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ATTN: Aimee Hoefs & Kathy Hoffine, Myrtlewood Field Office

TO: Roseburg BLM OR100MB@blm.gov
ATTN: Paul Ausbeck & Steve Lydick, South River Field Office

Subject: Oregon Wild scoping comments on two projects –
the Wagon Road Pilot and the Roseburg District Secretarial Pilot

Dear BLM:

Please accept the following scoping comments from Oregon Wild concerning the Coos Bay District's Wagon Road Pilot Project (DOI-BLM-OR-C040-2011-0008-EA) and the Roseburg District Secretarial Demonstration Pilot Project (DOI-BLM-OR-R050-2011-0006-EA). We are submitting these scoping comments together because both projects will apply similar prescriptions in moist westside forests that should be managed as future late successional habitat. Oregon Wild represents about 7,000 members and supporters who share our mission to protect and restore Oregon's wildlands, wildlife, and water as an enduring legacy. Our goal is to protect areas that remain intact while striving to restore areas that have been degraded. This can be accomplished by moving over-represented ecosystem elements (such as logged and roaded areas) toward characteristics that are currently under-represented (such as roadless areas and complex old forest).

The proposed action involves variable retention regeneration harvest (aka clearcutting) of hundreds of acres of maturing forests following the unpublished un-peer-reviewed guidance of Norm Johnson & Jerry Franklin 2009. Restoration of Federal Forests in the Pacific Northwest: Strategies and Management Implications. http://www.cof.orst.edu/cof/fs/PDFs/JohnsonRestoration_aug15_2009.pdf We offer some comments and concerns about this report near the end of these comments.

Pilot Process

The Secretarial Pilot process has been less than straightforward. We were invited to Roseburg, then Washington D.C. and given several different explanations of what we were being asked to engage in, e.g. collaboration and restoration, neither of which really

turned out to be completely accurate. The Pilot Process appeared to involve early involvement by a subset of stakeholders who drove the process toward certain outcomes (such as clearcutting) before the public was given a chance to influence these decisions. Regeneration harvest (aka clearcutting) of mature forests would likely not be on the top of the public's list of priorities. The Roseburg District has (had?) another collaborative in progress and this new pilot appeared to pull the rug out and shifted the focus from restoration to clearcutting.

Oregon Wild would approach these pilot projects differently. We would involve stakeholders and scientists earlier (e.g. in the selection and validation of goals) and throughout the process. We would identify clear problem statements and goals within the framework of the Northwest Forest Plan. We would validate those goals to make sure they make sense within the current economic and environmental context (e.g. the timber supply crisis is a myth; and certain Matrix objectives might need to be adjusted based on new information about barred owls and the need to store carbon). We would identify a wide range of alternative ways of meeting each goal; identify appropriate (and alternate) locations to realize those goals; analyze the environmental impact of alternatives; make adjustments to alternatives and design mitigation for unavoidable effects (e.g. loss of snag recruitment, carbon emissions); and choose the most appropriate alternative.

From the very beginning Oregon Wild has asked that these pilot projects identify clear goals so that we can validate them and establish monitoring benchmarks so that success or failure can be objectively determined. This sentiment seemed to be broadly supported when we brought this comment forward in Washington D.C. but unfortunately, we have been given a series of shifting purposes and an essentially untestable goal statement. We have essentially been told, "The pilots will test Norm and Jerry's regeneration logging prescriptions" — a decision which was made outside of any public process. It is still unclear toward what specific ends these prescriptions are directed, and before we've even started, several valid alternative means of achieving those ends are already foreclosed by the goal itself.

The unspoken driving goal is to restart regeneration logging on federal forest lands, because some small group of people decided that thinning young stands was "not enough." However, the assertions that (a) thinning is not enough and (b) regen is therefore the answer, have not been subject to proper scrutiny. Jobs, logs, and early seral forest can all be attained without wrecking more mature forests. There is 20+ years of young stand thinning to do and significant new reasons NOT to conduct regen harvest in mature forests.

In short, this process is asking for constructive participation from public participants who are not being treated with a great deal of respect in terms of meaningful collaboration and rational decision-making.

If it ain't broke, don't fix it.

Widespread social and ecological support for the agencies' young stand thinning program contrasts sharply with the regeneration pilot projects which propose to tread in murky water where public support and compelling ecological rationale are lacking.

With the support of many conservation groups, the BLM and U.S. Forest Service have developed is a successful program of thinning in dense young stands. There remains a lot to learn about how to convert simple tree farms back into complex forests. We would love to have as much scientific engagement in those important questions as is being devoted here. Moving towards controversial regeneration logging methods threatens to undermine the public trust that is still in the process of being rebuilt after decades of forest mismanagement and the agencies' "remarkable series of violations of environmental laws" noted by Judge Dwyer.

Johnson & Franklin (2009) observed:

> It is not too much to say that the harvest that has occurred on federal forests in the Northwest has largely been made possible by two simple rules: 1) the 80-year limit on thinning in LSRs in Moist Forests and 2) the 21" limit on thinning in Dry Forests. Those rules not only limit activities that agencies can undertake, they also protect the discretion of agencies to act by giving clear rules on when and where activities are permitted." … "the 80-year rule both restricts and protects agency discretion. The rule channels agency actions toward younger stands, especially plantations where a case can easily be made for actions to increase structural diversity." … "The agencies' management personnel consistently indicated that their highest priority is thinning plantations 20 to 60 years of age. This is where their activity is likely to have the most impact on stand development. The 80-rule is not preventing that action.

This is a compelling description of how successful implementation is most likely to result when the agencies focus on areas where social acceptance and ecological need are in greatest alignment, yet Johnson & Franklin (2009) still advocate for regeneration harvest in mature forests. They seem to assume that the opposition to regen harvest is mostly a social issue, while de-emphasizing constraints related to spotted owls/barred owls, marbled murrelets, salmon, and carbon storage/climate mitigation, and the fact that early seral forests can be restored without sacrificing mature forests.

We urge BLM to recognize that it is too early to move into controversial clearcutting practices, and we urge BLM to instead recommit to a sincere effort to restore the dense young forests and watersheds that were ruined with excessive clearcutting and logging roads.

Restoration means much more than just logging

Meaningful restoration requires addressing the wide range of needed restoration activities and prioritizing limited funds with efforts targeted where the most ecological good can be done with the fewest dollars.

