



Comments on Cooke Aquaculture's NPDES Application to rear *Oncorhynchus mykiss* in Puget Sound open water net pens

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Introduction

On behalf of the board of the Wild Steelhead Coalition and the organization's thousands of members, we thank the Washington Department of Ecology (Ecology) for the opportunity to provide our comments on Cooke Aquaculture's National Pollution Discharge Elimination System (NPDES) application to modify their existing water quality permits so that they can commercially farm triploid rainbow trout in four of their Puget Sound net pen operations.

In the years since Cooke's existing NPDES permits were issued, the legal, political, and social landscapes surrounding net pens in Washington have changed dramatically. Much of this change is the result of the 2017 collapse of Cooke's Cypress Island Net Pen operation, which released more than 250,000 farmed Atlantic salmon into Puget Sound and was one of the largest environmental disasters in recent history in Washington. Making matters worse, in the wake of this disaster Cooke repeatedly proved to be an untrustworthy business partner by lying about the cause of the breach, trying to buy the Lummi nation's silence about the impacts of the collapse, blocking state regulators' efforts to monitor the situation, and repeatedly misleading the public about pertinent information.

In the aftermath of this environmental disaster and months of deceit by Cooke Aquaculture, Governor Inslee signed HB 2957 into law, a bill banning non-native finfish farming in Washington's waters. This measure was overwhelmingly supported by Washingtonians and passed by large margins in the House and Senate.

While Cooke's farmed steelhead proposal does act in accordance with the letter of this law, it is certainly a violation of its spirit, which intended to prevent companies such as Cooke from operating dangerous salmonid net pen operations in Washington's waters. Additionally, this proposed steelhead operation violates the will of Washingtonians who believed the threat of Cooke's disaster-prone fish farms was being removed from Puget Sound.

Importantly, HB 2957 also created a more stringent regulatory regime for marine net pen aquaculture in Washington's waters. Therefore, in reviewing Cooke's application to modify their existing NPDES permits, it is essential that Ecology utilize a standard of review which ensures it achieves the state's goal to "eliminate commercial marine net pen escapement and to eliminate negative impacts to water quality and native fish, shellfish, and wildlife."

Due to these new legal mandates and the different risk profile associated with rearing a domesticated and biologically-altered form of a native species, this permit application should not be considered merely an extension of past practices. Rather, it should be considered a new project, warranting a more comprehensive review that incorporates HB 2957's higher standards and holds Cooke Aquaculture to a stricter standard of risk elimination as well.



In addition to the issues detailed above, we would like to note the following concerns we have with Cooke's NPDES permit application.

- **Ensuring Compliance:** Cooke has a long history of failing to comply with the Clean Water Act (CWA) in Washington's waters. This was particularly true with the Cypress Island collapse, where Cooke violated the terms of its permit by failing to conduct required inspections of net pen moorings and anchors; to accurately monitor and report the number of fish escaping from pens; to track the number of fish lost to predation; and to develop operational plans that include necessary procedures for inspecting cages, storing chemicals, disposing of harvest bloods.

One would hope that Cooke would have cleaned up its act following the 2017 Cypress Island disaster, but unfortunately it did not as was demonstrated by the partial sinking of the Orchard Rocks net pen in 2019. This incident demonstrated that the risk of additional escapes is very real, given the state of the existing net pen structures. Cooke's poor safety record, its history of CWA violations, its inadequate emergency response operations, and the degraded state of its existing net pens are critical to consider in this process and should be grounds for denying the permit.

- **Change in Species:** While HB 2957 was being debated in the State Legislature, Ken Warheit, the Chief Scientist for WDFW's Fish Program, told the House Agriculture & Natural Resources Committee that the State should "remove authorization for native salmonid marine commercial aquaculture which WDFW considers to be a greater risk to the State's native wild and hatchery salmonid populations, than is Atlantic salmon marine aquaculture."

