~~EXPLOITERS~~
FRIENDS
of ANIMALS

November 25, 2024

Via Regulations.Gov (EPA–R04-OW-2024-0113)

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Re: Notice of proposed issuance of a modified National Pollutant Discharge Elimination System (NPDES) permit (FL0A00001)

Dear Mr. Tyler,

Friends of Animals[1] has been involved in the Velella Epsilon ("VE") facility NPDES permitting process since 2020. As is discussed in the EPA Memorandum "EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)," Friends of Animals and others appealed the initial permit decision to the Environmental Appeals Board (EAB). After EPA issued the final permit on June 9, 2022, Friends of Animals and others sought review of that decision in a consolidated case in the U.S. Circuit Court of Appeals for the Second Circuit. On April 4th, 2023, this case was transferred to the United States Court of Appeals for the District of Columbia Circuit.

Before that case could move forward, NPDES applicant Ocean Era, Inc. applied to modify the permit. The comments below relate to the draft modified NPDES permit released on October 24, 2024.

[1] FoA is an international animal rights organization incorporated in the state of New York since 1957 with roughly 200,000 members worldwide. FoA and its members seek to free animals from cruelty and exploitation around the world and to promote a respectful view of non-human animals, both free-living and domestic. FoA's activities include educating its members on current threats to many species' abilities to live in ecosystems free from human manipulation, exploitation, and abuse; and monitoring federal agency actions to ensure that laws enacted to protect the environment and wildlife are properly implemented.

REQUEST FOR PUBLIC HEARING

Pursuant to 40 C.F.R. § 124.11, Friends of Animals formally requests that EPA hold a public hearing to discuss this permit. The nature of the issues to be raised in this public hearing relate to the comments below. A public hearing would very likely "clarify one or more issues involved in the permit decision."[2] For example, a public hearing could clarify whether EPA has considered recent events and trends, such as hurricanes intensifying in the Gulf of Mexico. Many studies and research papers, including several referenced in this comment, have been published since EPA last conducted substantial analysis of the permit. A public hearing could also shed light on EPA's response to, and/or consideration of, those recent scientific developments.

Moreover, there is significant public interest in this permit, as evidenced by the attendance and participation at the first public hearing in January 2020, which produced a voluminous transcript totaling 179 pages. Additionally, two lawsuits (now consolidated) involving eight separate organizations have been filed and are currently in abeyance pending the outcome of the current permitting process. Collectively, the previous participation and legal actions demonstrate significant public interest that necessitates a public hearing.

But beyond the clear public interest in the previous permit, this NPDES permit still relates to the first aquaculture facility of its kind in the Federal waters of the Gulf of Mexico. The modifications themselves raise serious concerns that would greatly affect the public interest, as discussed in more detail below.

Friends of Animals also requests that this public hearing include a virtual attendance option in order to solicit participation from all interested members of the public, regardless of whether they can travel to Southwest Florida.

LEGAL BACKGROUND

A. Clean Water Act

In 1971, Congress passed what is now known as the Clean Water Act, which gives protection to "relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as 'streams,' 'oceans, rivers, and lakes.'"[3] Section 1342 of the CWA requires EPA to issue a National Pollutant Discharge Elimination System (NPDES) permit before anyone may lawfully discharge a pollutant into the navigable waters of the United States.

The Administrator of the EPA "shall prescribe conditions for such permits to assure compliance" with the CWA, including information collection and reporting.[4] In addition, the

[2] 40 C.F.R. § 124.12.
[3] *Rapanos v. United States*, 547 U.S. 715, 739 (2006).
[4] 33 U.S.C. § 1342(a)(2).

Administrator must comply with the CWA's provision that prohibits unreasonable degradation of the marine environment.[5]

The implementing regulations define "unreasonable degradation" as either (1) significant adverse changes, (2) threats to human health, or (3) loss of aesthetic, recreation, scientific, or economic values which is unreasonable in relation to the benefits of the discharge.[6] In order to assess whether a discharge will cause unreasonable degradation, regulations require that EPA base its determination on ten specific factors:

