

McNamara, Cade

From: nick colazas <NickC_Fish@hotmail.com>
Sent: Thursday, February 17, 2022 9:14 PM
To: CEQAResponses
Cc: Planning Clerk; McNamara, Cade; Cassidy.Teufel@coastal.ca.gov
Subject: HFMA comments RE: Nordic Aquafarms DEIR PLN-2020-1669
Attachments: HFMA-Comment_NORDIC-DEIR_2-17-22.pdf

Mr. McNamara,

I've attached a copy of HFMA's public comment for your review and to be entered into the administrative record.

Thank you,
Nick Colazas

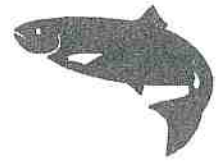
HUMBOLDT FISHERMEN'S MARKETING ASSOCIATION, INC.

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2/17/2022

Cade McNamara
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Submitted by email to CEQAResponses@co.humboldt.ca.us

RE: Nordic Aquafarms DEIR, Case Number PLN-2020-1669

Dear Mr. McNamara:

Humboldt Fishermen's Marketing Association (HFMA) is opposed to the Atlantic salmon aquaculture facility (the Project) proposed by Nordic Aquafarms (NAF) for the Samoa Peninsula in Humboldt County, CA. As mentioned in our May 16, 2021 letter, HFMA has been a valued and contributing member to this community since 1955. HFMA has been involved and following the progress of the Project since its first public announcement February 2019. Our members respect and rely upon maintaining the health, biological diversity, and resilience of Humboldt Bay and its surrounding waters.

HFMA believes that Atlantic salmon have no place being farm raised in proximity to Humboldt Bay or the Pacific Coast in California. Home to imperiled wild Pacific salmon stocks and being a delicate marine environment, the stakes are simply too high. Land-based RAS salmon facilities lower some of the common risks involved with traditional net-pen facilities but they do not eliminate any of these risks, and they create new risks of their own. While this is not a comprehensive list, some issues of great concern are:

- Fish escape
- Virus/pathogen introduction
- Waste discharge
- Harmful algal blooms
- Fresh water usage
- Saltwater intake/supply
- Enormous power consumption

- Solid waste storage/disposal
- Chemical waste
- Infrastructure/economic effects
 - Job displacement
 - Competition with existing markets
 - Competition for limited trucking/shipping availability
- Financial burden for County residents

NAF states that the risk of fish escapes from the Project are, “minimized inherently by design” and that they have gone beyond most standards to, “virtually arrive at an escape-proof facility and farm site” (DEIR project description 2-40, 2021). While this could be a great improvement over traditional net-pen or older land-based RAS facilities for countries that currently operate them, it is a significant adverse biological and environmental risk for Northern California where such facilities do not exist. NAF does not state, in their own document, that the risk of fish escape is zero because doing so would be a lie. Between 2010 and 2018 there were 17 unique escape incidences from similar land-based RAS facilities in Norway, one incident involving 49,000 fish (Føre and Thorvaldsen, 2019). The risk is real, and has been documented. Any risk of fish escape or viral/pathogenic introduction to threatened and endangered wild salmon populations is unacceptable. When farmed Atlantic salmon escape to Pacific waters, or salmonid viruses are introduced, there are no known mitigation measures to correct the resulting environmental and biological damage. This would be a devastating scenario to already vulnerable threatened and endangered wild stock.

The introduction of viruses is of particular concern, because there are multiple ways for them to be introduced to the environment from the facility. Fish escape being the most obvious pathway; but also, from the Project’s effluent discharge and from the un-treated solid waste sludge removed from NAF’s filtration system. The DEIR relies upon a best-case scenario for the filtration systems ability to remove viruses and pathogens and to prevent them from being released into coastal waters. This works in theory, but necessitates all filtration components and systems to work at 100 percent efficiency, 100 percent of the time to keep 12.5 million gallons of effluent per day virus free. The DEIR references that ruptures or failings are likely to occur within the filtration system (page 2-41). There is no mention of monitoring the system for this type of degradation, no maintenance schedule presented, and loss of efficiency due to said failures has not been quantified. The prevention of viral pathogens seems to rely 100 percent on using a “certified” source of eggs. The DEIR is deficient, in that it fails to mention who the supplier of “certified” eggs will be, the certification, standard, country of origin, or if such a source even exists. There is no mention of genetic testing or monitoring the facility’s fish stock for viruses, viral testing or monitoring of Project effluent, reporting to NMFS or CDFW in case of inevitable viral outbreak, or any planned mitigation for such an outbreak. These omissions are serious, and could potentially be devastating to our wild salmon populations.

NAF does not state where the enormous amounts of untreated waste sludge will be disposed of in the DEIR, but does reference storage of said waste on-site. This untreated waste is a huge potential vector for viral transmission to wild listed and non-listed native salmonid populations. While farm raised Atlantic salmon are known carriers for many different viruses and pathogens, scientists have discovered one in particular that has originated in European salmon farms and now infects wild salmon all across the British Columbian coast to Northern Washington state. Piscine orthoreovirus (PRV) has now spread globally from Europe, and has been determined to be first introduced to British Columbia via egg import from Norwegian salmon farms (Mordecai et al., 2021).

