



State of Washington

Department of Fish and Wildlife

P.O. Box 1100, 111 Sherman St. (physical address), La Conner, Washington 98257-9612

August 5, 2014

Ms. Hannah F. Hadley
U.S. Army Corps of Engineers, CENWS-EN-ER
P.O. Box 3755
Seattle, Washington 98124-3755

Subject: Comments for the Draft Feasibility Report & Environmental Impact Statement for the Skagit River Flood Risk Management General Investigation

Dear Ms. Hadley:

The Washington Department of Fish and Wildlife (WDFW) has reviewed Draft Feasibility Report and Environmental Impact Statement (DFREIS) for the Skagit River Flood Risk Management General Investigation. The U.S. Army Corps of Engineers (USACE) wrote the DFREIS to document the process of developing potential solutions to reduce flood risk in the Skagit River Basin. WDFW has participated in public and agency meetings with the USACE and other stakeholders during our review of the DFREIS. WDFW appreciates the arrangement of the informational meetings and opportunity to comment.

Overall, WDFW has concerns about impacts to fish and wildlife resulting from the proposed Tentatively Selected Plan (TSP) and other alternatives. Diking and flood control already have eliminated much of the fish habitat in the lower Skagit River, estuary, and delta through loss of large woody debris, riparian corridors, freshwater wetlands, connection to floodplain and those associated habitats, and the channel migration zone and associated habitat creation such as side channels. Expanding the levee system will further habitat losses. By protecting the floodplain with an additional levee system, USACE may encourage further building and residential development, which will continue to degrade the fish and wildlife habitat around the Skagit River.

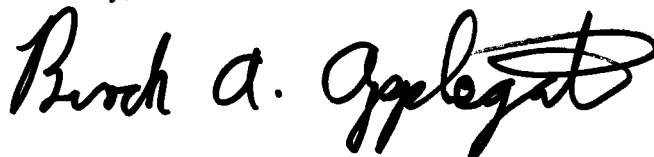
WDFW finds the level of environmental analysis for the proposed changes in operations at the Baker River Hydroelectric Project inadequate and does not meet the expectations of the Settlement Agreement Parties. The USACE led the Baker River Hydroelectric Project Settlement Agreement Parties to believe that additional environmental analysis through studies would occur if USACE proposed additional flood storage and different timing for reservoir drawdowns. The earlier proposed drawdown of Baker Lake would impact spawning sockeye and

reduce rearing habitat. The proposed change in timing of the drawdown also could reduce the productive capacity of the reservoirs during the sockeye growing season, which could reduce winter survival and smolt fitness for the following spring. Reduced smolt fitness may delay smoltification and create competition between age classes for a decreasing macro-invertebrate population in the reservoirs. WDFW recommends that USACE conducts studies on the potential impacts before the completion of the Environmental Impact Study (EIS). Proposed additional flood storage and changes in drawdown timing in Settlement Agreement Articles 107(b) and 107(c) still need environmental studies and analysis because the original licensing studies did not address the impacts of the proposed changes enough to satisfy many of the Settlement Agreement Parties.

WDFW has concerns about the TSP construction and the changed flows of the Skagit River on some of our restoration projects, such as those on Fir Island and Edgewater Park near Mount Vernon. We recommend further analysis on our restoration projects and the effects by the TSP implementation. WDFW asks the USACE to reconsider their old practices of heightening old levees and building new levees to construct ourselves out of our flood problems. USACE will have much more success in long-term and more permanent flood prevention by restoring natural riverine and estuarine processes. The USACE will more than likely have to build higher dikes and the new dikes farther upstream perpetually. Unfortunately, the old USACE paradigms of levee construction will more than likely continue to degrade fish and wildlife habitat, which will lead to lower fish and wildlife populations. WDFW recommends the USACE adopts a new standard of more levee setbacks and riprap removal.

Thank you for sending us the DFREIS for our review. WDFW welcomes the opportunity to consult further with the USACE on the TSP. We encourage future dialog on all USACE proposed projects. If you have any questions or need more information or clarification on the comments from the WDFW, please feel free to call me at (425) 379-2310.

Sincerely,

A handwritten signature in black ink that reads "Brock A. Applegate". The signature is written in a cursive, flowing style.

Brock Applegate
Fish and Wildlife Biologist

Cc: Justin Allegro, WDFW Olympia
Brett Barkdull, WDFW La Conner
Bob Barnard, WDFW La Conner
David Brock, WDFW Mill Creek
Wendy Cole, WDFW La Conner
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**SPECIFIC COMMENTS REGARDING THE DRAFT FEASIBILITY REPORT &
ENVIRONMENTAL IMPACT STATEMENT FOR THE SKAGIT RIVER FLOOD RISK
MANAGEMENT GENERAL INVESTIGATION**

3.7.3 Levee Setback Preliminary Alternative. WDFW recommends that the USACE conducts a more thorough analysis of levee setbacks or gives reasons for not considering the alternative more thoroughly. WDFW suggests a cost benefit analysis of land acquisition and easement development as compared with more environmentally damaging alternatives, such as the TSP. In developing a cost analysis, USACE should include researched levee setbacks that balance economics and environmental impacts. We would point to a past variable setback plan explored jointly by USACE and USFWS, which mimics natural conditions and processes more closely and allows for more habitat diversity and creation. With this approach, USACE would allow additional riparian habitat, development of side channels, and river connectivity with the floodplain. Setbacks would allow more room for natural floodplain functions such as floodwater storage and conveyance during high flow events. An approach of this kind would include riprap removal, where possible, to improve habitat and prevent juvenile stranding. WDFW asks the USACE to reconsider their old practices of heightening old levees and building new levees to construct ourselves continuously out of our flood problems. USACE will have much more success in long-term and permanent flood prevention by restoring natural riverine and estuarine processes. The USACE may have to build higher dikes and the new dikes upstream perpetually. Unfortunately, the old USACE paradigm of levee construction will continue to degrade fish and wildlife habitat, which leads to a decline in fish and wildlife populations. WDFW understands that USACE cannot meet the entire goal for flood risk reduction completely with levee setbacks, but please incorporate more levee setbacks than currently proposed.

