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

NOTICE OF OBJECTION

June 4th, 2022

Forest Supervisor, (Reviewing Officer)
Deschutes National Forest Supervisor's Office
Attn: Sasha Bertel
63095 Deschutes Market Road
Bend, OR 97701

RE: Blue Mountains Biodiversity Project's objection to the Deschutes National Forest Draft Decision Notice and Finding of No Significant Impact and Environmental Assessment for the Green Ridge Landscape Restoration Project

Dear Objection Reviewing Officer,

Blue Mountains Biodiversity Project (BMBP) hereby formally submits the following objections to the Deschutes National Forest Green Ridge Landscape Restoration Project (Green Ridge) 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 comments on the Draft Environmental Assessment, including field survey sheets and photographs from our surveying the affected area for weeks.

Decision Document
Green Ridge Landscape Restoration Project Environmental Assessment and Draft Decision Notice and Finding of No Significant Impact

Date Decision published
May 10th, 2022

Responsible Official
Ian Reid, District Ranger, Sisters Ranger District, Deschutes National Forest

Description of the Project
The Deschutes National Forest Service has selected a modified version of Alternative 3, including the following proposed management actions. Therefore, this objection focuses on modified Alternative 3, as specified in the Draft Decision Notice. Modified Alternative 3 includes:
* 620 acres of Accelerated Forest Recovery—Site Preparation [not clear if this still includes commercial logging and is planned in recent post-fire stand conditions]
* 38 acres of Aspen/Hardwood Enhancement [commercial conifer logging, apparently with no size limit]
* 1,103 acres [Northern Spotted owl] Dispersal Habitat Maintenance [commercial logging up to 21" dbh (see Draft Decision Notice, p. 7 specifying "small and medium trees" as "<21"dbh") and

small tree thinning]; (PST) ["Persistent Shade Tolerant" forest type]; Min. 40% Canopy Cover Retained
* 297 acres of Dispersal Habitat Maintenance [commercial logging up to 21" dbh and small tree thinning] (PST); Min. 50% Canopy Cover Retained
* 85 acres of Dispersal Habitat Maintenance [commercial logging up to 21" dbh and small tree thinning] (RGF) ["Recent Grand fir" forest type]; Min. 50% Canopy Cover Retained
* 2,818 acres of Dispersal Habitat Maintenance [commercial logging up to 21"dbh and small tree thinning] (RGF/RDF) ["Recent Grand fir/Recent Douglas fir" forest type]
* 107 acres of Future Dispersal Habitat UMZ [Upper Management Zone] Treatment [commercial logging up to 21"dbh and small tree thinning] (PST) ["Persistent Shade Tolerant" forest type] Min. 40% Canopy Cover Retained
* 94 acres of Future Dispersal Habitat UMZ Treatment [commercial logging up to 21" dbh and small tree thinning] (RGF) ["Recent Grand fir" forest type] Min. 35% Canopy Cover Retained
* 314 acres of Green Ridge Trail [management unspecified in the Draft Decision Notice]
* 263 acres of Hand Thin
* 2,283 acres of Mixed Conifer Restoration [commercial logging with no size limit as logging would apparently include "large" (>21"dbh) , and "very large" trees (>30" dbh) as well as small tree thinning] (RGF) ["Recent Grand fir" forest type]
* 1,898 acres of Plantation Restoration [commercial logging with a 21" dbh limit (as "thinning small and medium trees" Draft Decision Notice, p. 4) and small tree thinning] (PP/RDF) ["Ponderosa pine/Recent Douglas fir" forest type]
* 3,893 acres of Plantation Restoration [commercial logging with a size limit of <21" dbh and small tree thinning] (RGF/PST) ["Recent Grand fir/Persistent Shade Tolerant" forest type]
* 1,088 acres of Plantation Restoration [commercial logging up to 21" dbh and small tree thinning] (PST) ["Persistent Shade Tolerant" forest type]; Min. 40% Canopy Cover Retained
* 15 acres of Plantation Restoration [commercial logging up to 21" dbh and small tree thinning] (PST) ["Persistent Shade Tolerant" forest type]; Min. 50% Canopy Cover Retained
* 3,122 acres of Ponderosa Pine Restoration [commercial logging, apparently with no size limit and small tree thinning] (PP/RDF) ["Ponderosa pine/Recent Douglas fir" forest type]
* 37 acres of Prairie Farm Restoration [management unspecified in the Draft Decision Notice]
* 1,349 acres of [Fire] Risk Reduction (Ladder fuel reduction) [not specified in the Draft Decision Notice if this is only small tree thinning or commercial size logging]
The Green Ridge Landscape Restoration Project (aka "Green Ridge timber sale") would produce an estimated timber volume of 5.25 MMBF and include management activities over 19,437 acres.

(All words in brackets were inserted by the objector group in an attempt to make it easier for a lay person to understand what kind of management is planned under euphemisms such as "Restoration" and what the acronyms mean. Please let us know if we misinterpreted any planned management above.)

The Draft Decision Notice also includes further detailed descriptions of the selected modified Alternative 3.

Location

The Green Ridge project area is located in T11S, R10E, sections 7-10, 15-17, 20-22, 27-30, 31-34; T12S, R10E, sections 1-21, 29-32; T13S, R09E, section 1, Willamette Meridian. The project area is about nine air miles north of Sisters, Oregon (Map 1). The primary access routes are Forest Roads 1100 and 1190. The project area is about 25,000 acres in size and composed entirely of National Forest System lands. (Environmental Assessment (EA), p. 2)

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 hiking; camping; 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 and Central Oregon National Forests. Staff, volunteers, and supporters of BMBP live in various communities surrounding the Deschutes National Forest and use and enjoy the Forest for camping; hiking; bird watching; hunting; fishing; general aesthetic enjoyment; gatherings; viewing wild flowers, large trees, and wildlife; gathering forest products; and other purposes.

Request for meeting

BMBP requests a meeting with the Forest Service to discuss issues in this objection and seek resolution of concerns through negotiation before the Deschutes Forest Service makes a final decision on the Green Ridge Project.

Specific issues addressed in this objection

NEPA (National Environmental Policy Act) violations, including: failure to prepare a full Environmental Impact Statement instead of an Environmental Assessment; proposing management actions inconsistent with achieving the stated purpose and need for the project; failure to provide an adequate range of alternatives; failure to adequately analyze direct, indirect, and cumulative impacts of the project and the proposed Forest Plan amendment; failure to disclose scientific controversy; and inaccurate use of the science. We also object to the outsourcing of effects analysis and detailed issue information to separate reports in the project record and to the lack of disclosure during the Scoping comment period that commercial logging sale units are located within recently burned areas, raising issues of the effects of post fire logging. (We field surveyed commercial logging sale units that had many recently burned snags, live trees, and logs, which appear to be part of a larger wild fire area.)

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

Potential violations of the Deschutes National Forest Plan include violations of management area guidance and Forest Plan standards, including Aquatic Conservation Strategy requirements, and violations of Management Areas guidance for the Northern Spotted Owl Recovery Plan; Late Successional Reserves dedicated to protect habitat for the Northern Spotted owl, including dispersal habitat; Wildlife Connectivity Corridors; and recreational and scenic values, such as for Metolius special management areas. Potential violations of Forest Plan standards include those for elk and deer winter range (which may be resolved if modified alternative 3 or 4 is chosen); snag density/abundance; down wood standards; road density; and for limiting detrimental impacts to soils.

Potential Endangered Species Act violations include contributing to a trend toward federal uplisting for the following species: Threatened-listed Northern Spotted owl; Threatened-listed Gray wolf; Threatened-listed Canada lynx; Threatened-listed Bull trout; Sensitive Sierra Nevada Red fox; Sensitive Pacific fisher; Sensitive Wolverine; Sensitive woodpecker species, including White-headed woodpecker and Lewis' woodpecker; Sensitive Northern Waterthrush; Sensitive Columbia Spotted frog; Sensitive Redband trout; Sensitive bat species, including Fringed Myotis; Pallid bat; Spotted bat; and Townsend's Big-eared bat; Sensitive invertebrates, including Crater

Lake tightcoil; Morrisoni Bumble bee; Shiny Tightcoil; Suckley Cuckoo Bumble bee; and Western Bumblebee; and various Sensitive-listed plants known to be or suspected to be within the project area, including Peck's penstemon, previously Sensitive-listed Mountain Lady's Slipper, and potential *Rhizopogon alexsmithii* , a mycorrhizal fungal species. We are also concerned by the potential negative effects to Great Gray owls.

Potential Clean Water Act violations are covered in Paula Hood's comments and objections regarding the Green Ridge Project EA and Draft Decision Notice, on behalf of Blue Mountains Biodiversity Project, which will be sent separately.

We also express concerns in our objections regarding potential impacts to undeveloped lands, and potential cumulative negative effects to climate stability.

*Please note that we have read Forest Service responses to our comments in the final Environmental Assessment's Appendix D. The Forest Service responded to many of our comments, but not all of them. Issue headings for the response to our comments do not match our objection headings, but we note the page numbers of the responses to our comments where they correspond with our objection issues. Most of the responses to our comments simply re-state the agency's positions in the draft EA or otherwise do not resolve our objections. Where this is the case, we simply note the page number in appendix D that corresponds to our objection. When the response indicates a significant change in management plans or at least partially resolves our objection, we respond to the Forest Service response in our relevant objection. We may have missed some changes or additions to the final EA analysis.

BMBP objects to the Green Ridge Project for the following reasons:

I. The Green Ridge project violates the National Environmental Policy Act

The Green Ridge project violates the National Environmental Policy Act in the following ways: failure to prepare an Environmental Impact Statement (EIS) instead of an EA; inconsistency of proposed management actions with the stated "purpose and need" of the project; 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; and inaccurate use of the science. We also object to the outsourcing of detailed effects analysis to separate reports in the project record rather than including this necessary information in the EA, and to the lack of disclosure of apparent planned logging in recently burned forest stands.

Failure to prepare an Environmental Impact Statement for the Green Ridge Project

Our objection that the Green Ridge Project required an EIS is explained in our comments: "There is no compelling reason to log the Green Ridge area at all and many overwhelming reasons for not logging it. The Green Ridge sale should have been considered in an Environmental Impact Statement, not just an Environmental Assessment, as this is a highly valued recreation area which is also critical to Northern spotted owl recovery in the designated Critical Habitat and as part of the greater Metolius Spotted owl population. Mule deer are also in sharp decline in the area, threatening the ecological balance with large predators such as Gray wolves and cougars, as well as threatening human hunting opportunities. We request a full EIS for the Green Ridge timber sale project, with a full 45 day comment period and in-depth analysis consideration of publicly suggested alternatives listed in the EA." (Draft EA (DEA) comments, p. 9, par. 2)

"The Green Ridge sale needs an EIS and the requisite 45 day comment period to address the inadequacies in analysis—especially for wildlife effects sections, including for Northern spotted owl. An EIS is also needed for consideration of the public's reasonable suggested alternatives, and the EA's failure to disclose controversy between the Forest Service perspective on logging for Northern spotted owl recovery and the large body of science refuting this approach." (DEA comments, p. 21, par. 6)
"Northern spotted owl population numbers and population trends should have been disclosed for occupied territories in the EA and should be analyzed in depth in an EIS if this sale goes forward." (DEA comments, p. 21, par. 3)
"The results of the surveys for Northern spotted owls in 2011-2014 and 2016-2020 should have been fully included in the EA, not buried in the wildlife report. An EIS for the Green Ridge sale must include the findings from the NSO surveys, with in-depth analysis as to their implications for existing and future NSO population viability and recovery in the CHU Subunit 8 and in the Green Ridge area. (See EA p. 156.)" (DEA comments p. 21, last par.)

We also commented that an EIS is needed for the Green Ridge project in our scoping comments: "We want any subsequent Green Ridge EA or EIS—we think an EIS is needed—to fully disclose the presence and status of all listed, sensitive, and Management Indicator species within the planning area…." (Scoping comments, p. 6, last par.)

The Forest Service responded to Paula Hood's comment that an EIs should be conducted for the Green Ridge project on page 81 of the final EA, Appendix D. Paula Hood's comment reads in part: "A full EIS should be conducted for the Green Ridge project, and include adequate analyses of direct, indirect, and cumulative effects because the proposed action would significantly affect the environment—40 C.F.R. Section 1508.27. The Draft EA has not provided adequate analyses of potential direct, indirect, and cumulative effects on aquatics-related issues….These inadequate analyses led to unsubstantiated conclusions within the DEA, such as the DEA's determinations that there would be no effects to Threatened or at-risk species including Bull trout." The Forest Service claims in response that proposed management "effects are understood and disclosed in the EA…." We disagree that effects are fully disclosed and analyzed in the EA. We also do not determine that the EA analysis supports a Finding of No Significant Impacts. Therefore our objection to the Forest Service using an EA instead of an EIS for the Green Ridge project is not resolved by the Forest Service response.

Resolution

Blue Mountains Biodiversity Project (BMBP) has commented on our objection that an EIS should have been prepared for the Green Ridge project both during scoping and in our comments on the EA, as quoted and cited above.

Resolution of this objection would require preparation of a full Environmental Impact Statement for the Green Ridge Project with wide spread public notification, and including the requisite detailed effects analysis within the EIS and a full range of alternatives responsive to public concerns, with the required 45 day public comment period and a 45 day objection period.

Inconsistency with the stated purpose and need of the project

The Green Ridge project is not consistent with all the purpose and need goals as expressed in the Environmental Assessment. The Green Ridge EA included the following statement that constituted the purpose and need for the Green Ridge project on the final EA pages 12-13 :

"**Project Purpose and Need for Action**

The ***purpose*** of this project is to promote ecological restoration by reestablishing the composition, structure, pattern, and ecosystem processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience, and health under current and future conditions in the Green Ridge planning area. Treatments would support ecological restoration and place forested vegetation on a trajectory towards the Historic Range of Variability (See Table 3). The Forest Plan has set goals for the Deschutes National Forest which include the following for vegetation and forest health:
'With both even and uneven-management [logging] being practiced, size and age diversity is present on a landscape level, created by a mosaic of even-aged stands, as well as on a stand level, created by uneven-aged management practices within many ponderosa pine and mixed conifer stands.'
'The Forest is in an overall state of health, vigor and diversity whereby it can fulfill the full complement of resource management goals both in the long and short-term. Forest pest impacts are still present in the Forest but as desirable agents of a healthy functioning ecosystem. Resistance to devastating epidemics is high. This resistance is managed proactively with vigilance, planning and sound silvicultural techniques.' (LRMP 4-5)
Across the Green Ridge project area, there is a need to 1) remedy extensive past management actions such as clearcutting and high-grade logging which simplified forest structure and composition; 2) reintroduce prescribed fire and remove shade-tolerant tree species such as grand/white fir, thereby lowering overall fire hazard and accelerating the development of large, fire-resilient trees; 3) manage insects and diseases to their historical limits, improving levels to improve long-term forest health; 4) restore special habitats like Prairie Farm meadow and aspen/cottonwood stands; 5) maintain or improve habitat for northern spotted owl, mule deer, and other sensitive species through a combination of active management and core area protection; and 6) provide forest products and recreational opportunities to support local and regional economies and lifestyles." (final Green Ridge EA, pp. 12-13)

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.

Examples of our comments on the inconsistency of proposed management actions with the stated purpose and need for the Green Ridge project:

Re: Inconsistency of planned management actions with the stated purpose and need for the project:

"Based on the flawed project design strategy and the contradictions between statements of intent and the reality of planned extensive and intensive commercial logging across more than half of the Green Ridge project area, we find that the proposed management actions, especially the large extent and great intensity of planned commercial logging, are inconsistent with many aspects of the stated purpose and need. These include: providing for wildlife habitat needs in both the short- and long-term; enhancing the recovery of the Northern spotted owl (by logging); maintaining Mule deer viability and the viability of old growth or LOS-dependent species while removing large and very large trees, structural complexity, and higher canopy closure; restoring riparian conditions by logging in the riparian reserves; maintaining recreational values by logging in or around hiking trails, dispersed campsites, major recreational access roads, etc.; aiding forest resilience to climate change by logging mature, large, and "very large" trees that sequester and store the most carbon, which reduces climate change; and widely separating trees by logging, so that they can no longer communicate through underground mycelium webs to support each other

by sending chemical signals of impending defoliating insect epidemics or transferring nutrients and carbon through the intricate mycelium webs to support growth of other trees, including even trees of different species. See Suzanne Simard's peer-reviewed research articles since 1997 and her recent book, Finding the Mother Tree, Discovering the Wisdom of the Forest, which includes numerous citations of science supporting these concepts through rigorous controlled experiments.

Commercial logging does not function to "develop" nesting, roosting, and foraging habitat for Northern spotted owl where it is currently lacking. We are unaware of any evidence supporting that contention. Northern spotted owl habitat is best protected and nurtured by letting it develop naturally, as it was created. Planned commercial logging would degrade or eliminate suitability for spotted owl habitat by logging removal of many mature and also large and "very large" trees, and by eliminating needed structural complexity, canopy closure, and future large live trees, snags, and logs. Commercial logging does not make forests more resilient." (Draft EA comments on p. 7, 2nd and 3rd par.)

"Most of the logging planned would result in forest conditions contrary to the stated objective for each forest structure situation, as well as to the overall purpose and need statements for the whole sale. For example, the objective to "encourage large tree development" while allowing "incidental removal" and girdling of existing medium to large-sized trees (by using a rationale of mistletoe infection) in plantations already greatly lacking large trees. (See EA p. 30.)" (DEA comments, p. 11, par. 6)

"Since the Forest Service states as an objective for the "Persistent Shade Tolerant" forest condition that it "has a high potential to support high stand densities and complex structure needed for owl habitat", why is commercial logging planned that would purposefully reduce stand densities and inevitably reduce complex structure needed by the Northern spotted owl? This is so obviously inconsistent that it's as if one person wrote the objectives and another wrote the "treatment" description, without communicating with each other. Yet the management planned persists in logging large and very large trees (e.g. with mistletoe) and "of any size", even though Northern spotted owls select for large and very large tees with complex structure, such as is created by mistletoe through large branch size, inter-twined branches, and large mistletoe brooms. All of this structure is also correlated with Red tree vole nests, which is the spotted owl's primary prey on the west side of the cascades. Other small rodent prey, including squirrels, would also use this structure. Logging large mistletoe-infected trees is also detrimental to Northern goshawk nest platforms, Blue grouse roosting in mistletoe brooms, and various bird species that feed on mistletoe fruiting bodies.

