Comments on the QMS Project

by Friends of Douglas-fir National Monument
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Introduction

The following comments are submitted by the Friends of Douglas-Fir National Monument. The Friends are a non-profit organization created to promote the creation of a national monument recognizing the environmental, cultural and historical importance of the Douglas-fir and the environment that sustains the Douglas-fir. These comments reflect the opinions and interpretations of a number of members of the Friends, compiled into a single statement responding to the District's QMS draft EA. Individual members of the Friends were encouraged to submit their own remarks, but some chose to do so through the voice of the organization.

With the announcement of this project, it was clear that, at 249 units, it was much too large for the public to meaningfully assess and comment on it, as intended by the NEPA process.

It took a lot of map work just to become knowledgeable of the scope of the project. Only through a lengthy triage process, were we able to narrow down our list of units of most concern. Even at that, we ended up with 173 priority units of concern. We used three criteria:
1. units including or adjacent to streams;
2. units either adjacent to each other or adjacent to private industrial forest lands that, if cut, would have unacceptable cumulative affects;
3. units that impact the disappointingly few recreational areas within the project.

From that list, we had to narrow our list to a number that can be field-checked by our team of volunteers. As the only Forest Service public field trip demonstrated, only five units could be visited in one day (one of which wasn't even a QMS unit. It was included to represent other actual QMS units that were too far to reach that day.) And that field trip was organized by people knowledgeable of the area. A great amount of map work, and even Google Earth 3D research didn't inform us of the actual conditions we found on the ground. While our field work revealed much valuable information, we were unable to do the thorough job we could have done if we hadn't had to spend so much time getting to know the large area and lay of the land.

Undaunted, we set out to reach as many of our priority sites as possible during the season. Early in our efforts, we discovered that a number of those units were inaccessible, due to locked gates, roads blocked by landslides, bermed roads, missing roads, impassably rough or brushy roads and other impediments. We were told that FS employees themselves had to hike into such inaccessible units and told, in effect, to "take a hike". Units on inaccessible or no roads make a mockery of soliciting public input. It's not reasonable to expect unpaid volunteers to devote the required time and effort to field-check all hose inaccessible units, and doing so invalidates any semblance of compliance with the requirements for public input on the EA.

Then came the pandemic. While it is possible to field check as individuals (social distancing precludes checkers traveling together and working together in the field), the inefficiency of going individually greatly reduced the number of units that could be checked in the time available.

Then came the fires. Much of the area, particularly most of the LSR portion, was closed entirely to entry for a month or more. Even essential FS employees were re-assigned to work the fires, resulting in vital work on the

project being put on hold.

Then came the winter weather. During the race to visit as many units as possible, the rain and snow began. Many previously accessible units became inaccessible.

With a reasonably sized project, we could have coped with these many limitations.

General EA Comments

We appreciate all the cooperation the FS gave us in providing us with information we requested during the period this project was in the planning process. In the end, though, the formal comment period of the draft EA was very problematic. No matter what we could anticipate about the project as we studied it, we couldn't begin developing comments until the draft EA was released that described what was actually proposed.

1. The draft EA was released in the winter, with an inadequate description of road plans, (which calls into question the veracity of what little road data that was provided). It is not possible to field check the road plans when much of the area is inaccessible due to snow, especially without a map of the road plans. Field checking the project when the area was accessible found limited road access and many omissions and errors in the information provided, such as missing streams, incorrect characterization of some unit densities, presence of older trees, snags, etc.

2. After all the delays and postponements of the release of the draft EA, it was released at beginning of the Thanksgiving-Christmas holiday when many people were busy with holiday activities and unavailable to do a thorough study and response to the draft EA.

3. The comment deadline came on Dec 10. How many and which FS staff will be working at that time to review comments? The rushed public comments will likely be sitting on the desks of absent staff, unreviewed until well into the New Year.

4. We were told that the comment period could not, by law, be extended. Had the draft EA, or preferably, a draft EIS been released in January, the legally immovable comment period would have occurred after the busy holiday season. After the previous year of delays, six more weeks of delay, especially in the winter, would have made little difference to the Forest Service.

5. Because this is such a large project, an EIS is warranted. This would have allowed a 45 day comment period. Along with a release date of, say, January 1, a small improvement in the ability of the public to respond would have been possible. Better yet, a draft EIS should have been written and released in late spring, when the project area would be accessible for public field checking.

These comment restrictions violate the requirements of the law to provide for meaningful public input. These and other problems, mentioned above, demonstrates that, even given numerous extensions in release of the draft, that the QMS project is too large for even the Forest Service, with all of its resources, to produce a complete and credible EA.

On November 24, one interested party received a map of the temporary roads, not included in the draft EA, released on November 10. This information is vital to all interested parties as we prepare our comments. Does

this late release of such information constitute an amendment of the draft EA and thus, extends the comment deadline? Is the deadline extended until all interested parties receive this information?

Had the project been done in smaller pieces rather than one project over many years, separate EAs or EISs would have been done over time. As it stands, later phases will be done under an (outdated) EA, not reflecting the conditions at the later times, such as wildfires, climate change, economic conditions etc. The Forest Service promised to implement this project in stages. Where is this promise in the draft EA? Also, 5-10 years from now when later phases of this project are implemented, population growth in the area will bring new people with different expectations. The old EA will prevent those views from influencing implementation of the project.

Fourteen days after the draft EA was released, an article about the project appeared in the local newspaper. A Forest Service official stated "I hope people look themselves and not just respond to calls to action they get in their email." With only sixteen days left to comment, his doesn't invite thoughtful public comments, especially with much of the area under snow during the holiday season. How are people supposed to "look for themselves" and provide thoughtful response under such circumstances? Does this also imply that responses to email "calls for action" won't be taken seriously?

FDFNM generally supports scientifically sound variable density thinning with constraining safeguards to accelerate the onset of late-successional forest characteristics in the monoculture plantations.

FDFNM unalterably opposes the logging of any kind in forest stands that have not been logged or only lightly so. This includes older (mature and old-growth) stands in any land allocation or management. In the QMS project area this opposition includes all units characterized as "fire regenerated" and any unit identified as more than 100 years old.

The proposed project would have such a significant impact on the human environment that a full environmental impact statement is necessary. An EIS is required when a proposed project is controversial. The logging of older (mature and old-growth) forests is very controversial, especially on federal public forestlands.

