Reviewing Official

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This letter is my comments to the various North Fork Stillaguamish Landscape Analysis documents (Draft Decision Notice and Finding of No Significant Impact, Draft Environmental Analysis and Forest Response to Public Comments, and Draft Final Environmental Analysis and various Specialist Reports).

My comments are organized around the structural framework of the Aquatic Conservation Strategy found in the 1994 Northwest Forest Plan. I have done this because the disclosure, discussion, and documentation of this management direction is sparse or non-existent in the above North Fork Landscape documents. As stated in the NF Stillaguamish Landscape Analysis Hydrology Specialist Resource Report, the 1994 ROD for the Northwest Forest Plan provides standards and guidelines for management of Riparian Reserves and the Aquatic Conservation Strategy Objectives (ACSO). And the Aquatic Conservation Strategy is a primary component of the Northwest Forest Plan as amended and is intended to maintain and restore ecosystem health, preventing further degradation and restoring habitat over broad landscapes instead of small watersheds or individual projects (page 29-31). This Hydrology section also attempts to summarize how this NF Stillaguamish Landscape Proposal maintains and restores 9 of the ACSO’s. These summarizes received very little public review because they were only disclosed at the end of the Hydrology Specialist report. Other than this reference, there is a significant lack of disclosure, discussion or documentation of Northwest Forest Plan’s Aquatic Conservation Strategy management guidance and direction in these NF Stillaguamish Landscape Proposal documents. Most of my comments are a resubmittal of my comments to the earlier Draft EA because in the Forest’s Response top those comments, I either got no response to comments or got debatable responses.

**Aquatic Conservation Strategy Component – Key Watersheds**

 This proposed project is located in two designated Tier 1 Key Watersheds, North Fork Stillaguamish and Deer Creek. Tier 1 Watersheds serve as refugia is crucial for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species. These refugia include areas of high quality habitat as well as areas of degraded habitat. Key Watersheds with high quality conditions will serve as anchors for the potential recovery of depressed stocks. Those of lower quality habitat have a high potential for restoration and will become future sources of high quality habitat with the implementation of a comprehensive restoration program.

Three fish stocks at risk were formally designated as federally threatened species under the Endangered Species Act; chinook salmon (1998), bull trout (1999), and steelhead trout (2007). The North Fork Stillaguamish Landscape proposed project area contains critical habitat for each of these three fish species.

Key Watersheds were not part of the land allocation hierarchy because the designation of key watershed overlays all other land allocations (Congressionally Reserved Areas, Late-Successional Reserves, Adaptive Management Areas, Managed Late-Successional Reserves, Administrative Withdrawn Areas, Riparian Reserves, and Matrix). This designation does not preclude all the above mentioned land allocations (1994 ROD- S&G, page Introduction A-6).

*Hierarchy of Standards and Guidelines (1994 ROD – S & G pageC-1)*

In some areas, land allocations overlap creating the need for prioritizing the application of Standards & Guidelines. Key Watershed designation would add additional requirements.

*Summary of Aquatic Conservation Strategy for Key Watersheds and Standards & Guidelines for Key Watersheds (1994 ROD – S&G pages B-19 and C-7)*

No new roads will be built in roadless areas in key Watersheds

Reduce existing system and non-systems road mileage outside roadless areas. If funding is insufficient to implement reductions, there will be no net increase in the amount of roads in Key Watersheds

Key Watersheds are highest priority for restoration

Watershed Analysis S&G - is required prior to timber harvesting ROD-S&G, 1994(page C-7).

The provided documentation for this NF Stillaguamish Landscape Proposal contains no tracking for this Key Watershed designation.

**Aquatic Conservation Strategy Component – Watershed Analysis**

This ACS component has also been either ignored or glossed over in the NF Stillaguamish Landscape Project documents. The documents reference the two existing watershed analysis, the 2000 NF Stillaguamish Watershed Analysis and the 1996 Deer Creek Watershed Analysis. The scope and scale (spatial and temporal) of this NF Stillaguamish Landscape proposed actions were never covered by these old watershed analyses. These proposed projects require updated / revised watershed analysis. The 1994 ROD contains the following management guidance for this.

