



October 25, 2020

National Oceanic and Atmospheric Administration
C/O [www.regulations](http://www.regulations.gov) NOAA-NMFS-2020-0117

RE Comments on *Notice of Intent (NOI) to Prepare an Environmental Impact Statement* for Pacific Ocean AquaFarms (POA), opposing the issuance of permits

To whom it may concern,

The San Diego Fishermen's Working Group (SDFWG) is a 501-c-3 non-profit organization with a Board of Directors comprised of all the major fishery gear types of the greater San Diego region. The SDFWG represents the interests of commercial fishing men and women in local, state, and federal processes.

A lack of information and therefore transparency

SDFWG representatives attended one or both of the public "informational" sessions put by NOAA/USACOE and EPA. There was a startling lack of information for an information session, including not being able to tell the public exactly where the POA project would be located, the type of mooring system the pens would use, nor the types of feed, among other project plans of significant consequence.

Because of this, it does not appear that the NOI is a serious effort to obtain thoughtful comments on the POA project.

Economic concern

First, let us establish that a common theme for justification of industrializing the ocean for fin fish farms is the false statement that most US wild fish stocks are harvested at maximum yield, if not overfished. To quote the NOI: "However, many wild fisheries within the EEZ are at, or near, maximum sustainable yield..." In fact, no west coast groundfish species are subject to overfishing. For groundfish in particular, US fishermen only caught 23% of the science-based harvest limit for Optimum Yield, which is a more precautionary level of harvest than Maximum Yield. This translates to approximately 25 million pounds of groundfish left uncaught, in 2018 alone.

We wonder why offshore fin fish farming being promoted by the President, the NMFS, and some elected officials, instead of providing policies and programs to enable US fishermen to harvest to precautionary Optimum Yield levels?

While we grant that fin fish aquaculture can reduce the need to import fish, it does nothing to help fishermen survive economically if US farm raised fish replace healthier, US wild caught fish. To US fishermen, the marketplace distinction between US grown farmed fish and imported farmed fish is like the difference between being hit by a truck or a bus. Large amounts of farm raised fin fish, such as the 5,000 tons per year of yellowtail proposed by POA, will greatly upset the market for wild caught fish, thereby undermining the economic and social fabric of fishermen and their communities. Cross-over job opportunities are touted by POA, but if you ask fishermen if they'd rather be tending a fish farm, the answer would be a resounding "NO!"

Acknowledging the marketplace realities described above, we point out that the sushi-grade yellowtail proposed by POA may well be priced above tilapia and other cheap imports so it will only compete with and displace local fishermen's wild caught products. A claim is made by POA that their project will address the protein needs of the three-plus billion more persons who will occupy earth within thirty years. The SDFWG fails to see how high-end sushi grade products will address the hungry masses.

Another concern is the displacement of fishing activities by these permanent fish pens. Fishermen fish in certain locations for a reason, usually habitat-related, and/or to create beneficial catch-per-unit effort. Pushing fishing activity out of the way will interfere with "CPUE", and create additional fishing pressure on often less productive habitat.

Further, as detailed below, farm raised fish likely has greater and more negative effects on the environment, including contributing toward climate change, than do wild capture fisheries.

The SDFWG has deep concerns about the harmful environmental effects of industrial offshore fin fish farming.

Industrial fish farms are known to contaminate waters with pharmaceuticals, toxic chemicals, untreated waste and disease. Farmed fish spills can also threaten the wild fish populations and natural ecosystems. Coastal businesses could be negatively impacted by the increases in pollution and ecological damage. Other countries with marine finfish aquaculture have suffered extensive environmental, socio-economic and public health problems associated with the industry. These impacts are varied and widespread, and oftentimes do not come to light until years after the damage has been done. The U.S. should acknowledge and learn from these negative experiences. Several countries, like Canada, Argentina, and Denmark, are already moving away from offshore aquaculture due to these serious impacts.