As noted by Mr. Warheit, transitioning to native salmonid marine commercial aquaculture is a major risk to Washington's wild fish, so it is critical that this factor be considered in the permit application. Some policies that may have been permitted for Atlantic salmon under the pre-2018 status quo pose additional risks now with domesticated, biologically-altered steelhead/rainbow trout. For example, since escapees and their risks to threatened conspecifics constitute pollution and are within the scope of Ecology's review, the proximity of net pens to steelhead spawning rivers should be included in Ecology's review of these NPDES permits. Additionally, the assessment of risks from pollution and diseases should account for the migration corridors in areas like Rich Passage, which may concentrate wild salmon near the pens.

Moreover, the behavioral response of wild steelhead to a large aggregation of conspecifics may be different than it was to Atlantic salmon. If wild schools are attracted to the captive domesticated steelhead in pens, the pollution from the net pens may do greater harm to threatened wild Puget Sound steelhead.

- **New Material to Review:** There is substantial new material to review that has not been finalized yet, and it would be appropriate for Ecology to delay drafting any NPDES permit until all of that information is available. In particular, there are four integral missing sets of information. First, during the emergency response to the Orchard Rocks facility partial collapse, Cooke told DNR that they plan to replace some existing net pens. If that plan is under way, the NPDES review should include engineering data on the new net pen structures to ensure these new pens can handle Puget Sound's dynamic conditions and will minimize escape risk.



Second, the Mitigated Determination of Nonsignificance (MDNS) issued by WDFW earlier this year requires Cooke to submit a plan for marking farmed steelhead to ensure they can be easily distinguished from their wild and hatchery-raised counterparts in Puget Sound. That plan is not currently part of the record. Third, the MDNS also requires Cooke to submit a plan for a “no-recovery response” to escapes, but that plan is not part of the escape plan submitted in Cooke’s application. As a result, it is impossible to assess the adequacy of Cooke’s pollution prevention plan until that plan is included in the application.

Lastly, the State Environmental Policy Act (SEPA) review led by WDFW which produced the MDNS is currently being appealed. This challenge will undoubtedly generate new information pertinent to the NPDES review. For all these reasons, it would be prudent for Ecology to delay drafting any NPDES permit so that the Department can ensure it appropriately considers all of the pertinent information regarding the potential environmental impacts of these proposed steelhead net pens.

- **Water Quality Impacts:** After decades of net pen operations in Puget Sound, it is abundantly clear that net pens have a major effect on water quality around the net pens, and nothing in Cooke’s current permit application eliminates this impact. The NPDES review should re-examine existing data on effluents from industrial products, medicines, feed, fish waste, and rotting fish to assess whether the current plans eliminate all of these risks. The review should also examine new data on antibiotic resistance in protected marine mammals as well as how effluents will flow through Puget Sound and affect sensitive habitats and areas designated as critical habitat for southern Resident killer whales, salmon, and other threatened/endangered species.
- **Food Effluent:** Open water net pens routinely disperse large volumes of feed into public waters. A portion of this feed may not be consumed by the farmed fish and therefore makes its way into the surrounding marine environment. This dispersal of feed into public waters represents a continuous and constant act of chumming, which attracts native fish species and other wildlife. Smaller fish species as well as out-migrating and rearing salmonids (including ESA-listed Chinook and steelhead) may be attracted by net pen feed to the point where they physically enter a net pen and become vulnerable prey to the farmed steelhead in the pens. The constant dispersal of feed may also cause disruptions in the natural migratory patterns of native salmonids, as the pens provide a constant food source that may cause salmonids to occupy a single location for a longer period of time.

Surveys of aquatic diversity at sites near these net pens indicate substantial numbers of threatened and endangered juvenile salmonids and forage fish. Additionally, state-funded surveys have found substantial populations of threatened coho, Chinook, pink and chum salmon in near-shore waters at sites near and similar to those where net pens operate. These surveys also demonstrate sizable variation in total species diversity and population sizes from site to site and between surveys at the same site over time. All of this data highlights the difficulty of monitoring and predicting what species will be attracted to the net pens as a food source and how pollutants in and near the net pens will affect Puget Sound’s ecology.

