



*"Promoting Birding and Conservation as Community Educators,
Volunteers, and Stewards"*

P.O. Box 502 Sequim, WA 98382

June 8, 2020

Laurie Niewolny, Water Quality Program
Washington State Department of Ecology
PO Box 47600, Olympia, WA 98504

Subject: RAISING STERILE ALL-FEMALE TRIPLOID RAINBOW TROUT/STEELHEAD AT EXISTING MARINE NET PEN SITES IN PUGET SOUND

Dear Ms. Niewolny,

The Olympic Peninsula Audubon Society (OPAS) thanks you for the opportunity to comment on the applications Cooke Aquaculture submitted to the Department of Ecology requesting permission to modify their existing National Pollutant Discharge Elimination System (NPDES) permits to allow the company to begin rearing steelhead in their Puget Sound net pens.

We urge the Department of Ecology to undertake a comprehensive evaluation of the risks involved in permitting these net-pen operations. Scientific understanding of the effects of net-pen aquaculture and shifting societal values require a new assessment and evaluation of the local and regional effects of net-pen aquaculture. In addition, the human pressures and threats at play are quite different today (and in many cases worse) than they were three decades ago. These realities call for more than a cursory review of net-pen aquaculture in Washington's waters.

A NPDES permit is one tool that requires best management practices, monitoring, and reporting to ensure that the physical, chemical, and biological integrity of Washington waters are protected. Net-pen facilities require a NPDES permit to rear fish for harvest and market sale. Uneaten fish food, fish feces, growth enhancement chemicals, disease and pest control chemicals, and accidental release of fish are widely recognized as important factors in the degradation of water resources and threats to human health. Permit requirements provide the scientific and technical foundation that allow the Department of Ecology to ensure that facilities are meeting water quality and public health standards before they are permitted and throughout their operation if they are permitted.

If the permit is issued, it should include monitoring, reporting, and evaluation standards established in advance for permit continuation and for rescinding the permit if the operation is out of compliance

and, thus, is likely to degrade Washington's water resources, endanger native flora and fauna, or diminish public health.

We have five primary concerns about the potential for ecological damage occurring from Cooke's proposed reactivation of aquaculture net pens to raise triploid steelhead. Specifically, our concerns include:

- 1. Siting of net-pens.** Seabirds and other marine wildlife congregate in specific locations in Clallam, Kitsap and Skagit Counties in order to take advantage of food and habitat resources. Audubon has identified a number of areas within Puget Sound as Important Bird Areas—a formal designation that identifies areas of significant importance to birds at the regional, national and international level. If net pens are sited in or in close proximity to important foraging or resting areas, marine birds, including sensitive species like Marbled Murrelets, Brant, and many others may be displaced or disturbed by human activities. The EIS should incorporate information on the location of Important Bird Areas (e.g., Figure 1), as well as WDFW's own long-term data sets on marine bird occurrence and density hotspots in Puget Sound when exploring potential impacts to marine birds.
- 2. Regulatory compliance of triploid steelhead.** Washington is the only West Coast State that permits marine net pens. If triploidy and thus sterility are indeed a concern, technology must be in place and a plan for enforcement to monitor the fish. Otherwise there is nothing to prevent human error from introducing non-sterile fish into the net pens. To ensure the fish are indeed triploid, WDFW must test the fish and plan for field inspections by the agency or an independent party. If the latter, a conflict of interest would exist unless WDFW pays for the testing, then seeks reimbursement from the aquaculturist.
- 3. Ecological and health impacts of net pens.** An updated EIS is needed to evaluate the ecological impact of pollutants—such as sterility chemicals, disease control chemicals, growth enhancers, fish wastes, plastics and other materials—introduced into the waters of Washington as a result of net-pen operations. We are concerned about the potential impacts that toxic materials, organic enrichment, and debris would have to a large array of native vertebrates and invertebrates. Excess amounts of organic waste, for example, will suffocate valuable aquatic plants growing in the area (e.g., smothering eelgrass) or increase turbidity so that photosynthesis is impaired. The use of antibiotics in aquaculture needs to be re-examined due to the development of antimicrobial resistance in animals and humans. Microplastic debris is a new threat in marine waters throughout the world. These violations of the Clean Water Act and the National Environmental Protection Act should be prevented.

Net pens concentrate and propagate parasites and disease which can infect native stocks of salmon, forage fish, and other marine species. Scientific evidence suggests that seabird breeding success declines when forage fish populations drop below a third of their maximum long-term biomass. A recent study found that the number of marine birds wintering in the Salish Sea has declined significantly since formal surveys began 37 years ago. Migratory, fish-

eating birds, such as Western Grebes, appear to be at the greatest risk for continued declines ([Vilchis et al. 2015](#)). In U.S. waters, overwintering marine bird populations have decreased by up to 50% since 1980 ([Bower 2009](#)) and 14 of the 37 most common overwintering species are considered to be in significant decline. In British Columbia waters, 22 of 57 species assessed show significantly declining trends for the 1999-2011 period ([Crewe et al. 2012](#)).

No reasonable person would attribute all of these declines to operation of net-pens. But the concentration of activity associated with net-pen operations obviously stress local plant and animal communities and damage physical habitat.

- 4. History of neglectful net pen maintenance and cleanup.** Applicant must be required to clean and remove damaged equipment from existing operations plus clean and restore the seabed under decommissioned sites before new equipment and operations can commence. A cleanup bond or other performance enforcement measures must be part of any new net pen permit from Washington State agencies involved in the regulation of aquaculture.

Cooke has a public record of poor net-pen maintenance, raising concerns about their commitment to ecosystem protection. Any proposed and largely experimental methods to mitigate the impact of fish waste should be fully tested and evaluated by an independent science team before they are approved for use in Washington's waters.

The Washington Department of Ecology penalized Cooke Aquaculture Pacific (Cooke) \$332,000 for the negligent release of Atlantic salmon into Puget Sound. Cooke violated their water quality permit leading up to, and during, the net pen collapse near Cypress Island in August 2017.

"This investigation confirms Cooke Aquaculture was negligent in operating its net pen," said Ecology Director Maia Bellon. "What's even worse is that Cooke absolutely could have—and should have—prevented this incident."

Specifically, Cooke was fined for violating the following conditions of their water quality permit: poor net cleaning and maintenance, failing to follow required protocol for repairs, and insufficient attention to engineering (<https://ecology.wa.gov/About-us/Get-to-know-us/News/2018/Jan-30-Cooke-net-pen-fine>).

- 5. Lack of consideration of advances in land-based aquaculture.** Finally, land-based aquaculture in British Columbia (see kuterra.com) prevents pollution of public waters while continued use of existing net pens does not. The path to successful fish culture is a land-based closed system aquaculture that uses the ozonation process for re-use of water without danger of ecological and economic externalities. Over-land aquaculture contains the pollution and pollutants on the property of the industrial fish farm. This minimizes the risk of damage to public lands and waters.

In summary, we request that WA Department of Ecology:

- Complete a new, comprehensive Environmental Impact Statement

- Review the many risks associated with net-pen operation, including but not limited to the concerns described in 1–5 above
- Deny Cooke Aquaculture’s requests to modify their existing NPDES permit to allow rearing of steelhead in the waters of Puget Sound because of the well documented risks outlined above.

Thank you for your attention to this important matter.

Sincerely,

Judith White

Judith White
President

Figure 1. Puget Sound’s Important Bird Areas as Established by National Audubon Society.



