Mt Baker Snoqualmie National Forest Forestwide Thinning Project

RE: Comment letter on Forest-wide thinning, from Allison Warner, Camano Island, WA

Dear Mr. Franklin,

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the proposed Forestwide Thinning Treatments Project (FWT) in the Mt Baker - Snoqualmie National Forest (MBSNF). I am a frequent user of the Mount Baker Snoqualmie National Forest, having camped or hiked in many or most of its watershed areas including the 542 corridor, Highway 2 corridor, Mountain Loop highway, Baker Lake and the Highway 20 corridor. I am a wetland ecologist by training and professional career and a possess a MS degree in wildland ecology and management from UC Berkeley Forestry Department.

General Comments- Scope of the project

The EA is covering what is described as potentially 30 years' worth of thinning across multiple watersheds. While the purpose and need given, of increasing stand diversity, providing habitat for late-successional dependent species, by "accelerating old-growth conditions" while providing timber, certainly seems a worthy effort, the level of specificity and detailed information is lacking in the EA, with only one very small scale map showing the entire forest with miniature, colored polygons indicated the potential thinning units. The EA should provide at the very least watershed scale maps and where available, subwatershed maps. The analysis provided is inadequate to support the project. The supporting documentation does not provide any greater in-depth information about watershed conditions in the proposed treatment areas, other than generalized road densities. Also, the planning guidance does not mention the various Watershed Analyses available containing detailed status and health of many of the subwatersheds. As a former soil scientist for the Skykomish Ranger District, I worked on the Beckler Watershed Analysis and I know that many of the Ranger Districts have such documents.

The EA vaguely describes what should be specific and detailed actions. That is, the EA does not identify thinning units by location or acreage, and does not prioritize which annual thinning projects across the MBS, will occur where and when. The EA seems to indicate that much of the analysis that should be in this EA will occur at the project scale. The EA does not provide enough information to determine whether an EIS is warranted, but given the size and magnitude of this proposal, these issues should be addressed by an in-depth EIS. This project does not provide enough information to the public to allow for reasonable comments at the level of project scale.

The EA provides only one action Alternative. One alternative approach would be for the FWT to be broken into separate 10-year projects for each of the 4 Ranger Districts, for a total of

four (4) projects. Dealing with smaller pieces of the MBSNF will make the scope of the project easier to understand, and will facilitate better understanding of specific impacts within particular locales. Smaller projects can also be managed more precisely by the Forest Service.

Based on the analysis provided by the EA itself there are a number of resource-oriented comments I would like to make.

Large woody debris (LWD), downed and dead wood (DDW) and old growth conditions-

The proposal says it's goal is to accelerate old growth conditions. Tables showing 10 reference plots and the anticipated changes brought by the 35% across the board target %SDI. It is unclear the level of wood to be extracted or what part of this prescription addresses the level of DDW and LWD of old growth stands it intends to mimic. There is data and science available that indicates better tree growth with greater DDW. (Woodall and Westfall 2009) found that greatest amount of DDW was in stands with highest RD of – in other words DDW increased as RD increased, and improving tree biomass with more DDW. The prescriptions should address how DDW will be dealt with to both preserve this reservoir of wood that would have accumulated over a century to feed the forest soil, but is being extracted by harvest to simply achieve densities of old growth stands. There are many forest processes related to downed wood that are being skipped in the process and these should be addressed in the EA or in an EIS. What happens to mature stands between 80-150 years as they achieve these "old growth conditions?" If we are going to mimic or accelerate natural processes, we shouldn't be focused only on one element: tree spacing, as the sole indicator or foundation of what creates an old growth stand.

In order to achieve the said goal of accelerating old growth conditions, removing all the wood harvested (given the reference stands have diameters of 15-22" , all those trees fall within Class 2 Coarse woody debris (31-60 cm) and LWD for streams that is desirable is certainly within the 30 cm- 60 cm class range)). The EA and silvicultural report state that reducing the stands to a 35 % SDI (0.35 RD) will create large diameter trees and provide DDW and LWD of greater diameter. However, removing all the wood that might be deposited during the stem exclusion stage- wood larger than 12" diameter could have detrimental effects on soil health and long term biomass of the stand. (Woodall and Westfall 2009) found that greatest amount of DDW was in stands with highest RD of – in other words DDW increased as RD increased. The EA states that all wood slash will be removed for fire prevention, however, this does not represent a mimicking of what happens in the stem exclusion stage where large quantities of woody debris are deposited on the forest floor. This can be a great concern especially in riparian areas, where prescriptions

are suggested for thinning up to 60' from non-fish bearing perennial streams and within 100' or 75' of fish bearing perennial streams(less than one site potential tree height) .

Old growth conditions-

If a mosaic is desired and to allow for natural accumulation of DDW and LWD, there should be a variability in the % SDI target from 50% to 35% across the 10K acres to be harvested. While variable density thinning is proposed, there is very little detail about where this is needed at the site level. Neither the EA nor the Silvicultural report document why 35% is the target in all cases, across the entire forest. The Wildlife report states that healthy forests have a 40% relative density. The comparison of Reference stands before and after treatment show some stands with a gain of only 2-3 inches in average tree diameter (it is unclear from the analysis how long it is anticipated this diameter growth will take). Reference plots given already have diameters of between 15-22" in the 10 plots and SDI ranging from 53% to 88% . 6 of the 10 reference plots are near 60% or less than with 3 of the plots at 53% SDI. 60% is considered the self-thinning relative density.

