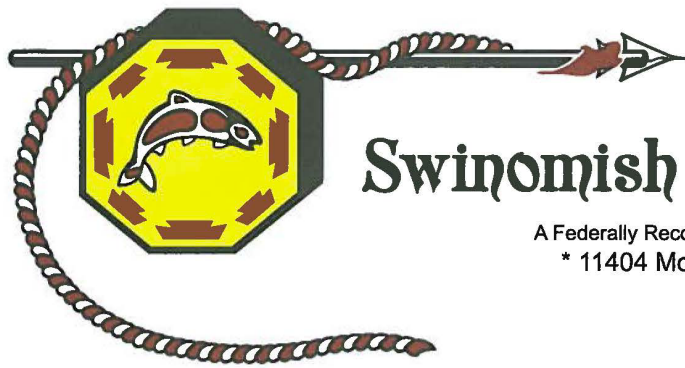




Main Office: 360.466.3163
Facsimile: 360.466.5309

Swinomish Indian Tribal Community

A Federally Recognized Indian Tribe Organized Pursuant to 25 U.S.C. § 476
* 11404 Moorage Way * La Conner, Washington 98257 *

June 8, 2026

United States Department of Agriculture
Forest Service – Mt. Baker Snoqualmie National Forest
Erin Uloth, Forest Supervisor
Mt. Baker-Snoqualmie National Forest
1000 SE Everett Mall Way, Suite 410,
Everett WA, 98208
FS-comments-pacificnorthwest-mtbaker-snoqualmie-mtbaker@usda.gov

Re: May 2026 Mt. Baker Geothermal Consent to Lease Draft Environmental Assessment

Dear Erin,

On behalf of the Swinomish Indian Tribal Community (“Swinomish” or “Tribe”) please accept these comments regarding the U.S. Forest Service’s (“USFS”) consideration of a request from the Bureau of Land Management (“BLM”) to grant consent to lease 60,0971 acres (“Proposed Lease Area”) that have been nominated in the Mt. Baker Ranger District of the Mt. Baker-Snoqualmie National Forest for geothermal energy development (“Project”). All of the Proposed Lease Area on the southeastern and southern portions of Mount Baker are within the Tribe’s adjudicated usual and accustomed area (“U&A”) and the Tribe retains Treaty-reserved rights to access these areas for hunting, gathering, fishing and cultural practices.

30 U.S.C. § 1014(b) provides that “Geothermal leases for lands withdrawn or acquired in aid of functions of the Department of Agriculture may be issued only with the consent of, and subject to such terms and conditions as may be prescribed by, the head of that Department to insure adequate utilization of the lands for the purposes for which they were withdrawn or acquired.” This statutory authorize provides the Forest Service broad discretion to grant or deny consent to lease and to impose terms and conditions. The Draft Environmental Assessment (“Draft EA”) affirms this very clearly in stating that, “the USFS will eliminate (deny) lands from further consideration when leasing would violate current management direction, law, or regulation.”¹

¹ EA p. 4.

The Forest Service must base its decision to consent to lease on consideration of the purposes of the creation of the national forest in which the consent to lease decision is being considered, and the numerous applicable laws, regulations and policies. The Mount Baker Snoqualmie National Forest was created subject to the Treaty rights of Swinomish. The consent to lease area would substantially interfere with the Tribe's Treaty protected resources and exercise of its Treaty rights. Accordingly, **Swinomish objects to the Proposed Lease Area being approved by the USFS for consent to lease and requests that the consent for these areas be denied.** This would simplify environmental review by avoiding sensitive resources and would ensure that the USFS can uphold its Trust Responsibility to the Tribe.

Swinomish appreciates that USFS prepared the Draft EA, and incorporated areas identified by the Tribe as Traditional Cultural Places and Traditional Cultural Landscapes as subject to No Surface Occupancy ("NSO"). If USFS chooses to consent to lease, the Tribe strongly supports the proposed NSO stipulations. As detailed below, there are numerous overlapping "NSO" restrictions applicable to the Baker Lake portion of the Proposed Lease Area that lie within the Tribe's U&A. Collectively these NSO restrictions should preclude any and all surface and sub-surface disturbing and development activities and preclude any future waiver, exemption or other relaxation of the strict "NSO" designation.

The Tribe incorporates its prior comments on this proposal by this reference. Thank you for your continued consideration and for addressing the Tribe's objections and concerns.

About the Swinomish Tribal Community's Treaty Rights and Resources

The Tribe appreciates the USFS September 10, 2025 letter recognizing that Swinomish is a "co-steward of the of the forest landscape" and that the "Swinomish Indian Tribal Community may have interests or knowledge of cultural uses or historic properties of religious or cultural significance within or near the proposed lease areas, or information on treaty-reserved rights within or near the area." As you are aware, Swinomish is a federally recognized Indian nation organized pursuant to Section 16 of the Indian Reorganization Act of 1934, 25 U.S.C. § 5123 with a population of approximately 1,200 enrolled tribal members. The Tribe is a present-day political successor-in-interest to certain tribes and bands that signed the Treaty of Point Elliott, 12 Stat. 927 (1855) ("Treaty of Point Elliott" or "Treaty"), a Treaty with the United States that established the Swinomish Reservation and that reserved to the Tribe other rights including without limitation the "right of taking fish at usual and accustomed grounds and stations." *United States v. Washington*, 459 F. Supp. 1020, 1039, 1041 (W.D. Wash. 1978). The Tribe's usual and accustomed fishing areas extend throughout "the Skagit River and its tributaries, the Samish River and its tributaries and the marine areas of northern Puget Sound..." *Id.* at 1049, Supplemental Finding of Fact 6.

The Tribe also has a Treaty right under Article 5 of the Treaty of Point Elliott to "the

privilege of hunting and gathering roots and berries on open and unclaimed lands.” These lands include USFS-managed lands in the Mount Baker-Snoqualmie National Forest. The Tribe’s reserved rights are to be treated as the “supreme Law of the Land” pursuant to the United States Constitution. U.S. Const. art. 6, cl. 2. Swinomish’s treaty rights, like easements, run with the lands or places they attach to, in perpetuity and are protected from federal, state, and private interference. *See United States v. Winans*, 198 U.S. 371, 381 (1905); *United States v. Oregon*, 718 F.2d 299, 304 (9th Cir. 1983); *United States v. Washington*, 20 F. Supp. 3d 828, 889 (W.D. Wash. 2007).

