



March 16, 2023

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Submitted electronically at <https://www.fs.usda.gov/project/?project=61659>.

RE: Sierra Club comments on North Fork Stillaguamish Landscape Analysis (#61659; Draft Environmental Assessment dated February, 2023

Dear District Ranger Smith:

On behalf of the Washington Chapter of the Sierra Club, we appreciate the opportunity to submit comments to Mt Baker-Snoqualmie National Forest regarding the content of the North Fork Stillaguamish Landscape Analysis (#61659) Draft Environmental Assessment dated February, 2023 (the "Draft EA" or the "Draft Environmental Assessment" or the "EA").

The Washington State Chapter of the Sierra Club includes over 100,000 members and supporters, working to protect communities and the planet. With over 3.5 million members nationally, the Sierra Club has the largest membership of all environmental public advocacy groups in the United States. We are the oldest engaged and enduring grassroots organization in the United States.

Members of the Washington Chapter have had a long history of working to protect federal lands within the Mt Baker-Snoqualmie and Okanogan-Wenatchee National Forests dating back to the North Cascades Act of 1968. During the 1980s, we submitted comments on RARE I and II studies. We commented on the Mt Baker-Snoqualmie Land and Resource Management Plan Draft EIS and Final EIS of 1990. More recently, we participated in the development of the NW FP of 1994 and its subsequent implementation, including a number of subsequent timber sales prepared under its direction on this Forest.

We have reviewed the Draft Environmental Assessment and are offering comments on a number of issues that are described below, including but not limited to comments on required compliance with the Northwest Forest Plan of 1994 and its Standards and Guidelines, and the Mount Baker-Snoqualmie Land and Resource Management Plan of 1990 (the "LRMP") and supporting documentation to the 1990 FEIS to the LRMP.

Please find our detailed comments on the Draft Environmental Assessment below:

I. THE DRAFT EA FAILED TO ADDRESS THE TIMBER HARVEST RESTRICTIONS IMPOSED BY APPENDIX H, THE HYDROLOGIC CUMULATIVE EFFECTS ANALYSIS, TO THE 1990 FEIS TO THE 1990 MT BAKER-SNOQUALMIE LAND AND RESOURCE MANAGEMENT PLAN.

We attach to this comment letter a PDF copy of pages H-34 through H-144 of Appendix H to the 1990 FEIS. The provided PDF includes the technical analysis of the Hydrologic Cumulative Effects and the data for the 70 watersheds which were analyzed.¹

a) Appendix H lists 70 watersheds and subwatersheds in the Mt Baker – Snoqualmie National Forest which were determined to be unacceptable in 1990 and therefore required timber harvest constraints for four (4) decades, ending in 2030. The timber harvest constraints required that harvests in the listed unacceptable watersheds *not exceed* the acreage listed in Appendix H for each watershed and subwatershed, so as to permit the watersheds and subwatersheds to recover and meet riparian and water quality standards.

b) The following watersheds and subwatersheds covered by the NF Stillaguamish Landscape Analysis Draft EA, which are included as part of the Finney Adaptive Management Area (the “Finney AMA”), were determined in Appendix H to be unacceptable (see pages H-46, H-92-93, H-95-96, and H-98), and had timber harvest constraints extending into the Fourth Decade (2020-2030), and are listed below:

List of Unacceptable Condition Watersheds in the 2023 North Fork Stillaguamish /Finney AMA/Project (which are identified as Unacceptable Condition Watersheds in the Hydrologic Cumulative Effects Assessment, Appendix H to the 1990 FEIS to the 1990 MB-S LRMP):

<u>AZ (Allocation Zone)</u>	<u>Watershed</u>	<u>Timber Harvest Constraint 4th Decade (2020 through 2030)</u>
AZ 29	Deer Creek, Northwest (includes Little Deer Cr, Day Creek and DeForest Cr)	400 acres
AZ 31	Deer Creek SE (<i>major tributary to AZ 32</i>)	262 acres
AZ 32	Deer Creek (includes Upper Deer Cr and Higgins Cr)	220 acres
AZ 34	M.R.N.F. Stillaguamish (includes Segelson and Swede Crs)	200 acres
AZ 37	Upper Reach N.F. Stillaguamish (includes: mainstem NF Stillaguamish, North, South and Middle Branches, Crevice Creek, and the headwaters of a few drainages into the Sauk River)	
		1,000 acres

¹ Note that pages H-1 through H-33 are not attached, as those pages were background but should the reader wish us to provide those pages, we will do so.

Note, AZ 31 was the only one of 70 watersheds reviewed to be designated for *no harvest* for the first 2 decades. See page H-42.

As a note, it is our understanding that the Deer Creek (location of the DeForest slide), Higgins and Little Deer are inherently naturally geologically unstable systems, and cannot be converted to stable locations by road decommissioning. These are steep areas, and decommissioning of roads is not a cure for the unstable slopes.

c) Therefore, the only timber harvest permitted through 2030 for the listed Allocation Zones, watersheds and subwatersheds, is as set out in Appendix H which is summarized for this Project in Subsection b) above in this Section I. A significant reduction in the amount of timber that can be harvested per the Draft EA is therefore required, and the Draft EA must be revised to reflect that limitation.

In anticipation of objections that the findings included in Appendix H are not applicable to the Draft EA and the proposed project, we note the following:

1. At page 1-2 of the 1990 Mount Baker-Snoqualmie Land Resource Management Plan (the "LRMP"), clearly the FEIS, including its Appendices, was contemplated to apply to subsequent environmental analysis. See the following:

*"Specific activities and projects will be planned and implemented to carry out the direction in this Plan. The Forest will perform environmental analyses on these projects and activities. **This subsequent project-level environmental analysis will use the data and evaluations in the Plan and FEIS as its basis. Environmental analysis of projects will be tiered to FEIS accompanying this Forest Plan.**"*
[emphasis added]

2. Therefore, Appendix H applies unambiguously to the pending NF Stillaguamish Landscape Analysis.

3. On Page 3-7 of the LRMP:

"In addition, the Plan will provide for a high level of investment for habitat enhancement for anadromous (and resident) fish. The hydrologic cumulative effects management requirement is designed to insure [sic] that effects of management activities prescribed by this Plan meet the intent of water quality laws and regulations."

See also Pages 3-6, 3-11 and 3-12 of LRMP:

*"Land allocations and standards and guidelines are used to meet part of the riparian management requirements and fish habitat needs. To fully meet riparian and water quality management requirements, **a constraint is established on the maximum number of acres that can be harvested in a given watershed in a decade. These limits on final harvest are incorporated as Forest Plan standards and guidelines.**"* [emphasis added]

See page 3-12 of the LRMP:

"It is the intent of this Plan that the quality and quantity of these resources not be diminished, but maintained at current levels or improved, if possible. Specifically, this means that timber harvest activities on National Forest lands will be deferred if the MR's for wildlife, soil, and water cannot be met."

See page 4-118 of the LRMP, which includes the following "Forest-Wide Standards and Guidelines for Soil, Air, Water & Riparian":

"Water Resources and Riparian Areas

Goal: Maintain or enhance water quality and riparian areas.

1. Limit acres of final harvest to meet the water quality and riparian management requirement. The management requirement, expressed as the maximum number of final harvest acres per FORPLAN Allocation Zone (watershed) per decade, is shown in Table 4-18."

Table 4-18 of the LRMP is found at page 4-121 of the LRMP. The allocation zone identifiers are the same as the AZ identifiers in the Appendix H to the 1990 FEIS to the 1990 Mt Baker Snoqualmie LRMP, and include those unacceptable watersheds in the NF Stillaguamish Landscape Analysis Draft EA as listed above in Section III (b).

4. Although the LRMP by its terms was meant to be updated and revised within 10-15 years after signature (see page 1-1), and thus the references at page 4-118 in the Forest-Wide Standards and Guidelines are for timber harvest constraints that are only for the first two decades that the LRMP was contemplated to be in effect before being updated, Appendix H covered a longer time period of 4 decades that were expected to take for the Unsatisfactory Watersheds described in Appendix H (which are also listed on page 4-121) to recover.

