Submitted Online via the E-Comment Form.

February 25, 2019

Rich Doenges
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Re: Comments on water quality permits for existing Atlantic salmon farming operations in Puget Sound

Dear Mr. Doenges,

Thank you for the opportunity to comment on the Department of Ecology's (DOE) draft National Pollutant Discharge Elimination System (NPDES) permits for four of Cooke Aquaculture's existing Atlantic salmon facilities in Puget Sound.[1] We submit these comments on behalf of Friends of the Earth to indicate our support for the proposed, tougher requirements in the draft permits, but want to take the opportunity to indicate specific areas in which the permits should be improved upon.[2]

Friends of the Earth fights to protect our environment and create a healthy and just world by promoting clean energy and solutions to climate change, keeping toxic and risky technologies out of the food we eat and products we use, and protecting marine ecosystems and the people who live and work near them. Friends of the Earth's sustainable aquaculture campaign specifically focuses on highlighting the dangers of industrial ocean fish farming and supporting sustainable seafood production alternatives. We are nearly 1.7 million members and activists across all 50 states – including over 61,000 in Washington – working to make these visions a reality. We are part of the Friends of the Earth International federation, a network in 74 countries working for social and environmental justice.

Industrial ocean fish farming – also known as marine finfish or offshore aquaculture – is the mass cultivation of finfish in the ocean, in net pens, pods, and cages. These are essentially underwater factory farms in our ocean, with devastating environmental and socio-economic

[1] State of Washington Department of Ecology, *Atlantic Salmon net pen individual permit* (last visited Feb. 25, 2019), https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-permits/Water-Quality-individual-permits/Net-pens#documents.

[2] In addition to this comment letter, Friends of the Earth is submitting individual comments from 1257 Friends of the Earth members and activists residing in Washington State. Friends of the Earth has also joined a group comment letter from the Our Sound, Our Salmon campaign that discusses the draft permits.

impacts. As detailed below, these underwater factory farms impose a significant risk to Washington's public waterways and native wildlife, including direct harm to its endangered salmon populations.[3]

In March 2018, spurred by Cooke Aquaculture's catastrophic spill of more than 263,000 non-native Atlantic salmon into Puget Sound, the Washington State Legislature passed House Bill 2957, which phases out marine aquaculture for non-native finfish species. Thankfully, by 2022, this law will end the farming of Atlantic salmon along Washington's coastline.[4] In the meantime, we are pleased to see DOE's proposal to impose more stringent restrictions on Cooke Aquaculture's operations through updated NPDES permits. However, as detailed below, the harms from these facilities simply cannot be mitigated or avoided – the only way to truly protect against harm is to remove these operations entirely. Therefore, as detailed below we urge DOE to unequivocally incorporate into each of the final permits its intention to terminate the permit for any noncompliance issue.[5]

Industrial ocean fish farming causes significant, unavoidable harm to coastal and marine resources or uses.

The environmental and public health problems associated with industrial ocean fish farming are extensive. These impacts are varied and widespread, including significant environmental harm that simply cannot be mitigated or avoided.

These practices routinely result in a massive number of farmed fish escapes that adversely affect wild fish stocks. As DOE is well aware, in August 2017 Cooke Aquaculture spilled more than 263,000 farmed Atlantic salmon into Puget Sound. Long after the escape, *many of these non-native, farmed fish continued to thrive and swim free* – some were even documented as far north

[3] *See generally* Friends of the Earth, The Dangers of Industrial Ocean Fish Farming (2018), *available at* http://foe.org/IOFFreport (providing an overview of the many harms and disruptions from industrial ocean fish farming, including links to additional peer-reviewed studies).

[4] After the phase-out is complete, Washington State will still allow industrial ocean fish farming of native finfish in its waters, and will be the only state along the Pacific Coast to do so. We continue to urge DOE to join Washington's neighboring states in banning all industrial ocean fish farms in its waters. Washington State is also home to a number of tribal nations who are improving the health and stability native, wild fish populations through the use of net pen facilities. These tribal facilities are raising native fish species, and are conducted harmoniously with the surrounding environment. Any minimal impacts caused by these facilities are far outweighed by the benefits. These tribal facilities are not industrial ocean fish farms, and our comments and request for a ban do not encompass those activities.

