

**OBJECTOR'S NOTICE OF OBJECTION, STATEMENT OF ISSUES AND LAWS,
AND REQUESTED REMEDIES**

NOTICE OF OBJECTION

April 21st, 2021
Reviewing Officer, Forest Supervisor,
Malheur National Forest
Attn: 1570 Appeals and Objections
P.O. Box 909
John Day, OR 97845

RE: Blue Mountains Biodiversity Project's objection to the Ochoco National Forest Crow Hazardous Fuel Reduction Project Draft Decision Notice and Finding of No Significant Impact and Environmental Assessment

Dear Objection Reviewing Officer,

Blue Mountains Biodiversity Project (BMBP) hereby formally submits the following objections to the Ochoco National Forest/Emigrant Creek Ranger District Crow Hazardous Fuel(s) Reduction Project (aka Crow or Crow HFR) Environmental Assessment and Draft Decision Notice and Finding of No Significant Impact. BMBP has secured the right to submit objections and thereby participate in the pre-decisional administrative review process for this project. BMBP has submitted timely written scoping comments regarding this project and extensive evidence of conditions on the ground in the Crow sale units in our field survey sheets and sample photographs. We were given no opportunity to comment on the Environmental Assessment, which was published with the Draft Decision Notice. This objection includes as an appendix our field survey sheets and sample photographs from our surveying Crow HFR sale units after the scoping comments were due (new information) and some photographs that could not be printed before the scoping deadline with associated survey sheets, reflecting our surveying the affected area for weeks as part of our assessment for this objection.

Decision Document

Environmental Assessment for the Crow Hazardous Fuels Reduction Project and the Draft Decision Notice and Finding of No Significant Impact For the Crow Hazardous Fuel Reduction Project

Date Decision published

March 24th, 2021

Responsible Official

Joshua Giles, District Ranger, Emigrant Creek Ranger District, Malheur National Forest

Description of the Project

“The preferred alternative was developed in response to comments received during scoping. Alternative 3 was developed from the key issue of effects on large tree retention and future snags. Hazardous Fuel Reduction Activities....[summarized and condensed from the Draft Decision Notice, pages 7-14] Actions Common to all Vegetation Treatments....No trees greater than 21 inches DBH would be cut with the following exceptions: *They are deemed a hazard to operations....

Vegetation Treatments and Acres....

Commercial Thin—8,013 acres This treatment is assigned to second-growth mixed ponderosa pine/Douglas/grand fir stands to reduce hazardous fuel load by reducing stand density...and selected standing dead trees...particularly of late seral trees that are less tolerant to disturbance such as drought, fire, and insects. Thinning would occur throughout the diameter range up to 21" DBH with residual basal area targets of 25 to 75 square feet per acre based on site productivity as measured by plant association and determined on a stand-by-stand basis....

Commercial Thin LOS Enhancement—5,974 acres This treatment is assigned to stands that currently meet the definition of both Late and Old structure (LOS) and old forest multi stratum (OFMS)....The goal of this treatment is to reduce the risk of stand replacement fire by converting OFMS to old forest single stratum (OFSS), thus shifting structure in the project area closer to the HRV and reducing competition to predominant overstory trees and protect and retain large old trees. This treatment would maintain all stands in late and old structure habitat by not removing trees greater than 21 inches DBH. Treatment would remove most of the understory, favoring ponderosa pine over Douglas fir and grand fir between the overstory groups, and leaving replacement trees for the declining overstory. Thinning would occur throughout the diameter range up to 21" DBH with a residual basal area target of 40 square feet per acre.

Commercial Thin—Connectivity Corridors—5,989 acres This treatment is assigned to stands that currently...are connectivity corridors that must be managed at higher canopy densities for old growth-dependent species....The goal of this treatment is to reduce hazardous fuel loads while still managing for old growth dependent species. Corridors established for old growth-dependent species in the project area would allow for big game and migratory bird dispersal and provide increased hiding cover. Thinning would occur throughout the diameter range (up to 21" DBH for all species) and would remove most of the understory, favoring ponderosa pine over Douglas-fir and grand fir between the overstory groups, and leaving replacement trees for the declining overstory. Proposed treatments would not degrade LOS status and would not drop acreage for OFMS below the HRV. The residual basal area target in these stands will be based upon two-thirds site potential based on site productivity as measured by plant association and determined on a stand-by-stand basis.

Commercial Thin—Lodgepole Pine—289 acres

This treatment is assigned to stands with a lodgepole component to reduce hazardous fuel load by reducing stand density...All ponderosa pine over 15" DBH would be left as reserve trees, creating an irregular open pine stand. Lodgepole pine under 21" DBH would be removed...

Small Diameter Thinning OFSS—1,173 acres

This treatment is assigned to stands that currently meet the definition of both LOS and OFSS....The goal of this treatment is to reduce hazardous fuels and the potential for a stand replacement fire, protect and retain large old trees, enhance OFSS, thus shifting structure in the project area closer to the HRV and reducing competition to predominant overstory trees. Small diameter thinning would be used to adjust species composition, forest structure, and stand density. Trees less than 12 inches DBH would be cut and would be removed. Proposed treatments would not degrade LOS status and would not drop acreage for OFSS below the HRV.

Small Diameter Thinning—4,570 acres

Small diameter thinning would be used to reduce hazardous fuel load by reducing stand density...and protect and retain large old trees. Trees less than 12 inches DBH would be cut. Small diameter thinning may also be required in proposed restoration treatments described below, to reduce fuels and competition....About 10 to 15 percent of the small diameter trees would be left as patches for wildlife hiding cover using variable density thinning....*Within harvest units: approximately 98 percent of commercial thinning units may also require small diameter thinning to reach stand density objectives. *Outside of harvest units: small diameter thinning in these stands would release larger trees from competition with undergrowth, making the stand more resilient to changes in growing conditions.

Juniper Encroachment in Ponderosa Pine—1,357 Acres

....This treatment would remove juniper trees that do not exhibit old growth characteristics in ponderosa pine stands where Western juniper is increasing in numbers in the understory in direct competition with the pine.

Conifer Encroachment—525 Acres

This treatment would remove conifers that have encroached into historically non-forested areas. Areas proposed for this treatment include meadows and shrub-steppe habitats and would reflect a more historical outline by removing encroaching conifers less than 21" DBH.

Plantation Thinning—48 Acres

This treatment will consist of cutting non-commercial sized trees so that the residual stand has an average crown spacing of 12 feet....

Landscape Scale Prescribed Burning Activities

....Because prescribed fires burn in a mosaic pattern, the entire 31,060 acres would not actually be burned. An estimated 21,750 acres would be burned, about 70% of the area. The purpose of prescribed fire in Crow is to reduce long term wildfire risk through reductions in existing fuel loading and restore ecological function in fire-adapted ecosystems. Priority areas for treatment would be primarily in the dry upland forest potential vegetation groups. Prescriptions parameters for prescribed fire would be designed to mimic a range of fire effects....

Forest Road Activities

Within the Crow project area, there are roads that were closed by previous administrative actions. These road segments...are physically closed on the ground and are not being utilized by the public. These roads may be used for haul and then reclosed....Previous administrative actions closed these roads for multiple reasons, including road densities, wildlife habitat security, hydrological impacts, water quality, or to reduce other resource damage....

Road Maintenance Activities....

Temporary Roads

Temporary roads are roads...not intended to be part of the forest transportation system and not necessary for long-term resource management....Less than 27 miles of temporary roads would be constructed and rehabilitated after use.

Design Criteria and Monitoring..." (Sections describing elements of the decision, condensed for brevity, Draft Decision Notice pp. 7-14)

Location

Crow is approximately 33,933 acres and is located in the western portion of the Emigrant Creek Ranger District. Major roads in the project area include forest roads 4300, 4100, 4332, 4334, 4340, 4341, 4357, 4360, 4365, and 4370 roads. Crow is located on National Forest system lands within the former Snow Mountain Ranger District, Ochoco National Forest. The Snow Mountain Ranger District was administratively combined with the former Burns Ranger District on the Malheur National Forest....and are managed by the Malheur National Forest as the Emigrant Creek Ranger District.

Appellant's Interests

Blue Mountains Biodiversity Project has a specific interest in this decision, which has been expressed through participation throughout the NEPA process. BMBP supporters visit much of the affected area for recreational uses including hiking; camping; fishing; relaxing; bird, wildlife, and wild flower viewing; photography; hunting; and more. The value of the activities engaged in by BMBP volunteers, supporters, and staff would be damaged by the implementation of this project.

BMBP is a non-profit organization that works to protect Eastern Oregon National Forests. Staff, volunteers, and supporters of BMBP live in various communities surrounding the Ochoco

and Malheur National Forests and use and enjoy the Forests extensively for camping; hiking; drinking water; hunting; fishing; general aesthetic enjoyment; gatherings; viewing flora and fauna; gathering forest products; and other purposes, such as solar eclipse viewing on the Ochoco.

Request for meeting

BMBP requests a meeting with the Forest Service to discuss matters in this objection and seek resolution of concerns through negotiation before the Malheur Forest Service makes a final decision on the Crow Hazardous Fuel Reduction Project.

Specific issues addressed in this objection

NEPA (National Environmental Policy Act) violations, including: proposing actions inconsistent with achieving the stated purpose and need for the project; inappropriate use of the Healthy Forest Restoration Act; failure to provide an adequate range of alternatives; failure to adequately analyze direct, indirect, and cumulative impacts of the project and the originally proposed Forest Plan amendment; failure to disclose scientific controversy; inaccurate use of the science; inappropriate use of the Healthy Forests Restoration Act authority; and failure to prepare an Environmental Impact Statement for this very large timber sale with intensive and extensive management proposed. We also object to the Forest Service using the HFRA authority to prevent the public from reading in-depth analysis of key issues and planned action effects in an EIS and to be able to comment on this analysis (including the Crow HFR EA analysis) during a full comment period (45 days for an EIS) prior to any draft decision and objection period.

Violations of the National Forest Management Act (NFMA) and the Ochoco Forest Plan, including failure to provide for population viability for multiple Management Indicator species and other wildlife species and violations of the Ochoco Forest Plan.

Potential violations of the Ochoco National Forest Plan include violations of management area guidance and Forest Plan standards, including originally proposed violation of the Eastside Screens 21" dbh large tree logging limit; potential violation of INFISH requirements and of Northern goshawk protections under the Eastside Screens; potential violations of Management Areas guidance for Wildlife Connectivity Corridors and Visual Corridors; and Forest Plan standards for snag density/abundance; and impacts to soils. The originally proposed Forest Plan amendment is also challenged by our objection. We are also concerned by the high potential for increased introduction and dispersal of invasive exotic plants through the proposed alternative management actions under the prevention emphasis of the Region 6 FEIS on Invasive Plant Management. We also object to the re-opening of roads closed for good ecological restoration and wildlife protection reasons and plans to construct the excessive mileage of about 27 miles of new "temporary" roads, when the Forest Service may be exceeding Forest Plan standards for road density and violating Forest Plan standards upheld by original road closures through re-use for another timber sale.

Endangered Species Act violations include contributing to a trend toward federal up-listing for the following species: Threatened-listed Gray wolf; potential Threatened-listed Canada lynx; Sensitive/Candidate for up-listing Wolverine; Sensitive Pacific fisher; Sensitive Columbia Spotted frog; Sensitive Redband trout; and various Sensitive-listed plants known to be or suspected to be within the project area.

We also express concerns regarding cumulative impacts to climate stability.

BMBP objects to the Crow HFR Project for the following reasons:

I. The Crow HFR project violates the National Environmental Policy Act

The Crow HFR project violates the National Environmental Policy Act in the following ways: inconsistency with the stated “purpose and need” of the project; inappropriate use of the Healthy Forest Restoration Act authority; failure to provide an adequate range of alternatives; failure to adequately analyze direct, indirect, and cumulative impacts of the project; failure to take the requisite “hard look” at project impacts required by NEPA; failure to disclose scientific controversy; inaccurate use of the science; and failure to prepare an Environmental Impact Statement for public review and comment.

Inconsistency with the stated purpose and need of the project

The Crow HFR project is not consistent with all the purpose and need goals as expressed in the Draft Decision Notice and the Environmental Assessment. The Crow HFR project included the following statement that constituted the purpose and need for the Crow project on the Draft Decision Notice page 4 under “The Purpose and Need for This Project”:

“The purpose of this project is to:

*Reduce hazardous fuel loadings...to alter fire behavior...and move the area towards conditions that will allow fire to play a more frequent and natural role on the landscape while exhibiting historical fire effects (mixed severity) from burning at low to moderate intensities during planned and unplanned ignitions.

*Salvage harvest recently killed trees that are surplus to other resource needs in order to reduce hazardous fuels and capture the economic value of those dead trees.

The need for action is based on the current conditions of resources within the project area.”

The need for action should be based on current habitat conditions within the project area, which we field-surveyed and documented in our survey sheets, incorporating our field survey sheets and photographs of conditions on the ground as part of our comments. Our survey sheets and sample photographs that were not sent in previously with our comments are enclosed as part of this objection, substantiating our observations in the field as they relate to our objections.

Examples of our comments regarding the inconsistency of proposed management actions with the stated purpose and need for the Crow HFR project:

“Reducing complex moisture-retaining forest structure now existing in the Crow sale area to only 30-40 square feet of basal area per acre would greatly reduce current moisture retention, increase wind speeds through the stands, eliminate most of the large, [or mature] more fire-resistant trees, and increase highly flammable slash and regrowth of small, dense highly flammable trees, all of which would increase fire risk, not reduce it. Thus the proposed action is contrary to the purpose and need stated for the Crow project (timber sale).” (BMBP Scoping comment, p.24) The Forest Service persists in refusing to see this trend across the landscape from past similar timber sales, which we witness continually while field surveying proposed timber sales overlapping past sales.

“When 65% of the project area has less than 8 tons per acre of ‘fuel loads’ (forest ecological wood), why was this area chosen as a ‘hazardous fuels reduction project’, especially since it is not near any town or city? This is not an area with extensive high fuel loading, based on our field surveying so far—a lot of the sale units have already been high graded and/or commercially thinned, and non-commercially thinned, and often prescribed burned, with little down wood or heavy duff.” (BMBP comment referring to, and written on the Scoping Package p. 4)

We are retaining our comments and arguments against large and old tree logging in this objection since it is only a draft decision not to log large and old trees. We cannot resolve our objections prior to a final decision not to log large and old trees.

“Crown ‘fuels’ are the least important aspect of theoretical fire risk reduction. Further, much of the overstory in the Crow sale area has already been removed. What’s left re: large trees and old growth structure is needed for wildlife habitat, carbon sequestration and storage to reduce climate change effects, soil nutrient cycling, and recreational appeal. This sale would not replicate historic patterns by removing many of the last large, more fire-resistant trees. The Forest Service needs to take responsibility for removing most of the large overstory trees (with old growth stumps of Ponderosa pine, Douglas fir, and Grand fir [as evidence in the Crow sale area]) and not repeat past mistakes.” (BMBP comments written on, and referring to content on the Scoping Package p. 3)

“There simply aren’t that many recently killed trees here—it’s almost all green and healthy, from what we’ve seen so far [we started surveying in the higher elevation, moister mixed conifer in the north half of the sale]—no real ‘salvage’ opportunity. Most large and old trees in the North section (half) of the sale are still doing well.” (BMBP comments on p. 3 of the Scoping package, regarding part of the purpose and need being to “Salvage harvest recently killed trees that are surplus to other resource needs” and the rationale that “Larger and older trees are often the first victims due to increased stand densities and higher fuel loading.”)

In response to the Scoping packet “Need for Amending the Ochoco Forest Plan” to remove large trees greater or equal to 21” dbh:

“What is the Forest Service rationale for removing large, more fire resistant trees under a ‘hazardous fuels reduction’ project? This runs contrary to a great deal of best available science. Ponderosa pine and Douglas fir are not ‘fire intolerant’ species and large Grand fir also develop thicker, more fire-resistant bark and higher crowns. See our survey sheets...This sale would not reduce fire risk to communities by logging and removing large trees.” (More BMBP comments on Scoping p. 7)

“Reducing ‘stocking’ to pre-fire suppression conditions is best done by removing small trees that may have grown in since effective widespread fire suppression, which did not take place until the 1950’s after World War II. Large tree logging is not needed or desirable to address wild fire suppression effects, as most trees $>/= 21$ ” dbh are at least 100 years old, not ‘young’—especially in the drier forest conditions of eastern Oregon. Not all of the Crow sale area is typical of a low intensity/severity fire regime or frequent fire intervals, as the northern half of the sale area increases greatly in elevation (up to nearly 7,000 feet), was often obviously dominated by Grand fir or Douglas fir, or was co-dominant Grand fir and Ponderosa pine or Douglas fir and Ponderosa pine, based on field evidence. See our survey sheets and photo descriptions. Many sale units in the north end are also near creeks, seeps, or fens. Some of these sale units also have much moister plant associations.” (BMBP comments on Scoping p.7)

“See our survey sheets—competition with large fir is not an issue; stress to Ponderosa pine from small trees (generally only up to 9 to 12” dbh) is an issue—especially on drier sites....Why would this density of large trees be a problem? It’s actually fairly open, with no ladder ‘fuels’ or high ‘fuel loading.’” (BMBP comments on Scoping p. 8, with the second comment in reference to Figure 3 as well as to common open large tree stands we found in LOS sale units in particular and as retention patches in some of the other sale units.)

“None of these rationales explains the emphasis of this sale being on the widespread logging removal of large trees, which are not the source of uncharacteristic density or high ‘fuel loading’, as admitted in various places in this scoping letter. Yes, lots of past logging mistakes have resulted in high density of NCT and younger-mature trees up to 9-12” dbh, but not in great density or numbers of large trees 21-30” dbh....Large trees are also more fire resistant, with thicker trunk bark and higher crowns, including for Ponderosa pine, Douglas fir, Western larch, and Grand fir. See my extensive measurements and photographs of old growth, more fire resistant characteristics in my survey sheets [and also in particular, for Sophie and Will’s survey sheets and Adam’s survey sheets, included with this objection] for Grand fir, Douglas fir, and Ponderosa pine 21-30” dbh. These are not ‘hazardous crown fuels.’ What a stretch this is to rationalize logging large trees in a sale area where large trees have already been spaced widely apart by past overstory high grading. See our photograph descriptions of actual sale unit conditions, where the only excess density to be found is small, young NCT size trees up to 9” dbh, and less frequently, younger mature trees generally up to only 12” dbh.” (BMBP comments on Scoping p. 9)

“Large tree logging is completely contrary to the perceived ‘hazardous fuel reduction need.’ Large trees—including Ponderosa pine, Douglas fir, and Grand fir, start developing old growth characteristics of thicker, more fire resistant bark—especially at the base of the tree and the lower trunk—and higher tree crowns further above most flame heights. This is most obvious in Ponderosa pine, Western larch, and Douglas fir, but also takes place in Grand fir...so that all three species of trees proposed for large tree logging are more fire resistant than the smaller diameter trees.”(BMBP comments on Scoping p. 13)

“Most of the ‘LOS’ identified stands in the Crow area have already been logged into open, park-like single strata stands, with many already partially high graded, CTed, and NCTed. See our field survey sheets and photo descriptions, mostly for the North half of the sale area.” (BMBP comment, Scoping p. 21)

Resolution

BMBP has commented on its objection to the Crow HFR project inconsistency between the proposed alternative (and the previous proposed alternative) management actions and the stated purpose and need for the project. (See comment quotes and citations above.)

Many commercial logging sale units should be dropped or reduced in size due to access limitations giving rise to planned re-opening of closed roads closed for ecological protection reasons and to about 27 miles of “temporary” roads, given the ecologically unsustainable pace and scale of current Forest Service logging in Eastern Oregon. We also found in field surveying the Crow sale that many of the sale units planned for commercial logging do not have enough mature trees less than 21” dbh for them to be commercially viable, with most density consisting of trees only up to 9-12” dbh due to the effects of intensive past logging.

We request that, to be consistent with the purpose and need for the project, conditions on the ground, and restoration goals, that the Forest Service:

*Drop all planned commercial logging and other management in never logged “undeveloped” areas identified. The Crow sale area has been logged to death already and needs any unlogged forest habitat to be protected for wildlife and as reference condition forest by which to judge the effects of management.

*Reduce the scale and intensity of planned logging overall to drop logging of mature trees 15” dbh to 21” dbh (and all large trees => 21” dbh) that would otherwise be next in line to become future large and old trees and restore large trees to the landscape. This would also help retain higher basal area to support the development of future snags and logs and provide for variability

and biological diversity across the landscape. The Crow sale area is already missing most of its historic large tree abundance due to past logging.

*Reduce the logging impacts to forest resiliency and structure and to maintain heterogeneous conditions and greater biodiversity. Decrease the number of commercial logging sale units by dropping commercial logging in moist mixed conifer (which is naturally denser and has mostly already been commercially thinned and/or high graded) and in old growth and Late and Old Structure forest, which has also been mostly already commercially thinned and/or high graded. See our survey sheets for guidance as to the best wildlife habitat in sale units, according to our characterization of conditions and our recommendations to drop or modify sale units.

* We are largely not opposed to the Forest Service reducing smaller tree density in even-aged Ponderosa pine plantations (see our survey sheets) but we want the Forest Service to stay out of all mixed conifer LOS except for some noncommercial-size thinning up to 9-12" dbh.

* Increase basal area retention in remaining sale units and leave more patches of diverse tree species and density within sale units for greater variability across the landscape "An across the board residual basal area average of only 30 square feet of basal area per acre is not consistent with the claim that 'commercial thinning treatments are determined on a stand-by-stand basis' (p. 13 of the Scoping packet.) Instead the Forest Service is ignoring the great variation in historic forest type based on higher elevations roughly north of rd. 43 versus south of rd. 43, proximity to riparian zones, slope aspect, and plant associations on the spectrum of dry to moist." (BMBP comments, on Scoping p. 13) Mixed conifer should have higher basal area retention of at least 80 to 120 square feet of basal area, with dry Ponderosa pine stands having at least 60-100 square feet of basal area, with exceptions made in both cases for large and old tree grove existing higher basal areas.