Johnson & Franklin (2009) say:

- “Plan and implement restoration activities at larger landscape levels, encompassing the variety of restoration efforts that are needed within a landscape.”
- “Rehabilitating a deteriorating road system while reducing impact on aquatic resources will provide a key restoration challenge.”
- “[T]he vast majority of acres in Moist Forests on which timber harvest might occur are plantations.”
- “Restoring federal forests will not be complete without recovery of riparian and upland hardwoods.”
- ”Substantial investment will be needed. While timber harvest receipts can help defray costs, they will not be sufficient to cover all the actions needed…”

Restoration needs include: rescaling and storm-proofing the overbuilt road system; reintroducing fire and accommodating natural disturbance processes; reshaping the aquatic system to allow retention and passage of water, organisms, wood, nutrients, sediment; preventing and removing weeds; recapturing carbon stores; etc.

Complex early seral forest

One of the primary restoration objectives we keep hearing for these projects is the need to restore *complex early seral forest*. This may well be an important goal. However, this goal needs to be validated and if valid, alternative means of meeting the goal must be explored. With a little thought and creativity one can see that many ways to increase rare early seral habitat without sacrificing rare mature & old-growth forests.

Validation of the early seral habitat objective requires, among other things, asking if the current and projected amount of early seral habitat might be adequate to meet the needs of the opportunistic and generalist species that tend to occur in those areas. Only the interior valleys (and a few ridgtops) of western Oregon likely had persistent early seral conditions, while most of the federal forest landscape had transient early seral conditions associated with disturbances. Early seral wildlife species likely evolved to take advantage of early seral conditions when and where it could be found in the shifting mosaic of seral conditions.

Natural disturbance processes continue to operate across the landscape, including fire, wind, ice storms, landslides, floods, volcanoes, native insects, native disease, etc. Each of these helps create various sized patches of early seral forests every year. Many predict that climate change will increase the frequency of these natural events, suggesting that any shortage of early seral conditions might just take care of itself. "Ecologically, increased distribution and frequency of disturbances may result in increased distribution and dominance of early successional ecosystems dominated by fire adapted species..." Lemieux, Christopher J., Daniel J. Scott, Rob G. Davis and Paul A. Gray. 2008. Changing Climate, Challenging Choices: Ontario Parks and Climate Change Adaptation. University of Waterloo, Department of Geography: Waterloo, Ontario

http://web.archive.org/web/20101023221023/http://www.fes.uwaterloo.ca/geography/faculty/danielscott/PDFFiles/NRCAN-Report-FINAL.pdf[1]

There is widespread recognition that early seral forest is produced in abundance on non-federal lands (through industrial clearcutting). Current industrial forest practices does not produce *high quality* or *long-lasting* early seral forest. It is also true, but not widely recognized that the *absolute abundance* of early seral forest on non-federal lands might partially mitigate for its lack of quality.

Early seral vegetation also exists along many streams, rock outcrops, meadows, as well as roadsides, landings, and other disturbed sites throughout the forest. An honest assessment of the early seral shortage must account for the quantity, quality and functionality of all these early seral forest elements.

If there is indeed a shortage of complex early seral forest, we must evaluate a full range of alternative ways of increasing either the quantity and/or quality of such features. Alternatives that have been suggested include:

(a) Reform forest practices on non-federal lands to retain more legacy structures and allow a longer period of conifer establishment and more vegetation diversity after harvest, as suggested by Norm and Debora Johnson in 2007 —

Possible policy changes---- Private Lands

Goal: create more diverse early seral forest without increasing landowner cost or regulatory burden

Ideas:

- Remove free-to-grow requirement
- Remove regeneration requirement in its entirety
- Allow substitution of an invasives eradication plan, enhanced wildlife tree plan, or logging debris retention plan

K. Norm Johnson, Debora L. Johnson. 2007. Policies to Encourage Diverse, Early Seral Forest in Oregon: What Might We Do?
http://www.reo.gov/ecoshare/ccamp/good_forest_opening/powerpoints/Early%20seral%20talkrevfinal.ppt

[1] Conversely, it may become harder to maintain existing late-seral ecosystems and species, so existing late-successional old-growth forests should be retained in order to avoid making the shortage of late seral forest worse.

(b) Rely on natural processes such as fire, wind, insects, etc. Since the public has been misinformed that natural forest mortality processes are undesirable, this approach would work best if we increase public tolerance for natural processes. This approach may also require reform of fire suppression policies and post-fire salvage logging and replanting, as suggested by Norm Johnson, Jerry Franklin, and others in 2007 Early Seral Forest Symposium. http://www.reo.gov/ecoshare/ccamp/Good_Forest_Opening.shtml.

(c) Aggressive pre-commercial thinning in existing very young stands or failed plantations to extend the early seral stage, as suggested in the Chalk Parker Project on the Middle Fork District of the Willamette NF;

(d) Create patches of heavily-thinned, structure-rich "gaps" in variable density thinning projects in dense planted stands <80 years old, as suggested by numerous projects around the region.

All these alternative methods would allow meaningful restoration of early seral forest conditions without unnecessarily sacrificing mature forests. Why have these alternatives been overlooked?

Consider a wide range of alternative ways of meeting project objectives.

From the very beginning, a big problem with the pilots is that proponents have leapt forward several steps to a conclusion that regeneration harvest is the answer to problems involving early seral forest and timber supply before considering (a) the validity of the alleged problems with early seral forest and timber supply, and (b) whether there might be less destructive ways of achieving objectives related to both early seral forest and timber supply.

These two pilot projects proposes to trade-off one relatively uncommon forest type (maturing forests) for another (complex early seral forest). Maybe this trade-off can be avoided by focusing management on the much more abundant simplified early and mid-seral forests.

The Roseburg District Secretarial Pilot EA and the Wagon Road Pilot EA both propose regeneration logging and both projects should consider:

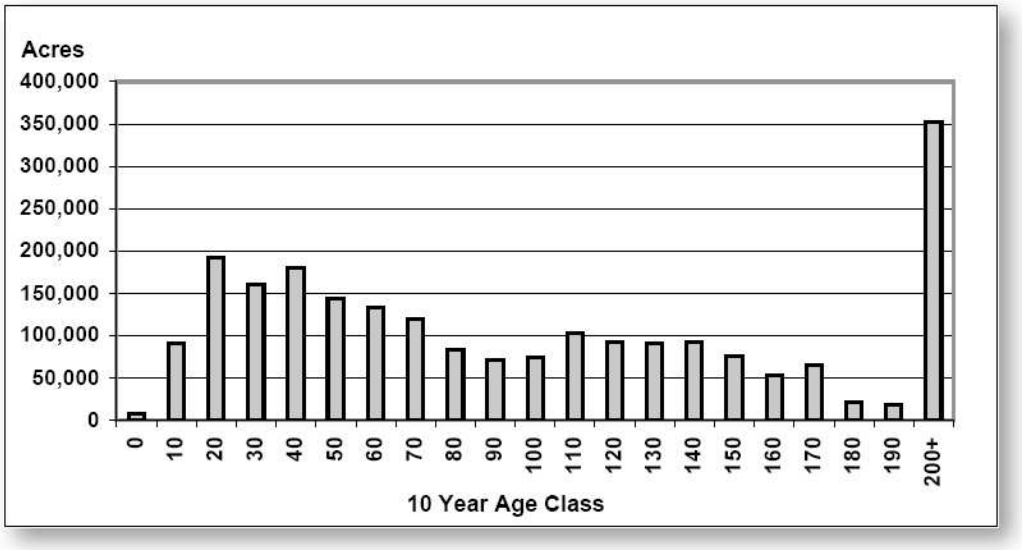
- *Alternative ways of restoring early seral forest* (as described above);

