



July 22, 2022

Scott M. Rumsey
Acting Regional Administrator
NOAA Fisheries West Coast Region
1201 NE Lloyd Blvd #1100
Portland, OR 97232

Submitted online at Docket No. NOAA-NMFS-2022-0051 at <https://regulations.gov>

RE: Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Identification of One or More Aquaculture Opportunity Area(s) in Southern California

Dear Dr. Rumsey:

Don't Cage Our Oceans is a coalition of national, regional, and local organizations and businesses working to stop industrial-scale offshore fish farming while uplifting values-based sea-food systems led by local communities. More responsible forms of aquaculture are community-driven, responsibly sited and appropriately scaled, and use more appropriate

species and methods. We respectfully submit these comments in response to NOAA's "Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Identification of One or More Aquaculture Opportunity Area(s) in Southern California" (Agency/Docket Number RTID 0648-XB875). Please note that **we also endorse the comments submitted by the Center for Food Safety. We support Alternative 1, the No Action Alternative**, in which no AOAs would be identified in Federal waters offshore of Southern California.

There are several reasons why the most prudent option is for NOAA (through the National Marine Fisheries Service, NMFS) to take no action in designating AOAs pursuant to former President Trump's Executive Order 13921. Chief among these is that NOAA lacks the legal authority to regulate aquaculture in federal waters. Furthermore, there are several grave ecological consequences and inevitable financial harms to the regional economy in allowing offshore finfish farming in U.S. federal waters. A few of these concerns would be partially addressed by unbiased application of relevant environmental law, but EO 13921 seeks to bypass those critical safeguards. Finally, NOAA's activist role in promoting industrial-scale offshore finfish aquaculture introduces unwarranted bias in the decision-making process, and flies in the face of scientific understanding on known harms, violating the precautionary principle.

Legality

NOAA repeatedly asserts authority in setting up and permitting an unprecedented nation-wide system of commercial offshore aquaculture across all U.S. waters, even though Congress has never passed any legislation granting the agency authority to do so. Furthermore, the courts have affirmed this lack of authority to oversee aquaculture activities in federal waters: in 2020 the Fifth Circuit held that NOAA indeed lacks any statutory authority to regulate aquaculture.¹

The 5th Circuit court case *Gulf Fishermens Ass'n* held that NOAA does not have authority to permit or regulate aquaculture in the U.S. federal waters of the Gulf of Mexico, as there is no Congressional authorization to do so under MSA. This ruling pertained to U.S. federal waters, so reasonably extends to other federal waters as well, like those off of southern California. For years, NOAA had claimed that MSA had provided authority under the contorted view that aquaculture falls under the statutory definition of "fishing" for purposes of MSA, as fish are ultimately extracted from net pens, and that NOAA could thus create a fishery management plan (FMP) to regulate aquaculture. The 5th Circuit Court saw through this nonsensical justification, and ruled against it.

¹ *Gulf Fishermens Ass'n v. Nat'l Marine Fisheries Serv.*, 968 F. 3d 454 (5th Cir. 2020).

Across several administrations, the agency has acted as an activist and promoter of industrial aquaculture. Following the circuit court ruling, the Trump Administration issued an executive order to grant NOAA authority where Congress had not. While EO 13921 does nothing to bolster NOAA's authority, the agency might argue otherwise. Executive orders cannot confer authority on agencies because the president's powers are executive, not legislative, in nature.² Rather, the President's authority to act "must stem either from an act of Congress or from the Constitution itself."³ As a result, EO 13921 cannot allow NOAA to establish a new offshore aquaculture industry in the absence of any statutory authority granted by Congress.

More recently, NOAA has claimed authority to regulate aquaculture via its role in the interagency Subcommittee on Aquaculture,⁴ established by the National Aquaculture Act of 1980.⁵ This legislation identifies the U.S. Department of Agriculture as the lead agency on aquaculture, and barely assigns *any* responsibilities to the Department of Commerce (NOAA) at all, let alone authority to designate AOAs. The Act requires only consultation with the NOAA for a biennial report on the *status* of aquaculture,⁶ and several studies due *35 years ago*.⁷ None of these submissions required NOAA to determine locations suitable for industrial aquaculture in federal waters.