*Drop sale units that are most used by wildlife, including species dependent on large trees and large or abundant snags and abundant down logs such as MIS primary cavity excavators and marten and for wildlife needing greater levels of security cover, such as Northern goshawk, Rocky Mt. elk, and Mule deer.

* All of the mapped connectivity corridors for wildlife should be dropped entirely or only non-commercially thinned up to 9 or 10" dbh, while still leaving good patches of hiding cover throughout.

**We are opposed to the creation of two acre gaps—especially in this sale, where past logging has made natural mixed conifer areas too wide open, with many large gaps in the overstory and midstory. See our survey sheets and photo descriptions." (BMBP comments, Scoping p. 12) There should be differentiation between gaps created in historically open, Ponderosa pine dominant forest and moister and higher elevation mixed conifer, which was naturally denser due to greater snowpack retention, moist floodplains, and/or ash soils. Mixed conifer should have gaps of only up to about half an acre, whereas drier sites could have historic openings of up to an acre or more. "Keep any gaps from commercial thinning down to only ¼ of an acre, and only if more gaps than exist are appropriate for the forest type—i.e. more appropriate for very dry Ponderosa pine." (BMBP comment, Scoping p. 12)

Violations of the Healthy Forests Restoration Act

The Forest Service has inappropriately used the Healthy Forests Restoration Act (HFRA) authority for the Crow HFR project. Our related comments describe how the Crow project includes violations of provisions of the HFRA:

"So how does large tree logging fall under the 'Healthy Forests Restoration Act' authority, since large trees are more fire resistant than small trees and provide important large structure over time for watershed integrity, wildlife, fish, and forest health as ecological functioning. The Crow timber sale would remove, rather than 'retain or culture' old forest structure and large trees, as

required by the HFRA. This proposed large tree logging for the Crow HFRA sale is not allowed under the HFRA.” (BMBP comments, Scoping p. 2) As stated on p. 2 of the Scoping package and the Crow Draft Decision Notice p. 5, “HFRA-authorized fuel projects must be designed to retain or culture old-growth forest structure and large trees according to provisions in the law.”

The Scoping package also clarifies that: “To expedite projects, HFRA requires collaborative planning.” We question the legitimacy of existing collaborative groups that do not represent the full spectrum of public interests and stopped trying to find common ground with environmental groups such as ours many years ago, even though both full representation of public interests and the purpose of finding common ground were instilled in the Harney County Restoration Collaboration group original vision and mission statements. These collaborative groups may not meet the requirements of collaborative planning under the HFRA. Our related comment: “The Harney County Restoration Collaborative group is not representative of the full range of public interests, including our concerns regarding logging large trees.” (BMBP comment, Scoping p. 2)

Further the Wildland Urban Interface boundary identified for the Harney County Community Wildfire Protection Plan is overly broad by being “county-wide”, not allowing for any wild lands to exist outside so-called “urban” areas or the county-wide WUI. This county-wide WUI is in a county that consists primarily of public wild lands and very small rural communities. This makes a mockery of the WUI designation. The Scoping packet and the EA admit that: “Crow is located within a designated WUI as defined by the Harney County CWPP (2013) but is more than 1 ½ miles from an at-risk community. Crow lies about 25 miles northeast of the community of Burns/Hines, Oregon....Crow also lies about 26 miles southwest of the community of Seneca, Oregon.” (Draft Decision Notice, p. 5) Yet Burns/Hines and Seneca are probably the only communities in the county that could qualify as “urban”. Our related comment: “Based on par. 1 of p. 3 of the scoping packet, the Crow project area does not make sense as a HFRA project timber sale due to it not being near any town or city—i.e. a ‘wildland-urban interface.’ This sale is focused on logging removal of large trees, not just removal of more highly flammable small trees, and anything done in this project area is very unlikely to reduce fire risk in the communities listed.” (BMBP comment, Scoping p. 3)

The Crow Scoping package includes the following on p. 7:

“The HFRA states:

- ‘projects shall fully maintain, or contribute toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth condition characteristic of the forest type...and retaining the large trees contributing to old growth structure.
- The large-tree retention requirements of Section 102 (f) must not prevent agencies from reducing wildland fire risk to communities, and at-risk Federal land. HFRA requires treatments to be carried out in a manner that will modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildland fire effects for the forest type. In achieving this objective, vegetation treatments are to focus ‘largely’ on small-diameter trees, thinning, strategic fuel breaks, and prescribed fire.
- Therefore, large trees of selected species that are not adapted to fire processes may need to be removed to promote greater fire resiliency...”

However, as discussed multiple times in our comments, not only are large trees more fire-resilient in general than small trees and thus important to retain in stands to reduce the potential for uncharacteristic fire severity for the forest type, but also all three species of the large trees proposed for logging removal in the Crow project are species that are adapted to fire processes. Many of our comments direct the Forest Service’s attention to our evidence from the field in Crow project commercial sale units of Ponderosa pine, Douglas fir, and Grand fir developing

thick fire-resistant bark and higher crowns at as small in girth as 21" dbh, with increased bark thickness and crown height as the tree grows bigger in diameter. Grand fir usually has thick fire resistant bark and higher crowns by 23 to 24" dbh and sometimes by 21 to 22" dbh, as shown in our photographs and survey sheets from the Crow sale units. Ponderosa pine is defined as old growth by 21" dbh due to that statistically usually indicating that the trees are 150 years old or older (i.e. defined as old growth) and characteristically have thick, fire resistant bark and high crowns at 21" dbh, which is also usually the case for Douglas fir.

Following are more of our comments specifically supporting this objection:

"The Forest Service plan to log large trees down to only 10-12 large trees per acre virtually guarantees that these areas will no longer be considered 'LOS' during the next round of logging and will therefore receive no special consideration—especially as only the largest, oldest trees over 30" dbh would be retained, and these would become snags and logs sooner. So this is a purposeful liquidation of LOS into the future, not maintaining or contributing to the restoration of the structure and composition of old growth stands, as required by HFRA. HFRA is quite clear that the Forest Service is to retain 'the large trees contributing to old growth structure.' (See HFRA quote, scoping p. 7 [above]) Ponderosa pine, Douglas fir, and Grand fir are all species adapted to fire processes—especially when they're large." (BMBP comments, Scoping p. 8)

"Leaving only 10 to 12 large trees per acre is a recipe for eliminating Forest Service recognition of LOS over time, as with natural mortality, only one to three large trees per acre could become snags or logs before the area is no longer considered LOS on the Malheur (the District and Forest planning the sale) due to the Malheur's 10 live large trees per acre requirement for LOS. Earlier large tree mortality is more likely for the largest oldest trees retained. What is the live large tree requirement for LOS/old growth on the Ochoco National Forest, since the Crow sale is still on the Ochoco?" (BMBP comments, Scoping p. 21)

"It's simply not true that 'all stands would be maintained in late and old structure habitat' through retaining 10-12 large trees per acre, as logging off firs and Ponderosa pines 21-30" dbh eliminate the future replacement generation for the largest, oldest trees >30" dbh, and logging down to only 30-40 square feet of basal area eliminates most mature trees that would otherwise become large and old." (BMBP comments, Scoping p. 21) * Note that the basal area concern expressed above is still relevant with the new Draft Decision, as logging to such low basal areas would eliminate so many mature trees that future replacement generation trees for the largest, oldest trees would still be lost at numbers that would remove most of the future replacement generation for the large old trees. This would increase the deficit of large trees on a landscape scale rather than increasing and retaining large and old tree structure at historic levels over time, in keeping with Forest Plan and HFRA goals. It's important to remember that current levels of large trees in the Crow project area are still at a tremendous deficit compared to the pre-European colonization HRV abundance of large trees, due to extensive large tree logging in past timber sales. A 30 to 40 square foot basal area would only retain the remaining large trees in most cases, rather than including enough mature trees < 21" dbh for their replacement and increase to historic levels.

"Logging of large and old trees is contrary to most collaborative group mission statements, the Forest Plan, HFRA, and best available science on 'fuel' reduction and resilience to fire." (BMBP comment, Scoping, p. 22)

"As documented in many of my survey sheets, most firs 21-30" dbh demonstrate old growth characteristics, and Ponderosa pine is statistically known to generally be at least 150 years old ('old growth') at 21" dbh—thus the 21" limit. So with the Crow HFR sale, the FS [Forest Service] would inevitably be logging old growth trees as well as large trees. There has been no

change in the vast majority of best available science that would support logging large trees or old growth—including not for the purposes of ‘hazardous fuels reduction.’” (BMBP comment, Scoping p. 9)

“The Crow HFRA sale flagrantly violates the HFRA requirement to ‘retain or culture old-growth forest structure and large trees’ and is thus illegal. The large tree requirements of HFRA do not prevent agencies from reducing wildfire risk to communities because large trees are the most fire resistant trees on the landscape. In the Crow sale area in particular, there has already been considerable logging removal of overstory and midstory trees, resulting in many very open park-like stands with no excessive large tree density.” (BMBP comments, Scoping p. 21)

Resolution:

Blue Mountains Biodiversity Project has commented on the inappropriate use of the Healthy Forests Restoration Act authority by the Forest Service and the consequent violations of HFRA requirements with regard to the Crow HFR sale Environmental Assessment and Draft Decision Notice. See our relevant comments quoted and cited above.

To resolve this objection, the following would need to take place:

- *Re-planning of the Crow sale with a new EIS and public comment period so that the Crow sale is either not planned under the HFRA authority or meets HFRA requirements, or:
- *Implement a final decision that is congruent with HFRA by not logging any large trees 21" dbh or greater and by increasing basal area retention for sale units to allow for the next mature class of trees to grow into replacement trees for the large and old tree cohort already lost to logging and the current large and old tree cohort by retaining all or most trees over 15" dbh across the sale area.
- *Focus primarily on small diameter thinning (>9" dbh, or up to 12" dbh for ladder fuel trees, only under the drip line of old growth Ponderosa pine and Western larch) and on the use of prescribed fire in drier, lower elevation forest types for reducing the most flammable small biomass accumulations for fire risk reduction.
- *Drop commercial logging sale units that are already open, park-like stands with few ladder fuels or small tree thickets or reduce the management to non-commercial thinning up to 9" dbh with up to 12" dbh for ladder fuels next to old growth Ponderosa pine and Western larch, where relevant, to be consistent with the HFRA planning focus on fire risk reduction.
- *Drop all planned logging in never logged Undeveloped areas as logging the few areas left that have never been logged does not constitute restoration and would remove needed reference condition areas for scientific study and determining adaptive management strategies elsewhere.

Inadequate and biased public involvement

Our concerns regarding the Forest Service’s inadequate and highly selective public outreach reflect potential NEPA violations and FACA violation. Our related comments express our concerns for this objection:

The Scoping package claims that “(t)he Interdisciplinary Team (IDT) was directed to involve the public early and often throughout the pre-NEPA and NEPA process.” (Scoping package p. 11) “So what happened to involving the public ‘early and often throughout the pre-NEPA and NEPA process—other than collaborative groups that no longer represent the full spectrum of public opinion and interests and are largely stacked (biased) by economic interests and Forest Service steering of planned management? It’s highly problematic that the full public engagement in planning huge controversial timber sales like Crow is limited to collaborative groups, who receive detailed information much earlier than the broader public. The Malheur collaborative groups

were probably engaged much earlier and more often than the Ochoco National Forest's recreational constituency and more often than ecological protection groups not members of the collaborative groups, as we were not notified at all of any pre-NEPA process, field trips, open houses, etc. for the Crow HFRA timber sale 'project'. Yet Blue Mountains Biodiversity Project has been monitoring Forest Service timber sales, field surveying proposed timber sales extensively, and commenting, filing objections or appeals, negotiating with the Forest Service, and sometimes litigating proposed timber sales on the Malheur NF since 1993 and the Ochoco NF since 1998. Clearly we are far more engaged than most of the public, since we spend weeks or months in the proposed timber sales, camping, surveying, and recreating." (BMBP comments, Scoping p. 11)

Resolution:

*To resolve this objection, the Forest Service would have to prepare an EIS for the Crow sale and properly involve the full spectrum of the public before the EIS is released, including full outreach to interested parties and announced through local and regional newspapers to fully involve the public in field trips, open houses, or other public collaboration. The purpose of involving the full spectrum of the public interests early and often throughout the pre-NEPA and NEPA process should be for the Forest Service to consider all perspectives and recommendations early in the process and throughout the process to guide planning of a balanced outcome that respects the full spectrum of ecological protection concerns, not primarily local economic interests to the exclusion of other considerations. Other considerations should include the full range of Forest Plan goals, objectives, and standards and guidelines, as well as more current best available science that better informs planning, as conditions, the science, and public interests have changed considerably since the very outdated Forest Plan was established.

*We also ask the Forest Service to take note of this reminder to reach out to everyone in the public, not just insular collaborative groups, for future agency projects, including pre-NEPA public involvement, field trips, and open house meetings.

Failure to provide an adequate range of alternatives

The Crow HFR Scoping packet and Environmental Assessment included an inadequate range of alternatives.

Our scoping comments were clear in proposing viable alternatives to meet our concerns for this objection:

"We ask that the Forest Service include in-depth analysis and serious consideration of the following action alternatives: Non-commercial size thinning and prescribed burning only with NCTing generally up to only 9" dbh and by hand with some exceptions for ladder-fuel trees up to 12—14" dbh; mostly non-commercial size thinning (only where needed) and very limited commercial-size thinning up to 14" dbh as the size limit, with no large tree logging; and only ecological restoration to provide local jobs, such as non-commercial thinning; full decommissioning of closed roads; diversification of even-age, single species Ponderosa pine plantations; meadow encroachment thinning up to only 9" dbh; aquatic restoration such as aspen stand fencing and head-cut repair or wood placement and riparian hardwood planting. This is the only viable set of alternatives for the future of the Crow sale area and eastern Oregon National Forests in general. Otherwise only a nightmare future of ecological devastation is left for future generations of humans and wildlife. Nature has limits." (Scoping comments, p. 18)

All three of these proposed alternatives were reasonable options for meeting NEPA requirements for a full range of alternatives and meeting the purpose and need of effective

“hazardous fuel reduction” while retaining and increasing large and old trees, as required by both HFRA and the Ochoco and Malheur Forest Plans. It really isn’t necessary to remove more crown fuels in the Crow sale area to reduce “hazardous fuel loading”, as that has already been done across the great majority of the sale area from past timber sales, and as crown “fuels” are the least important element for stand replacement severity wild fire “risk” reduction, based on the science. Yet none of our three proposed alternatives were analyzed in depth for full public disclosure and possible adoption.

Resolution:

BMBP has commented on its objection to the Malheur’s inadequate range of alternatives in the Crow HFR Environmental Assessment and requested a broader range of alternatives in our scoping comments. See our comments quoted and cited above.

To remedy this problem, the Forest Service would either have to reissue a new Environmental Impact Statement offering a full range of alternatives as required by NEPA for public review and comment, or better meet our concerns expressed in related comments as follows:

- *Greatly reduce the overall scale of commercial size logging (of mature trees).
- *Modify proposed logging intensity to maintain more forest structure for wildlife and soil nutrient cycling. Require higher basal area retention of at least 60 to 100 square feet of basal area for dry, Ponderosa pine dominant, lower elevation stands (much of the south half of the sale area) and at least 80 to 120 square feet of basal area for mixed conifer in moister areas, at higher elevations, and on North or East slopes (typical of most of the north half of the sale area and some of the middle of the sale area south of rd. 43 along drainages.)
- *Retain all mature trees 15 ” dbh and greater, regardless of species, to retain needed future large structure, which is at a great deficit in the project area compared to historic conditions.
- *Change more sale units to only non-commercial-size thinning instead of commercial logging, or to no thinning, throughout the sale unit, especially those sale units with suitable habitat density and canopy closure for Pileated woodpecker and American marten; actively used and connectivity corridor elk and deer thermal and hiding cover; primary cavity excavators; and Northern goshawk nest areas, Post-Fledging Areas (PFAs) and core foraging habitat. All wildlife connectivity corridors and other sale units adjacent to riparian areas should be planned for only non-commercial thinning up to 9” dbh or 12” dbh for ladder fuel trees next to large old growth trees (within the dripline).
- *Drop logging of suitable or active Pileated woodpecker and American marten habitat, which are indicated on our survey sheets by high old growth mixed conifer counts per acre; large live, snag, and log tree structure; fresh and recent Pileated foraging sign; and for marten, abundant down wood, large snags, and/or the presence of large enough root wad burrows for marten.
- *Drop any sale units or parts of sale units that have never been logged.
- *Drop commercial-size logging and all heavy equipment use within the RHCA buffers except for large wood placement for riparian restoration or conifer removal in aspen stands up to 21” dbh.
- *Drop all “temporary” road construction and greatly reduce the re-opening of currently closed roads. Especially don’t reconstruct or re-open roads already grown over or roads that were closed for ecological protection reasons, including roads within riparian buffers or that are hydrologically connected to streams.

*See recommendations on our survey sheets, as well as wildlife species sign mentioned, old growth counts, and forest type, for specific sale units or parts of sale units we want modified or dropped. We appreciate the Forest Service going through our survey sheets to consider our documentation of on the ground conditions and our recommendations.

* Drop our priority “Drop” sale units from commercial logging, as having some of the best wildlife and old growth habitat, never having been logged, and often not needing any more “fuel” reduction, as it has already been done in previous timber sales and has evident lasting effects.

Failure to use an Environmental Impact Statement for the Crow HFR project

The Crow HFR timber sale is exceptionally large with conspicuously intensive management throughout almost all of the designated project area. Most of the project area has also already been intensively managed through past timber sales, road construction, and livestock grazing, to its detriment. This situation raises significant negative cumulative impact concerns as to the Crow project being unsustainable for fundamental ecological functioning and processes; wildlife and plant biodiversity and abundance; soil productivity; recreational uses, including elk and deer hunting; and carbon storage and sequestration and water retention in the face of rapidly escalating extreme climate change. Agency projects posing significant impacts require preparation of an Environmental Impact Statement with a full 45 day comment period prior to the objection period, which should have been done and still should be done for the Crow HFR project.

Please note that we fully expected an Environmental Impact Statement for the Crow project with a full 45 day comment period due to the scale and intensity of the timber sale management proposed. An EIS for a sale with the scale and intensity of management planned for Crow is completely standard procedure for both the Ochoco National Forest and the Malheur National Forest, based on my experience with monitoring timber sales on the Ochoco since 1998 and on the Malheur since 1993. Logging about 8,000 acres of large trees as planned is also extremely controversial and an unprecedented scale of logging large trees on both the Malheur and the Ochoco since the adoption of the Eastside Screens 21" dbh logging limit in 1995. That proposed action alone should have warranted an EIS. The Snow Basin timber sale on the Wallowa-Whitman National Forest, which proposed logging of about 7,000 large trees, used an EIS and was defeated by our litigation. We specifically requested an EIS for the Crow HFR project.

Our supporting comments for this objection include the following:
“We’ll send photos with our EIS comments. This sale requires an EIS due to its scale and planned controversial logging of 8,000 acres+ of large trees.” (BMBP comments, Scoping p. 12)
“Please send us information on the history of past logging (types of logging, locations of sales, dates of logging) for this project area, along with past livestock grazing history. We would like to see the combined effects of past logging and grazing and this logging [Crow] analyzed in depth in an EIS. [Neither was received nor analyzed in depth in an EIS.] We are very upset by the level of logging damage already evident on a landscape scale here, as well as by a shocking lack of plant diversity, likely from combined legacy livestock overgrazing and very heavy tree cover removal by logging.” (BMBP comments, Scoping p. 14)

“We ask for the following key issues to be analyzed in depth for the Crow sale area in an EIS, or the sale should be dropped in its entirety....” (BMBP comments, Scoping p. 18, quoted in full below under “Inadequate cumulative effects analysis” comments.

Resolution:

BMBP has commented on the Forest Service’s failure to prepare and issue an Environmental Impact Statement for the Crow HFR project. See our supporting comments quoted and cited above.

*To resolve this objection the Forest Service would either have to prepare a new Environmental

Impact Statement for the Crow project with a full 45 day comment period or fully meet our substantive issue concerns regarding cumulative impacts, the extent and intensity of timber sale management planned, and proposed sale units in never logged areas or best wildlife habitat that would need to be dropped from commercial logging, as spelled out above under the proposed resolution for an inadequate range of alternatives, which also would otherwise require preparation and release of an EIS. If the Forest Service does not decide to issue an EIS for the Crow sale, this resolution would have to be negotiated even if large tree logging is not allowed in the final decision.

Failure to adequately analyze direct, indirect, and cumulative effects

The Crow HFR Environmental Assessment and scoping package demonstrate failure to adequately analyze environmental effects of the project throughout the document, including omissions and distortions such as the following addressed in our comments, which I have checked against the EA (which was not open for comments) for applicability to the EA:

“Forest types should not be determined for historic conditions here only by plant association, as plant diversity—including moisture-dependent plants—has been severely reduced to unnaturally simplified plant communities, probably due to about a century of rampant over-grazing and evident past heavy logging and clearcutting of the overstory, greatly reducing moisture retention necessary for the moister end of the PAG spectrum. [This applies to plant associations that include] Big leaf huckleberry, Grouse huckleberry, Twinflower, and Queen’s Cup Bead lily. Where plant community indicators exist beyond Sagebrush, Fescue, Pinegrass, and Elk sedge, they are often severely stunted (e.g. Snowberry) or restricted to small patches (e.g. Prince’s Pine) where, based on on-the-ground evidence of historic big old firs, there should be far more abundant moist plant community indicators. Determining historic forest type and site productivity [potential] should also be based on elevation, slope aspect, evidence of more abundant historic fir (big fir stumps, [old growth] fir log decks left behind, big live firs, old growth fir snags and logs) and soil type—e.g. ashy soil retains more moisture for firs than clay soils. See our survey sheets for a lot of this stand-specific information.” (BMBP comments, Scoping p. 16 regarding the Scoping (and EA) analysis being inadequate to determine historic forest type and site potential.

