Summary

Meeting dates: June 10 – 11, 2016

Agenda item: Impacts of Residues in Salmon – (Briefing)

Presenter(s): James West, Fish and Wildlife Research Scientist and Sandra O'Neil, Fish and Wildlife Research Scientist

Background summary:

The Puget Sound region has undergone rapid urbanization over the past 100 years, resulting in the release of toxics chemical into our waterways. The fjord-like structure of Puget Sound retains these contaminants within the Sound where they may reduce the health and productivity of fish and wildlife and their food supply**.** Because of, their anadromous life-history, salmon and steelhead (henceforth, for simplicity, "salmon") may be exposed to contaminants in freshwater, estuarine and marine waters. Chinook salmon are especially vulnerable to contaminant exposure because as juveniles they spend considerably more time than other salmon species feeding in estuaries where contaminant input may be quite high. Additionally, although most of Puget Sound Chinook salmon migrate to the cleaner waters of the Pacific Ocean, approximately a third reside in Puget Sound for extended periods of time, thereby increasing their exposure to toxic contaminants.

As a member of the Puget Sound Ecosystem Monitoring Program (PSEMP), the Washington Department of Fish and Wildlife (WDFW) *Toxics in Biota Unit* assesses status of and trends in the health of Puget Sound fishes and macro-invertebrates related to their exposure to toxic contaminants. This effort (a) monitors the status and trends of chemical contamination in Puget Sound biota, (b) evaluates the effects of contamination on the health of these resources and c) provides information to public health officials for assessing if Puget Sound seafood is safe to eat. WDFW has monitored contaminant exposure in adult Chinook and Coho salmon since 1992, and in 2013 we expanded our monitoring to include juvenile Chinook salmon. To date, WDFW's monitoring of contaminants in salmon has been limited to those contaminants legacy contaminants of known concern, however, this year we are expanding our coverage to include chemical of emerging concern (CECs), including pharmaceuticals and personal care products.

Department staff will provide the Commission a briefing on toxic chemicals in Puget Sound salmon, including the occurrence and impacts of CEC and legacy contaminants in these fish, and movement of chemicals up the food chain to marine mammals and humans. First we will summarize the results of a recent study by National Oceanic and Atmospheric Administration to investigate the levels of CECs in juvenile Chinook salmon. Second, we will summarize the results of WDFW's juvenile Chinook salmon contaminant monitoring to date - in particular the percent with potential health impairments, and our plans to incorporate monitoring of CECs into our on-going monitoring. Third, we will summarize WDFW's monitoring of contaminants in sub-adult and adult Chinook salmon, highlighting the importance of the salmon's residency in Puget Sound as factor in their elevated contaminant levels. Finally, we will summarize potential health risk to resident killer whales, people and other apex predators that consume Puget Sound Chinook salmon.

Policy issue(s) you are bringing to the Commission for consideration: N/A

N/A

Public involvement process used and what you learned: N/A

N/A

Action requested: N/A

N/A

Draft motion language:

N/A

Justification for Commission action:

N/A

Communications Plan:

N/A

Form revised 12/5/12

Commission Request to Department

"Blue Sheet"

Date of Request: Feb 26, 2016

Title of Request: Residues in Salmon ~~and impacts~~ impacts of

Commissioner: Wecker

Priority Level (put one check in each row):

Importance:	[ ] High	[X] Medium	[ ] Low
Urgency:	[ ] High	[ ] Medium	[X] Low

Request Due Date: _____

Knowledge or Action Being Requested (narrative). Describe what you want to know. Be specific.

~~Brief~~ Information on recent research into ~~effects~~ levels of medications, ~~etc~~ chemicals etc. in salmon in Puget Sound and impacts ~~of~~ on Reproductive success and ~~behavior~~ survival.

Also research into impacts up the food chain in marine mammals.

Output Requested (e.g., telephone call, memo, material from files, new report, presentation, other):

Briefing

For Commission Executive Assistant Use

Date Assigned: _____ [At Debrief] **Assigned To:** _____ [Program]

revised 8/07/12 -eg