Marine finfish aquaculture routinely results in farmed fish escapes that adversely affect wild fish stocks. In August 2017, a Cooke Aquaculture facility in Washington State spilled more than 263,000 farmed Atlantic salmon into Puget Sound. Long after the escape, many of these non-native, farmed fish continued to thrive and swim free – some were even documented as far north as Vancouver Island, west of the Strait of Juan de Fuca, and south of Tacoma, traveling at least 100 miles from the farm. Escaped fish increase competition with wild stocks for food, habitat, spawning areas and mates. Moreover, reliance on the sterility of farmed fish to prevent interbreeding is never 100% guaranteed; therefore, the “long-term consequences of continued farmed [fish] escapes and subsequent interbreeding . . . include a loss of genetic diversity.” Finally, escaped farmed fish might spread a multitude of parasites and diseases to wild stocks, which could prove fatal when transmitted.

Also on the topic of parasites and diseases, the SDFWG has significant concerns over the pervasive use of pharmaceuticals and other chemicals for prevention and treatment of outbreaks in marine finfish aquaculture facilities. The use of these chemicals creates environmental and public health concerns. It is no secret that large concentrated populations of animals are more susceptible to pests and diseases due to confined spaces and increased stress. In response, the agriculture and aquaculture sectors administer a pharmacopeia of chemicals – and in the open ocean, residues of these drugs are discharged and absorbed into the marine

ecosystem. For example, the marine finfish aquaculture industry treats sea lice with Emamectin benzoate (marketed as SLICE®), which has caused “widespread damage to wildlife,” including “substantial, wide-scale reductions” in crabs, lobsters and other crustaceans. For example, in Nova Scotia, an 11-year-long study found that lobster catches plummeted as harvesters got closer to marine finfish aquaculture facilities.

These industrial operations also have a plan in the works to apply Imidacloprid – an extremely hazardous, bee-killing neonicotinoid – to help control sea lice. In addition, the industry has embraced the use of Formaldehyde – a toxic carcinogen posing risk to both public health and the marine ecosystem – as a form of disinfectant. *Lobster, one of San Diego’s most valuable fisheries, could be impacted by such chemicals.* Finally, the use of antibiotics in marine finfish aquaculture facilities is contributing to the public health crisis of antibiotic resistance. In farmed fish, there may still be antibiotic and other chemical residues by the time they reach consumers, and they can also leach into the ocean, contaminating nearby water and marine life. In fact, up to 75% of antibiotics used by the industrial ocean fish farming industry are directly absorbed into the surrounding environment.

Another serious concern is the direct discharge of untreated pollutants, including excess food, waste, antibiotics, and anti-foulants associated with industrial ocean fish farms. Releasing such excess nutrients can negatively impact water quality surrounding the farm and threaten surrounding plants and animals.

Habitat, ESA, socioeconomic, and fisheries management issues

These underwater factory farms can also physically impact the seafloor, create dead zones, and change marine ecology by attracting and harming predators and other species that congregate around fish cages. These predators – such as birds, seals, and sharks – can easily become entangled in net pens, stressed by acoustic deterrents, and hunted. In fact, an industrial ocean fish farm caused the death of an endangered monk seal in Hawaii, which was found entangled in the net. In August 2018, Cooke Aquaculture entangled an endangered Humpback whale in large gillnets that it cast to recapture escaped farmed fish from a Canada facility.

These examples are merely two of many unfortunate incidents. Large populations of farmed fish will require an incredible amount of fish feed, which carries its own

environmental, public health, and human rights risks. Most industrially farmed finfish, like yellowtail, are carnivorous and require protein in their feed. This often consists of lower-trophic level "forage fish," some of which are already showing natural, cyclic declines. Lately, aquaculture facilities are relying more on ingredients such as corn, soy, and algae as substitute protein sources, many of them genetically engineered, and which do not naturally exist in a fish's diet. Use of these ingredients can lead to heightened, widespread environmental degradation that comes with fertilizer and pesticide use and fresh water demands, a heightened demand on other natural resources, and a less nutritious fish for consumers. Moreover, the fish feed industry is a global (non US) contributor to human trafficking and slavery. There are very few requirements for the industry to include traceability of ingredients or sourcing methods in fish feed, allowing these serious problems to pervade.

Scientific studies, such as conducted by the University of Washington's Ray Hilborn, have documented that secondary issues, such as agriculturally-produced feed, make offshore fin fish aquaculture a greater carbon producer when compared to wild capture fisheries utilizing high volume gears, such as purse seines, trawls, and long lines.