As explained in the declaration of Valentino Villaluz that accompanied our prior comments, Swinomish possesses Treaty rights to fish throughout the Skagit Basin and is an adjudicated Co-manager of fisheries. The Tribe also has a reserved Treaty right to hunt and gather on all open and unclaimed lands, which include USFS-managed lands. Since 2013, Swinomish has worked cooperatively with Mt. Baker National Forest (“MBS”) to carry out the commitments in our Co-Stewardship Memorandum of Understanding. Tribal members regularly exercise their Treaty rights in and around the Proposed Lease Area.

Additionally, the Tribe relies on USFS-managed lands for privacy necessary to carry out ceremonies, prayers, and other culturally significant activities. Tribal members utilize the lands in and surrounding the Baker Lake portion of the Proposed Lease Area for fishing, hunting, gathering, and cultural practices. The Baker Hot Springs is and has been a particularly important site since time immemorial.

The Tribe has a small Reservation and relies heavily on public lands to exercise its rights and Tribal members’ cultural practices. USFS-managed lands in the Skagit watershed are particularly important because they generally allow hunting and lack the recreation pressure imposed on nearby areas managed by the National Park Service.

The Project Would Cause Irreversible Harm to Swinomish’s Treaty Rights and Cultural Resources in the Baker Lake portion of the Proposed Lease Area.

The Draft EA repeatedly contends that the Project will have no environmental effects because it will not independently authorize geothermal exploration or development. As we explained in our prior comments, the Tribe disagrees with that analysis. NEPA requires analysis of potential effects at the earliest possible time. As recently explained by the Ninth Circuit Court of Appeals:

under NEPA, agencies must prepare an EIS or EA and engage with the public before reaching a final decision to undertake a particular activity that may have significant environmental impact. *See* 40 C.F.R. § 1503.1 (2020).

The point of NEPA's environmental review requirements is to assure that environmental assessment is “integrate[d]” at the “earliest possible time to insure that planning and decisions reflect environmental values.” *Andrus v. Sierra Club*, 442 U.S. 347, 351, 99 S.Ct. 2335, 60 L.Ed.2d 943 (1979) (quoting 43 Fed. Reg. 55992 (1978)). That timing assures that environmental impacts are not “overlooked or underestimated” and then discovered, if at all, “after resources have been committed or the die otherwise cast.” *Robertson*, 490 U.S. at 349, 109 S.Ct. 1835. Furthermore, building in environmental analyses at the planning and decisional stages allows nuanced adjustments of the proposed project by those most familiar with the project's goals and practical limitations.

Prutehi Litekyan: Save Ritidian v. United States Dep't of Airforce, 128 F.4th 1089, 1115–16 (9th Cir. 2025), *cert. granted sub nom. Dep't of Air Force v. Prutehi Guahan*, 224 L. Ed. 2d 174 (Mar. 9, 2026).

Here, it is reasonably foreseeable that BLM authorizes geothermal exploration and development on areas where consent to lease is granted. Those geothermal exploration and operations would cause irreversible harm to Swinomish's Treaty-protected natural and cultural resources and the exercise of its Treaty rights in the MBS. The reasonably foreseeable development activities² include:

- Drilling exploration activities,
- Development of new roads,
- Development of new transmission lines,
- Development of new energy plants,
- Fracking practices,
- Pollution to sub-surface waters from from toxic fracking chemicals,
- Use of surface and sub-surface water supplies,
- Significant noise and physical interference from machinery, and
- Ongoing geothermal plant operations.

Individually and collectively the Project's reasonably foreseeable development activities would cause out-sized harm to Tribal members' ability to exercise their Treaty rights to harvest plant, animal, and fish species, as well as carry out cultural and spiritual practices. **These**

² The RFD scenario presumes exploration, drilling, utilization, and reclamation of a 50-megawatt geothermal plant, which would utilize a footprint of from 51-350 acres, and includes the construction of 5 to 50 miles of transmission lines within a 40ft corridor. The RFD estimates that the duration of occupancy from exploration through the end of utilization could be from one to 55 years. Lands and Special Uses Report, p. 1.

numerous harms to the Tribe's Treaty rights could not be mitigated – they would be irreversible and thus must be avoided in their entirety.

While we appreciate USFS' decision to prepare an Draft EA, the analysis is often outdated or glosses over significant impacts. For example, the Draft EA, including its Fisheries Report, fails to include any information or analysis about arguably the most successful fish recovery in all of Puget Sound, Baker Lake Sockeye and Baker Lake Coho. These fisheries provide extremely important Treaty harvest opportunities for the Swinomish as well as non-tribal fishers. The 2025 juvenile salmon out-migration set a record of over 1.55 million fish passed downstream, including 1,485,560 smolt Sockeye and approximately 66,800 juvenile Coho.³ Returning adults in 2025 also set records, with a run size of 91,897 Baker Sockeye. The hatcheries that support these critical tribal and non-tribal fisheries are fed by a large network streams, tributaries and wetlands on the west side of Baker Lake and Lake Shannon. The vast majority of this large network of streams and wetlands is included in the Proposed Lease Area -- meaning that the water quantity and water quality supporting these historic salmon runs could be irreversibly harmed by the geothermal exploration and operations listed above. Increasing turbidity to the streams that flow into these Lakes can inhibit essential phytoplankton production, which leads to less productivity for the fisheries. And, once you add a pollutant like fracking chemicals into a lake system like Baker Lake, it is nearly impossible to remove that pollutant. The Draft EA does not even mention, let alone analyze, any such potentially catastrophic impacts to tribal and non-tribal fisheries. **The Tribe strongly opposes any consent to lease in the Baker Lake portion of the Proposed Lease Area due to the likelihood of irreversible harm to the Tribe's natural and cultural resources.**

The Draft EA also fails to analyze effects to hot springs, which are an important cultural resource to the Tribe. Examples in other regions demonstrate that geothermal exploration and operations can adversely impact nearby springs, even where there are buffers and setbacks. The interconnection between aquifers is often poorly understood, and once harm occurs, it can be impossible to undo. We provided examples of this in our October 2025 letter, but reiterate them here given their importance.

In Jersey Valley, Nevada, a geothermal project caused a springs to permanently run dry. In nearby Dixie Meadows, the United States Fish and Wildlife Service determined that as a result of interconnection between the geothermal aquifer and groundwater aquifers that feed a spring complex, the proposed geothermal project is likely to adversely affect water quality and quantity in the spring complex and the Dixie Valley toad that resides in the springs. *See* 87 Fed. Reg. 73971, 73984, "Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Dixie Valley Toad" (December 2, 2022)("In 2011, a 23.5-MW geothermal power plant started

³ *See* Puget Sound Energy's Baker River Coordinating Committee Q1 Report, p. 5. (2026).

production in Jersey Valley, just north of Dixie Valley. Springflow at a perennial thermal spring began to decline almost immediately after the power plant began operation (BLM 2022, p. 1; Nevada Division of Water Resources (NDWR) 2022, unpublished data). By 2014, the Jersey Valley Hot Spring ceased flowing.”).

