



*Sent via email on date shown below*

May 24, 2021

County of Humboldt  
Humboldt County Planning Department  
3015 H Street  
Eureka, CA 95501  
jford@co.humboldt.ca.us

Re: Nordic Aquafarm IS/MND

Dear Planning Director Ford,

On behalf of Humboldt Baykeeper, Surfrider Foundation, EPIC, the Northcoast Environmental Center, the Coalition for Responsible Transportation Priorities and 350 Humboldt, please accept this letter concerning the Nordic Aquafarms IS/MND.

### **Environmental Impact Review**

The project, one of the largest in recent memory, requires an environmental impact report (EIR). An EIR is required by law, as there is a fair argument that the project may result in significant environmental impacts. Further, an EIR is necessary to meet the purpose of CEQA: to solicit feedback from an engaged citizenry, thereby improving projects through democratizing decision-making.

An Environmental Impact Report is required whenever there is substantial evidence in the record that supports a “fair argument” that the significant impacts may occur, even if there is other substantial evidence that supports that no significant impact may occur.<sup>1</sup> This “fair evidence” standards creates a “low threshold” for requiring preparation of an EIR.<sup>2</sup> In reviewing whether substantial evidence supports a fair argument, courts engage in a “hybrid, quasi-independent” review<sup>3</sup> and in this review, deference is not afforded to the agency’s

---

<sup>1</sup> No Oil, Inc. v. City of Los Angeles (1974) 13 Cal. 3d 68, 75.

<sup>2</sup> Citizens Action to Serve All Students v. Thornley (1st Dist. 1990) 222 Cal. App. 3d 748, 754.

<sup>3</sup> Quail Botanical Gardens Foundation, Inc. v. City of Encinitas (4th Dist. 1994) 29 Cal. App. 4th 1597, 1603

determinations.<sup>4</sup> As shown below, there is a fair argument based on substantial evidence that the project may result in significant impacts from the release or potential release of greenhouse gasses.

An EIR is also preferable to better engage public participation and to satisfy the purpose of CEQA. CEQA serves “to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.”<sup>5</sup> If CEQA is “scrupulously followed,” the public will know the basis for the agency’s action and “being duly informed, can respond accordingly to action with which it disagrees.”<sup>6</sup> Thus, CEQA “protects not only the environment but also informed self-government.”<sup>7</sup> This kind of environmental analysis better allows for public participation in the decision-making process, including a response to comment. Meaningful public comment, in turn, is useful to help identify potential environmental impacts and mitigation measures. Similarly, an EIR provides for more analysis tuned to potential avoidance of environmental impacts, such as through alternative analysis.

## **Bay Water Intakes (Sea Chest) and Segmentation**

The IS/MND is flawed in that it fails to analyze the impacts of the bay water intakes, deferring it to a future CEQA process. According to the IS/MND, the two intakes are a component of an ongoing HBHRCD program to invest in pre-permitting and other support of aquaculture development on the Samoa Peninsula.<sup>8</sup> Terrestrial water piping infrastructure would be located within APN 401-112-021 and APN 401-112-024, within the Humboldt County jurisdiction and California Coastal Commission (CCC) appeal jurisdiction.

According to the IS/MND, “Existing water intake structures that were used by pulp mills will be improved and expanded at both locations...the Harbor District has contracted a consulting firm to develop a model that will assess impacts to larval fish (“Impact Assessment Model”). The model results will inform that project’s CEQA Mitigated Negative Declaration. However, field sampling and further analysis of fish larvae may be required for permitting. The Harbor District is currently identifying habitat restoration options that will serve as mitigation for project impacts. It is anticipated that the CEQA process will be complete in June 2021.”<sup>9</sup>

