

From: [REDACTED]
To: [Smith, Hannah K -FS](#)
Subject: Cannot submit my comments??
Date: Sunday, December 20, 2020 7:25:52 PM
Attachments: [pastedGraphic.png](#)
[pastedGraphic_1.png](#)
[pastedGraphic_2.png](#)

To: comments-pacificnorthwest-siuslaw-hebo@fs.fed

From: Paul Engelmeyer and Joe Liebezeit, Portland Audubon Society, Jim Adler, Andrea Scharf, Dave Eisler, Jim Fairchild

Subject: Sand Lake Restoration Project – comments

Dear William Conroy (District Ranger) and Hannah Smith,

Please accept the following scoping comments from Audubon Society of Portland concerning the Sand Lake Restoration Project.

Portland Audubon Society promotes the understanding, enjoyment, and protection of native birds, other wildlife, and their habitats. We focus on our local community and the Pacific Northwest, inspiring people to love & protect nature since 1902.

We welcome this opportunity to submit comments concerning the Sand Lake Restoration Project Area. We believe the process provided us an opportunity help define the issues that we think the Siuslaw National Forest (SNF) should analyze and address as the SNF moves forward with their conservation efforts here in the Coast Range Bioregion.

Many of our concerns have somewhat been incorporated into the latest restoration plan but we still have concerns that we feel are critical to moving forward with this and future landscape conservation and restoration plans for the Siuslaw NF lands.

Thinning: We support improving habitat conditions through a light thinning and restoration forestry program, but stress it is critical that the focus for this plan be on plantation stands that are early in their development. As the canopy closes there are ecological values that must be acknowledged.

Background Analyses Needed Before Decisions Are Made

Ideally a plantation thinning program will be approved but to inform the decision, we urge SNF conduct an analysis that provides detailed information on the distribution of tree size classes and age classes and that provides for the protection of small interior forest patches with remnant trees. These interior forests are essential to the recovery of the ESA listed Marbled Murrelet and other species dependent on older forest conditions.

The following issues must be included in the analyses and addressed before any thinning decisions are made:

1. Current analysis of interior forest conditions in the planning area. Linking the best interior forest patches with a closed canopy will have multiple benefits - see our concerns below. Acknowledging that approximately 25% of the landscape condition is older forest conditions is a reality check for managing a recovery strategy for multiple species. The interior forest patches identified in the Assessment Report for Federal Lands in and adjacent to Oregon Coast Range Province gives a clear opportunity to create a landscape conservation

strategy for multiple species.

2. How and where no-cut buffers will be planned and retained adjacent to native forests and occupied stands should be clearly articulated.
3. The relationship between thinning densities and predations issues (particularly how thinning relates to the production of berry producing plants that attract corvids and jays and the potential impacts on the endangered murrelet) needs to be examined.
4. How treatments would affect the dispersal of Northern Spotted owls needs to be clearly defined.
5. Current status of the ESA and sensitive species for the planning area including but not limited to Humboldt Martin, Red Tree Vole, and the Marbled Murrelet.
6. We urge you to complete an assessment that clearly deals with connectivity to protect and improve interior forest patch conditions in near term within the LSR designated areas. Reducing the Canopy Cover to 40 and 60% may negatively impair interior forest conditions for 10 - 20 years. An example would be stands 309040, 309035, and 309032 - We support the need to maintain and create blocks of closed canopy habitat for the near term. They should be considered a high priority with the expectation of improving survival of interior forest species. These species of concern include the murrelet, marten, flying squirrel, red tree vole and the unique microclimate conditions which they require.
7. The Assessment Report Federal Lands in and adjacent to Oregon Coast Province July 1995 clearly acknowledges the changes to habitat conditions as well as the loss of multiple species as a result of past management practices.