Additionally, the Draft EA does not adequately address water quality. As discussed with respect to impacts to Sockeye salmon in the Mount Baker watershed, water quality and quantity have significant impact on fisheries. The Tribe also values clean water as a value of its own.

Geothermal exploration and development involves infrastructure, including roads and land clearing, that lead to longterm loss of forest cover and increases in runoff and turbidity. We know from experience with logging roads that roads created for infrastructure give rise to increased authorized and unauthorized recreational use, and access for vehicles, hikers, ATVs, and ebikes.

Recent developments in enhancement geothermal development involve fracking of bedrock. Where this technology is utilized, fracking fluids may enter groundwater and surface water. In these instances, “more than half of the injected volume of fracturing fluid is not produced back to the surface, and the higher the percentage of fracturing fluid that remains in the subsurface, the higher are the risks associated with it.”⁴ The Draft EA should discuss and disclose potential effects to water quality related to geothermal development, including from potential fracking.

The Tribe disagrees with USFS’ repeated contention that it does not have to analyze environmental effects until a specific geothermal project is proposed. To the extent USFS continues to follow this approach, it is important that it be very clear that any future exploration, development and leasing decisions require full environmental analysis. The 2008 PEIS is now nearly 20 years old and does not address regional or site-specific issues. The Draft EA repeatedly states that environmental effects will be addressed in later phases. If that is the case, those later stages cannot attempt to tier to or rely upon this consent to lease Draft EA. See, e.g., *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768, 784 (9th Cir. 2006) (“Under NEPA and our case law, the agencies were required to complete an environmental impact statement before extending the leases. This obligation was not satisfied by the earlier environmental reviews.”). See also, *Conner v. Burford*, 848 F.2d 1441, 1448 (9th Cir. 1988) (Holding NSO provisions cannot be freely altered without an EIS. We cannot assume that government agencies will comply with their NEPA obligations in later stages of development.). In *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1073 (9th Cir. 2002), the court held that it was unlawful for the Forest Service to

4 Makki S, Maalouf E, Yehya A, Review of the environmental and health risks of hydraulic fracturing fluids, *Heliyon*, 2024; 11. Available at <https://doi.org/10.1016/j.heliyon.2024.e40883>

tier to earlier guidelines that had not undergone NEPA review. Analogously, a later phase of review here, such as exploration or leasing, cannot tier back to analysis that never occurred.

The Tribe requests that if the Forest Service retains its current analytical approach, that the Draft EA clearly state that future tiering or reliance on the Draft EA would be inappropriate and full environmental and cultural resources review is required for any later stage of exploration and development.

The Tribe Strongly Supports No Surface Occupancy throughout the Proposed Lease Area and Believes the FONSI can Only be Supported if these NSO Designations Are Applied Without Any Modifications, Waivers or Exemptions.

As stated in our October 2025 letter, the 2015 Stipulations hold particular relevance to and ensure necessary protection of the Tribe's Treaty-reserved natural and cultural resources. We reiterate those comments here:

The 2015 proposal contains extensive stipulations that restrict surface area disturbance. The Tribe supports continuation of those stipulations. In addition, the USFS should impose the following stipulations prohibiting geothermal exploration or operations under the following conditions:

- Where the exploration or operations may impair the exercise of Tribal Treaty rights,
- Where the exploration or operations may impair surface or sub-surface water quantity or quality, or
- Where the exploration or operations may impair Tribal cultural resources and/or cultural practices, particularly access and use of springs.

The USFS has a standard to protect, and avoid negative impacts to, sensitive cultural and natural resources. This standard is clearly articulated in the Draft EA on page 4:

If the leasing of lands for the development of geothermal energy would cause impacts to public lands or resources prohibited in other direction (law, regulation, or policy), the BLM does not have a right to lease that land. It is the responsibility of the USFS to identify where potential resource degradation may occur and develop stipulations to minimize or eliminate negative impacts.

The USFS will eliminate (deny) lands from further consideration when

leasing would violate current management direction, law, or regulation.

Where a lease area proposal contains innumerable sensitive natural and cultural resources, like the Proposed Lease Area on Mount Baker, the USFS should apply the most restrictive lease stipulation, the No Surface Occupancy:

No surface occupancy stipulations are considered a major constraint as they do not allow for surface development on specific portions of lease parcels. For example, a lessee of a no surface occupancy area must develop any surface infrastructure outside the no surface occupancy area and would need to use advanced technology, such as directional drilling, to access the geothermal resource under the no surface occupancy area. These stipulations are applied to the standard lease form as a condition of the lease. A no surface occupancy stipulation is appropriate when the standard terms and conditions, other less restrictive lease stipulations, and best management practices for permit approval are determined to be insufficient to achieve the resource protection objectives.⁵

A NSO lease stipulation is an “enforceable” term that is “made a part of the lease” to implement the USFS’s “regulatory authorities to protect resources or resource values.”⁶ In the Draft EA Appendix C, the USFS sets out the multiple and overlapping NSO designations, stating:

This appendix displays the stipulations applied to future geothermal leases on certain nominated parcels to be consistent with Mt. Baker-Snoqualmie Land and Resource Management Plan (LRMP) Standards and Guidelines, and a short explanation of the reasons for the stipulations. Stipulations are formed from guidance in the 2008 Geothermal PEIS, beginning on page 2-17. All the following stipulations are consistent with and are necessary to implement the land and resource management plan.⁷

The Tribe appreciates the Forest Service’s responsive NSO stipulations. We have summarized the stipulations that are most important to the protection of the Tribe’s Treaty resources and practices below. **We request that the final EA unequivocally state that these**

⁵ EA, page 9.

⁶ Id.

⁷ EA, p. 32.

NSO stipulations will not be modified through exceptions, modifications, or waivers, and that any consideration of such potential changes first requires notification and the opportunity for government-to-government consultation with Swinomish as well as further NEPA review.

