LUMMI INDIAN BUSINESS COUNCIL
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DEPARTMENT_____DIRECT NO. _____

December 16, 2011

Mr. Ted Sturdevant, Director
Washington State Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

SUBJECT: Comments on Draft Fish Consumption Rate Technical Background Document (September 2011, Publication No. 11-09-050)

Dear Director Sturdevant:

Thank you for your October 14, 2011 letter that provided both an overview of the Department of Ecology's current efforts to update the fish consumption rates used in the Washington State Sediment Management Standards, Water Quality Standards, and the Model Toxics Control Act (MTCA), and offered to engage in government-to-government consultation on this issue. The purpose of this letter is to provide comments on the Draft Fish Consumption Rate Technical Background Document (Publication No. 11-09-050) and to transmit preliminary information from the on-going Lummi Diet Study.

Comments on the Draft Fish Consumption Rate Technical Background Document include:

1. **Lower Limit of Recommended Rates:** Ecology chose the 80th to 95th percentile of the combined local consumption surveys to define a range of proposed consumption rates (157g/day to 267 g/day). The 95th percentile is commonly used in statistical applications to define an upper boundary (beyond the 95th percentile a "diminishing return" is assumed), but no reason is provided for choosing the 80th percentile as the lower boundary. Several reasons for choosing these rates are listed, including the recommendations of the *Human Health Focus Report Oregon Fish and Shellfish Consumption Rate Project,* 2008. However, this study from Oregon actually recommends using rates in the 90th to 95th percentile. The 90th percentile (210 g/day) should be used as the lower boundary of the range rather than the 80th percentile.

2. **Inclusion of Anadromous Species (Salmon) in Consumption Rates:** The Technical Background Document leaves open the question of whether or not salmon and

other anadromous species should be included in the new Washington consumption rates. This should not be an open question – salmon should be included in the new Washington consumption rates. The research presented in Appendix E describes how some species of salmon (Chinook) have extended resident times in Puget Sound and suffer especially from a high contaminant load. In addition, the Oregon Department of Environmental Quality (DEQ) argues in the 2008 *Human Health Focus Report Oregon Fish and Shellfish Consumption Rate Project,* that salmon consumption should be included in fish consumption rates. The Oregon Human Health Focus Group states that salmon is known to be consumed at specific quantities and contributes to the contaminant load of the consumers and therefore should be included in fish consumption rates to account for the exposure to these chemicals. In addition, salmon accumulate toxins within natal streams, local estuaries, and Puget Sound waters and are the predominant seafood in tribal and non-tribal communities in the Pacific Northwest.

As you may know, the Lummi Nation is in the process of conducting a Lummi specific diet study to both inform the triennial review of the Lummi Nation Water Quality Standards and the Washington State water quality and sediment standards. To date, 40 out of our targeted 100 surveys have been completed and entered into the database. We have decided not to include individuals whose consumption rates are greater than the 95th percentile of responses out of concern that these outlying values would have undue leverage on the final estimate and adversely impact the precision goal for the survey. Out of the 40 respondents so far, two individuals were removed that exceeded the 95th percentile. Overall, the mean consumption rate for the remaining 38 respondents was 5.1 g/kg/day or 390 g/day. The precision of these estimates is 26 percent and 24.5 percent respectively. We will provide our final report when it is completed during the second quarter of 2012.

Sincerely,

Merle Jefferson

Merle Jefferson, Sr., Executive Director
Lummi Natural Resources Department