Absent *any* plain text in support, NOAA cannot establish its authority to designate AOAs in southern California. In June 2022, the U.S. Supreme Court made plain that an agency must "point to 'clear congressional authorization' for the authority it claims."⁸ NOAA's attempts here to promote and lead a brand-new, highly controversial industry without pointing to statutory text provides just such an "extraordinary case" in which the "history and the breadth of the authority that [the agency] has asserted," provides a "reason to hesitate before concluding that Congress" meant to confer such authority.⁹

² *Doe #1 v. Trump*, 957 F.3d 1050, 1062 (9th Cir. 2020) (citing *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579, 587 (1952) ("[T]he President's power to see that the laws are faithfully executed refutes the idea that he is to be a lawmaker.")).

³ *Id.* at 585.

⁴ NSTC Subcommittee on Aquaculture, A Strategic Plan to Enhance Regulatory Efficiency in Aquaculture. Feb. 2022,

(https://www.ars.usda.gov/sca/Documents/2022%20NSTC%20Subcommittee%20on%20Aquaculture%20Regulatory%20Efficiency%20Plan_Final%20508%20compliant.pdf)

⁵ 16 U.S.C. §§ 2801-2810.

⁶ *Id.* § 2804(d).

⁷ *Id.* § 2804(c)(1)(C), (D) (requiring the Department of Commerce to submit studies by December 31, 1987).

⁸ *W. Virginia v. EPA*, No. 20-1530, 2022 WL 2347278, at *3 (U.S. June 30, 2022) (citing *Util. Air Regul. Grp. v. EPA*, 573 U.S. 302, 324 (2014)).

⁹ *W. Virginia*, 2022 WL 2347278, at *3; see also *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 159-160 (2000); *Nat'l Fed'n of Indep. Bus. v. Dep't of Lab., Occupational Safety & Health Admin.*, 142 S. Ct. 661, 666, 211 L. Ed. 2d 448 (2022).

Here, there is no ambiguity at all. Congress has never given NOAA the authority to regulate aquaculture in federal waters, and the courts have agreed with this interpretation. EO 13921 is an attempt to circumvent Congress, which has repeatedly demonstrated immense skepticism of offshore aquaculture, in order to lay the groundwork for large-scale fish farming in federal waters — an industrial activity that is severely lacking in public approval or buy-in when the details and risks of that development are made plain to the American public. NOAA should stop considering these southern California AOAs because of its clear lack of authority alone. However, even if NOAA’s permitting and regulating of aquaculture were to be legal, there are a variety of other compelling reasons why this activity should not move forward.

The Federal Government’s “water grab” and misappropriation of public funds is overwhelming rejected by the public

Aquaculture Opportunity Areas (AOAs) are the ocean-based equivalent of a land grab; they are a “water grab” by the federal government for the benefit of massive corporate interests. Cordoning off large portions of the Southern California Bight for the exclusive use of the private sector actively harms coastal communities and the livelihoods of Californians who live and work along the water.

For years, NOAA has been funneling millions of dollars of taxpayer money into research, development, and start-up funding to develop Confined Animal Feedlot Operations (CAFO)-style finfish farms in U.S. waters. These funds have been transferred to the aquaculture industry through programs like Sea Grant and the Saltonstall-Kennedy program. The agency is hardly a disinterested partner in this space, and is listed as a member of the Ocean Stewards Institute, in its California Sea Grant capacity. The Ocean Stewards Institute identifies as “a trade organization advocating for the emerging open ocean aquaculture industry.”¹⁰

Privatizing public resources for the benefit of large corporations, especially those not the U.S., is inherently un-American. Offshore aquaculture proponents have requested long-term (25-year) leases for their facilities spanning hundreds of acres, which is essentially blocking off a swath of public oceans for more than an entire generation. Through the AOA designation process, NOAA is proposing to carve up and hand control of our federal ocean spaces, a public resource that should be managed for the benefit of all Americans, to private corporations and foreign interests. In rushing through permitting for marine finfish aquaculture, NOAA is actively harming fishing families and the many small businesses in coastal communities that support

¹⁰ Ocean Stewards Institute, <https://www.oceanstewards.org/>

them. NOAA should instead focus on supporting independent fishermen and co-ops, as their small businesses continue to recover from the ongoing COVID pandemic.

