

# Scientific Documentation That Shellfish Aquaculture Pesticide Poisoning in Grays Harbor/Willapa Is A Significant Threat to Chinook Salmon, Orcas and Other Aquatic Life

## The Evidence Chain

1. Audubon Analysis of Imidacloprid Application to Eradicate Burrowing Shrimp in Willapa Bay/Grays Harbor

[https://wa.audubon.org/sites/g/files/amh546/f/audubon\\_wa\\_imidacloprid\\_seis\\_comments\\_final\\_11\\_1\\_17.pdf](https://wa.audubon.org/sites/g/files/amh546/f/audubon_wa_imidacloprid_seis_comments_final_11_1_17.pdf)

“Audubon especially has strong reservations about this specific pesticide, imidacloprid, which is demonstrably harmful to aquatic invertebrates as well as to birds.” Page 1

“Burrowing shrimp are also prey for other species in the marine and estuarine ecosystem, particularly fish. ESA-listed green sturgeon, salmonids, Pacific staghorn sculpin, Dungeness crabs, sea-run cutthroat trout, and leopard sharks are all known to prey on them.” Page 3.

“2.3.6 Indirect effects. The SEIS review of potential effects on threatened, endangered and protected species focuses on direct toxicity, ignoring the sub-lethal and chronic effects discussed above. Indeed, salmonids may come into direct contact with imidacloprid, including potential consumption, during application.” Page 6.

“The consequences of over half a century of pesticide use on nutrient and carbon fluxes, food web dynamics, intertidal sediments, vegetation, and secondary consumers, including shorebirds and waterfowl in Willapa Bay and Grays Harbor are almost entirely unknown. Coastal stakeholders lack information on ecosystem condition, species status, distribution and population dynamics, ecological relationships and management alternatives that are necessary to understand and make informed decisions about burrowing shrimp management.” Page 9

2. Grays Harbor, Willapa Bay salmon discussed at Feb 18, 2017 WDFW commission meeting

<http://www.thedailyworld.com/news/grays-harbor-willapa-bay-salmon-discussed-at-feb-11-commission-meeting/>

"The possibility of an Endangered Species Act designation for salmon in Grays Harbor and Willapa Bay is a major driving force behind modern salmon management and was part of the discussion at the Fish and Wildlife Commission meeting in Olympia a week ago....“We designated the Willapa a primary river for natural origin Chinook.”

3. SOUTHERN RESIDENT KILLER WHALE PRIORITY CHINOOK STOCKS  
REPORT-June 22, 2018-NOAA and WDFW Report

[https://www.westcoast.fisheries.noaa.gov/publications/protected\\_species/marine\\_mamals/killer\\_whales/recovery/srkw\\_priority\\_chinook\\_stocks\\_conceptual\\_model\\_report\\_list\\_22june2018.pdf](https://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mamals/killer_whales/recovery/srkw_priority_chinook_stocks_conceptual_model_report_list_22june2018.pdf)

“Washington Coast Spring Hoh, Queets, Quillayute, **Grays Harbor**-Avg Factor-1, Avg Factor2- 1, Avg Factor 3- 1.69, Total Score- 3.69.” (Out of a total of 5—An Important Score)

“Washington Coast Fall Hoh, Queets, Quillayute, **Grays Harbor**-Avg Factor- 1, Avg Factor 2- 1, Avg Factor 3- 1.69 , Total Score-3.69.” (Out of a total of 5- An Important Score) Page 7.

4. Orca Task Force Recommendations

[https://www.governor.wa.gov/sites/default/files/OrcaTaskForce\\_reportandrecommendations\\_11.16.18.pdf](https://www.governor.wa.gov/sites/default/files/OrcaTaskForce_reportandrecommendations_11.16.18.pdf)

“Lack of prey. The Southern Resident orca diet is composed primarily of Chinook salmon. Several runs of Chinook salmon that could provide important prey for Southern Resident orcas are listed as threatened or endangered under the Endangered Species Act. To be abundant, diverse and sustainable, Chinook need productive and protected habitat as well as a reliable supply of forage fish to feed on.” Page 5

“The recommendations support four goals: ♣ Goal 1: Increase Chinook abundance.” Page 6

It should be noted, that scientific comments submitted to the Orca Task Force regarding the harm of industrial shellfish aquaculture practices on habitat and prey were not mentioned in the report.

5. Rep. Brian Blake-Appointed to Orca Task Force

<https://housedemocrats.wa.gov/blog/2018/05/01/blake-to-serve-on-orca-recovery-task-force/>

6. Members of Orca Task Force

<https://www.governor.wa.gov/issues/issues/energy-environment/southern-resident-orca-recovery/task-force>

**Dated January 2019**