The stated Wildlife Habitat objective for the "Persistent Shade Tolerant" forest condition—i.e. moist mixed conifer—is "to promote habitat for the Northern spotted owl, American marten, elk, Mule deer, bats, woodpeckers, cavity-nesters, and species associated with down logs and woody debris" is completely contradicted by stated logging plans under "Treatment Description" to reduce stand density (applicable to elk and Mule deer habitat needs), and remove large and very large trees (all the other species named), and reduce the structural complexity found in large, very large, and mistletoe-infected trees." (DEA comments, p. 13, last par. through the 1st 2 pars. of p. 14)

Our additional comments on inconsistency between the stated purpose and need and proposed management actions can be found in our comments on the DEA and in our scoping comments

(handwritten scoping comments are designated by our page numbers, with the exception of scoping comments written on pages of the Scoping packet, which are designated as "S" before the Scoping packet page number.) These additional comments on the inconsistency between proposed management actions and the stated purpose and need include: DEA comments on: p. 1, last par; p. 2, par. 4; p. 3, par. 4; p. 5, par.s 2, 4, and 6; p. 6, last par.; p. 7, 1st par.; p. 12, par.s 1, 2, 3, 4, and 5; p. 14, par. 4; p. 16, par. 2; p. 22, par.s 6 and 8, through p. 23, par. 1; p. 38, par. 2; and p. 43, par. 1.

We found no direct response from the Forest Service in Appendix D of the final EA to our comments regarding the inconsistency between planned management actions and the stated purpose and need for the Green Ridge project.

Resolution

BMBP has commented extensively on its objection to the inconsistency between proposed management actions and the stated purpose and need for the Green Ridge Project (see quotes and citations above.)

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 large and "very large" tree logging. Reduce the scale and intensity of planned logging overall to significantly reduce logging of mature trees (e.g. 15" dbh to 21" dbh) that would otherwise be next in line to become future large trees and restore large trees to the landscape.

*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 all commercial logging in moister mixed conifer (e.g. the "Persistent Shade Tolerant" forest type), and in all old growth and Late and Old Structure forest (which may already be planned under modified alternative 3.) 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 not manage all mixed conifer mature forest (e.g. "mixed conifer restoration") and LOS except for some noncommercial-size thinning up to 6-9" dbh, only where it's really needed, with prescribed burning only in drier mixed conifer that is Ponderosa pine-dominant.

* Increase basal area retention significantly in remaining sale units and leave more patches of diverse tree species and density within sale units for greater variability across the landscape.

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

*Drop all undeveloped lands from logging, road construction, and closed road re-opening.

* Drop all commercial size logging in the Late Successional Reserve except for diversifying young plantations in the LSR.

* Drop all commercial size logging in the Metolius special management areas and within Riparian Reserves.

*Greatly reduce biomass removal overall. Abandon the "accelerated recovery" management and maximize retention of snags and down wood by not doing fuel reduction on such a large scale. Only non-commercially thin up to 9" dbh in the roadside fuel breaks and use prescribed fire to substitute for any planned commercial thinning—both in the fuel breaks and across the sale area in general. Don't do any fuel reduction except non-commercial thinning up to 9" dbh by hand in

the “Persistent Shade Tolerant” areas and in areas with more large and old Douglas fir, Incense cedar, and other tree species except for Ponderosa pine. Drop all prescribed burning in the so-called “Persistent Shade Tolerant” areas and in all mixed conifer old growth except for Ponderosa pine dominant stands.
* Incense cedar are not “over-represented on the landscape”, as they are quite rare except for on the Sisters District. Drop all logging of Incense cedar, as well as any Englemann spruce, Western larch, Mountain hemlock, and older Lodgepole pine stands, as well as the five-needled pines, wherever they exist. This is to maintain tree species diversity, which is a unique and recreationally prized characteristic of the Green Ridge area, and to increase biodiversity and heterogeneity on a landscape scale.
*Abandon the “investments” in maintaining homogenous pine plantations. Instead, allow them to diversify with different tree species that used to be there (as planned) and also don’t manage for individual tree vigor, but for high quality wildlife habitat with structural complexity and denser forest where it naturally existed or could be sustained.
*Abandon the outdated and unhelpful goal of “moving toward” an assumed and theoretical Historic Range of Variability and instead focus on maintaining forest carbon sequestration and storage by leaving far more forest cover and all large and “very large” trees, as well as the great majority of the mature trees, so that they can grow into large trees. Also switch the management focus to supporting the viability of Sensitive, Threatened, rare, and declining wildlife and plant species, including Northern Spotted owl, Gray wolf, Pacific fisher, Canada lynx, and American marten. If such mission changes aren’t adopted, unraveling ecosystems and mass species extinctions indicate that organized human civilization may not persist past the end of this century.

Failure to provide an adequate range of alternatives

The Green Ridge Environmental Assessment included an inadequate range of alternatives. Our scoping comments were clear in recommending three viable action alternatives that could be combined into one action alternative, but which the Forest Service refused to analyze as alternatives for management:
“We would like the Forest Service to analyze in depth the following action alternatives:
*only diversifying existing pine plantations through logging [with planting of other tree species that naturally existed in those areas] with no other commercial size logging or extraction.
*not logging any identified Northern Spotted owl dispersal habitat (black and white striped sale units on the draft sale map) or any other suitable Northern spotted owl habitat, including both identified retention areas and suitable NSO habitat in mixed conifer ‘restoration’ sale units (red and green on the draft sale map) and possibly in some LOS/Old growth Ponderosa pine ‘restoration’ sale units (gold on the map).
*not logging any large trees (>/= 21” dbh) to preserve needed large tree structure in an area where so many large trees have already been removed through clearcutting and other logging. This should include, but no be limited to, not logging trees with old growth characteristics and not logging large snags or removing large down wood.
Obviously these three action alternatives are not exclusive of each other, and could be combined.” (Scoping comments, p. 8)
Our other scoping comment suggested (as above) not commercially logging except to diversify existing young Ponderosa pine plantations, on p. S11.

Our other comments on an inadequate range of alternatives in the EA can be found on DEA comment pages:

“pp. 26-27: Narrowly construed purpose and need, inadequate range of alternatives, and rejection of reasonable alternatives suggested by the public:

" The purpose and need statement for the Green Ridge timber sale "project" is obviously too narrowly construed, in order to justify rejecting varied reasonable alternatives suggested by the public, as diverse as not constructing "temporary" roads, not logging large trees (recognized as those over 21" dbh across eastern Oregon forests, and only managing existing plantations. Claiming that any of these more ecologically protective alternatives recommended by public interest environmental organizations would not meet the pre-determined restrictive purpose and need results in an inadequate range of alternatives that do not fully address significant concerns raised by diverse environmental groups and individuals.

All three of the alternatives not analyzed in detail are reasonable and should have been considered and analyzed in depth." (DEA comments, p. 9, par.s 4 and 5)

"The EA offers an inadequate range of alternatives as they differ only in the degree (or acreage) of all the same types of management without completely avoiding the negative effects to Northern spotted owl recovery and to the viability of the Northern spotted owl and other species with similar habitat needs or which require denser security cover.

Based on Table 66 and 67 on EA p. 162, none of the action alternatives would avoid reducing dispersal habitat available for Northern spotted owls despite concerns expressed by multiple environmental organizations and Endangered Species Act (ESA) requirements to retain Critical Habitat components for Northern spotted owl recovery. These habitat components should include intact dispersal habitat to ensure genetic diversity of the populations through dispersal, which is essential to continued species viability.

We can't fully support any of the action alternatives because they would all threaten continued viability of the Northern spotted owl in the Green Ridge area over five home ranges. At least three of these NSO territories are known to be occupied, based on surveys reported on EA p. 157. The other territories' NRF and dispersal habitat also need to be protected from logging to allow for population recovery and expansion." (DEA comments, p. 23, par.s 7, 8, & 9)

" The inadequate range of alternatives is illustrated by the lumping together of all three action alternatives for soil impact analysis and the clear rationale for this expressed in the first full paragraph of p. 298—that management actions are basically the same under all three action alternatives. This gives the public no choice as to what would be done under the action alternatives to meet the stated purpose and need. The soil analysis acknowledges that there is only "a slight variance in the spatial extent and location of these treatments between alternatives." (EA p. 298, first full par.)" (DEA comments, last par. p. 38-1st par. p.39)

A further comment on our objection that there is an inadequate range of alternatives can be found in our comments on DEA comments p. 8, par. 6.

While there was no direct response to this objection in Appendix D, District Ranger Ian Reid did propose a modified version of alternative 3 in the Draft Decision. We appreciate this movement toward more ecologically sound management plans in response to numerous concerned comments from the public. However, modified alternative 3 does not fully resolve our objections. Our objections are based on the Draft Decision and our recognition that modified alternative 3 may be chosen as the selected alternative.

Resolution

BMBP has commented on its objection to the inadequate range of alternatives in the Green Ridge Environmental Assessment and requested a broader range of alternatives in our comments. See our comments quoted and cited above.

To remedy this problem, the Forest Service would either have to prepare an 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 above under Inconsistency with Purpose and Need, including the following:
*Drop all logging of large or "very large" trees over >/= 21" dbh.
*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.
*Retain more 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 Northern Spotted owl; Pileated woodpecker; American marten; elk and deer thermal and hiding cover; primary cavity excavators; and Northern goshawk.
*Drop all planned commercial-size logging (over 9" dbh) in Northern Spotted owl habitat, including identified dispersal habitat.
*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 conifer felling by hand in aspen stands up to 21" dbh, with all felled trees left in the stands.
*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.
*Greatly reduce overall biomass reduction to provide for abundant snags and sufficient down wood for wildlife species, both immediately and by allowing enough mature trees to grow larger, for future large snag and log recruitment.
*Focus on retaining and increasing carbon sequestration and storage and supporting the viability of Sensitive, Threatened, rare, and declining species, including the Northern Spotted owl, Gray wolf, Pacific fisher, American marten, Canada lynx, and wolverine, as well as declining or rare Neotropical migratory songbirds and Birds of Conservation Concern, as well as retaining biodiversity of aquatic and riparian species, including Threatened Bull trout, Sensitive Columbia Spotted frog, Sensitive invertebrates, and Sensitive, rare, and declining plant species.

Failure to adequately analyze direct, indirect, and cumulative effects

The Green Ridge Environmental Assessment demonstrates failure to adequately analyze environmental effects of the project throughout the document, including omissions and distortions such as the following addressed in our comments:

Inadequate Direct and Indirect Effects analysis:

" There appears to be no in-depth analysis as to the effects of past timber sale management to Northern spotted owl habitat that is equivalent to the EA's consideration of wild fire impacts to NSO habitat in the Eastern Cascades and the Green Ridge sale area, even though the timber sale

logging probably decimated far more spotted owl suitable habitat cumulatively that existed before these timber sales than recent wildfire affected. This is inadequate and pro-logging biased analysis of effects to NSO suitable habitat." (DEA comments, par. 5)

"The wild fires in the Critical Habitat (CHU) Subunit 8 are individually named and dated, with general and specific Northern spotted owl habitat loss described (see EA p. 154), but the many timber sales in the CHU Subunit 8 area that clearcut, high-graded, or otherwise degraded or eliminated NSO suitable habitat are not named, dated, or given any in-depth analysis and disclosure of general, specific, and quantified effects to NSO suitable NRF and dispersal habitat. Without this information, we are left to guess what the historic population of Northern spotted owls in the CHU Subunit 8 and Green Ridge areas looked like in population numbers and distribution and how much suitable NSO habitat may have existed before the extensive and intensive logging of the past timber sales. We are also left to guess how much all these timber sales diminished the NSO population in CHU Subunit 8 and the Green Ridge area, as a way of discerning how much more logging of NSO dispersal habitat (as planned) would further diminish the already precariously low NSO population, which is also not quantified and disclosed. The continued viability of Northern spotted owl in the Green Ridge area cannot be accurately assessed without species population numbers, reproductive success rates, mortality rates, and population trends over the long-term. " (DEA comments p. 21, par. 7)

"As with other sections of the EA, the No Action alternative is analyzed in a very biased way which assumes that planned logging and other management would somehow prevent or greatly reduce wildfires in the area, even though most of the Green Ridge area and the Metolius Basin area have already been extensively logged, with substantial "fuel" reduction intended to reduce fire risk, yet wildfires continue to occur at high severities in the area on a regular basis. There is also the implicit assumption that No Action would result in more insect and disease outbreaks and more large scale fire than under the timber sale plan, although there is no evidence cited for this. There is also no disclosure that the vast majority of high tree density (where it exists) in the Green Ridge sale area is only small trees up to 9-10" dbh, which does not necessitate commercial logging for removal. The No Action alternative effects description also fails to consider the benefits of not logging in NSO dispersal habitat, not logging large and very large trees, and not removing snags and down woody debris that support Northern spotted owl prey species." (DEA comments p. 22, par. 4)

Gray Wolf and Sierra Nevada Red Fox:

"This is unbelievably biased analysis for effects to various wildlife species, which can be boiled down to assumptions that planned management returning conditions to a theoretical Historical Range of Variability, with which species evolved, is therefore positive, disregarding all the negative effects of management to the species (since then and now proposed), and the idea that "wildfire is bad" , disregarding its benefits to all the species that evolved with fire, rather than with human management." (DEA comments, p. 26, par. 5)

"Fringed Myotis, Pallid, Spotted, and Townsend's Big-eared Bats:

"The EA analysis for wildlife species finding that the No Action alternative would harm each species is based on inadequate analysis –e.g. that logging large, very large, and many mature trees somehow results in greater development of large trees and snags despite this not being the result from past timber sales.

The analysis regarding the four bat species does not focus on the loss of cool, moist microclimate forest with high canopy cover on a landscape scale from the action alternatives.

"Other flawed assumptions from other wildlife sections re-appear in the consideration of effects to bats, such as that old trees would be conserved under all action alternatives. There is also the continued failure to quantify the effects of logging and other management actions as they would affect the species at issue." (DEA comments, p. 27, last three par.s)

Additional DEA comments addressing inadequate direct and indirect effects analysis can be found on the following DEA comment pages: p. 6, par. 3; p. 16, par. 5; p. 17, par. 3 and 4; p. 28, par.s 2 and 5; and p. 29, par. 4.

Our scoping comments identified key issues to be analyzed in depth on p. 7, last par. and the first half of p. 8 and on p. S11, 1st par., including effects to: Northern Spotted owls and their habitat; Mule deer and their habitat; primary cavity excavating woodpecker species (listed); area streams, including water quality parameters and effects to downstream fish species and amphibians; Northern goshawks and Cooper's hawks and their habitat; large tree structure; and climate change; (pp. 7-8) and to soil integrity and productivity and American marten viability and suitable habitat (p. S11).

Our comments illustrate the reasons for our objection regarding inadequate cumulative effects analysis:

"It is very clear with the Cumulative Effects analysis for Northern spotted owl (EA pp. 162-163) that subsuming past actions and effects (e.g. of all the timber sales that have reduced NSO habitat) into the existing condition is being used by the Forest Service not to analyze in depth any of the negative cumulative effects of past management actions with the current proposed timber sale even though the loss of suitable habitat for Northern spotted owls from all the clearcutting and high-grade logging is long-term and persists today.

The Metolius timber sale (which we field surveyed) did log Northern spotted owl suitable habitat, reducing the amount of dispersal habitat for NSO, which is a cumulative effect with planned logging removal of NSO dispersal habitat suitability that should have been analyzed in depth regarding combined effects to Northern spotted owl dispersal and genetic diversity. The loss of dispersal habitat from the Metolius sale and other sales should have been quantified and considered for cumulative effects to dispersal in the Critical Habitat Unit. (See EA pp. 162-163)" (DEA comments, p. 24, 1st & 2nd par.s)

"This is an astoundingly unsubstantiated conclusion that Alternatives 2-4 would cumulatively "benefit the persistence of the species and its habitat", which is based on no quantitative assessment of cumulative combined effects, completely omitting all the lasting and current loss of NSO habitat and viability from past timber sales on the Deschutes, the Sisters District, and in the Green Ridge area. (See EA p. 163, last sentence before "Determination of Effects".)

