



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Ecological Services
1009 College St. SE, Suite 215
Lacey, Washington 98503



May 10, 2024

Debbie-Anne Reese, Acting Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Dear Acting Secretary Reese:

Subject: Newhalem Creek Hydroelectric Decommission Environmental Assessment
Comments

Thank you for the opportunity to provide comments on the Environmental Assessment (EA) of the proposed decommissioning of the Newhalem Creek Hydroelectric Project (FERC No. 2705-037), (hereafter referred to as the Project) dated March 29, 2024.

The EA recommends partial decommissioning of the Project as proposed by City Light. For reasons outlined below related to ecological and cultural issues, the U.S. Fish and Wildlife Service (USFWS) does not support the proposed action and instead advocates for a modified Full Removal Alternative. This modified Full Removal Alternative, hereafter called the Full Restoration Alternative, will:

- Rehabilitate a traditional cultural property (TCP) eligible for the National Register;
- Meet environmental justice objectives by protecting and restoring cultural resources for tribal communities;
- Provide a private location for tribes to practice religious ceremonies, treaty-reserved rights, and to pass down cultural knowledge in an area that is highly significant to them;
- Restore upland forest, riparian, and floodplain habitat to a natural condition;
- Eliminate the effects of long-term maintenance of the facilities on terrestrial, aquatic, and TCPs;
- Minimize fire risk and eliminate the risk to firefighters to protect facilities from structural and wildland fires; and
- Eliminate the life cycle costs required to maintain and protect facilities.

PACIFIC REGION 1

IDAHO, OREGON*, WASHINGTON,
AMERICAN SAMOA, GUAM, HAWAII, NORTHERN MARIANA ISLANDS

*PARTIAL

Debbie-Anne Reese

2

The Full Restoration Alternative consists of the Full Removal Alternative with the following modifications:

- Retain the following facilities:
 - The road and bridge from the Newhalem Campground to the Powerhouse.
- Evaluate the following facilities for removal:
 - Penstock, penstock thrusts, and cradles located in the tunnel.
- Remove the following facilities:
 - Hilfiker wall and associated access road;
 - All above and below ground power lines, power poles, power pole anchors, and associated underground vaults;
 - All transformers and cement bollards;
 - Above ground penstock, penstock thrusts, and cradles;
 - Electrical cables and conduit attached to penstock saddles and telephone line laying on the ground adjacent to the penstock;
 - Viewing platform constructed of treated lumber on the lower portion of the penstock;
 - Six-inch diameter PVC pipe adjacent to the penstock;
 - Rock retaining fencing and posts above the penstock tunnel entrance;
 - Telephone, circuit breaker, lights, and six-inch PVC pipe inside of the penstock tunnel; and
 - Electrical conduit, lights, telephone line, and anchors in the penstock tunnel.

Modifications and Additions to the Proposed Management and Monitoring Plans

Since final management plans were not included in the EA and given that the Project is situated entirely on National Park Service (NPS) land, the USFWS believes the NPS should be granted the authority to approve all monitoring plans, management plans, and restoration actions before implementation as a condition of the Surrender Order. Approval from the NPS will be necessary to ensure that lands are restored to a condition satisfactory to the NPS and in accordance with the regulations NPS is committed to uphold (e.g., Organic Act of 1916). We provide the following comments and revisions to the proposed management and monitoring plans and ask FERC to include these changes as Surrender Order conditions.

Road Decommissioning Plan

The USFWS requests that all culverts are removed, natural drainage restored, and road ditches are filled. The road surface should be scarified first with the excavated material placed on the cut slope as appropriate to maintain or improve stability of the site and long-term drainage. When decommissioning the road, we recommend that microtopography features are created to help facilitate native plant regeneration on the scarified roadbed. We also request organic material be added to a depth of four inches on top of mineral soil surfaces to facilitate natural regeneration. The plan should also include restoration actions for the stream crossing that incorporates temporary erosion control and plantings.