Given that the LRMP remains in effect long after its adoption in 1990, the fact that Appendix H applies the harvest constraints through 2030, for the fourth and last decade listed in Appendix H, clearly makes the timber harvest restraints listed in Appendix H to the 1990 FEIS, applicable today to the NF Stillaguamish Landscape Analysis Draft EA.

II. THE 80 YEAR AGE LIMIT SHALL NOT BE EXCEEDED WHEN CUTTING TREES IN LSR, PER NWFP STANDARDS AND GUIDELINES C-12, AND THE 80 YEAR OLD CUTTING LIMIT MUST BE EXPLICITLY CALLED OUT IN THE EA.

Per Page 21 of the Silviculture Report, the Forest Service acknowledges that:

*“Stands identified for VDT are forested stands are **currently less** than 80 years of age [emphasis added] and not within nesting, roosting, or foraging habitat for northern spotted owl or marbled murrelet.”*

However, the EA itself does not include any acknowledgement that, as required by NWFP Standards and Guidelines C-12, trees over 80 years of age are not to be cut. Therefore, a statement defining explicit compliance with the Standards and Guidelines and not to cut trees over 80 years of age, must be added to the EA. Although the Specialist Reports are incorporated by reference into the EA, such a fundamental and critical condition of the entire Project should be clearly articulated in the EA.

III. THE SILVICULTURE REPORT STATES THAT NOT ALL STAND AREAS HAVE BEEN EXAMINED (FEWER THAN 44 OUT OF 352 STANDS HAVE ACTUALLY BEEN EXAMINED), AND THEREFORE THAT

“data would need to be collected and analyzed for the expanded section of the project area prior to implementation to ensure compliance with all conditions required for treatment”.
[emphasis added] see page 11 of the Silviculture Report

The Sierra Club asks “How can the Forest Service determine which stands to treat” when no more than 44, and likely fewer, stands (page 10 of the Silviculture Report) of 352 stands (page 13 of the Silviculture Report) have actually been examined?

In addition, per Page 10 of the Silviculture Report:

“After stand exams were performed **a change in the project boundary before scoping included areas that were not sampled.**” [emphasis added]

Furthermore, we note specifically that on Page 11 of Silviculture Report the author states that additional data is still needed for this project:

“Due to an expansion to the project area after the initial field season in, data collection, along with the Insect and Disease Assessment performed by Forest Health and Protection, occurred in only in the Eastern portion of the project area within the original project boundary. **Estimates and conclusions based off this information can only be characterized within the area in which it was collected. Data would need to be collected and analyzed for the expanded section of the project area prior to implementation to ensure compliance with all conditions required for treatment as part of condition-based management.**” [emphasis added]

The stand exams referenced in the Silviculture Report followed the Common Stand Exam procedure include the following, per page 11 of the Silviculture Report:

“Stand attributes include (but not limited to) are forest type, tree species, tree size, tree age, site index, damage caused by insects and disease, slope, aspect, and elevation.”

We request that the Forest Service obtain this additional data as requested by the Silviculture Report and break it out into commercial and non-commercial stands. We further request that data from these

Common Stand Exams for additional stands be summarized for insertion into the final EA. The additional data should be incorporated into decision making reflected in the final EA.

The Forest Service cannot know which stands that are identified for Variable Density Thinning are *currently less than 80 years of age* without this additional stand age information.

IV. THE MATURE AND OLD GROWTH FOREST STAND ACREAGE DATA INCONSISTENCIES BETWEEN THE 2011 FINNEY AMA PLAN AND THE DRAFT EA SHOULD BE IMMEDIATELY RESOLVED SO AS TO ENSURE THAT THE PROJECT IS CORRECTLY DESIGNED AND THAT EXISTING MATURE AND OLD GROWTH FORESTS ARE NOT CUT

A. There are three inconsistencies between the Draft EA and the 2011 Finney AMA Plan.

1. The first data point is the question of the actual extent of old growth in the Project area as well as the entire Finney AMA area, for which we rely upon compatibility with documents affecting the Finney AMA including the 1990 LRMP, the 1994 ROD (NWFP), and the 2011 Finney AMA Plan.

The Draft EA does not define ‘old growth’. See, however, Table 1 of the 2011 Finney AMA Plan, page 9, copied below, which shows significant acreage of Mature and Old Growth trees in the Finney Block, as of 2011, not very long ago. However, in the Draft EA, dated as of February 2023, we are having difficulty locating the acres of old growth indicated below from the 2011 Finney AMA Plan:

“Table 1. Forest Stand Conditions (acres) in the Finney Adaptive Management Area.

Seral Stage	Western Hemlock Zone	Pacific Silver Fir Zone	Mountain Hemlock Zone	Total
Early	1,780	18,926	4,696	25,402
Mid	6,282	5,790	50	12,122
Mature	2,986	2,306	28	5,320
Old Growth	4,532	29,641	16,560	50,733
Total	15,580	56,663	21,334	93,577”

We request that the above Table 1 be updated as noted and placed in the Final Environmental Assessment (the “Final EA”).

These updates should include all cutting since 2011, and show acres for each of these geographies separately: (1) the Project Treatment Areas; (2) Project Area; and (3) the entire Finney AMA.

As part of the requested update to Table 1, please include the stand age ranges for each of the noted seral stages, i.e. Early, Mid, Mature, and Old Growth.

The Sierra Club also notes that as of the 2011 Finney AMA Plan, page 8:

“Even now, with 40% of the forested area harvested since WWII, about 50% of the current forests are over 500 years old”.

Page 8 of 2011 Finney AMA Plan and see also Table 1 on page 9 of 2011 Finney AMA Plan which shows 5,320 acres Mature Trees, and 50,733 acres Old Growth.

Also, per the May 3, 2013 DN/FONSI (page 2) for the Finney 2013 harvest, 1,256 acres were to be harvested, but the Decision Notice and the FONSI for Finney 2013 harvest did NOT mention either Table 1 of the 2011 Finney AMA Plan or the text statement on page 9 in the 2011 Finney AMA Plan *“about 50% of the current forests are over 500 years old”.*

Notwithstanding, subtracting 1,256 acres (i.e. the 2013 harvest) still leaves significant acres of Old Growth and Mature Trees in the Finney AMA which should be explicitly protected, unless there has been an additional harvest, other than the 2013 harvest, between 2011 and 2022.

2. The second data point, as stated on page 69 of the Draft EA, is:

The project area includes both old forest (approximately 60% of the Finney AMA >200 years of age) and young, dense stands (approximately 40% < 80 years of age.)”

3. For the third data point, we refer the reader to language at page 29 of Draft EA which suggests that in the Project Area:

“Legacy or remnant old-growth trees are present and sporadically distributed throughout the treatment stands; however, the vast majority of trees are under 80 years in age.”

The inconsistencies between the three data points described above in 2011 Finney AMA Plan and in the Draft EA are causing concern. Reconstruction and updating of Table 1 would improve our confidence in the accuracy of the stand age data, and perhaps change the statements on pages 29 and 69 of the Draft EA.

B. Based on the statements referred to above, on page 69 and page 29 of the Draft EA, as compared to the explicit acreage data shown above in Table 1 in the 2011 Finney AMA Plan, we ask the Forest Service to provide details about what and where the Forest Service intends to cut as stratified by both LUA acres and log volume for each LUA designation. We also ask that those details be included in the Final EA.

This question has not been answered in the EA, and must be answered before the EA is finalized.

C. The Project must ensure consistency with the NW Forest Plan Standards and Guidelines to protect both remnant trees and stands mentioned on page 29 of the Draft EA, and any remaining Mature and Old Growth Forest mentioned in Table 1 of the 2011 Finney AMA Plan. We are concerned about plans for any cutting in mature and old growth stands, particularly considering the Executive Order dated April 22, 2022. In addition, regarding the quote referred to above on page 29 of the Draft EA, the referenced remnant trees and stands must not be cut as part of this Project.

The Sierra Club is opposed to any cutting of ‘remnant older trees & stands’ and any remaining Mature and Old Growth Forest in the defined cutting units and requests that the Forest Service ensure compliance with NW FP Standards & Guideline’s clear direction on not cutting trees older than 80 years old. Mature and Old Growth forests are a significant resource considering Climate Change and the stated need to protect late successional forest habitat. The public must have access to the latest information about the condition of these forests.