1. The1994 ROD, S&G pages B-20 to 23 and special note to the Fig B-2 on page B-22 showing the relationship between various levels of analysis - Watershed Analysis relative frequency described as Infrequent with redo based on monitoring, changing conditions, social values or process knowledge. Since 1996 Deer Cr WA and the 2000 NF Stillaguamish WA, updating these 2 watershed analysis is warranted based on post 1996 and 2000 MBSNF and external watershed partner monitoring results, changing management conditions, such as the ESA federal listing of threatened species status for the NF Stillaguamish  Chinook (1998), Steelhead Trout (2003) and Bull Trout (1999). Other management conditions that changed after the completion of these two  watershed analysis was reoccurrence of large flood events in the NF Stillaguamish-Deer Creek watershed from 1995-1996 and into the 2000's time period. Considerable expenditure of federal appropriated funds along with State, County, and Tribal funds were employed to address high priority watershed restoration needs in Deer Creek watershed from the mid 1990's and into the early 2000's time frame. The majority of these restoration treatments were on roads (upgrading, stormproofing, and decommissioning). Many of these treatments were monitored (most implementation, some effectiveness monitoring). All these management activities should have been assembled in an updated watershed analysis for Deer Creek.

 (2) the draft Transportation Report accompanying the Draft NF Stillaguamish Landscape Analysis refers to the need to for watershed analysis. See page 5, Relevant Roads Management Standards and Guidelines, RF-2 (b) and RF-3.

(3) Watershed Analysis consists of technically rigorous and defensible procedures designed to identify processes that are active within a watershed. The analysis is conducted by an interdisciplinary team consisting of geomorphologists, hydrologists, soil scientists, biologists and other specialists as needed (ROD-S&G, 1994, page B-21).

Watershed Analysis Standards & Guidelines (1994 NWFP- ROD, page B-30):

* Is a systematic procedure to characterize watersheds. The information is used to guide management prescriptions and monitoring programs, set and refine Riparian Reserve boundaries, and develop restoration.
* It is required in Key Watersheds prior to resource management
* It is required to change Riparian Reserve widths in all watersheds
* Earthflows qualify as unstable and potentially unstable areas and would be analyzed for inclusion within Riparian Reserves
* Watershed analysis is important in developing monitoring strategies

The Forest response to these my comments (p87) that the NWFP stated that a watershed analysis was required before timber harvest could occur but it didn’t specify a timeframe for the existing watershed analysis needed to be updated. A specified timeframe was not needed because there is enough guidance in the NWFP such as (1) ROD, S&G Implementation page E-20 and 21: beginning with the last paragraph on page 20 - Watershed Analysis will be a on-going, iterative process that will help define important resource and information needs. As watershed analysis is further developed and refined, it will describe the processes and interactions for all the applicable resources (2) additional federal guidance for updating/ revising watershed analysis can be found in this document, Ecosystem Analysis at the Watershed Scale,1995 - Part 1: Process Overview - Introduction page 1 where it says the process is incremental; as new information from surveys and inventories, monitoring reports, or other analyses could be added at any time; (b) Incremental Approach pages 4 & 5 this paragraph fully states the need to update watershed analysis (c) Iterative Analysis Steps, page 9 summarizes the need to update watershed analysis based on new information and data collection.

Forest response (87) and this condition based information included in the EA and specialist reports sets the baseline for the analysis and as such includes more current information that what was included in the watershed analyses.

My Response: The NWFP’s ROD-S&G states in varies sections that watershed analysis and a NEPA decision document such as a environmental assessment are totally different documents.

The NF Stillaguamish Landscape Environmental Assessment is based on a bunch of resource reports lacking little or no data/information resource integration and synthesis. In many cases in the environmental assessment document, linkage from one specialist report to another is a sentence referring the reader to read another resource report.

