Exhibit C

Petitioners' Original Comments

In re: NPDES Appeal No. 25-01M
NPDES Permit No. FL0A10001
Sender: mcufone@recirculatingfarms.org

Submitted via email to wahlstrom-ramler.meghan@epa.gov.

September 29, 2019

Ms. Meghan Wahlstrom
Environmental Protection Agency
NPDES Permitting Section, Water Division
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960
wahlstrom-ramler.meghan@epa.gov

Re: Comments on Proposed Issuance of NPDES Permit to Kampachi Farms, LLC (Permit No. FL0A00001)

Dear Ms. Wahlstrom:

Please accept the following comments on behalf of Friends of the Earth, Center for Food Safety, Center for Biological Diversity, Food & Water Watch, Healthy Gulf, Institute for Fisheries Resources, National Family Farm Coalition, Northwest Atlantic Marine Alliance, NY4WHALES, Ocean Conservation Research, Pacific Coast Federation of Fishermen's Associations, Sanctuary Education Advisory Specialists LLC, and Sierra Club Grassroots Network regarding the Environmental Protection Agency's (EPA) proposed issuance of a National Pollutant Discharge Elimination System (NPDES) permit, under the Clean Water Act (CWA), 33 U.S.C. § 1251 *et seq.*, to Kampachi Farms, LLC (Permit No. FL0A00001) (hereinafter, the "permit").[1]

The permit would allow Kampachi Farms, LLC to operate the only industrial ocean fish farm in U.S. federal waters – in the Gulf of Mexico approximately 40 miles from the coast of Sarasota, FL – and discharge untreated, industrial wastewater from the facility directly into the surrounding ocean. Industrial ocean fish farming – also known as offshore or marine finfish aquaculture – is the mass cultivation of finned fish in the ocean, in net pens, pods, and cages. These are essentially floating feedlots in open water, which can have devastating environmental and socio-economic impacts. For the foregoing reasons, the undersigned organizations strongly oppose EPA's issuance of the permit. We also urge the agency to hold a public hearing with the opportunity for live public testimony on this issue prior to making a decision on the permit.

I. The Federal Government Continues to Prioritize Marine Finfish Aquaculture Despite Evidence of Significant Global Harm and Widespread Public Outcry.

For decades, the federal government has pushed to expand marine finfish aquaculture in federal waters, despite massive public opposition and negative global experiences with the industry, including but not limited to: farmed fish spills, parasites, disease, conflicts with marine life, use of antibiotics and other toxins, harm to wild fisheries and coastal economies, and the devastation of native wild fish stocks. We have been closely tracking – and are entirely opposed to – the

[1] U.S. EPA, Notice of Proposed Issuance of National Pollutant Discharge Elimination System Permit No. FL0A00001 (August 30, 2019).

federal government's continued push to recklessly develop and expand this destructive and unnecessary industry in the United States.

Should federal agencies begin permitting marine finfish aquaculture – beginning with this permit – there lies a significant conflict-of-interest risk in the proposed framework for promoting and regulating the industry. The National Oceanic and Atmospheric Administration (NOAA) has proclaimed itself as the lead federal agency on policy formulation and regulation of domestic marine finfish aquaculture. However, in addition to its regulatory efforts, NOAA also has prioritized the explicit goal of promoting and expanding marine finfish aquaculture production in the United States. For 2019, NOAA Fisheries states:

> A high priority objective in the Department of Commerce strategic plan is "increasing marine aquaculture production." Supplementing U.S. wild-caught fisheries, a healthy marine aquaculture industry has the potential to greatly increase our overall U.S. seafood production and reduce the seafood trade deficit. In 2019, we will give our full support to growing a healthy U.S. marine aquaculture industry. Our first step will be to address the bureaucratic hurdles an applicant faces in the federal permitting process.[2]

Moreover, NOAA has relentlessly prioritized regulating the industry despite a recent opinion out of the U.S. District Court for the Eastern District of Louisiana holding that NOAA has no authority to regulate marine finfish aquaculture under the Magnuson-Stevens Fishery Conservation and Management Act.[3] Nevertheless, NOAA continues to promote operations along each U.S. coastline and has been significantly involved with the permit process in this instance (e.g., gathering and providing buoy data, conducting preliminary siting analysis and environmental quantitative modeling).

Even more concerning here is the fact that EPA has relied on vacated, *ultra vires* agency action to support the permit at issue.[4] This blind reliance is deeply troubling, if not also unlawful. Simply put, the proposed permit bolsters our concern that EPA is supporting NOAA's attempts to simultaneously regulate and promote this potentially disastrous industry without exercising independent due diligence to fully understand the risks and impacts of permitting these facilities in U.S. waters.

