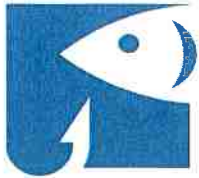


McNamara, Cade

From: Larry De Ridder <clderridder@hotmail.com>
Sent: Friday, February 18, 2022 12:47 PM
To: CEQAResponses
Subject: Nordic Aquafarms DEIR comments
Attachments: HASA letter_Nordic AquaFarms_draft EIR.pdf

The attached is submitted by Humboldt Area Saltwater Anglers.

Larry De Ridder
HASA



Humboldt Area Saltwater Anglers Inc.

P.O. Box 6191, Eureka, CA 95502

Email: hasa6191@gmail.com

FEIN #61-1575751

February 17, 2022

Humboldt County Planning and Building Department
3015 H Street
Eureka, CA, 95501



RE: Humboldt Area Saltwater Anglers comments on Nordic Aquafarms Draft EIR.

The Humboldt Area Saltwater Anglers (HASA) appreciates the opportunity to provide comments regarding Nordic Aquafarms (NAF) draft Environmental Impact Report (DEIR) for their proposed fish farm. HASA is a non-profit association whose purposes include educating anglers in conservation and best management practices of fishing, work cooperatively with Federal and State fishery management officials on proposed regulations, and providing our perspective on how regulations will affect our sector from opportunity and economic perspectives. HASA's membership of approximately 300 saltwater anglers are passionate about maintaining long-term recreational angling opportunities on the north coast of California, within the context of sound fishery management practices.

While we appreciate that NAF took the extra effort to develop an EIR for their proposed projects, HASA still has concerns and questions regarding the project as currently described in the DEIR. HASA's concerns include the following topics: bay water intake, effluent discharge to the ocean, and feed sources.

Bay Water Intake: The project proponent proposes to intake seawater from Humboldt Bay for use at the facility. The DEIR states that the capacity of the Humboldt Bay Harbor District sea chests on the RMT II and Red Tank Docks is being expanded to provide up to 10.5 million gallons per day (mgd) saltwater supply to the Project. Industrial installations using seawater for cooling, heating, or industrial processing must complete a Water Code section 13142.5(b) determination to ensure "the best available site, design, technology, and mitigation measures feasible" are "used to minimize the intake and mortality of all forms of marine life." The DEIR, however, does not indicate whether the facility will be required to complete a section 13142.5(b) determination, despite the fact the proposed intake structure has the potential to cause significant environmental impact. The facility should not be approved until the intake structure is evaluated and either conditioned or approved by the Regional Board in accordance with Water Code section 13142.5(b).

Regarding the fish screens at the seawater intakes in Humboldt Bay, the DEIR's Project Description claims that: "modifications would increase water withdraw [sic] capacity and add features that reduce environmental impacts of aquatic species entrainment and impingement with installation of new 1.0 mm wedge wire intake screens." Claiming that the new fish screens would reduce environmental impacts is a sweeping, general statement using the premise that organisms can swim away and avoid the seawater intakes, then applying the premise to a myriad of aquatic organisms that lack the capacity to swim away (or ignoring that these weaker swimming organisms are present within the bay). These organisms include larval fishes (ichthyoplankton) and the entire planktonic invertebrate community of Humboldt Bay. The Biological Resources

section concluded that the seawater intake system is not expected to reduce larval numbers of Dungeness crab because of strong tidal currents, low intake volume relative to source waters, intake velocity that megalopae are capable of avoiding, and the settling nature of megalopae. The smaller Dungeness crab zoea are an earlier, mid-water column, life-history stage for the species, and as such are significantly more vulnerable to entrainment. In selecting the megalopae life-history stage of Dungeness crab for analysis and not the considerably more vulnerable zoea life-history stage, the DEIR is skewed toward a less-than-significant determination for effects to Dungeness crab and the estuarine ecosystem, and it disguises the potential impact of seawater withdrawal on the Dungeness crab population in Humboldt Bay.

Effluent Discharge to the Pacific Ocean: The estimated discharge of 1,484 lbs of nitrogen per day reinforces the need for baseline ambient water quality assessment at the point of discharge and regular monitoring to accurately assess the impact of increased nutrients, including monitoring for Harmful Algal Blooms (HAB). The coast of Humboldt County has already experienced high levels of *Pseudo-nitzschia australis*, which causes domoic acid and has led to fisheries closures in Humboldt County in 2016 through 2021. *Pseudo-nitzschia* growth and domoic acid production benefit from nitrogen loading in the environment. Given the potential risk to ecosystems and the local economy, it is important that NAF collect appropriate data to accurately conclude that the impacts of increased nitrogen are indeed “less than significant” and that regular monitoring of discharged nitrogen be conducted throughout all phases of production to ensure that it does not contribute to increased HABs. Ambient water quality data from closer to the discharge point than what was used in the Numeric Modeling Report should be obtained and used to better assess potential impacts of nutrients proposed to be discharged in the project’s effluent.