The USFWS also requests that the impacts of the landslide/hill slope failure caused by the road should be mitigated by removal of the concrete retaining wall, all, or part of the Hilfiker wall (working in cooperation with federal, state, and tribal partners to determine the best approach),

restoring natural drainage to these slopes, and contouring the slope to match existing natural topography. Leaving the Hilfiker wall in place represents an unacceptable risk of a catastrophic failure when these structures become overloaded by landslide debris as the rebar lattice deteriorates. This potential for a large release of material into Newhalem Creek due to these constructed conditions could have major adverse impacts to the aquatic life, including bull trout, and culturally significant values of Newhalem Creek. The risk and potential burden of having to mitigate the impacts of a failure is unacceptable to the USFWS. Removing the Hilfiker wall and re-establishing natural drainage and contour of the slope is a reasonable mitigation and will result in the best outcome for the natural and cultural resources in lower Newhalem Creek.

Sediment and Erosion Control Plan

The USFWS supports the decision to forgo the construction of a grade control structure in Newhalem Creek so long as adequate monitoring and adaptive management strategies are incorporated into this plan. We concur that the large bedrock/boulder features upstream of the dam will likely serve as a natural grade control. That said, monitoring should be conducted to confirm the assumptions of the lower bounding estimate of stream bed erosion described in Dubé 2023 and on page 12-14 of the EA are met and if road decommissioning actions adequately mitigate impacts of the slope failure. As such, three years of monitoring to assess the impacts of sediment transport in Newhalem Creek after dam removal will be insufficient. The effects of dam removal on stream bed and bank erosion will happen during high flow events that have decadal recurrence intervals. The findings from the geomorphology report developed for this project and cited in the EA (page 12), describes a re-adjustment that happens slowly over a long time frame. Dubé 2023 states, “*Because of the coarse nature of the streambed (cobble/boulder/gravel), the re-adjustment to the new base level would likely take place relatively slowly, over decadal or longer time scale following the initial channel adjustment close to the diversion structure.*” Therefore, we request, that monitoring continue until at least two flood events over 1,500 cfs (2-year flood, Dubé 2023) and one flood event over 3,200 cfs (5-year flood, Dubé 2023) have occurred in Newhalem Creek over three separate years.

We agree with FERC that monitoring should include an assessment of “*barriers to fish passage that may develop due to sediment movement that have the potential to impede the passage of salmon, steelhead, bull trout or Dolly Varden into or within the lower 0.65-mile section of Newhalem Creek.*” We also request the monitoring be conducted prior to deconstruction activities and after two 2-year and one 5-year flood event to include:

1. Cross sectional measurements of wetted widths and depths (including thalweg depth) at no less than five equally spaced transects on the alluvial fan of Newhalem Creek where it enters the Skagit River;
2. Measurements of the maximum longitudinal distance the Newhalem Creek alluvial fan extends into the Skagit River;
3. Photographs depicting the habitat features of the alluvial fan;
4. Annual measurements of residual pool depths for all channel spanning pools within the lower 0.65-mile section of Newhalem Creek;

Debbie-Anne Reese

4

5. Annual measurements of sediment particle sizes and embeddedness using Wolman pebble counts (n = 250/site) conducted in riffle habitat at two locations: 1) below the Newhalem Creek bridge and 2) between the Newhalem Creek Bridge and the falls; and
6. An assessment stream bed and bank erosion at two locations: 1) above the falls and 2) at the site where the slope failure intersects with the stream below the falls.

If monitoring indicates that erosion of the streambed and/or banks (including the toe of hill slope failure associated with dam access road) are causing impacts to fish movement in and out of Newhalem Creek, decreasing residual pool depths, increasing fine sediment and embeddedness, and/or increasing turbidity (see Water Quality Plan), we request the plan include an adaptive management strategy that provides the opportunity for intervenors to evaluate stream conditions and work with the licensee to implement measures to mitigate the impacts and/or to extend monitoring actions to determine if the impacts will naturally resolve.

