

Kirsten McDade

See attached letter

To: Casey Dennehy  
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Transmitted Via Online Comment at: <https://sea.ecology.commentinput.com/?id=mTReU>

2 Aug 2021

**RE: Draft Guidance for Marine Net Pen Aquaculture in Washington State**

Dear Mr. Dennehy,

Thank you for taking the time to consider our comments on the Draft Guidance for Marine Net Pen Aquaculture in WA state (referred from here on as the “Guidance”). We have signed onto the letter written by *Our Sound, Our Salmon* (OSOS) and the purpose of this letter is to highlight our key concerns from the OSOS letter and to add additional concerns of our own.

RE Sources is a non-profit organization located in northwest Washington and founded in 1982. We work to protect the health of northwest Washington's people and ecosystems through the application of science, education, advocacy, and action. Our priority programs include Protecting the Salish Sea, Freshwater Restoration, Climate Action, and Fighting Pollution—all critical issues affecting our region. Our North Sound Baykeeper is also a member of the Waterkeeper Alliance, with over 300 organizations in 34 countries around the world that promote fishable, swimmable, drinkable water. RE Sources has thousands of supporters in Whatcom, Skagit, and San Juan counties, and we submit these comments on their behalf.

Over the years, RE Sources, community members, and other environmental organizations have sent in dozens of letters to Ecology, mostly for NPDES Permits, that clearly lay out science-based concerns about net pen aquaculture in the Salish Sea. We collectively believe that net pen aquaculture is not compatible with a full Salish Sea recovery.

Growing fish in unnaturally dense conditions leads to the emergence and spread of diseases and parasites that threaten our native fishes including ESA listed species and forage fish<sup>1,2</sup>. A recent study from British Columbia clearly shows how native salmon are susceptible to catching diseases from net pens as they migrate to and from their natal waters<sup>3</sup>. The EPA is in agreement, in 2020, they made a new determination that Puget Sound net pens are likely to adversely affect ESA-listed salmon, steelhead, and other protected fish species. Currently NOAA is preparing a biological opinion on the effects of net pen aquaculture on threatened and endangered salmon, steelhead, and other native fish in Puget Sound. *This Guidance should not be published until the results of the NOAA biological opinion are finalized.*

Discharges of nutrients and contaminants are also of big concern. Uneaten fish food, fish feces, disease control chemicals, marine fouling organisms displaced during net cleaning, and escaped fish all contribute nutrients and contaminants to the Salish Sea<sup>4</sup>. Because net pens are sited in areas that are well flushed

these contaminants can not be adequately measured nor controlled. Wastewater treatment plants in Washington will soon need to regulate and control the nutrients discharged from their facilities into the Salish Sea and that needs to happen for net pens as they also contribute to the growing nutrient problem.

A comprehensive study that analyzed the contaminants found in salmon raised in net pens, including those found in Washington State, found that net pen salmon have significantly higher levels of contaminants than wild caught salmon<sup>5</sup>. A benefit-risk analysis concluded that health benefits of eating farmed salmon, mainly the omega 3 fatty acids, did not outweigh the risks. The contaminants found in the farmed salmon are associated with increased cancer rates and a reduced IQ and other cognitive and behavioral disorders. The study concluded that eating moderate amounts of farmed salmon can be harmful to one's health particularly infants, children, and pregnant and nursing women. In addition, these contaminants can be circulated within the marine food web accumulating in higher trophic levels and also be transferred to land ecosystems.

Because of the harmful effects of net pen aquaculture, the British Columbia government has committed to ban all open-net pen salmon farms by 2025 and move to more sustainable land-based, closed-containment systems. The Danish government has banned all new aquaculture products including expansions of existing projects. Washington State needs to follow suit and begin phasing out all net pen operations in the Salish Sea. The Guidance admits that "all risk cannot be eliminated even if following every best practice in this guidance."

We support the request by OSOS to have a third-party, independent audit to determine whether or not the current regulatory framework is sufficient to safely regulate this industry at a level necessary to protect threatened and endangered species, water quality, tribal treaty rights, and marine health. We also agree that a comprehensive Environmental Impact Statement be conducted on net pen aquaculture so that we can understand the ecological and health risks associated with these operations.

Thank you for your time and consideration of our comments.

Sincerely,

Kirsten McDade  
Pollution Prevention Specialist

References:

<sup>1</sup>Walker, P. and Winton, J.R. 2010.

Emerging Viral Diseases of Fish and Shrimp. *Veterinary research*. 41. 51. [10.1051/vetres/2010022](https://doi.org/10.1051/vetres/2010022).

<sup>2</sup>Bateman, A. W., Peacock, S.J., Connors, B., Polk, Z., Berg, D., Krkosek, M., and Morton, M. 2016. Recent Failure to Control Sea Louse Outbreak on Salmon in the Broughton Archipelago. *Canadian Journal of Fisheries and Aquatic Sciences*

<sup>3</sup>Shea, D. et al. 2020. Environmental DNA from multiple pathogens is elevated near active Atlantic salmon farms. *Proceedings of the Royal Society B*. [doi.org/10.1098/rspb.2020.2010](https://doi.org/10.1098/rspb.2020.2010)

<sup>4</sup>Burrige, L., Weis, J.S., Cabello, F., Pizarro, J., Bostick, K. 2010. Chemical use in salmon aquaculture: A review of current practice and possible environmental effects. *SciencDirect*. Vol 306, Issues 1-4, p. 7-23. [doi.org/10.1016/j.aquaculture.2010.05.020](https://doi.org/10.1016/j.aquaculture.2010.05.020)

<sup>5</sup>Foran, J. A., Good, D.H., Carpenter D.O., Hamilton M.C., Knuth, B.A, Schwager, S.J. 2005. Quantitative analysis of the benefits and risks of consuming farmed and wild salmon. *Journal of Nutrition*. 135(11):2639-43. doi: [10.1093/jn/135.11.2639](https://doi.org/10.1093/jn/135.11.2639). PMID: 16251623.