- *Alternative ways of creating jobs*, such as conserving forest to help providing high quality-of-life and high-quality ecosystem services to support economic diversity and economic stability that will sustain more robust and resilient local economies. Jobs can also be created through valid forest and watershed restoration efforts such as young stand thinning, road stabilization and road removal, well-designed stream rehab, removing weeds, reintroducing fire, repairing damage from OHVs, creating snags, etc...

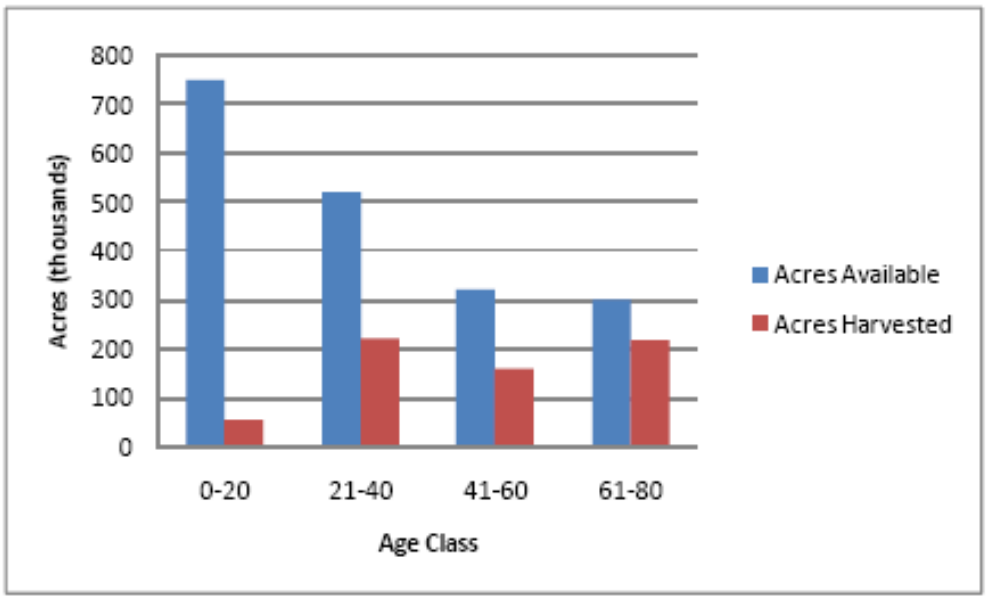
- *Alternative means of tribal cultural restoration*, such as tribal acquisition of non-federal lands within the BLM checkerboard. Tribal forest management will likely increase social and ecological values compared to non-federal lands, but Tribal forest management will likely reduce social and ecological values compared to the Northwest Forest Plan. There are more social and ecological benefits to be obtained from tribal acquisition of non-federal forests. Other options for cultural restoration include increased tribal participation in BLM management of certain federal lands to enhance cultural objectives like fish, game, berries, medicines, basket making materials, etc., but any such effort must be consistent with the Northwest Forest Plan and inclusive of the general public.

- *Alternative ways of producing wood*, such as from valid forest restoration projects. Variable density thinning of dense young planted stands has provided the vast majority of timber volume from federal lands over the last 10 years, and there is at least 20 more years of such work remaining to be done.

FIGURE 3-44. ACRES OF FORESTED LANDS WITHIN THE PLANNING AREA FOR 2006 BY 10-YEAR AGE CLASS



2008 WOPR FEIS, p 3-252.



"Figure 8. Restoration thinning on the national forests: … The large acreage in the 0-20 class, … will shift into higher age classes over the next 20 years, providing a large source of volume." (Johnson & Franklin 2009)

- *Alternative places to apply proposed treatments*. Locations for treatments should be based on landscape planning which has not occurred yet. Also, if complex early seral forest is the goal, then BLM should consider starting with forests that already have early seral component (e.g. very young stands or failed plantations) and conduct treatments such as aggressive thinning that will extend that early seral habitat condition.

- *Alternative ways of testing new silvicultural concepts on federal lands*. There is still a lot to learn about how to convert old clearcuts (now plantations) back to complex old forests. The Pilots would have been much more successful if they would have focused on learning how to improve restoration efforts in young planted stands where the ecological need is greater and the public support broader.

- *Alternative uses of the lands* where treatments are proposed including thinning, and no harvest (instead of regen harvest).

- Of course the BLM must also consider a *"no action" alternative*. Proper consideration of the no action alternative must clearly and accurately disclose the values that are retained by *not logging*, compared to the values likely to be lost as a result of logging. As Jerry Franklin said at the end of the Wagon Road field tour, these forests already exhibit the kind of complex forests that are expected to result long after the treatments that are proposed here. This begs a question — If we have reached the goal why are we starting over? If these forests are to be provide value to spotted owls, marbled murrelets, clean water, and carbon storage then these stands need to be retained in the target state for an extended period, rather than promptly regenerated to young forest upon reaching the target condition.

Reconsider Post-Logging Tree Replanting

If proponents of these pilots projects have a sincere desire to enhance complex early seral forest with diverse non-conifer vegetation, then that goal must not be truncated by replanting 200 conifers/acre which will accelerate the onset of closed-canopy conifer forest, and accelerate the loss of early seral vegetation.

Johnson & Franklin (2009) say —

> the requirement that lands will be '...adequately restocked within five years after harvest' on the national forests--needs to be reconsidered. First, all of our experience with credible retention harvesting indicates that there is adequate natural regeneration. Second, prompt uniform regeneration on harvested sites is probably not desirable where the creation of fully functional early successional or preforest communities is a goal.

In the 2007 Early Seral Forest Workshop, Jerry Franklin pointed out another reason to rely on natural regeneration, saying —

> Naturally-regenerated ESFCs are likely to be more resilient under climate change due to
>
> - greater species diversity
> - tree genotypes selected by nature (i.e., environmental stresses)
>
> …
>
> Reforestation will usually:
>
> - Reduce the duration of ESFCs
> - Reduce heterogeneity of the process by which closed forest canopy is re-established
> - Alter genotype of planted species (less selection by environment)
> - Homogenize composition of forest

http://www.reo.gov/ecoshare/ccamp/good_forest_opening/powerpoints/FranklinEarlySuccession.ppt

Replanting will reduce the longevity of complex early seral forest communities and, all things being equal, force BLM to increase the rate of regen harvest in order to maintain the same amount of early seral habitat on the landscape. When both complex late-seral and complex early-seral forests are in short-supply, replanting makes no sense, because it reduces both rare forest types while increasing closed canopy conifer forests that are already over-abundant.

