



John Ford, Director
Humboldt County Planning Department
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Sent via email

July 6, 2021

Re: Nordic AquaFarms Notice of Preparation of Draft Environmental Impact Report

Dear Planning Director Ford,

On behalf of Humboldt Baykeeper, EPIC, Surfrider Foundation, and Northcoast Environmental Center, please accept this letter concerning the Nordic AquaFarms Notice of Preparation of Draft Environmental Impact Report.

To avoid needless repetition of comments already submitted, we hereby incorporate by reference our May 24, 2021 comments on Humboldt County's Initial Study/Mitigated Negative Declaration (IS/MND) for the Project, as well as those submitted by the Wiyot Tribe, California Department of Fish and Wildlife, California Coastal Commission, and others which raised concerns that we share (but will not repeat here) related to impacts on wild fish populations from pathogens, fish escape, and feed sources, recreational and coastal access, energy consumption, and other issues that were not thoroughly analyzed in the IS/MND. We expect that these inadequacies will be thoroughly assessed and addressed in the DEIR, with strategies to avoid, minimize, or mitigate the impacts to the fullest extent.

I. Bay intakes

Since two intakes in Humboldt Bay would be an integral component of the project providing up to 10 MGD, the impacts of proposed use of these intakes should be analyzed and either avoided or fully mitigated in the DEIR. Such analysis must consider impacts on all life stages of protected species, forage species, and plankton that would be affected by the intakes. In addition, the DEIR should assess the potential for drawing seawater from subsurface ocean intakes on the west side of the Samoa Peninsula rather than the bay intakes to determine the best available technology to minimize the intake and mortality of all forms of marine life as required by California Water Code Section 13142.5(b).

II. Impacts to the Marine Environment from the Ocean Discharge

The potential impacts to the marine environment are of concern for a wide variety of reasons, including impacts to native salmonids and other fish species; marine mammals and the seabirds that depend on them; commercial, recreational, and tribal fisheries; and the potential to exacerbate harmful algal blooms that have plagued the region in recent years.

II.a. Additional Modeling: To ensure that such impacts are fully analyzed and thoroughly understood, additional modeling should be conducted using the best available scientific information.

Existing nutrient data from closer to the discharge point than was used in the Numeric Modeling Study for the proposed project¹ should be obtained and used to further examine potential impacts of nutrients expected to be discharged in the project's effluent. According to the Central and Northern California Ocean Observation System's webpage² on Humboldt Bay, HSU and NOAA's Southwest Fisheries Science Center have collaborated since 2006 to conduct monthly hydrographic and biological surveys along the Trinidad Head Line (THL). These surveys provide the only year-round, high-frequency ship-based ocean observations in the highly dynamic, strongly forced transitional zone between Cape Blanco and Cape Mendocino. As part of a collaborative study of ocean acidification funded by the Ocean Protection Council, Dr. Jeffrey Abell (HSU) conducted additional sampling to quantify carbonate chemical parameters and oxygen concentrations along the THL, successfully documenting seasonal and interannual variability in pH, dissolved oxygen (DO), and other carbonate-system parameters along the THL. According to Dr. Abell's webpage,³ one of his current research projects is Pacific Coast Ocean Observing System: *Monitoring nutrient concentration in coastal water along the Northern California shelf*.

These data are critical for assessing the potential impacts of nutrients discharged into the nearshore marine environment. Since they collect these data monthly, they may be willing and able (with funding) to add a sample site or two closer to the discharge point to begin collecting data on the baseline conditions as suggested by NMFS, as well as conducting ongoing monitoring that Nordic has agreed to do to ensure early detection of impacts.

II.b. Baseline and Ongoing Monitoring Near the Outfall

Collecting data on current (baseline) conditions near the discharge point is critical and should include levels of phytoplankton in various seasons. Ongoing monitoring should include early detection of toxic algae such as *Alexandrium*, the dinoflagellate that produces PSP toxins, and *Pseudo-nitzschia*, the diatom that produces domoic acid, which caused devastating impacts to the marine ecosystem in 2014-15, including the Dungeness crab fishery, marine mammals, and seabirds from Alaska to Southern California.