To achieve a "mosaic and diverse stand such as representing old growth stands , it would seem a range of %SDI less than 60% should be chosen, particularly when harvesting within riparian areas. The variable density thinning seems to indicate there will be "gaps so in some cases even larger openings.

Riparian thinning –

The EA proposes that thinning will occur as close as 75 feet from perennial, non ESA fish bearing streams, 60 feet from perennial non-fish bearing streams, and 50 feet from intermittent streams. Reducing buffers to as little as 50' for a thinning that will remove up to 75-80% of the tree canopy does not follow the science that went into establishing buffers of 100-300' for riparian areas. A 50 foot buffer will likely be only one to two trees between the thinning operation and stream ordinary high water mark (OHWM). Thinning operations that open the canopy so significantly within one site potential tree height are unacceptable, due to potential siltation, loss of LWD and loss of shade (as indicated by the LAA determination). As the site progresses through the stem exclusion stage these self-thinning trees could provide much needed LWD to the stream channel and lower watershed log jams. The Beckler River Watershed Analysis found that in channel stability surveys upper watershed intermittent streams that had been harvested to the stream had much poorer channel stability with more bank erosion. Prescriptions within the riparian

buffers should be altered to a higher relative density, and buffers should not be less than 100 feet in any stream type.

Water Quality-

The hydrology report states that "part of the purpose and Need for this Project is to enhance the health of streams and associated aquatic ecosystems by modifying the transportation system, stabilizing roads to reduce road-derived impairments, increase floodplain and channel complexity, and remove barriers to aquatic species migration." However, the EA Purpose and Need section does not state this. It is unclear if this is one of the outcomes of this project.

The FWT will likely have negative impacts on Water quality. The Hydrology Report lists many watersheds in the MBS which might be impacted by the FWT. Figure 2 of the hydrology report shows the entire Baker Lake subwatershed as in poor aquatic habitat condition – with this area being one of the main areas targeted for this thinning operation. Again, the map given shows only a forest-wide map at too large a scale to see clearly what areas are being shown exactly. It is inadequate for the public to provide meaningful comments. (Another section says Baker lake is not proposed for this project, but it clearly seems to be on the map of thinning units).

Apart from affects to fisheries and aquatic habitat, the MBS provides domestic water supplies to a number of communities, and the EA needs to adequately address the impact on domestic water sources.

Fisheries –

The fisheries report states a conclusion that this project as proposed will "likely adversely affect" Chinook salmon, steelhead trout and bull trout. The report states that there are data gaps in knowledge of what constitute non- ESA fish bearing streams. The reports states that short term effects (< 20-30 years) from commercial harvest activities in Riparian Reserves mostly are associated with potential for decreases in stream shade and recruitment of large wood to channels and floodplains. The report does not mention that the potential for blowdown could increase loss of trees along the thinning unit edge. So there will be short term negative impacts from this project to ESA listed species for upwards of 20 years. This is further reason that the riparian thinning widths should be revisited and non-harvested buffers should be increased to no less than 100 feet, with %SDI also changed to remove less trees that could provide LWD. (Reminder that the reference stands are already >15" in diameter, which meets definitions of desirable LWD for streams).

Climate Resilience –

There is also science that indicates leaving the LWD as a CO2 trap would be beneficial to climate resilience. This is another reason for clarifying how much downed wood will be left, and also why the alternative should include prescriptions to vary between 50% SDI and 35%. An assessment of impacts given the change in climate patterns within the near term should be given. Given that climate impacts for songbirds, pollinators, fish and other wildlife are probably the biggest threat being faced by most of these species within the next 30-40 years, this is a big gap in the EA. (See Audubon Survival by Degrees: 389 Birds on the Brink. https://www.audubon.org/climate/survivalbydegrees)

Wildlife –

While the thinning project aims to improve wildlife habitat for a number of old-growth dependent species, none of the analysis discuss how natural self-thinning create snag trees and standing dead trees that provide important habitat for pileated woodpeckers and other cavity nesters. The prescriptions should address how this important component of old-growth habitat will be created. the wildlife report states that healthy forests have a relative density of 40. Removing all of the self-thinning wood removes this natural process and should be addressed in the EA. The "consideration of No Action Alternative" in all cases simply says "there will be no enhancement of old growth conditions or understory improvement" but there is no analysis of how long these conditions will persist, since most of these stands are in the stem exclusion stage."

In addition, three designated "Wild and Scenic" rivers are in the MBSNF, as well as numerous rivers 'eligible' for designation, all of which need to be protected as listed by applicable law. There was no assessment in the EA Scenery report of affects to these designated rivers, or eligible areas.

The MBSNF is a key recreation destination, resource, and economic driver for all Washington State. See Gem of the Emerald Corridor: Nature's Value in the Mt. Baker-Snoqualmie National Forest, Earth Economics/The Wilderness Society, 2017, (https://bit.ly/gemoftheemeraldcorridor). The Emerald Gem Article touches on several areas the EA does not, especially the impact of non-timber production economies.

The FWT will likely have negative impacts on tourism and local communities' livelihoods as local and regional economies depend far more on tourism and recreation, as well as non-timber production jobs, than the timber jobs of the distant past.

The potential significant impacts of the FWT demand an EIS. Please conduct an EIS. Thank you for considering these comments.

Sincerely and respectfully submitted,

Allison Warner
316 Dove Drive
Camano Island WA 98282
allisivy@gmail.com

References:

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Woodall, C. W. & Westfall, J. A. Relationships between the stocking levels of live trees and dead tree attributes in forests of the United States. For. Ecol. Mgmt 258, 2602–2608 (2009).

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