“The Forest Service is neglecting to disclose that there has already been a lot of logging of large old growth Douglas fir and Grand fir in the Crow HFRA sale area—especially in the north end and at higher elevations or in moist areas [where greater fir dominance would naturally occur]. See our field survey sheets for this area as part of our scoping comments [and as an appendix for this objection]—check ‘evidence of historic mixed conifer’, ‘plant community type’, slope aspect, elevation, and our old growth counts and photo descriptions. Not all of this Crow project area is exclusively historically pure Ponderosa pine or even Ponderosa pine dominant. There is a lot of forest type variation based on topography, slope aspect, proximity to riparian areas, and elevation. These differences include historically Grand fir and Douglas fir dominant stands and Ponderosa pine/Grand fir and Ponderosa pine/Douglas fir co-dominant associations of mixed conifer.” (BMBP comments, Scoping p. 4) The EA also grossly over-estimates Ponderosa pine-dominant “dry upland” forest type through a model, compared to the much greater variation of forest type on the ground.

“There is no clarity as to why large Ponderosa pine would be removed, under what circumstances, or how many would be removed.” (BMBP Scoping comments, p. 7) This is still true in the EA. While Franklin et al. 2013 is correctly cited as promoting fire- and drought-tolerant Ponderosa pine, the EA fails to disclose why logging large fire and drought tolerant Ponderosa pine would be logged, based on the best available science and climate change

considerations of more future drought and more intense future wild fires. Logging removal of large and old Ponderosa pine (Ponderosa pine is usually old growth at 21" dbh based on statistical results of sampling) would be contrary to the "goal of these prescriptions...to create stands that more accurately reflect pre-settlement species compositions and to align with direction given by USDA (2010)." (Crow HFR EA p. 3-12) Earlier, the EA identified a typical stand type in the Crow area as: "Second-growth ponderosa pine/Douglas fir (and locally Grand fir) that had a complete or partial removal of the overstory ponderosa pine during past harvests....Much of this type was thinned after the overstory was removed." (EA p. 3-7) In other words a lot of the originally existing large and old Ponderosa pine was removed through high-grading or clearcutting, then more mature Ponderosa pine was removed again through later commercial thinning. Yet the only rationale given for now removing large Ponderosa pine is based on only one science source that has attracted criticism from more experienced scientists based on the methodology used and the conclusions being in contradiction with the majority of the science: "Treatments will remove large ponderosa pine only where densities currently do not reflect the desired conditions, based on historical references (Johnston et al. 2018)." This is a very flimsy rationale for a very controversial planned action and there is no analysis justifying the undefined "desired conditions". The EA still fails to specify exactly what situations on the ground (other than unquantified "densities") would justify large Ponderosa pine logging removal or how many large Ponderosa pines would be removed by logging and what specific effects this would have on the viability of wildlife species dependent on large Ponderosa pine, loss of carbon storage and sequestration, soil carbon storage inputs, and recreational values. Yet "vast reductions in trees per acre for each species occur by 2069" (EA p. 3-13, underline emphasis ours) based on Crow area modeling.

"Apparently the Emigrant Creek staff have not ventured into the entire northern half of the sale area, where there is no extensive mortality and sale units other than LOS and CT up to 30" [planned logging sale unit designations] are lacking historic level abundance of both large trees and snags. Even a lot of the LOS sale units don't really qualify as LOS. The Forest Service is greatly overstating the amount of LOS structure in this sale area. Many of those CT up to 30" [including logging Grand fir and Douglas fir up to 30" dbh] have hardly any firs 21-30" dbh—these are needed for diversity." (BMBP comments, Scoping p. 15) The EA continues to overestimate both the extent of mortality and the abundance of LOS structure, especially for firs. For instance, the EA states on p. 3-11: "The FVS model [which is not described or analyzed in the EA as to accuracy or input data used] shows that currently there are 280,201 trees greater than 21 inches diameter at breast height within the Crow planning area." This is extremely hard to believe, based on our weeks of field surveying the proposed commercial logging sale units, especially as we prioritized field surveying the LOS and CT up to 30" (with or without logging up to 30" Ponderosa pine) sale units. Almost 300,000 large trees seems to be an overstatement that allows the extreme removal of 15,447 large trees under alternative 2 (EA p. 3-11) to look more reasonable at about 5.5% of the total large trees in the area. Instead we found the sale units planned for logging large trees to encompass most of the large trees in the Crow area that remain from past heavy logging of large and old trees. 15,447 large trees removed could be most of the large trees in these sale units (or all of them) between 21-30" dbh. Most of the large trees remaining in these sale units are either in small remnant groves that were retention patches in past logging or have old growth/large stumps in their midst from past high-grading. The never logged areas are a limited exception to this.

"It's simply not true that 'all stands would be maintained in late and old structure habitat' through retaining 10-12 large trees per acre, as logging off firs and Ponderosa pines 21-30" dbh eliminates the future replacement generation for the largest, oldest trees >30" dbh, and logging down to 30-40 sq. ft. of basal area eliminates most mature trees that would otherwise become large and old."

(BMBP comment, Scoping p. 21) This claim in the Scoping package apparently disappears in the EA with no other analysis replacing it.

* There are gross examples of inadequate analysis by way of complete omission in the EA, including lack of a discrete in-depth analysis of effects to old growth and LOS structure from planned logging of thousands of large trees. That should have been a key issue for analysis. Likewise there is no apparent analysis of effects to American marten, even though the American marten (“Pine marten”) is a Management Indicator species for old growth and large structure for both the Ochoco and Malheur National Forests and marten likely inhabit the suitable moister mixed conifer old growth at high elevation (up to almost 7,000 feet) in the north end of the sale area. More recent science indicates that marten may also inhabit much lower elevation suitable habitat, which seems to be the case in the Ragged Ruby sale area on the Malheur National Forest, based on camera bait sets used by the Blue Mountain Ranger District staff there. There is no justifiable reason not to have analyzed effects to marten or to old growth and LOS structure as a key analysis issue in the EA. There is also no justifiable reason to completely omit any analysis of effects to Canada lynx, Wolverine, and Pacific fisher even when we specifically mentioned concern regarding effects to these species in our scoping comments and since these species could be using the Crow area—especially in the higher elevation moister mixed conifer forest bordering on an inventoried roadless area and Snow Mountain in the north end of the sale area.

The Scoping packet stated that: “Overall, late and old structure stands will increase from 13,674 acres to 22,492 acres by the year 2069.” (Scoping package, p. 22) Our comments in response: “This assumes no future logging, which is not a reasonable assumption. This is Orwellian reasoning (as per 1984) in that there has been no increase over time in late and old structure deriving from more logging of late and old structure trees. Instead, there has been continuing decline in LOS structure compared to historic levels of large and old trees, first from chipping away at large tree abundance with most [recent] Malheur timber sales, and now by taking a sledge hammer to large and old trees in the Crow sale.” (BMBP comments on Scoping p. 22) This claim appears to have disappeared in the EA, as it is not included in discussion of alternative 2 effects under “Forest Vegetation” and does not appear in the extremely limited discussion of “Late and Old Structure Stands (LOS) and Connectivity” and there is no separate section of analysis covering effects to LOS or old growth forest structure. It’s a breach of public trust that the public was allowed to comment on a very mis-leading Scoping package but not allowed to comment on analysis in the EA (or lack thereof), as scoping claims were later abandoned in the EA.

“What is missing here is the needed recognition that the most flammable “fuels” are dense small trees in the Crow sale area, not large trees or...down large wood or snags.” (BMBP comment, Scoping p. 23) This pertinent information also appears to be missing in the EA analysis.

“This is not serious, comprehensive, or scientific analysis in the scoping packet.” (BMBP comment, scoping p. 24) The same can be said for the very cursory and scanty analysis in the EA, which also has significant omissions.

“What is being proposed by the Forest Service is not really commercial ‘thinning’ at all, but very heavy logging to virtual clearcut-like extremely low basal areas. This calling of the logging planned “thinning” is very misleading to the public. It is really forest ecosystem liquidation.” (BMBP comment, scoping p. 25)

Comments specific to inadequate cumulative effects analysis:

"Please send us information on the history of past logging (types of logging, locations of sales, dates of logging) for this project area, along with past livestock grazing history. We would like to see the combined effects of past logging and grazing and this logging [Crow] analyzed in depth in an EIS. [Neither was received nor analyzed in depth in an EIS.] We are very upset by the level of logging damage already evident on a landscape scale here, as well as by a shocking lack of plant diversity, likely from combined legacy livestock overgrazing and very heavy tree cover removal by logging." (BMBP comments, Scoping p. 14) We had to ask for this information because it was not disclosed and analyzed in the Scoping package, the only document on which the public was allowed to comment. While the EA covers more information about the extensive past logging history of the Crow area, it fails to analyze in depth the effects of this past logging combined with the proposed intensive and extensive logging of the Crow HFR sale and the proposed Crow sale logging combined with still existing and continuing degradation from livestock grazing. Existing degradation and elimination of natural native plant diversity across the Crow area from past logging overstory cover removal and livestock grazing is also not considered in the EA with regard to the combined cumulative effects of proposed extensive logging and other intensive management of the Crow area planned with this timber sale. Thus the EA also has inadequate cumulative effects analysis despite our specific requests for such cumulative effects analysis.

We also asked for cumulative effects to be a key issue for analysis with regard to many receptors, including forest structure, wildlife species, plant species, soil integrity, moisture retention, climate change effects, indigenous people's cultural uses, and recreation, as follows: "We ask for the following key issues to be analyzed in depth for the Crow sale area in an EIS, or the sale should be dropped in its entirety: the cumulative effects of past logging, livestock grazing, and road construction and use combined with the proposed action [effects] to: *large tree structure and abundance *old growth habitat quality and abundance *old growth and large tree-associated or dependent species *species requiring security corridors, including elk, deer, Gray wolves, marten, Canada lynx, wolverines, and others *Neotropical migratory songbirds dependent on multi-layer canopy, large trees, and/or old growth structure *accipiter hawks requiring denser forest and mature and large trees (Northern goshawk and Cooper's hawk) *Management Indicator species, including Pileated woodpecker, American marten, primary cavity excavating woodpeckers, and Rocky Mountain elk *all Sensitive and Threatened-listed species known to occur in the Crow sale area or this part of the Ochoco National Forest *Peck's mariposa lily and other Sensitive, Threatened, or endemic plants in the project area *soil integrity *moisture retention *climate change effects *and indigenous people's cultural uses *and recreation." (BMBP comments, Scoping p. 18, with * substituted for some semi-colons for consistency)

It's hard to tell if the Forest Service even read our scoping comments, as we referenced Management Indicator species American marten, Threatened-listed Canada lynx, Sensitive Pacific fisher, and Sensitive/Candidate for up-listing wolverine specifically in our request for key issues to be covered in EIS analysis, yet none of these species are included in the EA wildlife analysis. There is very little, if any, in-depth analysis for the cumulative effects of past logging, livestock grazing, and road construction and use with these receptors and values in the EA despite our very specific request for in depth cumulative effects in relation to these key issues.

Another example of cumulative effect analysis missing in the Scoping package and the EA: "Old growth-dependent species are relying heavily on the 'LOS'/old growth structure outside the designated 1,456 acres of old growth to meet their needs and may not have viable populations without it." (BMBP comment on Scoping p. 10)

There is also considerable new information in the Crow HFR EA that was not included in the Crow Scoping Package for public consideration and comment that raises more cumulative effects concerns. These include numerous management actions within or adjacent to RHCAs that are admitted in the EA to potentially cause measurable negative effects to attainment of INFISH Riparian Management objectives, aquatic species such as MIS and Sensitive Redband trout, Sensitive Columbia Spotted frog, and water quality. Yet this long list of potential measurable negative effects within RHCAs is not quantified or analyzed for cumulative effects to combined stream and creek reaches for these receptors and values. See under “Forest Plan Violations”, sub-category “INFISH” for quoted examples of potential measurable negative effects to creeks and tributary streams, which includes the following conclusion:

The Crow HFR EA fails to analyze the cumulative effects to stream sedimentation, pool frequency, bank stability, and width to depth channel ratios from all these above quoted predicted potential measurable negative impacts of “temporary” road construction and closed road re-opening and use within RHCAs from the EA. Analyzing in depth and quantifying these cumulative effects is essential for predicting cumulative effects to Riparian Management Objectives attainment, fish species viability, Columbia Spotted frog habitat, and water quality for the combined creek and tributary stream segments affected.

The public was deprived of the right to comment on new information and analysis only disclosed in the EA, which was made possible by the Forest Service by using the Healthy Forest Restoration Act authority inappropriately. The Crow HFR sale is a controversial, exceptionally large scale timber sale with a higher degree of management intensity throughout the project area than in previous standard timber sales that causes a greater scale and intensity of many negative impacts (possibly unprecedented on the Malheur and the Ochoco for a green timber sale) that warrant the preparation and release of full Environmental Impact Statement with a 45 day comment period.

Resolution:

BMBP has commented on its objection to the ONF’s failure to adequately analyze direct, indirect, and cumulative effects of the Crow HFR project on a range of receptors; inadequate analysis leading to flawed determinations, such as for historic forest types, the extent of widespread tree mortality, whether “LOS” sale units actually qualify as Late and Old Structure or have enough large fir to justify logging large fir, and the current abundance of large trees; failure to disclose known relevant information such as large tree structure not being anywhere near as flammable as small tree structure; inadequate analysis leading to false claims that were later omitted in the EA; omitted effects analysis for LOS/old growth forest structure, marten, lynx, and Pacific fisher; and cumulative effects of past logging, livestock grazing, and roads in combination with the effects of proposed alternative management actions to a long list of receptors and values that we listed in our comments.

See our comment quotations and citations in the paragraph above and references to inadequate analysis in comments quoted in other sections of this objection.

* To resolve this objection, an EIS needs to be prepared that adequately analyzes direct and indirect effects of the Crow HFR project, and cumulative effects of the project in combination with past, ongoing, and reasonably foreseeable future actions to NEPA standards, with a 45 day public comment period to enable informed public comment and agency review, as well as a new objection period. Otherwise, as specified above for “Inadequate Range of Alternatives”, there would need to be multiple significant substantive changes to the proposed alternative for us to set

aside the need for an Environmental Impact Statement with adequate in-depth analysis of key issues and adequate effects analysis for potential receptors and values, with a full 45 day public comment period. Our goal in such negotiations would be to either have the Crow timber sale dropped entirely or to scale the proposed timber sale management down to a level of extent and intensity that no longer requires an EIS by not posing significant impacts--via not incorporating such an excessive scale and intensity of negative effects.

Inaccurate use of the science

There are numerous instances in the Crow HFR of analysis not reflecting the full range of best available science and/or not using the science inaccurately. Examples of failure to use science accurately:

“What is the Forest Service rationale for removing large, more fire resistant trees under a ‘hazardous fuels reduction’ project? This runs contrary to a great deal of the best available science.” (BMBP comment, Scoping p. 7)

“Reducing ‘stocking’ to pre-fire suppression conditions is best done by removing small trees that may have grown in since effective widespread fire suppression, which did not take place until the 1950’s after World War II. Large tree logging is not needed or desirable to address wild fire suppression effects, as most trees $>/= 21$ ” dbh are at least 100 years old, not ‘young’—especially in the drier forest conditions of eastern Oregon. Not all of the Crow sale area is typical of a low intensity/severity fire regime or frequent fire intervals, as the northern half of the sale area increases greatly in elevation (up to nearly 7,000 feet), was often obviously dominated historically by Grand fir or Douglas fir, or was co-dominant Grand fir and Ponderosa pine or Douglas fir and Ponderosa pine, based on field evidence. See our survey sheets and photo descriptions. Many sale units in the north end are also near creeks, seeps, or fens. Some of these sale units also have much moister plant associations.” (BMBP comments, Scoping p. 7)

“The ‘desired condition’ should not result in a tree farm or forest liquidation, as this should be based on varied topographical, slope aspect, elevational, and moisture gradient differences influencing historic and current forest types and density, which this sale does not reflect.” (BMBP comment, Scoping p. 8) Although the EA includes more information as to forest type, it still seems to greatly over-generalize or over-estimate dry Ponderosa pine-dominant forest type in the Crow project area, especially for the north half of the sale area that increases in elevation and in moister mixed conifer and has far more evidence of historic Grand fir and Douglas fir dominant forest in the form of big live old firs, big old growth fir stumps, old growth fir snags and logs, and log decks filled with old growth fir logs—Grand fir in particular. There is also a sale unit at high elevation that has never been logged that is primarily Grand fir (old growth) dominant with scattered big old Ponderosa pine on a south-facing slope. See Adam’s survey sheet and photos for that sale unit, with huge old Grand firs up to about 50” dbh.

“HRV modeling is suspect at best as it should reflect pre-European colonization conditions.” (BMBP comment, Scoping p. 8) We have witnessed the Malheur Forest Service staff use HRV baseline data from around 1927, well after European colonization and already heavy logging.

“As documented in many of my survey sheets, most firs 21-30” dbh demonstrate old growth characteristics, and Ponderosa pine is statistically known to generally be at least 150 years old (‘old growth’) at 21” dbh—thus the 21” limit. So with the Crow HFRA sale, the FS would inevitably be logging old growth trees as well as large trees. There has been no change in the vast majority of best available science that would support logging large trees or old growth—including not for the purposes of ‘hazardous fuels reduction.’” (BMBP comments, Scoping p. 9)

“An across the board basal area average of only 30 square feet of basal area per acre [See Scoping package statement on p. 7] is not consistent with the claim that ‘commercial thinning treatments are based on site productivity as measured by plant association and determined on a stand-by-stand basis.’ (p. 13 of the Scoping packet) Instead, the Forest Service is ignoring the great variation in historic forest type based on higher elevations roughly north of rd. 43 versus south of rd. 43, proximity to riparian zones, slope aspect, and plant associations on the spectrum of dry to moist. Please note that the sale units we field surveyed further north had moister plant associations (although some of these may have been destroyed by past heavy logging of the overstory and by past heavy livestock grazing), and greater proximity to larger perennial creeks, wet meadows, seeps, springs, and in one or two cases, possible fens. Further south we have observed drier conditions but also heavier past logging....Site productivity (and natural density) is much higher on ash soils, higher elevations with greater snowpack retention, and generally moister areas than on dry sites more typical at lower elevations. We are evaluating stands on a stand-by-stand basis.” (BMBP comments, Scoping p. 12)

“It’s very arrogant to assume you know what areas should not be forested at all. This ignores recent science warning against going back to a static point in time.” (BMBP comment, Scoping p. 12) Figure 8 in the EA (Aerial imagery of Duffy Prairie in 1953 and 2017) is not convincing at all. The two photographs actually look much the same, with not much increased conifer presence. This was also my experience on the ground, that there has not been much conifer encroachment in meadows or prairies beyond the obvious line of old growth. Also it’s not clear that this was all Sagebrush steppe, as opposed to a meadow system that may have dried up more recently with climate changes or effects of heavy past logging. Alternatively, there has been a climatic moister period since 1953 that could naturally increase suitability for conifers. In any case, going back to a past static point in time is not necessarily the wisest thing to do now, since forest carbon storage needs to be maximized to the highest extent possible (through retention, not removal) in order to offset or reduce as many extreme climate change effects as possible.

“Reductions in ‘fuel loading’ are known to be only effective for 10-20 years. The Forest Service is ignoring best available science re: fuel reduction effects not being likely to encounter fire.” (BMBP comments, Scoping p. 17) This is as ignored in the EA as it was in the Scoping package.

“Best available science supports retaining large and old trees, not removing them.” (BMBP comment, Scoping p. 21) We appreciate and support the Draft decision not to log large trees.

“Logging of large and old trees is contrary to most collaborative group mission statements, the Forest Plan, HFRA, and best available science on ‘fuel’ reduction and resilience to fire.” (BMBP comment, Scoping p. 22)

The Scoping packet stated that: “Overall, late and old structure stands will increase from 13,674 acres to 22,492 acres by the year 2069.” (Scoping package, p. 22) Our comments in response: “This assumes no future logging, which is not a reasonable assumption. This is Orwellian reasoning (as per 1984) in that there has been no increase over time in late and old structure deriving from more logging of late and old structure trees. Instead, there has been continuing decline in LOS structure compared to historic levels of large and old trees, first from chipping away at large tree abundance with most [recent] Malheur timber sales, and now by taking a sledge hammer to large and old trees in the Crow sale.” (BMBP comments on Scoping p. 22) This claim appears to have disappeared in the EA, as it is not included in discussion of alternative 2 effects under “Forest Vegetation” and does not appear in the extremely limited discussion of “Late and Old Structure Stands (LOS) and Connectivity” and there is no separate section of analysis covering effects to LOS or old growth forest structure.

“Reducing crown or canopy ‘fuels’ is the least effective way to reduce fire risk, and much canopy reduction has already taken place in the Crow area.” (BMBP comment, Scoping p. 23)

“Any projection of ‘fuel’ loading 50 years out is bogus and inaccurate use of the science unless it is predicated on forest and tree elimination on a vast scale. We are strongly opposed to forest elimination as a means for reducing fire intensity, and in general.” (BMBP comment, Scoping p. 24)

Resolution:

BMBP has commented on its objection to inaccurate use of the science in the Crow HFR project analysis. See our comment citations and quotations in the paragraphs above.

* In order for the Crow HFR project to comply with NEPA, the Forest Service needs to incorporate the requisite best available science and use the science accurately, with professional integrity in analysis in an EIS available for public comment for the Crow HFR project, to more accurately inform public comments, agency review, and decision-making.