We are also concerned and confused as to why the very agencies tasked with protection and stewardship of our ocean resources are fixated on supporting and expanding this outdated and unnecessary industry, especially in light of the well-documented ecological, social, and economic problems associated with these operations.

---

[2] NOAA Fisheries, Priorities and Annual Guidance 2019 at 1, *available at* https://www.fisheries.noaa.gov/webdam/download/88539344.

[3] *Gulf Fishermen's Assoc. v. Nat'l Marine Fisheries Serv*., No. 16-1271 (Sept. 25, 2018), *appeal docketed,* No. 19-30006 (5th Cir. Jan. 3, 2019).

[4] In *Gulf Fishermen's Assoc.*, the federal district court vacated as *ultra vires* NOAA Fisheries' 2016 final rule establishing a Fishery Management Plan for Regulating Offshore Aquaculture in the Gulf of Mexico. *Id.* at 15. EPA has also relied on NOAA's 2008 Programmatic Environmental Impact Statement, which was the subject of challenge in the case.

II. The permit and supporting documentation turn a blind eye to the range of risks and impacts that marine finfish aquaculture would bring to the United States.

The proposed permit and supporting documentation fail to fully acknowledge the breadth of socio-economic, public health, and environmental problems associated with marine finfish aquaculture. Issuing the permit despite these clear problems would be folly and vulnerable to legal challenge.

Other countries with marine finfish aquaculture have suffered extensive environmental, socio-economic, and public health problems associated with the industry. As detailed below, these impacts are varied and widespread, and may not come to light until years after irreversible damage has been done. Indeed, as of August 2019 Denmark has placed a prohibition on the expansion of offshore aquaculture development out of concern for the industry's impact to the environment.[5] Here in the U.S., Washington State swiftly moved to phase-out marine finfish aquaculture for non-native species following a massive Atlantic salmon spill in August 2017, essentially shuttering all facilities in the state by 2022.[6] Our federal government must heed past lessons and prevent these types of harms by not permitting marine finfish aquaculture facilities in open water.

Marine finfish aquaculture routinely results in a massive number of farmed fish escapes that adversely affect wild fish stocks. As noted above, 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 operation.[7] Escaped fish increase competition with wild stocks for food, habitat, and spawning areas. 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

[5] PHYS.ORG, Denmark halts aquaculture development over environment concerns (Aug. 27, 2019), *available at* https://phys.org/news/2019-08-denmark-halts-aquaculture-environment.html.
[6] *See, e.g.* State guidance for commercial marine net pens (referencing House Bill 2957), *available at* https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Aquaculture/State-guidance-for-net-pens.
[7] Lynda V. Mapes, SEATTLE TIMES, Despite agency assurances, tribes catch more escaped Atlantic salmon in Skagit River (Dec. 1, 2017), *available at* https://www.seattletimes.com/seattle-news/environment/despite-agency-assurances-tribes-catch-more-escaped-atlantic-salmon-in-skagit-river/.

a loss of genetic diversity."[8] Finally, escaped farmed fish will likely spread a multitude of parasites and diseases to wild stocks, which could prove fatal when transmitted.[9]

While on the topic of parasites and diseases, we have significant concerns over the pervasive use of antibiotics, herbicides, pesticides, and other veterinary drugs for prevention and treatment of outbreaks in marine finfish aquaculture facilities. The use of these chemicals raises environmental and public health concerns. It is no secret that confining large populations of animals will breed pests and disease. 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 often 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.[10] In Nova Scotia, an 11-year-long study found that lobster catches plummeted as harvesters got closer to marine finfish aquaculture facilities.[11] In addition, the use of antibiotics in marine finfish aquaculture facilities is contributing to the public health crisis of antibiotic resistance. For farmed fish, antibiotics not only leave residues in your seafood, but they 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.[12]

Another vital concern is the direct discharge of untreated toxins, including excess food, feces, antibiotics, and antifoulants associated with industrial ocean fish farms. Releasing such excess nutrients can negatively impact water quality surrounding the farm and threaten surrounding plants and animals. These underwater factory farms can also physically impact the seafloor by creating dead zones, and change marine ecology by entangling predators and other species that are attracted to the fish cages. These predators – such as birds, seals, and sharks – can easily become entangled in net pens, stressed by acoustic deterrents, and hunted. Indeed, an industrial ocean fish farm caused the death of an endangered monk seal in Hawaii, which was found

---

[8] Fisheries and Oceans Canada, Newfoundland and Labrador Region, Stock Assessment of Newfoundland and Labrador Atlantic Salmon (2016), *available at* http://waves-vagues.dfo-mpo.gc.ca/Library/40619655.pdf ("Genetic analysis of juvenile Atlantic Salmon from southern Newfoundland revealed that hybridization between wild and farmed salmon was extensive throughout Fortune Bay and Bay d'Espoir (17 of 18 locations), with one-third of all juvenile salmon sampled being of hybrid ancestry."); *see also* Mark Quinn, CBC News, *DFO study confirms 'widespread' mating of farmed, wild salmon in N.L.* (Sept. 21, 2016) https://www.cbc.ca/news/canada/newfoundland-labrador/farmed-salmon-mating-with-wild-in-nl-dfo-study-1.3770864.