Since the proposed project relies on these intakes for up to 10 million gallons per day, deferring mitigation to a future CEQA process is not consistent with the letter of the law. A negative declaration circulated for public review shall include “a brief description of the project.”<sup>10</sup> The CEQA guidelines define a project as “the whole of an action” and to the underlying physical activity being approved, not to each government approval.<sup>11</sup> The description of a project analyzed under CEQA must include the entirety of the project, and not some smaller portion of it.<sup>12</sup> “Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal’s benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal . . . and weigh other alternatives in the balance.”<sup>13</sup> “A curtailed, enigmatic or unstable project description draws a red herring across the path of public input.”<sup>14</sup> For a phased development project, even if details about future phases are not known, future phases must be included in the project description if they are a reasonably foreseeable consequence of the initial phase and will significantly change the initial project or its impacts.<sup>15</sup> For example, for a project requiring construction of offsite infrastructure (e.g., water and sewer lines), the offsite infrastructure must be included in the project

---

<sup>4</sup> *Sierra Club v. County of Sonoma* (1st Dist. 1992) 6 Cal. App. 1307, 1317-1318.

<sup>5</sup> *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* 47 Cal. 3d 376, 392 (1988).

<sup>6</sup> *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* 47 Cal. 3d 376, 392 (1988).

<sup>7</sup> *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* 47 Cal. 3d 376, 392 (1988).

<sup>8</sup> IS/MND at 2-12.

<sup>9</sup> IS/MND at 4-152.

<sup>10</sup> 14 Cal. Code Regs. § 15071(a).

<sup>11</sup> 14 Cal. Code Regs. § 15378

<sup>12</sup> *San Joaquin Raptor Rescue Center v. County of Merced*, 149 Cal.App.4th 645, 654 (2007).

<sup>13</sup> *County of Inyo v. City of Los Angeles*, 71 Cal.App.3d 192, 192-193 (1977).

<sup>14</sup> *Id.* at 198.

<sup>15</sup> *Laurel Heights Improvement Association v Regents of University of California*, 47 Cal. 3d 376 (1988).

description.<sup>16</sup> If a negative declaration is certified with “one or more significant effects not discussed in the ... negative declaration”, the negative declaration must be recirculated.<sup>17</sup>

Water intake upgrades and water intake associated with the project is a potentially significant issue that demands consideration as part of this project. Due to the presence of endangered and threatened fish species in the project area, specific intake limits and criteria such as screening and intake velocity may be necessary to minimize the potential for entrainment and impingement of adult and juvenile fish. Impacts to juvenile and larval stages of commercial, sport, and subsistence fisheries such as Dungeness crab and herring should also be analyzed. Impacts to fish larvae and invertebrates, planktonic organisms, and biological productivity must also be analyzed and either avoided or mitigated in consultation with trustee and responsible agencies.

## **Electric Energy Use and GHG Emissions**

Electricity use associated with the project is likely to produce significant quantities of greenhouse gas emissions absent additional mitigation measures.

In considering whether a project may result in potentially significant greenhouse gas emissions, the probable emissions of a project are compared against a “threshold.” As noted in the IS/MND, the North Coast Unified Air Quality Management District (NCUAQMD) has not adopted significance thresholds for project-level GHG emissions and instead recommends using the Bay Area Air Quality Management District (BAAQMD) adopted thresholds.<sup>18</sup> Inexplicably, however, the IS/MND fails to follow this recommendation and instead invents its own completely unsupportable significance thresholds. The IS/MND purports to justify this choice by noting that the BAAQMD has not adopted significance thresholds for project construction.<sup>19</sup> Yet only a page later, the IS/MND itself concludes that “emissions during construction would not be a considerable contribution to the cumulative greenhouse gas impact”,<sup>20</sup> meaning that the BAAQMD’s silence on construction thresholds is completely irrelevant.

