To the House Committee on Agriculture, Land Use, Natural Resources, and Water:

Thank you for the opportunity to make a statement in support of HB 2965-5. As a resident of Oregon, I am proud to live in a state that prioritizes environmental stewardship of its precious marine and estuarine resources. I am writing to raise my concerns regarding the potential development of net pen aquaculture in our state's waters. The challenges our state has faced as a result of the increasing industrialization, consolidation, and globalization of agriculture on land must serve as an instructive warning against developing a similar system in our state's waters. We have seen first-hand in this state how the industrialization of agriculture is devastating for both the environment and communities alike. Not only do terrestrial concentrated animal feeding operations serve as predictors of how things could go horribly wrong in commercial finfish aquaculture, but we have also seen how disastrous open sea aquaculture can be on a statewide level in Washington.

On a positive note, unlike the entrenched system of industrialized terrestrial agriculture, here we have a chance to prevent the proliferation of an industry that will harm our state's communities and environment before it is too late. We need to be proactive and learn from history, and not to repeat it.

My comments address the following: (1) the high risk of environmental devastation inherent to net pen aquaculture; (2) the public health risks associated with industrial aquaculture; and (3) the insurmountable competitive disadvantage that Oregon faces as a relatively late entry into this market. Given the weighty interests at stake, I support HB 2965-5 and implore representatives to join this effort to protect our state's aquatic resources.

I. Net Pen Aquaculture Is Extremely Vulnerable to Disaster

The high risks of net pen aquaculture outweigh the merely hypothetical rewards. "A single storm or even one…shark ripping through the nets…can set profitability back significantly."[1] Experience at a statewide level has demonstrated just how vulnerable these systems can be. In Washington, following a disastrous collapse of net pens in an aquaculture facility operated by Cooke Aquaculture, 263,000 Atlantic salmon were released into Puget Sound.[2] The impact of this disaster have been profound and long-lasting: 95% of the escaped Atlantic salmon were infected with a viral variant that had never before been documented in Puget Sound, and because the escape coincided with spawning season, "[i]n several places, Atlantic salmon were caught with small native salmon in their bellies."[3] These young native salmon will never grow to spawn the next generation of native salmon: whole lines have been cut off. Furthermore, the fish pen

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[1] CAL. ENV'T ASSOC., OFFSHORE FINFISH AQUACULTURE: GLOBAL REVIEW AND U.S. PROSPECTS 27 (2018), https://www.ceaconsulting.com/wp-content/uploads/CEA-Offshore-Aquaculture-Report-2018.pdf (last visited Feb. 10, 2025) [hereinafter U.S. PROSPECTS].

[2] Lynda V. Mapes, *Fish Farm Caused Atlantic Salmon Spill Near San Juans, Then Tried to Hide How Bad It Was, State Says*, THE SEATTLE TIMES (Feb. 2, 2018), https://www.seattletimes.com/seattle-news/fish-farm-caused-atlantic-salmon-spill-state-says-then-tried-to-hide-how-bad-it-was/ (last visited Feb. 9, 2025).

[3] Douglas Frantz and Catherine Collins, *How a Salmon Farm Disaster Changed Northwest Aquaculture Forever*, HIGH COUNTRY NEWS (July 1, 2022), https://www.hcn.org/issues/54-7/fish-how-a-salmon-farm-disaster-changed-northwest-aquaculture-forever/ (last visited Feb. 9, 2025).

collapse in Washington was first sighted by a local family that just happened to be passing by the scene to set crab pots.[4] If these passersby did not just happen to be there to alert authorities, the response time would have been slower still. With such high capital costs and dire consequences in the case of error, net pen aquaculture is simply too dangerous of a gamble, one that our state cannot afford to make. Washington has set an instructive precedent: following its disastrous experience with commercial finfish net pen aquaculture, the state adopted a rule to prohibit the practice.[5] HB 2965-5 gives our state a chance to achieve a similar outcome, while avoiding the environmental and economic costs that Washington incurred as a result of their own ill-fated foray into industrial aquaculture.