The QMS project draft EA attempts to tie its justification to the Willamette National Forest Land and Resource Management Plan of 1990, as amended primarily by the Northwest Forest Plan in 1994. The ages of the LRMPs that the Willamette National Forest is operating under are approximately a quarter century old. Since that time, there has been significant new information that has not been considered in the Willamette LRMP. This raises significant questions including, but not limited to:

1. Barred Owl. The invasion of the barred owl into northern spotted owl habitat. Does the proposed logging exacerbate the problem of invasive barred owls displacing native spotted owls?

2. Carbon. The importance of retaining carbon in forest stands to minimize the worst of climate change. The carbon analysis in the draft EA is inadequate, contradictory, and misleading. For example, the draft EA says:

> In addition, because the direct and indirect effects would be negligible, the proposed action's contribution to cumulative effects on global GHGs and climate change would also be negligible

By this "reasoning," any one timber sale, any one feedlot, any one oil or gas pipeline, any one coal-fired electric plant is "negligible." The cumulative total of a large number of negligibles is significant. The EA must either consider effects of this project cumulatively or tier to an environmental impact statement that does.

We have a few questions we would like answered/addressed/explained in the final environmental assessment or replacement EA. These questions are discussed in greater detail in these comments.

1. Why are the "net" timber volumes in MMBF listed in Table 48 for each alternative significantly higher than the "gross" timber volumes in MMBF listed in Tables 2, 3, and 4 and why are the calculations of Table 48 so erroneous?

2. Why are Figures 4 and 5, though described as two maps of two, not consistent? One features land allocation while the other management allocations? Under law, the Forest Service is required to administer the lands consistent with the land allocation and/or management allocation that is the most restrictive.

It has been 2 ½ years since the QMS project was announced. Much has changed in our public forests since then, particularly due to last year's and this year's fires.

One of the original purposes: "Contribute to a predictable, sustainable supply of forest products to help maintain the stability of local and regional economies and markets" is no longer is valid: supplying local mills with timber is being abundantly accomplished as trees salvaged from the fire are delivered to the mills.

Furthermore, the decline in local timber jobs has been going on for a number of years, due to automation in the mills and mechanization in the woods.

Public trees should not be used to supply profits to distant corporations and their stockholders who have an insatiable demand for short-term profits. Record high lumber prices driven by the demands of the housing replacement market are already providing record profits " Large corporations and lumber manufacturers are thriving, said Brooks Mendell, president of the forest investment consultancy Forisk. "You can see it's showing up in their financial statements, and the publicly traded guys and the private guys are doing really well," Mendell said. "They're investing in their mills and they're just doing extremely well."

The purpose of restoring the degraded public forests remains. The loss of so much public forest lands in the recent years' fires makes this purpose even more compelling. The wildlife displaced by the fires need natural forests more than ever.

Fish have lost miles of functioning streams due to erosion from fire devastated lands. Remaining streams in the QMS project area must be protected to take up the slack.

Clean drinking water needed by downstream cities such as Salem must be supplied by the restored remaining unburned forests in their watersheds.

Economic Analysis

The Economics Analysis of the Sweet Home District QMS Draft EA (Chapter 3; pages 187 – 189) analyses two economic factors: (1) the positive economic effects of the proposed harvests on jobs in Lane County, and the net present value and the cost benefit ration of the four analyzed alternatives, and (2) the recreational or tourist based economic impact for Linn County.

While discussed second, the tourism based impacts can be most easily dealt with. The EA analysis concludes that while there will be some negative impact on tourism for Linn County during the periods of active harvest, this will be minimal and, it is suggested, the logging will actually have some positive long term benefit, as the thinning hastens the development of late successional-like forests in the LSR segment of the project area. The study concludes there will be no economic consequences to the tourism sector of the Linn County economy.

No specific studies are cited to support these conclusions. The study does acknowledge that there is no economic benefit (other than direct revenue sharing payments to the county for roads and schools) to Linn County, whereas there is some acknowledged threat to Linn County's $138 million annual tourism revenue. Because the conclusions of no harm are based on unsubstantiated assumptions, it is impossible to directly argue with them, or attempt to refute them. One can only hope that the acknowledged short term harm caused by logging activity does not have a long term negative effect by driving tourists to other locations, which may be difficult to regain.

One basis for the conclusions is subject to question, however. The oldest units in the project, units 166, 172, 240, 241, 242 and 243, are subject to the most intensive logging in the favored alternative (alternative 2). One unit, 240, will only have a remaining canopy cover of 14 percent, because of nearly total shelterwood treatment, and the average canopy cover for these oldest stands after treatment is 29 percent, again because all of these areas are subject to shelterwood treatments and very aggressive thinning. The EA plans for loss of trees after the project is completed in the shelterwood treatment areas, so the practical effect of this proposed extensive treatment of these units, which are the closest to achieving the late successional forests that the study acknowledges are the main tourist attraction of the Forest, is that these units will probably actually never achieve late succession status. Further, because the EA contemplates additional, later treatment of all of the units in the Matrix area, it would seem to be at least as accurate to develop a contrary conclusion regarding long term tourism effects; that is, that the project will likely cause a diminution of the attractiveness of the Forest within the Project area, and thus will have a negative effect on tourism in Linn County.

The economic analysis looking at the net present value and the cost benefit ratios of the several alternatives, as reported in Table 48 (Chapter 3, page 188) appears to be the basis for the selection of Alternative 2. The table reports that the net present value of Alternative 2 is approximately $ 93,000 greater than the net present value of Alternative 3, and $ 4,128,000 greater than Alternative 4. In the same way, the benefit cost ratio of Alternative 2 is reported as slightly higher than Alternative 3, and higher than the ratio of Alternative 4. Since all of the alternatives have a similar positive effect in producing timber for the local and regional economy, and the other negative and positive effects of the several Alternatives are found to balance out, the calculations reported in Table 48 appear to be the strongest, if not the only practical, evidence that makes Alternative 2 the preferred option.

There are, however, errors in Table 48. Errors, which if corrected, reduce or eliminate the viability of Alternative 2 as the preferred option.

The first error can be found in the body of Table 48 as printed. The benefit cost ratios for Alternatives 2 and 4 are calculated by dividing the discounted revenues by the discounted costs for each Alternative. This process was not followed for Alternative 3. It is not clear what calculations were made, but when a calculation the same as is used for Alternatives 2 and 4, Alternative 3 is found to have a slightly higher benefit/cost ration than Alternative 2 (1.28 to 1.27). The text of Table 48 is reproduced below, with the original benefit/cost ratios reported and the recalculated ratio for Alternative 3.