Restoration Plan

The USFWS agrees with FERC's determination on the scope and components of this plan. We also strongly recommend that intervening tribes be consulted on the species of plants that are reseeded and planted. We support the Sauk-Suiattle Indian Tribe's comments filed with FERC¹ on prioritizing culturally significant plants for inclusion in the restoration plans as this could help strengthen tribes' ability to practice their gathering treaty right. We also agree with the Sauk-Suiattle Indian Tribe that a restoration plan should include snag retention to provide wildlife habitat. Restoration efforts should also promote the natural recruitment of native plants to the North Cascades Lowland Forest ecoregion.

Additional Recommended Plan

Water Quality Monitoring and Management Plan

The USFWS recommends that City Light develop a Water Quality Monitoring and Management Plan. The purpose of the plan is to describe the methodology and procedures City Light will implement to evaluate water quality conditions associated with decommissioning. This information will be needed to assess project-related effects and to inform adaptive management actions to protect aquatic resources including ESA listed bull trout, steelhead, and Chinook salmon. The plan should include continuous hourly measurements of water temperature, pH, and turbidity measured on a year-round basis until a minimum of two 1,500 cfs and one 3,200 cfs magnitude flows have occurred over three separate years. Adding these parameters to USGS gaging station 12178150 would likely be a cost-effective means of fulfilling these requirements.

Comments on the Environmental Effects Analysis

Power Tunnel

The USFWS requests that impacts associated with the removal of the penstock and any supporting structures in the tunnel (i.e., conduit, telephone line, wood cradles) be evaluated to determine if the short-term negative impacts of a removal action outweigh the long-term beneficial impacts of removal. As part of this evaluation, we request that the compounds used to

¹ Accession No. 20240426-5028

Debbie-Anne Reese

5

treat the wood cradles, walkway planks, and the extent of any soil contamination in the tunnel be determined. We support leaving the lower end of the penstock tunnel open to allow for wildlife, colonization, including bats. However, ensuring that contaminant sources within the tunnel are mitigated would be necessary to reduce adverse impacts to wildlife utilizing the tunnel.

The USFWS does not support the disposal of concrete or the use of slurry for transporting debris into the vertical portion of the power tunnel and requests that all concrete be removed from the Project and disposed of offsite. Disposing of concrete in the tunnel would effectively turn the power tunnel into a dump site, and use of slurry to transport material would have potential water quality impacts. If the tunnel must be filled, we recommend natural material from the landslide adjacent to the headworks access road.

Penstock Long-Term Stability

The Partial Removal Alternative of the EA and Decommissioning Plan fails in fully addressing the penstock's long-term maintenance, stability, and the impacts of vegetation management. Factors that were not assessed include: 1) the effects of precipitation and soil erodibility on penstock stability, 2) existing condition of above ground penstock cradles and supporting structures, 3) corrosion of concrete penstock cradles, and 4) impacts to terrestrial habitat related to hazard tree management. When combined, these factors indicate that the long-term stability of the penstock will require significant levels of maintenance to ensure the integrity of the structures, negatively impact forest structure and wildlife habitat, and place personnel at unnecessary risk when managing hazard trees. Under the Partial Removal Alternative, the only maintenance City Light proposed for the penstocks is painting every 10 to 20 years, which the USFWS finds to be severely deficient.

The penstock and its associated saddles are located on steep slopes below the power tunnel. The cradles above the powerhouse are not deeply buried and many of them have exposed bases that already exhibit erosion beneath them. If the penstock remains, we expect continued erosion and slope stability issues under the penstock cradles where slopes are more than 40 percent, which will threaten the integrity and function of the penstock. Despite the assertion in Page 9 of the EA stating, "*no detailed soil survey has been done in the Newhalem Creek area,*" a soil survey of the project area was published by the NRCS². Soil types found underlying the penstock saddles (Map Units 6014 and 6015 in Figures 1 and 2 below) are ranked "high" for corrosion of concrete and "severe" for erosion hazard. Therefore, slope run-off from precipitation events will continue to undercut and degrade these saddles on this steep slope necessitating short and long-term maintenance.