> (1) The quantities, composition and potential for bioaccumulation or persistence of the pollutants to be discharged;
> (2) The potential transport of such pollutants by biological, physical or chemical processes;
> (3) The composition and vulnerability of the biological communities which may be exposed to such pollutants, including the presence of unique species or communities of species, the presence of species identified as endangered or threatened pursuant to the Endangered Species Act, or the presence of those species critical to the structure or function of the ecosystem, such as those important for the food chain;
> (4) The importance of the receiving water area to the surrounding biological community, including the presence of spawning sites, nursery/forage areas, migratory pathways, or areas necessary for other functions or critical stages in the life cycle of an organism;
> (5) The existence of special aquatic sites including, but not limited to marine sanctuaries and refuges, parks, national and historic monuments, national seashores, wilderness areas and coral reefs;
> (6) The potential impacts on human health through direct and indirect pathways;
> (7) Existing or potential recreational and commercial fishing, including finfishing and shellfishing;
> (8) Any applicable requirements of an approved Coastal Zone Management plan;
> (9) Such other factors relating to the effects of the discharge as may be appropriate; and
> (10) Marine water quality criteria developed pursuant to section 304(a)(1).[7]

[5] 40 C.F.R. § 125.123.
[6] *See* 40 C.F.R. § 125.121(e).
[7] 40 C.F.R. § 125.122.

B. Endangered Species Act

The Endangered Species Act (ESA) was passed in 1973 to prevent extinction of various organisms and to protect the ecosystems which sustain them.[8] The plain intent of Congress was "to halt and reverse the trend towards species extinction, whatever the cost."[9]

All agencies "shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered species and threatened species."[10]

Section 7(a)(2) of the ESA requires federal agencies, in consultation with the Fish & Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS), to ensure that "any action authorized, funded, or carried out" by the agency "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of the species' critical habitat.[11]

According to current regulations, to "[j]eopardize the continued existence of means to engage in an action that 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."[12]

A federal agency proposing an action must first determine whether the action "may affect" a listed species or critical habitat.[13] If the action agency determines its proposed action "may affect" a listed species or critical habitat, it must then consult with the consulting agency, FWS or NMFS. Generally, formal consultation is required if an action may affect a listed species.[14] However, an exception exists where the action agency properly determines, with the written concurrence of the consulting agency, that a proposed action is "not likely to adversely affect" a listed species.[15]

The action agency can reach its no adverse effects determination through preparation of a biological assessment or informal consultation.[16] Informal consultation "includes all discussions, correspondence, etc., between the Service and the [action] agency."[17] If the action agency determines that a proposed action is "likely to adversely affect" a listed species, then formal consultation must take place.[18]

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[8] *See* 16 U.S.C. § 1531.
[9] *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978).
[10] 16 U.S.C. § 1536(a)(1).
[11] 16 U.S.C. § 1536(a)(2).
[12] 50 C.F.R. §402.02.
[13] 50 C.F.R. § 402.14(a).
[14] 50 C.F.R. § 402.14(a).
[15] 50 C.F.R. § 402.14(b)(1).
[16] *See* 50 C.F.R. § 402.14(b)(1).
[17] 50 C.F.R. § 402.02.
[18] 50 C.F.R. § 402.14.

C. National Environmental Policy Act

NEPA is our nation's basic charter for environmental protection. Congress enacted NEPA for two central purposes. First, Congress sought to ensure that all federal agencies examine the environmental impacts of their actions before acting. Second, Congress sought to provide the public with a statutory means to be informed about, and to comment on, the environmental impacts of proposed agency actions.[19] NEPA's purpose is "not to generate paperwork;" it is to "foster excellent action."[20]

NEPA requires federal agencies to analyze the environmental impact of a particular federal action before proceeding with the action.[21] Before making an EIS or an EA, agencies shall consult with "any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved."[22]

Accordingly, before a federal agency can act in a way that significantly affects the quality of the human environment, NEPA requires the acting agency to prepare a detailed environmental impact statement (EIS) that discusses, among other things: "(i) reasonably foreseeable environmental effects of the proposed agency action; (ii) any reasonably foreseeable adverse environmental effects which cannot be avoided should the proposal be implemented; [and] (iii) a reasonable range of alternatives to the proposed agency action."[23]

The EIS is the cornerstone of NEPA. An EIS is required for all "major Federal action significantly affecting the quality of the human environment."[24] "Significant effects" means "adverse effects that an agency has identified as significant based on the criteria in § 1501.3(d)."[25] These criteria require agencies to consider both context, intensity, and duration of an effect.[26]

A significant effect may exist even if the federal agency believes that, on balance, the effect will be beneficial. Agencies may **not** offset an action's adverse effects with beneficial effects to determine significance.[27] Instead, agencies must "analyze the significance of an action in several contexts."[28] Further, the intensity of effects must include analysis of the following factors:

> "(i) The degree to which the action may adversely affect public health and safety; (ii) the degree to which the action may adversely affect

[19] *See* 40 C.F.R. § 1500.1
[20] *Id.*
[21] *See* 42 U.S.C. § 4332.
[22] *Id.* § 4332(C).
[23] *Id.*
[24] 42 U.S.C. § 4332(2)(c).
[25] 40 C.F.R. § 1508.1(mm).
[26] 40 C.F.R. § 1501.3(d)
[27] *Id.*
[28] 40 C.F.R. § 1501.3(d)(1).