A summary of the key NSO lease stipulations for the Project include:

- 1) For Fisheries and Hydrology, No Surface Occupancy within Riparian Reserves, to protect the critical functions of these areas.
- 2) For Fisheries, Hydrology, and Soils, No Surface Occupancy within steep areas, to protect the landscape on slopes in excess of 40% and/or soils mapped with high erosion potential.
- 3) For Botany, No Surface Occupancy to protect the character and biological diversity of old-growth forests, including areas known to contain survey and manage species.
- 4) For Botany and Soils, No Surface Occupancy to protect the hydrologic and biologic features of water bodies, riparian areas, wetlands, playas, and 100-year floodplains.
- 5) For Cultural Resources, No Surface Occupancy within areas of important natural, cultural and archaeological values to tribes, and No Surface Occupancy within the boundary of properties designated or eligible for the National Register of Historic Places, including National landmarks and National Register Districts and Sites; and additional lands outside the designated boundaries to the extent necessary to protect values where the setting and integrity is critical to their designation or eligibility.
- 6) For Recreation, No Surface Occupancy for segments of rivers determined to be potentially eligible for Wild and Scenic River (“WSR”) status by virtue of a WSR inventory.
- 7) For Recreation, No Surface Occupancy to protect and preserve the nature and purposes of the Pacific Northwest Scenic Trail (“PNT”) and its planning corridor, 0.5 miles laterally on either side of the PNT.
- 8) For Wildlife, No Surface Occupancy in designated or proposed critical habitat for listed species under the ESA if it would adversely modify the habitat.

These NSOs are based on the Reasonably Foreseeable Development (RFD) scenario from the 2008 PEIS for Geothermal Leasing (USDA, DOI). The RFD scenario presumes exploration, drilling, utilization, and reclamation of a 50-megawatt geothermal plant, which would utilize a footprint of from 51-350 acres, and includes the construction of 5 to 50 miles of transmission lines within a 40ft corridor. The RFD estimates that the duration of occupancy from exploration through the end of utilization could be from one to 55 years.⁸

⁸ Land and Special Uses Report, p. 4.

“The Project does not make the decision to grant leases or authorize any exploration or development activities; it only authorizes the BLM to provided the nominated lands for competitive bid.”⁹ The Draft EA would remove the majority lands within the Proposed Lease Area from any surface occupancy. Based on the RFD, the Draft EA provides a strong basis to support each of the NSOs listed above, removing them from all surface occupancy, and they are addressed below.

1) For Fisheries and Hydrology, No Surface Occupancy within Riparian Reserves, to protect the critical functions of these areas.

The Fisheries and Hydrology Reports provide ample basis to support this NSO. Baker River and Baker Lake support at least eight (8) fish species. The Proposed Lease Area in the Baker River watershed has the greatest acreage of Riparian Reserve at 17,638 acres or 29% of the lease area.

The management standards and guidelines from the 1990 Mt. Baker – Snoqualmie National Forest Plan that are applicable include:

- Maintain the bank, floodplain, and shore stability of all wetlands, streams, lakes, and other bodies of water. Implicit in this standard are actions to prevent all forms of accelerated soil erosion and soil compaction, and the retention of the live root mat to the maximum practicable extent. (p. 4-119)

- Large woody material needed to meet the desired future condition shall be maintained and managed to: (1) maintain water quality in streamside management units of all streams at existing levels, and (2) maintain fish habitat at existing levels. (p. 4-119)

- Maintain in-channel and streambank stability maintained for upper and lower channels in the Forest watersheds in order to provide stable, high-quality in streamside management units of all streams at existing levels, and (2) maintain fish habitat at existing levels. (p. 4-119)

- Maintain pool conditions in both upper and lower channels in the Forest watersheds to: (1) provide high quality habitat for salmon and trout, and (2) provide in-stream flow regulation. (p. 4-119)

- Along perennial streams and fish bearing intermittent streams, vegetation should be maintained to provide cover and/or root strength so as to maintain streambank stability and fish habitat capability at existing levels.

Under the 1994 Northwest Forest Plan, Record of Decision, the “standards and guidelines for Riparian Reserves prohibit or regulate activities in Riparian Reserves that retard or prevent

⁹ EA, p. 1.

attainment of the Aquatic Conservation Strategy objectives.”¹⁰ Some of the applicable standards include:

- MM-2. Locate structures, support facilities and roads outside Riparian Reserves.
- MM-4. For leasable minerals, prohibit surface occupancy within Riparian Reserves for oil, gas and geothermal exploration and development activities where leases do not already exist.

Riparian Reserves provide essential habitat functions and values to a large majority of terrestrial and aquatic species found in Washington State.¹¹ The USFS has a strong basis to adhere to its Forest Plans and Land Resource Management Plan to remove Riparian Reserves from geothermal energy exploration and development activities.

2) For Fisheries, Hydrology and Soils, No Surface Occupancy within steep areas, to protect the landscape on slopes in excess of 40% and/or soils mapped with high erosion potential.

The Draft EA Hydrology Report highlights the uniqueness of Mount Baker and Baker Lake’s hydrology in the following text:

Receiving extremely heavy snowfall, Mt. Baker supports 20 square miles of active glaciers. Glaciation has been an important part of the area’s rich and complex geological history and continues to play an important role. Mt. Baker, Twin Sisters and their adjacent ridges and pinnacles form a spectacular alpine topography that dominates the landscape. Mt. Baker has one of three known crater ice cave systems in the world. Originating in North Cascades National Park (NOCA), the Baker River runs through National Forest System lands (NFSL) within the Mt. Baker-Snoqualmie (MBS) National Forest, and then through state and private lands to the Skagit River. Baker River headwater originates from glaciers and snowfields on Mt. Baker, Mt. Shuksan and in the Picket Mountain Range (greater than 7000 feet).

The watershed encompasses portions of, or is adjacent to, three designated wildernesses and 2 National Recreation Areas. The mainstem Baker River is approximately 32 miles long (Williams et al. 1975). It is the lowest major tributary to the Skagit River (USFS 2002).¹²

However, the Hydrology Report provides an assessment of the Hydrolic Unit Codes

¹⁰ Fisheries Report, p. 3.

¹¹ See, WA Dept. of Fish & Wildlife, Priority Habitats & Species, Riparian Habitat Vol 1. (2018).

¹² Hydrology Report, p. 20.

(HUCs) including the multiple sub-watersheds in the Proposed Lease Area. Notably, in Table 8, the Lower Baker Lake Watershed Condition FS Area is “Functioning at Risk.”¹³ In addition, the “Aquatic Habitat Condition,” which includes an assessment of sedimentation, is scored as “poor” for the Lake Shannon-Baker River, Lower Baker Lake, Sulphide Creek-Baker River, Swift Creek, and Upper Baker Lake HUCs.¹⁴ Thus, a NSO is necessary to protect and prevent any further water quality and habitat degradation which could harm the eight fish species that depend upon these waters as Essential Fish Habitat.