² Natural Resources Conservation Service. Soil Survey of North Cascades National Park Complex.2012. Washington, USDA NRCS.

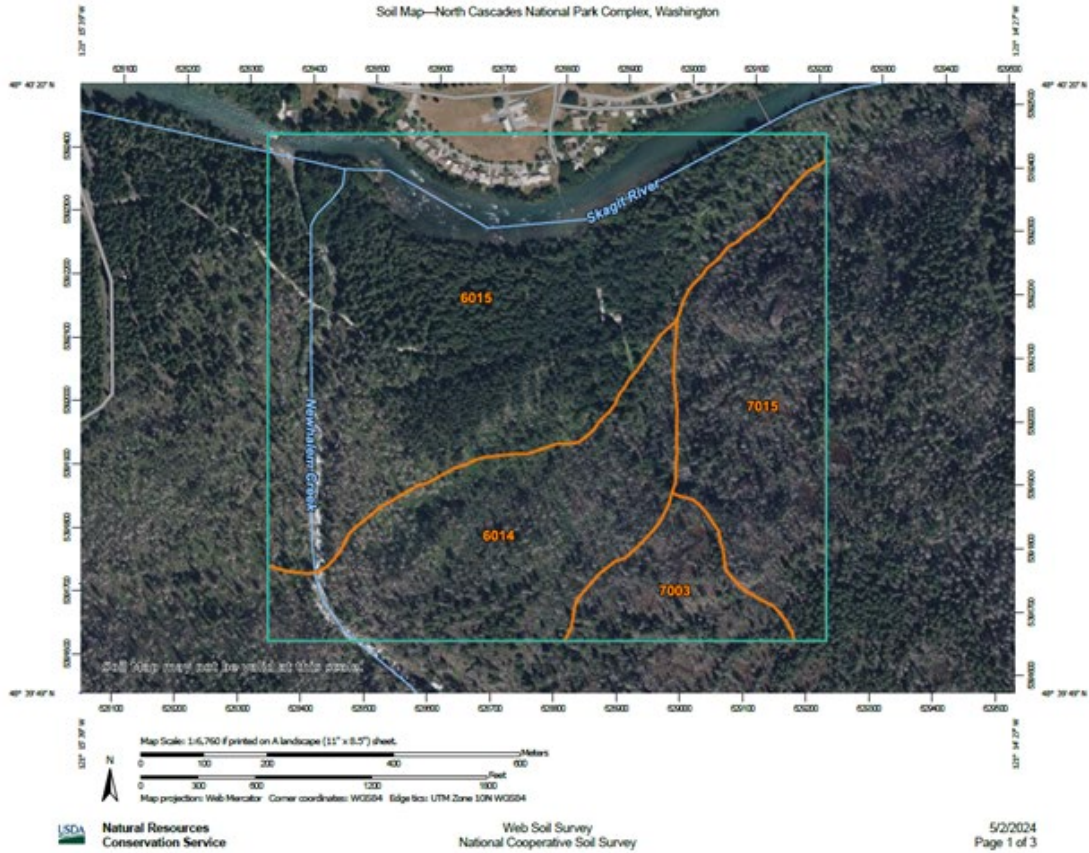


Figure 1. Soil Map, NRCS Report, 2012.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6014	Thornton-Ragged-Ledeir complex, 15 to 65 percent slopes	37.4	21.4%
6015	Tricouni-Ragged-Easy complex, 5 to 50 percent slopes	93.8	53.6%
7003	Benzarino-Ragged-Rock outcrop complex, 35 to 100 percent slopes	11.2	6.4%
7015	Thornton-Ragged-Benzarino complex, 35 to 100 percent slopes	32.6	18.6%
Totals for Area of Interest		175.1	100.0%

Figure 2. Soil Map Legend, NRCS Report, 2012.