- **Negative Impacts to Native Fish, Shellfish, and Wildlife:** Concentrated populations of fish raised in net pens that are essentially aquatic animal feedlots face far greater risk of disease,



parasitic, and viral amplification than free-ranging wild populations. When viral, bacterial, fungal, or parasitic diseases break out in net pens, the disease-causing organisms are rapidly amplified in number and leaked to the surrounding aquatic environment in large numbers. Because their conspecifics (and other salmonids of concern) will be swimming in close proximity to the pens, there is likely to be a spread of disease to endangered wild steelhead and other salmonids.

Such pathogens fall within the definition of pollutants, and the NPDES permit review should ensure that Cooke's plans will eliminate the risk of these pollutants harming the integrity of the Sound ecosystem and the biological integrity of its wild species. Given the frequent presence of marine mammals near the pens, including seals and sea lions aggregating near the pens during the harvest operations and recent video of orcas swimming nearby as well, it is all the more important to identify pollutants (antibiotic resistant bacteria, pharmaceuticals, and other emissions) that might do harm to these protected species.

- **Net Pen Escapement:** The escape of farmed triploid trout poses a risk to the genetic integrity of threatened Puget Sound steelhead stocks. While the limited data from Troutlodge indicates an average triploidy failure rate of 0.17 percent, the true rate may be substantially different. In the event of an escape on the scale of Cypress Island, that could mean thousands of fertile females entering Puget Sound, potentially diluting the genetics of threatened wild populations and competing with wild females for redds.

The escape of rainbow/steelhead from any of the Puget Sound aquaculture facilities, whether from small-scale leakage or a catastrophic facility failure like Cypress Island, will pose risks to native salmonids rearing in nearshore marine habitats and rivers due to competition for food and foraging space. This will be particularly true in the case of triploid trout because, as noted in Cooke's materials, these fish will have appetites that are likely to be considerably greater than wild juvenile salmon and steelhead due to the faster inherent growth rate of these triploid fish. As a result, escapees may outcompete wild steelhead or even predate upon them.

Because escaped fish would constitute pollutants under the Clean Water Act, Cooke's escape prevention tactics and the adequacy of their escape prevention and response plans must be carefully considered in the permit process. As noted earlier, the SEPA MDNS requires Cooke to develop a "no-recovery" option to be added to their escape response plan, which problematically is not included in the NPDES application materials. Additionally, Cooke has failed to meet the MDNS's requirement to develop a plan for marking their domesticated stock to distinguish them from free-swimming wild and hatchery steelhead. Cooke's failure to include these plans in their NPDES materials is an important aspect of escape recovery and must be addressed before a permit is issued.

In conclusion, given the new legal standard established by HB 2957, the pending legal challenge to the MDNS issued in January 2020, the large amount of new information that Cooke's application adds to the public record, the other new information described above that has been recently learned, and the substantial concerns that arise from raising a native species in net pens, we believe it would be appropriate to initiate a SEPA review of the NPDES application and potentially draft a new EIS after making a determination of significance. Additionally, we believe Ecology's NPDES permit review



should not begin until there has been thorough consultation with local, state, federal, and tribal governments.

On behalf of the Wild Steelhead Coalition, we urge the Department to conduct a full SEPA review for Cooke's proposal to transition its existing net pens to steelhead production. Simply put, Puget Sound and its wild steelhead, which are in such dire shape that they are protected under the Endangered Species Act, are far too important to Washington's people, economy, and ecosystem to risk by dangerously rushing through this important environmental review process.

Thank you for your consideration,

Greg Topf
Board of Directors
Wild Steelhead Coalition

The Wild Steelhead Coalition is a non-profit 501c(3) organization representing more than 3,000 members in Washington state and beyond. We were founded in 2000 by a group of conscientious steelhead anglers and advocates, determined to make lasting change for this iconic species. For nearly 20 years, the WSC has worked to build partnerships, educate stakeholders, and change policy on behalf of the fish.