Table 48 from EA			

	alt 1	alt 2	alt 3	alt 4
net volume	0	~103	~100	~80
discounted cost	0	$ 40,815,359	$ 39,399,646	$ 33,373,340
discounted revenues	0	$ 51,814,760	$ 50,305,592	$ 40,244,474
net present value	NA	$ 10,999,401	$ 10,905,946	$ 6,871,134
npv per acre	NA	$ 1,410	$ 1,334	$ 929
benefit/cost ratio	NA	1.27	1.26	1.21
recalculated benefit/cost ratio		1.27	1.28	1.21

Based on this more consistent treatment of the data in Table 48, it appears that Alternative 2 has a slightly higher net present value ($93,455 or 0.8% higher) but Alternative 3 has a higher benefit cost ratio. In this version of Table 48, either Alternative 2 or Alternative 3 could be considered the preferred alternative.

In reality, however, Table 48 contains other, more significant errors, that, when corrected, significantly alter all the results of the benefit/cost ratio and the net present value calculations. The errors that give rise to this problem are reflected in the assumed net volume of timber produced. The alleged volumes set forth in Table 48 are not to be found at any other location in the EA. The text of the EA itself says that the proposed treatments are expected to produce between 60 to 80 million board feet. If these projected volume numbers are used in the calculations in a revised Table 48, the net present value of all alternatives turns out to be negative (indicated by parenthetical marking), and the benefit/cost ratio falls well below the permitted threshold of 1.00.

Table 48 with text's projected harvest	Alt 2	Alt 3	Alt 4
revenue per million board feet	$ 503,056	$ 503,056	$ 503,056
net M board feet from text	80000	80000	60000
discounted cost	$ 49,407,637	$ 48,670,660	$42,395,541
projected revenue based on App B volume	$ 40,244,480	$ 40,244,480	$ 30,183,360
net present value	$ (9,163,157)	$ (8,426,180)	$ (12,212,181)
npv per acre	$ (1,177)	$ (1,082)	$ (1,662)
benefit/cost ratio	0.81	0.83	0.71

In this version of Table 48, the round numbers of the text's projected volume are used, with Alternatives 2 and 3 getting the higher estimated volume of 80 million board feet, and Alternative 4 getting the lower number of 60 million board feet, because the projected volume of Alternative 4 is lower than the other alternatives. The estimated value of $503,056 per million board feet is a number derived from the original Table 48, obtained by dividing the projected volumes set forth in the table by the projected revenues. The same number results from the same calculation for each of the harvest alternatives, which validates the use of this number. The estimated costs of the alternatives are the same as set forth in the original Table 48.

Again, if this version of the key indicators for proceeding with the project are calculated, the project cannot go forward.

There are other projected volume numbers in Appendix B that can be used to give a more positive evaluation of the project, but only by also reversing the relative value calculations for each of the alternatives, so that Alternative 4 appears to be the preferred option, based on benefit/cost calculations and net present value per acre calculations. That is, if the projected volume numbers of board feet projected to be harvested for each of the alternatives from Appendix B, combining the common numbers for the LSR area and the different volumes from the Matrix areas, are used for each alternative, and the discounted costs are treated as the same as in the original Table 48, the results are as follows.

Table 48 recalculated using App. B volumes	Alt 2	Alt 3	Alt 4
calculated revenue per million board feet	$ 503,056	$ 503,056	$ 503,056
M board feet from Ap B	98215	96750	84276
discounted cost	$ 40,815,359	$ 39,399,646	$ 33,373,340
projected revenue	$ 49,407,637	$ 48,670,660	$ 42,395,541
net present value	$ 8,592,278	$ 9,271,014	$ 9,022,201
npv per acre	$ 1,103	$ 1,191	$ 1,228
benefit/cost ratio	1.21	1.24	1.27

In this corrected version of Table 48 Alternative 4 has a noticeably higher benefit/cost ratio than either of the other two alternatives. Alternative 3 has a marginally higher net present value than Alternative 4, but a lower NPV per acre.

Several conclusions can be drawn from this review of the economic impacts of the proposed project. One conclusion must be that the economic analysis of the draft EA is flawed and, no matter how it is viewed, does not support Alternative 2 as the preferred option. A second conclusion to be drawn is that, if any of the project volume numbers found throughout the draft EA can be used to support going forward with the project, the numbers support Alternative 4 as the preferred option for the project.

Mistakes Regarding Fires

The analysis of fires in the QMS draft EA is full of misconceptions and faulty analysis. There were a few good comments; noting, for instance, that Indian burning was a minor influence on forest and it was confined to the Willamette Valley. Also an admission that some areas had fire rotations of 500 years or more--which is how you get old growth forests – was notable.

The idea of fire rotation is, however one place to start with critical analysis of the draft EA, and of the conclusions that come from the erroneous assumptions and descriptions of the character and occurrences of fires in the Cascades.

One major error in the QMS draft EA discussion of fires is to focus on a miscalculation of the ecological impact of fires by ignoring the variability of the size of fires. In reality, it doesn't matter if you have a lot of small fires; they don't have a major ecological effect. One 10,000 acre fire is far more significant than 10,000 one acre fires, especially since the small fires will be stretched out over multiple years.

Most fire history fire scar studies count fires, not the geographical extent of fire, i.e. when you read (as in the QMS draft EA) that some places burned every twenty years, it is not ecologically important if all you burn is a