Regen Logging Prescriptions

We do not think that regen logging is a restoration priority worthy of support in these pilots, but if BLM is going to do it anyway, here are some ideas to improve the prescriptions:

1. Retain all large trees and all old trees regardless of size or species or location.
2. Do not log suitable spotted owl nesting, roosting, foraging habitat, or other habitat for imperiled species.
3. Retain abundant legacy structures both clumped and dispersed. The dispersed leave trees outside of retention areas should be a mix of very heavily thinned

areas and scattered clumps of 2-6 healthy trees and larger snags. It is inconsistent with most natural disturbance processes to create cleared patches of any size without structural retention. Fire, insects, disease, wind, — they all leave lots of dead wood structure behind (and sometime live tree structure). Only floods and landslides remove the wood, but we should not be logging in places likely to be affected by those processes so we don't need to mimic those effects.

4. Recognize and mitigate for the fact that regen harvest removes all snag recruitment within cleared areas. The retention pattern described above is one possible mitigation.
5. Protect and enhance existing shrub component. Do not replant.
6. Protect under-represented tree species like Pacific yew, cedar, hemlock, pine, hardwoods, etc.
7. Treat slash and residuals in a variety of ways to create a variety of post harvest conditions, including some wildlife piles.
8. Fulfill survey and manage responsibilities.
9. Do not log in riparian reserves. Selectively extend riparian protection over ridgetops in order to provide dispersal corridors between watersheds.
10. Avoid all road construction. Work in areas that are already accessible from existing roads.
11. Prevent weeds by avoiding soil disturbance and canopy removal.

New Information Requires Modification of Matrix Objectives.

Since the Northwest Forest Plan was adopted in 1994 several significant new developments have occurred which indicate a need to increase conservation of more mature & old-growth forests, and logging less. Such new information may be part of the reason that Jerry Franklin and Norm Johnson have repeatedly suggested that old growth needs to be taken "off the table" including in the matrix. Unfortunately, the agencies have not taken steps to account for new information and adjust Matrix objectives accordingly.

A few of the most important new issues include:

(a) **Barred owls** — The threatened spotted owl faces a significant new threat in the form of the barred owl which has recently invaded the range of the spotted owl, uses similar habitat, and uses many of the same food sources. Hundreds of thousands of acres of suitable owl habitat that were assumed in the NW Forest Plan to be available for spotted owl nesting, roosting, and foraging are now occupied and defended by barred owls to the exclusion of spotted owls. There is an urgent need to protect additional suitable owl habitat in order to increase the likelihood that newly invading barred owls can coexist with instead of competitively exclude threatened northern spotted owls.

FWS has recommended protection of a subset of high quality owl habitat is enough, but this has never been tested and validated. The habitat modeling done as part of the spotted owl recovery planning process assume that the barred owl population would remain constant, but it is more realistic to expect that the barred owl population will continue to increase for some time. We are a long way from an effective rangewide

barred owl control program, and if the program ever gets fully implemented, failure to maintain the program in perpetuity will likely lead to an resurgent population of barred owls. That's a lot of preconditions that undercut FWS' modeling assumptions.

(b) **Carbon storage** — Global climate change is a new and significant threat not only to imperiled species, but also whole forest ecosystems and human communities. To reduce the severity of and mitigate for global climate change requires, among other things, that the global carbon cycle be managed to store more carbon, especially carbon-rich ecosystems like mature & old-growth forests of the Oregon Coast Range.

Commercial logging in stands over 80 years old likely comes with significant costs in terms of forgone carbon storage. Given the significance of the threat posed by climate change, it is difficult to imagine anything to justify logging mature & old-growth forests. Conservation of older forests not only helps mitigate climate change but also provides a variety of other benefits, including clean water, habitat imperiled species, as well as sport fish & game, and quality of life that helps diversify the economy and stabilize communities.

The O&C Act mandates that BLM manage for permanent forest production, watershed protection, and community stability, all of which are threatened by climate change. BLM therefore has a duty to make meaningful efforts to mitigate climate change by optimizing carbon storage in long-lived mature & old-growth forests.

(c) **Climate change** — A warmer world with more seasonal extremes of wet and dry also creates uncertainty about our ability to sustain older forests, and about whether we can create functional old forests starting from young, planted stands. If climate change brings increasing frequency and severity of drought and natural disturbance, it may be harder to sustain existing older forests and harder to establish new forests and sustain them through long periods of forest succession required to reach habitat goals for imperiled species like spotted owls, marbled murrelet, and salmon. This means that "a bird in the hand is worth two in the bush" so we should retain all the older forests that we currently have (and carefully nurture likely recruitment forests).

(d) **Dead wood standards** — Large accumulations of dead wood are essential for meeting objectives for fish & wildlife habitat, water quality, and carbon storage. Past and ongoing forest management has greatly reduced the prevalence of large snags and dead wood. Northwest Forest Plan standards for dead wood are based on an outdated "potential population" methodology which greatly underestimates the number of snags needed to meet the needs of a variety of species associated with dead wood. Rose, C.L., Marcot, B.G., Mellen, T.K., Ohmann, J.L., Waddell, K.L., Lindely, D.L., and B. Schrieber. 2001. Decaying Wood in Pacific Northwest Forests: Concepts and Tools for Habitat Management, Chapter 24 in Wildlife-Habitat Relationships in Oregon and Washington (Johnson, D. H. and T. A. O'Neil. OSU Press. 2001) http://web.archive.org/web/20060708035905/http://www.nwhi.org/inc/data/GISdata/docs/chapter24.pdf If more dead trees are needed, that means many more live trees need to be retained for long-term recruitment. Before conducting activities like

commercial logging that will result in long-term reduction in recruitment of snags and dead wood, the agencies should follow NEPA procedures to amend their plans, consider alternatives, and adopt new standards that assure objectives are met over time and across the landscape.

Since these significant new issues were not properly considered in the Northwest Forest Plan FEIS, BLM needs to address them here.

Why Mature Forests Must be Conserved

BLM should protect mature forests because they are the best candidates to grow and develop into old-growth habitat in the shortest time frame.