The determination of effects that none of the alternatives' effects are "impactful" enough to change population trends ignores the cumulative nature of species up-listing, extirpations, and eventual extinction from incremental loss of habitat. This determination is based on significant non-disclosure of relevant information regarding Northern spotted owl population status, reproductive success, population trends, a consequent viability threshold, and loss of habitat to past and ongoing logging—for the Green Ridge area, the Sisters District, the Deschutes National Forest, and the Pacific Northwest region." (DEA comments, p. 24, par.s 4 & 5)

"Switching to the Forest scale in order to minimize potential effects to species' viability is unjustified when there is no cumulative effects analysis on the Forest scale for effects to the species cumulatively from the many other timber sales across the Forest and from other cumulative losses of suitable habitat across the Forest." (DEA comments, p. 25, par. 8)

"The cumulative effects analysis for wildlife species is just a rote listing of ongoing and future foreseeable projects with no quantified analysis of specific harms to the species from the listed management actions combined with the Green Ridge project management actions. There is also no detailed consideration of past management actions that may have caused the current lack of suitable habitat or species decline or rarity compared to historic population numbers. The species' historic and current population numbers, recent reproductive success rates, population trends, and viability thresholds are not disclosed or considered in the analysis, making it impossible to make an accurate determination that the proposed actions would not cause a loss in population viability or contribution to an upward listing trend. It's not legally sufficient to just state that there would be no trend toward up-listing of populations or species viability without detailed analysis justifying these conclusions. The conclusions regarding potential for up-listing or loss of species viability must be specific to each species' population status and habitat needs." (DEA comments, p. 26, par. 4)

" Switching the scale of analysis to Forest level for viability determination for Mule deer and elk is not justified without taking the requisite steps to disclose and analyze the cumulative effects of habitat loss to these species across the entire Forest." (DEA comment, p. 31, par. 4)

"The following quote from EA p. 208 is typical of the inadequate cumulative effects analysis and lack of in-depth analysis supporting the assumption of not causing a trend toward listing or loss of viability: "Alternatives 2-4 may negatively impact the species in the short term but would cause a long-term neutral impact. They would combine with the aforementioned past, ongoing, and reasonably foreseeable actions and events for a cumulative effect on the fitness of cervids. In the context of these other factors, Alternatives 2-4 may impact cervids, but their cumulative contribution would not cause a trend toward listing or loss of viability." Just saying this does not constitute adequate cumulative effects analysis under NEPA or justify conclusions of cumulative effects not causing a trend toward listing or loss of viability." (DEA comments, p. 31, par. 7)

"There is no in-depth cumulative effects analysis that could justify a conclusion of long-term beneficial effects to marten from the action alternatives. As with other wildlife effects sections, switching to the Forest scale of analysis for determining viability is not justified when there is no supporting analysis of cumulative effects to marten across the Forest. Again, just because the project may be consistent with most of an outdated Forest Plan doesn't mean that the continued viability of a species, including marten, can be assumed. (See EA p. 212)" (DEA comments, p. 33, par. 4)

"The cumulative effects section for Transportation is inadequate because it fails to consider any road-building and related effects further into the past than five years, even though roads create long-term effects. This avoids cumulative effects analysis for the lasting effects of previous road construction, re-opening of closed roads, and construction of "temporary" roads in past timber sales, including "temporary" roads that were never decommissioned. It's notable that the 5 year future effects limit to the analysis effectively prevents disclosure of long-term cumulative negative effects of future timber sales in the Green Ridge sale area, even though these are likely anticipated in long-term planning. " (DEA comments, p. 40, par. 3)

"Climate Change:

The analysis does not assess the actual CO2 budget of the Green Ridge timber sale and disclose its contribution to climate change as one of many incremental effects leading cumulatively to such extreme climate change. There are now scientifically verified threats of global warming causing increased drought, mass famines, sea level rise drowning entire nations, flooding, extreme summer heat, more intense wild fires, extinctions of numerous species, mass emigration of people across the world leading to heightened resource conflicts and wars over the basic

necessities of life, and the potential for 10-50% of all species becoming extinct by the end of the century, and the potential collapse of human civilization as we know it. Yet the Forest Service analysis for Climate Change ignores all of this (except increased wild fire) despite global warming being the greatest global crisis of our time." (DEA comments, p. 42, par. 1)

"The analysis does not consider the cumulative effects of many small direct and indirect contributions to overall Greenhouse gas emissions that has led to this global warming crisis, including from timber sales. Federal agencies should set a positive example for the public and corporations by taking the lead in reducing Greenhouse gas emissions and preserving natural carbon sequestration and storage, including forest tree carbon sequestration and storage, rather than shirking their responsibility." (DEA comments, p. 42, par. 7)

"Chapter 3: Environmental Consequences:

Cumulative Effects, [re: DEA] p. 75:

Specific timber sale impacts from past timber sales overlapping or adjacent to the Green Ridge project area need to be considered in the cumulative effects analysis with the Green Ridge timber sale. These effects include the type and location of logging overlapping or adjacent to currently planned Green Ridge sale units, steep slope logging, past logging of previously never logged areas, large tree logging quantities, clearcutting, riparian area logging, road building, and prescribed burning. All of this information from past logging should be spatially located and quantified and then compared for cumulative long-term effects with the potential effects of the Green Ridge sale." (DEA comments, p. 15, par. 4)

"Wildlife:

Analysis Methods, p. 139: Past management effects can't be legitimately subsumed as part of the existing condition, as this serves to bury specific combined effects of the currently proposed timber sale with over-lapping and adjacent effects of past sales, many of which are long-term, such as cable yarding skid trails on steep slopes; loss of historic abundance of large, very large, and old trees; diminishing suitable habitat for TES and candidate for uplisting species dependent on LOS/Old growth conditions, and/or denser forest and higher canopy closure or greater structural complexity; and loss of basic riparian functioning form logging and roading in riparian areas. Without attention to specific past logging, roading, and prescribed burning effects, there is no learning curve from past mistakes and thus no real adaptive management. This standard and excessive timber sale purports to be designed to benefit the conservation of Sensitive species (EA p. 138) and the Northern Spotted owl and MIS Mule deer without analyzing in depth the specific impacts of past sales as to type of impacts, lasting consequences, and location, in combination with foreseeable and potential impacts of specific logging, roading, burning, and shrub mowing and mastication planned for the Green Ridge sale. Without considering past timber sale, roading, and burning effects to the Northern spotted owl, Pileated woodpecker, American marten, potential Pacific fisher, Mule deer, and other species, this timber sale may exacerbate long-term existing impacts from past sales and further wildlife species' declines, contributing to an upward trend toward federal listing for some of the species currently in decline. The determination of potential up-listing or no potential up-listing or loss of viability cannot be made without such in-depth analysis." (DEA comments, pp. 15, last par. through p. 16, 1st par.)

More of our comments on inadequate cumulative effects analysis can be found written on DEA comment pages: p. 28, 3rd and 4th par.; and p. 41, par. 2.

We found Forest Service responses to some of our comments concerning inadequate cumulative effects analysis in Appendix D of the final EA, including the agency's response under "Roads" on

p. 67, responding to our comment that the cumulative effects section for Transportation is inadequate because it fails to consider any road-building and related effects further into the past than five years, even though roads create much longer-term effects; on p. 42 to some of our comments regarding past management effects being illegitimately subsumed as part of the existing condition; the Forest Service switching to the Forest scale without considering cumulative effects to species' viability across the Forest; the cumulative effects analysis for wildlife species being just a listing of ongoing and foreseeable future projects with no quantified analysis of specific harms to species from the listed management actions combined with Green Ridge project management actions; and wildlife species' historic and current population numbers, recent reproductive success rates, population trends, and viability thresholds not being disclosed or considered in the analysis, making it impossible to make an accurate determination that the proposed actions would not cause a loss in population viability or contribution to an upward listing trend under the Endangered Species Act.

Forest Service responses to these comments merely confirmed their existing analysis practices in the EA, except for "Some recent past actions" being "included in the cumulative effects table at the beginning of Chapter 3" being "considered". The response also noted that the "wildlife report" as opposed to the EA, "made use of the available demographic data for the analyzed species", apparently without including this data in the EA. These responses did not resolve our objections regarding inadequate cumulative effects analysis.

Resolution:

We found the Green Ridge EA to have an extraordinary amount of inadequate effects analysis--including by omission of detailed, in-depth analysis--applying to a wide range of issues analyzed. BMBP has commented extensively on its objection to the Forest Service's failure to adequately analyze direct, indirect, and cumulative effects of the Green Ridge project on a range of receptors, including project effects to existing and future large tree structure; Northern Spotted owl population status and continued viability; primary cavity excavating woodpeckers' habitat structure; deer and elk habitat; Gray wolf dispersal and prey habitat; Sensitive Sierra Nevada Red fox habitat; wildlife species viability determinations; Sensitive bat species; Sensitive invertebrate species; Great Gray owl; and effects to wildlife species in general; down wood and recreation; and climate stability. We also commented on inadequate effects analysis regarding effects from: the transportation system; past timber sales; logging loss of historic mature and old growth fir; and inadequate effects analysis regarding subsuming past management effects into the existing condition baseline.

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

We did not find significant changes to the analysis in the final EA from the draft EA that would completely resolve this objection.

To resolve this objection, an EIS needs to be prepared that adequately analyzes direct and indirect effects of the Green Ridge 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, and a new objection period of 45 days.

Inaccurate use of the science

There are parts of the Green Ridge EA analysis not reflecting the full range of best available science and not using the science inaccurately. Examples of inaccurately using science from our comments:

"Contrary to the EA analysis, larger and older trees contribute more to carbon sequestration than young and small trees. (See EA p.330, par. 1.) " (DEA comment on p. 42, par. 4)
"Carbon dioxide emissions from timber sales and other sources are not just a "temporary" influence on atmospheric carbon concentrations as claimed on EA p. 331, because CO2 build-up remains in the atmosphere for up to 300 years, locking in extreme global warming effects for centuries." (DEA comment, p. 42, par. 6)

"There is absolutely no evidence that so-called "Accelerated Forest Recovery" would meet the objective "to accelerate the development of future habitat for spotted owls and other forest-dependent wildlife." (EA p. 41) Wildlife have evolved with wildfire and natural forest ecological disturbances, not with logging, tree planting, and shrub mastication. Drop all of the planned "Accelerated Forest Recovery" excessive and destructive management." (DEA comments on p. 14, par. 6)

"There is no evidence or guarantee that commercial-size "thinning" would "grow larger trees more quickly"—especially in the context of future timber sales following this sale's precedent to return to logging in riparian reserves. Given the past impacts from large tree logging and planned large and "very large" tree logging in the current Green Ridge sale, it seems very unlikely that remaining trees in the riparian reserves would be allowed to grow into large trees before being logged again." (DEA Comments p. 14, par. 6 & last par. into p. 15, 1st par.)

"Commercial logging does not function to "develop" nesting, roosting, and foraging habitat for Northern spotted owl where it is currently lacking. We are unaware of any evidence supporting that contention. Northern spotted owl habitat is best protected and nurtured by letting it develop naturally, as it was created. Planned commercial logging would degrade or eliminate suitability for spotted owl habitat by logging removal of many mature and also large and "very large" trees, and by eliminating needed structural complexity, canopy closure, and future large live trees, snags, and logs. Commercial logging does not make forests more resilient." (DEA comments, p. 7, 3rd par.)

" It's not clear that reducing forest cover would "enhance water storage and promote the slow release of water into streams and wetlands in the summer months by reducing stand densities." (EA p. 31) This seems like another excuse to log Douglas fir in particular, even though most large and old Douglas fir has already been lost to logging in the Green Ridge area. See our survey sheets and photos of big old growth Douglas fir stumps. "Recent" Douglas fir may be the result of Douglas fir regenerating in plantation areas where there used to be more Douglas fir before it was clearcut and replanted with Ponderosa pine. The same is true for "Recent" Grand fir situations in plantations where there used to be more Grand fir before clearcutting and planting all Ponderosa pine." (DEA comments, p. 11, last par.)

Other BMBP comments regarding inaccurate use of the science include comments re: inaccurate use of the science on DEA comment pages p. 4, par. 4 & last par.; p. 5, 1st par. & last par.; p. 6, last par.; p. 12, last par.; p. 13, par. 4 & 6; and p. 29, par. 4.
Our Scoping comments on inaccurate use of the science can be found on pages S6, last par.; S9; and S10.

The Forest Service responded to one of our comments regarding inaccurate use of the science with respect to use of the Merschel study. The Forest Service defended their use of these "coarse scale and overly generalized 'forest types'"(from our comments) as helping to "integrate information connecting present and past forest conditions and management particularly around

forest composition, structure and function", with the intent behind that scientific study being "to help prioritize restoration management promoting resilience in mixed conifer forests." This response does not fully resolve our objection, which includes multiple inaccurate uses of science in the EA analysis that have not been changed.

Resolution

BMBP has commented on its objection to the Forest Service's inaccurate use of the science in the Green Ridge project analysis. See our comment citations and quotations in the paragraphs above.

In order for the Green Ridge project to comply with NEPA, the Forest Service needs to consider the full range of the requisite best available science and use the science accurately, with professional integrity in analysis in an EIS available for public comment for the Green Ridge project, to better and more accurately inform public comments, agency review, and decision-making. The EIS should have a 45 day comment period and a 45 day objection period.

Failure to Disclose Scientific Controversy

The Green Ridge 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 Green Ridge EA.

Examples of our comments regarding Green Ridge EA failure to disclose scientific controversy include the following:

"The so-called "Fire Scars" focus should not lead to more logging in a misguided desire to manage already fire-thinned and rejuvenated early seral forest structure. Logging post-fire forest is contrary to a major scientific consensus. (See Dominick Della Salla's and Chad Hanson's Nature's Phoenix book and all its supporting science citations.) Logging early seral forest is also completely contrary to the purpose and need statements for most Forest Service timber sales." (DEA comments, p. 3, par. 4)

The Forest Service response to comments in Appendix D of the final EA on p. 51 claims they do not specifically propose post-fire logging, yet when we field surveyed almost all of the commercial logging sale units, we found multiple sale units within recent burn areas that were slated on the draft sale map for commercial logging. These were primarily along Green Ridge and the Green Ridge trail. The Forest Service acknowledged that: "Some of these areas had post fire treatments previously." The Forest Service also clarified that the Ponderosa Pine and Mixed Conifer sale units would not include removal of snags. It is unclear how many of the sale units slated for "accelerated recovery" overlap these logging area designations and whether there would still be snag felling or removal in the post fire areas. Management other than commercial logging, such as fuel reduction and tree planting in naturally regenerating forest in recently wild fire burned areas, would also be contrary to a large consensus of the best available science and would constitute failure to disclose scientific controversy (if the Forest Service has any science supporting such plans.) See our survey sheets and photos submitted with our DEA comments for evidence of recent post-fire conditions in commercial logging sale units, which appeared to be part of the footprint of a large recent wild fire. See also our comments re: failure to disclose scientific controversy re: managing recent post-wild fire burned forest stands on DEA comment p. 13, 2nd par..

"The EA fails to disclose scientific controversy over their use of fire regimes and condition classes, which serve to justify conclusions of high fire risk. Assuming that these figures are accurate, what's wrong or unnatural about higher elevation forest being 14,999 acres (most of the Green Ridge sale area) of low fire hazard, with 9,254 acres rated as high hazard, and 747 acres as moderate hazard? The Forest Service should not be persisting in planning timber sales for "fire risk reduction" even when the area in question is burning in wild fires on a regular basis (indicating lack of fire suppression effectiveness) and now is rated as being mostly low fire hazard. The Forest Service seems stuck in a rut of their habitual rationales. After all, the Green Ridge area is a higher elevation ridge prone to lightning strike wild fires, as admitted earlier in the EA." (DEA comments on pp. 3 (last par.) and 4, 1st par.) See also the 2nd and 3rd par.s of DEA comment p. 4, which continue our comments on the agency's questionable use of the fire science.

"The Forest Service seems to be conflating science applicable to Ponderosa pine-dominant forest with very different natural and historic conditions for moister mixed conifer with Grand fir. The Forest Service also seems to be ignoring all the recent science that finds that the historic norm wasn't just "frequent, low severity fire along with occasional patches of mixed or high severity fire effects", as claimed on EA p. 11." (DEA comments, p. 5, 1st par.)

"The emphasis on managing for an assumed HRV ignores the game-changing character of climate change. HRV was not a static condition, nor a static range of conditions, that can or should be replicated now under climate change, as Pacific Northwest Research Station scientists pointed out recently in their quarterly newsletter." (DEA comments, p. 5, par. 3) See also our comments on the failure to disclose scientific controversy regarding the use of HRV on DEA comment p. 12, last par..

"Re: no 21" dbh limit on aspen management: As with any logging in the Green Ridge area, the maximum size of any tree felled in aspen stands should be 21" dbh or less, as most conifers, including Grand fir, Ponderosa pine, Douglas fir, Western larch (and presumably Incense cedar) are at least 150 years old by that size or within a few inches of that. There is a strong consensus in the science [not disclosed or analyzed in the EA] that thoroughly supports preserving all old growth trees and a growing body of science that supports preservation of all large trees for carbon sequestration and storage to reduce extreme climate change and support the many wildlife species dependent on large tree structure, which is already at a great deficit compared to historic conditions across the region and in the Green Ridge area due to extensive past high-grading and clearcutting." (DEA comments, p. 10, par. 3)

"Planned logging within Riparian Reserves is completely contradictory with the Aquatic Conservation strategy that "was developed to restore and maintain the ecological health of watershed and aquatic ecosystems" which need retention of existing large wood and trees holding stream banks, contributing shade to the stream, and contributing down wood over time for moisture retention and fertile, rich soil supporting riparian plant diversity. Logging is well documented to degrade aquatic ecosystems, in part through sedimentation of streams and loss of shade and future large wood recruitment. Logging in riparian reserves is overwhelmingly opposed by a huge consensus of best available science." (DEA comments on p. 15, par. 2)

In refutation of claims made in the climate change analysis section that reveal failure to disclose scientific controversy (or the Forest Service/timber industry using very few science studies to refute a huge consensus of the science):

"Unlike natural disturbances, logging removes carbon from the forest ecosystem. Forest products only have life times from a few years to a few decades, whereas a live tree can sequester carbon for up to hundreds of years if not logged, and store carbon in the consequent snag and log." (DEA comments, p. 42, last par.)

Scoping comments of failure to disclose scientific controversy can be found on page S9.

The Forest Service response to one of our comments (see above, immediately after the comment) did not fully resolve our overall objection of failure to disclose scientific controversy, although we appreciate the clarification.

Resolution:

Blue Mountains Biodiversity Project has commented on the Forest Service's failure to disclose scientific controversy in the Green Ridge EA. See our comments quoted and cited above.

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

II. The Green Ridge project violates the National Forest Management Act

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

Potential violations of the Deschutes National Forest Plan include violations of management area guidance and Forest Plan standards, including Aquatic Conservation Strategy requirements, and violations of Management Areas guidance for the Northern Spotted Owl Recovery Plan; Late Successional Reserves dedicated to protect habitat for the Northern Spotted owl, including dispersal habitat; Wildlife Connectivity Corridors; and recreational and scenic values, such as for Metolius special management areas. Potential violations of Forest Plan standards include those for elk and deer winter range; snag density/abundance; down wood; road density; and for limiting detrimental impacts to soils.

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

Our comments noted many areas of analysis in which the Green Ridge EA failed to demonstrate that the viability of Management Indicator (MIS) species, Threatened-listed species, and Sensitive species 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 Mule deer.

