



Elevating the voices of those impacted by the Duwamish River pollution and other environmental injustices to advocate for a clean, healthy, and equitable environment for people and wildlife. We promote place-keeping and prioritize community capacity and resilience.

August 14th, 2026

Letter to: the Department of Ecology

Re: Glacier Northwest, Inc. Remedial Investigation (RI) Public Comment Period

On behalf of: the Duwamish River Community Coalition (DRCC)

Dear Department of Ecology,

On behalf of our Coalition, we thank you for the opportunity to comment on the Glacier Northwest draft remedial investigation (RI) for review. When reading through this report, our priorities lie with our neighbors. As a community-based organization rooted in the Duwamish Valley, we bring forward the lived experiences, technical knowledge, and long-standing advocacy of communities most impacted by contamination in the Lower Duwamish Waterway. People who live in Georgetown and South Park have some of the most severe health inequities in our region. Childhood asthma hospitalization rates continue to be among the highest in the City of Seattle, and life expectancy is approximately 10 years shorter when compared to wealthier neighborhoods and seven years shorter when compared to the King County average (*Public Health - Seattle & King County Assessment, Policy Development & Evaluation, 2023*). Our community also lives in close proximity to several contaminated waste sites and suffers from air pollution caused by both King County International and Seattle-Tacoma International airports, over 1400 industrial facilities operating in the Valley, drayage truck and traffic congestion, and three highways blanketing our neighborhoods.

The straightening, widening, and deepening of the River to accommodate industry in the early 1900s, alongside policies that prioritized economic benefits over community health, transformed the Duwamish valley and sanctioned decades of pollution. Toxic contaminants heavily diminished wildlife, habitats, and recreational uses, and approximately 97 percent of the original aquatic and shoreline habitat is destroyed (*National Oceanic and Atmospheric Administration, 2026*). The continued settler occupation of the land, and zoning decisions thereafter, changed the landscape so severely and legalized dumping of waste into the River for so many decades that

this cleanup effort is one of myriad reparations required to heal our lands and waters. For our community, this cleanup is not an endpoint but the beginning of a much longer process of healing. We have significant concerns related to data gaps and overall readiness for this site to move from the Remedial Investigation (RI) to the Feasibility Study (FS).

We want it to be noted on the public record that documents and resources critical to assessing this remedial investigation were not provided (porewater study results) and had to be found elsewhere or requested, including results from additional porewater testing, and that both the [Feasibility Study Data Gaps Report – Agency Review Draft](#) and the [Draft Solidification/Stabilization Treatability Testing Memorandum](#) were added on 7/16 only after the third comment period extension.

Data gaps still existing include:

I. EJ assessment

- A. We understand that this RI is backdated from two years prior and that MTCA's HEAL commitments were new. To align with state statute, we request that the RI be revised to include a full assessment of the Overburdened Communities/Vulnerable Populations likelihood as per Ecology's Implementation Memorandum No. 25¹.

1. We believe this census tract will qualify as having a high likelihood of containing overburdened communities and vulnerable populations. The feasibility study, according to MTCA statute, must then document thoroughly how this finding was incorporated into alternative considerations and how it impacted final recommendations for cleanup.

- B. South Park residents, many of whom are low-income, immigrant, and Indigenous community members, live within roughly half a mile of this site across the Duwamish. This must be included when considering cleanup alternatives,

II. Land use assessment

- A. Throughout this process, we request that you explicitly acknowledge that the areas within and along the Duwamish Waterway are among Usual and Accustomed harvest areas for the Suquamish, Muckleshoot, and Yakama federally recognized tribal nations, and is a site used for subsistence fishing for Duwamish Tribal members and additional Duwamish Valley neighbors, many of whom are immigrants, people of color, or low-income, and that these source control cleanup sites are vital to the health and safety of the residents.

1. Tribal consultation summary, traditional use survey, or culturally-specific exposure scenario (e.g., higher consumption rates, different harvested species, ceremonial use) must be included in future site plans. Tribal input

¹ [Implementation Memorandum No. 25: Identifying Likely Vulnerable Populations and Overburdened Communities under the Cleanup Regulations](#)

must be solicited separately from the public comment process and we request documentation of the outreach efforts when the feasibility study is published.