1. There is a serious region-scale deficit in mature and old-growth forest habitat. Over time, the Northwest Forest Plan seeks to re-establish 3.44 million acres of mature and old-growth forest (http://www.fs.fed.us/land/fm/oldgrow/oldgrow.htm). But by continuing to log mature forests we are significantly delaying this recovery. If we are going to make a timely recovery from that deficit, and give struggling species a chance to survive the habitat bottleneck that we have created, mature forests must be protected so that they can become old-growth.
2. Cutting mature forests is not needed for ecological reasons. These forests are already exhibiting the characteristics that provide excellent habitat and they continue to develop and improve without human intervention. As recognized in the Northwest Forest Plan standards and guidelines for Late Successional Reserves, stands over 80 years old do not need to be manipulated to become old-growth. All the ingredients are there, they just need time.
3. The transition from mature forest to old growth is a process that takes time and varies depending on factors such as location and species and disturbance events. In a mature forest, all the building blocks are there to create old growth (e.g., large trees, machinery to accumulate biomass, mortality processes) and scientists agree that these forests need protection to help meet the current old-growth forest deficit.
4. The architects of the Northwest Forest Plan found that many of our best large intact forest landscapes are mature forests, not old-growth. Some large forest fires burned westside forests between 1840 and 1910 and many such areas were skipped over by the timber harvest planners because they were more intent on converting the very old forests to tree plantations. These former fire areas, now mature forests, offer some of our best hopes of recreating large blocks of intact older forest.
5. Mature forests provide essential habitat for the species we are most concerned with such as: spotted owl, marbled murrelet, Pacific salmon, and most of the “survey and manage” species.
6. Protecting mature and old-growth forest leads to a real ecological solution, while protecting only old-growth is merely a partial solution to an ecological problem that is bigger than just old-growth.

7. Cutting mature forest will remain controversial and socially unacceptable. If we seek to resolve conflict over management of older forests, protecting the old-growth, while leaving mature forests unprotected would be only half a solution and would lead to more conflict. Shifting to a sincere restoration paradigm gets everyone at the table working toward the same goal.
8. If mature forest is left unprotected, some members of the environmental community will distrust the agencies and oppose them on many fronts.
9. Leaving mature forests unprotected would leave substantial areas of roadless lands subject to future conflict. Many westside roadless areas may not qualify as old-growth, but still provide important values as roadless and mature forests.
10. Complicated environmental analysis will be required for logging mature forests compared to thinning plantations. Wildlife surveys will be needed. Environmental Impact Statements will more often be needed instead of abbreviated Environmental Assessments. Formal consultation under the Endangered Species Act will more often be triggered.
11. We do not need to log mature forest to provide jobs. Less than 2% of the jobs in Washington and Oregon are in the lumber and wood products sectors, and only a small fraction of those are on federal land and only a fraction of those are related to mature forest logging. Many more environmentally benign jobs are available in restoring roads, streams, thinning young plantations, and managing fire and recreation.
12. We do not need to log mature forest to prop up the economy. The NW economy has greatly diversified in the last decade. Our economy typically creates more new jobs every year than exist in the entire lumber and wood products sectors.
13. We do not need to log mature forest to prop up the timber industry. Less than 10% of the logging in Oregon and Washington in recent years has been on federal lands. Only a fraction of that is mature forest. Much more environmentally benign and socially acceptable timber can be derived from thinning young plantations or small diameter fuel reduction where it is appropriate.
14. Since managing these stands is not "needed" for any ecological reason or any economic or social reason, what would be the objective?
15. Standing in a mature forest, once gets the distinct feeling that “this beautiful place should not be destroyed by logging.”

In short, regen logging is contraindicated. All the new information points to the fact that we have more reasons to retain existing mature forests and fewer reasons to log them. See Heiken, Doug. 2009. The Case for Protecting Both Old Growth and Mature Forests, Version 1.8. Oregon Wild.
http://dl.dropbox.com/u/47741/Mature%20Forests%2C%20Heiken%2C%20v%201.8.pdf
Since mature forests need to be protected, BLM needs to consider alternative ways of achieving objectives as outlined above.

Snags and Dead Wood

The definitions of old growth, mature and late successional forests in Johnson & Franklin (2009) are overly focused on the live tree component of forests. The report gives too little attention to dead wood features that are adversely affected by logging. The report's description of "ecological forestry" says that snags should be non-uniformly distributed but it fails to say that snags should also be *abundant*, and continuously recruited through time, which requires a significant pool of live trees. Regen harvest does not do this, and cannot be called ecological forestry.

Johnson & Franklin (2009) has a good discussion of the value of dead wood after natural disturbance. Unfortunately, the report does not adequately address the loss of dead wood that results from regen harvest (and commercial thinning) in terms of reducing recruitment of ecologically important dead wood structures and functions.

> Concerns with the removal of standing dead and down trees, collectively known as coarse wood, include the numerous ecological roles that it plays in forest ecosystems (Harmon et al. 1986, Maser et al. 1988) including roles as:
>
> • Long-term sources of energy and nutrients;
> • Aggregated sources of soil organic matter, which form important parts of soil matrices;
> • Structural elements of the landscape that influence hydrologic and geomorphic processes within aquatic and terrestrial ecosystems;
> • Significant modifiers of microclimatic regimes in the post-disturbance ecosystem; and, most profoundly
> • Habitat for a large array of animals, including the majority of vertebrate and large numbers of invertebrate species.
>
> Large snags and logs are generated by natural mortality processes in living forests that include mature and old trees, continually replenishing this important resource.
> …
> Retention of large snags and logs are specifically relevant to Northern Spotted Owl since these structures provide the habitat that sustains most of the owl's forest-based prey species.

http://www.cof.orst.edu/cof/fs/PDFs/JohnsonRestoration_aug15_2009.pdf

All commercial logging "captures mortality" and exports wood that would otherwise serve as snags and coarse woody debris. The forest landscape has a severe shortage of large snags as a result of a century of commercial logging (clearcutting, thinning, sanitation, salvage), fire suppression, road building, hazard tree removal, and firewood cutting. Further logging must mitigate for the shortage of dead wood, not make the existing shortage worse. This online slideshow shows the modeled effects of thinning on dead wood habitat which are significant and long-term.
http://www.slideshare.net/dougoh/effects-of-logging-on-dead-wood-habitat Regen logging will be worse than thinning, because there will be significant areas lacking adequate numbers of both snags and live trees needed to support future dead wood recruitment.

The untreated patches within the variable retention mosaic can only partially mitigate for the significant, long-term loss of snags in the clearcut areas. If these pilots are extended to the landscape, the untreated patches are not large enough to mitigate for the shortage of snags across the landscape on non-federal lands, old clearcuts on federal lands, missing hazard trees along the dense road network, the agencies' aggressive ongoing thinning program, etc.

In the 2007 Early Seral Forest Workshop, Jerry Franklin explained why salvage logging will have negative effects on early seral forest communities.