II. Net Pen Aquaculture Presents a Dire Threat to Public Health

The World Health Organization has identified antimicrobial resistance as one of the top threats to public health worldwide.[6] Similarly to land-based livestock and poultry operations, concentrated fish operations necessitate "the misuse and overuse of antibiotics to compensate for crowded, stressful conditions."[7] Up to 75% of antibiotics used in aquaculture is immediately lost to the surrounding environment, directly entering surrounding waters and native fish populations.[8] We have seen how devastating an industrialized food system can be in contributing to and perpetuating public health crises and decimating food resilience; we need to avoid making the same mistakes through industrial aquaculture.

III. Net Pen Aquaculture Cannot Promote Economic Competitiveness or Food Security

In all likelihood, the only companies with the know-how and resources to enter the industrial aquaculture market at a profitable scale would be foreign companies from Norway, Turkey, and China, whose aquaculture is already heavily vertically integrated and high-tech.[9] The U.S. is simply too far behind to compete in this particular race. Contributing to only one percent of global aquaculture production, and with its high labor and capital costs, the growing pains needed for the U.S. to be a significant player in the aquaculture market makes this venture a losing proposition.[10]

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[4] Douglas Frantz and Catherine Collins, *How a Salmon Farm Disaster Changed Northwest Aquaculture Forever*, HIGH COUNTRY NEWS (July 1, 2022), https://www.hcn.org/issues/54-7/fish-how-a-salmon-farm-disaster-changed-northwest-aquaculture-forever/ (last visited Feb. 9, 2025).

[5] *Board of Natural Resources Ends Open Sea Net Pen Salmon Farms in Washington Waters*, WASH. STATE DEP'T OF NAT. RES. (Jan. 9, 2025) https://www.dnr.wa.gov/news/board-natural-resources-ends-open-sea-net-pen-salmon-farms-washington-waters (last visited Feb. 19, 2025).

[6] *Antimicrobial Resistance*, WORLD HEALTH ORG. (21 Nov. 2023), https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance (last visited Feb. 9, 2023).

[7] FOOD & WATER WATCH, HOW FACTORY FISH FARMS MISUSE ANTIBIOTICS, 1–2 (Apr. 2016), https://www.foodandwaterwatch.org/wp-content/uploads/2021/03/ib_1604_aquaculture-web_0.pdf (last visited Feb. 9, 2025).

[8] UNITED NATIONS, FRONTIERS 2017: EMERGING ISSUES OF ENV'T CONCERN 15 (2017), https://www.unep.org/resources/frontiers-2017-emerging-issues-environmental-concern (last visited Feb. 9, 2025).

[9] U.S. PROSPECTS, *supra* note 1, at 5.

[10] *Id.* at 27–28.

High entry barriers aside, it is difficult to see how developing Oregon's industrial aquaculture industry will improve the state's food security. The U.S. is the world's number one importer of aquaculture products yet ranks as only eighteenth in global aquaculture production.[11] There is no guarantee that development of industrial aquaculture in Oregon will in any way lessen this disparity. The U.S. domestic caught seafood market serves instructive to this point: currently, the U.S. exports approximately 80 per cent of its domestically caught seafood and imports a comparable amount, owing in part to the international character of the seafood processing industry.[12] As the processing industry is mainly overseas, the fish produced from industrial aquaculture in Oregon will likely be sent to other countries to be processed, and only then imported back into Oregon for consumption. So long as the United States lacks the ability to process its own seafood, whether caught or farmed, increasing the amount of seafood produced in the country cannot change the significantly skewed export-import ratio.

To protect our state's aquatic resources for generations to come, I implore you to support HB 2965-5. Thank you for your consideration.

Sincerely,

Miranda Herreid

[11] *Draft Programmatic Environmental Impact Statement for the Identification of Aquaculture Opportunity Areas in U.S. Federal Waters off of Southern California*, NOAA 48 (Nov. 15, 2024) https://www.fisheries.noaa.gov/resource/document/draft-programmatic-environmental-impact-statement-identification-aquaculture (last visited Feb. 9, 2025).
[12] U.S. PROSPECTS, *supra* note 1, at 31.