Failure to Disclose Scientific Controversy

The Crow HFR project violates NEPA by failing to disclose significant scientific controversy over the efficacy and ecological soundness of managing to reduce the severity of wildfire (essentially acting to further suppress wildfire) as a natural disturbance and implementing heavy commercial logging under the guise of “restoration.” This failure to disclose significant scientific controversy leads to consequent suppression of scientific evidence and perspectives supporting other management, or non-management, as opposed to the Forest Service’s proposed action alternatives, in the Crow HFR EA. The Crow EA also fails to disclose significant scientific opposition to logging large and old trees and to an isolated, single study assumption that there are still as many large trees across eastern Oregon as there were historically, which is patently false based on logging records across the region, widespread field evidence of extensive overstory large and old tree removal by logging, and a great deal of variation in forest type and forest density across the region.

Examples of our comments regarding Crow HFR EA failure to disclose scientific controversy include the following:

“The Forest Service is failing to disclose significant scientific controversy over ‘fuel reduction’ as being effective or desirable to reduce fire ‘risk’ re: severity, size of fires, or incidence of fires. See our science enclosure [sent with our scoping comments.]” (BMBP comment, Scoping p. 4)

“We are strongly opposed to proposed logging of large trees 21-30” dbh of any tree species, which is not justified in any way in this sale area, where high-grading of large Grand fir, Douglas fir, and Ponderosa pine was rampant, with huge stumps as evidence, and large areas were clearcut and turned into sterile young even-aged Ponderosa pine plantations. Logging large trees is contradicted by the majority of best available science, including by PhD scientists Bev Law, Dominick Della Salla, and Chad Hanson, who were not allowed to present their positions on two out of three of the Zoom public forums re: Region 6’s misguided and unethical attempt to revoke the 21” dbh limit on the Blue Mountains National Forests and the Deschutes [and Winema-Fremont] .” (BMBP comments, Scoping, p. 15)

“Johnston et. al (2018) is questionable scientific method at best and should not be used to justify logging large Ponderosa pines [or any other tree species]. There are no historical records of

which [we] are aware that find there used to be fewer large Ponderosa pines historically and [there is] lots of science to the contrary. ‘Desired conditions’ decided by whom, the timber industry? One weak study is not sufficient to justify amending the Forest Plan and logging large Ponderosa pines again, contrary to most best available science.” (BMBP comments, Scoping p. 15)

Resolution:

Blue Mountains Biodiversity Project has commented on the Forest Service’s failure to disclose scientific controversy in the Crow HFR EA. See our comments quoted and cited in the paragraph above.

* To resolve this objection, the Forest Service must thoroughly disclose existing scientific controversy over agency assumptions and management plans in an EIS available for public review and comment. The Forest Service needs to use the full spectrum of best available science reflected in the controversy to guide management plans and to provide for a broader selection of action alternatives and changes in management direction.

II. The Crow HFR project violates the National Forest Management Act

The Crow HFR project violates the National Forest Management Act in the following ways: failure to ensure the viability of Management Indicator and other species and potential violation of management guidelines for Visual Corridors and Wildlife Connectivity Corridors. The Forest Service is also in potential violation of Forest Plan standards and guidelines: for the Eastside Screens 21” dbh limit for logging live trees and for INFISH Riparian Management Objectives requirements for large wood recruitment, Forest Plan goals and standards for retaining and increasing large and old tree structure and maintaining snag abundance, and protection of soils under the detrimental soil impact standard through proposed actions. The Forest Plan requires following protection guidance for the Northern goshawk under the Eastside Screens, yet much commercial logging is planned for Northern goshawk Post Fledging Areas and core habitat, which would threaten the viability of the species in the planning area. The Forest Plan being used for guiding management is also very outdated, including for snags per acre requirements, compared to current best available science.

Failure to ensure the viability of Management Indicator Species (MIS)

Our comments noted many areas of analysis in which the Crow EA failed to demonstrate that the viability of Management Indicator (MIS), Threatened species, Sensitive species, and other species of conservation concern would be ensured with project implementation. Species of concern for protection of viability included the following Management Indicator species: Pileated woodpecker, American marten, Primary Cavity Excavator woodpeckers; Redband trout; and Rocky Mountain elk; as well as Northern goshawk, which has protection guidance under the Eastside Screens. Many more species, including focal species (e.g. Great Gray owl) and Birds of Conservation Concern were also specifically mentioned in our scoping comments as part of our concerns for the effects of proposed timber sale management.

We are also concerned about failure to ensure viability of Sensitive and Threatened-listed species on the Forest, including Threatened-listed Gray wolf; Threatened-listed Canada lynx; Sensitive-listed Wolverine; Sensitive-listed Pacific fisher; Sensitive Columbia Spotted frog, and Sensitive-listed Redband trout.

The Forest Service has legal responsibilities to protect the viability of Management Indicator species, but not to move forest structure toward a theoretical Historic Range of Variability (HRV)

or eliminate substantial forest cover to theoretically reduce fire risk as over-riding goals. It's not appropriate or legally justifiable to keep reducing Management Indicator species' suitable habitat (e.g. American marten) in timber sale 'project' after timber sale 'project', even after that species is considered vulnerable by the U.S. Fish and Wildlife Service--which apparently applies now to American marten, who could have suitable habitat acreage reduced under the Crow HFR project. The EA did not include adequate cumulative effects analysis regarding all these reductions of suitable habitat across the Forest. (See our objection and comments above regarding inadequate cumulative effects analysis.) It is not justifiable to plan for continued impacts and cumulative potential loss of species viability for a Management Indicator species (e.g. Pileated woodpecker) based on "long-term" theoretical re-growth of suitable habitat eventually, as the species' viability may be lost before the habitat can grow back—especially given likely planned similar timber sales in the same area in the future, and the 100+ years suitable large and old habitat structure would take to re-develop.

Examples of how our comments express these concerns regarding the failure to ensure the viability of Management Indicator and other species:

"Old growth-dependent species are relying heavily on the 'LOS'/old growth structure outside the designated 1,456 acres of old growth to meet their needs and may not have viable populations without it. There is a lot more LOS/old growth in the Crow sale than the Dedicated (MA-F6) areas that are now on the chopping block again—this time for almost total liquidation by logging large and old trees 21-30" dbh, thus removing the next generation of big old trees 30"+ dbh and eliminating much of the large structure across the landscape needed by associated wildlife species and for carbon storage, soil nutrient cycling, fish habitat, and recreational values." (BMBP Scoping comments, p. 10)

"We are strongly opposed to reducing average basal area to only 30 square feet per acre. This leaves no trees for needed snag and log creation over time and no structural complexity." (BMBP comment, Scoping comments, p. 7) The EA fails to address these concerns by still planning to reduce basal area retention to the lower limit of the management zone for each forest type.

"It is simply not true that this project 'is framed to be consistent with all laws or policies governing National Forest management', as it would violate fundamental goals and standards embedded in the Forest Plan under NFMA (neither mentioned under 'Regulatory Framework') concerning the goals of retaining and increasing large trees and old growth on the Ochoco National Forest and standards to do so, including the Eastside Screens limit of 21" dbh for retaining large existing trees and providing for restoration of large tree and old growth structure into the future to compensate for the huge deficit in large tree structure and old growth already existing—still—from past over-logging of large and old trees." (BMBP comments, Scoping p. 13)

"We ask for the following key issues to be analyzed in depth for the Crow sale area in an EIS, or the sale should be dropped in its entirety: the cumulative effects of past logging, livestock grazing, and road construction and use combined with the proposed action [effects] to: *large tree structure and abundance *old growth habitat quality and abundance *old growth and large tree-associated or dependent species *species requiring security corridors, including elk, deer, Gray wolves, marten, Canada lynx, wolverines, and others *Neotropical migratory songbirds dependent on multi-layer canopy, large trees, and/or old growth structure *accipiter hawks requiring denser forest and mature and large trees (Northern goshawk and Cooper's hawk) *Management Indicator species, including Pileated woodpecker, American marten, primary cavity excavating woodpeckers, and Rocky Mountain elk *all Sensitive and Threatened-listed species known to occur in the Crow sale area or this part of the Ochoco National Forest...." (BMBP comments, Scoping p. 18, with * substituted for some semi-colons for consistency)

It's hard to tell if the Forest Service even read our scoping comments, as we referenced Management Indicator species American marten, Threatened-listed Canada lynx, Sensitive Pacific fisher, and Sensitive/Candidate for up-listing wolverine specifically in our request for key issues to be covered in EIS analysis, yet none of these species are included in the EA wildlife analysis. Without analysis of potential effects from planned management actions, there can be no assurance of continued species viability in the project area.

"There are many snag-dependent species currently using snags, large live trees, and large logs in the Crow area, including Northern Flicker, Williamson's sapsucker, Pileated woodpecker, Blackbacked woodpecker, and Hairy woodpecker, all of which we've seen, heard, and found foraging sign, as well as roost holes and nest holes. White-headed woodpeckers are also likely [and were later seen and photographed—see Sophie and Will's survey sheets and photo samples.] DecAID is not designed or intended to ensure viability of snag-dependent species. There are many species that would be extirpated from the Crow project area due to widespread loss of mature and large trees to the point of virtual clearcutting, eliminating recruitment of the majority of snags and down wood at levels currently available." (BMBP comments, Scoping p. 22) (See also evidence of the other woodpecker species mentioned above in our survey sheets and sample photographs, including photographs of Northern Flicker, Pileated woodpecker, and Williamson's sapsucker.)

"What constitutes snags being 'surplus to other resource needs'? Much of the sale area only consists of small live trees in young Ponderosa pine plantations. The woodpeckers here—including MIS woodpeckers—need the existing snags." (BMBP comment, Scoping p. 13)

"This brief assessment of preliminary effects to snags and snag-dependent species ignores the critical role large Grand fir plays in providing preferred and heavily used foraging substrate for Pileated woodpeckers and Black bears and broken top large snags for Great Gray owl nesting platforms. Also ignored is Pileated woodpecker occasional nesting in Grand fir, Northern Flicker preferential foraging in large Douglas fir and Ponderosa pine, and Williamson's sapsucker's heavy foraging use of live large Douglas fir and Ponderosa pine.

Northern goshawk also rely on live large Douglas fir and Ponderosa pine for nesting and Pacific fisher rely on live and snag large fir for denning cavities. American marten (another Management Indicator species) relies on Pileated woodpecker nest holes in large trees (of whatever species) for denning and on abundant down and elevated logs for winter subnivean foraging.

We are greatly concerned that such excessive removal of trees planned, and of large trees in particular, will lead to the loss of viability for snag and log dependent species, and large and old tree-associated species, in the Crow area, which is a large part of the Ochoco National Forest. Species' extirpation and eventual extinction happens cumulatively from the combined results of multiple timber sales, overgrazing by livestock, road use, etc." (BMBP comments, Scoping p. 23)

"Northern Flicker are not positively affected by the removal of large trees. Right now there are a lot of Northern Flickers using the Crow sale area. After extensive large tree removal, this would no longer be the case." (BMBP comment, Scoping p. 25)

"Lewis' woodpecker would be negatively affected by both loss of large tree structure (for nesting and perching) from logging and by any reduction in the extent or incidence of stand replacement fire—old burns are their preferred upland habitat." (BMBP comment, Scoping p. 24)

"It would not be just 'no improvements in big game security' but widespread elimination of big game security and great reduction in elk and deer numbers. Rocky Mountain elk and Mule deer depend on hiding and thermal cover for their survival, which would be mostly removed on a landscape scale. This would not be a 'minimal' effect." (BMBP comments, Scoping p. 25)

"The vast majority of species, including MIS and TES species, would be negatively affected over the long-term, to the point of loss of viability in the project area for many, likely including Pileated woodpecker, American marten, Redband trout, Rocky Mountain elk, and primary cavity excavating woodpecker species. This is unacceptable. The Forest Service conclusion that extensive and intensive removal of forest cover throughout the Crow project area would not contribute to a negative trend in viability for any MI species that has habitat within the project area does not pass the legal giggle test. Planned heavy extensive logging foreseeably would contribute to a negative trend in MIS viability." (BMBP comments, Scoping p. 25)

The Forest Service apparently did not analyze effects to American marten, Canada lynx, Pacific fisher, and Wolverine specifically in the EA. This represents inadequate analysis and failure to ensure these species' viability in the context of the proposed Crow HFR management actions.

Resolution

BMBP has commented on its objection to the Forest Service's failure to provide for viability of Management Indicator and other species in the Crow HFR project. See our comment citations and sample quotes in the above paragraphs.

Resolution of this issue would include:

Re: For Pileated woodpecker and marten viability: Drop all large tree logging and commercial logging and prescribed burning in all sale units that incorporate suitable or active habitat for Pileated woodpeckers and American marten, which would be moister mixed conifer old growth or LOS habitat with 40-60% canopy closure or more for Pileated woodpecker, and for marten, abundant down and elevated logs for winter foraging, as well as large snags for both species, with relatively intact forest canopy and no large openings for marten. See our survey sheets for guidance re: Pileated woodpecker sightings, fresh Pileated foraging and/or Pileated nest or roost holes in snags and abundant down and elevated logs and large snags with relatively intact forest cover for marten. There is also Pileated woodpecker nesting in old growth Ponderosa pine habitat, often in proximity to old growth Grand fir foraging habitat in riparian corridors. Good Pileated woodpecker and marten habitat is usually included in our priority "Drop" list of sale units.

Re: protecting Primary Cavity Excavating woodpecker viability: Protect large live trees and large snags and groups of snags from logging and significantly reduce snag loss by reducing mature tree logging, especially in the 15-21" dbh range and by dropping "temporary" road construction and closed road reconstruction to reduce loss of snags through hazard tree felling. See our survey sheets and photograph descriptions and samples for primary cavity excavating woodpecker species sightings, fresh or recent foraging sign, and/or roost and nest holes. Drop sale units with significant higher use by multiple primary cavity excavating woodpecker species or extensive active use by one species. Heavy use of a sale unit area by multiple species of PCEs or extensive use by one PCE species usually results in the sale unit being in our priority "Drop" category for sale units.

Re: Northern goshawk and MIS American marten and Pileated woodpecker:

- * No commercial-size logging in suitable primary goshawk habitat and PFAs, suitable marten habitat, suitable and active Pileated woodpecker habitat, with no overstory canopy reduction in these areas;
- * No log and snag reduction in suitable and active American marten and Pileated woodpecker habitat;
- * Drop all commercial-size logging in wildlife connectivity corridors; which benefits marten and also benefits many other species;

- * No prescribed burning of suitable habitat for Pileated woodpecker and American marten;
- * Drop all commercial logging, noncommercial thinning, and prescribed burning within any undeveloped lands.
- *Drop planned “temporary” roads as these often remain on the landscape and increase access for illegal firewood (often large snag) cutting and fur trappers (who take such species as marten, and potentially Gray wolf and Canada lynx or Pacific fisher) and for disturbance to nesting goshawks, and reduce re-opening of closed roads for the same reasons.
- *Drop all commercial logging in known goshawk PFAs, as well as in any other goshawk activity centers (nests and PFAs) discovered, as well as in mapped primary or core habitat. We saw numerous goshawks in the Crow sale, including juveniles. The Crow project area seems to be a stronghold for goshawk reproduction and viability.

Re: protection of many wildlife species:

- * Drop all commercial-size logging in wildlife connectivity corridors (allowing only for limited noncommercial thinning up to 9" dbh); which benefits Rocky Mountain elk, Mule deer, marten and various Birds of Conservation Concern, including Neotropical Migratory songbirds, and also benefits many other species;
- * Drop all commercial logging, noncommercial thinning, and prescribed burning within any undeveloped lands.
- *Drop planned “temporary” roads as these often remain on the landscape and increase access for illegal firewood (often large snag) cutting and fur trappers (who take such species as marten, and potentially Gray wolf and Canada lynx or Pacific fisher) and for disturbance to nesting goshawks and reduce re-opening of closed roads for the same reasons.
- *Protect any suitable habitat for Canada lynx, Pacific fisher, and Wolverine. This would most likely be in the higher elevation, moister mixed conifer forest areas in the north half of the sale area north of rd. 43 and along riparian drainages just south of rd. 43. These three species evidently were not analyzed for effects in the Crow EA. Their potential habitat probably overlaps our high priority “Drop” sale units to a large extent regarding potential lynx and Pacific fisher, as well as some sale units near or on Snow Mountain and next to the Utley Butte Roadless area for possible wolverine, which may also be in our priority “Drop” sale units.

Re: protecting the viability of Mule deer and Rocky Mountain elk:

- * Retain more overall tree density and deer and elk cover—especially by dropping sale units in cool moist habitat, dropping commercial size logging in wildlife connectivity corridors, and dropping commercial logging in microhabitat patches where greater density would naturally occur, such as at higher elevations, within RHCAs, on North to Northeast aspect slopes or in hollows.

*Road density should be reduced to at least the Forest Plan standards and objectives for elk.

Re: MIS and Sensitive Redband trout and Columbia Spotted frog: See recommended remedies below, under Forest Plan violations—INFISH.

Other Forest Plan violations

Additional Forest Plan violations in the Crow HFR project include potential violations of Forest Plan standards by further setting back attainment of INFISH/PACFISH Riparian Management Objectives; not following management intent for wildlife connectivity corridors; and not following visual corridor management. Violation of Forest Plan standards also include not adequately protecting Northern goshawk under the Eastside Screens and potentially exceeding Forest Plan limits to detrimental impacts to soils. Notably the originally proposed Forest Plan

amendments would egregiously violate the Eastside Screens 21" dbh logging limit and Forest Plan goals and standards to protect large trees and old growth habitat. We reject the rationales that these are site-specific Forest Plan amendments and that logging large and old trees is warranted in the Crow HFR sale area.

Violation of the Forest Plan Eastside Screens

INFISH Violations

Our comments on potential Forest Plan violation regarding failure to demonstrate adherence to INFISH RHCA buffers for heavy equipment use, "temporary" road construction, and re-opening of closed roads regarding stream crossings and to Riparian Management Objectives clearly state our concerns. Most information about planned damaging management actions within RHCA buffers or within 50 feet of a RHCA was not available to us through the scoping package and has only now come to light in the EA analysis, so we had no opportunity to comment specifically on that more detailed analysis and disclosed plans, in contravention of NEPA objectives. So we will clarify below what parts of the Crow planned actions within RHCAAs described in the EA that we want changed as part of this objection. Our relevant BMBP comments are quoted and cited below:

"Large wood, derived from large trees retained on the forest landscape, contributes large wood for fish habitat to form pools and strain excess sediment, as well as shade streams and keep water temperatures cool, and may be delivered to the stream from outside the RHCA buffers due to their great height/length. Also without large trees holding slopes above streams, there may be landslides, mass wasting, and other less direct excess fine sediment loading to streams, including from the logging." (BMBP comments, Scoping p. 11)

On p. 24 of the Scoping Package, without much detail as to what impacts would occur in RHCAAs from proposed management actions (which were later revealed in the EA after the allowed public comment period for scoping only), we responded to this general statement: "Sensitive species that would be negatively affected include redband trout, Columbia spotted frog...." (Scoping p. 24) Our response: "We are concerned by likely negative impacts to: Redband trout, possible Pacific fisher, Canada lynx, Gray wolf, Columbia Spotted frog...." (BMBP Scoping comments, p. 24)

"The vast majority of species, including MIS and TES species, would be negatively affected over the long-term, to the point of loss of viability in the project area for many, likely including Pileated woodpecker, American marten, Redband trout, Rocky Mountain elk, and primary cavity excavating woodpecker species. This is unacceptable." (BMBP comment, Scoping p. 25)

We object to not being allowed to comment on the Crow HFR EA, as the EA disclosed numerous planned management actions causing negative effects that were not revealed in the Scoping package. Allowing public comments only on limited scoping information deprived the public of a full understanding of what was planned to take place in the Crow sale area and what the effects could be. Our following quotes from the EA regarding management actions that would occur within RHCA buffers and their potential negative effects reflect a prime example of why we object to the lack of opportunity to comment on the EA, which really should have been an Environmental Impact Statement for the Crow project.

For instance, not disclosed in the Scoping package:

"Under both action alternatives, less than 2 miles of temporary road construction would occur within 50 feet of a CAT 1-4 stream to access some timber harvest units.

There are approximately 24 potential temporary road segments that are within RHCAAs (category 1, 2, and 4 RHCAAs.) The number of skid trail crossings are unknown at this time... Temporary roads that cross streams and potential crossings of streams, including fords and installation of culverts....Crossings (skid trail or road) and temporary road construction in

RHCAs would be considered on a site-specific basis...and would be subject to some of the following measures to protect stream banks and minimize channelization of sediment/water at the skid trail approaches to those streams. These measures are designed to reduce impacts but are not expected to be 100 percent effective in preventing sediment yield, or channel bank damage." (EA p. 3-79) Then on EA p. 3-80 there is a list of "temporary" roads and stream crossings "that may impact aquatic species habitat", including "temporary" roads crossing category 4 and 1 RHCAs (Burnt Cabin Creek tributaries, Whiskey Creek and a tributary, and Emigrant Creek), segments of "temporary" roads paralleling category 4 and 1 streams (tributaries to Emigrant Creek and Bear Canyon Creek and Bear Canyon Creek itself), and "Multiple unknown potential crossings that intersect RHCAs." (Crow HFR EA p. 3-80)

Based on this new information we have additional proposed partial resolutions for INFISH Forest Plan violations below. First, some of our observations based on all this significant information missing from the Scoping package and not disclosed for public comment:

RHCA buffers, including 300 foot buffers on each side for Category 1 RHCAs, are based on good science that has yet to be refuted, so we ask the Forest Service to stop violating the RHCA buffers, including by constructing "temporary" roads within Cat. 1 and 4 RHCAs and planning stream-crossings with vehicles and heavy equipment. Sediment travels downstream, including in spring run-off in category 4 intermittent stream channels. It's completely unnecessary to plan for so many (or any!) "temporary" road impacts to streams as per the list on EA p. 3-80. All the Crow area needs, if anything, is noncommercial thinning by hand up to 9" dbh, with up to 12" dbh for ladder fuel trees next to old growth trees (optional from our perspective) and prescribed burning only in the truly dry Ponderosa pine dominant forest types—none of which necessitates "temporary" road construction or stream crossings with heavy equipment or vehicles.

