May 27, 2020

Mr. Gordon White
SEPA Responsible Official
Washington State Department of Ecology
Chehalis Flood Damage Reduction Project EIS

c/o Anchor QEA
1201 3rd Ave, Suite 2600
Seattle, WA 98101

RE: Public comments on the draft state environmental impact statement for the proposed Chehalis River Basin Flood Damage Reduction Project in Lewis County, Washington

Mr. White,

On behalf of the Wild Steelhead Coalition's thousands of members in Washington state and beyond, thank you for the opportunity to submit comments on the state's draft environmental impact statement (DEIS) for the Chehalis River Basin Flood Control Zone District's proposed Chehalis River Basin Flood Damage Reduction Project of a Flood Retention Expandable dam (Chehalis Dam) facility and improvement to the Airport Levee (collectively referred to as the FRE).

Established in 2000 by a coalition of steelhead anglers concerned about the precipitous decline of Washington's wild steelhead, the Wild Steelhead Coalition has been working for the last two decades to increase the return of wild steelhead to the waters of the West Coast. As one of Washington's largest and most important steelhead strongholds, we are particularly concerned about the fate of the Chehalis River and are working to ensure the Chehalis Basin strategy successfully reduces flood risk while also maintaining healthy steelhead and salmon populations for future generations.

After careful review of the DEIS, the WSC has concluded that the scale and magnitude of environmental degradation the proposed FRE would generate is unacceptable. The DEIS makes it abundantly clear that the construction and operation of the proposed Chehalis Dam/FRE would cause irreparable environmental destruction in the Chehalis River Basin and negatively impact the ecological processes that are essential for sustaining the abundance and productivity of wild salmonids, wildlife, and plants.

We are also particularly concerned by the DEIS's failure to include viable mitigation measures to address these impacts. This shortcoming seriously impairs the ability of the public and state agencies to make informed judgements about the long-term effects of this proposed project on the Chehalis's salmonid populations. Moreover, the DEIS's statement about the "uncertainty" surrounding the technical feasibility and economic practicality of potential mitigation measures raises serious doubts about the viability of any mitigation effort.

Additionally, we are concerned by the failure of the DEIS to provide specific information on how projected impacts would affect the ability of the Chehalis Basin Strategy to achieve its dual goals of reducing flood damage and restoring aquatic species throughout the Chehalis River Basin. The people of the Chehalis Basin deserve real solutions to their flooding problems, while all Washingtonians, including local residents and

tribes, require constructive steps to reverse the decline of salmon and steelhead fisheries such as those in the Chehalis. However, the narrow framing of this DEIS prevents sufficient consideration of alternative actions for achieving both flood damage reduction and restoration of aquatic species.

The Wild Steelhead Coalition believes the wide-ranging negative impacts of the proposed Chehalis Dam/FRE are biologically and economically unmitigable. For this reason and the fact that the EIS fails to sufficiently detail mitigation measures for this proposal, we believe the state has sufficient cause to deny permits for the project under SEPA. However, the following comments shed even more light on the problematic nature of this DEIS and the misguided proposal it evaluates.

The DEIS determines that the construction and operation of the proposed FRE would significantly impact steelhead and salmon produced by the important spawning populations upstream of Rainbow Falls. While we agree with this assessment, we are disappointed by the DEIS's failure to fully account for the FRE's total impacts on salmonid populations since this project would compromise the ecology of the entire Chehalis River Basin ecosystem.

In particular, we found the DEIS analysis failed to assess the expected total effects on salmonid populations due to several factors:

- A lack of transparency in salmonid population modeling
- Inadequate analyses on watershed and ecological processes
- Inadequate analyses of effects on population performance and viability
- Inadequate analyses of cumulative effects
- Inadequate analyses of the compounding effects of climate change

Despite decades of habitat degradation throughout the Basin, the Chehalis River still maintains the largest run of wild steelhead in the state. However, wild steelhead and salmon numbers have been in serious decline for decades, and this decline has accelerated in recent years. In fact, for the last four years, the wild steelhead run has failed to meet escapement, which led the state to close down the spring steelhead fishery this past spring. Additionally, the spring Chinook salmon population is trending toward extinction.

The combination of the diminished population productivities and genetic diversity that has resulted from a dramatic loss in historic abundance indicates that the overall resiliency of these salmonid stocks is compromised. This context is critical for the DEIS because it underscores that these wild fish populations will be even more vulnerable to the various negative impacts of the proposed FRE.