> Early SFCs need full compliment of biological legacies to fully function. Salvage will reduce functionality … Conservation of biological legacies is critical for postfire reestablishment of characteristic levels of ecosystem processes & biodiversity … Biological Legacies: * Organisms and reproductive structures, * Structures and organic matter, * Organically-derived spatial patterns … Salvage of Dead Wood: * Done to capture socio-economic value, *Has negative impacts on recovery, * Removal of legacies is most profound long-term impact … Salvage is always a tax on ecological recovery! The tax may be large or small depending upon the salvage operation. Importance of Coarse Wood: * Habitat for species, * Organic seedbeds (nurse logs), * Modification of microclimate, * Protection of plants from ungulates, * Sediment traps, * Sources of energy & nutrients, * Sites of N-fixation, * Special source of soil organic matter, * Structural elements of aquatic ecosystems

http://www.reo.gov/ecoshare/ccamp/good_forest_opening/powerpoints/FranklinEarlySuccession.ppt) Variable retention regeneration harvest has effects very similar to salvage logging, except that the mortality is caused by chainsaws instead of fire, but the loss of legacy structures is functionally similar. It makes no logical sense to promote regen harvest while rejecting salvage logging, when the effects are similar.

Riparian Management

The Coos Bay Pilot proposal says that the objectives include "Test[ing] new riparian management approaches." We do not know what this means but we feel that it is important that both the Roseburg and Wagon Road Pilots adhere to the Aquatic Conservation Strategy of the Northwest Forest Plan, which prohibits logging in riparian reserves except as needed to meet ACS objectives, and requires that any logging maintain and 'not retard' attainment of ACS objectives.

Johnson & Franklin (2009) observed: "Forests and streams are highly integrated components of PNW forest landscapes. Coarse wood is a critical structural element of streams and river ecosystems." Commercial logging in riparian reserves will virtually always remove valuable woody structure and reduce the long-term recruitment of dead wood which is so important to meeting both aquatic and terrestrial habitat objectives for riparian reserves. See Heiken, D. 2010. Dead Wood Response to Thinning: Some Examples from Modeling Work. http://dl.dropbox.com/u/47741/dead_wood_slides_2.pdf

Landscape considerations

The checkerboard might already have too many old clearcuts leaving the existing old forests too fragmented to ensure adequate security for spotted owls and other late successional wildlife. Further regen logging will exacerbate this problem and make it harder for the spotted owl to co-exist with the barred owl.

Stands do not exist in isolation, so BLM must be sure to consider the effects of logging on adjacent stands of mature & old-growth forests which may provide important habitat for spotted owls, marbled murrelets, and other species. Spotted owls may also use adjacent stands for dispersal, foraging, and security from predators. It may be helpful to create a spotted owl "risk map" that identifies areas that are more or less suitable for logging based on criteria such as: existing habitat characteristics, proximity to activity centers, proximity to NRF habitat, and proximity to recently logged areas, non-habitat, and roads. The agency should also consider adjusting both the location and timing of logging to minimize the cumulative effects of widespread logging on the sensitive and listed species.

Johnson & Franklin (2009) recommend a landscape planning process to find the right mix of more dense and less dense conditions —

> Incorporate ecologically appropriate spatial complexity, including both open and denser forest patches at both the stand and the landscape level;" Identifying the appropriate mix of open and dense forests at multiple scales is among the most critical issues of landscape conservation. E.g., "managing for a lower percentage [of dense forest] in landscapes dominated by the driest forest types and somewhat higher [percentage of dense forest] in landscapes dominated by the Moist Forest habitats;

This should be part of the NEPA process.

Coquille Tribal Involvement

A unique component of the Wagon Road Pilot project is the level of involvement of the Coquille Indian Tribe. For a number of years, the Tribe has sought the transfer of a large area of publicly-owned BLM forestland into tribal ownership. This proposal has generated substantial public concern, and raises some very serious questions regarding public access, compliance with applicable environmental laws and safeguards, and fairness to US taxpayers.

There are many ways to do justice to the Tribe's interest in autonomy and cultural restoration. See "alternatives" section above. It does not require that we set aside the ecological goals of the Northwest Forest Plan and ignore subsequent information like the invasion of barred owls and the need to maintain and increase carbon storage in forests - developments which require even greater levels of forest conservation, not more regen logging like the Tribe would be expected to do.

The materials distributed by the Coquille Tribe associated with the Wagon Road Pilot project contain statements implying that testing Johnson & Franklin's regen harvest methods under this Pilot project would logically lead to Tribal control of the Coos Bay

Wagon roads. These are not logically connected. Further, any such transfer would be a decision made by elected officials at the national level, and BLM and the Wagon Road Pilot Project should not create any impression of endorsing the transfer of federal public lands to the Tribe.

The Coquille Tribe's forest management policies are of great concern to the public. The Tribe was already given about 5,400 acres of federal forest in 1996, and they were required to manage these lands in keeping with applicable environmental safeguards, including the Northwest Forest Plan and critical habitat designated for threatened & endangered species. However, once under Tribal control, a large portion of those acres were promptly clear cut pushing the limits of the law and leading a federal judge to find the Bureau of Indian Affairs in contempt of court related to illegal logging of the Coquille Tribal Forest.

The Wagon Road Pilot proposal also says that this project will "Provide [an] opportunity for Tribal cultural restoration…" It is not clear what the BLM believes that statement to mean. How does clear cutting and modern logging methods contribute to cultural restoration? If the goal is to restore historic landscape conditions and cultural values, the Wagon Road Pilot should consider an alternative that uses native practices like prescribed fire to meet cultural objectives like berry production (in an appropriate location).

Regen harvest makes forests more vulnerable, not more resilient.

Contrary to assertions in the record, regen harvest is not likely to make forests more resilient to disturbance. Rather, by removing large patches of maturing forest with relatively fire resistant large trees with thick bark and high branches, and replacing these forests with dense stands of small trees with thin bark and with more small fuels close to the ground, regen logging will make these forests more susceptible to fire and other disturbances. "Large blocks of old-growth forests – rather than large contiguous blocks of young growth or highly simplified forests – are the best scenario for reducing catastrophic wildfire." Jerry Franklin, David Perry, Reed Noss, David Montgomery, Christopher Frissell. Simplified Forest Management To Achieve Watershed And Forest Health: A Critique. National Wildlife Federation.
http://www.coastrange.org/documents/forestreport.pdf

Two fires in 2002 on the Umpqua National Forest were evaluated for their effect on the forest. Excerpts from the March 2003 Wildfire Effects Evaluation Project by the Umpqua N.F. are make clear the impact of creating more tree plantations:

> "Plantations had a tendency to increase the rate of fire spread and increased the overall area of stand-replacement fire effects by spreading to neighboring stands." [Page 4]
>
> "Fire burned most plantations with high intensity and spread rapidly through the canopy of these young stands." [Page 20.]
>
> "Plantation mortality is disproportionately high compared to the total area that plantations occupied within the fire perimeter. [Page 26-27.]

