Sent via E-mail to: BLM_OR_MD_IVM@BLM.GOV

October 16, 2020

Elizabeth Burghard
District Manager
Medford District Bureau of Land Management
US Department of Interior
3040 Biddle Road
Medford, Oregon 97504

RE: Integrated Vegetation Management for Resilient Lands Programmatic Environmental Assessment
EA: DOI-BLM-ORWA-M000-2020-EA
https://go.usa.gov/xmuJV

Dear District Manager Burghard:

Thank you for providing an opportunity to submit comments regarding the Environmental Assessment for Integrated Vegetation Management (IVM) for Resilient Lands. These comments are submitted on behalf of Klamath-Siskiyou Wildlands Center (KS Wild), Oregon Wild, the Soda Mountain Wilderness Council and Cascadia Wildlands. We support site-specific NEPA, transparency and public involvement in the management of public lands. We are concerned that the programmatic EA could be appears to circumvent impact analysis and timely public participation. We believe that the BLM's movement away from collaborative planning, site-specific analysis, and robust public involvement is counterproductive. BLM planners should strive for meaningful public involvement that fosters trust and buy-in towards agency actions. In both the short and the long-run the agency would benefit from collaborative planning efforts that build community concerns and values into public land management proposals and decisions. Programmatic NEPA designed to lock-in and fast track widespread commercial logging of mature forest stands throughout Late Successional Reserves is likely to increase, rather than decrease the ongoing controversy and acrimony regarding BLM timber management.

It appears that the selection and implementation of Alternative C is pre-ordained and inevitable. We fear that there are no public comments, concerns, science, photos, evidence or opinions that can alter the BLM's intent to utilize a programmatic document to reduce public involvement and site-specific analysis prior to removing forest canopy and large-diameter trees from mature forest

stands in the reserve land use allocations. The photos, concerns, suggestions and literature contained in our November 2019 comments were largely ignored by the agency. Meaningful public involvement involves much more than the development of publicly-suggested action alternatives that the BLM has no intention of implementing or incorporating into project layout. The BLM's "my way or the highway" approach to NEPA planning is unfortunate and precludes the types of collaborative success that have been achieved on a number of surrounding Forest Service lands and projects in which a wide variety of stakeholders and communities have a real and meaningful role in project development. We are attaching our 2019 comments concerning the Draft of Chapters 1 and 2 to these 2020 comments to again bring to the attention of the agency our previously stated comments, suggestions, photos and concerns.

The IVM is Not an "All Lands" Approach to Reducing Fire Hazard

At page 30 of the EA the BLM indicates that an "integrated risk-sharing, or 'all-lands' approach is necessary to achieve goals of the National Cohesive Wildland Fire Management Strategy…particularly in the checkerboard pattern of ownership common to southwest Oregon." Yet the IVM is primarily designed for a specific purpose- namely to accelerate canopy removal in native forest stands within the Late Successional Reserve (LSR) land use allocation. Indeed, at the same time that the BLM proposes logging LSR stands down to 30% canopy (such that they cease to function as foraging or dispersal habitat) the agency intends to conduct widespread regeneration logging throughout the Harvest Land Base (HLB) that results in the establishment of dense fiber plantations that BLM analysis indicates will increase fire hazard for decades. Please note that commercial treatments in the HLB are explicitly absent from the IVM proposal because the BLM is unconcerned about the resulting increase in fire hazard from regeneration logging in the HLB. Hence this is not an 'all-lands' approach."

It is only in the reserve land use allocations in which the agency exhibits an alleged concern for the development of disturbance resilient lands. Indeed, the type of gap creation logging proposed in the IVM and the regeneration logging common to BLM projects in the HLB is in fact a "disturbance" in that both remove larger fire-resilient trees which are replaced by less-resilient early seral forest stands. Please additionally note that IVM is not an "all lands" approach in that the private industrial timber companies that comprise much of the checkerboard pattern land ownership practice clearcut rotation forestry that is not designed or intended to achieve the goals of the National Cohesive Wildland Fire Management Strategy. So while industry clearcuts the private portions of the checkerboard and the BLM regenerates the HLB portion of the checkerboard, the BLM Reserves are now proposed for gap creation (up to 4 acres) and canopy reduction (to 30%) to support an hypothetical "all lands" approach that simply does not exist.

We again ask the agency to acknowledge and incorporate the 2018 findings of Zald and Dunn (Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape.) There study indicate that "[e]stimates of pre-fire biomass were not an important predictor of fire severity." Further, their peer-reviewed "findings suggest intensive plantation forestry characterized by young forests and spatially homogenized fuels, rather than pre-fire were significant drivers of wildfire severity." The BLM's proposal to conduct ground selection clearcutting of up to 4 acres in size on up to 20% of mature forest stands within LSRs will exacerbate the drivers of wildfire severity discussed in the literature.

Because the IVM proposes to essentially manage BLM LSRs as HLB (through logging prescriptions that clearcut 20-25% of mature forest stands while logging the rest of the stand down to 30% canopy) the BLM must conduct a Plan Amendment documenting the effects of treating the LSR as HLB in an EIS.