Roads

A thorough description current conditions of the road network needs to be included in the recommended NEPA analysis. This would include analysis of the number of miles of 'modern' and 'legacy' roads, the road density per square mile of land, the number of road decommissionings planned, and condition and number of culverts needing fish passage improvements. We were very pleased to be able to review the past Watershed Analysis which acknowledges the road density issues of 3.9 miles / per square mile with the worst subbasin being Jackson at 5.4 miles/per sq mile.

Of particular concern is road density per square mile of land in the planning area. A clear analysis that shows total roads, including legacy roads, should be included. We recommend the plan include a proposal for a clear decrease in the road density (linear miles/square mile) for the Project area. Road density is linked to the health of terrestrial as well as aquatic systems.(USDA Forest Service 1999)

While legacy roads alone may not add to the impacts from our current road network, we believe that overall cumulative road density impacts may still be significant and negatively impact watershed condition in the uplands as well as in the aquatic system. This has consistently been acknowledged in the Forest Service's guidance for Roads Analysis (USDA Forest Service 1999).

Understanding road density and location can help to gauge the impact of roads on natural watershed processes. NOAA Fisheries has defined road densities of less than

2 miles/square mile with no valley bottom roads as "properly functioning". We would like to see the SNF analyze the number and densities of roads in the planning area, including a specific identification of the number of valley bottom roads in the planning area and a plan for the retention or decommissioning of roads to meet the NOAA standards:

"Densities between 2 and 3 miles / square mile with some valley bottom roads are designated as "at risk" and densities over 3 miles / square mile with many valley bottom roads are considered "not properly functioning".

We support adequate funding for road decommissioning as well as culvert and/or bridge work if the analysis indicates the necessity in order to improve watershed health.

Interior Forest Conditions:

We urge the SNF to identify blocks of interior forest habitat in the planning area that will be protected from entry and thinning. According to the '1995 Assessment Report Federal Lands in and adjacent to Oregon Coast Province' interior forest conditions in the basins in the planning area are approximately 9%. This report gives clear direction for the need to secure additional and larger blocks of this interior habitat. The Assessment goes on to acknowledge that within the Coast Range lands the median patch size in the early 1900s was approximately 100,000 acres, by 1945 the median patch size was approximately 3,000 acres, and by 1990 the patch size averages 137 acres.

Please include an analysis of the lands in the planning area in which you identify opportunities to recover blocks of roadless areas to provide secure habitat, with reduced human contact, for species needing those rare old forest conditions including the Northern Spotted Owl, Flying Squirrel, Marbled Murrelet, and the Humboldt Marten.

Habitat Protection and Connectivity:

We urge the SNF to use the 'Best Available Science' that supports the protection of habitat for Marbled Murrelet and other species of concern. These protections would include considerations for no-cut buffers, skips, interior forest conditions, creating and connecting blocks of interior forest habitat and potential windthrow. These issues should be considered within the Project area as well as connecting larger landscape habitats in the adjacent basins. We saw nothing in the planning document analysis that addressed the connectivity issues from Sand Lake to adjacent watersheds.

Northern Spotted Owl

We urge you to consider a higher canopy cover to be retained to assure optimal dispersal habitat for the Northern Spotted Owl as indicated by the research paper cited below:

Stan G. Sovern, Eric D. Forsman, Katie M. Dugger, Margaret Taylor. 2015. Roosting Habitat Use and Selection By Northern Spotted Owls During Natal Dispersal. The Journal of Wildlife Management 79(2):254-262; 2015; DOI: 10.1002/jwmg.834.
[http:// agsci-labs.oregonstate.edu/duggerka/files/2016/09/Sovern-et-al.-2015.pdf](http://agsci-labs.oregonstate.edu/duggerka/files/2016/09/Sovern-et-al.-2015.pdf)

"Management Implications. ... Based on our study, we recommend that managers should pursue a strategy that exceeds the canopy cover guidelines recommended

by Thomas *et al.* (1990) when managing dispersal habitat for spotted owls. Based on our estimate of mean canopy closure (66%), and our estimate of mean canopy cover from overlaying a dot grid on the same areas (approx. 14% larger), we recommend that the target for canopy cover in stands managed for dispersing spotted owls should be at least 80%.”)

