Mt. Baker Ranger District
Mt. Baker Snoqualmie National Forest
810 Highway 20
Sedro Woolley, WA 98284

June 30, 2020

Dear District Ranger Uloth,

We would like to thank the Forest Service for this opportunity to comment on the proposed North Fork Nooksack Vegetation Management Project. The issues addressed in the project go right to the heart of our organization and impact a significant portion of the lands that we cherish.

Shuksan Conservancy (formerly American Alps) focuses on public lands in Whatcom and Skagit Counties from the Pacific Crest to the Salish Sea. We work on local conservation issues, including Lake Whatcom protection, pollinator conservation in subalpine meadows, North Cascades National Park expansion, and habitat protection for fish and wildlife. Our mission includes maintaining a close working relationship with local tribes, fully acknowledging tribal treaty rights and advocating opportunities for cultural and subsistence traditions.

Nooksack Integrated Conservation and Enhancement Project (NICE)

Shuksan Conservancy representatives participated in NICE and strongly encourage the Forest Service to incorporate as much of that project as possible into the environmental analysis for this vegetation management proposal. We feel that it is very important to plan vegetation management in the context of a much broader analysis of fish and wildlife conservation and recreation management. If possible, this stand-alone project should be scrapped and the issues it addresses should be incorporated into a reinvigorated NICE project.

Environmental Impact Statement (EIS)

Given the scope of the proposed project (e.g., more than 1,881 acres of regeneration harvest – nearly three square miles) and the very significant environmental impact it could have on the North Fork Nooksack watershed, we strongly encourage the Forest Service to complete an EIS. The unique nature of the North Fork Nooksack watershed (i.e., steep slopes, high diversity of wildlife, free flowing rivers and streams, multiple salmon populations, and heavy recreation use) precludes application of a cookie cutter approach to managing these national forest lands. An in-

depth analysis of environmental conditions, tribal treaty rights issues, and recreation needs is needed to prevent irreparable damage to the watershed.

The EIS should consider the cumulative the impacts of proposed timber harvest and ongoing climate change. Stand regeneration harvest could compound many hydrologic impacts of climate change, including increased frequency and magnitude of winter flooding (and associated salmon redd scour), decreased snowpack, earlier snowmelt, lower summer flows, and increased water temperature (Dickerson and Mitchell 2013, Truitt 2018).

Huckleberry Restoration

Huckleberry restoration is a unique opportunity in the North Fork Nooksack watershed. If done properly, it can provide opportunities for gathering huckleberries (an important traditional practice of local tribes), as well as reduce the acreage of dense and stunted silver fir stands that were planted at inappropriate elevations (too high) following disastrous clear cuts that devastated natural forests/parklands at these higher elevations. An EIS will be particularly important for identifying stands of replanted silver fir that are appropriate for huckleberry restoration.

Huckleberry restoration should occur only in areas above 4,000 feet elevation that are close to, if not contiguous with subalpine parkland (i.e., 4,000 feet is near the lower elevation boundary of the mountain hemlock zone). Above 4,000 feet, the mountain hemlock forest gradually thins and grades into subalpine parkland with clumps of mountain hemlock and a few silver fir trees.

Treating stands below 4,000 feet could create isolated (i.e., fragmented) huckleberry habitats that would be disconnected from the more open parkland portions of the mountain hemlock zone where strong growth of *Vaccinium membranaceum* (i.e., primary target for huckleberry restoration in the proposed project) already occurs. Such intentional habitat fragmentation could create a major challenge for pollinators and other species, not to mention restrict the effectiveness of natural pollination for huckleberry production.

The completed treatment (20% canopy closure) should leave clumps of trees and not a uniformly thinned habitat. *V. membranaceum* is most productive under such tree islands. Mountain hemlock trees in the treated area that have colonized naturally should be conserved as part of the 20% canopy coverage targeted by the Forest Service. The resulting tree islands would then more closely resemble tree islands under natural settings.

Other flowering plant species (e.g., heathers, lupines, other huckleberries, mountain ash, fireweed, and other flowering plants) should be strongly encouraged to assure a continuous supply of pollen and nectar for pollinators throughout the season (i.e., comparable to what is seen in the subalpine at Heather Meadows near the proposed restoration sites). This would be especially necessary if a huckleberry restoration treatment was below 4,000 feet and significantly isolated from subalpine parkland.

Salmon Protection and Restoration

The North Fork Nooksack River currently supports the largest salmonid populations in the Nooksack basin. However, these populations are significantly impacted by multiple factors. Chinook salmon have been listed as federally threatened for 21 years. The North Fork Nooksack population remains at less than 1% of historic abundance. Similarly, Steelhead is federally listed and Coho has been proposed for listing.