We are also concerned about failure to ensure viability of Sensitive and Threatened-listed species on the Forest, including Threatened-listed Northern Spotted owl; Threatened-listed Gray wolf; Threatened-listed Canada lynx; Threatened-listed Bull trout; 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) as an over-riding goal. 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'. Yet this is being done even after that species is considered vulnerable by the U.S. Fish and Wildlife Service--which applies now to American marten, who could have suitable habitat acreage reduced under the Green Ridge project. The EA did not include adequate cumulative effects analysis as to 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:
"The continued viability of Northern spotted owl in the Green Ridge area cannot be accurately assessed without species population numbers, reproductive success rates, mortality rates, and population trends over the long-term. The Green Ridge project area includes some of the best remaining spotted owl habitat on the Deschutes National Forest." (DEA comments, p. 21, last 2 sentences of 2nd to last par.)

"…Further, so much logging, road re-opening and construction, prescribed burning, etc. would be highly detrimental to species already in sharp decline, including the Threatened-listed Northern spotted owl and the Management Indicator Species (MIS) Mule deer, as well as the Vulnerable state-ranked American marten, and the MIS primary cavity excavating woodpeckers and the Sensitive-listed Pacific fisher and Lewis' woodpecker, both of whom are very rare." (DEA comments on p. 8, par. 3)

"As Mule deer have already sharply declined in the Green Ridge area, they need more hiding cover and fewer open roads to avoid using fat reserves needed to survive the winter, not less hiding cover and more re-opening of 23 miles of closed roads and construction of new "temporary" roads up to 15 or 12 miles. When we were field surveying the Green Ridge sale, we only saw about one to three deer over about two weeks of surveying almost all of the commercial sale units and camping in the area, which is conspicuously low. Bowhunters kept asking us what happened to all the deer. The Mule deer need more hiding and thermal cover now, not in the long-term only." (DEA comments on p. 11, par. 2)

"Elk and Mule Deer:

The analysis for effects to elk does not give any indication of the population status or trends for elk in the Green Ridge area, only saying that elk commonly occur throughout the project area. However, we found very little sign of elk in the project area compared to other timber sale areas we have surveyed. Population status and trends are needed to make any determination as to species viability in a given area.

The EA admits that: 'Locally, mule deer largely forage on bitterbrush during the winter season.' Yet the Forest Service still plans to mow and masticate shrubs, including Bitterbrush and other winter forage shrubs such as Ceanothus, despite the sharp decline in Mule deer in the area in recent years. We oppose shrub mowing and mastication and removal of needed forage for

Mule deer in particular. The EA also acknowledges that: 'Broadcast burning and mastication treatments would cause a decline in bitterbrush and other important forage species for cervids.' (EA p. 204, last par.)

The EA also acknowledges that: 'Mule deer have decreased substantially in recent years, and local populations occur at levels below ODFW objectives.' (EA p. 204) This should trigger changes in management plans such as the Oregon Department of Fish and Wildlife suggested setting aside of some of the best and most used Mule deer habitat from logging and other management, as in Alternative 4, and leaving more forest with denser hiding and thermal cover unlogged." (DEA comments, p. 30, par.s 2, 3, & 4)

"There is no apparent 'long-term beneficial impact' from Alternatives 2-4 for accipiter hawks, as so much forest density would be removed and set back to earlier stages for decades. This would most negatively affect Northern goshawk, then Cooper's hawk, and less so, Sharp-shinned hawk, as small trees grow back in more quickly. There is no analysis sufficiently supporting a determination of no cumulative trend toward up-listing or loss of viability—especially without considering Forest-wide cumulative effects to accipiter hawks." (DEA comments, p. 29, last par. through p. 30, 1st par.)

"Marten viability in the Green Ridge project area is threatened by planned widespread loss of forest density and canopy cover, as they need higher canopy closure; fragmentation of forest cover, as marten avoid crossing large openings; logging of large trees and large hazard snags or post-fire snags, as martens need large snags for denning; and loss of abundant down and elevated logs through prescribed fire and other "fuel" reduction, as martens need this habitat structure for winter foraging under snow. Marten would also be harmed by increased access for fur trapping. Yet the EA analysis did not even go into this much detail regarding negative potential effects from the Green Ridge timber sale to marten and their habitat.

The EA admits that: "Where mixed conifer (PST) restoration treatments occur [logging in Persistent Shade Tolerant moist mixed conifer] outside of riparian areas, habitat for the species would be removed. The PST forest type was and is the most well-suited and well-adapted forest type to serve as marten habitat in the past and in the future. It likely historically served as suitable habitat for the species….All action alternatives include removal of dispersal habitat in this forest type." (EA p. 211) This begs the question of how much suitable marten habitat would be removed by logging and how much would remain, and how many marten pair territories could be maintained in the existing No Action condition versus how many pairs could be maintained post-logging from each of the three action alternatives. There is no mention in the analysis of the Forest Service doing any surveys with trail cameras for marten in the Green Ridge project area, even though marten are now ranked as Vulnerable in Oregon and are a Management Indicator Species for the Deschutes National Forest. It doesn't seem that the Forest Service District staff have really focused on what it would take to maintain marten viability in the Green Ridge project area.

There is no species-specific analysis for marten that is quantified or detailed enough regarding reproductive pair territory sizes, specific habitat elements needed by marten, or population status and trends that could justify a determination of continued marten viability in the project area or no contribution to an upward listing trend. Instead, the EA analysis only refers to Northern spotted owl habitat as a surrogate for suitable marten habitat, although the two species have different habitat requirements." (DEA comments, p. 32, last 3 par.s)

"Woodpeckers and Cavity-Nesters:

Why is there no specific analysis for Pileated woodpeckers in the Green Ridge EA? Is Pileated woodpecker not a Management Indicator Species for the Deschutes National Forest? Pileated woodpeckers in the Green Ridge sale units would be harmed by the action alternatives' logging removal of: denser forest with higher canopy closure; large and "very large" trees; structural complexity; large snags for nesting and foraging; and abundant down wood for foraging. They are particularly harmed by removal of large and abundant Grand fir for Grand fir snag and log foraging and occasional nesting in large live Grand firs. Loss of large Ponderosa pine snags means they have lost their preferred nest trees. We found fresh Pileated woodpecker foraging in various Green Ridge sale units slated for commercial logging. See our survey sheets and photos for evidence of use of Green Ridge sale units by Pileated woodpeckers. Pileated woodpeckers need higher canopy closure for protection from larger edge species hawks and owls. Given all these foreseeable negative effects from the action alternatives to Pileated woodpeckers, the species should have been analyzed separately in the EA and still should be analyzed for effects in a new EIS if this timber sale goes forward." (DEA comments p. 33, par. 5)

"This is an outrageous claim that: 'Alternatives 2-4 would benefit other woodpecker species and cavity nesters by moving forests toward late-successional,' (EA p. 216) when logging would log late successional tree species, and large and very large trees that would mostly be old growth, as well as removing many mature trees that would otherwise grow into large and old trees." (DEA comment, p. 34, par. 3)

"There is no justification for the determination that alternatives 2-4 would not cause a trend toward listing or loss of viability for Black-backed and American Three-toed woodpeckers. The determination is just stated, not substantiated with any detailed analysis." (DEA comments, p. 34, par. 7)

"There is no apparent long-term (or short-term) benefit for woodpecker species from the action alternatives, as logging does not 'restore' more habitat for woodpeckers. A beneficial long-term effect is claimed with no evidence or substantiation. Once again, the analysis relies on switching to the Forest scale to conclude that continued viability of Black-backed and American Three-toed woodpeckers 'is expected' on the Deschutes National Forest just because the project is deemed consistent with the Forest Plan. The Forest Plan certainly hasn't prevented timber sales from contributing to these woodpeckers' declines so far. The analysis again fails to consider cumulative effects to these species from many timber sales and management across the entire Forest to substantiate a claim to continued viability. With no quantification of effects, the Forest Service can't claim only a 'small' negative impact on the woodpecker species and cavity-nesters and impacts to only 'a proportionately negligible amount of habitat across the Forest.' (See EA p. 219)"

"Although the EA admits that: 'The action alternatives would cause a short-term reduction in the density of snags due to loss from mechanical operations and consumption by prescribed fire" and that: "This would degrade already deficient habitat conditions (e.g. 2-9% of the ponderosa pine-Douglas fir wildlife habitat type in the analysis area and approximately 2-19% of the east-side mixed-conifer habitat type provide sufficient snags for [only] about half the population of woodpeckers, regardless of species, for other woodpeckers in the short-term', it then magically concludes without evidence: 'and improve them in the long term.'

This long-term result of increasing snags seems to be derived from the assumption that the area won't be logged for a long time into the future, and will thus re-develop snags—i.e. no action delayed until the future. So the effects of logging would much later be corrected by not logging—or at least that's the assumption, based on no future timber sales for decades.

For woodpeckers, as with other wildlife species, the viability cannot be determined without evaluating known information about the species' population status, reproductive success, and population trends on the project scale, District scale, and Forest scale, none of which is disclosed or discussed." (DEA comments, p. 35, par.s 2, 3, & 4)

Regarding the viability of Birds of Conservation Concern, referred to in the EA as "Other Birds":

"Clearly, the Forest Service should not be mowing and masticating shrubs and crushing them by logging within Riparian Reserves. There used to be more shrubs historically, not less. These migratory birds are most likely to decrease in abundance or survival if they are associated with shrubs, as with: Willow Flycatcher, Loggerhead Shrike, Green-tailed Towhee, Yellow-breasted Chat, and Lazuli Bunting, with all but one of these rare or uncommon.

We contest the assumption that the action alternatives would increase large snags for Lewis' woodpecker (which also favors shrubs for prey), or large canopy trees for Bullock's Oriole, as all of the three action alternatives would log large and 'very large' trees with no size limit, as well as thousands of acres of mature trees that would otherwise grow into large trees and snags.

We strongly refute the assumption that the following birds of conservation concern would have habitat increase due to the action alternatives: White-headed woodpecker, Pygmy nuthatch, Lewis' woodpecker, Brown Creeper, Williamson's Sapsucker, and Clark's nutcracker, because the action alternatives would remove large and 'very large' trees with no size limit, reducing the large live trees, large snags, and old forest that these species need for their habitat.

We are also concerned by cumulative loss of habitat from many timber sales (including Green Ridge) to other bird species, such as Hermit thrush, who needs multi-layered dense canopy.

Alternatives 2-4 would not benefit birds associated with shrubby habitat, as they did not evolve with an HRV created by logging and other management that causes unnatural impacts, such as suppression of wildfire and shrub mowing and mastication. Birds associated with shrubby habitat did, however, evolve with natural disturbances that would occur under the No Action alternative, such as insect outbreaks that support prey species and create snags, and wild fire and root disease that create openings and snags." (DEA comments on p. 36, par.s 1-5)

See our additional DEA comments supporting our objection re: the need to maintain the viability of MIS species under NFMA: Re: Northern Spotted owl: p. 3, 2nd & 5th par.; p. 6, par. 2 and 2nd to last par; p. 13, last par. through p. 14, 1st par.; re: Mule deer, Rocky Mt. elk, and other dispersing or migrating species: p. 18, full par. 2; species associated with down wood: p. 35; and other comments under the Endangered Species Act potential violations, below.
Re: Redband trout and Columbia (or Oregon Spotted frog) see Paula Hood's comments and objections sent separately as part of our objection.

Our Scoping comments re: our NFMA MIS and other species viability objection can be found on the following pages of our scoping comments: Re: MIS and other species seen during our field surveying of Green Ridge commercial logging sale units: p. 7, top half; general viability concerns: p. S6; re: Mule deer: p. 3, last par. through p. 4, 1st par.; p. 5, last par.; and S4.

The Forest Service responses in Appendix D of the final EA to our comments regarding effects to viability of wildlife species can be found regarding: Mule deer on page 27 and unattributed on p. 39; American marten on pp. 37-38; accipiter hawks on p. 39; Pileated woodpecker, p. 41; and Blackbacked woodpecker on pp. 41-42. None of these responses resolve our NFMA-violation of ensuring species viability, including Management Indicator species.

Astonishingly, the response to our comments regarding American (Pine) marten admits that: "There is no marten-related population data for the Green Ridge project area, the Sisters Ranger

District, or the Deschutes National Forest." (Appendix D, p. 37) Yet part of our cited comments included the following:

"There is no species-specific analysis for marten that is quantified or detailed enough regarding reproductive pair territory sizes, specific habitat elements needed by marten, or population status and trends that could justify a determination of continued marten viability in the project area or no contribution to an upward listing trend. Instead, the EA analysis only refers to Northern spotted owl habitat as a surrogate for suitable marten habitat, although the two species have different habitat requirements." (DEA comments p. 32)

Resolution

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

Resolution of this objection would include:
Re: Pileated woodpecker and marten viability: Drop commercial logging and prescribed burning in all sale units that incorporate suitable or active habitat for Pileated woodpeckers and American marten, which would be cooler or moister mixed conifer old growth or LOS habitat with 40-60% canopy closure or more, and for marten, abundant down and elevated logs for winter foraging, as well as large snags for both species. See our survey sheets for guidance re: fresh Pileated foraging and/or Pileated nest or roost holes in snags and abundant down and elevated logs and large snags for marten. There is also Pileated woodpecker nesting in old growth Ponderosa pine habitat, generally in proximity to old growth Grand fir foraging habitat in riparian corridors.
* No log and snag reduction in suitable or active American marten and Pileated woodpecker habitat;

Re: Primary Cavity Excavating woodpecker viability: Protect large snags and groups of snags 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.
Re: Northern goshawk:
* No commercial-size logging in suitable primary and reproductive goshawk habitat, including in both nesting areas and Post Fledging Areas, as well as in any other goshawk activity centers (nests and PFAs) discovered.

* Drop all commercial-size logging in wildlife connectivity corridors;
* 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 for disturbance to nesting goshawks, and drop or greatly reduce re-opening of closed roads for the same reasons.

Re: deer and elk:
* Retain more overall tree density and deer and elk cover—especially by dropping sale units in cool moist and cold dry habitat and 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, and in wildlife connectivity corridors.
*Road density should be reduced to at least the Forest Plan standards and objectives for elk.

*Drop all proposed shrub mowing and mastication to protect winter forage for Mule deer in particular.
*Protect from commercial logging and hiding cover reduction all of the ODFW identified critical habitat for Mule deer in the Green Ridge project area.
*Close and decommission roads at the highest recommended or possible level to meet objectives for core security habitat for elk and deer, and to support the viability of other disturbance-sensitive species, including recovering Gray wolves, Neotropical migratory songbirds, and owls.

Re: Redband trout and Columbia Spotted frog: See recommended remedies below, under Forest Plan violations—Aquatic Conservation Strategy, and in Paula Hood's objections.

We also listed many Green Ridge sale-specific proposed resolutions to our objections regarding protection of the viability of these species in our DEA comments. Please see our survey sheet priority drop sale units for these species, plus any additional known suitable habitat for these species in commercial logging sale units.

Other Forest Plan violations

Potential violations of the Deschutes National Forest Plan include violations of management area guidance and Forest Plan standards, including Aquatic Conservation Strategy requirements, and violations of Management Areas guidance for the Northern Spotted Owl Recovery Plan; Late Successional Reserves dedicated to protect habitat for the Northern Spotted owl, including dispersal habitat; Wildlife Connectivity Corridors; and recreational and scenic values, such as for Metolius special management areas. Potential violations of Forest Plan standards include those for elk and deer winter range; snag density/abundance; down wood standards; road density; and for limiting detrimental impacts to soils.

Aquatic Conservation Strategy Violations

Our comments on potential Forest Plan violation regarding failure to demonstrate adherence to riparian management objectives under the Aquatic Conservation Strategy can be found in Paula Hood's comments. See also BMBP comments quoted and cited below:

"Planned logging within Riparian Reserves is completely contradictory with the Aquatic Conservation strategy that 'was developed to restore and maintain the ecological health of watershed and aquatic ecosystems' which need retention of existing large wood and trees holding stream banks, contributing shade to the stream, and contributing down wood over time for moisture retention and fertile, rich soil supporting riparian plant diversity. Logging is well documented to degrade aquatic ecosystems, in part through sedimentation of streams and loss of shade and future large wood recruitment. Logging in riparian reserves is overwhelmingly opposed by a huge consensus of best available science." (DEA comments, p. 15, par. 2)

Our Scoping comments supporting this objection include the following:
"It is natural for streamside areas [Riparian Reserves] and above them to have more complex vertical layers within the canopy and sub-canopy." (S p. 3)
"Drop any commercial-size logging in Riparian Reserves." (S5)
"We are especially opposed to proposed ladder fuel reduction along streams and within riparian zones or designated riparian buffers. In our field surveying of these stream areas, we found only one small area that we thought could use ladder fuel reduction. In the rest of the stream areas where ladder fuel reduction is proposed, we found that this would degrade the integrity and

security cover of these areas as needed wildlife corridors and biodiverse riparian areas—for Northern Spotted owls, potential marten, Neotropical migratory songbirds, deer and elk, and other species, including potential fish and amphibians. Please drop all proposed ladder fuel reduction along streams. The integrity and cover of these areas is especially important given existing high habitat fragmentation, sun exposure to streams, past and ongoing sedimentation of streams, lack of large wood recruitment to streams, and great loss of security cover for wildlife due to the thousands of acres of young pine plantations across the Green Ridge planning area." (p. 6, 2nd par.)

The Forest Service only responded to Paula Hood's Aquatic Conservation Strategy-related comments, on Appendix D pp. 74-75. See Paula Hood's separately submitted objection for addressing these issues raised in her comments.

Resolution

BMBP has commented on the Green Ridge project's potential violations of Aquatic Conservation Strategy riparian management objectives. See our comments referenced, cited, and/or quoted above.

To resolve this objection, the Forest Service needs to:
*See Paula Hood's proposed resolution remedies and resolve her objections.
*Drop all commercial logging and heavy equipment use within Riparian Reserve buffers except for conifer thinning up to 21" dbh for aspen stand recovery, with felled conifers left as they fell in the Riparian Reserve, and which retains conifers providing streambank stability and primary shading.
*Drop all "ladder fuel" reduction in Riparian Reserves.
*Drop all re-opening of closed roads and construction of 'temporary' roads within, or adjacent to, Riparian Reserves.
*Drop any planned heavy logging equipment stream drainage crossings.
*Drop any skidding or yarding across or down ephemeral drainages.

Forest Plan Management Area Guidance Violations

Potential violations of Management Areas guidance include violations of: the Northern Spotted Owl Recovery Plan; Late Successional Reserves dedicated to protect habitat for the Northern Spotted owl, including dispersal habitat; Wildlife Connectivity Corridors; and recreational and scenic values, such as for Metolius special management areas.