2. For a site with this depth of fill history and a documented 1920s wooden bulkhead found intact in subsurface levels, include a cultural resources review (the Department of Archaeology and Historic Preservation Washington Information System for Architectural and Archaeological Records Data (DAHP WISAARD) predictive model query at minimum, ideally Tribal consultation with the Duwamish Tribe and/or Muckleshoot) prior to any intrusive remedial action that would reach the native soil/silt aquitard interface, with an unanticipated discoveries protocol and provision for Tribal monitor and archaeologist presence during such work.
- B. The RI acknowledges a “complete” pathway for subsistence/recreational harvesters (Section 7.6.1.1, 7.6.2.5) but characterizes actual current use as essentially theoretical (“not currently used...not likely to be used in the future...access is not strictly prohibited”).
1. This downplaying of an actual, ongoing community practice - despite EPA's own LDW ROD identifying the area as a clamming zone used by the Suquamish Tribe and other community members - is a recurring EJ flashpoint in Duwamish cleanups: documented subsistence fishing by people who may not be captured in standard "reasonable maximum exposure" assumptions tends to get treated as a footnote rather than a driver of cleanup levels. We request that you treat it as a high-probability, significant pathway.

III. Climate change analysis and use of Ecology’s Sustainability Remediation: Climate Change Resiliency and Green Remediation guidance².

- A. The remedial investigation must include a collection of data based on best available science regarding current and projected local and regional climatological characteristics. Evaluation of whether these climate traits could affect the migration of hazardous substances or the long-term resilience of cleanup action alternatives must be included. We request an analysis considering temperature extremes, compounding effects of sea level rise, seasonal rainfall patterns, and magnitude/frequency of storm events, flooding risk, and variations in biometric pressure.³
1. The impacts of heatwaves and urban heat island effects from impermeable surface areas must be a consideration in these cleanups. If cleanup decisions are made that lead to intensified climate vulnerabilities in the

² [Sustainable Remediation: Climate change resiliency and green remediation](#)

³ [WAC 173-340-350: Remedial Investigation.](#)

future, these cleanup actions are contributing more harm than good to our community and alternatives should be reconsidered.

IV. Aquitard characterization

- A. There are explicit gaps in reporting of the silt aquitard separating the aquifers at the site, despite acknowledging the presence of the aquitard as “continuous”. This means there are data gaps wherever contaminated shallow groundwater can freely migrate vertically into the deep aquifer that are not being captured in the cleanup plan.
- B. Include more information on what high-resolution stratigraphic characterization (e.g., cone penetrometer testing) will be conducted to map the exact geometry of these gaps, and explain how the feasibility study and subsequent cleanup stages will guarantee that downgradient plume migration into the deep aquifer is intercepted.

V. Treatability study

- A. Discuss the burden of proof being used to determine that source control will meet sufficiency and site cleanup alternatives are likely to succeed in disrupting contamination into the Embayment, especially if the Embayment cleanup is pushed out to the ROD timeline.
- B. Provide results of soil source areas, groundwater data, and hydrologic properties from previous RI data gaps that Ecology required refinement on.
- C. Due to alarmingly high levels of arsenic in porewater sampling and relatively small number of sites tested (Table 9, Page 80), we request additional sampling or existing porewater sampling results to be made publicly available with public commenters notified.

VI. Create and make publicly available a joint conceptual site model with Terminal 115 and the Duwamish Shipyard sites, including a comprehensive plan for the full arsenic contamination boundary that does not end at property boundaries.

- A. The lack of clarity and transparency around contamination sources and exchange between Glacier NW and adjacent sites reduces our confidence in the cleanup process and chances of success, while also making the selection of the most appropriate alternative challenging. We would like support from Ecology in understanding the relationship between contaminant movement between adjacent parcels, especially for sites also going through or expected to go through the cleanup process.
- B. The RI doesn't attempt any cumulative framing of how this site's contribution stacks with T-115, Duwamish Shipyard, and the broader LDW sediment burden in terms of community-level risk. This is precisely the kind of "cumulative impact" analysis the HEAL Act (RCW 70A.02) calls for relative to overburdened communities and highly impacted areas. A purely single-site framework for this

cleanup will understate the protectiveness needed for such a highly impacted area and cumulative impacts should be incorporated into scoping.