> "Crown fire spreads readily through these young stands: rates of fire spread can be high, and significant areas or mortality can occur in and adjacent to these stands." [Page 32.]

Finally, the report says that the fire behavior in forest that had not been converted to tree farms was normal. "The pattern of mortality in the unmanaged forest resembles historic stand-replacement patch size and shape." Page 64.
http://www.fs.fed.us/r6/umpqua/publications/weep/weep.html

Logging will likely make fire hazard worse instead of better because, (a) logging will move small/hazardous fuels from the canopy to the ground where those fuels are more available for combustion and thus more hazardous; (b) logging will open the canopy and make the microclimate hotter, dryer, and windier, which will reduce fuel moisture and increase flame length and rate of fire spread; and (c) logging will expose mineral soil and make available more light, water, nutrients, thus stimulating the germination and growth of future surface and ladder fuels. Also, logging will often require an expanded and improved road system, which will combine with the more open forest to invite more human uses such as firewood cutting and OHV trespass thus increasing the risk of fire ignitions.

Survey and manage

The Pilot must fulfill the requirements of the 2001 Survey and Manage ROD as amended by the exemptions approved by Judge Pechman for thinning in stands under 80 years old. Any regen harvest or other logging in stands over 80 years should be surveyed for red tree vole and other relevant species.

Experience has shown that in complex forests ground-transects result in an excessive level of false-negative results for RTV. BLM must apply survey methods that answer questions about presence/absence with a high degree of confidence. Ground transects may not be good enough.

Johnson & Franklin Moist Forest Restoration Concepts

These pilots are based in part on the forestry principles proposed by Norm Johnson and Jerry Franklin in Restoration of Federal Forests in the Pacific Northwest: Strategies and Management Implications. 2009.
http://www.cof.orst.edu/cof/fs/PDFs/JohnsonRestoration_aug15_2009.pdf There are many things to like in this report but t also raises several concerns. In addition to the comments noted above, we offer the following additional observations about those aspects of the Johnson & Franklin (2009) paper that appear most relevant to these moist forest pilots.

Johnson & Franklin's dual objectives of restoration and timber production are not well integrated. The report says that logging will help pay for restoration and "increase harvest levels on federal forests" but the report is not clear to what extent ecological values are sacrificed to achieve those logging objectives. These trade-offs need to be more transparent and explicit.

The authors contemplate "active management … in perpetuity." This is contrary to ecological principles. Continuous removal of commercial sized wood will deprive forests of essential late successional components including dead wood, future large trees, and unroaded watersheds, not to mention carbon storage.

The report reveals that the real purpose of regen harvest is not ecological restoration, but timber volume. Johnson & Franklin (2009) say —

> "A long-term timber supply strategy from these forests would include regeneration harvest …"
>
> "A long-term timber supply cannot be assured without regeneration harvests on these forests, however. As the stands age, it gets harder and harder to justify thinning them from an ecological perspective."
>
> "…[C]ompared to recent harvest levels, the restoration strategy here shows an increase in harvest for both the Forest Service and the BLM … undertaking regeneration harvest in the Moist Forest Matrix over time, using ecological forestry principles, in stands now younger than 120 years of age. These four features of the proposal should each enable an increase in harvest over the next 20 years compared to recent harvest levels."
>
> "So how do we provide for ecologically sound and socially acceptable regeneration harvest? … 1) Utilize an approach to regeneration harvest that makes an ecological contribution … 2) Identify stands outside of reserves and other special or controversial areas and below the threshold age for old forest… 3) Fit the approach within the agency's other laws and mandates … [e.g.] culmination of mean annual increment … [W]e settled on a long-term average rotation age between 120 and 160 years."

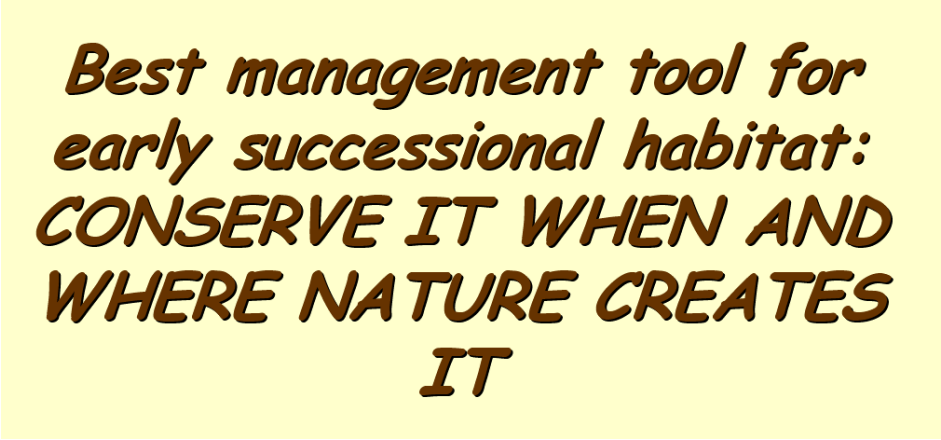
So, early seral forest is an "ecological contribution" (or byproduct) of regen harvest, but since early seral forest can be obtained in many less-harmful ways without regen harvest, the early seral contribution cannot serve to justify regeneration harvest on ecological grounds. If we're being honest, it's about timber.

Regeneration harvest in moist forests 80-120 years old on federal lands is an unsupported solution to the alleged shortage of early seral forest, because Johnson & Franklin (2009) failed to explore better options for attaining early seral habitat objectives including: (a) relying on natural disturbance processes which historically provided episodic recruitment of early seral habitat; (b) encouraging structural retention on non-federal lands that are already being regenerated; and (c) patches of very heavy thinning within a subset of the young stands that are subject to variable density thinning. These alternatives are much more in keeping with the authors' stated concept of "ecological forestry" which

> "utilizes principles of natural forest stand development, including the role of natural disturbances in the initiation, development, and maintenance of forest stands and landscapes and operating on temporal scales consistent with recovery of desired structures and processes."
>
> AND
>
> "We concentrate proposed active management on the Federal lands that are most in need of restoration because they are outside their natural range of structure and composition."

When asked during recent public meetings why artificial regeneration created by logging is necessary when nature is already creating early seral forests through fire and other disturbances, Jerry Franklin responded that early seral habitat needs to be more well-distributed than nature can provide. Similarly, Johnson & Franklin (2009) said "[N]atural disturbances are highly episodic, however, and are not likely to provide desired amounts of these communities in time and space. Hence, a systematic silvicultural program to create early successional communities can insure an adequate distribution of such ecosystems in time and space." The assertion that logging disturbance is better than natural disturbance raises several red flags and needs to be validated. This assertion also appears to contradict previous statements by the authors.