The results from the NF Stillaguamish Landscape Condition Based Management analysis and the individual resource specialist reports does not constitute an Aquatic Conservation Strategy’s Watershed Analysis as defined in the NWFP’s 1994 ROD and S&G.

**Aquatic Conservation Strategy Component – Riparian Reserves**

The NF Stillaguamish Vegetative Proposal involves Riparian Reserves for 3 of the 5 RR categories as described on pages C-30 and 31 (1994 NWFP’- ROD- S&G); fish-bearing streams, permanently flowing non-fish-bearing streams, and seasonally flowing or intermittent streams, and unstable areas such as earthflows.

This proposal includes the following major modification of the existing Riparian Reserve widths as described in the Final Fisheries Report (page 28-29), Alternative two proposes a condition-based approach to identify the appropriate buffer width on both perennial and intermittent non- fish streams. During sample field verification of various perennial and intermittent streams in the MBS Snoquera Landscape Analysis two common ecological relationships connected to vegetation functions were observed. These ecological conditions are referred to and categorized as Riparian Reserve (RR) condition 1 and RR condition 2:

* RR condition 1: streams where second growth has recruited few or no trees to the stream channel, floodplain or valley bottom
* RR condition 2: streams where second growth has recruited moderate to high amounts of trees to the stream channel, floodplain and valley bottom

Depending on the observed wood loading within the valley bottom of streams at the time of implementation one of the two buffer widths below would be applied (Table 4).

Table 4. Comparison of NWFP Riparian Reserves to Alternative No Thin Buffers

|  |  |  |  |
| --- | --- | --- | --- |
| **Residual Stream Buffers for RR Condition 1 and RR****Condition 2. Stream Classification** | **NWFP Riparian Reserve Stream Buffers** | **RR Condition 1 – Retained No-Thin Buffers** | **RR Condition 2 – Retained No-Thin Buffers** |
| Fish Bearing (Perennial and Intermittent) | 300 ft | 100 ft | 100 ft |
| Perennial Non-fish Bearing | 150 ft | 50 ft | 100 ft |
| Intermittent Non-fish Bearing | 100 ft | 25 ft | 50 ft |

My Response: Using this metric derived from field data from the MBSNF’s south end watersheds for application to the North Stillaguamish watersheds is highly problematic. Differences in watershed features and characteristics such as soils/geology, hydrology, topography, tree species composition along with land ownership patterns, and forest management history (timber harvesting, road management, etc) vary significantly between these two watershed settings.

There is no reference cited in the Fisheries Report on the procedure and methodology used to generate and establish these two riparian reserve ecological relationships. Was this effort done in an interdisciplinary effort and did in involve external efforts (federal and state, tribal). Again the documentation lacking full disclosure, description and discussion.

This proposal involves restoration treatments: tree removal (commercial, non-commercial thinning, and stand improvements, tree tipping into channels, aquatic organism passage, and road work (construction, upgrading, stormproofing, decommissioning) within all of the above riparian categories in Tier 1 Key Watersheds. These proposed actions require documentation in a updated / revised Watershed Analysis.

**Aquatic Conservation Strategy Component – Watershed Restoration**

Terrestrial and aquatic restoration is being proposed. As discussed above all proposed restoration treatments in Key Watersheds and Riparian Reserves require watershed analysis. The terrestrial habitat proposals are based on appropriate documented background data and information. These proposed aquatic habitat treatments are lacking such disclosed and documented data and information (Final EA, page 14 and 15)

1. *Improve Instream Habitat Quality: Enhance aquatic habitat complexity in streams by increasing large woody debris (LWD) that mimics historic wood recruitment to channels and floodplains.*

What habitat complexity metric is being used here?

*Such wood recruitment would help rebuild an important ecological element that historically supported aquatic habitat quality prior to legacy actions of yarding wood out of streams and rivers*.

 My Response: What desired future condition will be used to mimic historic wood recruitment to channels?

What Forest field data, information, and metrics are being used to support this proposal? Table 6 on page 10 of the Final EA lists up to 12 sites having potential for this treatment. Where are these channel sites located and what type of field data and information supports these treatments?

