

Judith Akins

Ms. Laurie Niewolny
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Re: Cooke Aquaculture Pacific, LLC NPDES permit modification application.

Dear Ms. Niewolny,

Thank you for the opportunity to comment on Cooke's request to raise sterile all-female triploid Rainbow/Steelhead at existing marine net pen sites in Puget Sound . I belong to many groups that are interested in making Puget Sound waters a healthy habitat for the flora and fauna which reside there as well as for human activity .There needs to be a net gain to these waters of Puget Sound to overcome the practices of the past.

While the Washington State Department of Fish and Wildlife has approved this project under SEPA, stating that the proposal "does not warrant an Environmental Impact Statement and the proposal will likely not have significant adverse impacts on the environment",I question the non-significance of this aquaculture project. I believe there will be significant impacts to the Puget Sound by these four projects and one only has to look at the comments already submitted by The Wild Fish Conservancy, Skagit Audubon Society, Swinomish Indian Tribal Community, Evergreen Islands, Our Sound Our Salmon.

Looking at the additional requirements being placed on Cooke I find some statements which are troubling. In the modifications DOE is requiring Cooke to prohibit release. Was not Cooke also charged with this prohibition when in August 2017, they allowed 250,000 salmon to escape and did not report this incident until days later? They are required to report unusual events, Cooke had a highly "unusual event" occur in 2017 and they did not report it until after others had reported seeing the Atlantic Salmon in their nets.

Fish feeding is an issue and the requirement that Cooke increase their monitoring, however they do not plan any changes in their feeding program. Fish feed along with the antibiotics are a very real threat to our native species and the surrounding waters. Farmed triploid rainbow trout are fed antibiotics which are widely used in modern aquaculture to prevent or treat bacterial diseases in farmed fish. The Seafood Watch program suggests that people should only eat these fish from indoor recirculating tanks because of levels of these antibiotics etc. in the fish.

Ecology has required Cooke to follow AKART analysis (All Known Available and Reasonable Methods of Treatment) to avoid excessive accumulation of marine growth.This contribution to marine waters of eutrophication, feces and uneaten food pellets alter the organic matter in the sediment, which can change the consumption of oxygen and can cause local eutrophication. According to the Institute For Coastal Marine Environment, "The most common negative

environmental effect is water eutrophication, water quality, and transmission of animal diseases." (Monique Mancuso, Institute for Coastal Marine Environment (IAMC) www.journaloffisheries.com) This can cause changes in the abundance and composition of microflora. The eutrophication causes dense growth of plant life and death of animal life and the spread and outbreak of diseases. Studies by both Ecology and WDFW: the 2000 Seventh Report of the Puget Sound Ambient Update finds "Widespread evidence of the declining population of Puget Sound marine organisms suggests the importance of new efforts to protect and recover populations. Recovery plans based on an ecosystem perspective will require additional information about the specific relationships among various Puget Sound species and the influences of various natural and human-caused environmental stresses on marine populations." WA State is spending millions of dollars for salmon recovery which depends on healthy seas. Continued fish aquaculture by Cooke and their proven record of abuse will only continue the decline to these waters.

Cooke is being required to improve their Net Hygiene in accordance with DNR protocol. Although Cooke has been required to do so, it has not maintained and cleaned net pens in the past and allowed buildup of mussels and other marine organisms which led to the net pen collapse in August 2017. The Department of Natural Resources report on Cooke's net pen collapse states that the net pens were not properly designed. (Negligence caused August net pen collapse News Date January 30, 2018, dnr.wa.gov) and as Cooke is making no changes to their structures the possibility of another collapse is real.

As government agencies address the effects of fish-farming in the Puget Sound waters, there is almost no scientific evidence that supports that this a healthy addition to our marine waters and in fact there is much evidence that supports that fish aquaculture contributes to the detriment of our water quality and life within the marine environment. It is my belief that Land-based Recirculating Aquaculture Systems (RAS) are a far better alternative for aquaculture farms. These systems located upland, allow for fin fish aquaculture but would greatly reduce or eliminate the impacts to the marine environment caused by net pens.

While "WDFW has determined that this proposal will likely not have a significant adverse impact on the environment", science is proving that this proposal will have significant adverse impacts to the marine environment and waters of Puget Sound. WA State is spending millions of dollars for salmon recovery which depends on healthy seas. Continued fish aquaculture by Cooke and their proven record of abuse will only continue the decline to these waters. We must study any and all impacts of any industry that will affect the Salish Sea and cannot allow any industry to threaten an already threatened environment and do further harm. I strongly urge that a new permit process be conducted on these projects and ones that include new SEPA analysis, threshold determination and a public hearing.

I am looking forward to seeing that the Department of Ecology carefully consider all the comments and decide in favor of a healthy and viable Puget Sound.