The Sierra Club requests that in order to ensure that these older trees and stands do not get cut during the course of Project implementation:

- 1) ***If the Forest Service or its contractors encounter older trees or older stands during the course of the project, they must be directed not to cut trees over 80 years old wherever found; and***
- 2) **The Sierra Club requests that that Forest Service personnel will closely inspect contractor actions *by on-site visits at all cutting operations* to verify compliance to ensure that these critical instructions are followed to the letter.**

V. THE DETERMINATION OF TREE AGE SHOULD BE MADE AT THE TIME OF PROJECT IMPLEMENTATION, I.E. WHEN CUTTING, CERTAINLY NOT AT THE DATE OF ISSUANCE OF THE FINAL ENVIRONMENTAL ASSESSMENT, as would be the effect of the sentence on page 21 of the Silviculture Report that the

*“Stands identified for VDT are forested stands are **currently less** than 80 years of age.”*
[emphasis added]

In order to comply with the NWFP, which clearly restricts the cutting of any tree greater than 80 years of age, all age calculations of trees must be made *at the time of harvest* rather than at the time of “planning.” Given that the project could take between 15 and 20 years, there are many stands in ‘treatment areas’ that will ‘age out’ and should not be cut. If, at the date of the EA, a stand is 70 years old, and the project does not schedule harvest of that stand for another 15 years, then that stand is not legally available for harvest as it would, at that time, be 85 years old. The EA must specify clearly and explicitly that no trees can be harvested if, at the time of cutting, they are greater than 80 years of age.

VI. SINCE THE EA DOES NOT INCLUDE ANY AREAS FOR VARIABLE RETENTION HARVEST, we conclude that the paragraph on Page 9 of the Scoping Letter that states *“Additionally, strategically placed regeneration harvests implemented by variable retention harvest, would be considered.”* has been dropped from the Project. Please confirm if our understanding is not correct.

VII. THE REGIONAL ECOSYSTEM OFFICE’S (THE “REO”) APPROVAL IS REQUIRED FOR CUTTING TREES 20” TO 26” DBH UNDER ALTERNATIVE 2

The following statement, found on page 17 of the EA, must be revised by removing the words “*and harvesting trees up to 26” DBH*” as the sentence is incorrect since it contends that such harvest is consistent with the NWFP Standards and Guidelines for Late-Successional Reserves:

*“Variable density thinning and **harvesting trees up to 26” DBH** in these stands would decrease the amount of time needed to attain late-successional characteristics and is consistent with NWFP Standards and Guidelines for Late-Successional Reserves.”*
[emphasis added]

The Forest Service’s suggested action is not consistent with the above statement, because Alternative 2, as stated on Page 16 of the EA, includes REO review to allow for cutting and removal of trees over 20” up to 26” DBH.

If the Forest Service adopts Alternative 2, the Forest Service will need REO approval for cutting and removing 20-26” DBH trees prior issuing the Final EA. Please revise the EA for consistency with the NWFP Standards and Guidelines for Late-Successional Reserves, as the Standards and Guidelines do not authorize harvest of trees up to 26” DBH.

The Draft EA states on Page 16

*“Due to the high productivity of this area and results from collected data on a past neighboring project, the proposed treatment stands **are likely [emphasis added]** to have a large proportion of trees greater than 20” DBH while remaining dense, single-storied, and homogeneous with limited understory development.”*

We ask that the Forest Service conduct stand exams of all proposed treatment areas for which the Forest Service intends to request REO approval to cut trees up to 26” DBH. Those stand exams must be conducted and documented prior to the Forest Service submitting the request to the REO for deviations from the NWFP, and such documentation should be included as part of the request.

Stand exam data is required so as to determine the actual extent of high productivity areas; trees up to 26” DBH; overall tree density; and related characteristics.

The Forest Service also needs to provide detailed information as to name and location of the *referred to past neighboring project (see page 16 of the EA)*, as well as specifics as to ecology and geology of said neighboring project, so as to verify use of the past neighboring project as data to justify the deviation requests to the REO.

A Copy of the REO approval should be posted on the website, together with a copy of the Consistency Request filed by the Forest Service with the REO which requested such approval, at such time as the Final EA is issued.

Please Note that If Alternative 2 is adopted, then if trees exist in a cutting stand that are within the 20-26” DBH and **are in fact over 80 years of age at the time of cutting**, they should not be cut, as cutting trees over 80 years of age is prohibited by the NWFP Standards & Guidelines at page C-12. All of those trees up to 26” DBH must be aged prior to cutting.

VIII. SILVICULTURE REPORT ISSUES:

A. The **modeling utilized for this project's economics** was based both on commercial thinning and *variable retention harvest* in the Project. However, the Draft EA does not include variable retention harvest and thus raises the question as to the appropriateness of the economic modeling. See page 11 of the Silviculture Report for the following quote:

*"Stand growth and yield was modeled for the individual stands for which data was collected and averaged by vegetation zone to project expected growth and yield for stands proposed for commercial thinning and **variable retention harvest** in the Project."* [emphasis added]

The Sierra Club suggests that the economic modeling described in the Silviculture Report should be revised based only on Variable Density Thinning since that is the one of the primary silvicultural tools utilized to produce the cut volume for this project.

B. We suggest that, as recommended in the Silviculture Report at page 29 and quoted below, Appendix B be amended to include, as a Design Condition, site specific prescriptions to minimize windthrow issues when cutting in a dense stand. Here is the quote:

*"When using silviculture to prevent excessive windthrow damage, understanding the **direction of high winds** is necessary. For this project, **site specific prescriptions would outline windthrow risk and advise markers to avoid abrupt edges** in the path of directional wind patterns. Another strategy that would be utilized during implementation would be to **leave strong scattered trees in road belts leading to high priority edges to dissipate some of the force of the wind gradually** rather than abruptly (Smith, et al., 1997)." [emphasis added]*

C. Note: Page 30 of the Silviculture Report "Past and Present Actions" Section needs to be replaced, as the existing language is an identical copy of the same paragraph from the NF Nooksack Vegetation Management Plan EA was used rather than a paragraph with information specific to the North Fork Stillaguamish Landscape Analysis Project Area.

IX. THE FOREST SERVICE ALSO NEEDS REO APPROVAL FOR HAULING OUT 20" – 26" TREES INSTEAD OF LEAVING TREES LARGER THAN 20-INCHES DBH ON THE GROUND FOR DEVELOPMENT OF COARSE WOODY DEBRIS, AS REQUIRED BY THE July 9, 1996 REO MEMO #694

Copied below is Stand Attribute #2, page 4 of the 1996 REO Memo #694:

*"2. West of the Cascades outside of the Oregon and California Klamath Provinces, the basal-area-weighted average age of the stand is less than 80 years. Individual trees exceeding 80 years in those provinces, or exceeding 20-inches dbh in **any** province, shall not be harvested except for the purpose of creating openings, providing other habitat structure such as downed logs, elimination of a hazard from a standing danger tree, or cutting minimal yarding corridors.*

Where older trees or trees larger than 20-inches dbh are cut, they will be left in place to contribute toward meeting the overall CWD objective [emphasis added]. Thinning will be from below, except in individual circumstances where specific species retention objectives have a higher priority. Cutting older trees or trees exceeding 20-inches dbh for **any** purpose will be the exception, not the rule.” [emphasis added]

As highlighted above, 1996 REO Memo #694 specifically requires that

“Where older trees or trees larger than 20-inches dbh are cut, they will be left in place to contribute toward meeting the overall CWD objective.”

The word ‘**will**’ in the preceding statement is a mandate; and it is not discretionary on the part of the FS.

The Forest Service must obtain REO approval to haul out cut trees 20” – 26” instead of leaving them on the ground as required to contribute toward meeting the overall CWD objective.

As part of this analysis for the Draft EA, the following questions should be answered and documented in the Final EA:

1. Identify specific stands that include numerous trees 20”-26” DBH that create the safety hazards asserted by the Forest Service?
2. The Forest Service must quantify the inability to manage habitat if it can’t cut larger trees, i.e. for snags, nest platforms, cavities for nests; and
3. The Forest Service should describe the specific safety hazards that are posed by any trees over 20” and up to 26” DBH which are left on the ground after being cut.