Spotted Owl Habitat Modeling is Flawed

Much of the NSO habitat modeling in the EA rests upon flawed assumptions. As established in our 2019 comments, there is an acknowledged and longstanding history of overharvest within Medford BLM logging units such that post-logging canopy cover is lower than modeled by the agency. Additionally, as established in our 2019 comments, there is also often significant post-logging windthrow and other stand damage that is not accounted for by BLM habitat modeling. Further, the BLM's contention that it may utilize forest stand averaging to log large trees, remove canopy and create gaps within NR and RA 32 Habitat is disingenuous. The fact that NR habitat structure may still exist somewhere else within a forest stand in no way changes the reality that when the BLM removes canopy and creates gaps (clearcuts) within NR habitat, it in fact removes habitat in those stands.

Please note that the Relative Habitat Suitability (RHS) model discussed on page 38 of the EA does not completely reflect actual NSO occupancy locations, the location of critical habitat, the geographic competitive competition from Barred Owls, or the "large block habitat" LSR assumptions relied upon in the 2016 BLM RMP.

As acknowledged on page 248 of the EA the "recent best available information continues to support the theory that barred owl competition may be the most pressing threat [to NSO survival and recovery]." Page 249 of the EA indicates that the BLM is aware of "concern that timber harvest and other silvicultural activities may directly or indirectly affect the interaction between barred owls and spotted owls and increase the competitive advantage for barred owls." Yet the BLM arbitrarily refuses to analyze "in detail" the impacts of its preference for "open seral" habitat in Late Successional Reserves on barred owl encroachment and competition.

The BLM contention at page 40 of the EA that the 2016 RMP (and the NSO Recovery Plan, and the BiOp for the RMP) allow BLM logging proponents to manage nearly 100,000 acres of LATE SUCCESSIONAL RESERVES for something called "open seral conditions" is simply wrong. LSRs are intended and designed to provide forested habitat rather than non-forested openings. Additionally, there is no such thing as "open seral conditions." "Seral" describes a forest age class. "Open" describes a canopy or basal condition. Presumably the BLM is using the novel phrase "open seral conditions" to describe logged openings (gaps/clearcuts) in the LSRs that are largely free from overstory trees. The RMP and its supporting documents do not allow for or encourage the conversion of NSO suitable forested habitat into "open seral conditions" within the LSR LUA.

The BLM has failed to provide meaningful site-specific analysis of how, where, when and why it intends to downgrade and remove NSO LSR habitat that has been deemed "critical" for the recovery and survival of the owl by the USFWS.

The BLM's stated intent on page 50 to clearcut up to 25% of LSR forest stands through gap creation logging undermines the habitat assumptions of the 2016 RMP, its Biological Opinion and the NSO Recovery Plan. It is also a significant action necessitating an EIS. Further, the BLM must conduct site-specific NEPA to disclose the impacts of clearcutting 25% of LSR forest stands.

Violating the 2016 RMP and the Federal Land Management Policy Act

As stated on page 51 of the EA the BLM does not intend to abide by the RMP direction to avoid preclusion of NSO Nesting and Roosting (NR) habitat for more than two decades following stand treatments. The agency's preference for removing the forest canopy of mature forest stands in LSRs such that they cannot provide habitat for late-successional associated species does not trump the agency's duty to abide by the standards and guidelines of the RMP. The proposal to remove canopy and large trees from LSRs to such an extent that the establishment of NR habitat is precluded for more than two decades due to the lack of canopy and basal area violates FLPMA.

Page 246 of the EA indicates that the BLM is aware that as per the 2016 RMP the "management objectives for the LSR LUA are defined and limited to developing, maintaining or promoting nesting-roosting or foraging habitat of the northern spotted owl and marbled murrelet..." The agency is poised to sign a decision for the IVM project that will result in the downgrading and removal of foraging habitat and the delay of NR habitat characteristics in the LSR LUA.

Significant Impacts to Recreation

The BLM's contention at page 243 of the EA that it need not analyze the impacts of its extensive LSR logging program on recreation "in detail" (or cumulatively or at the site scale) is mistaken. That the BLM is unable or unwilling to include recreation in its arbitrary purpose and need statement for the project in no way relieves the agency of its duty to analyze and disclose the impacts of the proposed LSR forest canopy removal on recreational uses of BLM lands.

No Site-Specific Information is Provided Regarding Forest Stands Older than 80 Years

There is a great deal of heterogeneity in the mature forest stands across the 684,185-acre treatment area. As stated on page 1 of the Draft Finding of No Significant Impact (FONSI) the "EA does not analyze specific, discreetly identified projects…" In the BLM's proposed programmatic approach to NEPA, the public and the decision maker will never be provided with a site-specific analysis of the effects of logging disparate varieties of mature forests located on hundreds of thousands of acres. The contention on page 8 of the Draft FONSI that "the EA documented the site-level analysis of effects, both beneficial and adverse, to the environment" is clearly incorrect." Without knowing where roads will be constructed, where timber sale units will be located, what the current stand conditions are, or what wildlife or plants are present in a particular forest stand, it is impossible to document site-level analysis of effect.

The Draft Finding of No Significant Impacts is Inaccurate

The BLM is incorrect in asserting that commercial logging of large-diameter fire-resilient trees throughout the LSR LUA for a period of at least a decade does not involve significant impacts. The IVM involves significant impacts to forest canopy, late-successional habitat, Humboldt Marten, Coho, Northern Spotted Owls and Marbled Murrelets. The Draft FONSI simply dismisses or ignores peer-reviewed scientific controversy regarding the effects of the massive LSR logging program that were submitted to the project administrative record. The entire point of the forthcoming programmatic decision document is to set a precedent for future actions-indeed that is the sole purpose of this planning effort. By any objective standard, the potential treatment of 684,185 acres and the logging of 17,000 acres of Late Successional Reserves is a significant environmental impact.