Northern flying squirrels

Dr. Brenda McComb on ‘Young Stand Thinning and Diversity Study’ in 2009’ indicated the following in her recommendations:

- Thinning had a marked and consistent negative effect on northern flying squirrels. NOTE: this is consistent with the Forest Ecosystems Studies findings

- Since northern flying squirrels are a primary food source for the Northern Spotted owl, thinnings should be strategically placed within a matrix of unthinned stands
- We anticipate that flying squirrel populations will recover as thinned stands close canopy and mature, unthinned stands will be an important bridge until that time.
- **Humboldt Marten**
Historically, the Marten inhabited our Coast Range Bioregion and is currently under review for ESA designation. We urge you to consider the information concerning canopy cover and predation.
A presentation by John Bailey, Oregon State University, Keith Slauson, USFS, Pacific Southwest Research Station and Katie Moriarty, Oregon State University drew attention to the following:
 - **Associated with structurally-complex forests**
 - **Rest and den sites = snags, trees and logs >36” DBH**
 - **Populations decline in areas with 25-30% forest cover removed (Hargis *et al.* 1999, Potvin *et al.* 2000)**
 - **Dietary generalist (given high metabolism)**
 - **High predation risk**
Clearly, complexity on the forest floor, road systems, canopy cover, connectivity between the small interior forest patches will play a critical role in the recovery of this unique species in our fragmented simplified habitat conditions. This would be another example of the need for designing a conservation option for a species in peril.
 - **Marbled Murrelets and concern about buffers**
We ask that you adopt a precautionary approach and place thinned stands within a matrix of unthinned stands and create buffers adjacent to all murrelet occupied stands. Increasing survivorship should be the highest priority in the near term. Modifying the current thinning program to reduce predation rates makes the most sense and should be the highest priority for the Sand Lake Restoration Project.

- **Marbled Murrelets and concern about buffers - As a precautionary measure we urge you to follow a recommendation from the 1997 MAMU Recovery Plan:**

- ***3.1.1.3 Maintain and enhance buffer habitat surrounding occupied habitat. Maintaining buffers around occupied habitat will mediate the effects of edge by helping to reduce environmental changes within the stand, reduce loss of habitat from windthrow and fire, reduce fragmentation levels, increase the amount of interior forest habitat available, and potentially help reduce predation at the nest. To have the greatest benefits, buffer widths should be a minimum of 300-600 feet and should consist of whatever age stand is present, including existing plantations (which should be managed to provide replacement habitat).***

We have been unable to find documentation or other information on Marbled Murrelet occupied stands in the planning area. Has the SNF completed surveys for the existing native forest in the LSR planning areas for stands within the planning area? Or has the SNF acknowledged that the native forests within the USFWS Critical Habitat designated area are suitable and deemed occupied?

From the literature this direction could be described as ‘at least 100 meters’ from any edges with actively managed forest to protect the ‘interior’ forest habitats. This prescription would improve habitat for interior guild species. The theory is that this increase in interior habitat will result in localized reductions of edge-associated species and in the near term reduce predation on the murrelet and other species dependent on interior forest habitat conditions.

Due to these concerns, we ask the SNF and USFWS to update the current 2019 Letter of Concurrence (LoC) from the USFWS. This document should be made available to the public. We also urge you to clearly address how your actions in the LSR would be consistent with the MAMU Recovery Plan (1997).

Please consider the following documents: Intact buffers around occupied, suitable, and restoration sites are needed to maintain or allow the creation of high-quality nesting habitat (McShane et al. 2004), reduce potential for blowdown (Jaross and Read 2006), maintain microclimate (Chen et al. 1993, 1995, Kremsater and Bunnell 1999, McShane et al. 2004), and reduce the impacts of hard edges, which have been linked to increased nest predation (Nelson et al. 2002; see below).