In addition, the following statement on page 65-66 of the EA needs quantification to justify both obtaining the REO approval for 20” – 26” DBH cutting and waiving the Coarse Woody Debris requirement under the 1994 REO Memo:

“This means that in some stands, the 20”+ DBH size classes are limiting the effectiveness of the treatment to reduce the stand density to the desired post-treatment condition of ~35% of SDI max.”

However, overall, regarding the hauling out and selling of 20-26” DBH trees, the argument for ‘safety’ appears to be over-ridden by the economic argument that the Forest Service makes that in order to make maximum profit, the 20-26” trees must be included, and therefore the EA indicates that Alternative 2 is preferred by the Forest Service.

- See page 65 of the EA for description of the Economics of Alternative 2:

“Using on a weighted stumpage rate of \$75.48 per thousand board feet (MBF) for the last three major timber sales sold on the Mt. Baker-Snoqualmie National Forest. This value accounts for typical timber quality, logging costs, road costs, and environmental protection measures that are typically found on the Mt. Baker-Snoqualmie National Forest. Based on modeling from FVS, 17 MBF per acre is estimated to be removed with the Variable Density Thinning of the commercial

units. Based on this information, the commercial harvest would generate an estimated \$1,283 per acre.”

- See Page 66 of the EA for description of the Economics of Alternative 3:

“However, under alternative 3, timber value is greatly reduced when a 20” diameter limit was implemented in the model. Alternative 3 results in an average volume removal of 9MBF/acre and based on this information, the commercial harvest would generate an estimated \$679 per acre, which depending on site specific situations, could cause some stands to be deemed not commercially viable and may not support the cost of the treatment.”

There is no documented requirement for the Forest Service to maximize the ‘profit’ of this timber sale at the expense of ecological and silvicultural benefits, particularly when this sale takes place in an AMA. Specifically, the NW Forest Plan directs that the emphasis of the Finney AMA management is “restoration of late successional habitat and riparian habitat components” by developing and testing new management approaches to integrate and achieve ecological, economic, and other social and community objectives. (ROD, pages 6 and D-13). In fact, the goals of this AMA, are for habitat enhancement and experimental modeling and these factors should be the focus and control the decision-making process. See Page 63 of the EA:

*“Through this alternative, planned activities aim to create habitat enhancement within AMA-NR and AMR-R within the range of the Northern Spotted Owl and **in accordance with the Finney AMA plan and experimental design.**” [emphasis added]*

X. ISSUES REGARDING THE PROPOSED PROGRAMMATIC AMENDMENT:

A) the description of the proposed programmatic amendment is flawed as it covers the entire Mt Baker-Snoqualmie National Forest *without* including any restrictions or other direction to protect those portions of the MA – 19 that would not receive any treatment for huckleberry enhancement.

Although the Draft EA at page 26 states

“The proposed forest plan amendment would apply to all areas of MA-19 across the forest, however there are no ground disturbing actions proposed on any MA-19 areas outside of the North Fork Stillaguamish Landscape Analysis project boundary, therefore there would be no direct or indirect effects on these areas.”

the effect of an amendment on the entire forest does open the future possibility of other ground disturbing projects in other parts of the forest *which by virtue of this proposed programmatic amendment would allow such other projects to proceed without any longer having to comply with the provisions of MA-19 that were in effect prior to any approval of this proposed programmatic amendment.*

By way of example, the NF Stillaguamish Landscape Analysis proposes to enhance for huckleberries only 300 acres out of the 2,154 acres of MA – 19 within the Project Area, but does not protect or otherwise

address the special management needs of those additional 1,854 acres to preserve the balance of MA – 19 LUA within the Project Area. Per the EA, page 25, the

“forest plan amendment would not change that determination. MA-19 would remain classified as “not suited” for timber production... timber management activities in MA-19 would be limited to those needed to improve habitat diversity, including huckleberry enhancement.”

However, the proposed programmatic amendment would remove specific protections from those 1,854 acres that are now in place. Per table 5 on pages 7-8 of the EA, the changes in the Programmatic Amendment for improving habitat diversity would then permit: broadcast burning; treatment of fuels by prescribed burning; and precommercial thinning in MA-19, all of which are management practices that are currently prohibited.

In that regard, we request that the EA specifically detail why either Broadcast burning or underburning is recommended for MA-19, and why an Amendment is requested to permit that burning.

The proposed Programmatic Amendment would also apply these changes to the remaining MA-19 acres in the Darrington Ranger District. There are 4,646 acres of MA-19 in the Darrington Ranger District, however, we do not know how many of the 300 acres of MA-19 to be treated in this Project for improving habitat diversity are included within the Darrington Ranger District and how many acres are included within the Mt. Baker Ranger District. The EA must disclose treatment acres for MA-19 for each of the two Ranger Districts, for the 300 acres proposed for treatment.

On the other hand, the pending NF Nooksack Vegetation Management Proposal, under Alternative 1 – Modified, proposes to treat only 99 acres out of the 10,674 acres of MA – 19 in the Mt Baker Ranger District. The NF Nooksack Proposal is a ***project specific amendment; that amendment only exempts the 99 proposed treatment acres from compliance with MA-19 restrictions and that amendment does not impact the remaining acres of MA – 19 in that District.*** The remaining acres in MA- 19 of the Mt Baker Ranger District would retain its current protection unless the proposed Programmatic Amendment for the NF Stillaguamish Landscape Analysis is adopted.

The proposed Programmatic Amendment in this Draft EA for the NF Stillaguamish Landscape Analysis would remove that protection from the remaining 10,757 acres of MA – 19 in the Mt Baker Ranger District, as well as that protection for all other MA – 19 acres in the Darrington, Snoqualmie and the Skykomish Ranger Districts.

We strongly suggest that the *project specific* amendment included in the NF Nooksack Vegetation Management Plan is the appropriate approach for enhancement of MA 19 lands for huckleberries. And, effectively the NF Stillaguamish Draft EA, by virtue of limiting the MA 19 acreage for huckleberry enhancement to just 300 acres, is appropriate and consistent with a project specific amendment.

We further suggest that a programmatic amendment is *out of scale for the intended goal of huckleberry enhancement, and we suggest that instead whenever huckleberry enhancement is desired in the Mt Baker Snoqualmie National Forest, a Project Specific Amendment be utilized to address only those specific acreages contemplated for treatment. In addition, we suggest that given that the NF Stillaguamish Project Area is within an AMA, a Project Specific Amendment would be a more appropriate approach.*

B) Specific issues with the description of the proposed Mountain Hemlock Zone, MA19 Programmatic Amendment to the 1990 Mt Baker Snoqualmie Forest Land and Resource Management Plan:

- We ask for the explicit description in the Draft EA, of the **extent of conversions, by acreage, stand age, and locations, of remnant mature and old growth Mountain Hemlock stands** to meet the MA-19 huckleberry objective in the Project Area described in the Draft EA.
- **We object to the fact that the EA has not provided specific information for the following aspects of the huckleberry enhancement project as would be implemented not only under the Draft EA in the NF Stillaguamish project area but also from time to time anywhere in the four (4) Ranger Districts of the Mt Baker-Snoqualmie National Forest that would be under the proposed programmatic amendment:**
 - i) determination criteria for site suitability of huckleberry enhancement
 - ii) scientific studies that define the effects of huckleberry enhancement within the mountain hemlock zone
 - iii) analysis of the short-term and long-term effects of specific management activities authorized by this project that may include but are not limited to logging, thinning, brush clearing, treatment of slash, under-burning, planting, or cultivation of huckleberry plants, planned changes in access to huckleberry areas, etc. These effects should address effects on the viability and persistence of late successional ecosystems including habitat and applicable species.
 - iv) the disposition of any mature and old growth logs that are cut, if any. Will these logs be left in the forest?
 - v) identify locations where the enhancement of huckleberry areas does not involve removing remnant mature and old growth trees?
- **We object that there is no clear statement under the proposed programmatic amendment prohibiting cutting trees over 8" DBH.**
- **We object that under the proposed programmatic amendment there is no requirement limiting the stand age of trees cut in the Mountain Hemlock zone to less than 80 years old at the time of cutting.**
- **We object that under the proposed programmatic amendment there is no prohibition in the proposed language of the programmatic amendment prohibiting stand improvements in MA 19 other than Huckleberry enhancement.**

C) there is no copy of the proposed language for the proposed programmatic amendment, so notice is insufficient for public comment. NEPA REQUIRES transparency for obtaining public comment.