HFMA is opposed to permitting the Humboldt Bay Harbor Recreation and Conservation District (HBHRCD) to pump saltwater from the Humboldt Bay Estuary for the purpose of supplying saltwater to the NAF project and any other HBHRCD mariculture tenants on HBHRCD properties. Any saltwater required must be sourced elsewhere. Humboldt Bay is the largest estuarine nursery for marine vertebrate and invertebrate species North of San Francisco Bay. The estuary contains diverse larval populations of mollusks, crustaceans, and fish species in large quantities. These species include, but are not limited to, herring, sardine, anchovy, both artherinid and osmerid smelt, Dungeness and rock crab in both zoea and megalopae stages, copepods, amphipods, and shrimp. Also abundant are different species of zooplankton and phytoplankton; which nearly all larval populations rely upon for feed.

The Endangered Species Act defines “take” as, “To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct”. Operation of said intake pumps will result in take of ESA and CESA listed species, both by direct impingement or entrainment *and by removal of their food sources*. The DEIR is deficient in this regard. Rigorous larval sampling must be conducted in the Humboldt Bay Estuary, at different tidal stages and at different times of year, to determine not only how much take of ESA and CESA species will occur, but also the removal of their food sources. Examination of past HBHRCD performance regarding preventative maintenance and operation of HBHRCD systems and equipment leads HFMA to believe that HBHRCD will likely fail to properly design, operate, and maintain any in-bay pumping system in a way that prevents the take of Humboldt Bay’s important marine flora and fauna. Again, sourcing required saltwater elsewhere will avoid any problems that HBHRCD will create if permitted to pump these volumes from Humboldt Bay.

Negative environmental effects such as harmful algal blooms may occur in Humboldt Bay and nearshore waters as a result of the high temperature and nutrient levels contained in the Project’s effluent. In their June 2, 2021 letter to the North Coast Regional Water Quality Control Board (NCRWQCB), the National Marine Fisheries Service (NMFS) states,

“NMFS is concerned that the discharge of 12.5 million gallons per day (MGD) into the Pacific ocean will cause significant adverse effects to Essential Fish Habitat, that include the following: the increase in temperatures of up to 4 degrees Celsius represents a significant change in local water temperatures that would likely disrupt the natural species composition in

the area, favoring warmer water species; the NCRWQB assumes in the National Pollutant Discharge Elimination System permitting that Humboldt Bay is enclosed and receives no ocean water, which is largely incorrect and the effluent would likely enter and effect Humboldt Bay during certain conditions; the perennial discharges of nutrients will support increases in the local populations of algae species and likely contribute to increased frequency of future harmful algal blooms and corresponding toxins and depressed dissolved oxygen conditions."

Harmful algal blooms are dangerous to fish, marine mammals, birds, and humans. Blooms of *pseudo-nitzschia sp.*, which create the neurotoxin Domoic acid, is the cause of Amnesic Shellfish Poisoning in humans. One such bloom was the reason for a 6-month delay to the start of the 2015-16 commercial Dungeness crab season. A facility that contributes to more frequent and longer durations of harmful algal blooms would be unsafe to the community and a devastating blow to the California commercial Dungeness crab fishery, which is a huge economic driver both locally and statewide.

As mentioned in HFMA's May 16, 2021 letter, HFMA is still unaware of a county requirement for financial guarantees or protections from NAF. NAF is a new company that has yet to construct a facility such as the proposed, and has only operated two significantly smaller facilities with limited experience. With no financial protections in place and no requirement from the county for NAF to purchase the project site from HBHRCD, the financial burden of decommissioning and site cleanup is placed directly on Humboldt County taxpayers should NAF's operations fail to be profitable.

HFMA and Humboldt County fishermen have vested interest and legal status as potential impacted stakeholders to protect Humboldt Bay and its coastal waters. We believe a project such as the proposed takes away from years of conservation and restoration efforts, and will be damaging to the marine environment for many years to come. We would like to thank you for hearing our comments on this matter.

Sincerely,



Harrison Ibach
President



Nick Colazas
Board Member

References:

Føre, H.M. and Thorvaldsen, T., 2021. Causal analysis of escape of Atlantic salmon and rainbow trout from Norwegian fish farms during 2010–2018. *Aquaculture* 532:736002.

Mordecai, G.J., Miller, K.M., Bass, A.L., Bateman, A.W., Teffer, A.K., Caleta, J.M., Di Cicco, E., Schulze, A.D., Kaukinen, K.H., Li, S. and Tabata, A., 2021. Aquaculture mediates global transmission of a viral pathogen to wild salmon. *Science Advances*, 7(22), p.eabe2592. <https://www.science.org/doi/epdf/10.1126/sciadv.abe2592>

