

## McNamara, Cade

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**From:** Ted Romo <blackbrantsky@yahoo.com>  
**Sent:** Friday, February 18, 2022 12:36 PM  
**To:** CEQAResponses; cmcnamara@humboldt.ca.us  
**Subject:** CDFW Letter - Nordic Aquafarms - DEIR -SCH# 2021040532

Humboldt Co. Planning and Building Dept.  
3015 H St.,  
Eureka, Ca 95501  
February 18, 2022

(submitted via email to: cmcnamara@humboldt.ca.us)

Attn: Mr. Cade McNamara, Planner II

Dear Mr. McNamara:

The following comments are submitted in response to Nordic Aquafarms CA, LLC project Draft Environmental Impact Report (DEIR), case # PLN-2020-16698.

One of the areas of concern is the old, wooden **saltwater intake** that is located at RMT II.

“The existing **RMT II dock intake structure is constructed of wood that has become deteriorated**. The wooden structure will likely need repairs to seal cracks that would allow flow into the intake structure other than through the intake screen.”

(3) (Appendix%20R%20-%20Sea%20Chest%20Screen%20Conceptual%20Design.pdf)

It was installed approximately 1966 or maybe earlier so that it allowed the new pulp mill to use it during construction.

The existing **Salt water intakes have not been in use for years** and should be investigated as to whether or not they currently have permits. There also seems to be an assumption in the DEIR that the existing wooden structure needs to only be modernized in order to function at the 2022 environmental standards. This is certainly a misnomer, as the existing wood intake is in need of repair since it contains an abundant amount of known carcinogens.

Siting new or replacement salt water intake potential in the same location as one selected in 1966 does not address current knowledge or concerns for Humboldt Bay as a shallow water estuary. Neither the concrete nor the wooden intake structures are currently operational. Therefore, the use of language referring to “existing” is misleading to the uninformed reader. One of the existing structures, as described in the SEA CHEST DRAWING UNDER D-12-226, was constructed with Doug-fir and utilized a great amount of creosote in its construction as a wood preserver to prevent deterioration from the saltwater environment.

### Creosote Hazard at Existing Saltwater Intake Facility

I suggest that a robust study be initiated on the existing saltwater intake due to the data provided by SHN Appendix R, that shows a diagram of the existing Sea Chest. I’m bringing this up because creosote is hazardous for humans. Why would a food source supposedly organic in nature want to have its water source in any way, shape, or form potentially exposed to a source of carcinogenicity such as creosote?

“Creosote is a probable carcinogen in humans (and surely other animals). Most sources currently assert that there may be no safe level of exposure to a carcinogen, so all contact with creosote or creosote-coated



materials (wood) should be avoided". You can find the actual document on the SHN Appendix R report. If you go to the schematic called Sea Chest Drawing 2-12-226 page 17 out of 22, and if you go to the bottom right hand corner, look under "General Notes", and blow up the notes, you can read the information shown in Appendix R. (3)



The lower picture is a picture of the Sea Chest that is going to be used for the intake. (8)



"The International Agency for Research on Cancer (IARC) has determined that coal tar is carcinogenic to humans and that creosote is probably carcinogenic to humans. EPA has also determined that coal tar creosote is a probable human carcinogen." (8)

The following quote is taken from the National Marine Fisheries Service guidelines:

"New facilities which propose to utilize unproven fish protection technology frequently require:

- 1) development of a biological basis for the concept;
- 2) demonstration of favorable behavioral responses in a laboratory setting;
- 3) an acceptable plan for evaluating the prototype installation;
- 4) an acceptable alternate plan should the prototype not adequately protect fish. Thus, adequate data to describe the size-time relationship requires substantial sampling over a number of years." (5) (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=75315>)

The following quote is also taken from the National Marine Fisheries Service guidelines:

"Where possible, intakes should be located offshore to minimize fish contact with the facility. Water velocity from any direction toward the screen shall not exceed the allowable approach velocity. Where possible, locate intakes where sufficient sweeping velocity exists. This minimizes sediment accumulation in and around the screen, facilitates debris removal, and encourages fish movement away from the screen face." (5)

Moving the locations for intake of salt water offshore will reduce adverse impacts of entrainment on Dungeness crab, longfin smelt, herring and other marine organisms using the estuary habitats of Humboldt Bay.

If you break down the water consumption of 10,000,000 gallons of saltwater per day intake over a 10-year period of time, the total amount of water used looks something like 36,500,000,000,000 gallons of water. It would be hard to believe that this much water being used from saltwater intakes would not have a detrimental impact on an aquatic environment. Such long-term saltwater transfers might affect the ecological stability in Humboldt Bay saltwater habitats to the extent that the long-term continuation of current water supply practices may result in significant and irreversible damage to the ecosystems.