D) the programmatic amendment must comply with the National Forest Management Act, which restricts harvest in MA-19. The requirements are as follows:

- **We note that the Draft EA did not include an analysis describing how this project complies with the National Forest Management Act**, specifically with regard to stand conversion and 36 CFR Section 219.11 of the Planning Rule. MA-19 was originally established in the 1990 LRMP because after cutting in this zone, regeneration could not be assured within 5 years as required by the NFMA regulations. See specifically 219.11 (a) (1) (v).
- See specifically Section 219.11 (a), (c), and (d) of the Planning Rule, including without limitation:

*“(d) Limitations on timber harvest. Whether timber harvest would be for the purposes of timber production **or other purposes**, plan components, including standards or guidelines, must ensure the following:*

...

*(2) Timber harvest would occur only where **soil, slope, or other watershed conditions would not be irreversibly damaged**;*

(3) Timber harvest would be carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources;...”
- **We request that such an analysis described in subsections (2) and (3) quoted above be conducted and included in the draft EA.**

E) Since the general objectives for NF Stillaguamish Landscape Analysis are the restoration of late-successional and riparian components of the forest, **we request that the draft EA explain how huckleberry conversion would support the NF Stillaguamish Landscape Analysis, the Finney 2011 AMA Plan and the NW Forest Plan ACS objectives.**

XI. RIPARIAN RESERVE (RR) BUFFERS IN THE EA DO NOT COMPLY WITH NORTHWEST FOREST PLAN

The riparian reserve buffers proposed in the EA are not in compliance with the NWFP. It is essential that requirements for RR buffers be met in Tier I watersheds. The entire project area lies within two (2) Tier I watersheds.

	Alt 2 RR1	Alt 2 RR2	Alt 3	NWFP
Fish Bearing, perennial and intermittent	100 ^a	100 ^a	150 ^a	300 ^c
Perennial, non fish bearing	50 ^a	100 ^a	150 ^a	150 ^c
Intermittent, non fish bearing	25 ^a	50 ^a	50 ^a	100 ^c
Lakes and Ponds	30 ^b	30 ^b	30 ^b	300 ^c
Wetlands < 1 acre	30 ^b	30 ^b	30 ^b	100 ^c

^a per Tables 12, 15, & 24, North Fork Stillaguamish Landscape Analysis EA

^b per North Fork Stillaguamish Landscape Analysis, Appendix B: Project Design Criteria, Page iii, SWF2

^c per Northwest Forest Plan, page C-30 ff

The NWFP is very clear on the determination of Riparian Reserve Buffers. The buffer widths are described on page C-30 of the NWFP Standards and Guidelines (S&Gs), and the minimum prescribed widths are shown in the above table. The required NWFP buffer widths come DIRECTLY from the S&Gs. Under the NWFP Components of the Aquatic Conservation Strategy, these prescribed widths can be modified, only to a limited extent as described in the NWFP, on Page B-13 of the S&Gs:

“Although Riparian Reserve boundaries may be adjusted on permanently-flowing streams, the prescribed widths are considered to approximate those necessary for attaining Aquatic Conservation Strategy objectives. Post-watershed analysis Riparian Reserve boundaries for permanently-flowing streams should approximate the boundaries prescribed in these standards and guidelines.”

And on the same page:

“The prescribed widths of Riparian Reserves apply to all watersheds until watershed analysis is completed, a site-specific analysis is conducted and described, and the rationale for final Riparian Reserve boundaries is presented through the appropriate NEPA decision-making process.”

This specifies that the baseline prescribed buffer widths established in the S&Gs can be modified only in a three-step process that includes 1) Watershed analyses, 2) site-specific analyses, and 3) a rationale for boundary limits presented through the NEPA process.

There are two Watershed Analyses for the project area. The Deer Creek Watershed Analyses (1996) reiterates the buffers prescribed in the NWFP, page 17:

“The Riparian Reserves established by the ROD include 90m (300 ft) slope distance either side of all fishbearing streams, 45m (150 ft) slope distance either side of nonfish-bearing streams, ponds and wetlands .and 30m (100 ft) slope distance either side of intermittent streams and small (< 1 acre) wetlands (USDA and USDI 1994a). Acreage and mapped coverage of riparian areas will increase when stream data is updated as a result of the Stream Channel Assessment.”

The North Fork Stillaguamish Watershed Analysis (2000) makes no mention of Riparian Buffer widths, so no adjustment was made through this Watershed Analysis from the NWFP S&G minimum buffer width requirements.

The second step, a “site-specific analysis”, has not been presented in the Landscape Analyses project documents, nor has the third step, a “rationale for final Riparian Reserve boundaries” been provided.

In order to justify the implementation of narrower buffers, the Forest Service would need not only an analysis of ecology, but also *analysis of geomorphology*. 1994 NWFP ROD and Standards & Guidelines page B-15.

“Watershed analysis provides the ecological and geomorphic basis for changing the size and location of Riparian Reserves.”

Neither the EA nor the Hydrology Report appear to include the required analysis of geomorphology.

However, quoting from Page D-9 of the Standards & Guidelines:

*“Riparian protection in Adaptive Management Areas should be comparable to that prescribed for other federal land areas. For example, Key Watersheds with aquatic conservation emphasis within Adaptive Management Areas must have a full watershed analysis and initial Riparian Reserves comparable to those for Tier 1 Key Watersheds. Riparian objectives (in terms of ecological functions) in other portions of Adaptive Management Areas should have expectations comparable to Tier 2 Key Watersheds where applicable. However, flexibility is provided to achieve these conditions, if desired, in a manner different from that prescribed for other areas and **to conduct bonafide research projects within riparian zones.**” [emphasis added]*

Therefore, changing the buffers must be part of bonafide research projects, as well as including a geomorphologic analysis. Please document these research projects and geomorphologic analysis in the EA.

The only reference in the project documents to the determination of boundary widths is in the Hydrology Report on page 19, which begins with a “recommendation” of boundary widths that are substantially less than those required by the NWFP. These “recommendations” are attributed to “(Gross, 2021).” There are no citations in the Bibliography of the Hydrology Report or the EA for these studies. Lindsay Goss, a Hydrologist from Hiawatha National Forest (Region 9 in Michigan) is noted on the title page as a contributor to the Hydrology Report. If this hydrologist is the author of the study by “Gross” (i.e. typographical error) it strains credulity to believe that hydrologic patterns including precipitation, infiltration, and streamflow in the Pacific Northwest within its mountainous environment would be sufficiently predictable by hydrology patterns in Michigan, particularly when the results of these hydrologic patterns would impact habitat of several federally listed anadromous fish species. Additionally, no study material has been presented that demonstrates a “site-specific analysis” was performed as required by the NWFP, and the Hydrology Report as currently written does not provide any “rationale for final Riparian Reserve boundaries.” At this time, the Hydrology Report only provides recommendations without basis of fact or justification.

The Riparian Reserve boundaries as proposed in the EA do not meet the minimum buffer criteria prescribed in the NWFP and the Watershed Analyses, and the project documents do not meet the standards necessary to satisfy the requirements of the NWFP for altering these minimum buffer requirements. Therefore, the Riparian Reserve Boundaries do not comply with the Northwest Forest Plan and must be increased to the minimum requirements delineated in the S&Gs. Please revise the EA so that it meets the requirements of the NWFP for stream buffers.