The California Harmful Algal Risk Mapping (C-HARM)⁴ monitors ocean waters across the state for early detection of toxic algae; it may be a source of baseline conditions in

¹ Samoa Peninsula Land-based Aquaculture Project Numerical Modelling Report, Rev. 1. Feb. 2021. Humboldt County Initial Study/Mitigated Negative Declaration, Appendix E. Accessed at <https://humboldt.gov/DocumentCenter/View/95070/Appendix-E---Numeric-Modelling-Report-Dilution-Study-PDF>

² Central and Northern California Ocean Observation System: Humboldt Bay. <https://www.cencoos.org/data-by-location/humboldt-bay/>

³ Dr. Jeff Abell. Professor of Oceanography, Humboldt State University. Arcata, CA. <https://oceanography.humboldt.edu/people/jeffrey-abell>

⁴ Anderson, C. R. et al. 2016. *Initial skill assessment of the California Harmful Algae Risk Mapping (C-HARM) system*. Harmful Algae 59: 1-16. Accessed at <https://www.sciencedirect.com/science/article/abs/pii/S1568988315301037>

the local nearshore environment and can provide information on the types monitoring that should be conducted to ensure early detection of toxic algae. Monitoring alone will not mitigate the impacts of a toxic algae bloom, but can help identify the problem before its impacts become widespread.

II.c. Adaptive Management Plan

An adaptive management plan should be adopted that sets thresholds that would trigger action to avert a toxic algae bloom once it is detected. The adoption of appropriate thresholds and implementation plan for adaptive management should include experts in detecting and managing Harmful Algal Blooms, as well as scientific experts from trustee agencies focused on protecting marine resources, including the California Coastal Commission, California Dept. of Fish & Wildlife's Marine Region, and National Marine Fisheries Service.

We suggest that the following language be adopted to implement the Science Advisory Panel:

Impacts to the ocean environment from nutrient pollution are anticipated to be below a level of significance based on modeling performed by the project proponent. If actual pollution released is above anticipated or permitted amounts or if the pollution may be a causal factor in a significant algal bloom, a Science Advisory Panel will meet to discuss the discharge and whether additional measures should be implemented to avoid significant impacts.

The Science Advisory Panel shall consist of four voting members and one non-voting member: (1) CDFW scientist with expertise in ocean ecosystems; (2) NOAA scientist with expertise in ocean ecosystems; (3) Coastal Commission scientist with expertise in ocean ecosystems; and 4) an employee of the Humboldt County Planning Department or a designated representative of the Planning Department. Nordic Aquafarms shall send a representative to the Science Advisory Panel, although this person may not vote. The Panel should strive to produce consensus decisions, although any recommendation made by a majority of its members shall be considered a binding condition on the project.

The Panel must be convened if actual discharges exceed permitted discharges or in the event of a significant algal bloom, as determined by at least one member of the Panel.

III. Hazardous Waste Removal and Disposal

The DEIR should include more detail on demolition, removal, and disposal of hazardous materials than was included in the IS/MND. The structures slated for demolition include the former pulp mill smokestack, boiler buildings, five brick silos, and others. These are large structures containing a variety of contaminants that should be described in detail, along with procedures for avoiding, minimizing, or mitigating impacts to air and water quality during demolition, removal, and disposal.

IV. Contaminated Soil and Construction of New Stormwater System

The Project's stormwater design includes a series of four bioretention and infiltration ponds combined with Low Impact Development (LID) facilities to manage stormwater generated on the Project Site. The DEIR should describe how the proposed LID facilities will avoid areas of soil and/or groundwater contamination that will remain on the Project site, thereby avoiding impacts to groundwater. Bioretention and infiltration ponds located in contaminated soil could have significant impacts to groundwater, even if the levels of contamination are below those considered acceptable for protecting human health on industrial sites.

V. Consultation re: Potential Impacts to Marine Mammals

The IS/MND proposed mitigation measures to avoid impacts to marine mammals from noise and vibration. It is not clear whether these mitigation measures were developed in consultation with National Marine Fisheries Service, which is the trustee agency responsible for protecting marine mammals. The DEIR should incorporate NMFS recommendations on avoiding, minimizing, or mitigating impacts to marine mammals.

VI. Cumulative impacts assessment should consider past, present, and reasonably foreseeable future projects, including the Humboldt Bay Renewable Energy Port Project, which is in the early planning stages on various parcels adjacent to the proposed Nordic AquaFarms project.

VIII. Alternatives

A range of alternatives should be considered and analyzed to evaluate potential options for minimizing impacts to the environment while achieving the Project's objectives. Such alternatives should include a Reduced Project Alternative: this would allow for many of the Project's uncertainties to be addressed in a future DEIR, including a dye test to track dispersal of the effluent in different seasons.

In closing, we appreciate your willingness to discuss this project and our concerns and we look forward to further conversation. Likewise, we have appreciated the open communication we have enjoyed with the project proponent. If you would like to discuss anything contained within this letter, please write to our organizations at the addresses below.

Sincerely,

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