[9] Jillian Fry, PhD MPH, David Love, PhD MSPH, & Gabriel Innes, VMD, Johns Hopkins University, Center for a Livable Future, "Ecosystem and Public Health Risks from Nearshore and Offshore Finfish Aquaculture" at 6-7 (2017) https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/research/clf_reports/offshor-finfish-final.pdf .

[10] 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/.

[11] I. Milewski, et al., (2018) *Sea Cage aquaculture impacts market and berried lobster catches*, Mar Ecol Prog Ser 598: 85-97, *available at* https://www.int-res.com/articles/meps2018/598/m598p085.pdf.

[12] United Nations, "Frontiers 2017: Emerging Issues of Environmental Concern" at 15 (2017) https://www.unenvironment.org/resources/frontiers.

entangled in the net.[13] In August 2018, Cooke Aquaculture entangled an endangered Humpback whale in large gillnets it cast to recapture escaped farmed fish from a Canada facility.[14] These examples are merely two of many unfortunate entanglements.

Large populations of farmed fish will require an incredible amount of fish feed, which carries its own environmental, public health, and human rights risks.[15] Most industrially farmed finfish, like Almaco jack, are carnivorous and need protein in their feed. This often consists of lower-trophic level "forage fish," which are at risk of collapse. Lately, aquaculture facilities are relying more on genetically-engineered ingredients such as corn, soy, and algae as substitute protein sources, which do not naturally exist in a fish's diet. Use of these ingredients can lead to widespread environmental degradation, a heightened demand on natural resources, and a less nutritious fish for consumers. Moreover, the fish feed industry is a global contributor to human trafficking and slavery.[16] There are very few requirements for the industry to include traceability of ingredients or sourcing methods in fish feed, which would allow these serious problems to pervade the United States should the industry take hold.

Permitting commercial, marine finfish aquaculture in the United States could bring formidable economic harm to our coastal communities, food producers (on land and at sea), and other marine-reliant industries. Members of the wild-capture fishing industry have collectively voiced their trepidation over attempting to coexist with the marine finfish 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."[17] These operations could also close-off and essentially privatize large swaths of the ocean that are currently available for numerous other commercial purposes, including fishing, tourism, recreation, shipping, and navigation.

Finally, 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.[18]

---

[13] Caleb Jones, USA Today, *Rare Monk Seal Dies in Fish Farm off Hawaii* (Mar. 17 2017), *available at* https://www.usatoday.com/story/news/nation/2017/03/17/rare-monk-seal-dies-fish-farm-off-hawaii/99295396/.

[14] Terri Coles, CBC News, *Humpback whale freed from net meant for escaped farm salmon in Hermitage Bay* (Aug. 14, 2018), https://www.cbc.ca/news/canada/newfoundland-labrador/whale-caught-gill-net-cooke-aquaculture-1.4784732.

[15] *See generally*, Changing Markets Foundation, *Until the Seas Run Dry* (2019), *available at* http://changingmarkets.org/wp-content/uploads/2019/04/REPORT-WEB-UNTILL-THE-SEAS-DRY.pdf (concluding that using wild fish to feed farmed fish "raises concerns of overfishing, poor animal welfare and disruption of aquatic food webs; it also undermines food security in developing countries, as less fish is available for direct human consumption").

[16] Tickler, David ,et al. (2018) *Modern slavery and the race to fish*, Nature Communications 9: 4643, *available at* https://www.nature.com/articles/s41467-018-07118-9.

[17] 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/.

[18] *See generally*, Undercurrent News, "World's 100 Largest Seafood Companies"

III. EPA's Inadequate Analysis of the Permit Application Violates the National Environmental Policy Act.

The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321*et seq.*, serves as "our basic national charter for protection of the environment,"[19] by requiring federal agencies to assess the environmental and socioeconomic impacts of projects to ensure that their decisions are fully informed.[20] NEPA requires federal agencies to prepare an Environmental Impact Statement (EIS) for all "major Federal actions significantly affecting the quality of the human environment."[21] 42 U.S.C. § 4332(2)(C). The NEPA procedure begins with preparation of an Environmental Assessment, which must include a "high quality," "accurate scientific analysis" of the proposed project.[22] This analysis must include a discussion of "appropriate alternatives" as well as a discussion of environmental impacts with sufficient evidence and analysis to determine whether to prepare an EIS or a finding of no significant impact.[23] In preparing an EA, an agency must take a "hard look" at the environmental impacts of the proposed action and alternatives.