In fact, the BAAQMD has adopted quantitative GHG significance thresholds for both land development and stationary sources.<sup>21</sup> Given the fact that the vast majority of the project’s emissions will come from distributed sources via the electricity grid or from mobile sources, rather than from direct on-site emissions, the land development threshold is the most applicable. BAAQMD establishes this threshold at either 1,100 MTCO<sub>2</sub>e/year or 4.6 MTCO<sub>2</sub>e/employee/year, which would equate to 690 MTCO<sub>2</sub>e/year for this project. Applying this threshold to the project, we see that the project will exceed significance thresholds, and thus, the impact must be considered significant.<sup>22</sup>

The project is expected to use 21.4 MW of electricity<sup>23</sup> and include a 3-5 MW solar energy system.<sup>24</sup> At face value, even without applying local solar energy capacity factors and considering any mismatch between energy usage and energy production times, this indicates that the solar system will generate at most between 14% and 23% of the project’s energy requirements at peak electricity production. However, the IS/MND further estimates that the project will use approximately 160,000 MWh of electricity per year.<sup>25</sup> Applying a generous local solar capacity factor of 20%, the solar system will provide at most 3-4% of the project’s annual electricity

---

<sup>16</sup> *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal.App. 4th 713 (1994).

<sup>17</sup> 14 Cal. Code Regs. § 15162.

<sup>18</sup> IS/MND at 4-96.

<sup>19</sup> IS/MND at 4-97.

<sup>20</sup> IS/MND at 4-98.

<sup>21</sup> BAAQMD CEQA Air Quality Guidelines 2017. [https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en)

<sup>22</sup> Even if the project were erroneously considered a stationary source, it would still far exceed that threshold, which is 10,000 MTCO<sub>2</sub>e/year.

<sup>23</sup> IS/MND at 4-88.

<sup>24</sup> IS/MND at 2-6.

<sup>25</sup> IS/MND at 4-97.

usage. However, the IS/MND estimates that the solar system will generate roughly 33% of the project's energy requirements.<sup>26</sup> This estimate is prima facie incorrect and unsupportable.

Even applying this "offset" of on-site renewable energy, the IS/MND estimates that the project's electricity usage will result in over 15,000 MTCO<sub>2</sub>e emissions per year.<sup>27</sup> Truck traffic from the project is estimated to add approximately 2,900 MTCO<sub>2</sub>e/year. Combined with a variety of other sources of greenhouse gas (GHG) emissions, this results in an estimate of approximately 20,100 MTCO<sub>2</sub>e/year from the project.<sup>28</sup>

Apparently in order to avoid the inevitable conclusion of significant GHG impacts, the IS/MND ignores the BAAQMD thresholds and invents a different 2-part test for significance. For the quantitative test, the IS/MND chooses a threshold of 25,000 MTCO<sub>2</sub>e/year, which it identifies as being derived variously from National Environmental Policy Act guidance for "direct emissions" from a project,<sup>29</sup> from the California Air Resources Board's industrial cap-and-trade program and from the EPA's Greenhouse Gas Reporting Program for large industrial sources.<sup>30</sup> None of these sources, however, is in any way relevant to the CEQA process.

The second qualitative significance test invented by the IS/MND is to compare the project to an adopted Climate Action Plan (CAP) in Yolo County. This choice is "justified" by citing the fact that there is not yet a local adopted CAP, and that climate impacts are non-local.<sup>31</sup> However, while climate impacts are global, effective mitigation measures are not and depend heavily on the mix of local GHG emission sources and other local conditions. It is obvious that sources and conditions in Yolo County are dramatically different from those in Humboldt County. For example, by far the largest source of GHG emissions in Yolo County is agriculture,<sup>32</sup> while Humboldt County's predominant source is transportation.<sup>33</sup> In addition, the Yolo County CAP is from 2011 and uses the goal of 27% reduction from 1990 levels when the state goal is 40% reduction; the Yolo document is not consistent with current California emissions goals. The resulting comparison of the project with Yolo County's CAP is completely irrelevant to any reasonable attempt to quantify significance.