Attachment B is a map produced by the technical team at the Skagit River System Cooperative from federal agency datasets that shows the extensive nature of slopes 40% or greater across the entire mountain top of Mt. Baker.¹⁵ Similarly, the Soils Report notes that 57% of the Baker Lake Project Area contain slopes that are greater than or equal to a 40% slope.¹⁶ That Report enumerates some of the reasonably foreseeable impacts from geothermal energy development:

Potential soil impacts from geothermal exploitation are numerous. Ground disturbance would be required at both the project site and access roads associated with it. This disturbance would result in destruction of soil structure and soil organic matter loss. Soil compaction would also occur as a result of heavy machinery use. This would negatively impact several key soil functions, potentially permanently. These functions include plant growth, groundwater storage and transmission, and maintaining slope stability. Impairment of these functions could result in numerous effects across the landscape including altered hydrology, increased soil loss and stream sedimentation, impaired plant growth, and loss of biodiversity. Additionally, this soil disturbance could exacerbate existing unstable slope conditions potentially resulting in new or more intense slope failures in the area going forward.¹⁷

Additionally, the Hydrology Report notes that groundwater is “the primary water resource that is potentially affected by geothermal exploration and development.”¹⁸ In addressing the potential resource impacts, the Report notes:

13 Id. at 30.

14 Id.

15 **Elevation Data Source:** 2009 USGS National Elevation Dataset (NED) 1/3 Arc Second DEM. NED data are from a seamless mosaic of best-available elevation data drawn from a variety of sources. Spatial resolution: 1/3 arc second (roughly 10M). **Stream Data Source:** USDA Forest Service. 2021. Variable Length Interval (VLI) stream gradient dataset. Rocky Mountain Research Station, Air, Water, and Aquatic Sciences Program, Boise Aquatic Science Lab. Boise, Idaho. Stream gradient is estimated using 1:100,000 scale NHDPlusV2 flowlines and 30 m DEM data for selected portions of the Western United States.

16 Soils Report, p. 6.

17 Soils Report, p. 6.

18 Id at 23.

... the development of geothermal resources could alter instream water quality and quantity at these sites, potentially altering the attainment of ACS objectives at a given location.

With a consent to lease with a “no surface occupancy in Riparian Reserves” stipulation, future analysis would revolve primarily around direct and indirect effects to near- and in-stream habitats from sedimentation, in-water vibrations, changes to quantity or timing of flows or other water quality contaminant discharges.

RFD scenarios for geothermal energy there is an, anticipate increased water consumption, risk of thermal pollution, and potential contamination of surface water resources. Future development . . . [could cause] operational risks to nearby streams remain a key focus of environmental assessments. (USDE 2026, UCS 2013). Exploration, drilling, utilization, reclamation and abandonment can have the following key impacts on streams and water resources (UCS 2013):

- **Contamination from Geothermal Fluids:** Geothermal fluids can contain high levels of toxic chemicals (e.g., boron, arsenic, mercury, ammonia) and heavy metals. Spills, accidental discharges, or leaks from well pads and pipelines could contaminate surface water.
- **Thermal Pollution:** The discharge of cooling water or processed water, even if treated, can be warmer than the receiving stream, adversely affecting aquatic ecosystems.
- **Subsidence and Groundwater Flow Disruption:** Large-scale withdrawal of water, if not adequately reinjected, can cause ground subsidence, which may alter the hydrology of surface streams and wetlands.
- **Water Consumption:** Development and operational processes can create water requirements which would compete or change with stream flow needs.

It is clear from the Fisheries, Hydrology and Soils Reports that under the RFD scenario there could be substantial and irreversible adverse impacts to surface and sub-surface water quality and quantity from the Project. There is an existing “poor” condition determination for the aquatic habitat throughout the Baker Lake sub-watersheds, including sedimentation. Thus, employing a NSO on slopes greater than 40% and upholding the 1994 Northwest Forest Plan standard MM-4 of prohibiting new geothermal leases where they currently do not exist, is well supported given the potential irreversible impacts to water quality, fisheries and sacred sites.

3) For Botany, No Surface Occupancy to protect the character and biological diversity of old-growth forests, including areas known to contain survey and

manage species.

As the Botany Report notes, the lease stipulations “documented in the 2015 ‘Mt. Baker Geothermal Consent to lease FINAL Environmental Assessment’ continue to apply for protection of Special Status Survey & Manage Species found within the lease area, and these requirements apply to actions occurring in old growth forests.”¹⁹ As discussed below, protection of old growth forests through a NSO is also warranted due to the reliance upon this designated critical habitat by ESA-listed Northern Spotted Owls and Marbled Murrelets, both culturally important species to Swinomish.

4) For Botany and Soils, No Surface Occupancy to protect the hydrologic and biologic features of water bodies, riparian areas, wetlands, playas, and 100-year floodplains.

The No Surface Occupancy lease stipulation to protect the hydrologic and biologic features of water bodies, riparian areas, wetlands, playas and 100-year floodplains is documented in the Final PEIS for Geothermal Leasing in the Western US, October 2008 and remains applicable.²⁰ In addition, Forest Service Manual 2500, R6 Supplement 2500.98-1 contains:

additional requirements for maintaining and improving soil and water quality. It includes limitations in the areas of “detrimental soil conditions.” Detrimental soil conditions include compaction, puddling, displacement, burned soil, surface erosion, and soil mass wasting.

Land management activities are to be planned and conducted so soil and water quality are maintained or improved.

1. Soil quality is maintained when soil compaction, displacement puddling, burning, erosion, loss of organic matter and altered soil moisture regimes are maintained within defined standards and guidelines.

2. Water quality is maintained when sedimentation and nutrient enrichment from surface erosion and mass wasting processes is within ranges of natural variability.²¹

The Soils Report goes on to note that, “Steeper slopes in particular are areas where erosion and mass earth movements are more likely. As a result, there are high risks associated

¹⁹ Botany Report, p. 13.

²⁰ Id. at 15.

²¹ Soils Report, p. 3.

with construction and retention of infrastructure on steep slopes.”²² As a result, the NSO stipulation that would protect the hydrologic and biologic features of water bodies, riparian areas, wetlands, playas, and 100-year floodplains is well supported in light of the reasonably foreseeable significant impacts noted above.

5) For Cultural Resources, No Surface Occupancy within areas of important natural, cultural and archaeological values to tribes, and No Surface Occupancy within the boundary of properties designated or eligible for the National Register of Historic Places, including National landmarks and National Register Districts and Sites; and additional lands outside the designated boundaries to the extent necessary to protect values where the setting and integrity is critical to their designation or eligibility.