As stated on page 167 of the EA, the BLM's intent to implement "Ecosystem Resilience Open" logging prescriptions throughout existing NSO habitat in the LSR ensures that "treatment acres would not be expected to provide suitable NR or F habitat for many years post-treatment." The proposal to remove NSO habitat in the reserves for "many years" violates the 2016 RMP and necessitates completion of an EIS. Additionally, the removal of NSO dispersal habitat throughout the LSRs is a significant action that undermines the assumptions contained in the 2016 RMP (and its Biological Opinion) regarding LSR LUA.

Humboldt (Pacific) Marten

The Draft FONSI hints at the fact that the BLM is aware of significant scientific controversy concerning the effects of its ambitious logging program on Humboldt (Pacific) Marten habitat and populations. Please note that the EA (page 56) treats the Marten as a species proposed for listing under the ESA. In fact, the species is listed (as of September 3, 2020). Please further note that the BLM has failed to consult with the USFWS regarding the impacts of its 2016 RMP on the Humboldt Marten or the impacts of the IVM LSR logging program on the species.

Page 59 of the EA indicates that "effects to the Marten habitat from all of proposed actions would include removal of protective cover, denning and resting structures, potential impacts to dispersal, and disturbance impacts, especially when occurring in mesic habitat." Yet the EA is unable to quantify these significant impacts due to a complete lack of site-specific information or data and due to the scientific controversy and uncertainty of the effects to the species. What is certain is that the BLM LSR logging program will remove and harm the late-successional forest structure that late-successional associated species rely upon for habitat within a land use allocation that is supposed to provide that habitat for those species.

Page 59 of the EA further acknowledges that small diameter thinning, understory burning and thinning "would simplify stands" in particular the brush and understory which would cause Marten to avoid those areas." This is a significant impact to a listed species that must be documented in an EIS. The BLM needs to provide both population and habitat data upon which to base its conclusions and assumptions. Additionally, the BLM needs to conduct site-specific analysis of the impacts of its project on this species and its habitat. Please note that throughout much of the rest of the EA the BLM reaches the exact opposite conclusion and contends that its

widespread LSR logging program will aid stand complexity and structure as opposed to resulting in "simplified stands."

Pacific Fisher

The BLM's refusal to analyze "in detail" the logging of the LSR LUA on Pacific Fisher habitat and populations in arbitrary and capricious. Please note that in its Pacific Fisher ESA listing decision the USFWS relied upon the existence of the LSR LUA as providing late-successional (rather than open seral) habitat. Rather than achieve the "late successional" habitat for which the LSRs were established the BLM intends to conduct LSR canopy removal such that there "may be a loss of individuals from the proposed action due to the removal of denning and foraging habitat within fisher home ranges and the potential to remove unknown active dens during harvest activities." (EA page 252). Yet the BLM refuses to analyze "in detail" the impacts of its LSR logging agenda on the species.

Neotropical Migratory Birds

The BLM's refusal to analyze the impacts of its LSR treatments on neotropical migratory birds is arbitrary and capricious. The BLM is mistaken in contended that the 618,185-acre treatment area is insignificant to migratory birds at the regional scale.

Siskiyou Mountain Salamanders

The USFWS ESA-listing decision regarding SMS assumes that the BLM LSR LUA will be managed for late-successional habitat characteristics. The IVM proposes to remove late-successional habitat characteristics from the LSR LUA. The BLM refuses to analyze the impacts of its LSR logging program on SMS is arbitrary and capricious.

Late Mungers Timber Sale

We are interested and concerned with the Late Mungers project, which we understand to be currently in planning and tiered to the present IVM-RL EA analysis and decision. A preliminary draft map shows a very extensive project of commercial logging, in addition to fuel reduction, and with 300' fire breaks along ridges.

First, the work taking place on that project appears to be pre-decisional and to be biasing the current EA analysis.

Second, we are concerned with the focus on so much commercial logging. While we are not *per se* opposed to all commercial logging, the commercial aspects of the activity need to be incidental to the primary purposes of land management in the LSR. Otherwise, there is major risk that economic incentives will function to undermine project goals, and even worse that resilience goals will be abused as a smokescreen to rationalize old growth logging in otherwise protected areas.

Third, the project illustrates some of the ways and reasons why this programmatic EA approach is inppropriate here. The timber sale itself is a discreet and site-specific effort that lends itself well to planning, commenting and analysis. It could be accomplished through traditional NEPA planning. Better yet, the BLM could finally engage in collaborative planning with communities and stakeholders. That the Late Mungers is being planned without any IVM-RL decision, or even an EA yet, strongly illustrates both the practical irrelevance of the IVM EA to actual on-the-ground decisions there, as well as showing advantages to planning that as a distinct project.