> unique characteristics of the geographic area such as historic or cultural resources, parks, Tribal sacred sites, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas; . . . (iv) The degree to which the potential effects on the human environment are highly uncertain; . . . (vi) The degree to which the action may adversely affect an endangered or threatened species or its habitat; . . . and (vii) the degree to which the action may adversely affect communities with environmental justice concerns."[29]

The requirement to prepare an EIS is broad and intended to compel agencies to take seriously the potential environmental consequences of a proposed action. Agencies may prepare an Environmental Assessment (EA) to determine whether a proposed action requires preparation of an EIS or warrants a finding of no significant impact.

An EA must take a "hard look" at the potential consequences of agency actions and provide enough evidence and analysis for determining whether to prepare an EIS. Agencies must involve the public in preparing this analysis, in order to "allow for meaningful engagement during the NEPA process and ensure decision makers are informed by the views of the public."[30]

After preparing an EA or EIS, an agency may not simply rest on the original document. The agency must gather and evaluate new information that may alter the results of its original environmental analysis and continue to take a hard look at the environmental effects of its future planned actions.[31]

ARGUMENT

A. The modifications raise new issues that EPA must analyze in greater detail.

1. Red drum, the species now planned for use, presents additional conservation and parasite issues that EPA did not fully address.

a. EPA failed to address the conservation concerns and applicable regulations imposed by both federal and state entities.

In EPA's analysis supporting the draft modified permit, EPA failed to consider the impacts of breeding red drum who have been "caught in the Gulf of Mexico in the Sarasota region."[32] All of the fish raised in the VE facility will be offspring from wild-caught fish. EPA should have analyzed the effects of catching wild fish as part of issuing this NPDES permit. These effects could include additional vessel traffic, increased, and accidental bycatch (including ESA-listed species who reside in the area). However, it is currently unknown how

[29] 40 C.F.R. § 1501.3(d)(2).
[30] 40 C.F.R. § 1501.9(a).
[31] *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 374 (1989); *NRDC v. United States Army Corps of Eng'rs*, 399 F. Supp. 2d 386, 388 (N.Y.S.D. 2005).
[32] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era* (FL0A00001) at 4.

dangerous and impactful these effects will be, because EPA did not include any such analysis in its support documentation. This is a violation of NEPA's requirement to analyze "reasonably foreseeable environmental effects."[33]

Of course, even if this species had no protection and were plentiful in the Gulf of Mexico, NEPA would still require EPA to conduct this analysis. But that is not the case. There are federal and state protections that limit the catch of red drum in the area where Ocean Era seeks to collect them. The protections described below make it even more important that EPA consider the potential effects of taking red drum.

Due to severe overfishing of red drum, the United States prohibited any directed commercial harvest of the species in 1986.[34] In 2007, President Bush issued a presidential order directing the Secretary of Commerce to create regulations that "include prohibiting the sale of striped bass and red drum caught within the Exclusive Economic Zone [EEZ] of the United States off the Atlantic Ocean and the Gulf of Mexico."[35]

Currently, federal regulations prohibit harvesting or even possession of red drum from the Gulf of Mexico EEZ.[36] In fact, the regulations state that any red drum "caught in the Gulf EEZ must be released immediately with a minimum of harm."[37] While the regulations contemplate issuing permits for "a dealer to . . . receive Gulf red drum harvested in or from the EEZ,"[38] there is not one mention of this permit, whether it has been issued, or any environmental analysis of the effects of issuing such a permit in this situation. The 2023 management for red drum makes this crystal clear when it states that "All EEZ waters in the U.S. Gulf of Mexico are closed for Red Drum and harvest is prohibited to commercial fishermen and recreational anglers."[39]

Yet, EPA states that the "red drum brood stock will be sourced from wild fish caught in the Gulf of Mexico in the Sarasota region."[40] Red drum raised for slaughter in the VE facility will be sourced from offspring of red drum commercially caught in the Gulf EEZ, in apparent violation of federal regulations. While regulations contemplate a license to receive red drum, no such license was mentioned or discussed in EPA's analysis.