3.8.2.3 CULI Feature Descriptions, General Operation and Maintenance (O&M). As the USACE strives to reduce impacts to fish and wildlife resources, WDFW recommends allowing willows and other hardwoods to grow on one or both side of the levees when creating their levee O&M protocol. Please also include the O&M protocol in the Comprehensive Urban Levee Improvement (CULI) feature description so that it can receive environmental analysis. Increasing vegetation on the levees would benefit littoral habitat and increases nutrient inputs through additional substrates for invertebrate. Please also include specific animal control measures for analysis.

4.13.1 Affected Environment. Please address the impacts of the alternatives on tidegates and the estuarine habitat.

4.14.3.2 Fish, Urban Levee Improvements. Please address the impacts to federally listed Chinook salmon (*Oncorhynchus tshawytscha*), including the predicted additional flooding of the Nookachamps River. WDFW requests more specifics in the impacts and analysis. WDFW recommends that the USACE follows the Chinook Recovery Plan, which the USACE could better meet through less levee construction and the use of more levee setbacks and riprap removals.

5.3 Risk and Uncertainty. Under the Comprehensive Urban Levee Improvement (CULI) Alternative, the 1% ACE flood elevations may increase by about 1 foot in the Nookachamps Basin. As an important river for fish habitat, particularly habitat for the listed Chinook salmon, WDFW agrees that the USACE needs to conduct analyses and studies on the effects of additional flooding in the Nookachamps Basin. We also emphasize the need for additional study of the transfer of flood risk from the Skagit River to the Nookachamps River and the need to address the future flood risk in the Nookachamps River with additional levees or dams in the future. We find this piecemeal approach to reducing flood and translocation of flood risk bad for the fish and wildlife resources and not in anyone's best interest.

5.8.3 Conceptual Mitigation Measures for Effects to Threatened and Endangered Species, Fish, and Aquatic and Riparian Habitats. In order for the project to determine mitigation, USACE and stakeholders, including fish and wildlife resource agencies, should collaboratively decide on the quantity and quality of habitat impacted and ways to assess the acreage, quality of habitat, and mitigation. USACE and stakeholders should determine the process for calculating mitigation and the mitigation itself so that USACE can analyze it as an element of the TSP in the Final EIS. The TSP will need to assess the habitat lost directly through building up and extending the dikes and the indirect loss through channel confinement and velocity acceleration. The TSP will need to include mitigation for fish spawning and rearing losses, including the sockeye salmon (*Oncorhynchus nerka*) and Coho salmon (*Oncorhynchus kisutch*) in the Baker River system that USACE has proposed for additional flood storage and a change in timing for reservoir drawdown. Other habitat impacts that deserve mitigation could include the impacts of tidegates at road crossings, loss of riparian habitat, loss of habitat connectivity to the river, and change of hydrology to the wetlands near the river. Outside of the federally listed species mitigation, USACE and stakeholders should figure the acres impacted, the quality of habitat, and the mitigation for those impacts. The USACE and stakeholders should collaboratively create a dredging mitigation plan should the TSP cause the need for dredging. Please include all mitigation plans and projects with specific detail within the TSP for environmental analysis.

6.18 Executive Order 11988 Floodplain Management. WDFW would like further explanation on how this proposal remains consistent with Executive Order (EO) 11988 Floodplain Management, which requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of flood plains. EO 11988 also recommends federal agencies to avoid direct and indirect support of floodplain development where other practicable alternatives exist. To accomplish this objective, "Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities." The USACE should include the following actions when executing the EO: acquiring, managing, and disposing of federal lands and facilities; providing federally-undertaken, financed, or assisted construction and improvements; conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

Under Section 209 of the Water Resources Development Act of 2000, the local sponsor must

participate in and comply with applicable Federal floodplain management and flood insurance programs prior to construction of any flood protection project that receives Federal assistance. The statute also requires local sponsors to prepare a floodplain management plan that will “preserve and enhance natural flood plain values.” WDFW contends that the federal agency and local sponsor can implement additional actions beyond what the USACE has currently proposed to better preserve and enhance the natural flood plain values.

While current floodplain management protects existing infrastructure, the TSP may conduct actions contrary to the intentions of the EO by constructing levee systems that will protect and encourage future development. Perhaps WDFW could better support the TSP if undeveloped areas around the levees had conservation easements and allowed natural riverine processes to occur. Please address federal statutes and executive orders in the development of the recommended alternatives. Floodplain development in the cities and Skagit County have degraded Skagit River basin tributary habitat to a large degree. WDFW would discourage any further habitat degradation through increased floodplain development; particularly more construction encouraged through increased flood protection and reduced flood risk.