## WHAT IS IMPINGEMENT AND ENTRAINMENT?

As with any other natural seawater source, saltwater contains aquatic organisms (algae, plankton, fish, bacteria, etc.). Impingement occurs when organisms sufficiently large to avoid going through the screens are trapped against them by the force of the flowing source water. Since algae, plankton and bacteria are small enough, they are not exposed to impingement. On the other hand, entrainment occurs when marine organisms enter the fish plant intake, are drawn into the intake system, and pass through to the treatment facilities.

Impingement typically involves adult aquatic organisms (fish, crabs, invertebrates larva, eggs and other aquatic fauna energy for all other organisms) that are large enough to actually be retained by the intake screens, while entrainment mainly affects aquatic species small enough to pass through the particular size and shape of

intake screen mesh. Impingement and entrainment of aquatic organisms is a source of concern with the current salt water intake where it currently exists.

## SOLUTIONS FOR IMPINGEMENT AND ENTRAINMENT

While impingement and entrainment associated with seawater intake operations are not expected to create biologically significant impacts under most circumstances, the idea that when considering an endangered species, such as the longfin smelt, the usage of the best available mitigation overall for the saltwater intake site should be considered. Moving the intake operations off-shore will be prudent for minimizing the loss of marine life and maintaining the productivity and vitality of the aquatic environment in Humboldt Bay estuary.

The US EPA considers extending intakes 125 meters (410 feet) outside of the littoral zone a good engineering practice that is aimed at reducing impingement and entrainment. According to the Office of Naval Research, the littoral zone extends 600 feet from the shore. Thus intakes with an inlet structure located at least 1100 feet from the shore will result in reduced environmental impacts. In addition, installing the intake to depths where there is a lower concentration of living organisms is preferable..

### Proposed RMT II Dock Intake Structure Conceptual Design

There is currently NO environmental impact from use of salt water. Installing new salt water intake pumps, screens, pipelines, and attachments will INCREASE the environmental impacts due to entrainment of larval marine organisms, including longfin smelt (LFS), herring, Dungeness crabs, and others.

Unfortunately, the DEIR only includes a preliminary evaluation of adverse impacts to longfin smelt (see appendix N for Tenera Memo). The lack of any analysis of negative impacts to herring and all other marine life makes the DEIR "inadequate".

The DEIR also discusses a "planned intake assessment study". This is the \$414,000 contract that HBHR&CD signed with Tenera at the Dec. 9, 2021 HD meeting. However, the detailed sampling and data collection will not be completed until early in 2023. Humboldt Co. Planning and Nordic expect to obtain approval of the Nordic project EIR BEFORE conducting any detailed analysis of adverse impacts of the salt water intake structures.

The mitigation being proposed is of questionable value to some of the marine life forms that will be impacted. As far as I can find, only adverse impacts to longfin smelt are being considered in the proposed mitigation measures. Again, this is environmentally inadequate as it precludes the thought that only longfin smelt will be impacted from the saltwater intakes.

Sincerely,

Ted Romo  
Eureka, CA 95501

## REFERENCES

1  
Fish Screening Criteria for Anadromous Salmonids1 National Marine Fisheries Service Southwest Region  
January 1997

<<http://www.onr.navy.mil/focus/oc>

2 [http://water.epa.gov/1awsregs/lawsguidance/cwa/3L6b/phases1/upload/2009\\_04\\_02\\_316b\\_phases1\\_support\\_contents.QQ.](http://water.epa.gov/1awsregs/lawsguidance/cwa/3L6b/phases1/upload/2009_04_02_316b_phases1_support_contents.QQ.)[

3 1Appendix%20R%20-%20Sea%20Chest%20Screen%20Conceptual%20Design.pdf

4 <<http://www.onr.navy.mil/focus/https://inspectapedia.com/Environment/Creosote-Hazards.php>

5 <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=75315>

6 Toxicological Profile for Creosote

<https://www.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=66&tid=18>

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Reference: 016240.005 August 6, 2021

Adam Wagschal

Humboldt Bay Harbor, Recreation, and Conservation District 601 Startare Dr.

Eureka, CA 95501

Phone: (707) 441-8855

Email: [info@shn-engr.com](mailto:info@shn-engr.com) Web: [shn-engr.com](http://shn-engr.com) 812 W. Wabash Avenue, Eureka, CA 95501-213

Subject: Humboldt Bay Intake Screen Conceptual Designs, Redwood Marine Terminal II and Red Tank Dock, Samoa, California–Revision 03

Adam Wag Sent from my iPad

8. Lost Coast Outpost. Feb. 15, 2022. “With Just Days Left for Public Comment, Enviro Groups Seek More Detail, Assurances in Nordic Aquafarms’ EIR”

<https://lostcoastoutpost.com/2022/feb/15/one-week-left-public-comment-enviro-groups-seek-mo/>