Additionally, over time, trees will grow adjacent to the penstock saddles, impacting their ability to support the penstock especially when trees tip, exposing root balls and undermining the soil

Debbie-Anne Reese

7

adjacent to the saddles on steep slopes. In addition, hazard trees will likely fall on the penstock damaging its integrity and function. These hazards also exist for the section of the penstock built on the flat slope. Rockfall also has a considerable potential to damage the penstock and saddles.

FERC concluded on page 18 of the EA that “*by retaining the penstock, soil disturbance along the penstock route would be minimal, and no negative effects would occur.*” The USFWS disagrees with this assessment and anticipates the penstock saddles will eventually shift due to unstable soils. As a result, the penstock and penstock saddles will either fall into disrepair, littering the natural landscape, or require significant amounts of maintenance (far beyond painting) to manage erosion and corrosion of the saddles and to manage hazard trees (which have a considerable habitat value) to prevent structural damage to the penstock itself. Additionally, the continued presence of the penstock and saddles, as well as the anticipated maintenance (e.g., saddle reconstruction, hazard tree removal, and associated noise disturbance) will disrupt normal movement patterns and behaviors of wildlife. Furthermore, the penstock and saddles diminish the indigenous cultural value of the area (see below). For all these reasons, USFWS supports the removal of the penstock, saddles, and associated infrastructure as part of the Full Restoration Alternative.

Soils and Contaminants

We do not concur with the determination on Page 18 of the EA that “*Full removal of the project would present more risks from hazardous substances to human health and ecological receptors than City Light’s proposed partial removal of the project. In addition to the risks discussed above, removal of the penstock and powerhouse would disturb soils containing hazardous substances to be transmitted directly or indirectly to humans, plants, and animals in the area. Commission staff finds this disturbance of soils would result in moderate, temporary adverse effects.*” As stated above, USFWS has substantial reason to believe soil disturbance will occur, via high soil erodibility and lack of penstock/saddle maintenance, along the penstock even if left in place. In the long-term, FERC staff expect a permanent beneficial effect from removing any soils containing hazardous materials during construction, and we concur. The more structures that are removed and media restored, the greater the benefit for human health and the environment. A thorough sampling and evaluation of the nature and extent of contamination should be completed prior to removing any structures. City Light already proposes to remove structures that may have caused contamination; removing additional structures should not be an issue.

The EA mentions that “*removal of the diversion dam (including the sluiceway and intake), gatehouse, and pedestrian bridge, under both the proposed action and the full dam removal alternative, would in the short-term mobilize the sediment in the impoundment and transport it downstream.*” The EA does not address the issue that “*the potential of sediment being contaminated with potentially toxic concentrations of mineral or organic chemicals (e.g., mercury, polychlorinated biphenyls [PCBs]) is a consideration for a dam removal project. If removing a dam releases impounded sediments that may be contaminated at levels above background levels for the river system, then those sediments may need to be removed or contained to prevent downstream contamination.*”³ Given that impounded sediments may be

³ Congressional Research Service. “Dam Removal: The Federal Role.” Updated March 15, 2024. Accessed at: [Dam Removal: The Federal Role \(congress.gov\)](https://www.congress.gov/resources/library/publications/20240315/dam-removal-the-federal-role).

found to contain contaminants, there may be an even greater need to keep them from migrating downstream until restoration efforts are complete. Therefore, we recommend that sediments be tested for contaminant constituents prior to removal of the dam structures. If present, contamination would need to be remediated prior to dam removal and the release of sediments downstream.

Electrical Service Line to the Powerhouse

The Partial Removal Alternative proposes to retain the overhead electrical service line across the Skagit River to the powerhouse. Despite City Light's proposal to install line markers to "reduce the risk of [avian] collisions, ...some collisions, at low frequency are still likely to occur." The USFWS believes avian collisions with overhead powerlines, even in a reduced frequency, is unacceptable, especially given that the powerline's sole purpose on the landscape is to support a feature (the powerhouse) that severely diminishes a traditional cultural property (see Cultural Resources comments below). Additionally, the EA analysis fails to account for wildfire risk that the powerlines pose from arcing. For these reasons, the USFWS supports removal of the overhead powerlines and associated poles as a part of the Full Restoration Alternative.