Re: Potential Violation of Wildlife Connectivity Corridor Management Guidance:
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 security areas to allow for movement of old growth-associated and far-ranging 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. Our comments explain our objection concerns:

"Removing [more] spotted owl habitat is not acceptable, as the Northern spotted owls are losing their habitat through logging at unnatural and disastrous rates. Wildlife connectivity is more important than ever due to the effects of extreme climate change driving species north or to higher elevations where habitat would be more suitable. This is relevant to the Northern spotted owl, which is adapted to moister mixed conifer conditions. Logging dispersal habitat rather than protecting connectivity corridors from logging fragmentation and degradation would further exacerbate the already weak habitat links in connectivity security habitat caused by past logging." (DEA comments, p. 8, full par. 1)

"The Forest Service apparently hasn't even bothered to analyze the location and condition of existing wildlife connectivity corridors and how these connectivity corridors would be affected by the planned management under the action alternatives. Yet intact connectivity corridors between old growth stands and other core, un-fragmented security habitat is more important to preserve than ever, due to extreme climate change forcing species to disperse to more suitable habitat north or at higher elevations as their accustomed habitat may be rendered unsuitable." (DEA comments, p. 33, par. 3)

BMBP has commented on the potential Forest Plan violation of not following management area intent regarding Wildlife Connectivity Corridors, with wildlife connectivity corridors not identified, mapped, or analyzed in detail in the EA to determine how the action alternatives would affect connectivity for old growth-associated and far-ranging or migrating wildlife species. Species affected would include the Northern Spotted owl, Pileated woodpecker, potential American marten, potential Canada lynx and Pacific fisher, Gray wolf, and Rocky Mountain elk and Mule deer. See our comments cited and quoted above, as well as our comments regarding providing sufficient security corridor forest cover for elk and deer, which can be found under NFMA—MIS viability, above, and Forest Plan Amendment violation, below.

The Forest Service responded to our following questions and concerns regarding planning for wildlife connectivity corridors:
"Why weren't more accurate and complex analysis techniques used to identify the highest wildlife connectivity habitat? It is inaccurate use of the science to simply identify patches of 'core habitat' with the most overlap as the highest value for habitat connectivity, sight unseen on the ground, and with no consideration of whether these patches have sufficient canopy closure and hiding cover. There also seems to have been no consideration of natural topography patterns that wildlife species tend to use for connectivity, such as riparian corridors. Also there's apparently been no assessment of the level and type of wildlife use of these areas. (See EA p. 144)"

Unfortunately, the Forest Service response on Appendix D p. 34 just highlights our reasons for concern. The "core habitat analysis" method tends to just focus on road closures, not on security cover forest retention for wildlife corridors between patches of old growth to allow for dispersal or migration of old growth-associated or far-ranging species. Other habitat needs such as hiding cover and canopy cover do not seem to be addressed through strategic mapping based on natural connectivity corridors, such as along streams in riparian reserves, and mapped migration patterns, as for Mule deer.

While it is beneficial to have a strategy for Northern Spotted owl, as described under "Wildlife Retention Strategy" on final EA p. 15, that builds on retention of Nesting, Roosting, and Foraging habitat, there is no explanation as to how areas of dispersal habitat were "strategically located across the project landscape". The concept of providing "stepping stones" to facilitate wildlife

movement does not seem applicable to the many dispersing and migrating wildlife species that can't fly and need more continuous connectivity habitat. In fact, Northern Spotted owls would be far more vulnerable to predation if forced to fly across large gaps in forest canopy.

Many birds, such as Pileated woodpeckers and many Neotropical migratory songbirds are at greater risk if they fly across open gaps in the forest canopy, as they may become more susceptible as prey to large raptors. Thus the idea that "wildlife clumps" isolated within logged sale units, with open, exposed gaps in forest canopy in between them can serve "to compliment the strategy" is highly questionable, as this seems like a way to rationalize increased forest fragmentation, not the foundation for wildlife connectivity habitat connections.

Wildlife connectivity corridors need to meet the needs for dispersing predators, such as Gray wolf, Canada lynx, and American marten, and for migrating species such as Mule deer and Rocky Mountain elk. With extreme climate change, strategically located connectivity corridors need to be mapped for connectivity for a variety of wildlife species that will need to disperse or migrate widely to find suitable habitat as their accustomed habitat becomes unsuitable due to changes such as extreme heat waves and drought. The Forest Service response does not resolve our objection regarding wildlife connectivity.

Resolution:

*Drop all planned commercial logging and limit non-commercial thinning to only the densest areas (that appear stressed and due to wildfire suppression) in mapped or identified wildlife Connectivity Corridors, while still retaining hiding cover sufficient to qualify as such for elk and deer.

Potential Violations of Forest Plan Management Area Guidance and Requirements

We are concerned that planned widespread logging and intensive biomass reduction, including small tree thinning, ladder fuel reduction, and prescribed burning in combination would violate management area guidance and requirements for recreation areas such as the Green Ridge trail and Metolius Special Management areas that were designated to protect recreational values, including bird watching. We are also concerned by potential violations of management guidance and requirements for deer habitat, designated old growth (which would be resolved under modified alternative 3), Late Successional Reserve areas, and Riparian Reserves (which are addressed above under potential violations of the Aquatic Conservation Strategy and by Paula Hood in her separately submitted part of this objection.)

Our comments describe the rationales for this objection:

"We are opposed to commercial size logging (>9"dbh) in all of the following Management Areas, in order to better protect the values for which these Management Areas were designated:

Deer habitat: There is a sharp decline in the deer population in the Green Ridge area. Deer need sufficient hiding and thermal cover to survive severe winters and summer heat waves (which have become more common under climate change) and also need less disturbance form open roads and increased road access to reserve fat for winter survival.

Old growth: The Green Ridge sale is scheduled timber harvest, which should not occur in MA-15 so as not to harm old growth-associated species and degrade their habitat.

Metolius: Heritage, Wildlife-Primitive, Special Interest, and Research Natural Area: See EA pp. 5-6 for indication of the values these Management Areas were meant to protect. Logging these areas defeats the purpose of their Management Area designations.

Drop all planned logging in Northwest Forest Plan allocations of: Administratively Withdrawn Areas, Late Successional Reserves, and Riparian Reserves. Logging and roading defeats the purpose of their allocations—e.g. by degrading Northern spotted owl habitat and other old growth-associated species' habitat, visual and back country value degradation, and not providing protection in riparian areas for aquatic and riparian-associated species."
(DEA comments, p. 2, last half of the page)

"We want to see far more 'core area protection' dropped from logging, including all Northern spotted owl (NSO) dispersal habitat, all Late Successional Reserves, all Metolius special designated Management Areas, all Riparian Reserves, and core deer habitat, and much less management overall, except to potentially diversify plantations and non-commercially this small trees up to 9" dbh or use prescribed fire in truly dry forest types for strategic fire risk reduction along access roads." (DEA comments, p. 6, par. 1)

"We are opposed to any logging within the 200 foot Green Ridge Trail corridor, since stumps, skid trails, slash piles, marked trees, missing trees, and ground disturbance all degrade the recreational experience, as well as damaging elements of wildlife habitat structure." (DEA comment, p. 10, par. 2)

"There is no compelling need to indiscriminately 'clear' roadside 'brush' (presumably including trees) up to 100 feet on either side of a designated road. First, roadside "fuel" reduction is usually far more nuanced than this, and usually only uses non-commercial thinning of the most flammable trees up to 9" dbh. There is no apparent limit on this 'roadside brush' clearing and no consideration of existing conditions. Second, the chances of this 'fuel' reduction along roads remaining effective long enough to make a difference (with at most a 10-15 year effectiveness period) are very unlikely, as shown ty recent scientific statistical analysis. Third, such big "fuel" reduction corridors would degrade many forest values, including NSO habitat from 50% removal, other wildlife habitat, and recreational values. Reduce the 'Forest Strategic Roads' management to just non-commercial thinning to 9" dbh maximum where really needed, or prescribed burning only, without shrub mowing and mastication." (DEA comments, p. 15, par. 3)

"Logging mature and large trees as planned would not 'perpetuate or enhance old growth characteristics' as required for MA-15 [designated old growth forest]. Incremental logging removal of mature and large Ponderosa pine does not 'perpetuate a big-tree environment' (MA-19) [Metolius Heritage] or a 'predominantly unmodified natural environment' (MA-20) [Metolius Wildlife-Primitive] or, along with other tree species logging, 'preserve and provide interpretation of unique geological, biological, and cultural areas for education, scientific, and public enjoyment purposes' (MA-23) [Metolius Special Interest Area] as required in the Forest Plan." (Scoping comments on S4, lower half. See scoping packet p. 4 descriptions of six LRMP Forest Plan land allocation management goals and Table 1.)

Our additional scoping comments for this objection regarding potential violation of Management Area standards and guidelines include comments on the following scoping comment pages: S4 (see below, under Resolution remedies.)

The Forest Service responded to some of our comments regarding concerns about management effects to recreational values along the Green Ridge trail, from mowing and masticating shrubs,

and to dispersed camp sites, recreational scenery, and bird-watching areas. The Forest Service responses on pages 84-85 of Appendix D in the final EA fail to resolve this objection or alleviate the concerns expressed in our comments.

The Forest Service does not directly address our comments regarding effects to Northern Spotted owl habitat through logging in the Late Successional Reserve area and violation of Late Successional Reserve guidelines. However they did respond to some similar concerns and additional concerns from other environmental protection groups on Appendix D pages 56-57. The responses to other group's comments did not resolve our objection regarding potential violation of Late Successional Reserve management guidance and requirements.

Resolution

*Drop all logging of large trees </= 21" dbh.
*Drop all logging within Late Successional Reserve areas that is not just small tree-thinning in young plantations.
*Drop all commercial-size logging planned for along the Green Ridge trail corridor and within the Metolius Special Management Areas. Drop brush removal and other fuel reduction along the Green Ridge trail.
*Drop commercial logging within and immediately around dispersed camp sites.
*Drop all planned commercial-size logging in administratively withdrawn areas and Riparian Reserves.
*We ask that proposed logging in deer habitat (MA-7) be dropped except in young Ponderosa pine plantations (outside of the Mule deer core area designated by the Oregon Dept. of Fish and Wildlife) as Mule deer are in sharp decline on the Deschutes, and that all logging in old growth stands (not just in designated Old Growth MA-15 stands), NSO dispersal habitat, and Metolius Heritage, Metolius Wildlife-Primitive, and Metolius Special Interest Management Areas (MA-19, 20, & 23) be dropped except for small tree thinning up to 6-8"dbh in Ponderosa pine-dominant stands, only where the small tree density seems excessive from past logging or fire suppression (outside of the ODFW Mule deer core use area.) (Adapted from our scoping comments on Sp. 4)
*Drop all planned shrub mowing and mastication, as Mule deer rely heavily on shrubs, including Bitterbrush and Ceanothus, for winter forage, and as the appearance of shrub mowing and mastication is highly unnatural and contrary to recreational values, including those for the Management Areas identified above.
* "All logging needs to be dropped in Late and Old structure (LOS), old growth, and wildlife emphasis areas, as well as in Northern spotted owl dispersal habitat. (See EA p. 3)" (DEA comment, p. 1, par. 1)

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

Our comments regarding negative effects of roads and the Forest Plan requirement to meet road density standards explain our position: See also our comments regarding deer and elk security concerns.

"Temporary Road Construction, Road Decommissioning, and Roadside Strategic Treatments:

The EA lists numerous significant negative impacts from "temporary" road construction and numerous beneficial effects from road decommissioning instead of just road closures. These support our positions that there should be no "temporary" road construction and that all or most closed roads should not be re-opened and should be fully decommissioned unless they are already effectively blocked and overgrown. (See EA p. 143)

The fact that past "temporary" road construction ("previously used roads" that were not system roads) and roads closed likely for good reasons such as ecological protection or to bring down road density, are now planned for construction of new "temporary" roads gives us reason to expect that these planned "temporary" roads would later be re-opened and re-constructed. This perpetuates open road impacts such as erosion and sedimentation of streams and wildlife disturbance, illegal firewood cutting, increased invasive plant spread, and forest fragmentation.

The Forest Service should be planning this sale to meet Forest Plan standards for road density, not to continue to exceed the Forest Plan maximum standard of 1.5 miles per square mile of open roads. This is a violation of the Forest Plan, especially as re-opening of closed roads, construction of new "temporary" roads, and road closures and decommissioning are all under consideration in the Green Ridge EA analysis, and are all part of the Green Ridge project. There is no reason to plan for Forest Plan violation for road density standards under all three action alternatives when this is an opportunity to close and decommission more roads to restore wildlife habitat. See the last sentence of p. 144: 'Motorized route density would remain well above Forest Plan standards and guidelines (maximum 1.5 miles per mile square)….'" (DEA comments, pp. 17 (last three par.s) through p. 18, 1st par.)

"[DEA] p. 28:

Re: 'temporary' road construction: Drop all planned construction of 'temporary' roads, as the existing road system is already excessive and so-called 'temporary' roads are rarely fully decommissioned and are often used again in the next timber sale (as is apparently planned for the Green Ridge sale), becoming de facto system roads. Locating 'temporary' roads on old skid trails or non-system roads perpetuates soil impacts and forest fragmentation, impeding recovery. Further, 'temporary' roads create more access for invasive plants; illegal firewood cutting (often of old growth live trees, snags, and logs), further reducing snags; and fur trapping. The Forest Service does not have the budget to maintain existing roads properly, let alone more roads. Placement of existing debris to prevent access to 'temporary' roads is usually not effective to block vehicle access, especially ATVs.

Re: road closures and decommissioning: We are opposed to re-opening closed roads that are not being maintained for seasonal use or that were closed for ecological protection reasons, such as elk and deer security or hydrological connections to streams, or that are overgrown.

We are also opposed to so much opening of closed roads (23 miles), as the re-opening of closed roads impedes soil impact and forest fragmentation recovery, increases disturbance to wildlife, and increases dispersal of invasive plants and access for illegal firewood cutting and for fur trapping.

The Forest Service does not sound serious about accomplishing effective road re-closure when their preference is for 'the most economical method' and for simply 'obscuring' the road entrance to discourage vehicle access, which, along with signs and easily circumvented barriers, is one of the least effective means of road closure. Likewise, we want full decommissioning of all closed roads that are not being maintained for seasonal use or which were closed for ecological protection reasons or are overgrown, not re-use for this timber sale first. We oppose the Forest Service 'storing' closed roads for future re-use, as this perpetuates an excessive, damaging road system that continues to introduce sediment into streams, disturb wildlife, and fragment forest habitat." (DEA comments, p. 10, bottom half, and 1st par. of p. 11)

Re: The Scoping packet noting on p. 13 that about 15 miles of "temporary" roads would be constructed, including three new "temporary" roads of 0.5 miles, 11 decommissioned roads (formerly closed or former "temporary roads promised to be decommissioned) of about 6 miles, and 28 "existing temporary roads" (never decommissioned, although full decommissioning of "temporary" roads is usually promised) of about 9 miles: "This is re-using 'temporary' [and closed] roads that were earlier promised to be fully decommissioned. Why should we trust the Forest Service to build and then decommission more so-called 'temporary' roads?" (Scoping comment, p. 13)

The Forest Service responded to some of Paula Hood's comments regarding road density on Appendix D p. 69. See Paula Hood's section of this objection.

Resolution

BMBP has commented extensively on our concerns re: 'temporary' road construction and the re-opening of miles of currently closed roads. See our comments cited and quoted above.

*Drop the re-opening of closed roads that were promised to be decommissioned in prior decisions or were closed for ecological protection reasons, such as hydrological connections, soil erosion, and wildlife disturbance, as well as closed roads that have already grown over, or which would require reconstruction.
*Drop re-opening of closed roads and 'temporary' road-building in, or adjacent to Riparian Reserves.
*Drop all "temporary" road construction.
*Decommission fully all roads within Riparian Reserves except for major roads not causing ecological damage.
*Fully decommission all closed or "temporary" roads promised in prior decisions to be fully decommissioned or which need further decommissioning for ecological protection. Full decommissioning should include effective barriers to ATV traffic, not just signs, berms, or easily dismantled post and pole barriers, unless the road is sufficiently overgrown or effectively blocked with big logs or rocks. Locked metal gates are more effective. Full decommissioning should also involve correcting hydrological connections to streams and erosion problems, and re-contouring of slopes, as needed.
*Reduce overall road density to less than Forest Plan standards (maximum of 1.5 miles of road per square mile), based on current best available science for species disturbance for the most sensitive species, including Gray wolf and Rocky Mountain elk.

Potential Violation of Snag Density Requirements

Our comments explain our concerns: See our snag density and abundance related comments, some of which also may be found under NFMA MIS species viability, quoted and cited below.

"[Re: DEA] p. 142: Removal of snags and dead wood:

The Sisters District Forest Service's proposed action to log mature trees over about half the project area and to go ahead and log large and very large trees with no size limit, as well as log snags in the post-fire early seral areas and engage in extensive biomass reduction, as well as logging hazard trees, makes the cumulative impacts to snag and down wood habitat overwhelmingly negative for many diverse wildlife species (as detailed in par. 3 of p. 142, including effects to raptors, songbirds, other small birds, Gray wolf, American marten, Sierra Nevada red fox, bats, bees, and terrestrial invertebrates) and would cause large losses of carbon

storage and soil nutrient replenishment. It's not reassuring that the associated Project Design Criteria (PDC) would not entirely compensate for these losses of snags and down wood, on top of already very low levels of snags and down wood—most likely caused by past timber sales with similar effects to the Green Ridge sale. Knowingly planning to remove considerable biomass, including down wood and snags, as well as the thousands of acres of trees that would be removed, seems very reckless, considering the importance of biomass and organic litter to keep soils fertile and productive." (DEA comments, p. 16 heading, & p. 17, 1st par.)

