Salmonid Restoration Federation

July 6, 2021

Alyssa Suárez
Planner II
Humboldt County Planning & Building Department
3015 H Street Eureka, CA 95501

Submitted by email to asuarez@co.humboldt.ca.us

RE: Nordic Aquafarms Permits Scoping Comments

Dear Ms. Suárez:

The Salmonid Restoration Federation (SRF) is concerned that Nordic Aquafarms (Nordic) has not paid adequate attention to the needs of wild salmonids in their proposal to build an aquaculture facility (Project) to raise Atlantic salmon on the Samoa Peninsula in Humboldt County. Millions of dollars of government grant money have been spent on salmonid habitat restoration in Humboldt Bay: restoring estuaries and instream habitat, improving access to salmonid habitat, doing upslope erosion control, and decommissioning roads that increase erosion. Several of the waterbodies that are being restored, such as the estuaries of Elk River, Salmon Creek, and Freshwater Creek are likely to be exposed to effluent from the Project. The juvenile salmonids using that restored habitat may be at risk from the chemicals and diseases from Project effluent.

The mission of SRF is to promote restoration and stewardship of California's native salmon, steelhead, and trout populations and their habitat. To accomplish our mission, we have been working since 1986 to advance the art and science of habitat restoration for California's precious salmonid species. SRF provides crucial educational services for landowners, community-based restoration organizations, consultancies, and state and federal agencies. SRF participates in the development of state and federal salmonid fishery restorations plans, objectives, and policies. We advocate for changes in key government policies and regulations that hinder or obstruct the restoration of California's salmonid fisheries, including the protection of existing funding and the development of additional funding for the California Department of Fish & Wildlife's salmon, steelhead, and trout restoration programs and grants. In support of our mission, we urge the

Humboldt County Planning & Building Department and the Planning Commission to reduce Project impacts on wild coho salmon, Chinook salmon, and steelhead.

On May 24, 2021, SRF commented on the Nordic Aquafarms Initial Study/Mitigated Negative Declaration (IS/MND). In our letter, we expressed concern regarding the effluent stream of the Project and its impact on the survival of juvenile salmonids, the need for an adequate effects analysis and ESA consultation, and seismic and fish escapes concerns. Please include SRF's May 24, 2021, comment letter in the comment record and response for the draft Environmental Impact Report (DEIR). These comments are included as an attachment to the email submission of this letter in a file named "SRF Nordic MND Humboldt Planning Dept comments 05-24-2021."

In our May 24, 2021, comment letter, we expressed concerns that no modeling has be done to determine the impact of Project water withdrawals in the Mad River and modeling is incomplete for determining the effluent dispersal area.

We recommend that Humboldt County ensures that instream flow incremental methodology (IFIM) bathymetric surveys or comparable LiDAR surveys are conducted for the Mad River. The IFIM data or LiDAR data should then be used for modeling with flow data from USGS station 11481000, near Arcata, California, to quantify effects of the Project in Dry and Critically Dry Water Years and during episodic drought events. We further recommend that Humboldt County ensures that Nordic has a firm agreement from Humboldt Bay Municipal Water District to maintain flows in the lower Mad River during extreme drought events and critically dry water years. The flow agreement should depend upon temperature modeling agreed upon by NOAA fisheries to ensure that critical habitat for salmonids and eulachon is protected and conserved.

The current modeling on the Project's effluent dispersal is incomplete and not sufficient to do a full analysis on the effluent effects on the Mad River and Eel River, critical habitat protected under the Endangered Species Act, and dispersal into the Samoa State Marine Conservation Area, Trinidad Head Area of Special Biological Significance, or the South Cape Mendocino State Marine Reserve. Specifically, the preliminary modeling is only based on a southbound current and does not include northward flows or marine upwelling.

We recommend that upwelling modeling be conducted that addresses the combined impact of effluent-laden sediments, marine upwelling, tidal surge, and daily south to north current changes. To this end, we recommend the existing modeling be re-done to include local current shifts and that the Biologically Effective Upwelling Transport Index (BEUTI) be used to estimate upwelling and nutrient transport within the full dispersal area of Project effluent. The modeling results should be included in the DEIR and summarized in the final EIR.

To reduce impacts to wild salmonids and to conserve the remaining habitat for these threatened and endangered species, we urge the County to require enhanced treatment of the Project's effluent streams. For the effluent that has undergone sludge removal,

the effluent should be treated to remove the remaining orthophosphate, ammonia, reduced inorganic nitrogen, and oxidized inorganic nitrogen. Removal of these nutrients should significantly reduce the risk of harmful algal blooms and corresponding toxins, and the depressed dissolved oxygen conditions that could harm juvenile salmonids.

The effluent should be further treated to remove treatment chemicals, pathogens, and pathogen remnants that may pass through the biofiltration units. Effluent from the fish processing facility and the sludge removal should not enter the marine environment until it has been fully treated to remove fish diseases, oxidants, antibiotics, antifungals, and other treatment chemicals.

Similar to other high-density fish farming around the world, fish diseases may proliferate at Nordic, such as: Infectious Pancreatic Necrosis Virus, Infectious Salmon Anemia Virus, Salmonid Alphavirus, Piscine Orthoreovirus, Novel Totivirus, and Novel Piscine Reovirus, and bacterial kidney disease. All of these pathogens pose a risk to juvenile salmonids growing to adulthood in the marine habitat in the area of the diffuser pipe and exposed to effluent during tidal cycles in Humboldt Bay, Mad River estuary, and Eel River estuary. Exposing young fish to disease can destabilize salmonid populations and lead to run and cohort failure in wild fish. This is a significant effect salmonid survival and recovery that needs to be addressed through prevention, monitoring, mitigation, and remediation.

Conclusion

We respectfully ask that the Humboldt County Planning Department ensure that the Project includes measures to protect wild salmonids from exposure to Project effluent and that these measures are included in the DEIR and final EIR. We further request that ESA and CESA consultation and modeling of Project impacts is completed prior to the final EIR. It is our hope that impacts of the Project on salmonids and the sensitive ecosystems salmonids depend upon for their survival are fully addressed and mitigated.

Sincerely,

Dana Stolzman

Dana Stolzman, Executive Director
Salmonid Restoration Federation

Email attachments:
SRF Nordic MND Humboldt Planning Dept comments 05-24-2021