In addition, higher water temperatures and lower salinity levels of the project’s effluent has the potential to exacerbate HABs. There is concern over further elevating the water temperature in the region, as our oceans are already warming. In 2014, a large Marine Heat Wave (MHW) known as “the blob” was identified as it began dominating the northeast Pacific Ocean. Researchers documented many adverse ecological effects associated with the blob, including unprecedented HABs, shifting distributions of marine life, and changes in the marine food web. NAF needs to consider how elevated ocean temperatures may affect the surrounding environment, and mitigate for any harmful effects.

One of the key issues brought up during public comment on the Initial Study/Mitigated Negative Declaration (IS/MND) was the potential threat to wild salmonids from viruses exiting the Project’s effluent pipe. Effluent from the fish processing area of net pen facilities in British Columbia is now known to be a primary source of exposure of wild salmonid populations to piscine reoviruses. Wastewater from NAF Project’s fish processing area is shown on page 2-25 of the DEIR to have a flow of 0.5 MGD. This wastewater will contain the highest viral loading of the entire wastewater stream, because maximum viral loading in salmonids is often in the blood and in the abdomen, where virus-laden fluid from lysed or broken cells accumulates. Beyond the unquantified UV treatment, there is no proposal to treat this wastewater for pathogens, no proposed ozone treatment, no reverse osmosis treatment, and no proposed monitoring of high-risk pathogens. Page 2-41 of the DEIR responds to the concern of viruses in the wastewater by redirecting the discussion to fish escape and claiming that there is “a zero probability of fish (adult, fry, eggs) from passing through the wastewater treatment system.” However, it is the ruptured or failed fibers in the wastewater treatment plant (also mentioned on page 2-41) that are precisely the source of concerns that needs to be addressed. These are: the risk of viral pathogens escaping the

Project and infecting wild salmonids, and the risk posed to wild salmonid populations from that exposure.

The DEIR is premature in its conclusion that the Project's risk of exposure to fish diseases is eliminated by the Project's "robust biosecurity measures" and water treatment facility. There are zero known sources of Atlantic salmon eggs that have been proven to be 100% virus free, so the Project does not have an established biosecurity measure for keeping viruses out of the facility. Not only are the source eggs an issue, the DEIR fails to include monitoring or testing for viruses and other pathogens within the facility itself or its wastewater utilizing contemporary testing methods. We recommend that the EIR substantially evaluate potential impacts and risk of elevated viral pathogens to native salmonids based on proposed operations, and include a rigorous monitoring effort and mitigation plan to assess virus pathogen discharge.

Feed Sources: It's been nearly three years of project planning and NAF is still unable to provide specific information about what they will feed their fish and where this food will come from. The DEIR provides "guidance criteria" in regards to procurement of fish feed. This guidance contains numerous steps where NAF will "aim" to "use, avoid or integrate" certain criteria to ensure a safe and healthy food source for the fish they plan to rear. Unfortunately, "guidelines" and "aiming" to do (or not do) something lacks any legal or binding commitment. The Feed Standards (pages 2-37 and 2-38) say NAF "aims" to "integrate the use of ingredients that are viable alternatives to harvest fisheries to the extent that it is practical." However, this statement is shortly followed by a discussion of the use of ocean-harvested fish meal and oils and the standards NAF would require its suppliers of these products to adhere to. Thus, it appears even though NAF "aims" to avoid the use of marine-derived fish food, it is hedging its bets that it will ultimately use ocean-harvested fish meal and oils. Again, no specific information is provided as to who would provide the feed for the facility or where this potential source of ocean-harvested fish meal would come from.

The potential impacts of antibiotic-resistant bacteria to human health need to be fully analyzed and mitigated. The risk of spread of antibiotic-resistant bacteria from fish feed that includes poultry byproducts poses a significant risk to surfers, other beachgoers, and anglers. The threat comes from two partially-treated effluent streams generated by the Project and from any failures, tears, or degradation of the biofilters. These potential impacts can be avoided by a condition of approval prohibiting the use of feed containing poultry byproducts, or at the very least, a condition requiring testing of the feed and effluent for known antibiotic-resistant bacteria (*Campylobacter* spp., *Escherichia coli*, *Enterococcus* spp., *Salmonella* and *Staphylococcus aureus*) and report the findings to the public in a timely manner. A plan for testing, removal, and replacement of the biofilm filters is essential to ensure they are successfully filtering the effluent and removing any bacteria before entering the ocean.

Sincerely yours,

A handwritten signature in blue ink that reads "Larry De Ridder". The signature is written in a cursive style.

Larry De Ridder
President, Humboldt Area Saltwater Anglers