There's no sufficient analysis in the EA to justify the conclusion in par. 2 of p. 3-81 that: "With implementation of project design criteria, construction of these temporary roads and utilization of these crossings would not result in a meaningfully measurable reduction in pool frequency."

We are also concerned by the following EA admission:

"With implementation of project design criteria, delivery of fine sediment resulting from road maintenance and use would be minimized but could still result in a meaningfully measurable reduction in pool frequency." (Crow HFR EA, p. 3-81, emphasis ours) There is no attempt in the EA to determine just how significant these potential "meaningfully measurable" reductions in pool frequency could be cumulatively.

Likewise the EA fails to assess and quantify the cumulative effects of fine sediment delivery to streams from use and re-closure of closed roads:

"With implementation of project design and criteria, delivery of fine sediment resulting from use and re-closure of closed roads would be minimized but can still result in a meaningfully measurable reduction in pool frequency." (Crow HFR EA, p. 3-81, emphasis ours)

Other statements in the EA that were not in the Scoping package also give rise to concerns based on new information:

"Since these roads would remain part of the Forest road system, the benefits of the closures would likely not be permanent." (Crow EA p. 3-82) While this is an honest assessment, "temporary" roads and roads closed for ecological protection reasons are not supposed to become part of the Forest road system, to be opened whenever convenient for more logging. In fact, the Forest Service has long promised that the public that these roads would not be part of the Forest road system, so as to reduce road density to meet Forest Plan standards, protect elk security, not reuse ecologically damaging roads such as those that continually erode and are hydrologically connected to streams, or because they are portrayed as merely "temporary" roads that will be fully decommissioned—though full decommissioning is rarely implemented. We are opposed to keeping closed roads and "temporary" roads in the Forest system road classification as this allows

their continual re-opening, as in the Crow sale, defeating the purposes of their closure or status and promised decommissioning as “temporary” roads.

There's no EA detailed analysis justifying the conclusion on p. 3-82 that: “The removal of shade associated with construction of temporary roads would have a negative effect to stream shading and water temperature that would not be meaningfully measurable.” This is especially in question if the “temporary” roads are becoming long-term system roads and will not be fully decommissioned and re-planted. We are also concerned that: “As closed roads are deemed needed for future management and are accessed infrequently, trees would not likely grow of a sufficient size within the roadbed to provide shade.” (Crow HFR EA p. 3-83)

The EA further admits that: “Construction of approximately 2 miles of temporary roads within 50 feet or less of a CAT 1-4 [stream] are proposed....This work along with project design criteria would minimize damage to streambanks or sediment delivery, but some measurable effects to bank stability or width-to-depth ratios could still occur.” (Crow HFR EA p. 3-83, emphasis ours)

The Crow HFR EA fails to analyze the cumulative effects to stream sedimentation, pool frequency, bank stability, and width to depth channel ratios from all these above quoted predicted potential measurable negative impacts of “temporary” road construction and closed road re-opening and use within RHCAs from the EA. Analyzing in depth and quantifying these cumulative effects is essential for predicting cumulative effects to Riparian Management Objectives attainment, fish species viability, Columbia Spotted frog habitat, and water quality for the combined creek and tributary stream segments affected.

Resolution

BMBP has commented on the Crow HFR project's violations of INFISH Riparian Management Objectives and RHCA no logging buffers. See our comments cited and quoted:

To resolve this objection, the Forest Service needs to:

- *Drop all “temporary” road construction and use and re-opening of closed roads within 50 feet of a Category 1-4 stream.
- *Drop all re-opening of closed roads, skid trail construction or use, and construction of ‘temporary’ road segments within, or immediately adjacent to, RHCAs.
- *Drop all planned heavy logging equipment or vehicle stream drainage crossings on skid trails, re-opened closed roads, and “temporary” roads.
- * Don't allow any use of pre-existing landings within RHCAs.
- *Drop the 17 miles of haul routes within Category 1, 2, and 4 RHCAs.
- *Don't re-open closed roads for hauling in or near an RHCA.
- *It's past time to implement effective road closures on the Ochoco, not just easily circumvented berms, signs, or no physical closures, as planned. (See Crow EA p. 3-81, 2nd to last par.)
- *All management activities within RHCAs that are predicted to potentially have “meaningfully measurable” impacts, as quoted above from the EA or otherwise appear in the “Effects to Aquatics and Water Quality” section should be avoided or prohibited in order to support INFISH Riparian Management Objectives and conform to Eastside Screens direction under the Forest Plan.

Failing to adhere to Eastside Screens Protections for Northern goshawks

We observed and photographed multiple goshawks in the Crow sale area, including juveniles, indicating that the Crow project area is a stronghold for goshawk reproduction and viability of the species. The broader context for goshawk is the systematic logging removal of suitable goshawk

habitat in National Forests across eastern Oregon, as the Forest Service is targeting tree density for removal under the guise of fire risk reduction, without great enough consideration for species like goshawk that evolved with and are dependent on denser and more complex forest structure. The accelerated sale, pace, and intensity of commercial logging is especially threatening the viability of dense forest-associated species, including Northern goshawk.

Our comments on the Crow HFR EA regarding goshawk explain our rationales for this objection: "Northern goshawk also rely on live large Douglas fir and Ponderosa pine for nesting.... We are greatly concerned that such excessive removal of trees planned, and of large trees in particular, will lead to the loss of viability for snag and log dependent species, and large and old tree-associated species, in the Crow area, which is a large part of the Ochoco National Forest.

Species' extirpation and eventual extinction happens cumulatively from the combined results of multiple timber sales, overgrazing by livestock, road use, etc." (BMBP comments, Scoping p. 23)

"We ask for the following key issues to be analyzed in depth for the Crow sale area in an EIS, or the sale should be dropped in its entirety: the cumulative effects of past logging, livestock grazing, and road construction and use combined with the proposed action [effects] to: *large tree structure and abundance *old growth habitat quality and abundance *old growth and large tree-associated or dependent species *species requiring security corridors, including elk, deer, Gray wolves, marten, Canada lynx, wolverines, and others *Neotropical migratory songbirds dependent on multi-layer canopy, large trees, and/or old growth structure *accipiter hawks requiring denser forest and mature and large trees (Northern goshawk and Cooper's hawk)...." (BMBP comments, Scoping p. 18)

Further comments relevant to Northern goshawks:

"Old growth-dependent species are relying heavily on the 'LOS'/old growth structure outside the designated 1,456 acres of old growth to meet their needs and may not have viable populations without it. There is a lot more LOS/old growth in the Crow sale than the Dedicated (MA-F6) areas that are now on the chopping block again—this time for almost total liquidation by logging large and old trees 21-30" dbh, thus removing the next generation of big old trees 30"+ dbh and eliminating much of the large structure across the landscape needed by associated wildlife species and for carbon storage, soil nutrient cycling, fish habitat, and recreational values." (BMBP Scoping comments, p. 10)

"We are strongly opposed to reducing average basal area to only 30 square feet per acre. This leaves no trees for needed snag and log creation over time and no structural complexity." (BMBP comment, Scoping comments, p. 7) The EA fails to address these concerns.

New information in the Crow EA that was not disclosed in the Scoping Package for public comment includes the following:

"Approximately 81 percent of PFAs would receive some sort of vegetation treatment. Sixty-six percent of the treatments are commercial treatments and about 34 percent are noncommercial treatments. Of the treated goshawk PFA acres, about 43 percent falls within connectivity corridor treatments where the vegetation is managed at higher canopy densities for old growth-dependent species....

"Twenty-nine percent of commercial treatments in PFAs under the proposed action alternative include the removal of trees greater than 21 inches diameter....

"Within potential source habitat, about 58 percent of source habitat would receive some sort of vegetation treatment. Eighty-seven percent of the treatments within source habitat are commercial treatments and about 13 percent are noncommercial thinning treatments. Of the commercially treated acres, about 31 percent falls within connectivity corridors....Under the

proposed action alternative about 42 percent of the commercial treatments would remove trees over 21 inches DBH....

“Proposed treatments in goshawk PFAs and source habitat would cause a decline in prey habitat, perch trees for hunting and potential future nest trees from the reduction in crown density and complexity. Treatments that remove trees greater than 21 inches DBH under the proposed action would have the greatest impact to goshawk habitat....

Crow would treat about 39 percent of the primary and secondary habitat within the watershed.

...Since over 60 percent of goshawk reproductive habitat would be treated with Crow and previous commercial treatments have occurred in the watershed and within the project area in addition to stand replacement fire in the past two decades, reproduction of goshawk in the short to mid-term may decline due to lack of complex vegetation....” (Crow HFR EA, pp. 3-68-3-69, underlining emphasis ours)

In other words, the Forest Service is not managing for goshawk viability in the Crow project area with the Crow sale. Reproductive decline in the short to mid-term, with much less suitable goshawk habitat left from Crow commercial logging and non-commercial thinning would likely lead to long-term extirpation of goshawk in the Crow project area, as the basal areas retained would be too low over too large an extent of the Crow area (landscape scale) and with too little canopy closure and complex structure to support Northern goshawk. Not managing for goshawk viability is in contravention of the Eastside Screens under the Forest Plan. This is an extraordinary extent and intensity of destruction of goshawk habitat that would be lost to logging, even if large trees were retained. Northern goshawk require at least 60% canopy closure to nest and at least 40% canopy closure to forage. Those levels of canopy closure would no longer exist at sufficient levels post-logging across the Crow area to support a viable goshawk population in the Crow project area.

As you can see from the previous paragraph, if we had known there would be such severe and widespread logging impacts to Northern goshawk reproductive habitat, we would have focused our comments much more on the specific threats to goshawk viability posed by the Crow HFR timber sale “project”. Fortunately we specifically referenced threats to Northern goshawk in our comments, though many members of the public probably completely missed their opportunity to comment on such severe impact to goshawk habitat and viability from the Crow sale, not realizing the extent and severity of the threat posed to goshawk in the Crow area. I did not expect such extensive and complete destruction of goshawk habitat to be planned by the Emigrant Creek Ranger District staff, as they have been much more careful not to log so intensively or extensively in goshawk post fledging areas, nest core areas, and other source habitat as to cause the decline in reproduction or eventual extirpation of goshawks in timber sale areas in the past.

Resolution

- * Drop all the commercial logging proposed in Northern goshawk designated Post-Fledging Areas, nest core areas, and other reproductive or source habitat for goshawks.
- * Don’t implement prescribed burning in goshawk PFAs or nest stands during the Spring reproductive season.
- * Keep noncommercial thinning away from recently active goshawk nest sites—i.e. active nests within the last 5 years, observing the 30 acre buffer for active nests. Drop all noncommercial thinning in the PFAs.
- * Drop any ‘temporary’ road construction or closed road re-opening within the nest core areas or the PFAs, as this could introduce enough human disturbance to drive away a nesting pair of goshawks and cause them to abandon the nest.

Forest Plan Management Area Guidance Violations

Re: Violation of Wildlife Connectivity Corridor Management Goals

We are strongly opposed to commercial logging and excessive “non-commercial” size thinning in wildlife connectivity corridors. We want the Forest Service to drop all commercial logging and limit non-commercial thinning in connectivity corridors, as it defeats the purpose of leaving denser areas to allow for movement of old growth-associated wildlife species, as well as native ungulates using these areas as security cover, and to provide greater habitat security in these areas compared to intensively managed stands outside these corridors.

Our comments regarding violation of wildlife connectivity corridor management goals can be found below. We also expressed concern regarding provision of sufficient deer and elk security cover, such as is often provided by wildlife connectivity corridors. For example:

“Connectivity corridors for wildlife should be based on wildlife use, riparian corridors, and sufficient existing hiding and thermal cover, not by sight (site) unseen mapping with little or no reference to existing conditions, as seems to be the case based on seeing some of the areas chosen as wildlife corridors. Wildlife connectivity corridors are more important to retain as viable security cover than ever, given extreme climate change soon necessitating mass migrations of species to higher elevations and north—non-commercial thin only.” (BMBP comment on Scoping p. 16)

Resolution:

BMBP has commented on the potential Forest Plan violation of not following management area intent and the current need for greater protection for Wildlife Connectivity Corridors. See our comments cited and quoted above.

*Drop all planned commercial logging and limit non-commercial thinning to only the densest areas in drier forest types (that appear due to wildfire suppression) in mapped or identified wildlife Connectivity Corridors.

*Limit prescribed burning to dry, Ponderosa pine-dominant, lower elevation connectivity corridors.

Logging within Visual Management Corridors does not meet the Forest Plan MA (Management Area) requirement

Our comments explain our objection position:

“If visual corridors are taken down to only an average of 30 square feet per acre of basal area and/or have significant numbers of large trees removed, this will no longer ‘maintain the natural appearing character of the Forest, violating MA F26 Forest Plan requirements. Recreationists do go off roads to hike, hunt, cross-country ski, pick berries and mushrooms, go antler hunting, camp, etc. Scenic quality would be destroyed.’ (BMBP comments, Scoping p. 10)

“Recreational values would be destroyed beyond recognition throughout most of the sale area by bringing down average basal areas to only [an average of] 30 square feet per acre, which would resemble massive clearcuts throughout the area with only small numbers of trees left [per acre], like a ‘shelterwood’ or ‘seed tree’ clearcut. This would no longer be a ‘relatively natural outdoor setting’ at all. No wonder buffers are planned along all the major roads—so the public won’t see the rampant destruction—the moonscape-like deforestation on a vast scale.” (BMBP comments, Scoping p. 10)

Resolution:

*Greatly scale down the extent of commercial logging. Prioritize non-commercial thinning up to 9" dbh or up to 12" dbh immediately under the dripline of an old growth Ponderosa pine or Western larch.

*Retain all trees equal to or greater than 15" dbh.

*Increase basal areas to a spectrum of at least 40-100 square feet of basal area for dry Ponderosa pine forest and 80-120 square feet of basal area for moister mixed conifer forest types at higher elevations, on north to east slopes, in riparian corridors, in moist hollows, and on ashy soils where there is evidence of historic mixed conifer. Overall average basal area should be much higher than 30-40 square feet per acre to allow for future mortality to create snags and logs and to allow for thermal cover, and greater structural complexity.

*Drop completely our highest priority "Drop" sale units as these overlap with the best recreational experience as well as with the best wildlife habitat, best old growth habitat, and never logged areas, as well as often overlapping with sale units that don't suggest the "need" for any commercial logging.

Road Concerns regarding "temporary" road construction and re-opening of many miles of currently closed roads:

See our road-related Visual Corridor comments above. Our comments regarding impacts to wildlife species sensitive to disturbance also explain our position. See also our comments regarding deer and elk security concerns and wildlife connectivity corridors above. Additionally, we are strongly opposed to any "temporary" road construction and closed road re-opening within or adjacent to RHCAs. See our comments and observations on this issue under "Forest Plan Violations" with the sub-heading of "INFISH".

Comments specific to "temporary" road construction and closed road re-opening and use:

"We are strongly opposed to opening any closed roads or constructing any so-called 'temporary' roads for this Crow timber sale. Opening closed roads would often double road miles per square mile and the Forest Service does not have a good record for effectively closing re-opened roads or decommissioning 'temporary' roads—especially on the Ochoco NF. Closed roads re-opened for timber sale use are hardly ever effectively closed after the timber sale."

"We are opposed to 'long-term storage' and re-opening of roads closed already for reducing road density, protecting wildlife security, preventing hydrological [connectivity] impacts, preserving water quality, or reducing other resource damage. Why does the Forest Service now throw out these concerns?! Don't repudiate past Forest Service precautions by re-opening closed roads."

"It's not necessary to use closed roads for a timber sale in order to confirm they are administratively closed, which could be done in a separate NEPA process. This is blackmail targeted at environmentalists, pure and simple. Don't use closed roads for log hauling. Instead, scale down this timber sale and largely replace it with only ecologically sound restoration (which does not include commercial logging) and non-commercial size thinning."

" 'Temporary' road construction is new road construction by another name, on top of the extreme back log mileage of unmaintained roads on the landscape. 'Temporary' road openings increase access for livestock, invasive exotic plants, illegal firewood cutting, fur trapping, cross-country ATV use, and all the attendant impacts of these, including riparian impacts."

"So-called 'temporary' roads should never be constructed unless as a shorter replacement for a longer, more damaging road in use. 'Temporary' roads are hardly ever fully decommissioned and are often re-used as 'existing disturbance' for the next timber sale. This makes 'temporary' roads de facto system roads." (BMBP comments, on Scoping p. 19)

Resolution

BMBP has commented on our concerns re: ‘temporary’ road construction and the re-opening of miles of currently closed roads. See our comments cited and quoted above. Many of our suggested resolution remedies are already requested under the heading of other issues.

*Drop the re-opening of closed roads that were closed for ecological protection reasons, such as hydrological connections to streams, soil erosion, and wildlife disturbance, as well as closed roads that have already grown over, or would require reconstruction.

*Drop re-opening of closed roads and ‘temporary’ road-building in, or adjacent to RHCAs.

*Drop all ‘temporary’ road construction.

*Decommission fully all roads within RHCAs except for major roads not causing ecological damage.

*Reduce overall road density to less than Forest Plan standards, based on best available science to protect elk and deer security and move road density lower to support Gray wolf recovery (less than one mile per square mile.)

From our INFISH violation resolution:

*Drop all “temporary” road construction and use and re-opening of closed roads within 50 feet of a Category 1-4 stream.

*Drop all re-opening of closed roads, skid trail construction or use, and construction of ‘temporary’ road segments within, or immediately adjacent to, RHCAs.

*Drop all planned heavy logging equipment or vehicle stream drainage crossings on skid trails, re-opened closed roads, and “temporary” roads.

* Don’t allow any use of pre-existing landings within RHCAs.

*Drop the 17 miles of haul routes within Category 1, 2, and 4 RHCAs.

*Don’t re-open closed roads for hauling in or near an RHCA.

*It’s past time to implement effective road closures on the Ochoco, not just easily circumvented berms, signs, or no physical closures, as planned. (See Crow EA p. 3-81, 2nd to last par.)

Potential Violation of Snag Density Requirements

Our comments explain our concerns: See our snag density and abundance related comments under NFMA MIS species viability above. Our comments also mentioned concern over the elimination of future large snags by logging large live trees, large hazard trees, and too many existing mature trees re: the habitat needs of Pileated woodpecker, Northern Flicker, American marten, Northern goshawk, and other species. See also our comments on snag density requirements for Primary Cavity Excavating woodpecker species under NFMA—MIS species viability quoted below, which pertain to this objection:

“There are many snag-dependent species currently using snags, large live trees, and large logs in the Crow area, including Northern Flicker, Williamson’s sapsucker, Pileated woodpecker, Blackbacked woodpecker, and Hairy woodpecker, all of which we’ve seen, heard, and found foraging sign, as well as roost holes and nest holes. White-headed woodpeckers are also likely [and were later seen and photographed—see Sophie and Will’s survey sheets and photo samples.] DecAID is not designed or intended to ensure viability of snag-dependent species. There are many species that would be extirpated from the Crow project area due to widespread loss of mature and large trees to the point of virtual clearcutting, eliminating recruitment of the majority of snags and down wood at levels currently available.” (BMBP comments, Scoping p. 22)

(See also evidence of the other woodpecker species mentioned above in our survey sheets and sample photographs, including photographs of Northern Flicker, Pileated woodpecker, and Williamson's sapsucker.)

“What constitutes snags being ‘surplus to other resource needs’? Much of the sale area only consists of small live trees in young Ponderosa pine plantations. The woodpeckers here—including MIS woodpeckers—need the existing snags.” (BMBP comment, Scoping p. 13)

“This brief assessment of preliminary effects to snags and snag-dependent species ignores the critical role large Grand fir plays in providing preferred and heavily used foraging substrate for Pileated woodpeckers and Black bears and broken top large snags for Great Gray owl nesting platforms. Also ignored is Pileated woodpecker occasional nesting in Grand fir, Northern Flicker preferential foraging in large Douglas fir and Ponderosa pine, and Williamson’s sapsucker’s heavy foraging use of live large Douglas fir and Ponderosa pine.

Northern goshawk also rely on live large Douglas fir and Ponderosa pine for nesting and Pacific fisher rely on live and snag large fir for denning cavities. American marten (another Management Indicator species) relies on Pileated woodpecker nest holes in large trees (of whatever species) for denning and on abundant down and elevated logs for winter subnivean foraging.

We are greatly concerned that such excessive removal of trees planned, and of large trees in particular, will lead to the loss of viability for snag and log dependent species, and large and old tree-associated species, in the Crow area, which is a large part of the Ochoco National Forest. Species’ extirpation and eventual extinction happens cumulatively from the combined results of multiple timber sales, overgrazing by livestock, road use, etc.” (BMBP comments, Scoping p. 23)

The EA analysis fails to address our concerns regarding foreseeable violation of Forest Plan standards for snag density and abundance, potentially immediately, and with long-term loss of snag abundance for woodpecker species and other snag-associated wildlife decades into the future due to planned logging down to extremely low basal areas on a landscape scale. Such low basal areas do not retain enough trees to allow for natural levels of snag and down log recruitment. Best available current science also refutes any assumption that current Forest Plan standards for snag density and abundance are sufficient for snag-dependent wildlife. The Malheur Forest Service staff have incorporated higher snag density and abundance requirements according to current best available science in previous timber sale planning or objection resolution.