A. Prior to issuing the permit, EPA is obligated to prepare an Environmental Impact Statement that comprehensively analyzes a reasonable range of alternative actions and the direct, indirect, and cumulative impacts that marine finfish aquaculture could have in the United States.

EPA has prepared a Draft Environmental Assessment (DEA) in support of its proposed NPDES permit. In such a document, NEPA demands that an agency consider impacts from connected, similar, and cumulative actions, and to take into account the significance of the proposed action at the local level, considering both short- and long-term effects, in assessing the scope and significance of a proposed action.[24] The DEA is simply not sufficient in this instance. Issuance of the proposed permit will pry open the doors for an industry with well-documented, significant harm in other countries, as well as in U.S. states with marine finfish aquaculture operations. It is no secret that Kampachi Farms LLC plans to initially operate Velella Epsilon for research purposes, while simultaneously pursuing commercial production at the facility.[25]

(Oct. 7, 2016) https://www.undercurrentnews.com/report/undercurrent-news-worlds-100-largest-seafood-companies-2016/; Tom Seaman, Undercurrent News, "World's top 20 salmon farmers: Mitsubishi moves into second place behind Marine Harvest" (June 29, 2016) https://www.undercurrentnews.com/2016/06/29/worlds-top-20-salmon-farmers-mitsubishi-movesinto-second-place-behind-marine-harvest/; Aslak Berge, Undercurrent News, "These are the world's 20 largest salmon producers" (July 30, 2017) http://salmonbusiness.com/these-are-the-worlds-20-largest-salmon-producers/.

[19] 40 C.F.R. § 1500.1(a)

[20] 42 U.S.C. §§ 4321-4332; 40 C.F.R. §§ 1502.1, 1503.1.

[21] 42 U.S.C. § 4332(2)(C).

[22] 40 C.F.R. 1500.1(b).

[23] 40 C.F.R. § 1508.9(a).

[24] 40 C.F.R. § 1508.25(a) (scope); 40 C.F.R. § 1508.27(a).

[25] *See* Kamapchi Farms LLC, Velella Epsilon: Pioneering Offshore Aquaculture in the Gulf of Mexico (Nov. 2, 2017) http://www.kampachifarm.com/blog/2017/11/2/velella-epsilon-pioneering-offshore-aquaculture-in-the-gulf-of-mexico.

Tellingly, EPA itself repeatedly refers to the proposal as a "pilot-scale" project.[26] It also states that "[t]hrough the preparation of this 'voluntary' EA and supporting studies, the EPA will also help streamline the NEPA process for any future aquaculture permitting actions, establish a monitoring and assessment baseline of important water quality issues associated with similar discharges, and provide an increased opportunity for public and stakeholder comments."[27] EPA cannot approve the proposed project by limiting the scope to the current scale, but must assess the myriad environmental, socioeconomic, and human health impacts from the full scope of the intended operations and further aquaculture development that may stem from the proposed pilot project. An EIS is clearly required here.

We also urge EPA to fully consider the range of available alternatives that can increase domestic seafood production while avoiding and/or reducing environmental, public health, and socio-economic impacts. Most notably, recirculating aquaculture systems (RAS) are being utilized around the world and have been growing in popularity and success right here in the United States. RAS are self-contained, closed-loop, land-based systems that raise finfish in an atmosphere similar to an aquarium, and as such, avoid a number of harms associated with offshore aquaculture.

RAS can also be combined with growing plants, known as aquaponics (joining the terms aquaculture and hydroponics). Such systems raise plants in nutrient-rich water rather than soil. They mimic natural ecosystems: the fish excrete nutrients in the water and the plants (vegetables, fruits, herbs, flowers, etc.) absorb those nutrients to grow, thereby cleaning the water for the fish to reuse. Because recirculating systems do not need to be in or near natural waters, they can run on rainwater or city water (dependent on the size of the system) and reuse the waste and water in the system. There is very little chance of fish escapes or pollution into the surrounding environment. Further, as these farms are self-contained, a wide variety of fish may be raised – in particular those that do not compete with what local fishermen catch. Because these aquaponics farms are land-based, they also avoid space conflicts in the ocean. Today, these farms can largely run on alternate energy, such as solar, wind or geothermal power (or a combination of various options). Thanks to the many benefits associated with recirculating farms, they are a better, more sustainable, less problematic way to raise fish in the U.S. making offshore aquaculture obsolete and completely unnecessary. When combined with sustainable wild-capture fishing, we can meet seafood demands in the U.S. without destructive industrial ocean fish farming.