[5] We make this call to action in addition to the recommendations in the comment letter from Our Sound, Our Salmon (which Friends of the Earth joined): (1) refrain from issuing the permits until the National Marine Fisheries Service and the U.S. Environmental Protection Agency have completed requisite formal consultation under Section 7 of the Endangered Species Act; and (2) address and include in the final permits conditions on discharge of various pollutants that affect the designated uses of receiving waters and land adjacent to the four facilities.

as Vancouver Island and the west end of the Strait of Juan de Fuca and as far south as Tacoma, at least as far as 100 miles from the farm.[6]
Escaped fish increase competition with wildlife for food, habitat and spawning areas. Reliance on the sterility of farmed fish is *never* 100% guaranteed; consequently, the "long-term consequences of continued farmed salmon escapes and subsequent interbreeding . . . include a loss of genetic diversity."[7]

Another vital concern is the discharge of excess food, feces, antibiotics, and antifoulants associated with industrial ocean fish farms. Releasing such excess nutrients negatively impacts water quality surrounding the farm and threatens surrounding plants and animals. These underwater factory farms also physically impact the seafloor by creating dead zones, and change marine ecology by attracting predators and other species to congregate around fish cages. These predators – such as birds, seals, and sharks – can easily become entangled in net pens, harassed by acoustic deterrents, and hunted. Indeed, an industrial ocean fish farm caused the death of an endangered monk seal in Hawaii, which was found entangled in the net.[8]

Large populations of farmed fish require an incredible amount of feed. Most industrially farmed finfish, like salmon, are carnivorous and need protein in their feed. This often consists of lower-trophic level "forage fish," which are at the brink of extinction. Lately, aquaculture facilities are relying more on genetically-engineered ingredients such as corn, soy, and algae as substitute protein sources, which do not naturally exist in a fish's diet. Use of these ingredients means more environmental degradation and a less nutritious fish for consumers.

There is no way to avoid and minimize these adverse environmental, social and economic impacts.

As described above, industrial ocean fish farms inherently harm the environment, society, and the economy – these harms cannot be avoided or minimized. Cooke has proven as recently as August 2017 that fish spills will happen, and in massive numbers. Containing massive quantities

[6] Lynda V. Mapes, SEATTLE TIMES, Despite agency assurances, tribes catch more escaped Atlantic salmon in Skagit River (Dec. 1, 2017), *available at* https://www.seattletimes.com/seattle-news/environment/despite-agency-assurances-tribes-catch-more-escaped-atlantic-salmon-in-skagit-river/.
[7] Fisheries and Oceans Canada, Newfoundland and Labrador Region, Stock Assessment of Newfoundland and Labrador Atlantic Salmon (2016), *available at* http://waves-vagues.dfo-mpo.gc.ca/Library/40619655.pdf ("Genetic analysis of juvenile Atlantic Salmon from southern Newfoundland revealed that hybridization between wild and farmed salmon was extensive throughout Fortune Bay and Bay d'Espoir (17 of 18 locations), with one-third of all juvenile salmon sampled being of hybrid ancestry."); *see also* Mark Quinn, CBC News, *DFO study confirms 'widespread' mating of farmed, wild salmon in N.L.* (Sept. 21, 2016) https://www.cbc.ca/news/canada/newfoundland-labrador/farmed-salmon-mating-with-wild-in-nl-dfo-study-1.3770864.
[8] Caleb Jones, USA Today, *Rare Monk Seal Dies in Fish Farm off Hawaii* (Mar. 17 2017), *available at* https://www.usatoday.com/story/news/nation/2017/03/17/rare-monk-seal-dies-fish-farm-off-hawaii/99295396/.

of animals requires the use of veterinary drugs, such as antibiotics, to control pests and disease. Moreover, because these facilities are sited in open-water, they directly discharge into the water untreated fish waste, excess fish feed, and other toxins. No amount of regulation will effectively protect against these harms.

In conclusion, we believe DOE's updates to the NPDES permits for Cooke's four facilities are well-intentioned. Although the draft permits include some improvements, it is important to note that marine finfish aquaculture facilities cannot operate without releasing toxins directly into the water. The new requirements in the draft permits cannot minimize or avoid the harms that are simply inherent with underwater factory farms. The only way to truly avoid and minimize adverse impacts is to not allow marine finfish farming in open water. Therefore, in addition to the suggested improvements in the joint comment letter from Our Sound, Our Salmon, we urge DOE to include in the final permits its intention to utilize rigorous enforcement powers, including swift permit termination for any noncompliance issue.

Thank you for the opportunity to submit these comments.

Sincerely,

Hallie Templeton
Senior Oceans Campaigner
Friends of the Earth