Failure to Meet the Alleged Project Purpose

Page 11 of the EA indicates that the "purpose" of the IVM project is to develop disturbance resilient lands. Our organizations and nearly all stakeholders and communities support that purpose. Unfortunately, precluding meaningful and site-specific public input and analysis will not aid the goal of developing disturbance resilient lands. Logging, habitat removal and downgrading via gap creation clearcutting, widespread canopy removal and subsequent increased blowdown are in fact, by any definition, "disturbance." On many acres the BLM will increase, rather than decrease, disturbance of the very late-successional habitat that the LSR LUA is intended to provide. Indeed, the terms "downgrade and remove" describe the act of disturbing existing functional late successional forest habitat (in LSRs, RRs and critical habitat) to meet artificial LSR logging acreage targets contained in the 2016 RMP. Further, the BLM frustrates the alleged objective to develop disturbance resilient lands by excluding the HLB from its "all lands approach." The BLM's intent to increase and emphasize regeneration harvesting in the HLB that will increase fire hazard while precluding public input and site-specific analysis for widespread LSR logging that will downgrade and remove existing LS habitat is self-defeating.

Fire Hazard

The IVM proposal simply ignores the significant, certain and cumulative impact of the BLM HLB regeneration logging program which is known and acknowledged to increase fire hazard and result in plantation forestry stands across the District that are less resistant to fire disturbance. The BLM references to the Rogue Basin Strategy fail to acknowledge that at no place does that strategy advocate for regeneration logging and plantation establishment as is routinely proposed in BLM HLB lands intermingled with the LSR lands that the agency now intends to subject to analysis-free logging. Hence the contention that the BLM is interested in an "all lands" approach is simply inaccurate. As depicted on page 31 of the EA, the vast majority of "all lands" include private industrial timber lands that like the HLB are managed exclusively to maximize fiber production. Were the BLM, stakeholders and communities to come together to develop a true "all lands" approach to fire hazard it would likely involve consideration of the cessation of logging practices conducted by the BLM and the timber industry that are known to increase fire hazard and decrease forest resiliency.

The EA Failed to Quantify or Estimate Cumulative Effects (Such as HLB, Private and Past Regeneration) That Would Exacerbate or Cause Summer Streamflow Deficits.

Perry and Jones (2017), Segura et al (2020) and Coble et al. 2020 provide compelling analysis that found that past conversion of mature/old growth forest to young stands results in significant summer low flow deficits that persists for decades. "Group selection" clearcutting as proposed in the IVM project involves conversion of mature forest stands into young stands. While these publications are "new information," the issue of reduced summer stream flow due to logging is not a new issue as summer stream flow deficits due to logging have been documented in the scientific literature since Hicks et al. (1991) first alerted forest managers to reduced summer flows subsequent to clearcut logging. These three most recent findings are important for IVM decision making because the magnitude of reported reduced summer flows reported in Perry and Jones 2017, Segura et al. 2020 and Coble et al. 2020 would be expected to significantly reduce the fish rearing capability of small streams in the planning area over time. The EA fails to inform the decision maker that cumulative impacts from IVM LSR and RR logging in combination with HLB, private and past harvest will have significant impacts when harvest is occurs in headwater areas of perennial streams over space and time. (i.e. the ten-year planning period).

Coble et al. 2020:2 states: "Of 25 small catchments with ≥10 years post-harvest data, nine catchments had no change or variable low flow and 16 catchments experienced reduced low flow years after harvest." The BLM analysis contained EA at 212 is biased because it failed to discuss or report about catchments discussed in Coble et al. 2020 that were found to "experience reduced flow years after harvest." This is important because these catchments are similar to the ones in the IVM planning area.

A hard look at summer streamflow deficits would require that hydrological analyses be conducted at much smaller scales than the typical EA analysis of 5th or 6th field catchments to avoid diluting the effect of adverse effects with regard to streamflow deficits (See Coble et al. 2020). This means delineating the smallest possible catchment for a perennial stream (e.g. 7th field watersheds and smaller) for analysis.

The IVM EA and PRMP FEIS failed to analyze the potential for cumulative harvest to contribute to reduced summer streamflow in the long term (e.g., UTA, LITA, MITA regeneration harvest units, canopy thinning to 30%, unit openings with up 4-acre regeneration harvest, RR harvest). The EA cannot propose maximum RMP harvest in Alt C and then deny any exacerbation of low flow deficits. Substantial amounts of mature/old growth forest trees would be replaced by water consuming young forest trees 10-20 years post logging, especially in units logged to 30% canopy and within group selection openings that may comprise up to 25% of forest stands. Modeling techniques currently used by BLM to predict "recovery" or lack of cumulative impact are not applicable because Perry and Jones (2017) report no hydrologic recovery 50 years post logging. Thus the summer low flow deficit continues 50 years post logging.

Page 212 of EA the states: "The BLM infers from the literature that tree retention, including the Riparian Reserve, the spatial arrangement of commercial harvest both within unit and on the landscape, and the intensity and timing of thinning would all serve to moderate summer streamflow surpluses and deficits."

There is no literature that supports this subjective conjecture. BLM assertions that riparian no-cut buffers along stream channels would prevent or ameliorate summer streamflow deficits as reported in Perry and Jones (2017) are speculative and have no relevant scientific support. Moore and Wondzell (2005) did not state that riparian vegetation alone affects evapotranspiration (ET), merely that riparian vegetation appears to have important effects on ET. The studies that Moore and Wondzell (2005) cite in support of this assertion were from Eucaplytus watersheds in Australia that may not be relevant to watersheds in the planning area. Perry and Jones (2017) include examples of patch-cut watersheds as well as clear-cut watersheds (in Coyote Creek and the Andrews Forest), that all experienced summer low flow deficits, even though these watersheds had very diverse riparian zones, indicating that riparian zone vegetation does not control or ameliorate the reduced streamflow response.