B. The Draft Environmental Assessment Fails to Take a Hard Look at the Direct, Indirect, and Cumulative Impacts of the Proposed Permit or Analyze a Reasonable Range of Alternatives.

The Draft Environmental Assessment (DEA) is insufficient to support the agency's finding of no significant impact (FONSI). A FONSI following an EA is only appropriate when an agency's "hard look" at the potential consequences of its proposed action fails to reveal even the

[26] *See, e.g.*, DEA at 1.
[27] DEA at 2.

possibility of significant effects.[28] A FONSI must be supported by a "convincing case for its finding."[29]

First, EPA fails to take a hard look at foreseeable impacts of extreme weather on this project. Even a single adverse weather event could have a devastating effect on marine ecosystems surrounding the operation by damaging the pens and infrastructure – even if submersible – and allowing the release of farmed fish into surrounding waters. EPA has information demonstrating that strong storms caused by climate change will eventually affect offshore facilities, eliminating the effectiveness of some of the habitat mitigation efforts listed in the NPDES permit, but failed to consider or analyze that information in the DEA.

Similarly, the DEA acknowledges that the proposed site location is home to numerous sensitive marine species. A number of these species receive federal protection under the Endangered Species Act (examples include the Oceanic whitetip shark, Giant manta ray, and a variety of seabirds and sea turtles) and the Marine Mammal Protection Act (examples include the Atlantic spotted dolphin, the Common bottlenose dolphin). The DEA admits that the Giant manta ray "may encounter the facility given its migratory patterns,"[30] and also recognizes that sea turtles may be impacted by the proposed operations,[31] but stops short of taking a hard look at these likely impacts.

Second, EPA fails to sufficiently analyze cumulative impacts of the proposed facility for its full possible duration of five years, using the permit's initial 18-month approval period to bypass full analysis of several significant cumulative impacts. NEPA defines cumulative impacts as "the impact of the environment which results from the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions."[32] EPA itself admits that an adequate cumulative impacts analysis must, at a minimum, cover the entire life of the proposed permit (5 years).[33] Yet, EPA fails to sufficiently analyze cumulative impacts such as interference with migration, entanglements, and ocean noise disturbance over the full potential five-year duration of this permit.

An analysis of the full duration is essential for migration because cumulative impacts of the facility on migration over a five-year period greatly differ from impacts over an 18-month period. Here, the DEA acknowledges that giant manta rays will likely encounter the facility during their migrations but fails to analyze this impact because EPA claims that the project will not affect them over a period of 16-18 months. This dismissal does not address whether the project will unduly affect their migration over the full potential five-year period. Additionally, the DEA states that sea turtles are "highly migratory" throughout the Gulf, but does not address whether the project will interfere with their migration over the potential five-year span of this permit.

---

[28] 40 C.F.R. § 1501.4(e); see, e.gA FONSI must be supported by a "convincing case for its finding." *Id*.
[29] *Sierra Club v. U.S. Dep't of Transp*., 753 F.2d 120, 127 (D.C. Cir. 1985).

[30] DEA at 36.
[31] DEA at 40-41.
[32] 40 C.F.R. § 1508.7.
[33] DEA at 48.

Additionally, the DEA fails to provide a significant analysis of the risks of entanglement and ocean noise disturbance, dismissing these impacts due to the short 18-month period, despite the possibility of a five-year period. Marine mammals, seabirds, and other ESA-listed species such as sea turtles, whales, and the Giant manta ray will be attracted to the operation as a food source and could become entangled in the flexible mooring and net pen connection lines. The DEA also acknowledges that underwater noise disturbance could affect these species. However, the DEA dismisses these impacts as unsubstantial over an 18-month period while failing to analyze these impacts over the possible five-year deployment.

Finally, as stated above, the DEA's cumulative impacts analysis of impacts from future aquaculture operations is arbitrary and capricious because EPA limits its analysis to the current "pilot-scale" proposal as well as one other known project.[34] At a minimum, to satisfy NEPA's hard look requirement, EPA's cumulative analysis must examine the reasonably foreseeable expansion of the current proposal beyond its pilot stage.

IV. EPA's Analysis of the Discharge from the Proposed Industrial Fish Farm is Inadequate, in Violation of NEPA and the CWA.