"It's not at all clear that the action alternatives would conserve snags, down logs, and woody debris per Forest Plan direction as claimed, as the Green Ridge area is already very deficient in snags and down wood—below Forest Plan standards now—and the action alternatives are acknowledged in the EA to further reduce down wood and snags." (DEA comments, p. 27, par. 2)

"Nowhere does the EA independently analyze effects to snag habitat apart from an unquantified, very general discussion of effects to woodpeckers. Nowhere does the EA claim that snag requirements of the Forest Plan will be met, or even disclose what those requirements are. The EA fails to specify how the alternatives would affect existing and future abundance or size of snags. Given the admission that snag abundance is already very low in the existing condition, plus the lack of disclosure about whether Forest Plan snag requirements would be met, it seems reasonable to assume that the action alternatives would not meet Forest Plan snag requirement standards and that the Forest Service is not trying to meet snag density and size requirements." (DEA comments, p. 34, par. 6)

"The tired argument that "restoring" the forest to "the HRV" will cure everything, is repeated by a claim that this "will increase the amount of large snags (which the species use for nesting and roosting), offsetting historic losses." (EA p. 218) This is ludicrous, as the planned logging to re-establish the assumed HRV would log large trees and large snags [logging large snags at least as hazard trees], as well as prevent the majority of mature trees from becoming large snags by logging them." (DEA comments, p. 34, par. 8)

An additional DEA comment regarding removal of snags can be found on DEA comment p. 22, par. 2, and is quoted below under violation of dead wood requirements.

See also our comments on snag density requirements for Primary Cavity Excavating woodpecker species under NFMA—MIS species viability, above, which also pertain to this objection.

The Forest Service responded to multiple comments we submitted regarding snag density and down wood requirement potential violations on Appendix D pp. 30-33. Their responses did not resolve our objection re: potential violation of snag density requirements and our objection below regarding potential violation of down wood requirements.

Resolution:

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

Resolution to our objection regarding snag density includes the following modifications to the Green Ridge project:

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

be 40% for mature Ponderosa pine forest and at least 60% for moister or cooler mixed conifer, especially given the restoration needs of supporting Northern Spotted owl population recovery and restoring more mature and old growth forest by allowing more mature trees to become large and old by letting them grow. These suggested retention levels for canopy closure are intended to provide for foraging and nesting canopy requirements for Northern Spotted owl, Pileated woodpecker, American marten, and Northern goshawk.
*Reduce the scale of commercial logging and snag reduction overall (including by reducing hazard tree logging) 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 Forest Plan Down Wood Standards and Guidelines

Our comments describe our objection concerns:
" It's not at all clear that the action alternatives would conserve snags, down logs, and woody debris per Forest Plan direction as claimed, as the Green Ridge area is already very deficient in snags and down wood—below Forest Plan standards now—and the action alternatives are acknowledged in the EA to further reduce down wood and snags." (DEA comment p. 27, par. 2)

"The conclusion that the action alternatives would have a neutral effect to down logs and woody debris neglects to consider the planned 'fuel' breaks by roads and extensive prescribed burning. Further, 'The PDC [Project Design Criteria] offset but do not entirely compensate for losses of down wood from active management.' (EA p. 162)" (DEA comments, p. 23, last par.)

"How is considerable consumption and removal of down wood—both existing and future—from logging, burning, and biomass reduction on a landscape scale of thousands of acres—found to have only a 'neutral'effect on species that require down logs and woody debris? This doesn't make sense. There's no way that a beneficial impact on down logs and woody debris for mid- and late-successional forest species makes any sense either, based on the heavy logging planned for these structural stages, as well as prescribed fire. There is no logical argument given to justify the finding that cumulative effects would not cause a trend toward listing or a loss of viability for wildlife species dependent on down log and woody debris for their habitat, especially given the admissions of negative effects in the analysis and the very deficient levels of existing logs and woody debris that is documented as the existing condition in Appendix C." (DEA comments, p. 35, last full par.)

BMBP has commented on our objection that proposed actions may violate Forest Plan down wood standards and guidelines. See our comments quoted and cited above. See also relevant comments above under potential violations of snag density requirements.

The Forest Service responded to some of our comments regarding potential violations of down wood requirements on Appendix D, pp. 30-33. None of their responses resolved this objection.

<u>Resolution</u>

*Greatly reduce overall biomass reduction, given the existing deficiency of down wood habitat.
*Drop prescribed burning in moister or cooler mixed conifer, including all the "Persistent Shade Tolerant" described forest type and in all suitable or active habitat for Pileated woodpecker and/or American marten.
*Reduce the planned biomass reduction along roads by only thinning the densest areas nearest major road access corridors within only 25-50 feet of the roads, with no commercial logging.
*Drop all commercial logging and excessive non-commercial small tree thinning within Riparian Reserves, with no removal of thinned small trees.
*Drop the "accelerated recovery" fuel reduction and associated planting in the post fire areas.
*Drop all planned large tree logging >/= 21" dbh to provide more large logs over time.
*Greatly reduce planned commercial logging by not logging outside of plantations, including dropping all commercial-size logging in Northern Spotted owl dispersal habitat and all commercial logging within the "Mixed Conifer Restoration" logging area and the core Mule deer habitat identified by ODFW. Reduction of mature tree logging provides for a continued source of mature down wood at natural abundance levels, especially necessary since the Green Ridge area has already been extremely over logged from numerous past timber sales, including thousands of acres of clearcuts and plantation establishment.
*Buffer all existing mature and large logs from prescribed burning.

Potential Violation of Soil Protection Standards

Our comments explain our objection:

"All the sale units that are likely to exceed Forest Plan standards for detrimental logging should be dropped from commercial logging and any other heavy equipment use, including re-opening of closed roads and constructing 'temporary' roads. These sale units would include those already in the 8-20% range for detrimental soil impacts, based on the analysis. Mitigation of soil impacts to meet Forest Plan standards is not sufficient, as mitigation is usually not 100% effective and is often not implemented. See EA p. 299 regarding multiple studies finding detrimental soil disturbance between 8 to 12% with re-use of infrastructure (skid trails and roads) and between 15 and 20% for areas with little or no previous management." (DEA comments, p. 38, 2nd to last par.)

The Forest Service responded to our comment above on final EA Appendix D, p. 63, last par. regarding procedural allowances from a Region 6 supplement to the Deschutes Forest Plan #2500-8, which apparently allows for management that would further degrade soil integrity when sale units already exceed the 20% standard for detrimental soil impacts, and for temporary exceedance of this standard "before all restoration activities are completed." This does not resolve our objection, as this loophole allows for further soil degradation beyond the Forest Plan standard limit. Also see our following comments below, especially the first two, that explain why we are still concerned that there will be long-term soil damage:

"It's questionable whether restoration activities to ameliorate detrimental compaction on skid trails and landings would really restore the soil enough not to still have detrimental conditions, such as soil horizon mixing, rocks brought to the surface, and loss of the organic horizon, as only compaction is being relieved. The EA admits on p. 303 that "the biological significance of sub-soiling is less certain…"

'It is estimated that detrimental soil disturbance could increase up to 10% within these plantations if trees are mechanically cut and skidded to landings.' (EA p. 301, 2nd to last par.) Non-commercially felling only small trees by hand and leaving them lopped and scattered would avoid

this impact, which would likely exceed Forest Plan standards for detrimental soil extent. This would also increase down wood levels from deficiency that already exists." (DEA comments, p. 39, par.s 5 & 6)

"Why is the Deschutes Forest Service (FS) using ground-based logging on slopes up to 40% when the other Forests require cable yarding at 30-35%?"

" This is excessive degradation to have landings every 1-15 acres. Landings become perpetual large openings, with detrimental soil impacts and usually with new introduction or dispersal of invasive plants." (DEA comments on p. 11, par.s 3 and 5)

An additional comment on detrimental soil impacts can be found in Scoping comments, p. S8.

Note: Not all of our comments received response in the final EA. We reference the Forest Service responses where they are more than just re-stating information in the Draft EA or include changes to management plans. See our response to the Forest Service's response to our second-listed comment above right after our quotation of the comment. This was the only detrimental soil impact-related response to our comments that we found (on Appendix D, p. 63)

Resolution

BMBP has commented on our objection that the Green Ridge 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 found to have already high degrees of detrimental soil impacts (including those areas with existing 8-12% detrimental soil impacts) or sensitive soils likely to lead to violation of Forest Plan standards for soil protection with proposed management. See specific criteria for determining this in our related comments above.

*Drop logging of any slopes greater than 35% to reduce potential erosion, loss of soil integrity, and potential sedimentation of creeks, if adjacent. See our related comment above.

The Forest Service responded to this question vaguely in Appendix D of the final EA, citing local knowledge of soils. In our experience with other proposed timber sales, logging on slopes is limited to short pitches of slopes only up to 30 to 35%. Steep slope logging usually results in very long-term yarding corridor soil damage. "Tethered" steep slope logging is largely untested as to the resulting detrimental soil damage, but the soil damage is likely to be even greater than standard yarding on slopes and much greater than very expensive helicopter logging. So our objection concern remains unresolved.

*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 or may not be fully implemented, as this is sometimes reduced due to lack of funding.

*Reduce the footprint of excessive landing abundance by dropping more areas from commercial logging and reducing the number and size of landings to avoid long-term detrimental soil impacts. Just using existing landings is not enough, as this perpetuates failure to achieve soil recovery from past landing sites. See our related comment above.

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. Our comments explain our position:

"This is an incredible amount of logging, with commercial timber sales about every one to three years in the Green Ridge area except for one 13 year gap from 1990 to 2003. There were also years that included two timber sales. (See EA p. 294, last par.) The cumulative negative impacts from these sales are long-term and still evident. Based on our field surveying, there are very few areas that have never been logged, and they should be dropped from any planned logging or road construction as they constitute some of the best wildlife habitat left. We are strongly opposed to logging never logged areas. See our survey sheets for indication of possibly never logged areas in sale units." (DEA comments, p. 38, third from last par.)

"We are strongly opposed to logging and roading in never logged areas, including those between prior clearcuts, Inventoried Roadless Areas, undeveloped lands, and Potential Wilderness Areas, and ask that this not be done in the Green Ridge "Project" timber sale." (Scoping comment, p. S11) A similar comment can be found on Scoping comment p. 8.

BMBP has commented on our objection opposing the management of undeveloped lands. See our comments above. The Forest Service apparently did not directly respond to any of our related comments in Appendix D of the final EA.

Resolution

*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 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.

Improper Use of Forest Plan Amendment*
*We recognize that this objection may be resolved if modified alternative 3, alternative 4, or the No Action alternative are chosen, since alternative 3 was modified in the Draft Decision to avoid the use of a Forest Plan amendment. We are including this objection since the final decision could include a different alternative that would still use an illegitimate Forest Plan amendment.

Our comments explain our position for this objection:

"The Forest Service should not be planning timber sales to require Forest Plan amendments that are not really site-specific or responding to unique conditions but instead incrementally violating and negating the existing outdated, weak Forest Plan requirements. Instead, the Forest Service would need to revise and update the Forest Plan comprehensively and properly, based on best available current science. This makes alternative 4 the starting point for any negotiations [since it does not rely on a Forest Plan amendment] if any management other than No Action is to go forward. Alternative is still deeply flawed in planning to log in Northern spotted owl habitat and Riparian Reserves and in other aspects, such as still logging large and very large trees, that are unacceptable to us." (DEA comments, p. 9, par. 3)

"[DEA] p. 29: Re: the proposed 'site-specific' Forest Plan amendment: The proposed Forest Plan amendment is [not] project-specific, as it is repeated across the region and the Deschutes by the Forest Service, incrementally eliminating more and more hiding cover for elk and deer. Nor

is the Forest Plan amendment promoting 'ecological restoration' as commercial logging creates unnatural impacts that do not constitute ecologically sound restoration. Already declining Mule deer would be harmed in the area by the Forest Plan amendment. As Mule deer have already sharply declined in the Green Ridge area, they need more hiding cover and fewer open roads to avoid using fat reserves needed to survive the winter, not less hiding cover and more re-opening of 23 miles of closed roads and construction of new "temporary" roads up to 15 or 12 miles. When we were field surveying the Green Ridge sale, we only saw about one to three deer over about two weeks of surveying almost all of the commercial sale units and camping in the area, which is conspicuously low. Bowhunters kept asking us what happened to all the deer. The Mule deer need more hiding and thermal cover now, not in the long-term only. We are strongly opposed to the proposed Forest Plan amendment. The Forest Service can't have it both ways, by refusing to revise the outdated Forest Plan comprehensively, and then not following the existing Forest Plan standards" (DEA comments, p. 11, 2nd par.)

"The Forest Service should provide for more hiding cover in summer range outside MA7 than would be provided even by alternative 4, which would reduce hiding cover in that area from 10,096 acres to only 7,973 acres. This is especially important for Mule deer, but also for elk, Gray wolf, and other species.

The analysis shows a lot of thermal and hiding cover reduction on top of all the lasting reductions from past timber sales, as well as from prescribed burns. See EA p. 206. These are big reductions of thermal and hiding cover for Mule deer, elk, and other density-dependent wildlife, even on the watershed scale. It's worth noting that the hiding cover acreage in summer range covers more than ten times the acreage of hiding cover in winter range, so has much higher acreage and percentage impacts in reductions. Record-breaking heat waves and drought due to climate change necessitate more thermal and hiding cover retention to reduce energy expenditure for ensuring the viability of Mule deer in the Green Ridge and the Lower Metolius watershed, not less." (DEA comments, p. 31, par.s 2 & 3)

"We are opposed to the Forest Service using Forest Plan amendments to violate already weak standards in the Forest Plan. This 'site-specific' Forest Plan amendment is not really site-specific or based on unique conditions in the forest, as demonstrated by at least three other similar Forest Plan amendments targeting the same Forest Plan standard across the Deschutes National Forest." (DEA comments p. 31, last par. through p. 32, 1st par.)

"There has been a sharp decline in the Mule deer population on the Deschutes not even mentioned in the scoping letter, [which] is likely due to a combination of hunting, poaching, [and] high human disturbance, (all of which require alleviation of pressure by retaining more hiding cover, not less), and especially in the case of Green Ridge, last winter's severe conditions [in the winter of 2016-2017] , which require alleviation through retention of more thermal cover, not less. Given this situation, the proposed Forest Plan amendments to enable reduction of deer and elk cover below, and further below, Forest Plan standards, would contribute to the loss of viability of a Management Indicator species, the Mule deer…." (Scoping comments on p. 3, last par., into p. 4, 1st par.)

BMBP has commented on our objection to illegitimate use of Forest Plan amendments under NFMA. See our comments quoted and cited above, as well as further comments regarding the substantive negative effects that would be caused to already declining Mule deer from these proposed Forest Plan amendments under NFMA—MIS viability, above.

See p. 81 of Appendix D in the final EA for the Forest Service response to a limited part of our comments regarding the proposed Forest Plan amendment, which does not resolve this objection.

Resolution

*Drop the proposed Forest Plan amendment, along with the associated proposed logging and small tree thinning of Mule deer summer range hiding cover to below Forest Plan standards.

The Forest Service response to our Forest Plan amendments-related comments regarding the sharp decline in Mule deer and their need for sufficient hiding and thermal cover to be retained on p. 27 of Appendix D in the final EA does not resolve our objection. See also p. 81 of Appendix D in the final EA for the Forest Service response to a limited part of our comments regarding the proposed Forest Plan amendment, which does not resolve this objection.

* However Alternative 3-modified could resolve this objection if chosen (or if alternative 4 or the No Action alternative is chosen), as the Draft Decision Notice states on p. 2: "With the changes in treatment type acres for mule deer and northern spotted owl, a Forest Plan amendment for deer hiding cover is unnecessary." (Draft Decision Notice, p. 2) We appreciate the changes made in the Draft Decision Notice to better protect the viability of Mule deer and Northern Spotted owl. However, more changes are needed to ensure both species' viability in the Green Ridge planning area.

III. The Green Ridge Project Would Violate the Endangered Species Act

We are very concerned that the Forest Service is not adhering to the intent and management guidance of the Endangered Species Act. We are very concerned regarding Forest Service disregard for the need to maintain sufficient suitable habitat and conditions to prevent a trend toward federal up-listing and likely local extirpation for the Threatened Northern Spotted owl in particular, and potential contribution to an upward federal listing trend for: Threatened-listed Gray wolf; Threatened Canada lynx; Threatened Bull trout; Sensitive Sierra Nevada Red fox; Sensitive woodpecker species, including White-headed woodpecker and potential Lewis' woodpecker; Sensitive Columbia Spotted frog and Sensitive Redband trout; Vulnerable-ranked American marten; Sensitive-listed Pacific fisher and 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. All of these species have known active or potential suitable habitat in the Green Ridge project area or are known to inhabit the Deschutes National Forest. These species are potentially harmed by Green Ridge EA and Draft Record of Decision management plans.

Our comments explain our concerns regarding violation of the Endangered Species Act through degradation or elimination of suitable or core habitat setting back species recovery, threatening loss of population viability, or otherwise contributing to a federal uplisting trend for the species:

Comments re: Threatened-listed Northern Spotted owl (and other wildlife species that could be affected, contributing to a trend toward up-listing):

"Northern Spotted Owl:

The EA acknowledges that: "The Revised Recovery Plan for the Northern Spotted Owl…states that many populations of spotted owl continue to decline….Managing sufficient habitat for the spotted owl now and into the future is important for its recovery….Past and current habitat loss are also threats to the spotted owl, even though loss of habitat due to timber harvest has been greatly reduced on public lands over the past two decades (USFWS 2011). (EA p. 148)

However, we note that the Green Ridge timber sale, as it is being proposed, would violate multiple parts of the Northern spotted owl recovery plan, including the following principles for dry forest restoration 'treatments' for the East Cascades (USFWS 2011, 111-34 to 111-35) as Special Management Considerations (USFWS 2012, p. 71910):

(1) Conserve older stands that contain the conditions to support northern spotted owl occupancy or high-value northern spotted owl habitat as described in Recovery Actions 10 and 32 (USFWS 2011, p. III-43, III-67). On Federal lands this recommendation applies to all land-use allocations….
(2) Emphasize vegetation management treatments outside of northern spotted owl territories or highly suitable habitat;
(4) Retain and restore key structural components, including large and old trees, large snags, and down logs;
(5) Retain and restore heterogeneity within stands;
(See EA p. 149)

The Forest Service is planning to log within Critical Habitat designated for Northern spotted owls, including within known current and historic known territories for Northern spotted owls.