Throughout geologic time, watershed processes have been producing the freshwater and estuarine habitats required by salmonids and other aquatic species. Unfortunately, the Chehalis Basin has experienced decades of habitat degradation, which has reduced the river's salmon and steelhead populations to a fraction of their historic abundance. The proposed FRE's unprecedented impact on habitat would compound the basin's habitat problem, further degrading the conditions needed to support healthy salmonid populations.

The subbasin upstream of Crim Creek supports populations of wild steelhead and salmon that are genetically unique from salmon and steelhead in other subbasins within the greater Chehalis River Basin. The DEIS accurately concludes that the proposed FRE would reduce the important genetic diversity with and among salmonid populations of each species across the Chehalis Basin. We also agree that predicted population

reductions in the late century from the proposed FRE are significant because they would bring population abundance even further below 70 percent of their historic abundance than the reductions predicted from climate change alone. All the while, the DEIS does not consider impacts on salmon populations that originate from tributaries in the Chehalis River Basin other than the mainstem, despite these species documented utilization of common areas with the mainstem below the proposed FRE.

The population of spring-run Chinook are of primary concern. The Willapa Hills in the Upper Chehalis Basin was once a stronghold for spring-run Chinook, but species occurrence has been highly variable and notably decreasing in recent years, which has led to significant concerns about the risk of local extirpation.

It is important to note that spring-run Chinook spawn in only three primary areas within the Chehalis River Basin, and the FRE would significantly affect one of these critical spawning zones. The spatial range of spring-run Chinook in the Chehalis River Basin was once far greater than it is now, but this spatial diversity appears to be contracting due to the decline of the population. The FRE would accelerate this contraction by degrading the habitat in a primary spawning area, which would further erode the population viability. While the DEIS identifies likely impacts specific to spring-run Chinook, we believe that it does not adequately account for the importance of this population ecologically, culturally, or economically to the greater Pacific Northwest region.

The upper Chehalis subbasin (upstream of the proposed Chehalis Dam/FRE site) is also a stronghold for wild winter-run steelhead production, especially compared to other sections of the Chehalis River Basin according to the findings from intensive spawner surveys over the past six years (Ashcraft et al. 2017, Ronne et al. 2018, Ronne el al. 2020). The decline that is occurring in the spawning escapements in the Chehalis River Basin suggests that the upper Chehalis subbasin is particularly important to protect for the aggregate population in the Chehalis River Basin. Effects of the proposed FRE, as presented in the DEIS, to this population segment are substantial, causing significant loss in abundance, productivity and diversity (DEIS p. E-117, 141, 143, 144, and 146). These losses would be further magnified as losses to the overall aggregate population.

Each of the salmon populations produced upstream of Rainbow Falls, with the possible exception of steelhead, currently perform at low levels (reflected in low abundance, productivity, and diversity). This poor performance is in large part due to intensive land use practices in the area over the past century, which have created poor habitat conditions. This ecological region anchors the location in the watershed where anadromous fish life histories have the longest distance in their migrations upstream of the estuary, subsequently promoting substantial life history diversity.

Beyond the habitat issues associated with the proposed project, the project also creates substantial issues involving project construction and long-term fish passage. As presented, there exists significant uncertainty associated with the fish passage estimates and survivability rates of both the fish tunnels and the temporary trap and haul (both during construction and normal operation of the proposed FRE) in the DEIS.

Picket weirs are well documented at causing behavioral site rejection by certain salmon species as well as for being extremely difficult to maintain and operate during elevated flows in Western Washington rivers. This level of uncertainty is not incorporated into the DEIS analysis of fish passage impacts. Additionally, the post-construction passage effectiveness is highly uncertain and likely to vary year by year based upon streamflow and the following of operations protocol by a yet to be determined entity.

Uncertainties also exist with the analysis of the impacts associated with the in-water work window during the FRE construction phase. As indicated in the DEIS, a work window extension would be requested from the Washington Department of Fish and Wildlife. If granted, this extension would permit work from July through September, which is when spring-run Chinook are migrating, steelhead eggs are incubating, and juvenile coho and steelhead are rearing and migrating to suitable habitats. High temperatures and low flows which occur during this construction period would increase the psychological stress and susceptibility to disease, increasing mortality and reducing overall fitness of salmonid species. If the requested extension is not approved, construction activity would take longer than the proposed five-years to complete, impacting more year classes and production of salmon.