The IS/MND must correct its estimate of solar electricity output and compare the project's corrected GHG emissions estimate with the adopted BAAQMD thresholds. This process will inevitably result in a finding of significant impact, and thus require the preparation of an Environmental Impact Report or additional mitigation measures. Feasible mitigation measures which must then be required include but are not limited to the following:

- Increasing the size of the on-site solar electricity system;
- Committing to purchase 100% renewable energy;
- Installing a battery storage system to maximize daily usage of on-site solar electricity and minimize usage of back-up fossil fuel-powered generators during grid outages;
- Adopting an adaptive management plan requiring adoption of zero emission trucks and other vehicles as they become commercially available.

The IS/MND also fails to consider whether the project will conflict with any local plans for renewable energy or energy efficiency, instead considering only state plans.<sup>34</sup> While the IS/MND seems to assume (although it does not explicitly state) that the project will source its electricity from Pacific Gas & Electric Company, rather than

---

<sup>26</sup> IS/MND at 4-98.

<sup>27</sup> IS/MND at 4-99.

<sup>28</sup> IS/MND at 4-99.

<sup>29</sup> IS/MND at 4-96.

<sup>30</sup> IS/MND at 4-97.

<sup>31</sup> IS/MND at 4-97.

<sup>32</sup> Ascent Environmental Memo re: Final Yolo County Historic Greenhouse Gas Emissions Inventory Results and Peer Review of the Base-Year and Build-Out Inventories. 2011.

<https://www.yolocounty.org/home/showpublisheddocument/14425/635289380535200000>

<sup>33</sup> Overview of Humboldt County 2015 Greenhouse Gas Inventory.

<https://humboldt.gov/DocumentCenter/View/79805/PowerPoint-Presentation?bidId=>

<sup>34</sup> IS/MND at 4-88.

from the Redwood Coast Energy Authority (RCEA), the project is nevertheless within RCEA's service area. RCEA has adopted many plans and goals which are potentially relevant to the project, including its Comprehensive Action Plan for Energy (CAPE) goal that Humboldt County will be a net exporter of renewable electricity by 2030.<sup>35</sup> The sheer amount of electricity the project will consume could put this goal in jeopardy. The IS/MND must assess the project's consistency with local plans for renewable energy and energy efficiency, including but not limited to the CAPE.

## **GHG Emissions from Refrigerants and Fluorinated Gases**

The IS/MND is flawed in two manners regarding high global warming potential gasses. First, the document fails to adequately describe the project, including what gasses are to be used in refrigeration. Second, the IS/MND fails to do an analysis of the risk associated with refrigerants, despite the well-documented issues with release of these gasses from aquaculture operations.

The IS/MND is clear that refrigeration is a major part of the operation of the aquafarm: "The central utility plant (CUP) houses the heating and cooling equipment needed to maintain proper water temperature during operation...This facility will include required heating and cooling systems, as well as the central facility switch boards. Water-based temperature systems will be used to reduce electricity use."<sup>36</sup>

The IS/MND fails to produce an adequate project description. A CEQA standard is that measures must be adopted to reduce high global warming potential gases. The IS/MND correctly states that this standard applies to gases such as HFCs, perfluorocarbons and sulfur hexafluoride but then says the project's air conditioning system would utilize equipment that complies with this measure. This is disingenuous since the issue is not equipment but refrigerants, which presumably include HFCs, PFCs and SF6 since they are mentioned in the MND. These are all highly potent greenhouse gases. The global warming potential (GWP) of gases is measured against CO2, which has a GWP of 1. "The average 100-year GWP of the current mix of HFCs being used is about 1700, and the average 20-year GWP is about 3800...A recent study concluded that replacing high-GWP HFCs with low-GWP alternatives could avoid 0.1°C of warming by 2050 and warming of up to 0.5°C by 2100."<sup>37</sup> PFCs have a global warming potential of from 7,400 to 17,300. SF6 has a global warming potential of 23,500 - the highest of any chemical - and can last in the atmosphere 3,200 years.<sup>38</sup> In any case, no description of the equipment *or* the refrigerants to be used is in the MND or the applicant's project description.