Resolution:

BMBP has commented extensively on our objection that the Crow HFR Project proposed actions could lead to a significant reduction in existing and future snag density and abundance in violation of Forest Plan standards.

Resolution to our objection regarding snag density includes the following modifications to the Crow HFR project:

*Increase the lowest basal area in the variable density retention range to be at least 60 square feet of basal area in dry Ponderosa pine forest and at least 80 square feet of basal area in the mixed conifer stands in a variable density range of basal areas up to 100 (dry forest) to 120 (moister mixed conifer forest) square feet of basal area, with higher average basal areas to allow for more natural rates of mortality over time to create snags and down wood into the future.

*Reduce the scale of commercial logging and snag reduction overall by dropping best wildlife habitat sale units based on our survey sheets, including moister mixed conifer habitat suitable for Pileated woodpecker and American marten, and stands with abundant snags currently suitable for Primary Cavity Excavating woodpeckers. Small diameter non-commercial thinning up to 9” dbh could usually still be done in these stands without harming the woodpecker species.

*Reduce planned re-opening of closed roads as suggested above under Road Density to reduce the amount of hazard tree felling involved and prevent future increased illegal snag felling for firewood.

*Drop the construction of ‘temporary’ roads, as these provide access for illegal snag felling for firewood as well as increasing project-associated hazard tree snag felling.

*Buffer and protect existing large snags and pockets of abundant snags from logging.

Potential Violation of Soil Protection Standards

Our scoping comments address our objection based on the scant information in the Scoping Package and our observations of extensive soil damage in the field, as the public was not allowed to comment on the new disclosures and more detailed information regarding potential detrimental soil impacts from the Crow HFR timber sale management actions in the EA:

“There’s extensive soil damage in this sale area. Burning should not be allowed to increase soil damage. Lopping and scattering of small trees cut should be used whenever down wood is not already at high levels.” (BMBP comment, Scoping p. 14)

“Reduce small dbh thinning to 9” dbh and work by hand only. There’s a lot of soil damage.” (BMBP comment, Scoping p. 16)

New information in the EA not in the Scoping package discloses that “existing detrimental disturbance is at its highest allowable extent” in sale units 120, 156, 171, 186, 1029, and 1170. (EA p. 3-89) There’s no specific analysis incorporated in the EA for specific areas that have already high detrimental soil impacts that may exceed the detrimental soil impact level of 20% with Crow management impacts except for these six sale units that would be “monitored” without EA disclosure of how high detrimental soil impacts are in those sale units and how high they might be after management implementation. This is not prevention of Forest Plan standard violation of the detrimental soil impact standard, but accommodation of violations.

The EA also discloses new information about Equivalent Harvest Area calculations. Since when is the EHA threshold 30% instead of the 11% to 16% limits used before in Forest Service timber sale NEPA documents? This is switching the standard based on the science to allow for more soil and watershed damage. Allowable EHA thresholds should be compared with the best available current science but there is no science citation for the new 30% threshold, or is it an outdated threshold for EHA? There is no comparison given with other EHA threshold percentages used before by the Forest Service.

The EA seems very biased toward minimizing effects of soil damage with un-quantified terms such as “insignificant”, ignoring that there has been recent scientific critique of best management practices not going far enough to prevent sediment increases or water temperature increases. The EA minimizes effects through vague language rather than any tangible data and science study results in the field: “These effects are also not of a type or extent that would combine with ongoing human activities or foreseeable projects on the Forest and produce long-term, cumulative impacts.” (Crow HFR EA, p. 3-91) Why not? There’s lots of cumulative negative effects to soils from past management, such as in major timber sales like Crow.

There’s no disclosure of existing levels of detrimental soil impacts for all the timber sale units, as is often done in past Malheur timber sale EAs and EISes. These detrimental soil impacts need to be quantified and disclosed. The guiding principle behind NEPA analysis is to avoid or prevent Forest Plan and other legal violations and damages to “resources” (life sources), not to allow violations and degradation to happen.

The Forest Service is apparently planning to let higher detrimental soil impacts occur in the sale units that would be monitored due to existing high levels of detrimental soil impacts:

“These units would be monitored using the Forest Soil Disturbance Monitoring Protocol during and after treatment to evaluate soil disturbance and mitigate detrimental soil impact exceedance where possible. Therefore, maximum cumulative detrimental impacts are expected to meet Forest Plan standards in all units due to BMPs, design criteria and mitigation.” (Crow HFR EA, p. 3-91, emphasis ours) This conclusion does not logically follow from admission that mitigation is not 100% effective and may not be possible.

Resolution

BMBP has commented on our objection that the Crow HFR Project as proposed could violate Forest Plan soil protection standards. See our comments quoted and cited above.

To resolve this objection, the Forest Service needs to do the following:

- *Drop sale units which are acknowledged to have already high degrees of detrimental soil impacts or sensitive soils likely to lead to violation of Forest Plan standards for soil protection with proposed management. This includes dropping sale units 120, 156, 171, 186, 1029, and 1170 from any heavy equipment use and commercial logging.
- *Drop logging of any slopes greater than 35% to reduce potential erosion, loss of soil integrity, and potential sedimentation of creeks, if adjacent.
- *Drop any sale units or parts of sale units unlikely to meet Forest Plan standards for detrimental soil standards without further mitigation, as mitigation is unlikely to be 100% effective.

Violation of the Eastside Screens 21” dbh limit for logging large trees and the inappropriate use of the associated proposed Forest Plan Amendments

Since our scoping comments respond directly to many of the rationales given for logging large trees made in the EA, we will pair some of the statements in the EA with our relevant comments while also considering (outside of the scoping comments) new information in the EA on which we were not allowed to comment:

Re: planned logging removal of “young” large trees: In the Crow sale area, trees reaching 21” dbh generally have visual old growth characteristics by that size or only a few inches larger. The Grand fir cored in the Wolf sale for planned removal of large trees were generally 100 to 134 years old, not “young”. Calling one hundred plus year old trees young is to jettison the category of “mature” trees and to ignore that large trees are more fire resistant than small trees, no matter what age they are. One of our relevant scoping comments:

“Large tree logging is completely contrary to the perceived ‘hazardous fuel reduction need.’ Large trees—including Ponderosa pine, Douglas fir, and Grand fir, start developing old growth characteristics of thicker, more fire resistant bark—especially at the base of the tree and the lower trunk—and higher tree crowns further above most flame heights. This is most obvious in Ponderosa pine, Western larch, and Douglas fir, but also takes place in Grand fir (see my photo descriptions of 21-30” dbh Grand and Douglas fir), so that all three species of trees proposed for large tree logging are more fire resistant than smaller diameter trees.” (BMBP comments, Scoping p. 13)

The EA states that the proposed Forest Plan amendments “allow removal of young trees up to 30 inches DBH in selected commercial thinning units outside of late and old structure stands in Crow.” (EA p. 3-112) Yet the sale map which we were given to use for field surveying Crow sale units included many sale units identified as “LOS up to 30” for logging large firs up to 30” dbh and others identified as “LOS up to 30” with Ponderosa pine up to 30” dbh also scheduled for logging along with firs up to 30” dbh. Most of the sale units with logging large trees up to 30”

dbh were in designated LOS stands. So has this changed between scoping and the EA, such that large trees are no longer included for logging in all of these LOS identified sale units in Alternative 2? This is unclear.

Regarding the EA statement: "...there is a need to change the Ochoco Forest Plan, as amended, to better reflect desired conditions regarding hazardous crown fuels and fuel levels within Crow." (EA p. 3-112) Our response to this perception in our scoping comments:

"None of these rationales explains the emphasis of this sale being on the widespread logging removal of large trees, which are not the source of uncharacteristic density or high 'fuel' loading, as admitted in various places in this scoping letter. Yes, lots of past logging mistakes have resulted in high density of NCT and younger-mature trees up to 9" -12" dbh, but not in great density or numbers of large trees 21"-30" dbh." (BMBP comment, Scoping p. 9)

"Crown 'fuels' are the least important aspect of theoretical fire risk reduction. Further, much of the overstory in the Crow sale area has already been removed. What's left re: large trees and old growth structure is needed for wildlife habitat, carbon sequestration and storage to reduce climate change effects, soil nutrient cycling, and recreational appeal. This sale would not replicate historic patterns by removing many of the last large, more fire-resistant trees. The Forest Service needs to take responsibility for removing most of the large overstory trees (with old growth stumps of Ponderosa pine, Douglas fir, and Grand fir [as evidence in the Crow sale area]) and not repeat past mistakes." (BMBP comments written on, and referring to content on the Scoping Package p. 3)

The EA states the following: "Within Crow there has been an increasing trend of younger more shade-tolerant grand fir and Douglas-fir trees growing in the understory. The combination of timber harvest and fire suppression has gradually converted these dry forests from primarily long-lived, early seral species (ponderosa pine) to a higher proportion of late-seral species (grand fir and Douglas-fir)." (EA p. 3-112) Why does the Forest Service expect different results from the same general type of management as happened in the past? That is, logging removal of the overstory canopy and most mature (and potentially large) trees, and continued fire suppression (which is highly likely to continue), which would produce the same results: of more small, very flammable young trees growing in and more Grand fir and Douglas fir seedlings growing in (especially where there is a seed bed, or where moisture levels, topography, and/or elevation are suitable for firs, indicating they were historically present.)

The EA states that: "Some of these younger late-seral species are now greater (sic) quite large. The ingrowth of large younger fir trees has increased the risk of tree mortality to old growth ponderosa pine due to competition induced stress, insect attacks, and uncharacteristic wildfire." (Crow HFR EA p. 3-112) There is no in-depth in either the Crow EA or the Scoping package that supports these claims that large fir trees increase the risk of old growth Ponderosa pine succumbing to competition-induced stress, insect attacks, and uncharacteristic wildfire. This would be hard to prove, and the EA makes no attempt to justify these claims. It is far more likely that old growth Ponderosa pine may succumb to early mortality to the much greater competition stress from the far more numerous small trees surrounding them (which are mostly only up to 9" dbh with fewer cases of up to about 12" dbh), as most of the large trees (including large and old Ponderosa pine) were already removed from the Crow area by past logging.

Our relevant scoping comments:

"Reducing 'stocking' to pre-fire suppression conditions is best done by removing small trees that may have grown in since effective widespread fire suppression, which did not take place until the 1950's after World War II. Large tree logging is not needed or desirable to address wild fire suppression effects, as most trees $\geq 21"$ dbh are at least 100 years old, not 'young'—especially

in the drier forest conditions of eastern Oregon. Not all of the Crow sale area is typical of a low intensity/severity fire regime or frequent fire intervals, as the northern half of the sale area increases greatly in elevation (up to nearly 7,000 feet), was often obviously dominated by Grand fir or Douglas fir, or was co-dominant Grand fir and Ponderosa pine or Douglas fir and Ponderosa pine, based on field evidence. See our survey sheets and photo descriptions. Many sale units in the north end are also near creeks, seeps, or fens. Some of these sale units also have much moister plant associations.” (BMBP comments on Scoping p.7)

“The description of CT “LOS enhancement” does not disclose that some of these sale units have substantial fir old growth.” (BMBP comment, Scoping p. 15)

Based on our extensive field surveying of the Crow sale, most of the large Douglas fir and Grand fir are located where they would have been historically—at higher elevations, in moister areas, and on North to Northeast slopes. One sale unit that has never been logged before consists of big old growth Grand fir interspersed with openings (probably from past wild fires) and scattered big old growth Ponderosa pines generally near or in the openings—on a south-facing, high elevation slope. Our relevant scoping comments:

“The Forest Service is neglecting to disclose that there has already been a lot of logging of large old growth Douglas fir and Grand fir in the Crow HFRA sale area—especially in the north end and at higher elevations or in moist areas [where greater fir dominance would naturally occur]. See our field survey sheets for this area as part of our scoping comments [and as an appendix for this objection]—check ‘evidence of historic mixed conifer’, ‘plant community type’, slope aspect, elevation, and our old growth counts and photo descriptions. Not all of this Crow project area is exclusively historically pure Ponderosa pine or even Ponderosa pine dominant. There is a lot of forest type variation based on topography, slope aspect, proximity to riparian areas, and elevation. These differences include historically Grand fir and Douglas fir dominant stands and Ponderosa pine/Grand fir and Ponderosa pine/Douglas fir co-dominant associations of mixed conifer.” (BMBP comments, Scoping p. 4) The EA also grossly over-estimates Ponderosa pine-dominant “dry upland” forest type through a model, compared to the much greater variation of forest type on the ground.

The EA states that “Stand densities and multi-layered canopies have also increased across the project area.” (Crow HFR EA, p. 3-1112) Based on our field surveying, this is true for areas in the south end of the sale that have been heavily logged or clearcut and that are very dry Ponderosa pine-dominant, low elevation stands. Still, the stand densities have mostly increased due to small non-commercial size trees, not to sufficient time since past logging for re-growth of large trees, or even many mature trees. In the North half of the sale area, north of FS rd. 43 and a bit south of 43, especially along drainages, there is naturally moister, denser mixed conifer except for some south aspect slopes. The LOS designated sale units are mostly wide open, having been heavily logged right up to 21” dbh, creating artificial “open, park-like” stands. There are some LOS stands with more in-growth of young fir, but these are not large trees, and these areas are often historically mixed conifer with large and old fir trees present. These distinctions are important for preventing homogenization and sterilization of forest that was not historically wide open, Ponderosa pine-dominant dry stands—with an average basal area retention of only 30 square feet of basal area. Our related scoping comments are quoted below:

“Most of the ‘LOS’ identified stands in the Crow area have already been logged into open, park-like single strata stands, with many already partially high graded, CTed, and NCTed. See our field survey sheets and photo descriptions, mostly for the North half of the sale area.” (BMBP comment, Scoping p. 21)

“Many of those CT up to 30” [dbh] sale units have hardly any firs 21-30” dbh—these are needed for diversity.” (BMBP comment, Scoping p. 15)

The EA states that: "Roughly 72 percent (24,567 acres) of forested ground in the project area has a basal area greater than 90 square ft. per acre, which is above the desired range." Actually 90 square feet of basal area per acre is quite reasonable and to be expected in a natural forest, even in dry forest, especially if there is variable density with some openings. Many native species evolved with denser forest cover and greater structural complexity (e.g. Mule deer, elk, American marten, Pileated woodpecker, Pacific fisher, Northern goshawk, etc.) and are dependent on these conditions. Our related comments:

"An across the board basal area average of only 30 square feet of basal area per acre [See Scoping package statement on p. 7] is not consistent with the claim that 'commercial thinning treatments are based on site productivity as measured by plant association and determined on a stand-by-stand basis.' (p. 13 of the Scoping packet) Instead, the Forest Service is ignoring the great variation in historic forest type based on higher elevations roughly north of rd. 43 versus south of rd. 43, proximity to riparian zones, slope aspect, and plant associations on the spectrum of dry to moist. Please note that the sale units we field surveyed further north had moister plant associations (although some of these [PAGs] may have been destroyed by past heavy logging of the overstory and by past heavy livestock grazing), and greater proximity to larger perennial creeks, wet meadows, seeps, springs, and in one or two cases, possible fens. Further south we have observed drier conditions but also heavier past logging....Site productivity (and natural density) is much higher on ash soils, higher elevations with greater snowpack retention, and generally moister areas than on dry sites more typical at lower elevations. We are evaluating stands on a stand-by-stand basis." (BMBP comments, Scoping p. 12)

The Crow EA states the following on p. 3-112: "Existing fuel conditions are a result of effective fire suppression for the past 75 to 100 years, timber harvest, and livestock grazing. There has been an increase in understory vegetation and an increase in surface fuels, a change in species composition, and an increase in the continuity of vertical and horizontal stand structure. As a result, the potential for crown fire has increased." (underlining emphasis ours) This begs some closer examination. First, there is only claimed an increase in understory vegetation and surface fuels (both indicative of small tree density, not large tree density), and an increase in the continuity of vertical and horizontal stand structure, which was primarily caused by clearcutting and overstory removal, the effects of which would be replicated and continued by again proposed very heavy mature tree logging down to an average of 30 square feet of basal area or little more per acre and through proposed logging of large trees. These proposed management actions would reproduce the very conditions now prompting the Forest Service to repeat similar management, in an endless cycle of escalating ecological destruction through over-management.

Regarding the Crow EA's new information assumption of only a 12 to 20 year fire return interval for the Crow area as a whole: However, the Crow area has a great degree of variability in elevation, topography, and moisture regimes that make it very unlikely that the whole area (including high elevations up to above 6,000 feet) had a fire return interval of only 12-20 years. This assumption represents the underestimation of the variation in fire return intervals, which are also not static (i.e. fire not always occurring again within 12 to 20 years, even when this is the average fire return interval.) This assumption of a static frequent fire return interval biases the analysis predictably in favor of more heavy logging. Further, there has been a lot of scientific critique of the calculation methods for fire return intervals, such as for fire scar sampling, yet the EA does not disclose this scientific controversy. We sent science summaries as part of our scoping comments that includes critique of typical methods of fire return interval calculation, including fire scar sampling.

There is also significant scientific controversy not being disclosed in the EA about "uncharacteristic" mixed to high severity fire that is assumed not to have occurred historically.

For example, the Crow EA claims that: “Future fires would be mixed severity to stand replacing with detrimental effects to other resources that did not historically occur.” The idea that mixed to stand replacing severity fire is “detrimental” ecologically is also disputed by scientists. Our science summaries sent as part of our scoping comments also included this critique of “uncharacteristic” mixed to high severity fire assumptions. So it is surprising that the EA does not disclose or analyze these discrepancies between Crow EA fire return and historic fire severity assumptions and recent credible science refuting these assumptions that include science citations in the science summaries that we sent with our scoping comments.

The EA states that: “The proposed forest plan amendment is needed to address the need for change and the site-specific conditions in the project area described above.” (Crow HFR EA p. 3-113) As explained above, addressing the need for change and site-specific conditions of great small tree density and possible tree species composition shift in the drier, low elevation Ponderosa pine-dominant stands in Crow is better done by focusing mostly on non-commercial thinning and prescribed burning. Where Douglas fir was planted in the past in Ponderosa pine forest where there was no historic Douglas fir (as claimed in the EA), Douglas fir could be thinned up to 15” dbh, as most Douglas fir encroachment since past logging would not be larger trees than that. Tree species composition could be shifted without logging large trees. Where the tree species planned for removal are large, they typically exhibit old growth characteristics and were probably historically present. Following are supporting scoping comments:

“Ponderosa pine and Douglas fir are not ‘fire-intolerant’ species and large Grand fir also develop thicker, more fire-resistant bark and higher crowns. See our survey sheets—mine in particular [and enclosed, also survey sheets and photographs by Adam and Sophie and Will]—for evidence. (BMBP comment, Scoping p. 7)

“Large tree logging is completely contrary to the perceived ‘hazardous fuel reduction need.’ Large trees—including Ponderosa pine, Douglas fir, and Grand fir, start developing old growth characteristics of thicker, more fire resistant bark—especially at the base of the tree and the lower trunk—and higher tree crowns further above most flame heights. This is most obvious in Ponderosa pine, Western larch, and Douglas fir, but also takes place in Grand fir...so that all three species of trees proposed for large tree logging are more fire resistant than the smaller diameter trees.” (BMBP comments on Scoping p. 13)

The EA attempts to justify large tree logging removal in order to shift “the tree species composition toward the ecologically desired mix of fire-resistant tree species.” (Crow EA p. 3-113) To justify this, the EA cites the following: “Studies completed on the Malheur National Forest show that the dry forest landscapes were historically dominated by ponderosa pine (Johnston et al. 2017). Historically, frequent low-severity and mixed severity fire regimes maintained ponderosa pine as the dominant species (Munger 1917)....” (Crow EA p. 3-113) These are sweeping generalizations that do not account for the great variation in forest types across eastern Oregon due to elevational, aspect, moisture, and soil type differences. These broad, over-simplified generalizations (which the authors may not necessarily have intended) are based on only two studies, one of which has been critiqued by more experienced scientists for flawed methodology. Our supporting scoping comments follow:

“Johnston et. al (2018) is questionable scientific method at best and should not be used to justify logging large Ponderosa pines [or any other tree species]. There are no historical records of which [we] are aware that find there used to be fewer large Ponderosa pines historically and [there is] lots of science to the contrary. ‘Desired conditions’ decided by whom, the timber industry? One weak study is not sufficient to justify amending the Forest Plan and logging large Ponderosa pines again, contrary to most best available science.” (BMBP comments, Scoping p. 15)

“We are strongly opposed to proposed logging of large trees 21-30” dbh of any tree species, which is not justified in any way in this sale area, where high-grading of large Grand fir, Douglas fir, and Ponderosa pine was rampant, with huge stumps as evidence, and large areas were clearcut and turned into sterile young even-aged Ponderosa pine plantations. Logging large trees is contradicted by the majority of best available science, including by PhD scientists Bev Law, Dominick Della Salla, and Chad Hanson, who were not allowed to present their positions on two out of three of the Zoom public forums re: Region 6’s misguided and unethical attempt to revoke the 21” dbh limit on the Blue Mountains National Forests and the Deschutes [and Winema-Fremont] .” (BMBP comments, Scoping, p. 15)

The EA also uses the historical range of variability guideline (which emerged from the Eastside Screens) to justify logging large trees, which is contrary to the Eastside Screens goal of retaining large trees across the landscape: “Treatments would develop an ecological balance and diversity of structural stages and tree species composition across the landscape that better reflect the historical range of variability for the dry upland forest potential vegetation groups....” (Crow HFR EA p. 3-113) See our scoping comment in response:

“HRV modeling is suspect at best as it should reflect pre-European colonization conditions.” (BMBP comment, Scoping p. 8) We have witnessed the Malheur Forest Service staff use HRV baseline data from around 1927, well after European colonization and already heavy logging.

