



THE TULALIP TRIBES

Natural and Cultural Resources
7515 Totem Beach Road
Tulalip, WA 98271

June 12, 2009

TO: Snohomish River Basin Project Review Panel

FROM: Maria Calvi, Restoration Ecologist

RE: Responses to Follow-up Questions/Comments

- Questions related to the fill pad and industrial runoff treatment.

PSAR funds in the amount of \$325,000 are requested to complete the following construction activities: levee improvement, breach, and construction oversight and project management. PSAR funds will be combined with \$1,455,000 in local (tribal and state) funds to meet a 35% cost-share obligation to partner with the US Army Corps of Engineers to complete these most essential restoration tasks for a total project cost of \$5,083,000. Additional restoration tasks included in the design package and permits will be completed using other federal funds. These actions include the stormwater runoff basin and fill pad. The stormwater runoff basin is required to hold water that will back up behind the new levee during high tides. It is the most cost effective approach to discharging water through the levee. A pump station for instance would be much more costly over the long-term. Details of the runoff basin are described in the Design Section of this proposal. The fill pad is required to protect a small portion of private property in the northern portion of the Qwuloolt Project area. This project element will be constructed and paid for by Sound Transit.

- Provide more detail on project tasks and budget.

Restoration tasks are outlined clearly in two places in the proposal. The Project Design Section discusses specifications and considerations for the levee, runoff storage basin, levee breach, interior site work (Stream and Tidal Channel Excavation, and Ditch Fill), and other Site Preparation work. The Tasks and Schedule Section lists remaining tasks in the final design, permitting, and construction phases of the project. These are the key milestones for the project. The project budget included in this proposal outlines costs for the levee, breach, and construction oversight and project management for a total of \$5,083,000. \$4.3 million of these project costs are for the levee and \$450,000 in costs are for the breach. An additional, ~\$2.5 million in restoration work (runoff storage basin, interior channels and ditch fill) will be completed using federal funds and are not fully described in this proposal.

- In regards to rerouting of Jones and Allen Creek, what is the likelihood of maintaining the proposed reroute of the creeks as future sediment deposition occurs? Are there any potential issues if the creeks shift back towards their current alignment or create a new alignment?

There will be several sediment transport processes occurring on the restoration site following project implementation. Tidal action will be focused at the breach location spreading from the large tidal channels at the breach horizontally across the site depending on tidal elevation. These actions will slowly deposit sediment on the marsh plain and erode sediment in the tidal channels. At the same time, the large tidal channels are also the creek channels (Jones and Allen Creek). These channels operate as stream channels moving sediments downstream. Therefore the likelihood of sediment deposition occurring in the channels is unlikely given that both stream and tidal actions both cause erosive action in the tidal channels. It is however possible that over time the creeks/tidal channels could shift location. By moving the outlet of the creeks to the large breach location we have in fact allowed more space within the project area for this type of change to occur without damaging adjacent infrastructure. However, tidal channels in the Snohomish Estuary appear quite stable over time.