1. *Improve Aquatic Organism Passage: Coupled with storm proofing treatments are targeted methods to restore aquatic organism passage at road crossings with perennial fish bearing streams. Existing undersized culverts (which cause barriers to fish migration) would be removed and replaced with larger appropriately sized AOP structures, designed to both effectively pass 100-year flood return interval flows and simulate natural stream and habitat function, restoring passage for fish.*My Response: What aquatic species are requiring passage? And passage to what habitat type?

This NF Stillaguamish Vegetative proposal involves above mentioned restoration treatments (in the Riparian Reserves section). The forest resource management needs for these treatments needed to be identified and documented in an up-to-date watershed analysis. The current Draft EA and supporting specialist reports do not accomplish this.

**Additional Comments (based on MBSNF responses to my comments to the Draft EA)**

**Specialist Reports – Silviculture** (p 95) 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.

Data needs to be collected and analyzed for the expanded section as well as in the western portion of the project area before a NEPA decision, not after during condition-based management implementation. Relying on just a 12.5 percent stand sample base to drive this vegetative treatment proposal does not support this silviculture management purpose and need.

My response: the Forest rational for going with this limited sample size was really not adequately addressed or answered.

The Forest response was: If stand exams were not completed during the NEPA process and analysis, it would be a required step for developing a prescription on a stand-by-stand basis. Through this process, stands that do not meet the requirement for silviculture treatments would not be candidates.

My Question: Who will determine this and where will it get documented in the record?

The Forest also made a note to my comments that Riparian Reserves, while a single and separate land allocation under NWFP, they are still parts of the surrounding forest stands.

My response: the major NWFP rationale for creating designating riparian areas as separate land allocations was based on the past federal forest timber management practices results that left riparian areas in undesirable conditions.

Specialist Reports Engineering (p97) What is a Temporary Road. A road authorized by contract, permit, lease, other written authorization, or emergency operation and not intended to be a part of the forest transportation system and not necessary for long-term resource management.

Given the possibility that under a Condition Based Management as envisioned in the Draft NF Stillaguamish Vegetative EA, the need for temporary roads in the proposed project could span a time period of 10-15 years, how would temporary roads be managed? Would they be closed and then reopened again based access for timber sale harvesting treatments over such a time period? What type of annual maintenance would these temporary roads be assigned?

The Forest response: The USFS would make efforts not to reuse temporary roads for more than one sale access. If a temporary road is needed for more than one access, this project allows for flexibility to use the temporary road for the duration of the activity needed and then decommission it. Maintenance of temporary roads is managed via the timber sale contract and is the responsibility of the purchaser. All temp roads would be obliterated prior to the closure of the timber sale.

My response: If the case of the management of temporary roads either constructed or reconstructed, over the extended timeline of this proposal, who is the responsible entity for road management; the Forest Service or the Purchaser? What oversight will the Forest Service employ monitor the maintenance efforts on these temporary roads. And what is road obliteration vs road decommissioning?

Another comment I listed in my review of the Draft EA was the Forest’s work force field capability / capacity to implement this proposal. These were not addressed in the Forest’s response.

The Deer Creek watershed contains a lot of unstable soils and geologic features and a high degree of small stream channel drainage networks (Riparian Reserves category – non-fish bearing, intermittent channels). Management history has shown where these unstable soil/geologic features (earthflows) are interlaced with these numerous small stream channels and intersect the road system there has been moderate to high history of landslides and debris torrents occurrence and subsequent damage and degradation to lower fish bearing channels. Soil typing and geologic surveys and mapping along with stream channel location and mapping have been done in the project area. This landscape proposal involves over 60 percent of stream channels of this type are in the project area. I want to know when and who will be going to the field to verify these locations in order to lay-out red flag areas for sale layout and road prism work? Also, the soils input to this proposal was done by a recently hired hydrologist (with little or no field experience / knowledge) since the Forest doesn’t have a soil scientist. The soils input into this proposal was existing data/information. Who will do the field site verification based the soil types in the watershed. The MBSNF has not had a journey-level geologist/soil scientist on staff for a number of years.