Finally, permitting commercial, marine finfish aquaculture in the United States could bring economic harm to our coastal communities, food producers (on land and at sea), and other marine reliant industries. Other members of the wild-capture fishing industry besides the SDFWG have collectively voiced their deep concerns over attempting to coexist with the marine finfish aquaculture industry, stating, to paraphrase, that this emerging industrial practice is incompatible with the sustainable commercial fishing practices embraced by our nation for generations and contravenes our vision for environmentally sound management of our oceans.

These massive facilities could also close off and essentially privatize large swaths of the ocean that are currently available for numerous other commercial purposes, including fishing, tourism, shipping, and navigation. Given what we know about economies of scale and the business models of modern agriculture and terrestrial food production, we can only expect a similar trend at sea: that is, the marine finfish aquaculture industry could easily push out responsible, small-scale seafood producers and crop growers. This dynamic equates to an alarming

imbalance of power, and allows corporations to dominate business structures, production methods, and management policies within the industry. Giving corporations disproportionate influence over food production also severely limits consumer choices. Most important is the fact that our existing seafood producers are already acutely struggling from the sweeping impacts of the COVID-19 pandemic.

The potential for fish farms such as the POA-proposed project will also displace the existing fishing effort, thereby concentrating that effort to other similar habitats and violating a principal rule of fisheries management to spread effort over large areas.

The POA proposal further exemplifies the need for a credible, inclusive marine spatial planning and conflict resolution exercise, considering that multiple aquaculture projects could be in the offing, along with offshore wind developments.

The SDFWG urges the EPA to deny a National Pollution Discharge Elimination System (NPDES) permit to POA.

Based on the above cited environmental and socioeconomic concerns, the SDFWG urges the EPA to deny the NPDES permit requested by POA.

We further note that the state of California would need to consent to having aquaculture facilities sited in its adjacent federal waters. Indeed, California does not currently permit marine finfish aquaculture. A consistency review with the California Coastal Commission would need to occur, wherein the issues listed above would surely be relevant.

The proposed POA facility must undergo rigorous review by pertinent agencies, including meaningful public participation and fulfillment of all mandated environmental reviews, consultations, and other conservation processes, including, but not limited to, those contained in the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., the Endangered Species Act (ESA) 16 U.S.C. § 1531, et seq., the Marine Mammal Protection Act, 16 U.S.C. § 1361, et seq., and the Migratory Bird Treaty Act, 16 U.S.C. § 703, et seq.

The SDFWG opposes the U.S. Army Corps issuance of any permits for POA under Harbors and Rivers Act.

Many of the risks inherent with industrial aquaculture operations cannot be mitigated or avoided. Moreover, as mentioned above, even localized ocean space can vary significantly within the same region, which requires a unique and targeted review for each proposed site. For these reasons, each individual permit and its potential environmental and socio-economic harms must be closely and thoroughly scrutinized by pertinent agencies, including a rigorous public participation process.

The SDFWG notes that the NOI does not contain the coordinates of the POA project. *Thus it is difficult for us to know its effects on our specific fisheries, and we submit that it is impossible for the USACOE to evaluate the proposal unless the exact location is known and public comments heard.*

In conclusion

We recommend the EIS fully consider that the Magnuson Stevens Act acknowledges the critical relationship between fishing and non-fishing uses of the ocean through its mandate to consider all ocean uses when creating or amending fisheries policy. By the same logic, the NOAA/NMFS has a vested interest in ensuring that emerging ocean policies and uses do not compromise West Coast fishing activities by damaging the ocean ecosystem, disrupting ongoing spatial uses, or harming marine life. Indeed, fish harvesters and their communities all deeply depend on a healthy, robust marine environment, which would be put at significant risk by industrial aquaculture.

Industrial aquaculture has myriad, inherent environmental and socioeconomic harms. We urge NOAA/NMFS/EPA/USACOE to adopt the above recommendations and deny the permits sought for the POA project.

Thank you for accepting these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Pete Halmay". The signature is stylized and written in a cursive-like font.

Pete Halmay, President

San Diego Fishermen's Working Group

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San Diego Port District Commission