The Cultural Resources Report cites numerous federal law, regulatory and policy provisions that make clear “avoidance” of impacts to cultural resources is a mandated responsibility of the USFS. As noted on page 3 of the Cultural Resources Report:

Direct effects from ground disturbing activities related to geothermal activities such as the RFD scenario have the potential to cause effects on historic properties and places of traditional religious and cultural significance to Indian Tribes.

Other types of effects that may be indirect but also have the potential to cause the integrity of a property’s value to be diminished include changes to its location, design, setting, materials, workmanship, feeling, or association. In order to maintain their significance, Historic Properties must retain their integrity (US Department of the Interior).

As noted above, Swinomish is a signatory to the 1855 Treaty of Point Elliott. The Tribe has a Treaty-reserved right to fish, hunt, and gather foods, medicines, and culturally significant materialson all “open and unclaimed” lands. National Forest System lands are considered “open and unclaimed.”²³

In addition, Swinomish tribal members make use of public lands for cultural and spiritual purposes. These activities are protected by the First Amendment to the United States Consitution, the National Historic Preservation Act, Religious Freedom Restoration Act, the American Indian Religious Freedom Act, and other laws and policies.

²² Soils Report, p. 5.

²³ Cultural Resources Report, p. 5.

Swinomish tribal members have regularly practiced their Treaty rights to hunt, gather, and conduct spiritual ceremonies throughout the MBS, including the Proposed Lease Area. Further habitat fragmentation and irreversible impacts from new geothermal energy development, including the opening of roads that are currently closed entirely or seasonally to protect wildlife and their habitat, present extreme concerns of substantial harm both to the numerous Swinomish tribal members who engage in the exercise of Treaty rights in these areas and the underlying, collectively held Treaty rights themselves.

Today, Swinomish can harvest far fewer plants and animals than previous generations, which impacts my and the Tribal Community's ability to feed our families and practice our cultural lifeways. Recovering native plant and animal populations is high on the Tribe's list of priorities because the Tribe is starting to lose hunters and gatherers as opportunities to hunt and gather decline. This loss breaks the generational cycle that has existed for millennia. Before, our earliest thoughts were on the water, with our parents, uncles and grandparents catching salmon, and also on the land, hunting and gathering. If our children are no longer following in our footsteps, we—as a Tribe, as a people—are threatened with losing a way of life that has been with us for thousands of years.

Equally impactful, the degradation, fragmentation, and destruction of habitat quality and quantity already represent an existential threat to the plants and animals that form part of the foundation of the Tribe's Treaty rights and exercise of cultural, spiritual, and religious practices. Simply put, our fish, plants, and animals are experiencing a homelessness crisis. After more than a century of population growth, recreational impacts, and resource extraction in the greater Skagit River watershed, as well as the Mt. Baker - Snoqualmie National Forest and its surrounding public lands, the remaining habitat does not come close to meeting conservation needs—much less meeting the Tribe's needs in terms of access to and availability of multiple species.

This level of habitat degradation is also harmful on a cultural level to a people whose teachings and beliefs are so tied to the land. From an early age Swinomish youth are taught that life begins in the Upper Watershed—fishing, hunting, and everything else depends on the cold, clean water of the Skagit River flowing downstream from the Cascade Mountains. We have a saying that our existence occurs “from whitecap to whitecap”—meaning, from the snow and glaciers atop the Cascade mountains to the whitecaps of waves breaking in the Salish Sea. We may be the “People of the Salmon,” but we are not just that—for example, the Swinomish story pole features a mountain goat, a species only found in the alpine and sub-alpine areas of the Upper Watershed and Mt. Baker area. It is vital to Swinomish that the Forest Service maintain connectivity and species diversity in habitats throughout the MBS, and especially in the Proposed Lease Area.

Swinomish has a system of issuing permits and tags to Tribal members for the

subsistence harvest of game. These harvests are small due to conservation needs and the dwindling availability of many species for harvest, but are nonetheless very important to Tribal members' health, tradition, and cultural practices. In the 2024-2025 subsistence and ceremonial hunting season, Tribal hunters harvested 16 deer (approximately 800 pounds), 27 elk (approximately 7,290 pounds), one bear (approximately 100 pounds), and an estimated 200 geese (approximately 1200 pounds) and 500 ducks (approximately 1500 pounds).

Subsistence hunting and gathering is much more important to Swinomish and other treaty tribes than it is to the general population. Game and harvested foods like berries, in addition to fish and shellfish, have been a major part of the Swinomish diet since time immemorial. All of these foods, and in particular game, have declined as a share of Swinomish member's diets due lack of access, fragmented habitat, falling abundance due largely to inadequate or degraded habitat, and harvest time restraints.

The Tribe's adjudicated Treaty areas within both the MBS and the greater Skagit River watershed are co-located in many areas of the Proposed Lease Area, including within and throughout the Baker River watershed. Allowing geothermal energy exploration and development throughout the Baker River watershed – the most successful salmon restoration project in Puget Sound - and over ecologically important wildlife corridors that connect public lands for wildlife migration could result in irreversible direct, indirect, individual and cumulative impacts to the Tribe's Treaty rights and Traditional Cultural Properties.

As noted in the Cultural Resources Report, "the Forest Service shares the federal government's overall trust responsibility to tribes where treaty or other legally defined rights apply to NFS lands. The agency redeems this shared responsibility by exercising statutory and other legal authorities and making decisions in a manner that carries out the intent of the treaties and takes tribal interests into account in land management decisions."²⁴ In applying the No Surface Occupancy lease restrictions for cultural resources, the USFS is carrying out its legal responsibilities and Trust Responsibility to the Tribe.

In the case of managing Indian lands, the federal government owes a fiduciary duty to Indian tribes.²⁵ In *Mitchell*, the United States Supreme Court held:

[A] fiduciary relationship necessarily arises when the Government assumes such elaborate control over forests and property belonging to Indians... the fiduciary relationship normally exists with respect to such monies or properties (unless Congress has provided otherwise) even though nothing is said expressly in the authorizing or underlying statute (or other fundamental document) about a trust

²⁴ Id.