The IS/MND is also silent on greenhouse gas emissions from refrigerants. This is peculiar since a 2020 peer-reviewed study documents aquaculture as responsible for 0.49% of anthropogenic GHG emissions in 2017.<sup>39</sup> Additionally, the IS/MND fails to consider potential refrigerant leaks from refrigerator truck traffic. The MND argues that there will be a reduction in emissions due to more local transport rather than importing from other countries. The net gain or loss is difficult to model but a MND should not be accepted without an attempt to assess the overall impact of emissions of both engine exhaust and refrigerant leakage.

At a minimum the IS/MND or future EIR must contain:

1. A description of the exact refrigerants/fluorinated gases being used, not a class. For example, R-410A, or PFC14.
2. A description of the quantity of each type of refrigerant/fluorinated gas, that is, the "charge."
3. A statement of the Global Warming Potential of each type of refrigerant/fluorinated gas.

---

<sup>35</sup> RePower Humboldt: The Redwood Coast Energy Authority's Comprehensive Action Plan for Energy, 2019 Update. <https://redwoodenergy.org/wp-content/uploads/2020/06/RePower-2019-Update-FINAL-.pdf>

<sup>36</sup> IS/MND at page 2-2 - 2-3.

<sup>37</sup> CARB. Short-Lived Climate Pollutant Reduction Strategy. March 2017. <https://ww2.arb.ca.gov/resources/documents/slcp-strategy-final>

<sup>38</sup> [https://en.wikipedia.org/wiki/Global\\_warming\\_potential](https://en.wikipedia.org/wiki/Global_warming_potential)

<sup>39</sup> MacLeod, M.J., Hasan, M.R., Robb, D.H.F. *et al.* Quantifying greenhouse gas emissions from global aquaculture. *Sci Rep* 10, 11679 (2020). <https://doi.org/10.1038/s41598-020-68231-8>

4. A statement of the procedures to be followed to prevent leaks.
5. A realistic estimate of the likely amount of leaked refrigerant annually for each type of refrigerant/fluorinated gas.<sup>40</sup>
6. A statement of the combined Global Warming Potential of all leaked refrigerants/fluorinated gas annually.
7. Addition of this estimate to the annualized total emissions for the project.

No mention is made in the IS/MND of CARB regulations for refrigerants. In December 2020 new rules were approved that require new stationary refrigeration installations to use refrigerants with a GWP of 150 or less.<sup>41</sup> In addition, in late May 2021 the EPA issued proposed rules that will reduce the use of HFCs by 95% *during the life of the project* and is particularly directed against certain specific high GWP products.<sup>42</sup> For most applications, these standards can be met by using “natural” refrigerants such as ammonia or CO<sub>2</sub>, which have extremely low GWP compared to HFCs. That is, the effect of high global warming potential emissions from HFC leaks can be mitigated by switching to “natural” refrigerants. There are also lower GWP alternatives to SF<sub>6</sub>.<sup>43</sup> It is not clear how PFCs would be used, so it is unclear whether applicable alternatives exist. The project should be required to use reclaimed refrigerants where available as the reclamation requirement incentivizes recovery when equipment is retired.

### Concerns Regarding Feedstock

Feedstock for the project is not addressed through the IS/MND. CEQA requires that “indirect” effects—those that are “caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable”—be analyzed. The project is likely going to increase demand for feedstock, and accordingly will increase pressure of feed fish and produce indirect GHG emissions. In the peer-reviewed study of global contributions to greenhouse gas emissions of aquaculture cited above, it turns out that the largest component of emissions comes from obtaining food to feed the fish: “Production of crop feed materials accounted for 39% of total aquaculture emissions. When the emissions arising from fishmeal production, feed blending and transport are added, feed production accounts for 57% of emissions.”<sup>44</sup> This is a standard method of calculating greenhouse gas emissions attributable to animal production, such as cattle. No mention of these indirect emissions is made in the MND, but they should be included.