The long-term implications of climate change on salmonid populations is already a major concern in the Chehalis River Basin, but the proposed FRE will exacerbate this serious threat. Unfortunately, the DEIS fails to appropriate account for the impacts of climate change as it focuses myopically on peak flows and temperatures. As a result, it fails to sufficiently analyze the impacts of climate change on salmonid productivity, diversity, and spatial structure.

In particular, the DEIS fails to include adequate assessment on the effect of climate change in the estuary and the ocean as well as the resulting impacts on salmonids and other aquatic species. Annual variation in ocean conditions and ocean survival is a significant contributor to annual variation in spawner abundance for steelhead and salmon. It is not clear how climate change will affect salmon and steelhead survival in the estuary and in the ocean, although climate models suggest that ocean temperatures may lead to reduced adult returns (Logerwell et al. 2003). For small or declining populations, this annual variation may result in populations dipping to very low numbers, possibly resulting in earlier functional extirpation.

When these myriad impacts are analyzed collectively, it is clear the proposed FRE will have a cumulative effect on the ecosystem that will be quite significant. This impact is largely the result of the project's litany of disruptions to the ecosystem's dynamic natural processes, which adversely affects the quality and quantity of habitats and subsequently the salmonid populations that depend upon them. Concerningly, the DEIS does not adequately assess how the FRE would fundamentally alter watershed and ecological processes critical to salmon habitats through the entirety of the Chehalis River Basin extending into the estuary.

Additionally, the DEIS does not provide an adequate analysis of the cumulative effects on the salmonid species that originate within the general vicinity of the FRE. To understand the overall impacts of the proposed FRE, the cumulative impacts of other known or likely factors that could reasonably be expected to compound the adverse impacts of the project must be assessed. The magnitude of the projected impacts of the FRE on the limited set of salmonid populations that were analyzed are very likely significantly underestimated when the full scale of cumulative impacts is considered.

Salmonid populations in the Chehalis River Basin have declined sharply from their historical levels with dramatic declines in abundance, productivity, diversity, and special structure. The FRE would further alter watershed processes vital to the long-term sustainability of salmonid populations. The DEIS does not adequately assess how the FRE would fundamentally alter watershed and ecological processes critical to salmonid habitats through the entirety of the Chehalis River Basin extending into the estuary.

Lastly, the DEIS fails to provide equal and ample analysis of alternatives. This shortcoming prevents a valid comparison of the Local Action Alternative (LAA) and the FRE. The DEIS fails to adequately develop

alternative elements such as buyouts, relocations, and local flood protection measures; fails to describe when and how these elements could be accomplished; and fails to objectively assess how such elements could achieve the goals and purpose stated in the DEIS, despite there being data available to do so. The DEIS also fails to demonstrate how the Office of the Chehalis Basin could manage and lead a basin-wide LAA, a glaring omission that demonstrates the DEIS's failure to appropriately consider the LAA as a legitimate alternative.

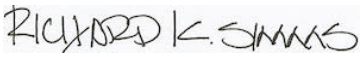
In conclusion, while we greatly appreciate the Chehalis River Basin Flood Control Zone District's attempt to mitigate flood risk in the Chehalis Basin, we strongly believe the proposed FRE is the wrong approach and that there are too many omissions and shortcomings in this DEIS to use this document as the basis to approve the proposed project. This proposal fails the wild steelhead and salmon of the Chehalis Basin, and the many Washingtonians who value them, while insufficiently addressing flooding and habitat issues.

This concern is amplified by the failure of the DEIS to include viable mitigation measures to address the unacceptable level of environmental degradation the proposed FRE would cause. Not only does this shortcoming seriously impair the ability of the public and state agencies to make informed judgments about the long-term effects of this proposed project, but it raises serious concerns about the technical feasibility and economic practicality of mitigation efforts.

Although we believe the proposed FRE is the wrong approach to address flood risk in the Chehalis Basin, it is critically important that we develop solutions for mitigating flood damage. Doing nothing is simply not an option. To that end, we strongly encourage the Chehalis Basin Board to go back to the drawing board and assemble, in partnership with stakeholders, local action alternatives that accomplish the dual goal of reducing flood impacts and restoring aquatic ecosystems.

Thank you for the opportunity to comment on this DEIS and for your tireless work to create a better future for the Chehalis Basin.

Sincerely,



Rich Simms
Board of Directors
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On behalf of the Wild Steelhead Coalition Board of Directors