- VII. Provide more information on any work to reduce contaminant transport from SPU's 48 inch-diameter stormwater line, as well as any pipe inspections conducted for cracks or leaks/infiltration.
- A. The Appendix S document (2014 abandonment plan) and the RI's Section 7.4.1.6 detail the historical 15-inch stormwater pipe, which connected directly to elevated arsenic/copper/dioxin soils and discharged to the SPU 48-inch line for 16 years (1975–1991), and characterize it as a "minor and finite historical transport mechanism" whose abandonment "provides additional assurance" it's not a current pathway.
 - 1. However, the RI notes the pipe was "mostly filled with solids" - evidence the system had been failing/leaking for years - yet concludes the total volume transported was insignificant compared to LDW-wide sediment deposition rates. This kind of volumetric-dilution argument (small relative to the whole River) is a recurring rhetoric in remedial investigations; it shouldn't be discounted that this was a direct, sustained, undocumented discharge pathway from contaminated soils to the waterway for over a decade with no monitoring. We request that you give appropriate weight to this in the feasibility study.
- VIII. Changing groundwater movement not addressed in the groundwater analysis
- A. Incorporate updated groundwater sampling into the public documents available before and during the feasibility study public comment period. Specifically, publish data on added wells in the southwest portion of the property and deeper wells at the interface with property to the north (Duwamish Shipyard), where there are only shallow wells.
 - B. Groundwater leaching - the RI inadvertently downplays the soil-to-groundwater leaching pathway by noting that 24 soil samples co-located groundwater samples with PCP concentrations below detection limits, concluding that low soil concentrations present less leaching risk. Yet the RI admits that out of the remaining 9 soil samples with detectable concentrations, 8 samples exhibited concentrations exceeding the preliminary cleanup levels (pCULs) established specifically for the protection of drinking water, surface water, and sediment via groundwater leaching.
- IX. Soil source areas
- A. Provide an explanation if additional soil samples for pentachlorophenol are not going to be collected.
 - B. Given the documented presence of dioxins/furans, cPAHs, and metals in shallow soil that's only partially capped by pavement/gravel, and given fugitive dust as a known issue at industrial sites along this corridor, the absence of any off-site air

pathway discussion is slightly incomplete and could be further strengthened when considering alternatives in the feasibility study.

X. Tributyltin (TBT)

- A. We are concerned about the amount of TBT coming from the Duwamish Shipyard property. Provide more information on catchment of TBT as a result of cleanup of other contaminants on the property, especially if migration is occurring. Are there assurances that, for example, adequately capture of arsenic below screening levels will also remove the TBT present?

XI. Embayment ecological assessment (WAC 173-340-7493⁴)

- A. We reject the simplified terrestrial ecological assessment submitted within this RI. Terrestrial habitat pathways are substantial and must be evaluated in the context of contaminant bioaccumulation impacts, including PCBs, cPAH, D/Fs, and arsenic and PCB Aroclors 1260 and 1254 and D/Fs. The bioconcentration factor for D/Fs is 5,000 L/kg (Table 7-3), indicating that even low concentrations in the environment can lead to high concentrations in aquatic or terrestrial organisms, but both the sources and pathways of D/Fs are not appropriately explained.

1. The terrestrial pathways should be considered through an embayment ecological assessment due to raptors and shorebirds that could consume contaminated fish and invertebrates from the contaminated Embayment.

This includes:

- a) Wading Birds & Fish Eaters: Great blue herons and double-crested cormorants are common sights along the banks, actively preying on juvenile fish.
- b) Raptors: The area supports apex aerial hunters, including bald eagles, osprey, peregrine falcons, and merlins.
- c) Waterfowl & Shorebirds: The waters host concentrations of wintering and migrating waterfowl, including mallards, northern pintails, Canada geese, diving ducks, mergansers, coots, western grebes, common loons, gulls, and terns.

Requested considerations when analyzing alternatives in the feasibility study:

- XII. The text explicitly concedes that "transport of both arsenic and PCP to surface water and sediments in the Embayment via groundwater is a complete migration pathway because both COPCs are present in shallow groundwater adjacent to the Embayment at concentrations exceeding their SLs". Under MTCA, a documented, complete migration pathway discharging concentrations above screening levels into a surface water body of an active waterway provides undeniable leverage to demand aggressive, engineered groundwater controls rather than an intervention like passive Monitored Natural

⁴ [WAC 173-340-7493: Site-specific terrestrial ecological evaluation procedures.](#)

Attenuation (MNA). Instead, a Permeable Reactive Barrier (PRB) or other strong intervention should be considered at the shoreline.