We appreciate the steps that the aquaculture industry has taken to reduce animal protein in its feedstock and the work to develop insect-based and plant-based feedstock. We ask that Nordic commit to an adaptive

---

<sup>40</sup> The EPA estimates leakage at 25% for commercial refrigeration:

[https://www.epa.gov/sites/production/files/documents/GChill\\_Retrofit.pdf](https://www.epa.gov/sites/production/files/documents/GChill_Retrofit.pdf). The Air Conditioning, Heating and Refrigeration Institute reported in a recent webinar that 52% of all HFCs manufactured go to replacing leaked refrigerant: “April 20: AHRI Refrigerant Webinar Series - How to Not Only Survive, but “Win” the Refrigeration Industry HFC Phasedown” <https://www.ahrinet.org/news-events/webinars>

<sup>41</sup> <https://ww3.arb.ca.gov/board/mt/2020/mt121020.pdf>

<sup>42</sup> “The US EPA has released a proposed rulemaking to establish an allocation system to decrease the production and import of HFCs by 85% over the next 15 years. The proposed rule is the first step to implement the American Innovation and Manufacturing (AIM) Act of 2020, the new climate law that sets the US on course for compliance with the international HFC phase down under the Kigali Amendment. The AIM Act directs the EPA to sharply reduce production and consumption of HFCs by using an allowance allocation and trading programme. The proposals list 18 of the higher GWP HFCs including R134a, R32, R125, R143a, R23, R152, and R152a. ” <https://www.coolingpost.com/world-news/us-epa-moves-to-initiate-hfc-phase-down/>

<sup>43</sup> Nicholas Ottersbach. Grid switchgear uses SF<sub>6</sub>, the world’s most potent greenhouse gas. How do we regulate it? November 25, 2019. <https://energypost.eu/grid-switchgear-uses-sf6-the-worlds-most-potent-greenhouse-gas-how-do-we-regulate-it/>

<sup>44</sup> MacLeod, M.J., Hasan, M.R., Robb, D.H.F. *et al.* Quantifying greenhouse gas emissions from global aquaculture. *Sci Rep* 10, 11679 (2020). <https://doi.org/10.1038/s41598-020-68231-8>

management program, whereby the company commits to using feed with the lowest possible use of animal protein commercially available throughout the life of the project.

## **Transportation Impacts**

The IS/MND estimates that the project will generate 95 additional truck trips per day. Due to the project's location, these trucks will all travel on Highway 255—either across the Samoa Bridge or through the community of Manila—and subsequently on New Navy Base Road. All of these local roads lack even the most basic bicycle or pedestrian facilities, but are regularly used by people walking and biking for both transportation and recreation purposes. The IS/MND notes that “the road network [in the project area] has been designed to accommodate truck traffic”<sup>45</sup> but fails to note that it has not been designed to accommodate non-vehicular users. The substantial increase in truck traffic as a result of the project has the potential to pose significant increased hazards to non-vehicular road users due to what CEQA identifies as “incompatible uses.” The IS/MND must recognize this potentially significant impact and provide mitigation in the form of improved bicycle and pedestrian facilities on or adjacent to Highway 255 and New Navy Base Road.

The project will also generate transportation impacts from the expected 150 employees working two shifts at full build-out.<sup>46</sup> The IS/MND estimates that 17% of these employees will either walk, bike or take the bus to work, or work from home, by applying commute shares from local Census data without modification.<sup>47</sup> When measured from local population centers, however, the project is outside the expected commute range for walking and biking, and as discussed above lacks even basic infrastructure for those modes. It is also currently unserved by public transit (see below). Furthermore, due to the nature of the work, it is unlikely that any substantial portion of employees will work from home. Therefore, it is inappropriate to apply unmodified Census commute share data to the project. In reality, almost 100% of employees can be expected to either drive alone or carpool to work in the absence of other feasible options.