Windthrow or blowdown can result from the clearcut harvest of adjoining areas on private lands and on ridges exposed to high winds. An example of this concern is the recent September east wind event where blow down was significant and unprecedented in recent times. A 40% Canopy closure adjacent to occupied stands creates a significant risk and raises a number of issues: blow-down, micro-climate, flying squirrel habitat, marten distribution, increased predation on murrelet chicks, as well as distribution of dispersing potted Owl.

Malt and Lank (2007) found that sites at timber harvest edges had lower moss abundance than interior nest sites and natural edge sites (stream corridors and avalanche chutes) due to stronger winds, higher temperature variability, and lower moisture retention when compared with interior sites. Maintaining microclimate is critical to maintaining moisture in the stand to help moss development and aid in proper thermoregulation of adults and chicks.

An assumption that a thinning program that leaves a 40% or 60% canopy cover is sufficient to reduce edge effects as well as protect microhabitat features such as moss mat development is questionable. Please include scientific rationale for any proposed canopy cover prescriptions adjacent to occupied stands.

We are concerned about the issue of predation on Marbled Murrelets from human activities around habitat patches. It is well accepted that there are documented increases in populations of corvids (crows, ravens, and jays) and that human activity both within and around habitat patches (recreation sites, roads, landfills/dumps, agriculture, rural development) contributes to increased predator populations.

Additionally, past timber management practices have created a landscape in the Coast Range in which the habitat fragmentation and degradation has contributed to increased predation due to increased forest edges and increased predator access to nests.

While it is well accepted that research indicates that nest predation is over 70% we believe the highest priority should be to truly protect known occupied habitat in the near term.

The proposed thinning units adjacent to occupied stands should follow the Marbled Murrelet Recovery Plan recommendations by including a prescription of 'no-cut' buffers or skips. How to best reduce negative impacts from edge effects can be obtained via long-term-monitoring. While there has been an initial effort at effectiveness monitoring by the SNF on the current forest management program, there appear to be significant flaws in the design. If there is more information about this effort I urge you to share it with the scientific community and the public. If not, we recommend such a monitoring program be established. While the SNF has developed a draft monitoring plan it appears to lack control stands, 100M no-cut buffers adjacent to occupied stands which is needed to fully understand any effects of the thinning program.

Carbon storage/climate changes - microclimate edge effects

Forest fragmentation results in abiotic changes to forest structure which affects nest site suitability (Malt and Lank 2007). Chen et al. (1993, 1995) found fragmented stands and forest edge areas to have higher winds, increased solar radiation, and lower humidity than contiguous mature and old-growth forests.

Malt and Lank (2007) found that sites at timber harvest edge (both clearcuts and regenerating forests) had lower moss abundance than interior sites and natural edge sites (stream corridors and avalanche chutes) due to stronger winds, higher temperature variability and lower moisture retention when compared with interior sites.

Burger (2002) found that Marbled Murrelets are more likely to select suitable nest trees and stands with high rates of lichen and bryophyte growth. These findings show that effects of forest fragmentation may be more complicated and lasting than previously thought. We ask you to include an analysis of the potential impacts of such microclimate edge effects on MAMU and other dependent species.

Trees, particularly in the northwest are important carbon stores. Any timber management program should include a carbon analysis and we urge you to determine and disclose impacts to the value of current carbon storage in stands that are nearing 80 years.

We also urge you to retain enough basal area to ensure long-term recruitment of large tree and large snags into the future.

Riparian analysis

Current conditions of the riparian zone would be a valuable component of the Project. There was little acknowledgement of Clean Water Act's 303d list and, if the sub-basins are on the list, which parameters are impaired. We see an opportunity to understand this issue forest-wide.