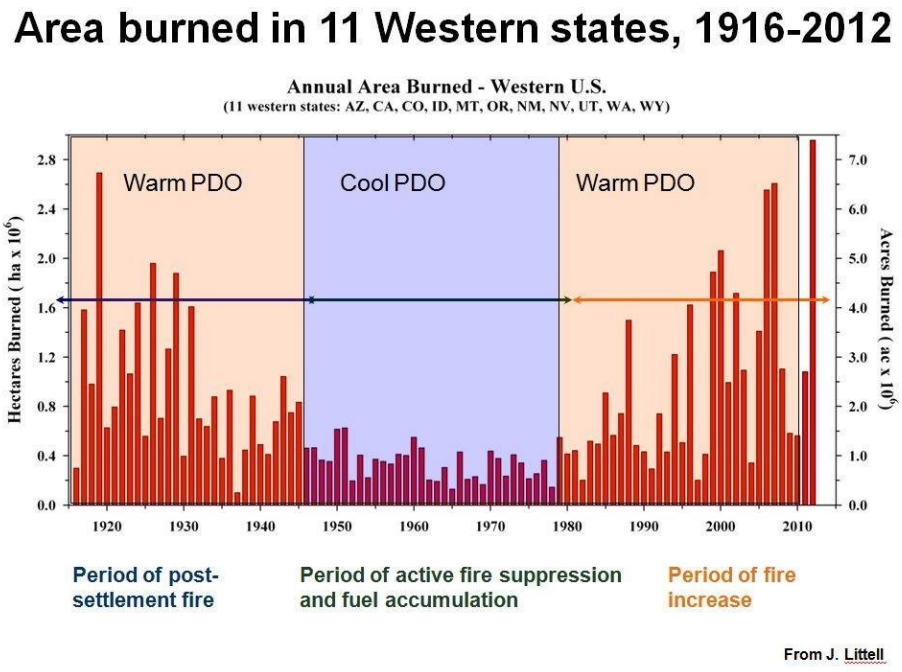
few acres each time. In other words, if only a few acres burn, it doesn't amount to a hill of beans, and it does not make that much difference in the forest ecology.

So one of the problems that often occurs is that all fires are treated as "equal". A one acre fire counts the same as a 10,000-acre fire in the "composite" fire scar history. Of course, the more fires you count, the shorter the interval between fires, so you get very short fire intervals like 20 years. Whereas, the real fire history of an area with occasional small fires, measured in terms of ecological impact is that the ecologically impactful fires may not come along any more often than another area that is reported to have a 500 year fire interval.

It is also incorrect to place most of the blame for recent decades of major fires on a history of suppression, or the collection of biomass. The majority of all acres burned occurs only during extreme fire weather. During these conditions, you get extensive fires, such as occurred in the Labor Day fires of 2020. These fires occur during extreme drought coupled with low humidity, high temps. and in particular, high winds.

The idea of successful fire suppression having a major effect on the cycle of wildfires is greatly exaggerated. The time of "successful" fire suppression began in the 1940s with airplanes, but this was time of cool, moist climate. Cool moist conditions mean you don't get any ignitions and when you do, they don't spread. The weather is a much more successful fire suppressor, or large fire catalyst, than any other cause.

This can be seen by charting the weather cycle and the cycle of large fires in the west.



Beginning in the 1980s global warming began to change the nearly four decades of cooler climate, and concomitant time of smaller fires, so now we are getting larger fires again. But it's not due to fire suppression and too much fuel, it's due to climatic conditions being favorable to fires.

A similar application of scientific thinking clarifies the relative unimportance of biomass as a cause of fires. If fuels drove fires, the Coast Range would have the most fires because there is more biomass there than anyplace else except perhaps the western slope of the Cascades. And the Coast hardly ever burns. Why? Because it is cool and moist.

The other problem with the Forest Service "thinking" about fire is the idea about fire rotation and fuel accumulation. If the area is characterized by a large fire every couple of hundred years, the natural situation is that fuels will accumulate. This is not "abnormal" or outside of historic conditions. It's more like a light switch. It's either on or off. It's not half way on, i.e. if you have a two hundred-year fire rotation, you don't burn half the landscape in 100 years.

Another problem with the QMS draft EA conclusions regarding the need for the proposed treatment is the idea that doing prescribe burning and thinning will reduce large fires. Again large fires only occur when the weather conditions are favorable for fire spread. And the fire spread by wind blowing embers. This means that fire flows around, and over "fuel reductions". We saw this on the Labor Day fires on the western slope of the Cascades, where there are massive clear-cuts with no fuel that did not stop the fires because the embers just blew over the clear-cuts.

There is a disconnect in the thinking. Thinning is not going to slow fires under extreme conditions and there is evidence that it can increase fire spread by opening the forest stand to greater wind penetration and drying, which are two elements essential for a large fire.

Keep in mind that some of the largest recent fires burned through areas of extensive "fuel reductions." For instance, an estimated 75% of the Bootleg Fire had experienced some level of previous logging and thinning, but that didn't stop that fire. Same for the Dixie Fire of this summer. Of course, the Labor Day Fires of 2020 burned through extensive clear-cuts, etc., and were only halted when the weather changed. That is the typical situation. Weather changes, and fires are "controlled." In reality, what controlled the fires was a change in the weather.

Furthermore, there are plenty of studies that demonstrate the likelihood that a fire will actually encounter a thinned stand is small. And thinning by reducing competition for nutrients, etc. can stimulate the growth of new trees and shrubs. These smaller fuels are what burns in forest fire, not the bigger trees. So thinning can actually exacerbate fire spread.

If you are thinning and removing trees that are larger than 4-5 inches in diameter, you are not reducing fuels because these larger trees do really not burn in a forest fire which is why you get snags. Yes you have branches and needles burning, but not the boles--which is what the Forest Service removes. This illuminates another myth about thinning and "shelterwood with reserves;" these treatments do not in any realistic way simulate the effect of fires.

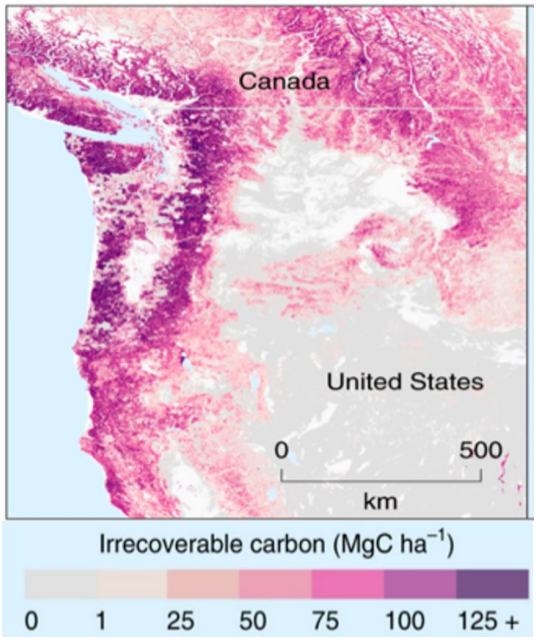
Neglect of Carbon in the EA

The draft QMS EA contains no discussion about carbon. There are a number of studies showing that logging, thinning and wood products production releases far more greenhouse gas emissions than any wildfire. So in logging/thinning to reduce wildfires, the Forest Service is actually increasing the gases that contribute to warming, and hence larger fires. Burning slash is not necessary if enough canopy is left so that the slash does not dry out and it is not collected into piles that tend to dry the slash more and may create anaerobic conditions, leading to the production of methane.