This conclusion is strengthened by the fact that the project proposes to provide 115 parking spaces, despite the fact that the maximum number of employees ever expected on site at one time is only 100.<sup>48</sup> Excessive free parking is well known to incentivize commuting by personal vehicle.

The IS/MND suggests that the project will be subject to a Transportation Management Plan to be approved by the county as part of its Coastal Development Permit,<sup>49</sup> but does not incorporate approval of such a plan as a mitigation measure. The IS/MND identifies several measures which such Plan “may” include, such as carpooling incentives and providing on-site dining facilities and showering/changing facilities. The IS/MND also states that “installation of a transit stop in proximity to the project can be used to satisfy this requirement.”<sup>50</sup> However, local experience demonstrates clearly that public transit services to low-density areas such as the Samoa Peninsula are neither effective nor sustainable. Given the project's expected 2-shift work schedule, a much more effective mode shift strategy for employees would be to provide a free vanpool at shift changes, which could bring employees either to their homes or to the nearest high-frequency fixed-route bus line.

The IS/MND should re-analyze vehicle miles traveled (VMT) impacts based on the reasonable expectation of 100% drive-alone employee mode share in the absence of other guaranteed transportation programs or improvements. If as expected this analysis demonstrates a potentially significant impact, then the Transportation Management Plan should be made a required mitigation measure and should specify that certain minimum

---

<sup>45</sup> IS/MND at 4-136.

<sup>46</sup> IS/MND at 2-4.

<sup>47</sup> IS/MND at 4-133.

<sup>48</sup> IS/MND at 2-4.

<sup>49</sup> IS/MND at 2-4.

<sup>50</sup> IS/MND at 2-4.

measures must be included, including free vanpool at shift changes, drastically reduced provision of parking and/or a charge-for-parking program, and a guaranteed ride home program.

## **Impacts to Coastal Recreation**

The 95 additional trucks per week also has the potential to impact the recreational experience. Almost all the parking for coastal access points along Old Navy Base Road is just on the side of the road in pull-outs, dangerously close to the roadway where the speed limit is 55 mph. The County recently blocked some inroads into the dunes to discourage illegal camping, thereby concentrating the number of coastal access points along the Samoa Peninsula. Improvements to designated coastal access points to allow safer distances between parking areas and the roadway would help mitigate impacts to coastal access and recreation.

## **Analysis of Impacts from the Ocean Discharge Relies on Circular Reasoning**

Potential impacts to the marine environment as a result of discharging 12 mgd treated wastewater through the ocean outfall have not been adequately analyzed. The North Coast Regional Water Quality Control Board's draft Order R1-2021-0026, NPDES No. CA1000003 relies on the analysis within the IS/MND.<sup>51</sup> Curiously, however, the MND relies on the draft NPDES permit.<sup>52</sup>

According to Appendix E of the Draft IS/MND, "It is clear from Table 3 that the key effluent water quality parameters of concern from the Nordic facility are the high concentrations of reduced inorganic nitrogen (NHX) and oxidized inorganic nitrogen (NOX) that pose a potential risk to the receiving coastal waters in terms of increased ecosystem productivity (e.g. higher phytoplankton levels)."<sup>53</sup> However, the IS/MND fails to further analyze these potential risks, simply stating that modelling completed for the Project predicts that "the effluent discharge would be compliant with established water quality thresholds in the Ocean Plan and the Thermal Plan. Additionally, the effluent discharge would be regulated under the NPDES program, which would require regular compliance monitoring."<sup>54</sup>