We are also attaching a paper entitled: '*Optimizing carbon storage and biodiversity co-benefits in reforested riparian zones*' by Dybala et al 2018. We urge you to include this in your analysis of carbon for the project area.

We look forward to discussing these issues further with the SNF staff.

Sincerely,
Paul Engelmeyer Audubon Society of Portland Ten Mile Creek Sanctuary [REDACTED]
[REDACTED]

Joe Liebezeit
Staff Scientist
Audubon Society of Portland 5151 NW Cornell Road Portland, OR 97210 [REDACTED]
[REDACTED]

Literature Cited

'1995 Assessment Report Federal Lands in and adjacent to Oregon Coast Province', July 1995

Burger, A.E. 2002. Conservation assessment of the marbled murrelet in British Columbia, a review of biology, populations, habitat associations, and conservation. Tech. Rep. Series 387. Delta, BC: Pacific and Yukon Region, Canadian Wildlife Service: 171pp.

Chen, J., J. F. Franklin, and T. A. Spies. 1993. Contrasting microclimates among clearcut, edge, and interior of old-growth Douglas-fir forest. *Agricultural and Forest Meteorology* 63:219-237.

Chen, J., J. F. Franklin, and T. A. Spies. 1995. Growing-season microclimatic gradients from clearcut edges into old-growth Douglas-fir forests. *Ecological Applications* 5:74- 86.

Jaross, W., and W. Read. 2006. Wind hazard assessment in the Willapa Region of Southwestern Washington. Unpublished document. Washington State Department of Natural Resources, Olympia, WA.

Kremsater, L., and F. L. Bunnell. 1999. Edge effects: Theory, evidence and implication to management of Western North American Forests. *In* J. A. Rochelle, L. Lehman, and J. Wisniewski, eds. *Forest Fragmentation: Wildlife and Management Implications*. The Netherlands: Brill and Leiden.

McShane, C., T. Hamer, H.R. Carter, G. Swartzman, V. Friesen, D. Ainley, R. Tressler, K. Nelson, A. Burger, L. Spear, T. Mohagen, R. Martin, L. Henkel, K.

Prindle, C. Strong, and J. Keany. 2004. Evaluation report for the 5-year status review of the Marbled Murrelet in Washington, Oregon, and California. Unpublished report. Seattle, WA: EDAW Inc. (prepared for U.S. Fish and Wildlife Service).

Nelson, S.K. and T.E. Hamer. 1995a. Nest Success and the Effects of Predation on the Marbled Murrelet. In: Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, eds. Ecology and conservation of the Marbled Murrelet. Gen. Tech. Rep. PSW-152. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station: 89-97.

Raphael, M.G., D. Evans-Mack, J.M. Marzluff, and J.M. Luginbuhl. 2002b. Effects of forest fragmentation on populations of the Marbled Murrelet. *Studies in Avian Biology* 25:221-235.

Raphael, M. G., S. K. Nelson, P. Swedeen, M. Ostwald, K. Flotlin, S. Desimone, S. Horton, P. Harrison, D. Prenzlowl Escene, and W. Jaross. 2008. Recommendations and Supporting Analysis of Conservation Opportunities for the Marbled Murrelet Long-Term Conservation Strategy. Olympia, WA: Washington State Department of Natural Resources.

Stan G. Sovern, Eric D. Forsman, Katie M. Dugger, Margaret Taylor. 2015. Roosting Habitat Use and Selection By Northern Spotted Owls During Natal Dispersal. *The Journal of Wildlife Management* 79(2):254-262; 2015; DOI: 10.1002/jwmg.834. [http:// agsci-labs.oregonstate.edu/duggerka/files/2016/09/Sovern-et-al.-2015.pdf](http://agsci-labs.oregonstate.edu/duggerka/files/2016/09/Sovern-et-al.-2015.pdf)

U.S. Fish and Wildlife Service. 1997. Recovery plan for the Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon and California. Portland, OR: Oregon Field Office: 203pp.