²⁵ See *United States v. Mitchell*, 463 U.S. 206, 225 (1983).

fund, or a trust or fiduciary connection.²⁶

With the federal government's trust responsibility to the Tribe, along with the desire of Swinomish to protect and manage their natural and cultural resources throughout the Skagit Watershed, especially throughout the Proposed Lease Area, it is essential that the Forest Service retain the Cultural Resource NSOs in the final Draft EA and ROD without any modification. Conversely, any weakening or removal of the NSO lease stipulations for Cultural Resources would directly and irreversibly undermine the Tribe's Treaty rights by:

- Opening Treaty-protected areas, including roads currently closed for wildlife habitat protections, to geothermal energy exploration and development, which has the laundry list of potential harms noted above and that would fundamentally alter and harm the quality and quantity of habitats upon which the Tribe's Treaty resources depend;
- Degrading, destroying, and fragmenting habitat for Treaty-reserved and/or protected species, including salmon, steelhead, deer, elk, traditional plants and foods, and culturally protected properties and landscapes;
- Restricting, interfering with and degrading access to traditional cultural use areas through privatization and industrialization; and
- Violating the federal government's obligation to protect Treaty resources in perpetuity.

Areas within the Mt. Baker Snoqualmie National Forest, and particularly within the Baker River Watershed and Proposed Lease Area, encompass numerous Traditional Cultural Places (TCPs), sacred sites, and cultural landscapes integral to the Tribe's identity and spiritual practices. The Tribe has shared necessary information with the Forest Service but seeks to maintain their exact location private in these comments. These areas include:

- (1) ceremonial and prayer sites,
- (2) traditional gathering areas for medicines, foods, and materials, and
- (3) cultural places and landscapes that embody the Tribe's stories and oral traditions.

The NSO lease stipulation provides protection to the Tribe's culturally important natural and cultural resources from irreversible harm. Without the NSO, the Project could have direct and indirect individual and cumulative effects to the exercise of the Tribe's Treaty protected rights that are essential to Swinomish's cultural lifeways and identity. The Cultural Resources NSOs must be fully retained and upheld.

²⁶ *Id.* (internal quotation marks and citations omitted).

6) For Recreation, No Surface Occupancy for segments of rivers determined to be potentially eligible for Wild and Scenic River (WSR) status by virtue of a WSR inventory.

According to the Recreation Report, over two miles of Bell Creek was deemed eligible for WSR designation as part of the 1990 Forest Plan. In addition, nearly six miles of the North Fork Nooksack River was also deemed eligible for WSR designation.²⁷ While in different watersheds, given that both of these water bodies are important salmon habitat it is important to uphold the NSO for these WSR-eligible water bodies.

7) For Recreation, No Surface Occupancy to protect and preserve the nature and purposes of the Pacific Northwest Scenic Trail (“PNT”) and its planning corridor, 0.5 miles laterally on either side of the PNT.

The Pacific Northwest National Scenic Trail is a 1,200 mile congressionally designated national scenic trail that spans from the Continental Divide to the Pacific Coast. It runs throughout the Proposed Lease Area, as depicted on the map included herein as Attachment C. According to the Recreation Report, “the PNT Comprehensive Plan identifies a minimum distance of 0.5 miles on either side from centerline of the trail as the corridor within which the identified resources and values of the trail should be protected and managed for. There are 80 miles of the PNT in the Mt Baker Ranger District, of which 26.9 miles are within” the Proposed Lease Area.²⁸ This amounts to over 17,000 acres within the Proposed Lease Area’s that is set aside for the PNT Trail. The Tribe believes that the NSO is warranted to uphold the wilderness, solitude, educational, recreational, adventure and other purposes for which the PNT Trail was created.

8) For Wildlife, No Surface Occupancy in designated or proposed critical habitat for listed species under the ESA if it would adversely modify the habitat.

Under the 1994 Northwest Forest Plan, Record of Decision, the Proposed Lease Area is classified as Late-Successional Reserve (LSR) and Riparian Reserve under the Forest Plan as amended.²⁹ A few of the applicable standards applicable for wildlife include:

²⁷ Recreation Report, p. 7.

²⁸ Recreation Report, pp. 7-8.

²⁹ Wildlife Report, p. 4.

■ Development p. C-17: Development of new facilities that may adversely affect Late-Successional Reserves should not be permitted.³⁰

■ Minerals Management MM-4 p. C-34. For leasable minerals, prohibit surface occupancy within Riparian Reserves for oil, gas, and geothermal exploration and development activities where leases do not already exist.³¹

The Wildlife Report includes the following information about the ESA-listed Northern Spotted Owl:

Northern Spotted Owl – The spotted owl continues to display an apparent declining population trend across its range (as was predicted in the Northwest Forest Plan), particularly in Washington and British Columbia, Canada. There are twelve historic owl activity centers within lands proposed for lease. They are also within the home range (.7-mile radius) of seven historic owl activity centers. All owl activity centers are based on historic surveys in the 1990s. Owl territories in or near the project area have not been recently surveyed to protocol. No spotted owl activity centers have been detected in or near the proposed lease areas in any surveys since 2008. Although, the surveys are limited and the area as a whole is considered unsurveyed.

Almost all the land proposed for lease occurs in the Nooksack and Baker Late-Successional Reserves (LSR) and contain areas suitable for nesting by spotted owls. Because of their size and expected contribution to spotted owl production, these LSRs are very important to the success of the LSR conservation strategy adopted by the Northwest Forest Plan (USDA 1994). The LSRs are expected to be a source of owls dispersing to two neighboring LSRs and maybe a critical link to late-successional habitat in North Cascades National Park.³² (Emphasis added).

Northern Spotted Owls are a culturally important species to the Swinomish Tribe, and the Tribe values the complex older forest habitat conditions that NSOs and marbled murrelets (see below) rely upon. In Washington, populations have declined by more than 80% from 1995-2017.³³ Particularly in light of these dramatic population declines, maintaining unoccupied

30 Id.

31 Id. at 5.

32 Wildlife Report, pp. 7-8.

33 Franklin, A.B., K.M. Dugger, D.B. Lesmeister, R.J. Davis, J.D. Wiens, G.C. White, J.D. Nichols, J.E. Hines, C.B. Yackulic, C.J. Schwarz, S.H. Ackers, L.S. Andrews, L.L. Bailey, R. Bown, J. Burgher, K.P. Burnham, P.C. Carlson, T. Chestnut, M.M. Conner, K.E. Dilione, E.D. Forsman, E.M. Glenn, S.A. Gremel, K.A. Hamm, D.R. Herter, J.M.