The EA notes that: “Maintaining or enhancing ecologically appropriate old forest conditions provides ecosystem types and habitat for forest plan management indicator species for old growth....” (Crow HFR EA p. 3-113) This does not include removing large structure from old growth habitat, including large live trees, which are already at a great deficit across the region due to past over-logging of large and old trees, as established by the Interior Columbia Basin Ecosystem Management Plan (ICBEMP) science. The deficit in large trees is even greater now than it was then, due to extensive logging of mature trees that would otherwise become large and old trees, wild fires, and renewed logging of large trees. It’s also important to note that Management Indicator species within the Crow project area, including Pileated woodpecker (seen, heard, and photographed) and likely American marten, and Eastside Screens focal species, the Northern goshawk (seen and photographed) all depend on large trees threatened by proposed large tree logging in the Crow sale, including large Grand fir needed by Pileated woodpeckers for foraging, large Ponderosa pine for Pileated woodpecker nesting and roosting holes and for American marten denning, and large Douglas fir and some large Ponderosa pine used by Northern goshawk for nesting, as well as large snags needed for perching.

The Crow EA also says that: “Encroaching conifers greater than or equal to 21 inches DBH would be removed, reducing the risk of future insect outbreaks and uncharacteristic wildfire, while also restoring habitats for historically present plant communities and wildlife habitat...” (Crow EA p. 3-114) Conifers greater than or equal to 21 inches dbh are not “encroaching” as they are too old to be a consequence of past effective fire suppression (see our scoping comment to this effect) and many large trees, likely the majority, have already been removed from the Crow sale area by past logging. See also our observation above that the EA presents no in-depth analysis to justify large trees being responsible for insect outbreaks and uncharacteristic wildfire. Some of our relevant scoping comments supporting this objection:

“None of these rationales explains the emphasis of this sale being on the widespread logging removal of large trees, which are not the source of uncharacteristic density or high ‘fuel’ loading, as admitted in various places in this scoping letter. Yes, lots of past logging mistakes have resulted in high density of NCT and younger-mature trees up to 9” -12” dbh, but not in great density or numbers of large trees 21”-30” dbh.” (BMBP comment, Scoping p. 9)

“Large tree structure has been greatly diminished by past high grading of all commercial tree species (Ponderosa pine, Douglas fir, Grand fir, and probably Western larch where it occurred.) Large structure is badly needed to be retained for many ecological functions, including carbon storage to reduce climate change, soil nutrient cycling, structure for wildlife and fish habitat, soil carbon storage, moisture retention, slope stability, etc.” (BMBP comments, scoping p. 9)

“Crown ‘fuels’ are the least important aspect of theoretical fire risk reduction. Further, much of the overstory in the Crow sale area has already been removed. What’s left re: large trees and old growth structure is needed for wildlife habitat, carbon sequestration and storage to reduce climate change effects, [aid] soil nutrient cycling, and [contribute to] recreational appeal. This sale would not replicate historic patterns by removing many of the last large, more fire-resistant trees. The Forest Service needs to take responsibility for removing most of the large overstory trees (with old growth stumps of Ponderosa pine, Douglas fir, and Grand fir [as evidence in the Crow sale area]) and not repeat past mistakes.” (BMBP comments written on, and referring to content on the Scoping Package p. 3)

The EA asserts that: “The proposed action alternative would develop stands more resilient to natural disturbances such as insects, disease, and wildfire....” (Crow HFR EA p. 3-114) On the contrary, widespread forest cover elimination to an average of only about 30 square feet basal area per acre will not make the forest more resilient to natural disturbances, as there are many unnatural impacts of logging and prescribed burning, including break-up of mycorrhizal networks of nutrient and water transfer and inter-tree communication for triggering defense actions against defoliating insects. These networks that connect trees as living, mutually supporting communities rather than isolated trees always just competing with each other are becoming the focus of scientific and public attention. Such network exchanges between trees—even trees of different species—challenge a lot of Forest Service foundational management assumptions, such as that above. Apparently the Forest Service has missed this new science information or chooses to ignore the books and the New York Times magazine article that cover it.

One of our many scoping comments opposing such low basal areas as not developing more resilient stands for wildlife: “We are strongly opposed to reducing average basal area to only 30 ft. square per acre. This leaves no trees for needed snag and log creation over time and no structural complexity.” (BMBP comment, Scoping p. 7) Sure, if there’s hardly any trees left, there may be much more limited extent of natural disturbances, but such natural disturbances, including insects, disease, and wildfire, are needed to support variability across the landscape for species that evolved with these disturbances. Natural disturbances provide niche habitats for disturbance-adapted native wildlife species and native plants and are essential for biodiversity. See also our other scoping comments opposing low basal areas as a generalized management objective for the entire Crow area, quoted above in this section.

The Crow EA hypocritically states: “Without the removal of trees greater than or equal to 21 inches diameter at breast height, the percentage of ponderosa pine would be lower”—while planning to log large Ponderosa pine, reducing the percentage of Ponderosa pine! (See Crow HFR EA p. 3-114, par. 6) One of our relevant scoping comments:

“There is no clarity as to why large Ponderosa pine would be removed, under what circumstances, or how many would be removed.” (BMBP comment, Scoping p. 7)

Whoever authored this section of the Crow EA also had the audacity to claim the following: “The proposed action alternative is consistent with the intent of the updated Eastside Screens [actually the jettisoning of the Eastside Screens], as amended by the Old and Large Tree Guideline on a project-level scale....project wide, late and old structure stand components would be maintained and/or enhanced in stands subject to timber harvest as much as possible....” (Crow

EA p. 3-114) In reality, the Region 6 changes to the Eastside Screens 21" dbh limit on logging don't go as far as the Crow sale proposed actions, as they don't include logging large Douglas fir and Ponderosa pine between 21" and 30" dbh, as does Crow. So the Crow proposed Forest Plan amendments are not consistent with the Region 6 new late and old tree guidelines. The Region 6 changes to the Eastside Screens will also be facing litigation, as there is opposition from a broad coalition of environmental protection organizations and scientists, including Blue Mountains Biodiversity Project. So these voluntary guidelines may not remain in effect to replace the Eastside Screens. Our relevant scoping comments regarding the proposed Forest Plan amendments violating Forest Plan goals and standards (as well as the Healthy Forests Restoration Act provisions) designed to protect, retain, and increase large and old forest structure:

"The Forest Service plan to log large trees down to only 10-12 large trees per acre virtually guarantees that these areas will no longer be considered 'LOS' during the next round of logging and will therefore receive no special consideration—especially as only the largest, oldest trees over 30" dbh would be retained, and these would become snags and logs sooner. So this is a purposeful liquidation of LOS into the future, not maintaining or contributing to the restoration of the structure and composition of old growth stands, as required by HFRA. HFRA is quite clear that the Forest Service is to retain 'the large trees contributing to old growth structure.' (See HFRA quote, scoping p. 7 [above]) Ponderosa pine, Douglas fir, and Grand fir are all species adapted to fire processes—especially when they're large." (BMBP comments, Scoping p. 8)

"Leaving only 10 to 12 large trees per acre is a recipe for eliminating Forest Service recognition of LOS over time, as with natural mortality, only one to three large trees per acre could become snags or logs before the area is no longer considered LOS on the Malheur (the District and Forest planning the sale) due to the Malheur's 10 live large trees per acre requirement for LOS. Earlier large tree mortality is more likely for the largest oldest trees retained. What is the live large tree requirement for LOS/old growth on the Ochoco National Forest, since the Crow sale is still on the Ochoco?" (BMBP comments, Scoping p. 21)

"It's simply not true that 'all stands would be maintained in late and old structure habitat' through retaining 10-12 large trees per acre, as logging off firs and Ponderosa pines 21-30" dbh eliminate the future replacement generation for the largest, oldest trees >30" dbh, and logging down to only 30-40 square feet of basal area eliminates most mature trees that would otherwise become large and old." (BMBP comments, Scoping p. 21) * Note that the basal area concern expressed above is still relevant with the new Draft Decision, as logging to such low basal areas would eliminate so many mature trees that future replacement generation trees for the largest, oldest trees would still be lost at numbers that would remove most of the future replacement generation for the large old trees. This would increase the deficit of large trees on a landscape scale rather than increasing and retaining large and old tree structure at historic levels over time, in keeping with Forest Plan and HFRA goals. It's important to remember that current levels of large trees in the Crow project area are still at a tremendous deficit compared to the pre-European colonization HRV abundance of large trees, due to extensive large tree logging in past timber sales. A 30 to 40 square foot basal area would only retain the remaining large trees in most cases, rather than including enough mature trees < 21" dbh for their replacement and increase to historic levels.

"As documented in many of my survey sheets, most firs 21-30" dbh demonstrate old growth characteristics, and Ponderosa pine is statistically known to generally be at least 150 years old ('old growth') at 21" dbh—thus the 21" limit. So with the Crow HFR sale, the FS [Forest Service] would inevitably be logging old growth trees as well as large trees. There has been no change in the vast majority of best available science that would support logging large trees or old growth—including not for the purposes of 'hazardous fuels reduction.'" (BMBP comment, Scoping p. 9)

As for the Crow plan components listed on Crow HFR EA p. 3-114, see our scoping comments above regarding large and old fir and Ponderosa pine trees largely overlapping, with most large trees between 21" and 30" dbh showing obvious old growth characteristics such as thick, fire resistant bark and higher crowns, as well as often rounded crowns. So either the Crow sale would end up not logging many large trees at all, since most appear to be old growth, or the Crow sale will log a lot of large old growth trees. So far, from both the EA and the Scoping Package, it is hard to tell that there is any serious consideration of "appropriate species composition for biophysical environment, topographical position, stand density, [and] historical diameter distributions...considered in order to develop stands that are resistant and resilient to disturbance." (Crow HFR EA p. 3-114) It's hard to believe these considerations will be sufficiently weighed against all the other assumptions in the EA, such as very frequent fire intervals across the entire sale area regardless of these differences, and reliance on two science studies that make broad, sweeping generalizations used to characterize the Crow sale area as all dry Ponderosa pine dominant forest, despite substantial evidence to the contrary on the ground in the north half of the sale. It's especially hard to take these plan component considerations seriously when they are weighed against a similarly biased assumed historical range of variability in the second to last plan component listed. Of course we have virtually no remaining trust in the Forest Service to retain large and old trees after the Region 6 assault on the 21" dbh limit and the Crow sale's even more ambitious grab for large Douglas fir and Ponderosa pine, which may represent the Region 6 influence of the large tree standard becoming only a voluntary guideline in general. Further, the extremely low basal area retention planned across the entire sale area is inconsistent with use of these plan components for guidance, with the exception of the assumed HRV component.

The two sales that did and propose to log large trees on the Ochoco discussed in the EA were both opposed by Blue Mountains Biodiversity Project, with the Walton Lake sale now under litigation after years of opposition. The Wolf sale timber sale removed large and old Grand fir that historically existed at that high elevation (at and over 6,000 feet), based on lots of field evidence of historic live old growth firs, large old growth fir snags and logs, and old log decks stacked with old growth Grand fir logs. A logger at one of the Ochoco collaborative group meetings confirmed that he helped log a lot of old growth Grand fir in that area. Likewise, the Walton Lake timber sale grab for old growth and large Grand fir is planned in historic old growth mixed conifer receiving moisture from Walton Lake and on ash soils on an appropriately situated slope, with plenty of old growth Grand fir larger than 30" dbh and up to about 57 to 60" dbh. These are not great examples of why we should trust the Forest Service to return to timber industry logging of large trees while claiming that they don't belong in those sites or that old growth trees will be left standing.

A voluntary guideline and highly subjective visual assessment of old growth characteristics will not protect wildlife habitat needs for large and old growth tree structure. It is painfully obvious that the Forest Plan amendments proposed are really based on making timber sales more profitable for the timber industry. The previous timber sales that involved logging of large trees support this assumption, which we have heard made explicit during collaborative group meetings on the Malheur. With the combined acreage total of large tree logging on the Ochoco (on Crow EA p. 3-115), it is clear that the Crow sale would represent the lion's share of this large tree removal.

The Crow EA also claims that "treatments would reduce hazardous crown fuels and contribute to the restoration of the structure and composition of old growth stands according to the pre-fire suppression old growth condition characteristic of the forest type." (Crow HFR EA p. 3-115)

This assumes only one forest type in the entire 33,000+ acre Crow project area, regardless of the great variation in elevation, topography, and moisture regimes. See our scoping comments above in this section regarding the variability of forest types in the Crow project area. Further, the majority of large and old growth trees in the Crow area were already removed by multiple past timber sales, so further removal of large trees would not represent the pre-fire suppression old growth condition. See our scoping comments above in this section regarding the evident logging removal of large and old growth trees across the majority of the proposed sale units. See also our scoping comment above regarding crown “fuels” being well known to be the lowest priority for fire risk reduction.

Scoping comments specific to the proposed Forest Plan amendments include the following: “The 21” dbh limit for logging large trees under the Eastside Screens is still in effect at the time of the Crow sale planning. The Eastside Screens were court-ordered pending Forest-wide Forest Plan revisions, which still haven’t been done due to Forest Service ineptitude and timber industry bias. As the Forest Service is aware—at least on the Ochoco NF, (see the Black Mountain sale Decision Notice for the Ochoco NF) site-specific Forest Plan amendments are inappropriate for Forest-wide perceived trends and desires, such as the FS/timber industry desire to log large trees up to 30” dbh over all the Blue Mountains Forests, which is now being pursued by Region 6. So a Forest Plan amendment [now amendments] for the Ochoco NF to log large trees is not really site-specific or based on any unique circumstances for this sale area. Therefore the Forest Plan amendment[s] planned for the Crow HFRA sale to the Ochoco NF Forest Plan is bogus and illegal.” (BMBP comments, Scoping p. 6)

“What ‘relevant forest-specific information and data’ for the Crow sale was used to determine there were ‘excess’ large trees in this project area? That’s not at all what conditions on the ground reflect, based on our field surveying. In fact, there’s still a large deficit in large trees on the Ochoco NF, compared to historical conditions.” (BMBP comments, Scoping p. 6)

“It is simply not true that this project ‘is framed to be consistent with all laws or policies governing National Forest management’, as it would violate fundamental goals and standards embedded in the Forest Plan under NFMA (neither mentioned under ‘Regulatory framework’) concerning the goals of retaining and increasing large trees and old growth forest on the Ochoco National Forest and standards to do so, including the Eastside Screens limit of 21” dbh for retaining large existing trees and providing for restoration of large tree and old growth structure into the future to compensate for the huge deficit in large tree structure and old growth already existing—still—from past over-logging of large and old trees.” (BMBP comments, Scoping p. 13)

We do commend the Emigrant Creek District Ranger for recognizing the excessive ecological degradation that would be caused in the Crow area by logging large trees and appreciate his and other staff members’ courage in standing up against an extremely destructive shift of the Forest Service’s policies under the Trump administration.

Resolution:

Blue Mountains Biodiversity Project has commented extensively in support of this objection regarding violations of the Forest Plan through inappropriate use of Forest Plan amendments, as quoted and cited above from our scoping comments. To resolve this objection, the Forest Service must:

*Cancel all proposed large tree logging in the Crow HFR project and drop the proposed Forest Plan amendments to log large trees, as recommended in the Draft Decision Notice.

Undeveloped Lands

Blue Mountains Biodiversity Project has long-standing concerns over the logging and roading of undeveloped lands, which are some of the last strongholds for wildlife and unimpeded natural ecological processes to occur outside of roadless areas and Wilderness Areas. Conservation biologists have determined that without protecting many more thousands of acres of never logged and un-roaded wild habitat outside of Inventoried Roadless Areas and Wilderness Areas, many relatively rare species that require large home ranges for foraging or hunting will go extinct over time for lack of sufficient habitat connections and genetic diversity. Such species potentially include Canada lynx, Pacific fisher, Wolverine, American marten, Gray wolf, Bison, and Woodland caribou. Of these, any of the predators listed could be using part of the Crow area.

Our comments support this objection:

“What analysis for undeveloped lands special or unique values in undeveloped areas in the Crow sale has been done or actually will be done [based on field surveying] on the ground? Most of it may never be assessed on the ground.”

“We are especially opposed to management of undeveloped lands greater than 1,000 acres, since these may qualify for roadless area designation and protection.”

“Drop all ‘hazardous fuel reduction’ management in identified undeveloped lands that have little or no evidence of past logging and roads. Drop areas of undeveloped lands less than 1,000 acres (down to 100 acres) as well as >1,000 acres from any lands less than ‘fuel’ reduction activities except for prescribed burning. Prohibit any management (re: ‘fuel reduction’, logging, roading, burning) in Inventoried Roadless Areas and undeveloped lands >1,000 acres as a block. This planned management of undeveloped lands is outrageous and unacceptable on top of all the other devastating logging and road re-opening and ‘temporary’ road building planned.” (BMBP comments, Scoping p. 26)

“We are strongly opposed to management of undeveloped land.” (BMBP comment, p. 25)

Regarding new information in the EA for which we were not allowed to submit comments:

Wow, how was all this decided, that these undeveloped lands “do not have high quality or undisturbed soil, water or air, [sic re: the missing use of semi-colons] they are not sources of public drinking water, do not contain a diversity of plant and animal communities, are not source habitat for threatened, endangered, proposed or candidate species, do not contain primitive non-motorized classes of dispersed recreation, are not reference landscapes, are not natural appearing landscapes with high scenic quality, and have no other locally identified unique characteristics”? We really doubt that Forest Service staff have walked and field surveyed all these undeveloped lands to determine this, even though field surveying for these values is the only way to be sure they aren’t present.

Why don’t all the “resources” (life sources) acknowledged to be in these undeveloped lands warrant protection? These include “soils, water quality, vegetation, fuels, air quality, plant and animal communities [unspecified], habitat for threatened, endangered, and sensitive species [unspecified], noxious weeds, roaded modified and roaded natural recreation, semi-primitive motorized recreation, scenery, and cultural resources.” (Crow HFR EA p. 3-106) At least values such as unmanaged soils; water quality; air quality; plant and animal communities; habitat for Threatened, Endangered, and Sensitive species; natural recreation, scenery, and indigenous cultural resources ought to warrant protection in never logged and un-roaded undeveloped lands. There are not many undeveloped lands left, and they tend to have higher value for: wildlife (including especially for far-ranging rare predators and Endangered, Threatened, and Sensitive wildlife); rare and TES plant species; primitive recreation; escape from urban areas; high air quality; high water quality; solitude; reference condition ecological functioning; relatively

pristine old growth habitat; wild natural scenery, often on a landscape scale; and undisturbed indigenous peoples' cultural sites and values.

The Crow EA states on p. 3-107: "Because temporary roads are not permanent roads and are restored after use, they would have no impact to the designation of other undeveloped lands." This is not true, as "temporary" roads are rarely fully decommissioned and would be a lasting impact disqualifying the undeveloped areas from becoming part of an Inventoried Roadless Area or Wilderness Area.

"Past harvest and road building have reduced the acreage of other undeveloped areas across the watershed." (EA p. 3-107) This needs to stop. "Crow, when combined with past, present, and reasonably foreseeable actions for other undeveloped lands, where project activities would occur, would reduce the acres of other undeveloped lands." (Crow HFR EA p. 3-107) Yet to reduce and slow climate change to levels that enable us to continue to survive on this planet, along with all the other biodiversity of species that are threatened by extreme climate change and the Sixth Mass Extinction, there are now calls to save 30% of the land and ocean to be protected by 2030 (under the current Biden administration) and at least 50% of the planet lands and waters to be fully protected from human management in order to avert fundamental ecological systems collapse (supported by the well credentialed biologist, E.O. Wilson) and by others calling for 50% of the land and waters to be protected by 2050 (including in a new book by a New Yorker magazine writer.) The Forest Service should recognize the urgency of the climate crisis and the Sixth Mass Extinction and follow the precautionary principle by protecting far more of the lands and waters of National Forest from management instead of going on a management rampage of more ecological destruction.

We specifically ask in regard to the Crow sale that the 9,379 acres of undeveloped lands be dropped from planned logging and/or road construction. More forest in the Crow project area needs to be left unmanaged to support wildlife species, soil integrity, water quality, and carbon sequestration in forest trees—especially mature and large trees. It's relatively unprecedented for the Malheur Forest Service to manage almost every single acre of a project area (the vast majority of it) with one planned project. The Forest Service does not need to manage all acres to significantly reduce "fuel loads" and reduce the "risk" of high severity fire.

Resolution:

* We specifically ask in regard to the Crow sale that the 9,379 acres of undeveloped lands that are planned for logging and/or road construction be dropped from planned logging and/or road construction.

* More forest (than just the undeveloped land acreage) in the Crow project area needs to be left unmanaged to support wildlife species biodiversity; plant biodiversity; soil integrity and carbon sequestration; water quality; and carbon sequestration in forest trees—especially mature and large trees.

*Please clearly identify the location and size of any undeveloped lands identified by the Forest Service so that we can evaluate which areas are artifacts of the GIS system not recording early past logging, and which have likely never been roaded or logged.

* Drop any logging and road construction in undeveloped lands. We are strongly opposed to any logging or other development in such rare relatively pristine areas, which serve as scientific reference conditions, undisturbed wildlife habitat, fish strongholds, and primitive recreation areas. We are opposed to converting unmanaged lands to managed lands wherever they exist.

*“Drop all ‘hazardous fuel reduction’ management in identified undeveloped lands that have little or no evidence of past logging and roads. Drop areas of undeveloped lands less than 1,000 acres (down to 100 acres) as well as >1,000 acres from any lands less than ‘fuel’ reduction activities except for prescribed burning. Prohibit any management (re: ‘fuel reduction’, logging, roading, burning) in Inventoried Roadless Areas and undeveloped lands >1,000 acres as a block.” (partial resolution remedy in BMBP comments, Scoping p. 26) Adopt the first resolution remedy listed above, as being more comprehensive.