The marine resources evaluation provided under Appendix D of the Draft IS/MND further provides that the "modelled toxicity mixing zone is extremely limited to within less than 5 ft of the multiport diffuser due to rapid dilution (GHD 2021), indicating that marine organisms would need to be in the immediate zone of the diffuser in order to be exposed to potentially toxic levels of ammonia."<sup>55</sup> The IS/MND found that it was unlikely any marine resources of concern would be exposed to potentially toxic levels of effluent, yet specifically found that Pacific Groundfish may "be attracted to the RMT ocean outfall structure and therefore spend more time in the area of higher contaminant concentration."<sup>56</sup> Further, "younger pelagic life stages are likely more susceptible to effects of effluent contaminants and degraded water quality due to their incomplete physiological development, although specific levels affecting younger life stages are not known."<sup>57</sup> The IS/MND ultimately fails to provide a specific analysis of the impacts of this discharge on Pacific Groundfish, instead simply states that "[i]t is anticipated that dilution of effluent at the RMT outfall would be rapid and exposure to levels that may be toxic to pelagic life stages is not expected."<sup>58</sup>

The Draft Mitigated Negative Declaration additionally provides a review of special status wildlife based on database and literature review, with no special status wildlife surveys conducted on site.<sup>59</sup> Even so, species with

---

<sup>51</sup> IS/MND at Appendix D, p. 27.

<sup>52</sup> IS/MND at 4-114.

<sup>53</sup> IS/MND at Appendix E, p. 8.

<sup>54</sup> IS/MND at 4-114.

<sup>55</sup> IS/MND at Appendix D, p. 40.

<sup>56</sup> IS/MND at Appendix D, p. 39.

<sup>57</sup> IS/MND at Appendix D, p. 39.

<sup>58</sup> IS/MND at Appendix D, p. 39.

<sup>59</sup> IS/MND at Appendix D, p. 13.



a high potential to occur in the project area include, but is not limited to the green sturgeon, migrating Coho salmon, Chinook salmon, and steelhead. The project area is specifically within designated critical habitat of the green sturgeon, and a site-specific evaluation is needed to properly evaluate the water quality impacts of this project.

These analyses need to be completed before they can be relied upon in other permitting processes—especially here, where the NPDES permit is prematurely relied upon to evaluate impacts.

### **Monitoring and Adaptive Management of the Ocean Discharge**

Monitoring and adaptive management are necessary to compensate for uncertainty of impacts to the marine ecosystem. Nordic AquaFarms believes that the effluent released from the project will not result in any adverse effects to the environment. This may be true, but given the newness of the technology and the complexity of predicting impacts from new nutrient discharge, we believe that this project would be improved by monitoring and disclosure of actual effluent discharge at the end of the outfall pipe, along with incorporation of objective adaptive management provisions if environmental impacts are worse than anticipated. Monitoring and adaptive management is a common feature in projects where uncertainty or controversy exists. The discharge should be monitored once it enters the ocean water column to validate the modeling predictions of dilution. Biological monitoring of fish and vertebrates in the benthic habitat should be conducted, including baseline monitoring prior to project completion, to ensure there are no adverse impacts to species. Such monitoring is necessary to evaluate cumulative impacts from co-mingling with existing and future permitted discharges through the ocean outfall. Separately monitoring each discharge as it enters the outfall is inadequate due to the potential for additive and/or synergistic effects of various constituents, including chemicals used for disinfection.

### **Fish Waste Disposal**

The IS/MND states fish waste will be turned to sludge and trucked off site. We would like to see an analysis of what constitutes the sludge, where it will go, how it will be treated and disposed of, and emissions from sludge decomposition. We would also like to see a spill contingency plan for transport of the sludge.

In closing, we appreciate your invitation to discuss this project and our concerns and we look forward to our 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,

Jennifer Kalt  
Humboldt Baykeeper  
jkalt@humboldtbaykeeper.org

Tom Wheeler  
EPIC  
tom@wildcalifornia.org

Jennifer Savage & Delia Bense-Kang  
Surfrider Foundation  
jsavage@surfrider.org  
dbense-kang@surfrider.org

Colin Fiske  
CRTP  
colin@transportationpriorities.org

Larry Glass  
Northcoast Environmental Center  
larryglass71@gmail.com

Daniel Chandler  
350 Humboldt  
dwchandl@gmail.com