Despite the foreseeable discharges and pollution discussed above, EPA fails to analyze the discharge of significant pollutants from the facility under the Ocean Discharge Criteria required for NPDES aquaculture permits, in violation of NEPA and the CWA.

The CWA broadly defines "pollutant" to include a range of substances, such as "solid waste . . . sewage, garbage, . . . chemical wastes, biological materials, . . . wrecked or discarded equipment, . . . and industrial . . . and agricultural waste."[35] Courts have interpreted "pollutant" to also include "substances not specifically enumerated but subsumed under the broad generic terms" listed in § 1362(6) of the CWA.[36] Yet, the only discharges that EPA evaluated under the "ocean discharge criteria" are fish food pellets and fish wastes. Elsewhere in the proposed permit and accompanying DEA, EPA acknowledged that the proposed facility will consist of copper mesh, and recognized the risks of fish escape, pollution from pharmaceutical and chemical inputs, and the development of pathogens and parasites. EPA's failure to sufficiently analyze copper, escaped fish, pharmaceuticals, and pathogens/parasites as potential pollutants violates the CWA's anti-degradation policy. The failure to analyze these foreseeable pollution risks is also arbitrary and capricious, in violation of NEPA.

Additionally, EPA should unequivocally require that the monitoring of all discharges will be used in determining whether to renew or expand the permit in the future, to the extent that such requests are sought. The omission of such criteria could result in litigation, as an agency's failure to comprehensively regulate creates liability under common law torts and nuisance.

V. The Endangered Species Act requires EPA to conduct formal consultations and prepare a Biological Opinion prior to issuing the permit.

[34] DEA at 49.
[35] 33 U.S.C. § 1362(6).
[36] *See, e.g., Hudson River Fishermen's Ass'n v. City of N.Y.*, 751 F. Supp. 1088, 1101 (D. N.Y. 1990), aff'd, 940 F.2d 649 (2nd Cir. 1991)(citing *United States v. Hamel*, 551 F.2d 107 (6th Cir. 1977)).

The Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544, "represent[s] the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."[37] Section 9 of the ESA prohibits any "person" from "taking" any member of an endangered or threatened species.[38]

Pursuant to Section 7 of the ESA, before undertaking any federal action that may have direct or indirect effects on any listed species, the action agency must engage in consultation with NMFS and/or FWS (collectively, the "consulting agencies") in order to evaluate the impact of the proposed action.[39] In jointly issued regulations, the consulting agencies defined the term "action" for the purposes of Section 7 broadly to mean "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies . . . in which there is discretionary federal involvement or control."[40] An agency may only avoid this consultation requirement for a proposed action if it determines that its action will have "no effect" on threatened or endangered species or critical habitat.[41]

The purpose of consultation is to ensure that the action at issue "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [designated] habitat of such species."[42] As defined by the ESA's implementing regulations, an action will cause jeopardy to a listed species if it "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."[43] The evaluation of the effects of the proposed action on listed species during consultation must use "the best scientific . . . data available."[44] Moreover, after the initiation of consultation, the action agency is prohibited from making "any irreversible or irretrievable commitment[s] of resources with respect to the agency action which has the effect

---

[37] *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). The National Marine Fisheries Service (NMFS) and the Fish and Wildlife Service (FWS) share responsibilities for implementing the ESA. 16 U.S.C. § 1532(15). Pursuant to a 1974 Memorandum of Understanding, NMFS has primary jurisdiction over marine and anadromous species, including marine mammals (except walruses) and marine turtles, while FWS has primary jurisdiction over land-dwelling and freshwater species, including birds. *See* Memorandum of Understanding Between the U.S. FWS of the Department of the Interior and the NMFS NOAA DOC Regarding Jurisdictional Responsibilities and Listing Procedures Under the ESA of 1973 at 3, 5 (1974).

[38] 16 U.S.C. § 1538(a). The term "take" is defined broadly to include "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect." *Id.* § 1532(19). By regulation, NMFS has defined "harm" to mean "an act which actually kills or injures fish or wildlife," and "include[s] significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering." 50 C.F.R. § 222.102. Likewise, FWS has defined "harass" to include "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, including breeding, feeding, or sheltering." 50 C.F.R. § 17.3. In addition, "harm" is defined to "include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." *Id.*

[39] 16 U.S.C. § 1536(a).

[40] 50 C.F.R. §§ 402.02, 402.03.

[41] *Id.* § 402.14(a).

[42] 16 U.S.C. § 1536(a)(2).

[43] 50 C.F.R. § 402.02.