Cultural Resources

The EA states that removal of the powerhouse and penstock "*would result in greater adverse effects to the Skagit River and Newhalem Creek Hydroelectric Projects Historic District than would occur under the proposed action.*" While we agree that adverse effects to the historic district would occur, it ignores the proportionality of effect to the historic district as a whole and the outsized historical presence of hydropower compared to indigenous history and culture of the Skagit Valley.

Other than the No Action Alternative, all alternatives would adversely affect the Skagit River and Newhalem Creek Hydroelectric Projects Historic District (DT-66). The Newhalem Creek powerhouse and penstock, however, only comprise two properties within the 58-property district. Furthermore, portions of the powerhouse and/or penstock (e.g., Pelton turbine) could be moved to the Newhalem townsite to provide interpretive opportunities for the public access and learn about the role of hydropower in the Skagit Valley. Therefore, FWS does not agree that the retention of the powerhouse and penstock under the Partial Removal Alternative is necessary to mitigate effects of decommissioning on historic properties.

Comparatively, the Partial Removal Alternative would have an adverse effect of greater magnitude to the Upper Skagit Indian Tribe's TCP 45WH450. The integrity of the TCP is almost entirely defined by the pre-developed natural environment which formed the basis of the Tribe's unique origin story and is integral for tribal members' spiritual and ceremonial practices. It is explicitly stated in the 45WH450 "Determination of Eligibility" that the historic built environmental features, including dams, reservoirs, and their associated operational and maintenance facilities (e.g., Newhalem Powerhouse and penstock), diminish the TCP's integrity (Mierendorf and Schuyler, 2019:15⁴).

⁴ Mierendorf, Robert R. and Scott Schuyler "The Skagit River Gorge and Canyons, Whatcom County, Washington, 45WH450" National Register of Historic Places Determination of Eligibility. Upper Skagit Indian Tribe, Sedro-Woolley, WA, November 13, 2019.

Debbie-Anne Reese

9

Therefore, we strongly support the Upper Skagit Indian Tribe's position for the Full Restoration Alternative and concur that partial removal has an adverse effect to the Tribe's TCP 45WH450.

Several federally recognized Indian tribes have expressed interest in a location to carry out culturally significant activities and ceremonies in the upper Skagit Valley. Thus, we support the Full Restoration Alternative as means to provide tribes with a location to carry out religious ceremonies and treaty-granted fishing and gathering rights. Retaining the road and bridge from the Newhalem Campground to the powerhouse site will enable tribal access for these purposes.

The establishment of the Newhalem Creek Hydroelectric Project contributed to the economic prosperity of Seattle while marginalizing indigenous communities and disposing them of their land. Retaining the partial remains of the Project to convey hydropower's legacy in the Skagit Valley is redundant and overshadows the indigenous history that preceded it. The Skagit Hydroelectric Project's three functioning dams and the historic district that it resides in adequately depicts hydropower's role in the history of the area. The Full Restoration Alternative provides an opportunity to honor the indigenous history of the upper Skagit Valley and allow tribal communities to reconnect with traditional places and resources that are sacred to them. We challenge City Light and FERC to support an outcome that strengthens tribal trust treaty rights, responds to the cultural needs of the Tribes, and balances the stories told in and about the human history of the Skagit River Valley.

Thank you again for the opportunity to comment on the EA. We look forward to continued coordination with FERC, City Light, agency, and tribal partners as we strive towards a decommission plan that restores the environmental integrity of the site. If you have any questions, please contact Jeffrey Garnett (jeffrey_garnett@fws.gov; 360-701-6838).

Sincerely,

VINCENT
HARKE

Digitally signed by
VINCENT HARKE
Date: 2024.05.10
11:39:52 -07'00'

for Brad Thompson, State Supervisor
Washington Fish and Wildlife Office

cc:

FERC, Washington, DC (D. Shannon)

Document Content(s)

Newhalem Hydro EA Comments_signed_20240510.pdf1