Indeed, it is incredible that the Biden Administration would push through an unnecessary and unpopular program like industrial scale marine finfish aquaculture when it is so detached from actually supporting people with access to food. These factory farms take significant time and money to build; they are not community driven nor will they benefit people from coastal communities. The species grown in these facilities are high-trophic level fish that are destined for high-end local and foreign markets. CAFO-style fish farming has been repeatedly met with fierce opposition from the public, Congress, and even the courts.

Few people want to see this industry get a foothold in our public waters except for the mega-corporations (like Cargill, Merck, Sysco, etc.) and their shareholders¹¹ who see an opportunity to profit from industrially produced fish. In the recent NOAA listening sessions for NOAA's 5 year draft strategic plan on aquaculture, people overwhelmingly voiced their opposition to the inclusion of marine finfish aquaculture as part of NOAA's vision in the first place, and urged its removal from the strategic plan. Participants in the commercial fishing industry have collectively voiced their concerns over being forced to coexist with the marine aquaculture industry, stating 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."¹² NOAA has failed to secure public buy-in or societal license to push forward industrial fish farms in federal waters.

Creating AOAs to promote offshore finfish farming harms fishing families and fishing communities

NOAA's AOA Atlas already concedes potential impacts on commercial fishing operations and the significant geographical overlap between the AOAs, commercial traffic, and fishing.¹³ The agency also explicitly acknowledges that commercial fishing supports many communities along the

¹¹ Stronger America through Seafood, <https://www.strongerthroughseafood.org/sats-members>

¹² Open letter to Members of the U.S. House of Representatives and Senate, Dec. 4, 2018, re: Opposition to marine finfish aquaculture in U.S. waters, *available at* <http://foe.org/DecFishFarmingSignOnLetter/>.

¹³ Morris, J.A. Jr, MacKay, J.K., Jossart, J.A., Wickliffe, L.C., Randall, A.L., Bath, G.E., Balling, M.B., Jensen, B.M., and Riley, K.L. 2021. An Aquaculture Opportunity Area Atlas for the Southern California Bight. NOAA Technical Memorandum NOS NCCOS 298. Beaufort, NC. 485 pp. <https://doi.org/10.25923/tmx9-ex26>, 74-76.

coastline by providing employment, income, and revenue from seafood sales, stating that the seafood industry in California supported more than 150,000 jobs in 2017.¹⁴

The threat of fish escaping into southern California waters is inevitable, because fish escapes are a regular and ongoing occurrence in the industry. After a massive escape of Atlantic salmon from an aquaculture facility in state waters, the state of Washington investigated the site's operator, Cooke Aquaculture, and found that the company lied about both the cause of the escape and its magnitude.¹⁵ The true number of fish that escaped ended up being roughly 263,000 Atlantic salmon in the Pacific Ocean, much higher than Cooke Aquaculture was willing to admit.¹⁶ As a result, in 2018 Washington Governor Jay Inslee signed into law House Bill 2957 which phases out industrial ocean fish farms in state waters. It does so by banning new leases to non-native net pen operations and prohibits the renewal of existing leases.

Around the world, industrial finfish aquaculture has repeatedly resulted in fish escapes, which impact wild fish and other marine wildlife. For example, in January 2020, 73,600 salmon escaped from a net pen in Mowi, Scotland, marking the third major escape in the area since October 2019.¹⁷ In Norway, approximately four million fish escaped in a single year.¹⁸ AquaChile reported the escape of 787,929 fish in 2013 due to bad weather that damaged cages.¹⁹ In 2018, 680,000 fish escaped from Marine Harvest Chile, 109,515 from Bakkafrost Faroe Islands, and 120,000 from Huon Aquaculture in Tasmania.²⁰ Recognizing the regularity of fish escapes from ocean-based net pens, the U.S. Council on Environmental Quality has stated that it "must be *assumed* that escapes will occur" from net pens.²¹

¹⁴ *Id.* at 13.