Older stands supporting Northern spotted owls are not 'restored' by commercial logging—especially by logging large and very large trees, reducing canopy closure and structural complexity, and further depleting old growth logs and snags.

The Forest Service is not planning to retain and restore the key structural components of large and old trees, large snags and down logs, since they plan to log large and 'very large' trees with no size limit, most of which would be old growth, and would remove large trees that would otherwise become large snags and logs. The Forest Service would also generally reduce mature trees next in line to become large trees (15-21" dbh) and reduce snags and logs through salvage logging, prescribed burning, 'fuel' reduction along roads, and hazard tree removal.

Logged stands would be more homogenous and simplified, as the EA admits, due to the landscape scale reduction of density and mature trees to low canopy closure and low basal area retention, and selective removal of tree species, including Grand fir and Douglas fir, which reduces tree species diversity, as well as through the removal of multi-layered canopy and large trees that provide structural complexity. This would not meet the recovery plan goal of retaining and restoring heterogeneity within stands. Grand fir and Douglas fir are also key components of the best Northern spotted owl habitat.

The Forest Service is not planning to protect Northern spotted owl dispersal habitat from logging and so is removing suitable and potential, Forest Service-identified Northern spotted owl dispersal habitat, in violation of the Northern spotted owl recovery plan.

How much of the Northern spotted owl Nesting, Roosting, and Foraging habitat (NRF) and dispersal habitat outside of the Green Ridge project area boundary has already been logged, and in what kind of logging? These negative effects should have been covered in depth in the cumulative effects analysis for effects to NSO habitat, including the combined effects of past timber sales and the proposed Green Ridge sale.

Re: p. 152:

Identified Northern spotted owl dispersal habitat sale units meet at least the minimum qualifications for dispersal habitat listed on EA p. 152, but would no longer meet these qualifications after logging. Nesting, roosting, and foraging habitat characteristics outlined on EA p. 152 show that the Forest Service is planning their logging across the landscape in such a

way that they would be systematically removing the key elements of NSO NRF habitat, including moderate to high canopy cover; multi-layered, multi-species canopies with large trees; high diversity of different diameters of trees (by removing many of the last large trees and some of the already "very large" trees, as well as many mature trees that would otherwise grow to become large and very large); high incidence of large trees with various deformities (by removing large and very large trees infected with mistletoe); and large snags and large accumulations of fallen trees and other woody debris on the ground (through post fire snag logging, "fuel" reduction, and prescribed burning.) This includes significant extensive reduction of six out of seven NRF habitat characteristics through planned logging, such that it resembles a strategy to systematically reduce and eliminate future (and possibly unidentified existing) Northern spotted owl Nesting, Roosting, and Foraging habitat, which is critical to the survival and recovery of the species. 'Sufficient open space below the canopy for Northern spotted owls to fly' would not be enough to ensure spotted owl recovery, as the forest would be missing all the other elements of NRF habitat.

Likewise, planned logging would reduce five out of the six key conditions of NSO foraging habitat: future stands of nesting and roosting habitat; stands composed of Douglas fir and white fir (usually Grand fir)/Douglas fir mix; mean tree size greater than 16.5 inches quadratic mean diameter; increasing density of large trees greater than 26" dbh and increasing basal area; and large accumulations of fallen trees and other woody debris on the ground. (See EA p. 152 bullet points under 'Foraging Habitat'.)

Functional Northern spotted owl NRF habitat includes mixed conifer, Ponderosa pine with Grand fir in the mid-story, and Mountain hemlock with Subalpine fir—with at least 40% canopy closure and at least 5% of the overstory greater than 21" dbh, also with suitable nest sites from structural complexity such as cavities and snags and live trees and nesting platforms. (EA p. 152) Yet all of these habitat conditions would be reduced or eliminated in otherwise potential future functional NSO NRF habitat, through planned selection for Ponderosa pine and Western larch dominance; targeted removal of Grand fir and Douglas fir and of other tree species such as Mountain hemlock that are not considered 'early seral' or 'more fire resistant' tree species; planned extensive density reduction, including down to 35% or less remaining canopy cover in identified NSO dispersal habitat; and planned removal of large and very large trees with mistletoe infection, that would otherwise provide good opportunities for platform nests and more large trees for perching and canopy protection from predators.

Since almost all of Critical Habitat Subunit ECN 8 falls in the Deschutes National Forest and on the Sisters Ranger District, the Forest Service has a critical responsibility to protect Northern spotted owl habitat to ensure recovery of the Northern spotted owl." (DEA comments, pages 18, 2nd to last par. through p. 20, par. 4)

Since we recognize that alternative 3 modified would now meet the 40% minimum canopy closure requirement for functional Nesting, Roosting, and Foraging (NRF) for Northern Spotted owl, we are not quoting here three paragraphs of comments specific to former plans to reduce dispersal habitat to only 35% canopy cover, which are par.s 5-7 on DEA Comment p. 20. However, we are still quoting most of our specific ESA and recovery plan comments regarding Northern Spotted owl, since we are still not satisfied that logging NSO dispersal habitat would not threaten the already tenuous viability of Northern Spotted owls in the Green Ridge planning area, especially in the context of logging large and "very large" trees and commercial logging in the so-called "Mixed Conifer Restoration" sale units, which would also remove potentially suitable habitat for Northern Spotted owls. As stated in our comments, NSO prey habitat would also be degraded, reducing prey availability for the Northern Spotted owl, and wildlife

connectivity corridors and total forest cover may not be sufficient after planned logging for the remaining Northern Spotted owls to survive. Further:

"Since Grand fir/ 'White fir' composes 76% of Critical Habitat Subunit ECN 8, the Forest Service needs to stop selectively removing Grand fir (and 'White fir' if it exists) in forest areas of core habitat and suitable and potential future NRF and dispersal habitat to ensure Northern spotted owl recovery under the Endangered Species Act for this population of Northern spotted owls.

Douglas fir is the second most abundant and suitability contributing Plant Association Group (PAG) in CHU Subunit 8 at 12%. So the Forest Service also needs to stop selectively targeting Douglas fir for logging removal." (DEA comments, p. 20, last par. and 1st par. on p. 21)

"This standard and excessive timber sale purports to be designed to benefit the conservation of Sensitive species (EA p. 138) and the Northern Spotted owl and MIS Mule deer without analyzing in depth the specific impacts of past sales as to type of impacts, lasting consequences, and location, in combination with foreseeable and potential impacts of specific logging, roading, burning, and shrub mowing and mastication planned for the Green Ridge sale. Without considering past timber sale, roading, and burning effects to the Northern spotted owl, Pileated woodpecker, American marten, potential Pacific fisher, Mule deer, and other species, this timber sale may exacerbate long-term existing impacts from past sales and further wildlife species' declines, contributing to an upward trend toward federal listing for some of the species currently in decline. The determination of potential up-listing or no potential up-listing or loss of viability cannot be made without such in-depth analysis." (DEA comments, p. 16, 1st par.)

"The Forest Service can't 'maintain' NSO dispersal habitat by reducing canopy closure to 35% or even lower where canopy closure is already less than 35%. Spotted owls need higher canopy closure to support their survival. They use stands with at least 60% canopy closure for nesting, and generally at least 40% for foraging, because otherwise they can be more easily killed by larger raptors.

Primarily removing Grand fir, as planned, is also antithetical to retaining dispersal habitat because Grand fir is a key component of the denser moist mixed conifer forest that spotted owls need. Favoring so-called "early seral" species for leave trees also degrades NSO dispersal habitat, as they are associated with denser, moister mixed conifer climax conditions which include Grand fir and other late successional species. Logging NSO dispersal habitat is completely contrary to the NSO recovery part of the purpose and need for this sale. (See EA p. 38)

Even in the 'Persistent Shade Tolerant' more ideal NSO dispersal habitat, the FS can't seem to resist thinning stands that are already less than 40% canopy closure, rendering them as unsuitable as dispersal habitat after logging despite the claim that: 'All stands would continue to provide dispersal habitat after treatment.' Even the identified dispersal habitat that starts out with over 40% canopy closure would be degraded by lowering the canopy closure to only 40% and reducing structural complexity important for retaining NSO prey species. We are strongly opposed to all logging and prescribed burning in identified NSO dispersal habitat." (DEA comments, p. 14, par.s 3, 4, & 5)

"Due to the tremendous loss of spotted owl territories to past logging and wildfires, all existing suitable and potential future NSO habitat should be fully protected from logging, including dispersal habitat. Otherwise logging may eliminate the suitability of existing and potential future Northern spotted owl habitat in the name of protection from wildfire, which might not occur soon or eliminate NSO habitat. Logging is a definite and immediate threat to NSO dispersal habitat and potential future NSO Nesting, Roosting, and Foraging habitat and dispersal habitat.

Northern spotted owl population numbers and population trends should have been disclosed for occupied territories in the EA and should be analyzed in depth in an EIS if this sale goes forward.

There should be no further logging in the Late Successional Reserve Northwest Forest Plan Management allocation, as LSR is meant to protect and enhance conditions of late successional and old growth ecosystems, which serve as habitat for Northern spotted owls and other species that depend on late successional and old growth forests. (EA pp. 154-155) Logging degrades LOS and old growth structure conditions." (DEA comments, p. 21, par.s 2, 3, and 4)

"The Forest Service is planning management contrary to Carey et al.'s 1997 recommendations for supporting denser populations of Northern flying squirrel, which is the primary Northern spotted owl prey on the Deschutes National Forest (See EA p. 157) by planning to log large green trees, which may have platform branching, multiple tops, and/or cavities providing Northern flying squirrel habitat." (DEA comments, p. 22, par. 1)

"The Forest Service plans to remove a lot of woody debris, large live trees, and large snags, including hazard trees, despite the fact that 'Currently, the project area is deficit [sic] in snags and down wood in spotted owl habitat….' (EA p. 158) This does not constitute Northern spotted owl recovery." (DEA comments, p. 22, par. 3)

" Planned commercial logging of Northern spotted owl dispersal habitat does not 'improve landscape-scale connectivity, dispersal of individual owls, colonization of vacant territories, and continued viability of known territories.' (EA p. 160) Given the highly vulnerable current status of the Threatened-listed Northern spotted owl being close to extinction, there is no compelling 'need' or justification for removing dispersal habitat suitability through logging. It is not necessary or desirable to log everywhere to reduce fire risk.

Why would the Forest Service plan to remove dispersal habitat from the most suitable and historically suitable 'Persistent Shade Tolerant' forest condition if this is really a sale geared to Northern spotted owl recovery? Northern spotted owl recovery is evidently not a committed goal of this sale. Alternative 2 as the proposed action also demonstrates the lack of real commitment to supporting Northern spotted owl recovery as 'Alternative 2 would preclude the development of future dispersal habitat…in stands delineated as NSO future dispersal habitat treatment areas under Alternatives 3 and 4' as it 'would thin these stands to the lower management zone (i.e. fewer trees per acre).' (See EA p. 160, last par.)

Someone writing this section of the EA recognized that 'the benefits to the species of strategically placed future dispersal habitat and no treatment areas under Alternative 3 may outweigh the risks to the species of more hazardous fuels on the landscape.' (EA pp. 160-161) Although alternative 4 or No Action would be more beneficial to NSO recovery than alternative 3.

There are no calculations or science citations given in the EA that would justify a determination of continued Northern spotted owl viability under the action alternatives." (DEA comments, p. 23, par.s 2, 3, 4, & 5)

"Based on Table 66 and 67 on EA p. 162, none of the action alternatives would avoid reducing dispersal habitat available for Northern spotted owls despite concerns expressed by multiple environmental organizations and Endangered Species Act (ESA) requirements to retain Critical Habitat components for Northern spotted owl recovery. These habitat components should include intact dispersal habitat to ensure genetic diversity of the populations through dispersal, which is essential to continued species viability.

We can't fully support any of the action alternatives because they would all threaten continued viability of the Northern spotted owl in the Green Ridge area over five home ranges. At least three of these NSO territories are known to be occupied, based on surveys reported on EA p. 157. The other territories' NRF and dispersal habitat also need to be protected from logging to allow for population recovery and expansion." (DEA comments p. 23, par.s 8 & 9)

"Much of the EA analysis actually documents adverse impacts to the Northern spotted owl and its critical habitat and does not support the conclusion of not likely to cause adverse effects.

This is an astoundingly unsubstantiated conclusion that Alternatives 2-4 would cumulatively 'benefit the persistence of the species and its habitat', which is based on no quantitative assessment of cumulative combined effects, completely omitting all the lasting and current loss of NSO habitat and viability from past timber sales on the Deschutes, the Sisters District, and in the Green Ridge area. (See EA p. 163, last sentence before 'Determination of Effects'.)

The determination of effects that none of the alternatives' effects are 'impactful' enough to change population trends ignores the cumulative nature of species up-listing, extirpations, and eventual extinction from incremental loss of habitat. This determination is based on significant non-disclosure of relevant information regarding Northern spotted owl population status, reproductive success, population trends, a consequent viability threshold, and loss of habitat to past and ongoing logging—for the Green Ridge area, the Sisters District, the Deschutes National Forest, and the Pacific Northwest region.

Even the conclusions that alternatives 2-4 would not likely cause adverse effects to the Northern Spotted owl and its critical habitat on EA p. 163 is immediately contradicted by admissions of action alternatives causing adverse effects to the NSO and its critical habitat, including: 'Alternative 2 would have the most adverse effects, followed by Alternative 3, and last by Alternative 4. The action alternatives would remove habitat for flying squirrels, the primary prey species of spotted owls.' (EA pp. 163-164) Therefore the conclusion of no adverse effects to the Northern spotted owl and its critical habitat by the action alternatives is unwarranted and refuted by the EA analysis." (DEA comments, p. 24, par.s 3, 4, 5, & 6)

Other DEA comments relevant to our ESA objection regarding the potential up-listing and local extirpation of the Northern Spotted owl include the following comment pages: p. 3, par. 2; p. 8, full par. 1; and other relevant comments quoted and cited under NEPA—Cumulative Effects analysis and NFMA—MIS and other species viability.

Our scoping comments also extensively covered the proposed management threats to Northern Spotted owl viability from the Green Ridge timber sale logging and associated loss of prey species' habitat through down wood reduction and snag loss on most of pages 1, 2, and 3, and the last par. of p. 6 into the 2nd par. of p. 7, as well as on pages S7 and S10.

BMBP has extensively commented on the potential up-listing and local extirpation of the Northern Spotted owl from Green Ridge timber sale logging, and from snag loss and reduction of down wood needed for NSO prey. See our comments quoted and cited above.

The Forest Service responded to some of our comments regarding potential violations of the Endangered Species Act from not ensuring the continued viability of the Northern Spotted owl, including regarding logging in NSO dispersal habitat, on the following pages of Appendix D in the final EA: 20 through 26. None of these responses resolved our objections regarding the Northern Spotted owl's viability under the Endangered Species Act and the National Forest Management Act. A Forest Service response on p. 20 did finally disclose that there is a breeding pair and a resident single Spotted owl occupying the Green Ridge analysis area, which makes it all the more critical to fully protect all remaining suitable and potential future NSO habitat in the

Green Ridge planning area from commercial logging. The Northern Spotted owl is in sharp decline and needs protection of all suitable habitat structure (including large trees, down wood, and sufficient canopy cover and connectivity for dispersal) to help populations recover and avoid extinction.

Resolution

*All large tree logging >/= 21" dbh must be dropped to allow for retention of large tree structure throughout the sale area. The largest size class of any trees in mature mixed conifer (such as between 15-21" dbh) must also be dropped from logging to allow for development of sufficient habitat for Northern Spotted owl population recovery in the Green Ridge area.

*All commercial size logging in Northern Spotted owl identified dispersal habitat must be dropped.

*All commercial size logging in "Mixed Conifer Restoration" sale unit areas that could currently be suitable for Northern Spotted owl habitat or would likely develop into suitable NSO habitat if left alone must be dropped. All commercial-size logging in the "Persistent Shade Tolerant" forest type must be dropped, as this is the most likely type of forest to develop into suitable habitat for Northern Spotted owls if it is not logged.

*All LOS and old growth forest areas must be protected from logging, which may be done under modified alternative 3.

*There must be no "fuel reduction" except small tree thinning, no prescribed burning, and no shrub mowing or mastication in suitable or potential Northern Spotted owl habitat, in order to protect habitat for NSO prey species.

*The whole timber sale must be scaled down to reduce snag loss (from hazard tree cutting), and forest cover loss that would harm future NSO population recovery and expansion of suitable habitat over time.

*Wildlife connectivity corridors must be identified and dropped from commercial logging to allow for Northern Spotted owl dispersal for genetic viability and to respond to climate changes by migrating to more suitable habitat.

*More remedies to help resolve this objection can be found in our comments.

Comments re: Threatened-listed Gray wolf and Sensitive Sierra Nevada Red fox:

"Logging, roading, prescribed burning, and shrub mowing and mastication move habitat to an unnatural state, with which Gray wolves and Sierra Nevada red fox did not evolve." (DEA comments, p. 26, last par.)

"The analysis omits discussion of increased disturbance to elk and deer (as major prey species for wolves) from so much logging, road re-openings, and 'temporary' road construction. The analysis for effects to Gray wolf and Sierra Nevada red fox (which strangely, are combined) fail to disclose just how much more open the forest would be after logging and that both species would be affected by a great reduction in hiding cover from hunters and fur trappers, as well as from predators of the red fox. The analysis also omits consideration of a likely stark decrease in prey for the same reason, regarding Mule deer and elk for wolves, and due to a great reduction in down wood and shrubs for small mammal prey for both species." (DEA comments, p. 27, 3rd par.)

"The analysis is extremely strained to somehow achieve a long-term beneficial impact to Gray wolf and Sierra Nevada red fox that doesn't really exist (except on paper). There is no evidence

given to support 'a cumulative effect on the fitness of the species', which is not defined. The cumulative effect analysis is very weak, without any real justification for conclusions. There is no detailed analysis justifying that Alternative 2-4's 'cumulative contribution would not cause a trend toward listing or loss of viability.' Simply saying there would be no trend toward up-listing or loss of viability doesn't make it so." (DEA comments, p. 27, par. 5)

Additional comments pertaining to potential damage to Gray wolf and Sierra Nevada Red fox and their prey from proposed management can be found under NFMA—viability of species and under NEPA—Inadequate analysis of effects.