During an April 2018 science conference at OSU regarding timber harvest and effects on lowering summer streamflows, the question was posed as to whether BLM protective Riparian Reserve management would ameliorate reduced summer low flows from logging on upland areas. Both Julia Jones and Steve Wondzell agreed that BLM Riparian Reserve management could not ameliorate reduced flows caused by upland logging. R. Nawa (KS Wild) was at this conference and it was emphatically stated several times that Riparian Reserve buffers cannot mitigate for upland logging causing depleted low summer flows.

Perry and Jones (2017) showed that the summer low flow deficits troughed at a stand age of 50 years after harvest, which are the oldest post-harvest stands existing in paired watershed experiments (control watersheds were 150 to 500 years post-disturbance). Perry and Jones (2017) state that deficits increased as stands aged from 25 to 50 years (approximately) and there is no indication of a reduction in the low flow deficit in stands aged 50 years and older. Hence it is reasonable to infer that stands older than 50 years also produce summer streamflow deficits. Thus, an analysis of the percent of land in the 15 to 50-yr age class in the harvest plan area would underestimate the potential area affected by summer streamflow deficits. No indication is provided in Perry and Jones (2017) of the age of stands at which the summer streamflow deficit might disappear, relative to mature and old-growth forests. Hydrologic recovery must be at least several decades beyond age 50.

Perry and Jones (2017) showed that stands aged 40 years or older that had been thinned continued to produce summer streamflow deficits. The additional growth of the remaining trees apparently utilized the moisture made available by thinning. Again, this finding indicates that post-thinning, the treated stands > 50 years old are likely to continue to produce summer streamflow deficits relative to (baseline) intact closed canopy mature/old-growth forests. This is relevant to any cumulative effects analysis that includes thinned plantations.

The 2016 RMP FEIS did not analyze cumulative harvest effects to summer streamflow from replacement of mature forests with fast growing young Doug-fir/pine stands. Similarly, the IVM EA did not include cumulative effects analysis for the smaller perennial stream watersheds with comingled LSR, RR, HLB and private lands that would be affected with future headwater logging. Both private and anticipated BLM logging would contribute to cumulative effects over space and time.

At 212 of the EA BLM incorrectly states that: "[l]ow flow hydrologic recovery is partially influenced by harvest treatment, and these thinning results demonstrate quick hydrologic recovery following a period of low flow surplus that was potentially beneficial to aquatic organisms." This statement is in error because it misinterprets Perry et al. 2107, furthermore "thinning" has varying levels of intensity. IVM Alt C proposes to thin down to 30% canopy in older stands with 4-acre gaps. This intensity of thinning in older stands is likely to have long term flow deficits because older mature trees will be replaced by many young trees that consume more water. In addition, cumulative impacts from harvest on comingled HLB and private lands (especially regeneration harvest) would also be certain to result in exacerbating low flow deficits or creating new ones if the watershed has not been previously logged. The EA failed to consider cumulative impacts to low flow deficits from HLB logging at appropriate scales within the planning area.

The EA at 212 states that "[changes in average annual streamflows are also expected to decrease [as a result of climate change]." Coble et al. 2020 report that harvest will exacerbate any climate change effects, in addition paired watershed studies account for climate change since each would experience the same climate. The EA is flawed because it did not assess the cumulative impact of climate change and harvest on reduced summer low flows in small perennial streams and small fish bearing streams. The RMP FEIS did not assess how climate change or logging would have cumulative adverse effects on summer low flows.

The EA at 212 states "[t]he BLM expects upland thinning to produce relatively small and short-lived summer streamflow surpluses with no deficits." The expectation of "no deficits" is conjectural, subjective and not based on any scientific report or publication. The expectation of "no deficits" is incorrect since there will be cumulative impacts from comingled HLB and private land logging that are certain to result in deficits as reported in Perry and Jones 2017, Segura et al. 2020, and Coble et al. 2020. Furthermore, as stated previously and in Perry and Jones 2017, thinning does not ameliorate low flow deficits because the remaining trees simply require more water for enhanced growth.

The EA at 212 states that "[a]ny harvest related low flow changes would be relatively small in absolute terms at the drainage scale, indistinguishable at the subwatershed scale given patterns of land ownership/management and interannual streamflow variability." This confusing statement is biased because it seeks to report scales of analysis where impacts are unlikely but ignores the scale of analysis reported in the research literature. For example, there are dozens or even hundreds of small named perennial streams in the planning are where impacts similar to those reported in Coble et al 2020 where deficits would be likely. The EA fails to analyze cumulative effects to summer low flow deficits from Alt C, HLB logging, and private land logging in small headwater streams, many of which are coho salmon critical habitat.

The EA is defective because it failed to identify each specific watershed that could have increased peak flows due to cumulative effects of Alternative C, HLB logging and private land logging.