¹⁵ Wilson, Deborah. *Report blames negligence, not eclipse, for Washington fish farm collapse*. CBC, February 2, 2018. <https://www.cbc.ca/news/canada/british-columbia/fish-farm-collapse-cooke-aquaculture-report-washington-state-1.4516075>

¹⁶ Mapes, Lynda V. *Fish farm caused Atlantic salmon spill near San Juans, then tried to hide how bad it was, state says*. Seattle Times, February 2, 2018. Accessible at: <https://www.seattletimes.com/seattle-news/fish-farm-caused-atlantic-salmon-spill-state-says-then-tried-to-hide-how-bad-it-was/>

¹⁷ *Escape calls high energy salmon sites into question*, The Fish Site (Jan. 20, 2020), <https://thefishsite.com/articles/mowi-reports-mass-salmon-escape-from-colonsay>.

¹⁸ Nat'l Marine Fisheries Service Pac. Islands Reg'l Off., Draft Programmatic Env't Impact Statement (DPEIS) 171 (2021).

¹⁹ Lola Novarro, *Here are the largest recorded farmed Atlantic salmon escapes in history*, IntraFish (Feb. 1, 2019), <https://www.intrafish.com/aquaculture/here-are-the-largest-recorded-farmed-atlantic-salmon-escapes-in-history/2-1-388082>.

²⁰ *Id.*

²¹ Council for Environment Quality & Office of Science and Technology Policy, Case Study No. 1: Growth-Enhanced Salmon, at 23 (2001), <https://clintonwhitehouse5.archives.gov/media/pdf/salmon.pdf>; *CEQ and OSTP Assessment: Case*

Fish escapes can disrupt the marine ecosystem and threaten wild fish stocks and fisheries. Farmed fish are genetically inferior fish, and when they interbreed with wild stock, they bring down the fitness and survivability of the wild fish stocks.

Finfish aquaculture of “Salmonidae, transgenic fish species, or any exotic species of finfish” is illegal in California state waters;²² setting up salmon farms just beyond the 3-mile marker could threaten California’s native salmon stocks, many of which are at risk for extinction, and harm fishermen operating within state and federal waters (and should also trigger a federal consistency review under the Coastal Zone Management Act).

If farmed finfish from facilities sited within AOAs are actually sold in the U.S., they will likely undercut wild fisheries, and drive small fishing businesses to closure – the impacts of global salmon farming on small-boat salmon fishermen in Alaska during the 1990s are a textbook example of this effect, which caused economic insecurity and contributed to permit loss in small fishing communities.

Floating CAFO-style fish farms incubate and proliferate parasites and diseases (e.g., sea lice) that then spread to the wild fish populations. This is harmful to both the marine ecosystem and wild fisheries. There is more evidence that pathogens from farmed salmon spread to wild salmon: piscine orthoreovirus (PRV) is widespread in farmed salmon and is associated with heart and skeletal muscle inflammation. *Tenacibaculum maritimum* is known to cause disease and mortality. The toxic chemicals that offshore fish farm operators use to treat these diseases are widely known to harm other marine life and commercially-sought species as well, as discussed further below. That NOAA would nonetheless enthusiastically pursue the permitting of factory fish farms that are known to harm the very fisheries that the agency is tasked with conserving and managing is deeply troubling.

Creating AOAs would harm the marine environment and exacerbate climate change

For a variety of logistical reasons, the AOAs have generated minimal interest from companies looking to engage in shellfish or seaweed farming. Instead, the agency must be honest in acknowledging that the farming of high-trophic level finfish - that is, carnivorous or omnivorous

Studies of Environmental Regulations for Biotechnology,
https://hygeia-analytics.com/wp-content/uploads/2016/12/RP_RegGETech_CEQ.pdf.

²² California Code, Fish and Game Code - FGC § 15007

fish that require high animal protein inputs - is the ultimate endgame for these public-turned-private spaces.

Industrial offshore finfish aquaculture **leads to overfishing** of forage fish. Most farmed marine fish require large amounts of fish in their feed – much of this comes from globally-sourced wild forage fish, including anchovies, menhaden, sardines and other small fish that are critically important to the diet of marine wildlife, including birds, dolphins, sharks, and other fish. Removing massive amounts of forage fish from our oceans reduces prey availability for other marine species and can change relationships in our ecosystem with potential widespread consequences.