Resolution

*Use our NFMA viability and Forest Plan amendment remedies for reaching resolution of our objection for Mule deer, as a major Gray wolf prey species.
*Maximize road closures and decommissioning, with no construction of "temporary" roads and great reduction of the mileage of closed roads that would be re-opened as per our remedies under Forest Plan violations re: Road Density above, since Gray wolf is most threatened by poaching mortality, which increased hiding cover also helps remedy.

*For Sierra Nevada Red Fox, retain down wood for prey (which also helps retain smaller wolf prey species) by not doing as much biomass reduction and not mowing or masticating shrubs. See our remedies to resolve our Forest Plan—Down Wood requirements objection above. Also protect meadows by implementing small conifer thinning by hand only. Don't do prescribed burning in naturally denser forest, such as the "Persistent Shade Tolerant" forest type and in suitable mixed conifer habitat for Pileated woodpecker and American marten, to retain more down wood for prey species.

Comments re: Threatened Canada lynx, Sensitive Pacific fisher, and Sensitive wolverine:

"Wildlife species that are Sensitive listed and have been candidates for up-listing that could be using the Green Ridge project area forest for habitat that were not considered at all in the analysis include the Sensitive Pacific fisher (Pacific fisher are known to exist in the Deschutes on the Crescent Ranger District and are thought to exist in the Newberry Crater area of the Bend-Fort Rock District, and are likely to inhabit the Cascade range Wilderness Areas, such as Mount Jefferson, near the Green Ridge project area.) The Sensitive Wolverine, which like the Fisher, was proposed as a candidate for up-listing, also is known to reside in the Cascade range Wilderness, likely in the Mt. Jefferson Wilderness Area. Wolverines have huge ranges that could easily take a Wilderness denning wolverine pair on foraging excursions as far as the Green Ridge area. The Threatened Canada lynx should also have been analyzed for potential effects, as they inhabit higher elevation forest, are likely to reside in the Cascade range Wilderness Areas for winter habitat, but range more widely to lower elevation forest in the summer and fall. I saw a likely Pacific fisher crossing highway 20 at night between the Camp Sherman turnoff and Suttle Lake. I have also had a positive daylight sighting of a Pacific fisher in high elevation mixed conifer forest at about 6,000 feet in the Ochoco with a volunteer, and two positive daytime sightings of a Canada lynx in the summer, both within 10 miles of where I live above the John Day River—one sighting in dry Ponderosa pine mid-elevation forest and one crossing highway 20 to the John Day River between Mule Shoe Creek and Service Creek. So these species do exist in eastern and central Oregon. Effects to them should have been analyzed in the EA and in an EIS that should be prepared for this sale if it goes forward." (DEA comments on p. 18, full par. 3)

While there may be other references to these species in our comments, this is the main set of comments for these three species. The Forest Service response was to assert that there was no evidence of any of these species being in the Green Ridge area. Yet any of these far-ranging

species could be easily missed in (usually non-existent) surveys, bait-trapping, or camera sets, as they are relatively rare but disperse and forages over great distances. All three species are known to exist in the Deschutes National Forest, with ample core or winter habitat in the Cascade crest Wilderness Areas. Canada lynx, Pacific fisher, and wolverine have all been noted as occurring on the Deschutes in the Crescent or Fort Rock Ranger Districts of the Deschutes, including mention of nearby Pacific fishers and wolverines in the Newberry Crater National Volcanic Monument in the Surveyors sale EA, and further south, dispersing Canada lynx were noted as having been on the Crescent District recently in another timber sale's documents. The Sisters District encompasses Wilderness Areas, so is more likely to have occasional use by all three species. Not analyzing effects to potential listed wildlife species is equivalent to writing off their survival in terms of management planning.

Resolution

*As with Gray wolf, these three rare predators are most at risk from human-caused mortality, but usually through fur trapping. Our recommendations for these species include our open road reduction remedies under Forest Plan violations—Road density requirements, above. More road access can contribute to more fur trapping.
*Drop all commercial logging, road construction or re-opening, and other management in all undeveloped lands, as all three of these predators are threatened or disturbed by human access, and survive best in unmanaged natural habitat.
*For Pacific fisher, drop all logging in any potentially suitable habitat in the area, which would largely overlap with suitable old growth fir habitat that could also be used by Northern Spotted owl. Thus Pacific fisher would also benefit from our remedies above for the Northern Spotted owl, including from not logging large trees <21"dbh and not logging in the "Persistent Shade Tolerant" forest type and the "Mixed Conifer Restoration" sale units, in order to retain and increase suitable habitat that would aid the fisher's recovery to more widespread populations.
*Canada lynx would benefit most from no logging in the "Persistent Shade Tolerant" forest type and higher elevation mixed conifer forest. However, as noted in our comments, they also disperse and forage across much drier Ponderosa pine and Douglas fir forest, and would benefit from these forest types having less logging and fuel reduction, to support prey species.

Comments re: Sensitive bat species on DEA comment page 27, last three par.s:

"Fringed Myotis, Pallid, Spotted, and Townsend's Big-eared Bats:

The EA analysis for wildlife species finding that the No Action alternative would harm each species is based on inadequate analysis –e.g. that logging large, very large, and many mature trees somehow results in greater development of large trees and snags despite this not being the result from past timber sales.

The analysis regarding the four bat species does not focus on the loss of cool, moist microclimate forest with high canopy cover on a landscape scale from the action alternatives.

Other flawed assumptions from other wildlife sections re-appear in the consideration of effects to bats, such as that old trees would be conserved under all action alternatives. There is also the continued failure to quantify the effects of logging and other management actions as they would affect the species at issue. "

BMBP has commented on our objection regarding potential Endangered Species Act violations, including not adequately protecting Sensitive bats from management-caused trends toward federal up-listing. See our comments quoted and cited above.

The Forest Service responded to some of our comments regarding Sensitive bat species on Appendix D, p. 38. Their response refers us back to the analysis in the EA, which does not resolve our concerns.

Resolution

*Drop all logging of large trees </= 21" dbh, as bat species may roost in the loose bark of large snags or within cavities in large trees. Protect all large snags from logging.
*Prohibit all logging and heavy equipment use within Riparian Reserves, where bats are more likely to forage for prey, except for aspen restoration with conifers thinned only up to 21"dbh at most, and left within the Riparian Reserves.
*Buffer any caves or other likely sites for bat hibernacula from management actions.
*Preserve water retention within the forest for moister conditions attracting flying insect prey by retaining more mature and large overstory forest cover for shading and water retention—especially in moister forest types, such as the mixed conifer "Persistent Shade Tolerant" forest, or forest with evidence of historic Grand fir and/or Douglas fir, or other moisture-associated trees such as Englemann spruce, Mountain hemlock, or Lodgepole pine/Western larch.

Comments re: Threatened Bull trout, resident fish species, and aquatic and terrestrial invertebrates:

See Paula Hood's more detailed comments on aquatic species and effects to riparian areas.

"We are strongly opposed to any logging or road construction or re-opening in the Tier 1 watershed that contributes to the conservation of at-risk salmonids, Bull trout, and resident fish species—especially within riparian reserves areas and on any steep slopes above creeks." (DEA comments, p. 3, par. 1)

"Crater Lake and Shiny Tightcoils:

[The Crater Lake Tightcoil is aquatic/terrestrial and the Shiny Tightcoil is terrestrial.] Analysis for effects to Crater Lake and Shiny tightcoils repeats some of the same mistakes and non-species specific assumptions. Again there is inadequate analysis to justify conclusions. For example: 'By not reducing hazardous fuels and not actively managing for tree growth, the no-action alternative would hinder the conservation of the habitat of tightcoils, which use large down logs for shelter.' (EA p. 183, 1st par.) Yet these species rely on sufficient canopy shading, litter, logs, and woody debris (see EA p. 183, par. 2), which would be reduced by logging, large tree removal, and 'hazardous fuels' reduction.

The EA analysis supports our concerns that logging large and old trees and heavy logging would harm tightcoils and their habitat: 'Individual tree-selection harvest of large, old trees …prior to the 1960s caused the loss of protective cover for tightcoils. Stand-replacing timber harvest, primarily from the 1960s through the 1990s, literally decimated tightcoil habitat in and around the DNF (literally, less than 10% of old-growth forest remained after this period.)' (EA p. 183, last par.)" (DEA comments, p. 28, par.s 5 & 6)

BMBP has commented on Threatened-listed Bull trout, resident fish, and Sensitive invertebrates, including aquatic invertebrates. See sample comments above and Paula Hood's more detailed comments.

Resolution

See Paula Hood's proposed remedies for resolution regarding Threatened and Sensitive-listed fish and other aquatic and riparian-associated Sensitive species, including Threatened Bull trout; and Sensitive: mussels, Redband trout, Columbia Spotted frog, and aquatic invertebrates.

See also the remedies for resolution of violations of Forest Plan standards—Aquatic Conservation Strategy, above.

*Drop all commercial size logging and heavy machinery use within Riparian Reserves, except for conifer felling (with felled conifers left in the Riparian Reserves) up to 21" dbh at most.
*Drop heavy machinery stream crossings and heavy equipment use across ephemeral draws.
*Drop steep slope logging, especially over Riparian Reserves.
*Drop all "temporary" road building and re-opening of closed roads within Riparian Reserves.
*Drop most small tree thinning by hand and all ladder fuel reduction within Riparian Reserves.

Comments re: Northern goshawk:

See BMBP comments re: Northern goshawk under NFMA—MIS viability, above, and associated resolution remedies.

Comments re: Sensitive-listed plant species:
"Botany:

The known Peck's penstemon population and any new discovered populations should be buffered from any heavy soil disturbance (logging and heavy equipment use) and a buffer to avoid losing individual plants at the margins of the population. Non-commercial thinning could be done by hand around the edges of the population and individual plants. Prescribed burning could potentially be done across the population area in the fall only so as not to affect reproduction, and without piling and burning slash—based on the analysis. Why are the specific mitigations planned for Peck's penstemon not disclosed and discussed as to their effectiveness in the Botany section? This should have been part of the analysis.

Why are the mitigations in old growth stands and riparian areas not identified for effects to the mycorrhizal fungi species and discussed re: effectiveness? All commercial logging and heavy equipment use should be dropped from all Riparian Reserves, including riparian areas within 'persistent shade tolerant' moist or wet mixed conifer, in part to protect the two Sensitive species of mycorrhizal fungi for existing and future habitat.

The botany analysis does not address specific effects to Sensitive plants" (DEA comments, p. 36, lower part of the page)

" Survey and Manage Botanical Species:
Why is there no disclosure of buffer sizes being used to protect Survey and Manage species?

It's not much to ask that the only 10 sites of known Mountain Lady's slipper be protected, especially as undetected individual plants could be destroyed by logging. Drop the planned logging in site #06010500912 of Mountain Lady's Slipper. Non-commercial thinning and prescribed burning, but not in the Spring reproductive season, could be acceptable for this species. We remain concerned regarding management impacts to this site of Mountain Lady's Slipper because in our field experience, this species occurs under Grand fir and Douglas fir cover, not in completely open or disturbed sites. Further, individual plants could remain underground for multiple years. The few sites where this plant was found indicates decline, which seems evident on other Forests as well." (DEA comments, p. 37, top paragraphs)

BMBP has commented on effects to Sensitive plants. See our comments quoted and cited above. We did not find a specific Forest Service response to our comments regarding Sensitive plants.

Resolution

*Buffer all known Sensitive and Survey and Manage plant populations from management impacts, as may be already planned.
* Drop the planned logging in site #06010500912 of Mountain Lady's Slipper. *Drop any planned prescribed burning in moist mixed conifer 'Persistent Shade Tolerant' late successional old growth forest to protect plant species diversity, including Mountain Lady's Slipper.
*Don't implement prescribed burns during the spring reproductive season.
*Reduce overall ground disturbance from the Green Ridge project/timber sale.
Re: invasive plant introduction and dispersal prevention:
* "Invasive Plant Species:
Our recommendation based on the invasive plant effects analysis is clear: the less logging and ground disturbance, the better for preventing increased introduction and dispersal of invasive plants. The Forest Service should be preventing exotic invasive plants comprehensively under the Region 6 FEIS, rather than endlessly trying to control them as each timber sale, road re-opening or new construction, and other extensive ground disturbance brings on more invasive plant spread." (DEA comments, p. 37, 3rd full par.)

"The analysis continues to warn of increased invasive plant spread under the action alternatives: 'There are considerable spotted and diffuse knapweed populations throughout the project area…There is a large risk of both spread of existing and creation of new populations with ground disturbance….Disturbance associated with logging activities is one of the larger risks of increase and spread.…these risks cannot be eliminated…There is a very high risk of annual grass increase even with mitigations and Project Design Criteria.…Accelerated Forest Recovery treatments are particularly likely to increase invasive species.' (EA p. 285, underlining emphasis ours.)" (DEA comments, p. 37, par. 4) *Therefore, greatly reduce disturbance from logging by reducing the planned logging and road work. Also drop the "Accelerated Forest Recovery" management, since it is "particularly likely to increase invasive species."

Comments relevant to contributing to a trend toward federal up-listing or local extirpation of populations under the ESA can also be found quoted above under NFMA—MIS viability, re: MIS woodpeckers and re: American marten. Comments relevant to contributing to a trend toward federal listing for aquatic and riparian species can also be found in Paula Hood's comments for this objection—including for Threatened-listed Bull trout, Sensitive Redband trout, Columbia Spotted frog, and aquatic invertebrates.

Resolution:

Blue Mountains Biodiversity Project has extensively commented on our objection regarding 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, that are also applicable to the ESA violations. Additional partial resolutions are by species below:

Re: Sensitive Redband trout and Columbia Spotted frog and Sensitive riparian plant species:
*Drop all heavy equipment use and related commercial-size logging in potential Columbia Spotted frog habitat and Redband trout habitat stream reaches and within Riparian Reserves 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.

Re: Gray wolf:
*Retain more good security cover (hiding and thermal) for wolf prey: 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 new or '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 any 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 NFMA—MIS species viability.

Re: Pacific fisher:
*Drop all commercial logging of LOS stands with suitable habitat for Pacific fisher, such as old growth moister mixed conifer (e.g. the "Persistent Shade Tolerant" forest type with large tree structure—especially large fir, including large logs and large/old fir with large cavities for denning.
*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 and large fir travel logs.
*Drop any known suitable Pacific fisher habitat.

IV. The Green Ridge Project Would Potentially Violate the Clean Water Act

Examples of our comments regarding water quality and potential violations of the Clean Water Act can be found in Paula Hood's comments on the Green Ridge EA, with proposed remedies for potential resolution of her objections in her objection submitted separately.

Resolution

Some partial remedies:
*Drop planned commercial size logging and heavy equipment use in the Riparian Reserves, except for aspen stand restoration-related conifer thinning up to 21" dbh, with all felled trees left in the Riparian Reserves, which retains all conifers contributing to stream bank stability or primary shading of a stream.
*Drop all re-opening of closed roads and construction of 'temporary' roads within, or adjacent to, Riparian Reserves. Prioritize decommissioning of existing roads within Riparian Reserves, without using them for the Green Ridge timber sale, except for major roads not causing damage to the riparian areas.
*Drop any planned logging equipment stream crossings.
*Drop any skidding or heavy equipment use across ephemeral drainages.

Inadequate Analysis and Mitigation Regarding Effects to Climate Change

Once again, the Forest Service fails to accept responsibility 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 Green Ridge timber sale. See our related comments below:

"The EA's analysis downplays the agency's contribution to climate change by planning ever larger timber sales on a landscape scale with increasingly high intensity logging, with less forest cover retention and at an accelerated, unsustainable pace. This constitutes engaging in incremental deforestation.

While forest carbon stocks may have only decreased on the Deschutes only by 1.4 percent between 1990 and 2013 (USDA Forest Service 2015), the loss of forest carbon was probably much higher before 1990 when timber sales became fewer and less intensive due to public and scientific opposition to heavy logging. Now, however, the Forest Service is ramping up the logging again across the region despite the existential threat of global warming and the critical need to protect natural carbon sinks, including the Forest's carbon sequestration.

Logging does not necessarily increase forest resilience. Most density in the Green Ridge sale units, where it exists, is only small trees up to about 9" dbh that should be just thinned by hand.

It's noticeable that the Forest Service is not quoting parts of more recent IPCC reports. 12% of global human-caused emissions from forestry and other land uses is still significant. In Oregon, forestry is the biggest human-caused Greenhouse gas emissions contribution to global warming, and one of the most controllable sources.

Forest land increase in the U.S. does not tell the whole story, in that it is probably from younger stands that don't sequester as much carbon as larger trees.

Unlike natural disturbances, logging removes carbon from the forest ecosystem. Forest products only have life times from a few years to a few decades, whereas a live tree can sequester carbon for up to hundreds of years if not logged, and store carbon in the consequent snag and log." (selected quotes from DEA comments on p. 42)

Additional comments on effects to climate change can be found on p. 42, and under NEPA—Inadequate Cumulative Effects Analysis, NEPA—Inaccurate use of the science, and NEPA—Failure to Disclose Scientific Controversy. Additionally, comments on effects to climate change can be found on DEA comment pages: 13, 18, 31, and 33.

We did not find any direct response to our comments regarding climate change by the Forest Service in Appendix D of the final EA.

Resolution

BMBP has often commented regarding Forest Service failure to acknowledge and mitigate 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 Green Ridge project.

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

* Significantly decrease the geographic scale of the Green Ridge project commercial logging of mature trees.
* Significantly decrease the intensity of planned commercial logging by leaving higher minimum and average basal area per acre, with a minimum retention of 40% canopy closure in mature

Ponderosa pine stands and a minimum of 60% canopy closure in moister or cooler mixed conifer stands with mature or old Douglas fir and Grand fir.
* Retain all large tree structure, including snags, 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.
*Retain more soil sequestration of carbon by dropping logging in sensitive soil areas and in sale units that would exceed Forest Plan detrimental soil impact standards, as specified above.

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,

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