Fire is not only a natural part of the forest, even the largest fires do not release as much carbon as industrial logging. Even after a fire, most of the carbon remains on the site as a snag, roots in the ground, charcoal in the soil, etc. Protecting these forests as "carbon reserves" is the single best use of them with regard to climate change, rather than attempting to rationalize logging as equally productive for carbon storage.

The QMS project area, as a part of the Cascade ecosystem in the larger Pacific Northwest, specifically including the western slope of the Cascades, is an important area of stored carbon. Any loss to the amount of carbon stored in the cascades now will not be recovered by 2050. In other words, the loss of this carbon now will contribute to a rapid and short term irreversible increase in carbon in the atmosphere and therefore an irreversible increase in global warming. Logging these forests will be directly contrary to the Biden administration's stated goal of keeping global warming to less than 1.5 degrees Celsius.

The map reproduced below shows the high level of carbon stored in the Pacific Northwest.



Map and analysis source: M.L. Noon et al. Mapping the irrecoverable carbon in Earth's ecosystems. Nature Sustainability. Published online November 18, 2021. doi: 10.1038/s41893-021-00803-6.

Commercial logging is an intense atmospheric carbon dioxide producer. While it is true that some of the carbon stored in the cut trees is retained in the wood produced from the timber, the mechanical operations of road building, cutting, skidding and gathering the logs, especially by means of helicopters, transporting the logs to the mills, and then milling the logs produces more carbon than is stored in the produced lumber. Then much of the understory and slash is burned, further contributing to the carbon negative effect of logging.

This is why logging the QMS project will seriously contribute to the deterioration of the climate. While it is true that the forest will eventually recapture some of the carbon lost by logging, it will be hundreds of years until this happens and in the meantime, the climate will have worsened, probably creating conditions adverse to the regeneration of the logged forest.

Endangered Species

There are also errors in the EA with regard to many of the threatened and endangered species to be protected. One species not otherwise mentioned, and not considered by the EA are salamanders.

There is no mention of terrestrial salamanders of any kind in this EA. This is a major oversight, given that terrestrial salamanders are the most abundant vertebrates in western forest ecosystems (Best and Welsh, 2014).

The project area lies squarely within the range of the Oregon slender salamander (Batrachoseps wrighti), listed by the Oregon Department of Wildlife (ODFW) as a Sensitive Species in the western Cascades. The Oregon slender salamander is the only amphibian species endemic to Oregon and is restricted to mature coniferous forests on the west slope of the Cascades. Individual salamanders have small home range sizes of perhaps 1m2, and are dependent on down wood for cover. Although this species was shown to be resilient to a variety of logging practices, a major caveat is that large amounts of down wood must remain to provide moist micro-refugia (Garcia, et al. 2020). A little appreciated long-term impact of logging is that large scale removal of trees from the landscape will decrease the supply of down wood over time, a resource that salamanders and a multitude of other species rely on for moist refuges during summer drought conditions common in the western U.S.

Similarly, the clouded salamander (Aneides ferreus) is also listed by ODFW as a sensitive species, and is also not mentioned in the EA. As with the Oregon slender salamander, the clouded salamander is most abundant in forests containing large decaying logs with sloughing bard (Thomas, 1993). The long-term decline of large wood debris as a result of logging will negatively impact this species.

Several other species of terrestrial salamanders occur within the management area, and are ignored by the EA. The Oregon ensatina (Ensatina eschescholtzii) require large woody debris are negatively impacted by logging practices on the west slope of the Cascades (Garcia, et al., 2020). Western red-back salamanders (Plethodon vehiculum), also require woody debris of various decay classes (Corn and Bury, 1991). Dunn's salamanders (Plethodon dunni) are most abundant in shaded riparian corridors (Vesely and McComb, 2001). Terrestrial salamanders such as the Oregon ensatina are ecologically important predators of invertebrates that accelerate leaf decomposition. The Oregon ensatina is known to increase leaf litter and slow the release of carbon by reducing populations of leaf-eating invertebrates (Best and Welsh, 2014). Given their ecological importance, the EA should have contained specific reference to terrestrial salamanders and addressed steps to maintain their abundance and diversity.

The Cascade torrent salamander (Rhyacotriton cascadae) is also listed by ODFW as a Sensitive Species in the Western Cascades. Cascade torrent salamanders inhabit lower order seeps and springs with cold, highly oxygenated water. Logging will negatively impact this species by increasing water temperature and increasing siltation (Steele, et al., 2003). These negative impacts can be mitigated by providing ample streamside buffers (Vesely and McComb, 2001). However, management plans rarely require buffers for seeps, springs, and first order streams. Although the EA mentions the Cascades torrent salamander and stream buffers, there is no assurance the microhabitat needs of this aquatic salamander will be met in areas where logging is recommended. Cascades torrent salamanders are expected to benefit from decommissioned roads and resultant decrease in siltation from road runoff.

Inexplicably, the EA contains numerous reference to Cope's giant salamander (Dicamptodon copei), which does not occur in the study area.

The Friends of the Douglas Fir National Monument endorse, and incorporate by reference, the comments on this project by Oregon Wild, Cascadia Wildlands, Great Old Broads for Wilderness, the Western Environmental Law Center and Reed Wilson, of the Northwest Ecological Survey Team (NEST).

General Forestry Comments

We were heartened by the few groves of old growth trees we discovered in the QMS project area that were not included in any units.

We managed to field-check 123 of our 173 priority units in a project with 249 units.