NOAA must assess impacts of these industrial facilities on all species, not just those that are listed under the Endangered Species Act. The agency’s AOA Atlas reveals that eighteen threatened and endangered species can be found in the southern California bight, including several whale species, several sea turtle species, giant manta rays, black and white abalone, the Guadalupe fur seal, and the gulf grouper.²³ Additionally, nineteen species of marine mammals may traverse the proposed areas,²⁴ and fourteen fish species whose Essential Fish Habitat overlaps with proposed AOA sites.²⁵ Furthermore, Santa Monica Bay and the Santa Barbara Coast serve as nurseries for great white sharks.²⁶ NOAA even admits that “[g]iven the high occurrence of these species, it is unlikely that aquaculture activities can avoid interactions.”²⁷ and admits that more indirect impacts to marine mammals and other wildlife may occur as well.²⁸ Because the proposed facilities will be located in, or near, species’ migration routes or in their habitat, NOAA must analyze the AOA designations’ cumulative effects of this project and other proposed projects for the full term of any proposed permit on species.²⁹

Entanglement from ropes, lines, and net pens may harm endangered species and other wildlife in the proposed areas, especially as the facilities’ propensity to act as fish aggregating devices

²³ Morris Jr., *supra* n. 13 at 194.

²⁴ *Id.*

²⁵ *Id.*

²⁶ Marc Cota-Robles, *Drone footage captures cluster of juvenile great white sharks off Pacific Palisades coast* (Aug. 11, 2021), <https://abc7.com/great-white-shark-pacific-palisades-will-rogers-state-beach-california-population/10945063/>; <https://abc7.com/great-white-shark-pacific-palisades-will-rogers-state-beach-california-population/10945063/>; Beth Farnsworth, *Santa Barbara Coast is a nursery ‘hot spot’ for great white sharks* (Jan. 27, 2022), <https://keyt.com/news/santa-barbara-s-county/2022/01/27/santa-barbara-coast-is-a-nursery-hot-spot-for-great-white-sharks/.s/>

²⁷ Morris Jr., *supra* n. 13 at 194.

²⁸ *Id.*

²⁹ See 33 U.S.C. § 1371(c)(1).

(FADs) further exacerbates risks of entanglements and vessel strikes as species are drawn to the facilities. Recently, NOAA has admitted that industrial aquaculture may attract predators as a result of fish escapes, food drifting outside the pens, and other animals aggregating around the pens.³⁰ In March 2017, an endangered Hawaiian Monk Seal died due to entanglement in net pens at Blue Ocean Mariculture, which is a NOAA research farm.³¹ The FAD effect may result in more frequent encounters with protected species, which could increase the likelihood of injury from structures or equipment associated with the facility.³²

Waste from intensive finfish farming (excess feed, fish poop and any chemicals used on the fish or pens) readily flows from the net pens into surrounding waters. In many cases, the nitrogen outputs associated with the concentrated rearing of hundreds of thousands of fish in a limited area is equivalent to the sewage output of major U.S. cities; worse, in this case, it is *untreated*.

Nutrient pollution decreases oxygen levels in our waters, killing off aquatic life and creating low-oxygen “dead zones” and harmful algal blooms.³³ Climate change further exacerbates these risks of harmful algal blooms, as warmer, more acidic ocean waters increase both the frequency and toxicity of these events.³⁴ Harmful algal blooms produce toxic chemicals that can kill fish and other vertebrates by affecting their central nervous systems, and can cause serious illness in humans with severe or chronic respiratory conditions.³⁵ Southern California has already been experiencing an increase in harmful algal blooms in recent years and harbors some of the world’s highest concentrations of domoic acid, an algal toxin dangerous to wildlife and people who eat local seafood.³⁶ NOAA must consider the likelihood of algal blooms in all study areas and assess the potential harms that could occur to the region, including harm to the local fishing industry from more frequent and severe disruptions due to Domoic Acid.

The spread of disease is also of grave concern. In 2012, off the coast of Washington’s Bainbridge Island, in waters that are home to wild Pacific salmon species, a massive viral outbreak in Atlantic salmon net pens led to the deaths of over one million pounds of farmed Atlantic

³⁰ Luke T. Barrett, et al., *Impacts of marine and freshwater aquaculture on wildlife: a global meta-analysis*, *Reviews in Aquaculture* (2018).