[44] 16 U.S.C. § 1536(a)(2).

of foreclosing the formulation or implementation of any reasonable and prudent alternative measures."[45]

Consultation under Section 7 may be "formal" or "informal" in nature. Informal consultation is "an optional process" consisting of all correspondence between the action agency and the consulting agency, which is designed to assist the action agency, rather than the consulting agency, in determining whether formal consultation is required.[46] During an informal consultation, the action agency requests information from the consulting agency as to whether any listed species may be present in the action area. If listed species may be present, the action agency is required by Section 7(c) of the ESA to prepare and submit to the consulting agency a "biological assessment" that evaluates the potential effects of the action on listed species and critical habitat. As part of the biological assessment, the action agency must make a finding as to whether the proposed action may affect listed species and submit the biological assessment to the consulting agency for review and potential concurrence with its finding.[47] If the action agency finds that the proposed action "may affect, but is not likely to adversely affect" any listed species or critical habitat and the consulting agency concurs with this finding, then the consultation process is terminated.[48]

If, on the other hand, the action agency finds that the proposed action "may affect" listed species or critical habitat – and did not find through informal consultation that the action was not likely to adversely affect any listed species or critical habitat – then the action agency must undertake formal consultation.[49] The result of formal consultation is the preparation of a biological opinion ("BiOp") by the consulting agency, which provides the consulting agency's analysis of the best available scientific data on the status of the species and how it would be affected by the proposed action.[50] Additionally, a BiOp must include a description of the proposed action, a review of the status of the species and critical habitat, a discussion of the environmental baseline, and an analysis of the direct and indirect effects of the proposed action and the cumulative effects of reasonably certain future state, tribal, local, and private actions.[51]

Without an adequate BiOp and incidental take statement[52] in place, any activities likely to result in incidental takes of members of listed species are unlawful.[53] Accordingly, anyone who

---

[45] *Id.* § 1536(d).
[46] *See* 50 C.F.R. § 402.02.
[47] 16 U.S.C. § 1536(c).
[48] 50 C.F.R. §§ 402.13(a), 402.14(b).
[49] 50 C.F.R. § 402.14; *see also* FWS & NMFS, Endangered Species Consultation Handbook ("Consultation Handbook") at 3-13 (1998).
[50] When preparing a biological opinion, the consulting agency must (1) "review all relevant information," (2) "evaluate the current status of the listed species," and (3) "evaluate the effects of the action and cumulative effects on the listed species," 50 C.F.R. § 402.14, using "the best scientific and commercial data available," 16 U.S.C. § 1536(a)(2); *see also Greenpeace v. Nat'l Marine Fisheries Serv.*, 80 F. Supp. 2d 1137, 1149-50 (W. D. Wash. 2000) (remanding biological opinion where agency failed to "meaningfully analyze" the risks to the species and the key issues).
[51] *See* Consultation Handbook at 4-14 to 4-31.
[52] A BiOp concluding that the agency action is not likely to jeopardize the continued existence of a listed species, but will result in a take incidental to the agency action, must include an incidental take statement. 16 U.S.C. § 1536(b)(4). The incidental take statement must specify the amount or extent of incidental taking on such listed species, "reasonable and prudent measures" that the Fisheries Service (in this case) considers necessary or

undertakes such activities, or who authorizes such activities, may be subject to criminal and civil federal enforcement actions, as well as civil actions by citizens for declaratory and injunctive relief.[54]

In this instance, EPA has unlawfully failed to meet its ESA mandate. EPA has reached the flawed conclusion that Velella Epsilon's potential threats are "highly unlikely to occur or extremely minor in severity" and that the proposed project is not likely to adversely affect listed species or designated critical habitat.

The Biological Evaluation (BE) acknowledges more than 20 federally protected species, listed as either threatened or endangered, located in or near the proposed action area, including two seabird species, four fish species, seven invertebrates, six whales, and five reptiles.[55]

Despite Velella Epsilon's adverse effects to these listed species and designated critical habitat (in particular the Northwest Atlantic distinct population segment of loggerhead sea turtles), EPA did not conduct a formal Section 7 consultation on the project. Nor did the agency's BE evaluate the indirect or cumulative impacts to listed species that will occur should this pilot project fulfill its intended purpose and incentivize the expansion of commercial aquaculture in the Gulf of Mexico.[56]

As detailed above, the expansion of finfish aquaculture systems into the open ocean generally, and the Gulf of Mexico in particular, presents serious environmental concerns. Farmed fish will escape. Industrial wastewater will be discharged into the ocean, including pharmaceuticals, heavy metals, and excess nutrients from feed and fish waste. Marine mammals and other wildlife will be attracted to the nets and put at risk of fatal entanglement. Operations will become a reservoir of parasites and disease. It is readily apparent that the construction and operation of a pilot project that is expressly intended to facilitate the development of commercial aquaculture could have serious adverse effects on listed species and designated critical habitat.