XII. NEW/UPDATED WATERSHED ANALYSIS IS REQUIRED FOR TIER 1 KEY WATERSHEDS

Per Page C-22 of the Standards & Guidelines, it is required that a

*"Full watershed analysis will be conducted **prior to new management activities** in identified Key Watersheds within Adaptive Management Areas." [emphasis added]*

See also the Standards & Guidelines at page A-7 Section 1, last paragraph, the following:

*"As described elsewhere in these standards and guidelines, **watershed analysis is an ongoing, iterative process.**" [emphasis added]*

See also the Standards & Guidelines at page E-20, last paragraph on the page:

*"**Watershed analysis will be an ongoing, iterative process** that will help define important resource and information needs." [emphasis added]*

Last, see also document titled 'Ecosystem Analysis at the Watershed Scale, Federal Guide for Watershed Analysis, revised August, 1995, Version 2.2, at pages 4-5
<https://www.fs.usda.gov/r6/reo/library/downloads/documents/watershd.pdf>:

*"**Federal agencies will conduct multiple analysis iterations of watersheds as new information becomes available, or as ecological conditions, management needs, or social issues change.** The time between iterations will depend on factors such as major disturbance events, monitoring or research results, new management objectives, and different regulatory requirements. Subsequent analysis iterations may be triggered when existing analyses do not adequately support informed decisionmaking for particular issues or projects. Future iterations also may be necessary to fill critical data gaps identified during earlier analyses. As subsequent analyses are conducted, new information will be added to that created in previous analyses." [Emphasis added]*

The Club requests that the two (2) Tier 1 Key Watersheds, the North Fork Stillaguamish Watershed Analysis, dated March, 2000, and the Deer Creek Watershed Analysis, dated May, 1996, be updated. As referred to above in this Section XII, in citations to the Standards & Guidelines as well as to the referenced Federal Guide to Watershed Analysis, the development of such analyses is regarded as an ongoing process.

We believe these existing Watershed Analyses need to be updated as the data in those Analyses have been overcome by events. There is a clear trend of increasing flood intensities occurring at decreasing intervals.

Since 2000 there have been eight (8) flood events in the North Fork Stillaguamish of at least 39,000 cfs or greater as shown below.

Prior to 2000, the largest annual flood was in water year 1991 with a peak flow of 36,700 cfs, which would have been the largest event reflected in either of the latest cited watershed analyses. The flood events since 2000, from the USGS North Fork Stillaguamish near Arlington, were recorded at station number 12167000 (record since 1929) are as follows:

2004 with a flood of 44,000 cfs
2005 with a flood of 39,000 cfs
2007 with a flood of 39,200 cfs
2009 with a flood of 49,400 cfs
2011 with a flood of 55,100 cfs
2016 with a flood of 50,600 cfs; there also was a second flood of 46,500 cfs
2020 with a flood of 40,600 cfs

These events dramatically exceed the flood events and history that had been recorded when the existing Watershed Analyses were written. The increase in volume of flood events within the last two decades reflects the impacts on stream flows in this region. These values are clearly on the rise. Frequency, intensity, and flood volume have increased since the Watershed Analyses were done, and more than meets the threshold for a change in condition that should trigger updates to the Watershed Analyses.

Such events would likely have significant impacts on stream channel characteristics and on the ability of the stream to support on salmon and salmon's ability to lay and hatch eggs. Further road construction and timber harvests in riparian areas could exacerbate the impacts of the increased frequency and high intensity flood events. **In addition, for watershed analysis, a review of the 1994 Standards and Guidelines, page D-11 (regarding AMA guidelines regarding Timber Supply) specifically finds that in old-growth fragments in watersheds found in AMAs, which old-growth fragments are mentioned in the EA, the Forest Service must:**

"Provide for old-growth fragments in watersheds where little remains. [emphasis added]"

"Matrix standards and guidelines on page C-44 of these standards and guidelines specify retention of old-growth fragments in fifth field watersheds containing less than 15 percent of such stands In **Adaptive Management Areas, less than 15 percent of fifth field watershed in late-successional forest should be considered as a threshold for analysis rather than a strict standard and guideline, and the role of remaining stands of late-successional forests must be fully considered in watershed analysis before they can be modified.**" [emphasis added, both underlining and bolding]"

These references require the retention of such fragments in watersheds within AMAs and must be considered in the EA for the Finney AMA

In closing regarding watershed function and the need for updated Watershed Analyses, the goal of management is improved watershed function, per top of page 6 of the Draft EA quoted below:

“Some past management actions on both Forest Service and non-Forest lands within the watershed inadvertently altered hydrologic regimes, accelerated sedimentation in tributaries, provided large scale adjustment to channel form and function, disconnected floodplains and generated undesired downstream effects on native fishes. Actions that target restoration of such impaired processes can result in improved watershed function that is in a state of higher resiliency.”

We request that the Watershed Analyses be updated and that the Final EA must provide the metrics that support the claim that these cutting plans improve the “watershed function.”

XIII. ISSUES WITH CONDITION-BASED MANAGEMENT, AS OCCURS AFTER PUBLIC COMMENT PERIOD

Per the EA, CBM would apply to riparian reserve buffers in Alt 2 but not Alt 3, and CBM would also apply to dispersed camping. While we support the reduction in scope for the application of CBM, we continue to have concerns as noted below.

We request that CBM not be utilized in the Project. Introducing a new process (CBM) that results in significant plan changes being made after the close of the NEPA process without public knowledge, participation or input is both new and unacceptable. Transparency is still required under the NEPA process and making decisions across the board after Public Comment period does not comply with intent of the decision-making process requirements.

Any plan revisions based upon *current conditions* produced through any process, with actions which would change the final plan direction, can only be made if those changes clearly move the plan in the direction of Forest Plan “desired future conditions” and comply with public transparency, involvement and participation in the gathering of the public comment process.

XIV. ROADS DISCUSSION

The proposed actions include a number of positive actions aimed at the reduction of road mileage within the project area, which will have a beneficial effect on wildlife and aquatic habitats. However, the EA plans for roads need additional work.

Per the Forest-Wide Sustainable Roads Report (aka Sustainable Roads Strategy, SRS, 2015), Forests need to consider the fact that they won’t have funding for road maintenance in the future. The SRS states that “Based on funding levels over the previous five years the Mt. Baker-Snoqualmie National Forest can only afford to maintain approximately 35% of the current road system.” (page 14). This percentage is not anticipated to improve. Consequently, this project seems to be “kicking the can down the road” in terms of actually dealing with real reductions in maintenance budgets by reducing the road system. Today’s roads that are in “very poor” condition and which suffer from “deferred maintenance” were initially new roads built to access these stands that were logged in relatively modern times. The idea that we can rebuild these roads today and try to manage them in the future at the predicted future level of maintenance budget will only result in a future condition of these same roads in remaining in “very poor” condition. While the use of timber sale contracts to perform maintenance on roadways is a sound solution for those roadways that will remain open after use, it should not preempt the decommissioning

of roads that are no longer required after the project life. Roadways retained within the Forests' Road system will always require ongoing maintenance, whether they be ML1 or ML5. These maintenance costs cannot be supported under current funding levels, and it is not a long-term solution to the chronic problem of funding road maintenance. The proposed retention of roads in excess of identified requirements only exacerbates this funding problem. A better solution is to use this project as an opportunity to fund the decommissioning of roads that are not needed for the long-term management of the Forest.

In particular, we request that:

- There should not be two separate options for road closure and decommissioning as is currently presented in Alternative 2 and Alternative 3. The goal of road decommissioning is to improve the condition of the forest for wildlife and aquatic species by reducing the open road density within the subwatersheds. This should be independent of timber treatments, particularly since the two timber alternatives are proposing to enter the same timber stands along the same roadways. Of the road modifications presented in Alternatives 2 and 3, the road modifications in Alternative 3 would decommission more road miles than alternative 2, resulting in better post implementation conditions. Using this Alternative 3 roads option as a starting point, only one roads option should be developed, and at minimum, these additional modifications need to be made to this alternative:
 - A) Using Alternative 3 as a baseline, the road network of Roads 1730, 1731 and 1732 should be placed into ML1 as is outlined currently only in Alternative 2.
 - B) The final road plan must include the decommissioning of Roads 1891, 1890013, and 1890130 as is currently only delineated in Alternative 3. These roads penetrate the Mt Higgins Inventoried Roadless Area (IRA), and must be decommissioned and obliterated as part of this project to improve habitat integrity.
 - C) The final road plan should decommission Roads 1820 and 1840, as described below. In particular, the portions of Road 1840 within Sections 15 and 22 must be decommissioned and obliterated as these segments penetrate the IRA. See below for a more complete discussion of this road element.
 - D) Using Alternative 3 as a baseline, Roads 2880 and 2881 must be moved into ML1 status as is currently only proposed in Alternative 2.
 - E) Explanation and clarification must be given for the plan to move Road 1765 from ML1 to ML2 status.
- ML-1 (closed) roads and ML-0 (decommissioned) road management do not have equivalent impacts. The Hydrology Report attempts to make the two options sound like they will have the same impact by stating that the
 - “reduction in each of the road metrics, the number of miles of roads within 300 feet of stream streams (sic), the total road miles within floodplain-prone areas, and the total stream crossings are quite similar.” (page 14)*

This interpretation, however, does not take into account the long-term maintenance needs of an ML-1 road or its effect on soil stability, and the impacts of open roads on wildlife. The most favorable roads alternative in terms of a Tier I watershed is the one that both decommissions the most roads (ML-0) mileage and permanently closes the most roads, i.e. produces the smallest remaining open road mileage.