State-level regulations further prohibit what Ocean Era plans to do, and EPA also failed to consider this. Presumably, Ocean Era or its surrogates will be extracting red drum from the

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[33] 42 U.S.C. § 4332(2)(c)(i).
[34] Gulf of Mexico Fishery Management Council, *Red Drum*, https://gulfcouncil.org/species/drum-red/.
[35] Exec. Order No. 13415, Protection of Striped Bass and Red Drum Fish Populations (Oct. 20, 2007), https://www.federalregister.gov/documents/2007/10/24/07-5299/protection-of-striped-bass-and-red-drum-fish-populations.
[36] 50 C.F.R. § 622.92(b).
[37] *Id.*
[38] *Id*. § 622.92(a)(1)
[39] Gulf States Marine Fisheries Commission, *Management Profile for Gulf of Mexico Red Drum* at 5-5; https://www.gsmfc.org/publications/GSMFC%20Number%20317.1.pdf.
[40] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 3.

Gulf of Mexico at a greater level than "1 fish per person per day; 2 fish vessel limit," which the Florida Fish and Wildlife Conservation Commission has set as the limit for the Sarasota region.[41]

EPA has thus not taken a "hard look" at how authorizing this NPDES permit modification (1) violates federal regulations that prohibit the commercial taking of red drum directly from the Gulf EEZ, or (2) how Ocean Era will abide by Florida's catch limits.

Again, even assuming that the capture of red drum from the Gulf EEZ complies with both federal and state law, EPA did not analyze the environmental effects of extracting this protected species from the wild. This failure directly contrasts with NEPA's requirements to analyze **all** reasonably foreseeable effects. EPA should not issue this permit before analyzing all of the environmental effects of the proposed project.

b. EPA failed to sufficiently analyze the likelihood of parasites and diseases in red drum, the resulting need for therapeutants, and the corresponding threats therein.

More than 30 families of marine fish are susceptible to parasites such as iridovirus, which causes lymphocystis disease, and red drum "are no exception."[42] The scientific literature available regarding red drum susceptibility to diseases demonstrates that several parasites (*Amyloodinium, Trichodina*, and *Ambiphrya*), bacterial infections (*Vibrio, Aeromonas, Cytophaga columnaris*, and *Eubaterium tarantellus*), and fungus (*Saprolegnia*) can occur in red drum cultivation.[43]

Somehow, even though red drum represents an entirely new species from the previously planned amberjack species, "Ocean Era is not proposing any changes to the drugs or therapeutants used during fish production."[44] It is illogical for Ocean Era to rely on the same therapeutic regime for an entirely new species. In its analysis, EPA failed to meaningfully analyze the expected use of pharmaceuticals, antibiotics, or other therapeutants at the VE facility. Basing the likelihood of pathogens **entirely** on the words of Ocean Era, EPA merely re-states Ocean Era's assertion that "red drum are naturally more tolerant to skin flukes."[45] EPA does not analyze the likelihood of any other disease common among red drum and the corresponding likelihood that Ocean Era will need to use pharmaceuticals.

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[41] Florida Fish & Wildlife Conservation Commission, *Red Drum (Redfish)*, https://myfwc.com/fishing/saltwater/recreational/red-drum/.
[42] Colorni et al., *Splenic and cardiac lymphocystis in the red drum*, Sciaenops ocellatus, 18 J. Fish Diseases 467 (Sept. 1995), https://onlinelibrary.wiley.com/doi/10.1111/j.1365-2761.1995.tb00339.x.
[43] J.A. Plumb, Major diseases of striped bass and redfish, 33 Vet. Hum. Toxicol. 1:34 (1991), https://pubmed.ncbi.nlm.nih.gov/1926745/.
[44] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 4.
[45] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 12.

This lack of analysis conflicts with the Gulf of Mexico Fishery Management Council's management profile for red drum. As stated there, "Red Drum carry numerous infections and parasites both internally and externally from a wide variety of vectors that lead to a broad spectrum of diseases. Infections may affect the brain, skin, fins, digestive tract, and other internal organs."[46] In fact, the management profile lists 16 bacterial infections, 3 viral infections, 11 parasites, and 18 worms, and 14 copepods that can affect red drum.[47] Yet, among this broad spectrum, only skin flukes were mentioned in EPA's analysis.

Currently, "Ocean Era does not intend to use therapeutants for the modified action, but use of therapeutants is authorized."[48] Simply put, there is no reason to believe that the VE facility will be entirely free from therapeutants. The lack of analysis, or even mentioning, of a single pathogen other than skin flukes, shows how little EPA looked at this possibility.