If the natural occurrence of disturbance and early seral habitat was episodic, then that is the pattern and process that native species evolved with. It is unclear why this natural pattern and process is improved upon by more uniform distribution across space and time. In a January 2007 Early Seral Workshop, Jerry Franklin seemed to say that natural processes should be the first place to look for early seral habitat values. http://www.reo.gov/ecoshare/ccamp/Good_Forest_Opening.shtml One of the big points in Jerry Franklin's presentation was —



http://www.reo.gov/ecoshare/ccamp/good_forest_opening/powerpoints/FranklinEarlySuccession.ppt The specific reference to "where and when" nature creates early seral habitat, is an indication that the spatial distribution of early seral forest created through natural episodic disturbance processes is the ideal, and cannot be improved upon with kinder, gentler clearcuts.

The authors appear to recognize the need for an aquatic strategy but it's not found in the report. ("recognizing the inter-connection of forest and watershed restoration and the importance of functioning riparian and aquatic systems.")

Apparent conflicts between different aspects of forest and watershed restoration are acknowledged by not resolved by the authors.("[W]e acknowledge that there are tensions among the different elements of a comprehensive restoration program.") For instance:

(a) Logging with retention might help some trees grow faster but it also captures mortality and significantly reduces recruitment of dead wood which is essential for meeting both riparian and upland habitat objectives;

(b) Logging requires heavy equipment and road construction which detract from restoration objectives;

(c) Commercial logging reduces forest carbon storage, with the possible exception of projects involving removal of the smallest fuels from low elevation Ponderosa pine forests with the most frequent fire regimes. See Mitchell, Harmon, O'Connell. 2009. Forest fuel reduction alters fire severity and long-term carbon storage in three Pacific Northwest ecosystems. Ecological Applications. 19(3), 2009, pp. 643–655 http://ecoinformatics.oregonstate.edu/new/FuelRedux_FS_CStorage_Revision2.pdf;

(d) Removal of commercial sized trees can and canopy reduction can make fire hazard worse by making stands hotter, dryer, windier and stimulating the growth of future surface and ladder fuels;

Johnson & Franklin (2009) framework for discussion of climate change & carbon storage needs to be validated and adjusted.

1. The report fails to explicitly harmonize climate resiliency and carbon storage. The authors seem to allow climate change adaptation to trump climate change mitigation. However, regen harvest in moist forests provides no clear benefit in terms of resiliency, but has clear costs in terms of accelerated carbon emissions. A quantitative risk assessment needs to be conducted to help answer the question of how much habitat and carbon can be sacrificed in the short- and mid-term, in order to hedge the long-term speculative risks associated with climate change. The authors make an unsupported assertion that "wildfire and insect … threats will probably develop very quickly as the result of climate change."

2. The report erroneously concludes that the carbon effects of logging are "unsettled" when the basic facts are not in dispute. Logging accelerates the transfer of carbon form the forest to the atmosphere. Wood products are not a preferred carbon sink because: only a small fraction of disturbed forests end up in long-term storage in wood products; wood already saturates the building materials market; and substitution effects are greatly overstated. Law, B.E. and M. Harmon. 2011. Forest Sector Carbon Management, Measurement and Verification, and Discussion of Policy Related to Climate Change. Carbon Management 2(1): 73-84. http://terraweb.forestry.oregonstate.edu/pubs/lawharmon2011.pdf See also, this slide show clarifying many misconceptions about forests, logging, and carbon: http://www.slideshare.net/dougoh/forest-carbon-climate-myths-presentation/

3. The report says that the carbon storage benefits of unmanaged forests are only "short-term," when in fact they are also "long-term." Long-term benefits are realized when the landscape average forest carbon storage values increases over time and are maintained. Long-term landscape average carbon stores are determined by site productivity and disturbance rates. Cumulative anthropogenic disturbance is added to cumulative natural disturbance, then long-term landscape carbon storage is reduced.

4. The authors justify lumping mixed forests with dry forests based on an unsupported assertion that forests with historic mixed-severity fire regimes "will shift to more frequent and severe fire regimes with climate change." This may be true but it is speculative. The effects of ongoing fire suppression cannot be ignored, especially in the extensive areas of checkerboard ownership in western Oregon. In addition, there is some countervailing evidence such as the fact that severe fire effects are closely related to near surface wind speeds, which are declining in the Northern Hemisphere. Tim R. Mcvicar And Michael L. Roderick 2010. Winds Of Change - On average, terrestrial near-surface winds have slowed down in recent decades. Nature Geoscience | VOL 3 | Nov. 2010.

5. The report does not give forest ecosystems credit for their inherent resilience to climate change. Oregon forests have evolved with seasonal and decadal drought as well as periodic insects and fire events. Climate change may increase the frequency and severity of these events, but these are not novel processes in our forests. The ecological effects of climate change are still minor compared to the cumulative legacy effects of past and present logging, grazing, roads, weeds, and fire suppression. Furthermore, most of the stresses caused by climate change (e.g., drought, insects, fire) result in natural reductions in tree density which increases the vigor of remaining trees and produces habitat heterogeneity. Even large disturbances can help forests adapt to climate change by creating opportunities for change and immigration of genes and species better adapted to the changing climate. Reducing small fuels may be warranted on the driest sites where restoration of fire frequent regimes is most likely, but from a habitat perspective fuel reduction may not be warranted in mixed forests or where fire suppression policies are likely to persist.

6. The report says that "In Moist Forests, growth will go toward rebuilding the carbon stocks that have been greatly depleted during the last 100 years" but the report does not disclose the long-term adverse carbon consequences from regen harvest of mature forests. The report does show that thinning will move treated stands away from carbon storage objectives based on historic stand conditions. The report points out that after thinning carbon stocks will recover in the long-term, however the report does not fully acknowledge the adverse effects of (and need for mitigation for) increased logging-related carbon emissions during the period when logged forests are catching up with unlogged forests.

The report does not address the need to recover the spotted owl, marbled murrelet, and Pacific salmon. Many recommendations for active management (such as to reduce fuels, increase climate resilience, and regenerate forests to create early seral habitat) will interfere with important conservation goals for listed species.

The report accepts the existing land allocations, including regen of mature forests in the matrix. However, since the NWFP was adopted in 1994, there are significant new reasons to protect mature forests, including carbon storage to mitigate climate change, and the needs for additional habitat to increases the chances that spotted owls and barred owls can co-exist instead of competitively exclude each other.

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Sincerely,

Doug Heiken