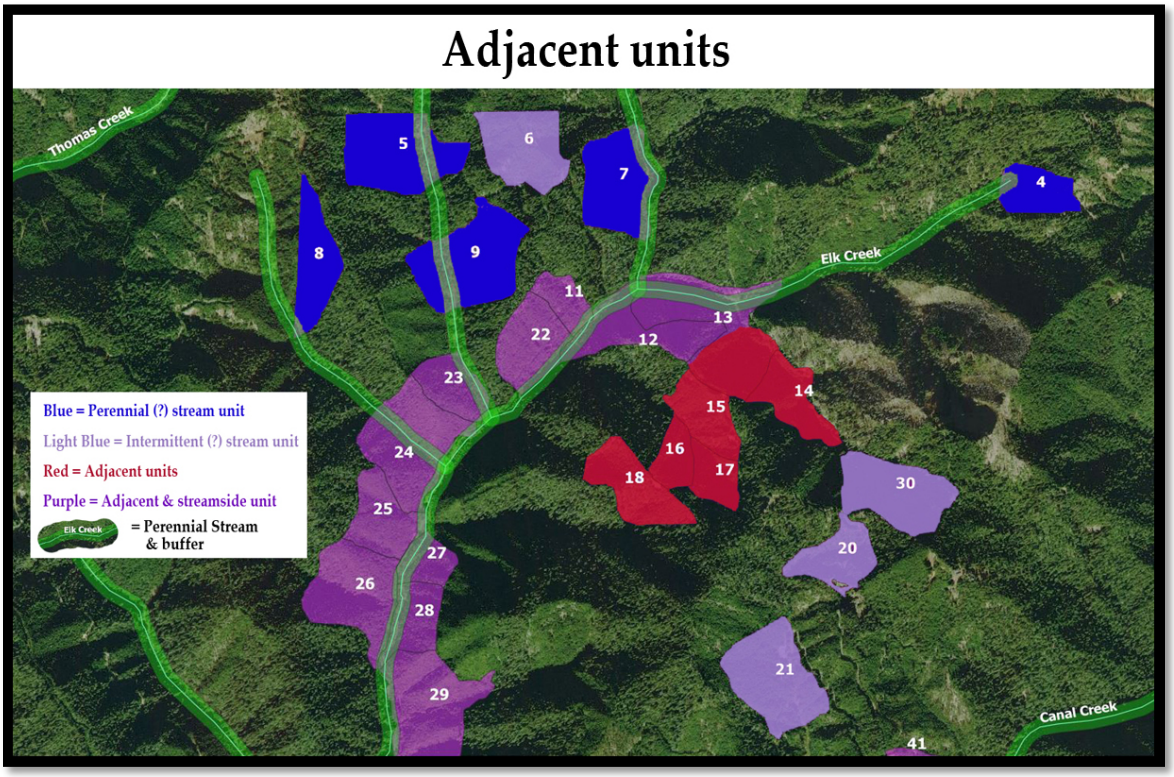
• Because of the large number of units in the project, it must be divided into at least ten projects of no more than 20 units each, separated by at least one year. This is necessary to allow wildlife to adjust and move out of the affected units into nearby undisturbed areas. It is also necessary for the public to have enough time to field check and comment meaningfully on the smaller, manageable projects.

General Unit Comments

• All comments are based on the units we were able to get to. No doubt these comments apply to many other units in the QMS project.

• 88 Units adjacent to each other must be assigned to separate time-spaced projects to reduce the cumulative

effect of cutting: Units (11,12,13,14,15,16,17,18,22), (23,24,25,26,27,28,29), (39,40), (42,43), (44,45), (50,51,52), (55,56,57), (58,59,60,62,63,64,65,66), (68,70,71,72), (75,76,77), (78,79), (100,101), (107,108), (116,117), (118,119), (122,123), (124,125), (133,134,135), (150,151,153,154), (185,186), (201,202), (213,214), (234,235), (243,244,246), (263,264), (266,267), (272,273,274,275), (280,281,282), (285,286).



We found 49 inaccessible units that should be dropped:

Reason	Unit #
Locked Gate	7.
Landslide	14, 15, 16, 17, 18, 101.
Bermed road	23,101, 182.
Missing/removed road	5, 6, 9, 64, 65, 109, 182,183, 185, 186, 189, 278.
Fallen trees across the road	67, 69, 72, 104, 105, 107, 109, 110, 120,125,129, 130, 134, 144, 145,147, 148, 149, 159, 162.
Too brushy	083, 084, 097, 098, 110, 117, 128.

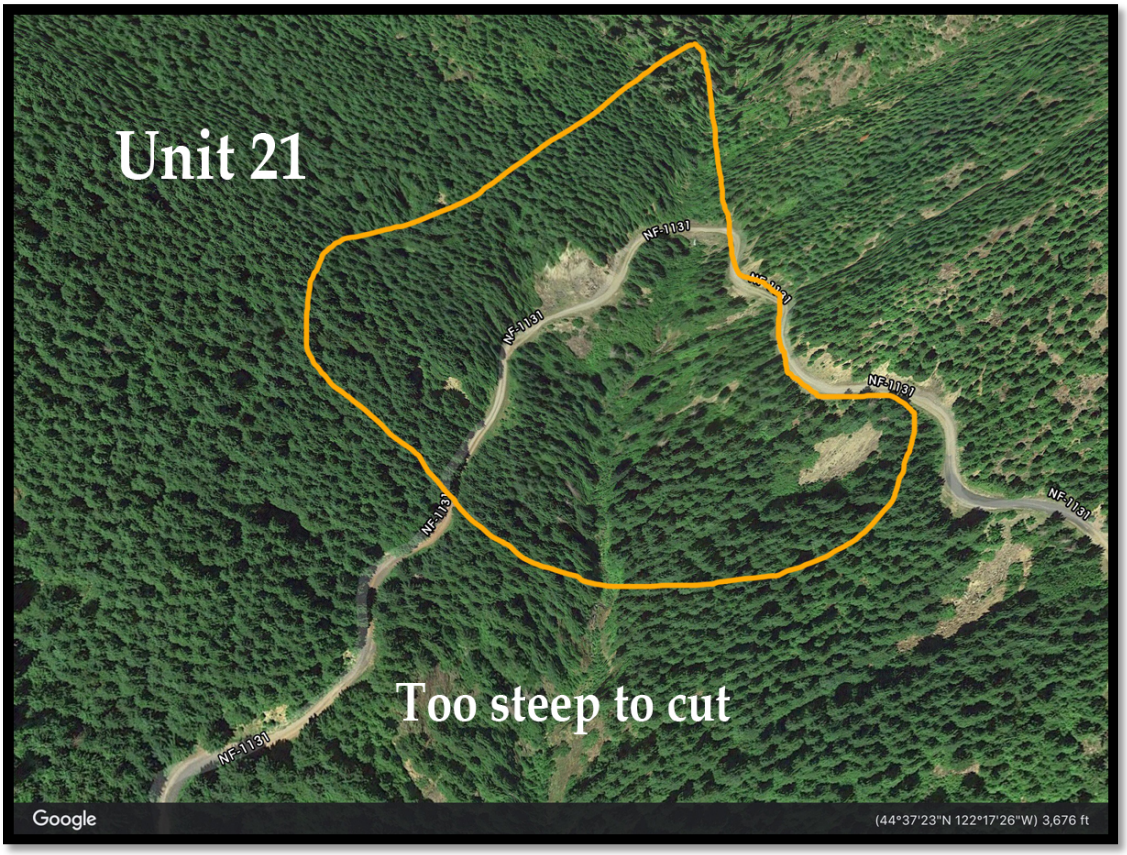
• 24 Units in the matrix adjacent to private property, either already clearcut or inevitably to be clearcut, must be dropped to prevent treatment from extending broadly across the landscape:

Units 45, 47, 48, 53, 56, 88, 213, 233, 234,235,247,249,263,264,266,267,269,280,285,287,288.280,281,282

• Many of the units we checked were so steep, they will require expensive helicopter logging. To cover that expense, contract buyers will pay for it from the receipts they earn from selling the logs. In effect, the trees will pay the expense of cutting them down.

All such steep units must be dropped.

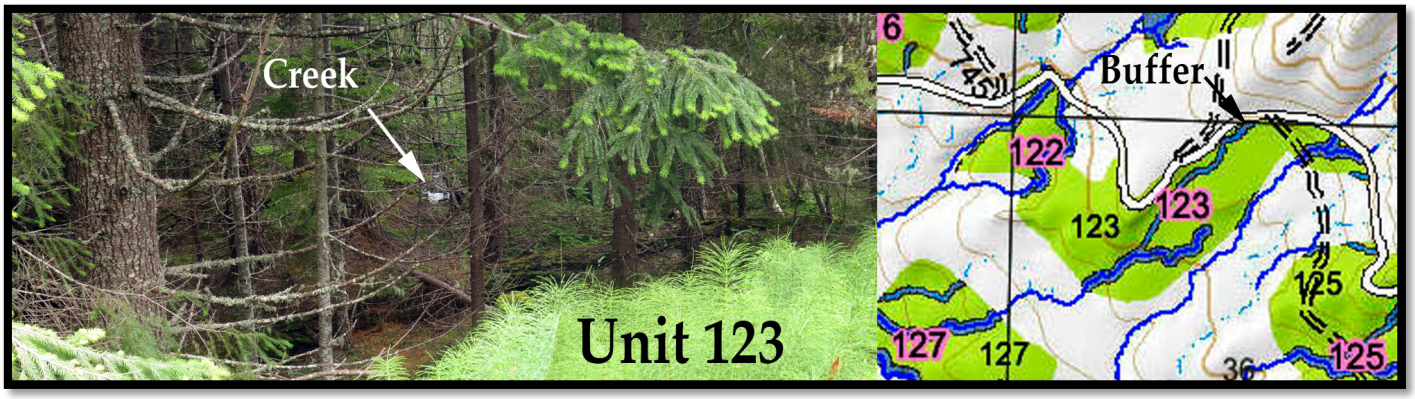
Steep units we found:
11,13,21,22,23,24,25,26,32,33,34,41,42,47,53,56,57,59,60,61,87,88,90,91,99,109,111,112,118,119,126,
132,133,135,137,140,141,143,146,161,163,164,187,189,275.



• To meet the purpose and need in the LSR portion, restoration is prescribed to “release” the older, larger trees so that they can attain old growth characteristics. In many units, these such larger trees already exist. These trees must be marked and monitored by the on-site sale administrator so that they aren’t inadvertently cut. Such restrictions must be noted in the bidding contract so that bidders can accurately assess the true value of the sale. All units must be so marked, monitored and described.

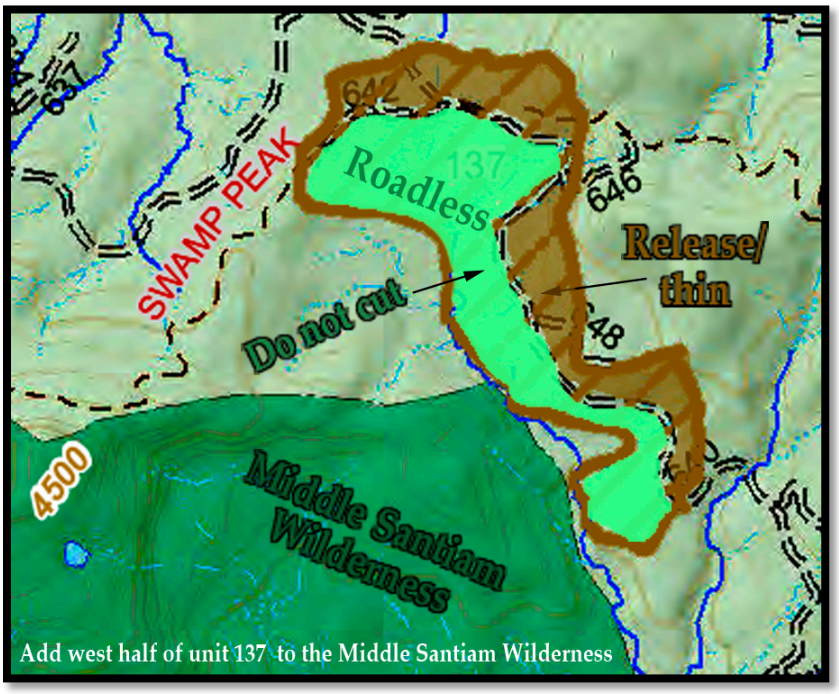
These units were found to have such trees:
7,11,21,22,28,29,34,41,57,58,59,60,61,62,63,68,71,91,106,112,116,126,131,135,137,142,145,166,173,200,240,247,264,272,273,275,285,288,291.

• Stream buffers are especially important as climate change gives us longer and more severe droughts. While field checking, we found a number of small streams still flowing in October. All units with streams of any size must be fully protected under the aquatic conservation strategy of the Northwest Forest Plan.