The EA at 211 states that "[t]he 2016 FEIS identified 7 subwatersheds in western Oregon that would be susceptible to detectable change in peak flow response. Two of those subwatersheds

are on the Medford District." We assert that the analysis for peak flows in the 2008 FEIS and 2016 FEIS are flawed because they used incorrect data for hydrologic recovery. Perry and Jones 2017 provide new information that find that hydrologic recovery may take 40 or more years post-clear cutting for full recovery. Research watersheds were still exhibiting increased peak flows 40 years post-harvest. In addition, the EA failed to assess cumulative impacts to peak flows from Alternative C harvest, HLB harvest and private land harvest over space and time. Furthermore, any decision cannot meet DNA requirements because 2016 FEIS analysis and 2008 analysis is based on inaccurate data about post-logging hydrologic recovery due to new information in Perry and Jones 2017.

The EA is defective because it failed to discuss likely adverse affects to coho salmon critical habitat due to decreased summer low flows and increased peak flows as previously described.

The 2016 FEIS failed to analyze logging impacts that would exacerbate low summer flows. The 2016 FEIS and 2008 FEIS analysis for peak flows is in error because new information in Perry and Jones 2017 was not used for hydrologic recovery. Science-based expectations of reduced summer low flows and increased peak flows cause by cumulative effects of logging would likely adversely affect coho salmon critical habitat.

Implementation of the IVM Alternative C Would Violate the ESA.

The BLM Medford District has failed to re-initiate required ESA section 7 consultation with National Marine Fisheries Service for threatened Southern Oregon Northern California Coast (SONCC) coho salmon and their habitat. Re-initiation is required due to new information about reduced summer low flows following timber harvest that was not covered in NMFS consultations for the RMP (USDC NMFS 2016) and subsequent Programmatic Biological Opinion (USDC NMFS 2018).

The EA at page 75 states: "[c]onsultation between the BLM and the National Marine Fisheries Service (NMFS) has already occurred programmatically in the Forest Management Program for Western Oregon (NMFS 2019) for both ESUs; the NMFS issued a Biological Opinion (NMFS consultation # WCR-2017-7574) to the BLM in March of 2019"

The Programmatic Biological Opinion WCR-2017-7574 states on page 221:

> "2.10 Reinitiation of Consultation
> This concludes formal consultation for Resource Management Plan for Western Oregon. As 50 CFR 402.16 states, reinitiation of formal consultation is <u>required</u> where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if: (1) the amount or extent of incidental taking specified in the incidental take statement is exceeded, (2) **new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion**, (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action."

The Programmatic Biologial Opinion WCR-2017-7574 states on page 225:

> "3.5 Supplemental Consultation
> The BLM must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH**, or if new information becomes available** that affects the basis for NMFS' EFH Conservation Recommendations (50 CFR 600.920(l))." (emphasis added)

New Information: Perry and Jones 2017; Segura et al. 2020, Coble et al. 2020

New published information identifies significant decreased summer low flows from forest lands due to conversion of mature/old growth Douglas-fir forests to young stands (Perry and Jones 2017; Segura et al. 2020; Coble et al. 2020). The Programmatic BiOP WCR-20177574 pages 132-138 discuss effects of timber harvest and roads on peak flows but does not address significant decreases in summer low flows caused by conversion of mature/old growth Douglas-fir forests to young stands as would occur in Alternative C. Similarly, USDI/BLM 2016b (p. 408) failed to analyze depleted summer low flows from conversion of mature/old growth Douglas-fir forests to young stands which has likely occurred on most watersheds that support listed coho salmon in western Oregon. Although Perry and Jones 2017, Segura et al. 2020 and Coble et al. 2020 have recently provided new compelling information about depleted low flows beginning 15 years following timber harvest, reduced summer low flows due to timber harvest has been reported in the scientific literature since the early 1990s (Hicks et al. 1991). Despite this scientific information the BLM did not addressed this impact from timber harvest in the 2016 RMP, 2016 FEIS, NMFS programmatic consultation for forest management projects (USDC NMFS 2018) or NMFS consultation for the RMP (USDC NMFS 2016).

The EA Fails to Comply with Stipulations in the NMFS Biological Opinion for Incidental Take of Coho Salmon (USDC NMFS. 2016).

The incidental take statement includes the following reasonable and prudent measure necessary to minimize the impact of the amount or extent of incidental take: "The BLM shall implement measures through management direction[1] and anticipated travel management plans to minimize take of ESA-listed species due to sediment and stormwater contaminants derived from the use of roads." (SWO RMP page 37).

The EA fails to adequately implement the following RMP management direction consistent with the RMP BA and NMFS 2016 (RMP) BiOp:

> "Implement road improvements, storm proofing, maintenance, or decommissioning to reduce or eliminate chronic sediment inputs to stream channels and waterbodies. This could include maintaining vegetated ditch lines, improving road surfaces, and installing cross drains at appropriate spacing." (SWO RMP page 93.)

[1] KS Wild interprets the Decision Record as an outcome of "management direction".

"Decommission roads that are no longer needed for resource management and are at risk of failure or are contributing sediment to streams, consistent with valid existing rights." (SWO RMP page 93.)

"Fully decommission or obliterate (permanent closure) roads with no future resource management need. Decommission (long-term closure) roads not currently needed for resource management but that will be used and maintained again in the future. Apply road closure BMPs as needed (Appendix C). Close roads only with the approval of affected permittees consistent with valid existing rights." (SWO RMP page 96.)