- XIII. Because advection is a potential transport pathway for arsenic, copper, PCP, and dioxins/furans in the deep aquifer, and because the deep aquifer is actively impacted beneath the former Mineralized-Cell area, the responsible parties cannot argue for a shallow-only remedy. The deep soil and the aquitard matrix itself must be targeted for source removal or in-situ stabilization to prevent long-term vertical diffusion into the lower aquifer.
- XIV. We do not support the use of any covenants restricting future recreational use or community access, as well as alternatives that include capping and paving over contamination.
 - A. Given the RI's own finding that contaminated fill was actively placed to create the current shoreline, look beyond "natural" deposition or capped sediment alternatives to justify leaving anthropogenically-placed contamination present.
- XV. Consider restoration activities in the context of existing NRDA liability on the part of Glacier NW.
 - A. The natural history of the Embayment existed as marsh habitat and tidal flats. Future uses for shellfish fishing must be considered, as the Suquamish Tribe (and Muckleshoot and Yakama Tribes) have tribal-allocated fishing rights to the Embayment area.
 - B. Mitigation credit opportunity - work with the NOAA program to satisfy liability on this site.⁵
 - C. The embayment appears to function as a tidal flat/marsh. Based on aerials the site appears to also be filling in since 2005. Since the embayment was built relatively recently (1967-1974) and the habitat appears to be away from operations, we would like to see this as a potential future marsh/subtidal flat restoration project. This will be an important future use to consider as it appears the groundwater is moving towards the river primarily and as such the highest contamination is found in samples at the embayment shoreline (See App J, Figure 5C) and this contaminated groundwater also appears to interface with former ditch with flows.
 - D. Habitat restoration is more viable here than at sites with a seawall because the current shoreline is riprap with mud and some vegetation. The embayment is depositional and receives sediment from the river, so following cleanup in the LDW this could support relatively clean sediment deposition for marsh habitat. In the ROD this area is labelled for clamming habitat. This means that the Feasibility Study should ensure that contaminants do not reach this area to the maximum extent practicable - especially arsenic since this is a significant issue on the river. We encourage Glacier to reach out to see whether credits are needed to support endangered fisheries or Waters of The US credits.

⁵ [Final Lower Duwamish River NRDA Restoration Plan and Programmatic Environmental Impact Statement](#)

- E. The community is interested in communicating with Glacier to explore opportunities to restore the embayment and turn it into a public access area. Restoration ideas include replacing the largely invasive shrub layer with native riparian plantings (ex. Willow, dogwood, native sedges, etc.). This would support near-site water quality (sediment/pollutant filtration, shade for salmonids) and to support the kind of intertidal harvesting (shellfish, plants used traditionally by the Duwamish Tribe) that the RI itself acknowledges is a "potentially complete" exposure pathway via the seafood consumption pathway.
- XVI. No intervention is planned for the Embayment in the meantime, which is inappropriate considering how polluted the groundwater and porewater samples are with arsenic - it could take at least a decade before the ROD reaches the Lower Reach to focus on upland source control here, leading to continued recontamination of the River, risks to the health of aquaculture, terrestrial habitats, Indigenous autonomy, and residential health this entire time.
- A. We request further study, and reporting on results, to determine if the gradual lowering of arsenic levels over the last decade is due to bioattenuation, or if it is a result of a direct connection into the River. We request extended monitoring of performance of pilot-tested shoreline solutions like a PRB.
- B. It should be stated in the FS and included as a factor when considering cleanup alternatives that porewater concentrations contributing to high surface water cleanup levels will affect the ecology of the Embayment throughout this time.

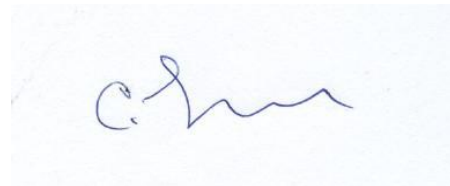
DRCC is committed to uplifting community values and ensuring that historically marginalized voices are at the forefront of important decisions affecting the Duwamish Valley. This is one of many such cases, and we are open to working with you to align this plan with the realities of our community and cleanup commitments required.

Thank you for your time and consideration.

Sincerely,



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