III. The Crow HFR Project Would Violate the Endangered Species Act

We are concerned that the Forest Service is not adhering to the intent and management guidance of the Endangered Species Act. We are concerned regarding Forest Service disregard for the need to maintain sufficient suitable habitat and conditions to prevent a trend toward federal up-listing for Threatened-listed Gray wolf; Sensitive-listed Columbia Spotted frog and Redband trout; Vulnerable-ranked American marten; Sensitive-listed Pacific fisher and Sensitive/Candidate Wolverine; Sensitive-listed plant species; and Northern goshawk, which is cumulatively threatened by the ever escalating scale and pace of heavy logging based on density reduction, which typifies the Crow timber sale. All of these species have known active or potential suitable habitat in the Crow HFR project area that is potentially threatened by Crow HFR Draft Decision Notice proposed alternative management plans.

It's hard to tell if the Forest Service even read our scoping comments, as we referenced Management Indicator species American marten, Threatened-listed Canada lynx, Sensitive Pacific fisher, and Sensitive/Candidate for up-listing wolverine specifically in our request for key issues to be covered in EIS analysis, yet none of these species are included in the EA wildlife analysis. Without analysis of potential effects from planned management actions, there can be no assurance of continued species viability in the project area.

The Forest Service apparently did not analyze effects to Vulnerable ranked American marten, Sensitive Pacific fisher, Threatened-listed Canada lynx, and Sensitive/Candidate Wolverine specifically in the EA. This represents inadequate analysis and failure to ensure these species' viability in the context of the proposed Crow HFR management actions.

Our comments explain our concerns regarding violation of the Endangered Species Act through degradation or elimination of suitable and core habitat setting back species recovery, threatening loss of population viability, or otherwise contributing to a federal up-listing trend for the species: “We are greatly concerned that such excessive removal of trees planned, and of large trees in particular, will lead to the loss of viability for snag and log dependent species, and large and old tree-associated species, in the Crow area, which is a large part of the Ochoco National Forest. Species’ extirpation and eventual extinction happens cumulatively from the combined results of multiple timber sales, overgrazing by livestock, road use, etc.” (BMBP comments, Scoping p. 23)

“The vast majority of species, including MIS and TES species, would be negatively affected over the long-term, to the point of loss of viability in the project area for many, likely including Pileated woodpecker, American marten, Redband trout, Rocky Mountain elk, and primary cavity excavating woodpecker species [which would include the Sensitive Lewis’ woodpecker]. This is unacceptable.” (BMBP scoping comments, p. 25)

“We are concerned by likely negative impacts to: Redband trout, possible Pacific fisher, Canada lynx, Gray wolf, Columbia Spotted frog, Sensitive bat species, White-headed woodpecker, and Peck’s Mariposa lily and other Sensitive plants.” (BMBP comment, Scoping p. 24)

A volunteer and I had a positive daylight sighting of a Pacific fisher in appropriate old growth mixed conifer habitat in a Wolf timber sale unit on the Ochoco National Forest when we were field surveying that sale. I reported that sighting to the Ochoco collaborative group and the Forest Service Ochoco staff during one of their collaborative meetings. Therefore it is possible that there are Pacific fisher elsewhere in the Ochoco National Forest.

Scoping comments re: Threatened-listed Gray wolf:

“How much ‘field reconnaissance’ and how many camera sets were actually done in the Crow area for wolves?”

“We (three of us) saw a Gray wolf (black) in the southwest end of the Ochoco National Forest in the Black Mountain sale area, not that far from the Crow project area, I think in the summer of 2018 [the summer we field surveyed the Black Mountain timber sale]. There is no reason to assume that Gray wolves would not disperse through the Crow sale area.” (BMBP Scoping comments, p. 24)

Scoping comments re: Sensitive Lewis’ woodpecker:

“Lewis’ woodpecker would be negatively affected by both loss of large tree structure (for nesting and perching) from logging and by any reduction in the extent or incidence of stand replacement fire—old burns are their preferred upland habitat.” (BMBP comment, Scoping p. 24)

Additional comments noting concern re: potential effects to Threatened Canada lynx; Sensitive/Candidate for up-listing wolverine; Vulnerable ranked American marten; and Threatened-listed Gray wolf and Sensitive Pacific fisher and “all Sensitive and Threatened-listed species known to occur in the Crow sale area or this part of the Ochoco National Forest” can be found in our request list of key issues for in depth analysis:

“We ask for the following key issues to be analyzed in depth for the Crow sale area in an EIS, or the sale should be dropped in its entirety: the cumulative effects of past logging, livestock grazing, and road construction and use combined with the proposed action [effects] to: *large tree structure and abundance *old growth habitat quality and abundance *old growth and large tree-associated or dependent species *species requiring security corridors, including elk, deer, Gray wolves, marten, Canada lynx, wolverines, and others *Neotropical migratory songbirds dependent on multi-layer canopy, large trees, and/or old growth structure *accipiter hawks requiring denser forest and mature and large trees (Northern goshawk and Cooper’s hawk) *Management Indicator species, including Pileated woodpecker, American marten, primary cavity excavating woodpeckers, and Rocky Mountain elk *all Sensitive and Threatened-listed species known to occur in the Crow sale area or this part of the Ochoco National Forest....” (BMBP comments, Scoping p. 18, with * substituted for some semi-colons for consistency)

Comments relevant to contributing to a trend toward federal listing under the ESA can also be found quoted above under NFMA—MIS viability, re: MIS woodpeckers and re: American marten. More comments relevant to contributing to a trend toward federal listing for aquatic and riparian species can also be found under Forest Plan violations—INFISH re: Sensitive Redband trout and Columbia Spotted frog.

Resolution:

Blue Mountains Biodiversity Project has commented on our objection regarding potential violations of the Endangered Species Act. See our comment quotations and citations in the paragraphs above. Some of the species addressed in this objection have remedies cited under NFMA—MIS and other species viability above and under Forest Plan Violations, under the sub-category of INFISH, that are also applicable to the ESA violations.

Additional partial resolutions are by species below:

The EA failed to analyze for potential impacts to Threatened Canada lynx, Sensitive/Candidate species Wolverine, and Sensitive Pacific fisher. The only way this can be remedied is by the preparation of an EIS and a full 45 day period for public comment.

Re: Sensitive Redband trout and Columbia Spotted frog and Sensitive riparian plant species:

*Drop all heavy equipment stream crossings and planned “temporary” road construction and re-opening of closed roads in RHCAs, including in potential Columbia Spotted frog habitat and Redband trout habitat stream reaches and within RHCAs in general except for aspen stand restoration-related conifer thinning up to 21” dbh or less, as long as trees contributing to bank stability and primary stream shading are retained. Buffer and protect any Sensitive plants found in current or pre-implementation surveys. See INFISH resolution remedies above.

Re: Gray wolf:

*Retain more good security cover (hiding and thermal) for elk and deer where there is high use by elk and deer, and through dropping sale units suitable in habitat for other density-related species, such as Northern goshawk, American marten, and Pileated woodpecker.

*Drop construction of ‘temporary’ roads and greatly reduce the proposed re-opening of closed roads to protect Gray wolf security during dispersal as much as possible.

*Drop logging and roading in all identified undeveloped lands.

Re: Management Indicator species— Pileated woodpecker and American marten, see resolution suggestions under NFMA MIS viability, above, for these species. See also comments regarding resolution suggestions for Northern goshawk, quoted above under Forest Plan violations—Eastside Screens.

Re: Pacific fisher:

*Drop all commercial logging of LOS stands with suitable habitat for Pacific fisher, such as old growth moister mixed conifer, which is predominantly in the north half of the sale and along riparian drainages in the middle of the sale area. See our survey sheets and photographs for suitable habitat indicators.

*Retain more mature Grand fir and Douglas fir wherever it would naturally occur (e.g. in moist mixed conifer, in riparian zones, on North to Northeast facing slopes, and in high elevation mixed conifer) so that more mature Grand fir and Douglas fir will survive to become suitable hollow denning trees.

*Drop all known suitable Pacific fisher habitat. (Two of us had a positive Pacific fisher sighting in broad daylight in a Wolf sale unit on the Ochoco.)

Re: Sensitive plants: Buffer all known Sensitive plant populations by 100 feet on all sides from all heavy equipment use, logging, “temporary” road construction, and closed road re-opening, as well as road maintenance.

* Survey for Sensitive plants in the Crow project area prior to any project implementation if this has not already been done recently (e.g. in the past three years.)

Inadequate Analysis and Mitigation Regarding Effects to Climate Change

Once again, the Forest Service fails to accept responsibility in the EA for their increasing contributions to climate change through the increasing scale and pace of incremental deforestation and carbon storage reduction through repeated timber sales at an accelerated pace and scale, including the Crow HFR timber sale. See our related comments below:

“Large tree structure has been greatly diminished by past high grading of all commercial tree species (Ponderosa pine, Douglas fir, Grand fir, and probably Western larch where it occurred.) Large structure is badly needed to be retained for many ecological functions, including carbon storage to reduce climate change, soil nutrient cycling, structure for wildlife and fish habitat, soil carbon storage, moisture retention, slope stability, etc.” (BMBP comments, scoping p. 9)

“Old growth-dependent species are relying heavily on the ‘LOS’/old growth structure outside the designated 1,456 acres of old growth to meet their needs and may not have viable populations without it. There is a lot more LOS/old growth in the Crow sale than the Dedicated (MA-F6) areas that are now on the chopping block again—this time for almost total liquidation by logging large and old trees 21-30” dbh, thus removing the next generation of big old trees 30”+ dbh and eliminating much of the large structure across the landscape needed by associated wildlife species and for carbon storage, soil nutrient cycling, fish habitat, and recreational values.” (BMBP Scoping comments, p. 10)

“Connectivity corridors for wildlife should be based on wildlife use, riparian corridors, and sufficient existing hiding and thermal cover, not by sight (site) unseen mapping with little or no reference to existing conditions, as seems to be the case based on seeing some of the areas chosen as wildlife corridors. Wildlife connectivity corridors are more important to retain as viable security cover than ever, given extreme climate change soon necessitating mass migrations of species to higher elevations and north—non-commercial thin only.” (BMBP comment on Scoping p. 16)

“The Crow HFRA sale is a prime example of forest liquidation with no provision for or consideration of future forest ecological functioning, preservation of biodiversity, long-term retention of old growth forest and large trees, moisture retention and carbon storage to reduce catastrophic climate change effects, soil integrity, Native people’s cultural uses of the Forest and treaty rights, and public uses of the land other than logging and livestock life source (“resource”) extraction. We intend to do everything we can legally to stop this sale as it is proposed.” (BMBP Scoping comments, p. 26)

Since the public was not allowed to comment on the climate change analysis in the EA, we had no opportunity to submit comments on the analysis. However, many of our comments above do address rationales for inaction for reducing Greenhouse gas emissions and protecting existing and future forest carbon storage with the Crow project. The following is our assessment of the climate change analysis as new information, with occasional references to our scoping comments quoted above which also refute the highly biased analysis assumptions:

For a government agency, the Forest Service is certainly dedicated to obfuscating the well established need to reduce Greenhouse gases from all sources and to protect natural carbon sequestration carbon sinks, including intact forests and individual trees—especially mature and large trees. The Forest Service in the Crow climate change analysis fails to disclose or analyze the dire urgency and ramifications of global warming that are now past multiple established scientific tipping points. Instead the Emigrant Creek District staff are making excuses for their refusal to join world leaders and global communities in slowing and reducing extreme climate change effects.

The de minimus argument of comparing the timber sale’s effects to the Forest scale and forest land in the U.S. is highly biased and hypocritical as climate change is caused by many cumulative effects of different scales and magnitudes, with each contributing to the global crisis we are now facing. This type of calculation ignores the cumulative effects to the climate of many such timber

sales' contribution to climate change and the Crow sale being part of an accelerating scale, pace, and intensity of timber sales in eastern Oregon that greatly increase contributions to negative climate change effects as a growing trend that needs to be reversed. The 12% contribution of the forestry sector world-wide needs to be reduced, as does every other source of Greenhouse gas emissions—especially as logging not only results in net CO₂ emissions but also incrementally eliminates live trees that would otherwise sequester carbon and ultimately return carbon to soils from becoming snags and then logs, contributing to both increased CO₂ emissions (wood products typically do not have very long shelf lives compared to trees which could live up to 200 years or more) and to loss of natural carbon storage that offsets human Greenhouse gas emissions.

The IPCC has identified deforestation as a cause of climate change; incremental deforestation, which the Crow sale exemplifies, has the same effects in the long-term.

Whoever wrote the EA climate change analysis claims falsely that “carbon emissions during the implementation of the action alternatives would have only a momentary influence on atmospheric carbon concentrations, because carbon would be removed from the atmosphere with time as the forest regrows, further minimizing or mitigating any potential cumulative effects.” (Crow HFR EA p. 3-109) This is fallacious reasoning in that CO₂ has a residency time in the atmosphere of about 300 years and its accumulation in the atmosphere is from all sources. This is not a “momentary” effect but a long-term effect that future generations will be facing. Further, the EA admits that the proposed alternative will remove a “vast” number of trees, so there will be far less trees on the landscape to grow and sequester carbon—in particular, mature, and potentially large, trees that store and sequester the most carbon. This is also fallacious reasoning in that newly established small, young trees do not store as much carbon as mature and large trees. This is well established in the science. It’s despicable to perpetuate this myth in order to promote and rationalize excessive logging of mature—and potentially large—trees on a landscape scale as part of a larger trend being promoted by the Malheur Forest Service in particular.

All the sources of Greenhouse gases could be seen as “negligible” on the global scale, yet collectively they are causing off-the-charts extreme climate change effects that threaten the viability of the planet through droughts; famines; flooding; sea level rise; extreme storms; loss of most species—and consequently fundamental ecological processes and functioning, such as pollination of plants; and loss of human civilization as we know it through mass migrations, wars over resources, and more and more land not sustaining human populations.

The analysis evades the question of how much forest increase is small young trees that don’t store anywhere near as much carbon as the mature (and potentially large) trees now planned for removal on a greater scale and with more intensive logging removing more trees in a single timber sale than I’ve seen in the last three decades. The Crow sale, according to the EA, would result in the loss of vast numbers of trees—that would otherwise store and sequester carbon over the long-term. Small young trees growing in after logging will not make up for the significant gap in mature tree carbon storage for many decades, assuming they are allowed to reach full maturity.

The Crow project would remove far too many mature—and potentially large—trees to be consistent with the IPCC suggestions for minimizing the impacts of climate change. This is why we are opposing continued logging of mature trees on a landscape scale and of large and old trees but are not opposed to removing excessive small tree density (generally only up to 9” dbh) where it is very dry, Ponderosa pine dominant forest that appears to have very dense small trees due to wild fire suppression. However, even the theory of small tree encroachment due to wild fire suppression is in doubt scientifically, depending on the forest type, elevation, moisture regime, slope aspect, and soil type. Our recommendations are consistent with reducing climate change effects. There has to be enough mature and large trees left to store significant carbon, and these

have to be allowed to grow to their full carbon storage capacity as old growth that then becomes snags, then logs, then carbon replenishment for the soils.

It's good that forests in the United States removed 757 megatonnes of CO2 from the atmosphere after accounting for natural emissions. (Crow HFR EA, p. 3-110) All natural carbon storage and sequestration needs to be increased and protected to enable slowing down and reducing global warming. This means leaving all mature forests standing, not logging and removing their carbon storage capacity.

The Forest Service is completely ignoring the growing body of science calling for increasing retention of natural sources of carbon sequestration, including forests. Scientists calling for protection and retention of natural sources of carbon storage include Dr. James Hansen, who has said that if we manage to stop using fossil fuels entirely by switching to renewable energy sources, we are still gravely threatened by extreme climate change if we fail to fully protect carbon sequestration in the oceans, forest, and soils. He is joined in this concern by Pacific Northwest forest ecologists, including Bev Law, Dominick Della Salla, and Chad Hanson, as the Forest Service is well aware, since they participated in the science forum pertaining to the Region 6 Forest Plans amendment to return to logging large trees.

This analysis is also omitting disclosure and consideration of science that finds more CO2 emissions from logging than from wild fires, including consideration of carbon budgets of returns to soils. The EA analysis also ignores science findings that carbon storage in wood products is very short-lived compared to live trees and eventual carbon storage in snags, logs, and biomass contributing to soil carbon.

The Crow EA analysis regarding the Global Climate Change Prevention Act (the recommendations of which are not disclosed) is downplaying the contribution of forest biomass burning for energy to Greenhouse gases and portrays biomass burning as a good substitute for fossil fuels. Whoever wrote this analysis is quite the devil's advocate in defending logging as reducing climate change through careful omissions, failure to disclose the full range of best available science, failure to disclose the current urgency for protecting natural sources of carbon storage, and amplifying science that supports the timber industry at the expense of the climate and a viable future.

The EA analysis even goes so far as to say: "In fact, removing carbon from forests for human use can result in a lower net contribution of GHGs to the atmosphere than if the forest were not managed." Where did the funding come from for the three studies cited for this? What nuances and exceptions made by the scientists are being ignored? This conclusion flies in the face of a lot of other science and experiments in the field. Actually, never logged forests tend to be less choked with small young trees and to have far more mature and large trees left to maximize carbon storage in an open condition than "managed" (i.e. logged or logged and burned) forests. This is evident in the Crow sale's few unlogged areas, as well as in other timber sale areas we have surveyed.

The EA's climate change analysis also notes that Ponderosa pine is a fire-adapted species without disclosing that Douglas fir and Grand fir are also fire-adapted species and that the Crow sale actually plans to remove significant numbers of mature Ponderosa pine and was originally proposed to log large Ponderosa pine, rather than moving toward more Ponderosa pine numerically. (See EA p. 3-111, par. 1)

As we commented in scoping (see above under the proposed Forest Plan amendments section), “hazardous fuel reduction” is best done with only small tree thinning (e.g. up to 9” dbh or at the most, 12” dbh) and prescribed burning. “Fuel” reduction and fire risk reduction does not require logging removal of mature and large trees, including in the Crow sale area, where many mature and large trees have already been removed by logging.

The EA claims that: “This project would not convert forest land to other non-forest uses, thus allowing any carbon initially emitted from the proposed action to have a temporary influence on atmospheric GHG concentrations, because carbon would be removed from the atmosphere over time as the forest regrows or would transfer carbon to the product sector where it may be stored for decades and substitute for more emission intensive materials or fuels.” (EA p. 3-111, 2nd to last par.) Who wrote this, a timber industry lobbyist? What’s certain is that Crow sale logging of mature and large trees would contribute to climate change. What is not certain is that this would support forest health and reduce high severity wild fire. In fact, the opposite is likely. As for a “temporary” influence on atmospheric Greenhouse Gas concentrations, CO₂ stays in the atmosphere for up to 300 years. This is not a short-term temporary effect. The forest will not regrow to its current level of carbon storage in the Crow project area quickly enough to make this a “temporary” effect, as the trees will require up to 100 years or more to reach the ages and size of the large trees and at least 80 years to reach the size of the mature trees in the next size class. Meanwhile, the lost carbon from the current forest would still be exacerbating climate change effects in the form of CO₂ emissions concentrated in the atmosphere for up to 300 years. Likewise, most wood products only store carbon for up to a decade or a few decades, with many of them being shorter-term uses, as with paper products.

The Forest Service, with the Crow HFR EA, is still refusing to quantify and disclose the predictable CO₂ and other Greenhouse gas emissions produced by planned management actions combined. The EA analysis also fails to estimate the amount of carbon storage and sequestration that would be lost from the extensive and intensive logging of “vast” numbers of trees to the lowest limit of the management zone.

Resolution

BMBP has often commented regarding Forest Service failure to acknowledge and stop or greatly reduce their contributions to catastrophic climate change through their increased intensity and scale of commercial logging to unsustainable levels in multiple large timber sales, including the Crow HFR project.

To resolve this problem, the Forest Service needs to make the following modifications to the Crow HFR project, as suggested in other proposed resolution remedies above:

* Significantly decrease the geographic scale of the Crow HFR project commercial logging of mature (and potentially large) trees to preserve more tree carbon sequestration for the long-term, including tree carbon contributions to soil carbon storage, as now advocated by scientists (some of them referenced above and with our scoping comments) in the face of extreme climate change effects that would likely lead to the extinction of 10-50% of species by the end of the century.

This extent of species loss would probably lead to the loss of vital ecological functioning, leading also to chaos and conflicts among nations and communities in combination with climate change-related droughts, famines, sea level rise, and flooding. Such chaos would likely include wars over scarce resources, mass emigrations and immigrations, and other threats to human civilization as we know it.

* Significantly decrease the intensity of planned commercial logging by leaving higher minimum and average basal area per acre, which also helps retain and perpetuate carbon storage and sequestration. We suggest higher target basal areas that could be more easily achieved by setting

an upper logging limit of 15" dbh instead of 21" dbh and by focusing primarily on non-commercial thinning up to 9" dbh with ladder fuel exceptions up to 12" dbh only where needed, under the dripline of old growth Ponderosa pines and Western larch.

- * Retain all large tree structure, including live large trees, large snags, large down wood, and large live conifer trees in all aspen stands (equal to or greater than 21" dbh) to retain the most significant existing carbon storage and increase the biodiversity of the aspen stands.
- * Retain more mature trees to sequester carbon and become large trees by dropping the best wildlife habitat from logging as per our survey sheet recommendations for priority "Drop" sale units. Drop all of our priority Drop sale units from commercial size logging.
- * Retain more soil sequestration of carbon by dropping logging in sensitive soil areas and in sale units that would otherwise likely exceed Forest Plan detrimental soil impact standards, as specified above for sale units listed in the EA, under "Forest Plan Violations" under the sub-category of "Detrimental Soil Impacts".

Thank you for your consideration of these objections. We look forward to meeting with you to work on a resolution to our concerns. Many other remedies for resolution were suggested throughout our comments.

Sincerely,



Karen L. Coulter

Karen L. Coulter, Director, Blue Mountains Biodiversity Project