Implementation of the above management direction for roads within the planning area would identify at least some road miles needing treatment independent of Alternative C mitigation for new road construction and road reopening. The EA is inadequate to implement required management direction and the BiOp because no roads other than newly constructed (or reopened) temporary roads and mitigation roads (to compensate for new construction) would be decommissioned/obliterated.

It is clear from the 2016 BiOp that NMFS assumed that management direction and BMPs would be implemented to reduce sediment and vehicle pollutants from BLM logging roads. The following is excerpted from the 2016 BiOP p.199-200. The most relevant passages are underlined for this action are underlined.

"The BLM proposes the following Management Direction that would minimize the amount of runoff to streams:

- Allow road construction, and stream crossings where there is no operationally feasible and economically viable alternative to accomplish other resource management objectives. In addition to the Management Direction that limits road construction in the RR, the BA says "It is extremely unlikely that any new road or landing construction would occur within the inner zone of a RR. BLM's recent experience is that most road construction or renovation to provide access for RR thinning projects occurs in what would be the outer zone (at least 50 feet from intermittent streams and 120 feet from perennial streams), or entirely outside of the RR.

- <u>Implement road improvements, storm proofing, maintenance, or decommissioning to reduce or eliminate chronic sediment inputs to stream channels and water bodies. This could include maintaining vegetated ditch lines, improving road surfaces, and installing cross drains at appropriate spacing</u>.

  The following are a subset of the BMPs that could be implemented for road work:

  Locate roads and landings on stable locations, ridge tops, stable benches, or flats, and gentle-moderate slopes.

Locate roads and landings away from wetlands, Riparian Reserve, floodplains, and waters of the State, unless there is no practicable alternative. Avoid locating landings in areas that contribute runoff to channels.

Disconnect road runoff to the stream channel by outsloping the road approach. If outsloping is not possible, use runoff control, erosion control and sediment containment measures. These may include using additional cross drain culverts, ditch lining, and catchment basins. Prevent or reduce ditch flow conveyance to the stream through cross drain placement above the stream crossing.

Effectively drain the road surface by using crowning, insloping or outsloping, grade reversals (rolling dips), and waterbars or a combination of these methods. Avoid concentrated discharge onto fill slopes unless the fill slopes are stable and erosion proofed.

Locate cross drains to prevent or minimize runoff and sediment conveyance to waters of the State. Implement sediment reduction techniques such as settling basins, brush filters, sediment fences, and check dams to prevent or minimize sediment conveyance. Locate cross drains to route ditch flow onto vegetated and undisturbed slopes.

Space cross drain culverts at intervals sufficient to prevent water volume concentration and accelerated ditch erosion. At a minimum, space cross drains at intervals referred to in the BLM Road Design Handbook 9113-1 (USDI BLM 2011), Illustration 11 –'Spacing for Drainage Lateral.' Increase cross drain frequency through erodible soils, steep grades, and unstable areas.

Install cross ditches or waterbars upslope from stream crossing to direct runoff and potential sediment to the hillslope rather than deliver it to the stream.
Luce and Black (1999) found that incorporating design features such as cross-drains and ditch relief culverts into roads reduced the hydrological connection of these structures. Forest vegetation buffers flow and prevents sediment from reaching streams (Copstead and Johansen 1998)."

There are no specific proposals to implement underlined items at specific locations or road segments in the EA for Alternative C descriptions or in Appendix 1. For example, the EA does not state that: "prior to log haul cross drains will be installed at priority locations or similar proposal of erosion control structures to disconnect the road system from the stream system." There are no proposals to hydrologically obliterate abandoned roads or routes within and adjacent units independent of new road establishment. There is no provision in BiOp that road decommissioning be linked to new road construction as described in EA for Alternative C. Alternative C would construct up to 10 miles of new/temp road per year and up to 90 miles per decade. Alternative C does not identify any stand-alone road decommissioning as identified in the BiOp. EA assertions that all unneeded roads have been previously addressed is speculative and not supported with reports, analysis or previous road decomissioning decisions.

The IVM EA fails to identify permanent or long lasting road-related sediment reduction BMPs which are identified in the 2016 BiOp (e.g. R26 and other "storm proofing" BMPs). The EA primarily identifies routine road maintenance for temporary effects (identified in 2018 BiOp) and routinely described/ implemented in timber sale contracts (e.g. water bars). Road renovation/ road construction for timber sales that would comply with the 2018 BiOp requirement (e.g., temp road construction followed by decommissioning). We conclude that the EA (Alternative C) fails to implement actions to substantially reduce sediment stemming from the use of existing haul roads and log haul on proposed new roads.

We have learned that the 2019 Medford District aquatic restoration projects will not fulfill the 2016 BiOp's requirements for reducing road related sediment into coho streams because no timber haul roads within coho watersheds will be decommissioned or storm-proofed. See previously submitted 2-page letter dated June 6, 2019 from E. Burghard (BLM) to R. Nawa (KS Wild). Similarly, we know of no decisions that have been issued in 2020 that would substantially reduce road related sediment with decommissioning or permanent erosion control structures (e.g. additional cross drains).