In short, EPA has failed to undertake the legally mandated process for formally and fully analyzing and addressing impacts to listed species and designated critical habitat, although it is apparent that marine finfish aquaculture can harm these species in numerous ways.

A. EPA Cannot Approve the Proposed Permit Without Completing Consultation with NOAA Fisheries.

---

appropriate to minimize such impact, and set forth "terms and conditions" that must be complied with by the action agency to implement the reasonable and prudent measures. *Id*.; 50 C.F.R. § 402.14(i).

[53] *Id.* § 1538(a)(1)(B).
[54] *Id.* §§ 1538(g)1540.
[55] Draft BE at 8 (Table 2).
[56] *See* 50 C.F.R. § 402.02 (defining "indirect effect" as one that is (1) "caused by the proposed action," (2) occurs later in time than the action, and (3) is reasonably certain to occur"); *id.* § 402.14(g) (requiring a BiOp to evaluate the "effects of the action," which include the action's "indirect effects"); *see also San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 1009 (9th Cir. 2014).

Under Section 7(d) of the ESA, the EPA may not issue the NPDES permit until the EPA and NMFS consult and NMFS concurs with EPA's findings in the BE. Section 7(d) of the ESA provides that once a federal agency initiates consultation on an action under the ESA, the agency, as well as any applicant for a federal permit, "shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section."[57]

Since the purpose of Section 7(d) is to maintain the environmental status quo pending the completion of consultation, Section 7(d) prohibitions remain in effect while NMFS determines whether it will concur with EPA's findings. These prohibitions must also remain in effect throughout the consultation period and until the federal agency has satisfied its duty under Section 7(a)(2) to ensure that the action will not result in jeopardy to listed species or adverse modification of critical habitat. Hence, EPA may not approve the proposed permit until it has complied with the statutory mandates of the ESA.

B. EPA's Draft Biological Evaluation Is Inadequate.

EPA also failed to consider several impacts on endangered species, thus rendering the BE arbitrary and capricious. A BE is arbitrary and capricious when an agency "entirely failed to consider an important aspect of the problem or to consider the relevant factors and articulate a rational connection between the facts found and the choice made."[58] Here, the BE is arbitrary and capricious because EPA failed to consider the effects of releasing feed into the water as a food source on endangered species, as well as potential disturbances caused by light pollution. Additionally, while EPA acknowledges genetic impacts to wild fish from cultured fish and the potential spread of disease from cultured to wild fish, EPA fails to even mention the impact of escaped cultured fish on endangered species in the BE. EPA's omission of these essential impacts on endangered species renders the BE arbitrary and capricious.

As set forth above, EPA has not provided sufficient data to support its conclusions, and made no attempt to quantify or analyze the potential harm from several significant impacts to the Listed Species. As stated, the threshold for triggering formal consultation is very low, and a Biological Opinion that meaningfully accounts for and addresses the action's adverse impacts on each listed species is mandated unless it can be clearly established that a proposed action is not likely to adversely affect a particular species. EPA has not met this burden.

In conclusion, EPA must remedy the above violations of law prior to reaching a decision on the permit. We strongly oppose issuance of the permit for industrial wastewater discharge from a marine finfish aquaculture facility in the Gulf of Mexico, and we request that EPA hold a public hearing, with the opportunity for live public testimony, prior to reaching a decision on the permit.

[57] 16 U.S.C. § 1536(d).
[58] *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 901 (9th Cir. 2002).

Sincerely,

Hallie Templeton
Senior Oceans Campaigner
Friends of the Earth

Julie Teel Simmonds
Senior Attorney
Center for Biological Diversity

Wenonah Hauter
Executive Director
Food & Water Watch

Cynthia Sarthou
Executive Director
Healthy Gulf

Noah Oppenheim
Executive Director
Institute for Fisheries Resources &
Pacific Coast Federation of Fishermen's Associations

Niaz Dorry
Executive Director
National Family Farm Coalition

Sylvia Wu
Senior Attorney
Center for Food Safety

Rosanna Marie Neil
Policy Council
Northwest Atlantic Marine Alliance

William Rossiter
Vice President
NY4WHALES

Michael Stocker
Director
Ocean Conservation Research

Patricia Sullivan
President and Co-Founder
Sanctuary Education Advisory Specialists LLC

Paul McCullough
Co-Chair, Food and Agriculture Team
Sierra Club Grassroots Network

Rosanna Marie Neil
Policy Council
Northwest Atlantic Marine Alliance