Higley, R.B. Horn, J.M. Jenkins, W.L. Kendall, D.W. Lamphear, C. McCafferty, T.L. McDonald, J.A. Reid, J.T. Rockweit, D.C. Simon, S.G. Sovern, J.K. Swingle, and H. Wise. 2021. Range-wide declines of northern spotted owl populations in the Pacific Northwest: a meta-analysis. *Biological Conservation* 259:109168.

habitat on the landscape is critical to allow for spotted owl recolonization, as are management actions taken to reduce invasive barred owl populations and ensuring habitat continuity for spotted owl dispersal across occupied suitable habitat is essential. Northern Spotted Owls are particularly sensitive to audio-visual stressors during the early breeding season, when flushing an adult may result in injury to eggs or young. The fragile status of spotted owls in Washington necessitates a conservative approach to any actions that may further exacerbate declines. Given that almost all of the Proposed Lease Area contains suitable nesting habitat for Northern Spotted Owls, the Tribe strongly supports the NSO throughout the Proposed Lease Area in order to protect the designated critical habitat of ESA-listed Northern Spotted Owls.

The Wildlife Report includes the following information about the ESA-listed Marbled Murrelet:

Marbled Murrelet – The murrelet continues to display an apparent declining population trend across its range (as was predicted in the Northwest Forest Plan), particularly in Washington. In Zone 1, there is a declining trend of 7.4% of population/yr., or about 30% decline in population since monitoring began in 2001. Surveys for murrelets are limited. Marbled murrelet detections (flyovers and vocalizations) have been made in the Baker River and South Fork Nooksack River drainages (Forest Service Files). There are numerous murrelet detections within and adjacent (within 0.5 miles) to the lands proposed to lease. The lease areas range from approximately 23 to 43 miles from the salt water of Puget Sound. There is suitable marbled murrelet nesting habitat within the lands proposed for lease. The vast majority of land proposed for lease occur within a Designated Critical Habitat unit for marbled murrelet (WA-07-c) (USDI 1996).”³⁴ (Emphasis added).

Marbled Murrelets are also a culturally important species to the Swinomish Tribe. Marbled murrelet in Washington experience extremely low fecundity rates. Marbled murrelet are vulnerable to fragmentation caused by development, which create edge effects that increase exposure to corvid nest predators. Any activities that result in the loss of occupied nesting habitat, mortality of breeding adults, or reductions in nest productivity due to disturbance or increased exposure to nest predators reduce the probability of recovery. Given that the “vast majority” of the Proposed Lease Area is designated critical habitat for ESA-listed Marbled murrelet, the Tribe strongly supports the NSO throughout the Proposed Lease Area in order to protect their designated critical habitat.

Numerous other culturally important wildlife species occur within the Proposed Lease Area, including:

- Bald Eagle

³⁴ Wildlife Report, pp. 8-10.

- Mountain Goat
- American Goshawk
- Fisher
- Pileated woodpecker
- Deer
- Elk

Regarding deer and elk, the Wildlife Report notes that:

The Nooksack Elk Herd provides recreational, aesthetic, spiritual, and subsistence values to residents of northwestern Washington. The lease area is located partially in the Nooksack herd's range. Foraging habitat may not be a limiting factor to the herd at present, but the availability of forage in the project area in the future is a concern. As one might expect, a high density of roads can have a negative impact on elk with increased disturbance from legal hunting and poaching (CEMG 1999).³⁵

In taking the habitat needs of the above-mentioned ESA-listed and non-listed species into account, it is clear that the Project would completely undermine their recovery and existence by fragmenting and degrading their habitat. The Project would also interfere with the Tribe's ability to harvest culturally important species such as deer and elk within the Proposed Lease Area. As a result, the Tribe strongly supports the NSOs for the designated critical habitat of ESA-listed Northern Spotted Owl and Marbled Murrelet, which are also culturally important species.

In sum, given the overlapping Treaty-protected cultural and natural resources throughout the Proposed Lease Area, all lands within Baker River watershed should be withdrawn and denied. However, if the USFS must proceed with consent to lease, then the USFS Finding of No Significant Impact ("FONSI") under the Draft EA is only appropriate if the numerous NSOs discussed above remain in place and fully intact. Additionally, there should be a clear statement that future environmental and cultural resources review should not tier to the Draft EA, and require full analysis.

Endangered Species Act and National Historic Preservation Act Compliance

As stated in our prior letter, the Tribe believes that the correct and most appropriate time to conduct robust NEPA, Endangered Species Act, and National Historic Preservation Act consultation and compliance is early, before momentum gathers that results in later exploration and development. If the Forest Service does not undertake this necessary comprehensive and

³⁵ Wildlife Report, pp. 17-18.

site-specific resource analysis now, it must clearly provide that such analysis is required prior to any decision on any future permit, including for all phases of exploration, leasing, and development. No waiver, modification or exemption can be considered or granted until the full site-specific analysis of resource impacts has been completed.

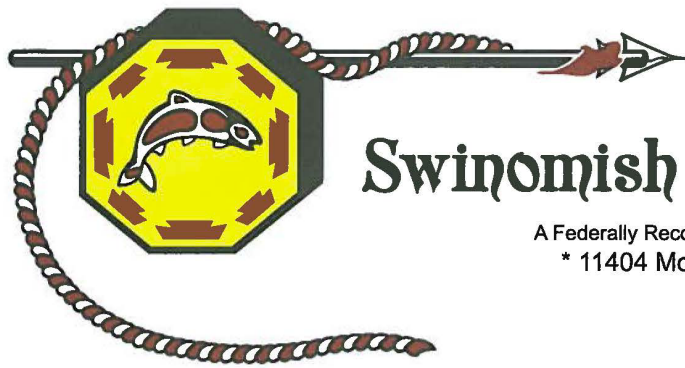
Conclusion

The Tribe appreciates the USFS consideration of its comments and objections on the Draft EA. Swinomish requests that instead of the NSOs provided within the Baker River and Skagit watersheds, that the Forest Service deny the consent to lease. If the Forest Service provides consent to the BLM, the Tribe requests that in the Final EA and Record of Decision the Forest Service: 1) retain and uphold the strong NSO protections described in the Draft EA, and 2) clearly state that because the Draft EA defers analysis of impacts to the environment, listed species, and cultural resources that these impacts must be fully assessed in any proposed later phases and prior to any federal permit for any exploration or development work.

Sincerely,



Steve Edwards, Chairman
Swinomish Indian Tribal Community



Main Office: 360.466.3163
Facsimile: 360.466.5309

Swinomish Indian Tribal Community

A Federally Recognized Indian Tribe Organized Pursuant to 25 U.S.C. § 476
* 11404 Moorage Way * La Conner, Washington 98257 *

List of Attachments

Attachment 1	Declaration of Valentino Villaluz
Attachment 2	Map of 40% or greater slopes in the Proposed Lease Area
Attachment 3	Map of Pacific Northwest Scenic Trail in Baker Lake area