The IVM action alternatives fail to actually require implementation of BMPs to permanently redirect road related sediment to vegetated slopes and not into stream channels (i.e., permanently disconnect roads from streams with road BMP R26 at all or some of the hundreds of stream crossings in the planning area). While anticipated temporary BMPs are necessary to comply with 2018 BiOp (e.g. hay bales, sediment detention digouts), permanent or longlasting modifications to road drainage are needed to comply with 2016 BiOp since "storm proofing" measures are not being done under other programs (e.g. Aquatic Restoration Programmatic EA).

The EA Fails to Provide a Cumulative Effects Analysis Relevant to the Planning Area (i.e. Medford District).

Although no commercial harvest is proposed for HLB lands anticipated logging in the HLB must be assessed with cumulative effects analysis relevant to the planning area. For example, the EA only identifies negligible sediment from proposed harvest, however, road building and regeneration harvest on the HLB in combination is certain to result in significant sedimentation of streams, including critical coho salmon habitat. Deferring cumulative effects to the RMP FEIS is not appropriate because the RMP FEIS cumulative effects analysis scale was for all west side districts. Obviously, the magnitude of these impacts will not be exceeded due to the smaller spatial scale of the planning area (i.e., Medford District). Thus there needs to be cumulative effects analysis for the Medford District which would include sediment from HLB logging and private land logging. Similarly, cumulative impacts to NSO habitat would need to include HLB harvest impacts to NSO within the Medford District.

The EA fails to Adequately Describe Action Alternatives.

At page 96 the EA states that "[n]o treatment would occur within NSO nesting-roosting (NR) Late-closed seral stands in high RHS (these are existing NR stands and in landscape locations that support persistence (USDI FWS 2011)."

The EA fails to indicate how many acres of "high RHS" exist in the planning area or where they are located. Furthermore, the EA fails to provide a description of the methodology to identify high RHS lands that would be excluded from treatment as required by NEPA. We cannot make substantive comment or understand the strategy for the protection of "high RHS" lands if they are not identified in the EA.

Conclusion

While the BLM is willing to develop action alternatives that address some of the public concerns and values expressed during project planning, it appears unwilling or unable to incorporate those public concerns and values into its decisions and project implementation. Meaningful public input requires more than simply developing action alternatives that the agency has no intention of implementing while using NEPA to justify pre-ordained actions and outcomes. Outside of the BLM, throughout southwest Oregon and northwest California numerous forest collaboratives with wide representation are working together for forest resiliency and community safety. The BLM's IVM proposal to meet arbitrary logging targets by further reducing public involvement and environmental analysis is out of step with what is demanded of the agency in this moment. It is unfortunate that the BLM has conveniently written itself a management plan in which the agency directs itself to produce timber while ignoring the public. The BLM's proposal to decrease public involvement and site-specific analysis while increasing early seral forests in supposed "reserve" land use allocations will not result in more resilient landscapes, safer communities, or better BLM decisions.

Sincerely,

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Citations

Coble, A.A, Barnard, H., Du, E., Johnson, S., Jones, J., Keppeler, E., Kwon, H., Link, T.E., Penaluna, B.E, Reiter, M., River, M., Puettmann, K., and Joseph Wagenbrenner, 2020. Long-term hydrological response to forest harvest during seasonal low flow: Potential implications for current forest practices. Science of the Total Environment. 138926 (Elsevier), 17pgs.

Perry T.D., Jones J.A. 2017. Summer streamflow deficits from regenerating Douglas-fir forest in the Pacific Northwest, USA. Ecohydrology. 2017;10:e1790. https://doi.org/10.1002/eco.1790

This study found that replacing mature forests with young forests will result in reduced summer low flows in western Oregon. The results are pertinent to BLM proposals to regenerate harvest older forests in headwater areas and establish young forests on large areas. It is also relevant to thinning that reduces canopy to 30% with substantial areas in gaps because mature and old growth trees would be replaced with large numbers of fast growing young trees. The study also found that purported hydrologic recovery used in RMP FEIS is wrong. BLM needs to consider this in EA/ decision making as the adverse impacts to low summer flows and peak flows would be long term.

Segura, C. , K.D. Bladon, J.A. Hatten, J.A. Jones, V.C. Hale, and G.G. Ice. 2020. Long-term effects of forest harvesting on summer low flow deficits in the Coast Range of Oregon. Journal of Hydrology. https://doi.org/10.1016/j.jhydrol.2020.124749

This study found that replacing mature forests with young forests resulted in reduced summer low flows in western Oregon streams. The results are pertinent to BLM proposals to regenerate harvest older forests in headwater areas and establish young forests on large areas. This study confirms Perry and Jones 2017 findings and refutes BLM assertions of no effect to summer low flows from large scale regeneration harvest as purported in RMP FEIS by misinterpreting Moore and Wondzell 2005.

USDC NMFS. 2016. Endangered Species Act Section 7(a)(2) Biological Opinion, and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat for the Resource Management Plan for Western Oregon. WCR-2016-4089. Portland, OR. 395 pp.

This Biological Opinion is relevant to analysis because federally listed SONCC coho salmon OC coho salmon are present in the planning area.

USDC NMFS. 2018. Endangered Species Act Section 7(a)(2) Biological Opinion, and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat for the Programmatic Forest Management Program for Western Oregon. WCR-2017-7574. Portland, OR. 254 pp

This Biological Opinion is relevant to analysis because federally listed SONCC coho salmon and OC coho are present in the planning area.