³¹ Jones, Caleb. Rare monk seal dies in fish farm off Hawaii. *USA Today*. March 17, 2017. <https://www.usatoday.com/story/news/nation/2017/03/17/rare-monk-seal-dies-fish-farm-off-hawaii/99295396/>

³² *Id.* at 186.

³³ Donald Boesch *et al.*, Pew Oceans Comm’n, *Marine Pollution in the United States* 20-22 (2001).

³⁴ Crable, M. Climate change could make toxic algal blooms in our oceans more deadly. *Phys.org* (2020) <https://phys.org/news/2020-07-climate-toxic-algal-blooms-oceans.html>

³⁵ NOAA, Harmful Algal Blooms, <https://oceanservice.noaa.gov/hazards/hab/>.

³⁶ Polakovic, G. *Southern California’s coast emerges as a toxic algae hot spot*. University of Southern California News, Aug 2018.

<https://news.usc.edu/147515/southern-californias-coast-emerges-as-a-toxic-algae-hot-spot/>

salmon.³⁷ NOAA must assess these potential discharges since these pathogens, parasites, and the chemicals used to treat them can easily spread to wild fish, including wild populations that are listed as endangered or threatened under the Endangered Species Act.

There are documented studies of large populations of sea lice having left their origin sites of fish farms into the broader ocean environment, both in the Atlantic and Pacific oceans. In March 2022, a study from *Scientific Reports* notes: "Our results suggest that salmon lice in the Pacific Ocean have recently evolved substantial resistance to the antibiotic EMB ["SLICE"], and that salmon-lice outbreaks on Pacific farms will therefore be more difficult to control in the coming years."³⁸ A May 2021 study from *Royal Society* shows how the industry is losing the "arms race" in the North Atlantic Ocean because multiresistant salmon lice are dispersed throughout.³⁹ As parasites develop resistance to these chemicals, there is a growing trend to increase the level of toxicity of the chemicals used in response; this of course further increases the load of toxic chemicals in the marine environment.

The chemicals used as anti-foulants, antibiotics, and pesticides are often **carcinogenic and toxic to marine life**; these chemicals (e.g., organophosphates, cypermethrin) are openly discharged into the marine environment. In fact, up to 75% of antibiotics used by the industrial aquaculture industry directly absorb into the surrounding environment.⁴⁰ In Nova Scotia, the use of the antibiotic EMB resulted in "widespread damage to wildlife," including "substantial, wide-scale reductions" in crabs, lobsters and other crustaceans close to marine finfish facilities.⁴¹

When it comes to carbon footprint, proponents of offshore finfish farming compare apples to oranges, in contrasting various farmed fish species to land-based livestock, instead of comparing

³⁷ Our Sound, Our Salmon, *New Federal Analysis Finds Puget Sound Commercial Net Pens Are Harming Salmon, Steelhead, And Other Protected Fish*, (June 30, 2022), <https://www.oursound-oursalmon.org/news/2022/5/18/new-federal-analysis-finds-puget-sound-commercial-net-pens-are-harming-salmon-steelhead-and-other-protected-fish>.

³⁸ Godwin, S.C., Bateman, A.W., Kuparinen, A. *et al.* Salmon lice in the Pacific Ocean show evidence of evolved resistance to parasiticide treatment. *Sci Rep* 12, 4775 (2022). <https://doi.org/10.1038/s41598-022-07464-1>.

³⁹ Fjørtoft Helene Børretzen, Nilsen Frank, Besnier Francois, Stene Anne, Tveten Ann-Kristin, Bjørn Pål Arne, Aspehaug Vidar Teis and Glover Kevin Alan. 2021. Losing the 'arms race': multiresistant salmon lice are dispersed throughout the North Atlantic Ocean *R. Soc. open sci.* 8: 210265. <https://doi.org/10.1098/rsos.210265>.

⁴⁰ United Nations, *Frontiers 2017: Emerging Issues of Environmental Concern*, at 15 (2017), <https://www.unenvironment.org/resources/frontiers>.