- The Wildlife Report (page 76) states that *“both Alternative 2 and 3 would support meeting the goal of open road density of 2.0 miles/Sq. mile for wildlife in the MA-14 area, deer and elk winter range.”* However, the Wildlife Report also describes the security habitat for gray wolf and grizzly bear, confirming that 1.0 miles/sq mile of road density is the threshold for secure habitat for both gray wolves and grizzly bear (page 29). Additionally, the Deer Creek Watershed Analysis recommends that management goals be to *“reduce open road density below 1 mile per square mile”* (page 364). In particular, the Watershed Analysis recommends *“closing Roads 1820 and 1840”* to *“significantly enlarge...security habitat.”* (page 19) The current plan instead calls for continued access and thinning along these road corridors, which are roadways that protrude into the adjacent Inventoried Roadless Area.

As currently proposed, neither roads proposal meets the criteria of reductions in open road density below 1.0 miles/sq mile for gray wolves and grizzly bear, and there is no discussion within the project documents of any analysis of the recommended closure of Roads 1820 and 1840, which is one of the key suggestions within the Deer Creek Watershed Analysis. While neither gray wolf nor grizzly bears at this time have a confirmed presence in the project area, the accessibility of secure habitat for their growth and distribution, particularly for gray wolf, should be a goal of this project in order to reduce the barriers for successful future distribution. We request that the Forest revise the EA to present a road closure plan that aggressively reduces the open road mileage in an attempt to achieve an open road density of 1.0 miles/sq mile, and in particular consider the decommissioning of Roads 1820 and 1840 at the conclusion of the project.

- If no additional vegetation projects are identified in the project area, then an **Entry Plan** for all the stands in the project area must be included in this EA so that future extent of the road system can be clearly seen to conform to LSR management guidance. At the end of this project’s term of 15 to 20 years, the stands that are currently 65+ years old would then be 80+ years old, and at that point Northwest Forest Plan direction for LSR’s precludes any further entries—which would mean that any roads in those stands should be planned for decommissioning as part of this project. We request the Forest Service should use this EA to develop and present an Entry Plan to establish the minimum road standards needed for access to all stands within LSRs, and to decommission roads that predominantly access LSR stands aged greater than 65 years old. In particular, the work proposed along Road 1820 is primarily Commercial Thinning, which generally is only performed on trees reaching the 80 year threshold for timber management in LSRs. We request that, in addition to a comprehensive Entry Plan being prepared for this project, that Forest Service Road 1820 in particular be considered for decommissioning in order to enhance the roadless character of the adjacent Inventoried Roadless Area.

- The Draft Transportation Report presents a description of the road work anticipated to construct Temporary Roads (page 20). This description includes an entire paragraph of potential “improvements” that are *exactly the same* as the description in the previous paragraph for “Road Reconstruction”. We hope that this is an error on the part of the author, and that an inadvertent “cut-and-paste” was done to fill in the description of a temporary road construction, because the text in place in this draft is completely inappropriate for a temporary road. Temporary roads should not have “*bridge replacement...installation of soil nails...roadway realignment...*” and the other major modifications presented in the report. We would refer instead to the description of road work for a temporary road as prepared by this same author for the North Fork Nooksack Vegetation Management Plan. We request that the Final Transportation Report correct this error, and that the description of work for temporary roads reflect the fact that these roads should be developed only to a level that allows the safe operations within a very short window of time, is not a permanent fixture on the land, and should be obliterated upon completion of work.
- All temporary roads constructed for this project must be decommissioned as an integral part of this project. We ask that the EA be revised to explicitly state this requirement.

XV. MONITORING/MANAGEMENT/AMAS; PROJECT DOES NOT SATISFY THE NWFP OBJECTIVES FOR ADAPTIVE MANAGEMENT AREAS

The Finney Adaptive Management Area was established through the NWFP to “encourage the development and testing of technical and social approaches” to achieve desired ecological, economic, and social outcomes. AMAs are expected to test different methods of land management, monitoring the results of these alternative techniques to establish what works and what doesn’t. AMAs are zones within which it is expected that experimentation takes place, new processes are tested, and the results of successful experiments can then be applied to other areas of the Forest. Key to this process is the development and execution of a monitoring protocol in order to delineate the goals of the experiment, track the results over time, and report on the success or failure of the experiment. It is therefore very disappointing that this project was not designed to meet the goals of an AMA as outlined in the NWFP, namely:

- 1) The North Fork Stillaguamish Landscape Analysis Project has not been designed in any way to experiment with new technological or social objectives, but is simply another “commercial and non-commercial thinning” vegetation management project on the Forest.
- 2) The North Fork Stillaguamish Landscape Analysis Draft Environmental Assessment does not address any long-term monitoring of the treatments proposed for the project to satisfy NWFP monitoring requirements within Adaptive Management Areas.

The NWFP is very explicit in defining the goals of establishing Adaptive Management Areas (page D-3):

“The Adaptive Management Areas have scientific and technical innovation and experimentation as objectives...”

The primary technical objectives of the Adaptive Management Areas are development, demonstration, implementation, and evaluation of monitoring programs and innovative management practices that integrate ecological and economic values...

Monitoring is essential to the success of any plan and to an adaptive management program. Hence, development and demonstration of monitoring and training of the workforce are technical challenges and should be emphasized."

As presented in the Draft Environmental Assessment, the North Fork Stillaguamish Landscape Assessment does not achieve any of these objectives. There is no "scientific and technical innovation" that the project has been designed to investigate, and a review of the Appendices for the project show only a minimal reference to "monitoring" within Appendix B: Project Design Criteria. These monitoring references only appear to apply to very basic Implementation levels of monitoring, answering the question, "was the project work performed as described." Equally important would be Effectivity and Validation Monitoring, which would answer the questions, "did the project achieve the desired goals that it was designed for?" and "were the models and baseline facts that were used to design the project correct?" These Effectivity and Validation Monitoring questions are the key to establishing whether the long-term goals of a project within an AMA were achieved, and without answering these questions the purposed of an AMA is ignored.

The Finney Adaptive Management Area Plan (April 2011) outlines baseline conditions and "Learning Themes" that the Forest developed with inputs from outside groups to guide in the management of this AMA. The Finney AMA Project and the Finney AMA Research Study Plan (2013) outline a study to test different thinning methodologies in the Finney Creek Basin of the AMA, including a Monitoring Plan to track and report on the results of the Plan. While the results of the Finney AMA Project have not been released, it was at least developed in order to begin to establish the potential beneficial impacts of the thinning operations that it outlined.

We request that the North Fork Stillaguamish Landscape Analysis be designed as required by the Northwest Forest Plan as a project within an Adaptive Management Area to test technical and social objectives for the landscape, and to track and analyze the results of this experimentation in a robust monitoring program that can demonstrate the efficacy and veracity of the project. Please revise the EA so as to reflect these requirements.

XVI. INVENTORIED ROADLESS AREAS (IRA).

EA, Page 4: IRAs. We support the direction that no new road construction or timber harvesting is proposed in IRAs which are part of this project. However, we request that no new road construction or any timber harvest be conducted in areas *contiguous to IRAs* that are unroaded and ought to have been included within the original IRA boundary. For example, The IRA boundary near Deer Creek, in Sections 7, 8, 9 and 10 should either extend north to or beyond the Deer Creek to the edge of the newer cutting units.

XVII. NEEDED ECONOMIC ANALYSIS

EA, Page 5: Need for the Proposal. The EA states that the North Fork Stillaguamish landscapes contributes “...*ecologically and economically to the greater Puget Sound area and beyond.*” It is expected that the EA would include a discussion on the extent and nature of the noted economic contribution, particularly when the NW Forest explicitly calls for AMA units “...*to encourage the development and testing of technical and social approaches to achieving desired ecological, **economic**, and other social objectives.*” (ROD page D-1, emphasis added). However, no such economic discussion of a numerical nature, or any nature, has been included in the EA.