Salmon persistence depends on river and stream conditions in the North Fork Nooksack. Many reaches are beginning to recover after excessive harvests in decades prior to implementation of the Northwest Forest Plan. If conditions supporting Chinook degrade in the North Fork due to further timber harvest (especially stand regeneration harvests) or other factors associated with the vegetation management proposal, extinction of that population will be hastened. This issue alone should compel requirement for an EIS.

Road Construction

Road construction is particularly problematic in a watershed like the North Fork Nooksack. We oppose any new road construction (including "temporary" roads) and believe that an EIS should include a detailed analysis of the damage that such construction would do to hydrology. We would also like to see a complete analysis of the risks to natural flora and fauna, especially on issues such as introduction of invasive plants, access for poaching, access for illegal tree cutting, the potential for landslides, and the expected sedimentation that will come with roads. Any roads that are reopened or newly constructed as part of the project should be fully decommissioned before the end of the project.

Regeneration Harvest

Regeneration harvests will clearly have a major impact on the environment of the North Fork Nooksack watershed. The scoping letter is vague on exactly what is proposed. Importantly, the timeline for completion of treatments is not addressed at all. Knowing whether harvests would occur over just a few years versus 20 years or more years would help assess impacts to the environment, as well as recreation.

Areas of proposed regeneration harvest include mid-elevation montane forest, which offer the greatest potential to mitigate climate change impacts to Chinook Salmon (Battin et al. 2007). Extensive stand regeneration harvests could decrease forest cover below thresholds required to maintain hydrologic functions needed to support salmon and water quality (Hjältén et al. 2016, McLaughlin 2018, Mt. Baker RD 1995, NWIFC 2016).

Regeneration harvests should not occur at all in Riparian Reserve areas. Implementation of an EIS will reveal significant impacts on water temperature and stream/river sedimentation (e.g., from landslides on steep/unstable slopes and construction/reopening of forest roads) and long-term survival of salmon, bull trout, and steelhead populations. Regeneration harvests are incompatible with the goals of the Aquatic Conservation Strategy of maintaining and restoring wildlife habitat and maintaining habitat connectivity.

For proposed regeneration harvest on other Matrix designated lands (i.e., more than 1,300 acres), total clear cutting should be avoided and instead treatments on small acreages should include skips, gaps, and thins that mimic fire and wind impacted landscapes. Assuming that more early seral landscape is even needed in the North Fork Nooksack watershed (a questionable assumption), it is still imperative that new early seral habitat mimic natural landscapes (e.g., retention of snags and legacy trees, assurance of a complex and diverse flora).

Stands older than 80 years should not be disturbed at all by regeneration harvests, regardless of Matrix status. Older stands have already developed structural complexity and are not in need of restoration for wildlife habitat enhancement.

Before further regeneration harvests planning proceeds, these impacts should be evaluated in an EIS, which includes results of a Chinook salmon population viability analysis and addresses the compounding impacts of timber harvest and climate change. An example of such an analysis is in Battin et al. (2007).

Forest Thinning

Although we recognize that some thinning of planted, even-aged stands can help move a forest toward a later successional status, the benefits of thinning are very dependent on conditions on the ground and how the treatment is designed. Only younger stands (less than 80 years old) should be thinned and selective cutting should be used to protect larger trees and increase tree species diversity. Natural regeneration of cedars and western hemlocks should be encouraged. Skips and gaps, as well as variable density thinning, are also more likely to mimic natural forest conditions than a uniform thinning throughout a stand.

A detailed EIS is needed to understand how these treatments should be implemented on the proposed project acreage. The percent canopy closure post treatment needs to be fully justified. The EIS also needs to identify the specific habitat benefits that will accrue, the species that will be benefited, and the likely negative impacts to the environment if thinning occurs in inappropriate areas. Special attention should be focused on endangered salmon habitat that will be impacted by landslides, erosion, and increased water temperature.

We are particularly puzzled by the emphasis on enhancement of mountain goat habitat via commercial thinning. The scoping letter does not provide enough information to understand, let alone justify thinning in mountain goat habitat. An in-depth EIS is needed to thoroughly explain how mountain goat habitat will be enhanced and how these benefits will be balanced with the potential negative impacts of thinning in mountain goat habitat.

Citations

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Thank you for considering these comments. We look forward to working with you further on this important vegetation management proposal and would encourage the Forest Service to provide an opportunity for concerned citizens to tour proposed treatment sites during the EIS process.

Sincerely,

Jim Davis
President
Shuksan Conservancy
405 Hillcrest Way
Bellingham, WA 98225
jimdaviscpc@comcast.net