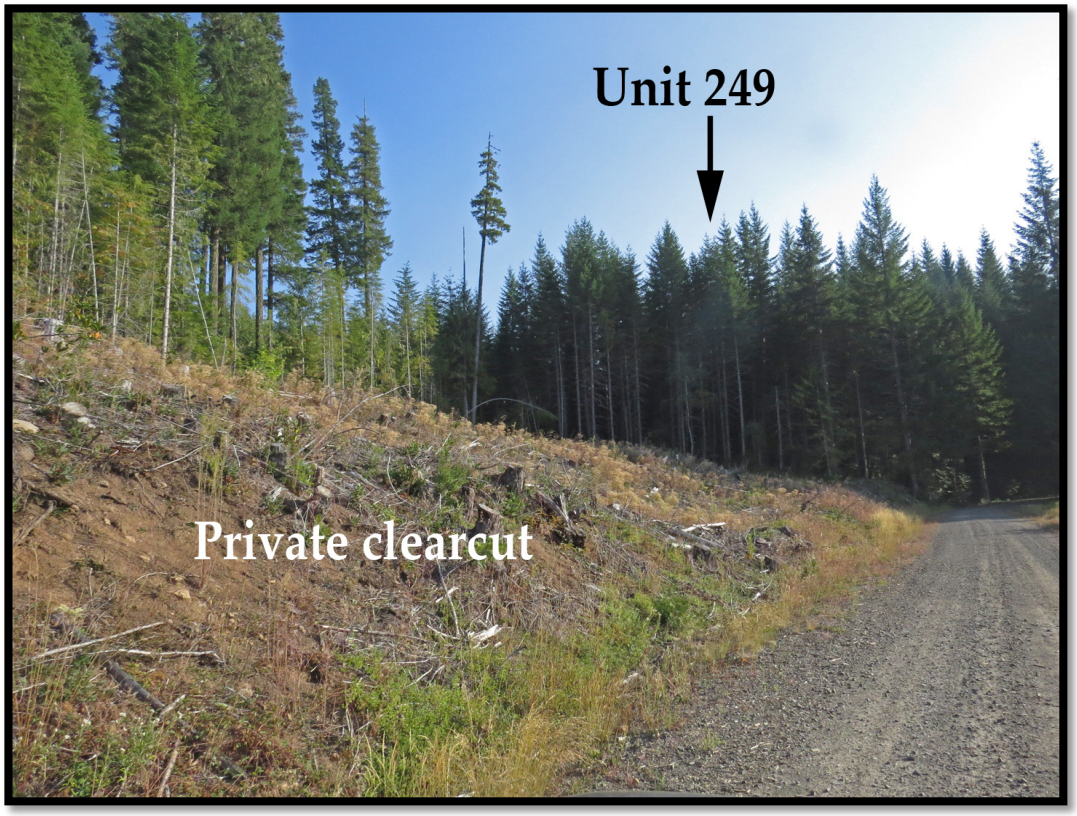
• Units affecting the recreation sites must be dropped because such sites are so uncommon in the area. Narrow corridors (“beauty strips”) along trails are not acceptable. Units 142, 158.

• Units 176,177,189 and the west half of unit 137 are roadless and should remain uncut for the eventual inclusion into the Middle Santiam Wilderness.



• Matrix units: Commercial logging, even commercial thinning will have a negative impact on the nearby administratively withdrawn areas and harm the area's potential to contribute to the area's local recreation economy in a positive, more sustainable way than commercial logging.

Units 147,249,258,259,263,264,266,267,269,272,273,274,275,276,278,280,281,282,285, 286,288. These units must be dropped.



Specific Unit Comments

• Unit 166: This large unit is full of old growth, contains two streams and is a known site for red tree voles, food source of the threatened Northern Spotted Owl. Small buffers around known tree vole nests are not adequate. This unit must be dropped.

• Units 243,244,246 are adjacent and should all be dropped to maintain a contiguous block of intact habitat.

• Units 240, 241, 242 and 243 are adjacent or nearly adjacent units and represent units with older, large diameter and taller trees in an area where abutting private logging has removed all older trees and form a potential barrier to endangered species expansion. These units should be dropped.

Summary

• The QMS project is much too large to be addressed by a simple EA. An EIS is required because of its large impact.
• The QMS project is much too large for meaningful public comment.

• The QMS project must be separated into smaller projects of no more than 20 units each, each with their own EIS.
• The adjacent LSR units must be offered in separate projects, time-spaced to allow local wildlife to move on.
• Existing large trees in LSR units are already on their way to old growth characteristics and must not be cut in the thinning process.
• Units that are inaccessible to the public due to landslides, locked gates, and impassible and no roads must be dropped.
• The Matrix units adjacent to private clearcuts must be dropped to minimize the cumulative affect across the

broad landscape.

• All steep units that need helicopter logging must be dropped.

• All streams must be buffered

• Due to the large amount of salvaged timber from recent fires, the first Purpose and Need, supplying local mills, has been abundantly met and should be dropped, as well as all statements in the EA that are supported by that Purpose and Need.

In the end, The Friends of Douglas-fir National Monument (FDFNM) encourages the Forest Service to adopt Alternative 4 for the QMS project. It is the most environmentally least damaging.

References

Best and Welsh. 2014. The trophic role of a forest salamander: impacts on invertebrates, leaf litter retention, and the humification process. Ecosphere 5(2):16. http://dx.doi.org/10.1890/ES13-00302.1.

Corn, P. S., and R. B. Bury. 1991. Terrestrial amphibian communities in the Oregon Coast Range. Pages 3-4-317 in L. F. Ruggerio, K. B. Aubry, and M. H. Huff, technical coordinators. Wildlife and vegetation of unmanaged Douglas-fir forests. USDA Forest Service, Pacific Northwest Research Station, Olympia, Washington, General Technical Report PNW-GTR-285.

Garcia et. al., 2020. Experimental evidence indicates variable responses to forest disturbance and thermal refugia by two plethodontid salamanders. Forest Ecology and Management 464:118045, DOI:10.1016/j.foreco.2020.118045.

Noon, M.L., Goldstein, A., Ledezma, J.C. et al. Mapping the irrecoverable carbon in Earth's ecosystems. Nat Sustain (2021). https://doi.org/10.1038/s41893-021-00803-6

Simard, Suzanne. 2021. Finding the Mother Tree. Alfred A. Knopf.

Vesely and McComb. 2001. Salamander abundance and amphibian species richness in riparian buffer strips in the Oregon Coast Range. For. Sci. 48(2):291–297.

Thomas, J. W., et al. 1993. Viability assessments and management considerations for species associated with late-successional and old-growth forests of the Pacific Northwest. The report of the Scientific Analysis Team. USDA Forest Service, Spotted Owl EIS Team, Portland Oregon. 530 pp.

https://www.dfw.state.or.us/wildlife/diversity/species/docs/Sensitive_Species_List.pdf