⁴¹ Rob Edwards, *The Sunday Herald, Scottish government accused of colluding with drug giant over pesticides scandal* (June 2, 2017), http://www.heraldscotland.com/news/15326945.Scottish_government_accused_of_colluding_with_drug_giant_over_pesticides_scandal/.

it to land-based fish farming such as predominantly herbivorous species like tilapia or catfish. The carbon footprint for farmed carnivorous finfish is also significantly miscalculated in most models. There is a **massive carbon footprint** associated with the global sourcing, capturing, blending, and shipping of feed inputs to go into the fishfeed, and related infrastructure associated with keeping the farmed fish in cages, feeding them, medicating them, and harvesting them. Instead, most models that calculate the carbon footprint of farmed salmon, for example, rely on the unrealistic expectation that a unit of farmed salmon in Norway was fed from fishfeed derived exclusively from within Norway, and will be eaten by a person in Norway. This does not reflect the reality that industrially-grown salmon is sold globally, and that the international fishfeed industry - both globally sourced and globally distributed - is not structured in such a “local” manner.

CAFO-style fish farming does not feed Americans or help alleviate hunger

In most cases, it takes more fish to feed the farmed fish than it does to simply eat the lower-trophic level fish in the first place. This is an **inherently unsustainable and energy-intensive model** that leads to a **net loss in fish and animal protein**, mocking the purported “feed the world” claims of NOAA and industry alike, through offshore finfish aquaculture.

The higher trophic level fish is aimed to be sold to the higher-end market, since it will be so expensive to set up the infrastructure. This often includes foreign markets, as most of our country’s landed fish and aquaculture is sold abroad. In other words, opening up our waters for foreign investors and mega corporations does not necessarily mean that the farmed fish would be sold domestically, beyond a few expensive restaurants and boutique grocery retailers, nor at an affordable price: it will go where the money is, and leave us with an ecological and economic mess and little else.

Better technology cannot “save” an open flow-through CAFO

Other countries, like Denmark and Canada – both often considered global leaders in offshore marine finfish aquaculture – are moving away from the practice after recognizing harmful effects from it. Prime Minister Trudeau has ordered the phasing out of open water salmon farming, and that these operations should be land-based instead. This is in no small part to the devastating impact that the salmon farming industry has on wild fish stocks, First Nations, and the marine environment. This begs the question: why would the U.S. start pursuing the promotion of an outdated, largely unwanted, and dangerous form of finfish farming when there are so many better ways to provide seafood?

Scientifically unsound in conception and siting

It is Incredible that NOAA - an agency with so many qualified scientists and experienced fishery regulators on staff - is pushing forward in creating AOAs for offshore finfish farming. This siloed approach to management demonstrates a profound lack of knowledge of fisheries on the part of the agency's proponents, and a grave miscalculation on how important science and public input is in the fisheries regulatory process. The members of this coalition encourage agency staff to talk with fellow staff from different departments entirely, and to also engage with scientists and colleagues *outside* of the aquaculture industry. This can help cut down on both groupthink and agency capture.

Finally, two of the proposed AOAs in the Southern California Bight (CN1-A and CN1-B) are near a known DDT dumpsite, with the latter AOA site even closer. In 2020, scientists found up to 500,000 barrels of the banned pesticide DDT were found dumped in the Pacific Ocean off Catalina Island near NOAA's proposed AOA option CN1-B.⁴² Following these discoveries, in July 2022 the EPA launched an investigation into this dumpsite and several other areas in southern California.⁴³ DDT is highly toxic and carcinogenic and linked to a wide variety of health problems in both humans and wildlife; unfortunately it is also very durable, as it biomagnifies and bioaccumulates as it travels through food webs.⁴⁴ It is difficult to imagine how NOAA ever deemed these areas to be ideal at any stage of the siting process.

For the many reasons above, including the lack of authority to regulate aquaculture under existing law, our members strongly urge NOAA to refrain from identifying any Federal waters offshore of Southern California (or anywhere else) as Aquaculture Opportunity Areas. We recommend the no action alternative.

Sincerely,

James Mitchell
Legislative Director
jmitchell@dontcageouroceans.org
202-643-1830

⁴² Samantha Haugen, *How Barrel After Barrel of DDT Ended Up On the Ocean Floor*, OCEAN BLUE PROJECT (Jan. 13, 2021) <https://oceanblueproject.org/ddt-effects-on-the-environment/>.

⁴³ EPA, Southern California Ocean Disposal Site #2 Investigation, <https://www.epa.gov/ocean-dumping/southern-california-ocean-disposal-site-2-investigation>

⁴⁴ *Id.*