Please revise the EA and include an economic analysis that at least addresses the following elements:

- The volume of logs this sale would make available to local mills and over what period of time this log volume would become available.
- An estimate of the employment and personal income response that these logs would produce and over what period of time. This estimate should separate direct effects from induced and indirect effects.
- An estimate of the employment and personal income response that other aspects of this sale (non-timber) would produce and over what period of time.
- Analyses of the contribution that logs from this sale would make to the local log sourcing area, allowing for typical log hauling distances typically experienced in the current timber economy. An estimate is needed in this EA for the importance of this sale to the local timber supply.
- Analyses of the contribution that the employment and personal income generated from this project’s logs and other economic contributions would make to the labor economy within the economic influence zone of the sale. The contribution of this sale to both to the timber economy and the total economy of the full economic influence zone should be examined.

The EA should be revised to describe how this sale will contribute to the labor economies and personal income within the economic influence zone of the timber sale described by this EA.

XVIII. WE REQUEST THAT THE EA INCLUDE AND ADDRESS THE FOLLOWING POLICY FRAMEWORKS:

1. **We request that the EA take into consideration the Biden Administration’s executive order dated April 22,2022, “Executive Order on Strengthening the Nation’s Forests, Communities, and Local Economies” mandating an inventory of old growth trees across all Federal forests**
2. **We request that the EA include an analysis of the impact of the proposed cutting on the ability of the Finney AMA to achieve the carbon sequestration and biodiversity co-benefits described in the following article:**

Carbon sequestration and biodiversity co-benefits of preserving forests in the western United States - Buotte - 2020 - Ecological Applications - Wiley Online Library (*funded in part by the USDA*)

<https://esajournals.onlinelibrary.wiley.com/doi/10.1002/eap.2039>

3. In addition, **we request that the EA follow page 2 of 2011 Finney AMA Plan, Learning Themes,** or that the Forest Service amend the 2011 Finney AMA Plan to change the purpose accordingly.

4. **Several of the “Merged Land-Use Allocations” listed in Table 2 are clearly Matrix** per the NW Forest Plan direction. We request that the EA:

- Include the nomenclature of matrix for those LUAs listed in the table that allow and schedule timber harvest; and
- provide a map that delineates those LUAs that allow and schedule timber harvest.

XIX. 2013 STUDY PLAN:

We request that all of the actions listed below regarding the 2013 Study Plan be made part of this Project, and be addressed in the EA:

- Obtain the results of the monitoring from the 2013 Study Plan, pages 2 and 3:
 - “It is expected that multi-story canopy response to the treatments will be detectable after five years. The response to treatment of individual overstory and focus trees will probably not be evident until approximately ten years following treatment.
 - “Evaluation of the data will be done at each data monitoring interval, i.e., pre-treatment, in the year following treatment, and at five year intervals following treatment.
 - “An analysis of the response to treatment will be completed after each five year increment. The intent is to publish a report documenting the analysis and making the report available to the public”
- Page 19 of the 2013 Study Plan provides:

“The MBS intends to review the Research Study Plan periodically to evaluate the monitoring and inventory completed in the prior field season, and to make any needed adjustment for the next year’s activities.”
- The EA should disclose relevant study plans and/or results if any action was taken. The EA should also disclose if no action was taken and explain why action was not taken.
- If the Study Plan was terminated, review and provide results that were obtained.

We also request that the EA should reflect the intent of the 2013 Study Plan.

XX. THERE IS VIRTUALLY NO DISCUSSION IN THE EA OF COMPLIANCE WITH REQUIREMENTS OF THE 1994 S&G, PAGES D-13 AND 14 (REQUIREMENTS FOR AMA-FINNEY) AND PAGES D-16 AND 17 (DELINEATION AND MANAGEMENT OF RESERVED PAIR AREAS – FINNEY).

The Sierra Club refers the reader to the following article: *Forest Service Pacific Northwest Research Station, Research Paper PNW-RP-567, Learning to Manage a Complex Ecosystem: Adaptive Management and the Northwest Forest Plan, dated August 2006*). See Pages 74 and 76 of the above Research Paper:

"However, in October 2003, at the request of the Regional Interagency Executive Committee (RIEC), a staff and legal review of the ROD, S&Gs, and other pertinent documents was undertaken to determine the extent to which there was latitude for using the AMAs to meet Plan objectives. This analysis concluded, contrary to the 2000 REO report, that there was no basis for exemptions, exceptions, or other flexibilities owing solely to the fact that an activity was proposed within an AMA..."

Based on the above conclusions, if the Forest Service cannot freely modify compliance with the S&G then the LSR restriction to 80 years of age and 20" DBH must continue unless the Forest Service meets the full requirements of the S&G including how to modify compliance in an AMA.

We request explicit answers in the EA to acknowledging the restrictions of the above described 1994 S&Gs, and the prior discussion above, and stating that the project will be in compliance as required.

XXI. WE ASK THAT THE FOREST SERVICE ANSWER IN THE EA THE FOLLOWING SUGGESTIONS FROM PAGE 34 OF THE 2011 FINNEY AMA PLAN (2008 RECOMMENDED LEARNING THEMES WORKSHOP):

"15. Effects of stand manipulations on carbon sequestration. Does this result in a net increase or decrease in sequestration rates.

"16. How is climate change affecting the various forest systems and how can the USFS best manage to adapt to climate change?"

These answers are of particular importance given the Biden Administration's executive order dated April 22, 2022, "Executive Order on Strengthening the Nation's Forests, Communities, and Local Economies."

XXII. ALL OF THE SPECIALIST REPORTS ARE STILL MARKED DRAFT; ARE THOSE REPORTS BEING REVISED?

If there are revisions to the Specialist Reports, the comment period should be reopened so that the public has an opportunity to review and comment on such revisions to the Specialist Reports.

XXIII. WE REQUEST AN ENVIRONMENTAL IMPACT STATEMENT UNDER NEPA:

The scope, scale and timeframe of this project should trigger a full EIS. This project proposes to undertake landscape treatments in a project area of almost 62,000 acres of land encompassing 6 sub-watersheds within two (2) Tier 1 Key Watersheds. The North Fork Stillaguamish and Deer Creek are Tier 1 Watersheds. These watersheds and subwatersheds are habitat for Northern Spotted Owl and Marbled Murrelets, as well as federally listed anadromous fish populations. These thinning projects will have a direct impact on the short- and long-term viability of this habitat. The project timeline, spread over 15 to 20 years, is beyond the scope of a simple EA. The potential impacts of the project actions, in conjunction with potential changes to the landscape over the 15 to 20 year timeline due to extreme weather, flooding, landslides, and other major aspects of Climate Change, would support the need for a full EIS. This is not a small project in which the impacts and repercussions of the proposed action are insignificant. This project is enormous in scope, scale and time, and the complexity of the issues it attempts to rectify, the cumulative impacts of which will be undeniably significant, thus meeting the requirements of the National Environmental Policy Act (NEPA), 40 CFR 1508.27(b), for an Environmental Impact Statement.

For this reason, this project should require an EIS to study not only the project specific impacts, but the cumulative impacts on the environment of this and related projects in the nearby areas of the national forest and in the nearby areas of privately held, as well as state owned, forests. We request that an EIS be prepared to study the complete impacts of this large landscape project.

In closing, the Forest Service should take the necessary steps in the Environmental Assessment to implement the research requirements, restrictions and purposes of an AMA, to protect Mature and Old Growth Forest, and to protect Endangered Species and Riparian Reserves.

We appreciate the opportunity to comment on this important federal action. Please keep us informed about next steps in the planning process and do keep us on the mailing list for any follow-on actions.

Please address future communications, emails or telephone calls regarding this project to the National Forest Committee, WA Chapter of The Sierra Club, to the following:

- Don Parks at dlparks398@gmail.com and (425) 891-2025, and
- Amy Mower at almower@earthlink.net and (360) 305-2922, and
- Nete Olsen at neteolsen01@gmail.com and (206) 713-7128.

Sincerely,

**THE SIERRA CLUB, WA Chapter
National Forest Committee**