If the MBSNF turns the administration of this sale over to the DNR, as it has done for other recent timber sales there needs to be description about this cooperative/coordinative between the USFS and DNR. It needs to cover details like sale area layout, on-the-ground operational review/oversight, and post-sale inspection (role of both agencies). The MBSNF would still need to provide management oversight for the entire project.

Given the amount of earth science and aquatic ecosystem work that is going to be required to implement this vegetative manipulation project (field work in the selected project area to delineate timber sale area boundaries, employment of one or more of the 44 soil, water, fisheries BMP's/ mitigation measures (Hydrology Analysis- Appendix B), and implementation and effectiveness monitoring field reviews, plus the ESA &EFH Consultation needs I have concerns that this workload can be met by the current and future Forest Earth Science and Aquatic Staff capacity.

 And given that this proposal could have a timeline up to 15 years for implementation / completion, how will the information/and data be stored and made accessible? Over this time period, staffs will change due to retirement, transfers, reassignments and fluctuating budgets. How will these projects be tracked and documented over such a time period?

**Summary Comments**

After reviewing all the provided (FONSI. Final EA, Specialist Reports, Maps), my input is that the documentation does not support the proposed actions and doesn’t provide enough background and support information in describing the purpose and need. A major flaw in the planning process for this proposal was the inadequate narrative of following the management direction of the NWFP’s Aquatic Conservation Strategy. Especially missing is the documented and defendable rationale for the proposed modification of the Riparian Reserve widths. The scope and scale (spatial and temporal) of the proposed vegetation manipulation (tree felling and removal), the amount of ground disturbance (new road operations), and stream channel alterations in numerous delineated Riparian Reserves in Tier 1 – Key Watersheds containing critical habitat for three ESA threatened fish populations is not adequately supported by the draft specialist resource reports.

My comments to this NF Stillaguamish Landscape Analysis proposal and supporting specialist reports are based on my 25 years (1980-2005) experience and knowledge as a MBSNF senior aquatic ecosystem staff member (fish biologist).

I led the aquatic staff in the planning and development of the aquatic sections of the 1990 Land & Resource Plan to include the lead role in the development of the Hydrologic Cumulative Effects Assessment.

In 1993-1994 I participated as a requested participant in the FEMAT development of the NWFP. Took lead role on the aquatic staff in implementing the NWFP’s ACS components.

Served as Forest’s watershed restoration coordinator (1995-2005).

Lead role in planning, developing, and implementation of multi-year programmatic BA/BO’s with NMFS and USF&WS for ESA-Section 7 Consultation and ESH Consultation.

Familiar with NF Stillaguamish River Basins 5th field watersheds especially Deer Creek. Spent more field time in Deer Creek than any other watershed on the MBSNF from 1980-2005). Participated in many fish utilization and habitat surveys, hydrologic and soil sensitivity assessments, timber sale layout delineation, and monitoring of timber sale activities in the 1980’s (pre-sale, harvesting, post harvesting) and many watershed restoration monitoring efforts (implementation, effectiveness, and validation).

Little change resulted from public review and comment between the draft and final environmental assessments. This was fully disclosed in the Final NF Stillaguamish Landscape Analysis Environmental Assessment (page 7); *In response to public comments* ***minor modifications, corrections, and editorial changes have been made*** *to the text in several sections of the document, including: descriptions of the alternatives, project design criteria, climate change, and alternatives considered, not fully developed. Updated maps have been added
in Appendix A.*

Given the short review period from the draft to final, approximately a month, not enough time was available to do any major revision of updating to the final environmental assessment. The MBSNF got twenty-nine commenters providing hundreds of individual comments. Given this allocated time period, it is understandable why little change was possible.

As a concerned public, this is frustrating, why bother to take the time to comment on MBSNF resource proposals with orchestrated outcomes such as this?

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