This is no small failure, either, as pharmaceuticals and related maladies implicate all three federal statutes at issue here. Under NEPA, this is a clear failure to take a "hard look" at the effects, as EPA does not even consider what impacts are likely to occur from the use of therapeutants.

Under the CWA, an NPDES permit should not be issued without ensuring that no unreasonable degradation will occur. In assessing whether a discharge will cause unreasonable degradation of the marine environment, the director must make the determination based on consideration of ten specific factors.[49] This is a lose-lose situation for the Gulf of Mexico. If the VE facility discharges therapeutants and antibiotics into the ocean, that will likely cause unreasonable degradation. Conversely, if chemicals are not used to control parasites and other diseases, the introduction of parasites will implicate multiple of these factors of unreasonable degradation.

For example, factor number two lists the "potential transport of such pollutants by biological, physical, or chemical processes."[50] Transport of parasites or antibiotics could easily be spread from the facility to native red drum or other species through the net pen system. Factor number three requires the director to consider the "vulnerability of the biological communities" of the receiving waters, including "species identified as endangered or threatened pursuant to the Endangered Species Act."[51] The Gulf of Mexico and its biological communities are already vulnerable: a 2023 study from NOAA found that "all species in the Gulf of Mexico" will experience high or very high exposure to climate-driven change."[52] The study further found that 48% of the species were moderately

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[46] Gulf of Mexico Fishery Management Council, *Management Profile for Gulf of Mexico Red Drum* at 3-33, https://www.gsmfc.org/publications/GSMFC%20Number%20317.1.pdf (2023).
[47] *Id*. at 3-33 through 3-38.
[48] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 4.
[49] 40 C.F.R. § 125.122(a).
[50] 40 C.F.R. § 125.122(a)(2).
[51] 40 C.F.R. § 125.122(a)(3).
[52] Quinlan et al., *Results from the Gulf of Mexico Climate Vulnerability Analysis for Fishes and Invertebrates*, NOAA Technical Memorandum NMFS-SEFSC-767 (2023).

vulnerable, highly vulnerable, or very highly vulnerable.[53] This factor too suggests that the VE facility will cause unreasonable degradation, as the species in the area are already vulnerable. Even a relatively small amount of disease proliferation or therapeutants added to the Gulf of Mexico could affect vulnerable species. Factor number six, potential impacts on human health, is also a concern with this project. If parasites or diseases spread to wild populations, humans could easily consume tainted fish or invertebrates who are affected by the pathogens. Likewise, antibiotic resistance due to the use of therapeutants is already a threat to human health, and we simply don't need another pathway for more drug-resistant pathogens to spread.[54]

Together, these three factors suggest that the discharges from the VE facility will qualify under all three factors of the regulatory definition of "unreasonable degradation," including significant adverse changes in the ecosystem; threats to human health; and loss of esthetic, recreational, scientific or economic values."[55]

EPA has not looked at how this new species, and the likely requirements of therapeutants involved, would affect the marine environment. Even if Ocean Era can control the spread of parasites and diseases via the use of therapeutants, the negative impacts of the therapeutants themselves have likewise not been analyzed by EPA.

Lastly, under the ESA, EPA must ensure that issuing the NPDES permit is "not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat."[56] Without analyzing further the possibility of parasites or infections, EPA cannot say that this action won't jeopardize one of the numerous endangered and threatened species in the area by dumping antibiotics and other therapeutants into the water. Additionally, the spread of disease remains likely. As a baseline, captive aquaculture systems negatively impact the health of the fish within the system, causing an overall decrease in health and immune responses.[57] Stress from the initial transfer and increased noise from vessels further impacts fish immune systems. This baseline, combined with a net pen system specifically designed to have water flow through it, means that the spread of disease is very likely. Wild red drum are particularly susceptible, as some parasites and diseases are species-specific. However, many of the dozens of potential pathogens that affect red drum also affect other fish species.[58] Lastly,

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[53] *Id.*
[54] World Health Organization, *Antimicrobial Resistance*, https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance (Nov. 21, 2023) ("The misuse and overuse of antimicrobials in humans, animals and plants are the main drivers in the development of drug-resistant pathogens.")
[55] 40 C.F.R. § 125.121(e).
[56] 40 C.F.R. § 122.49.
[57] Craig Radford and Matthew Slater, *Soundscapes in Aquaculture Systems*, 11 Aquaculture Env. Interactions 53-62 (2019).
[58] Gulf of Mexico Fishery Management Council, *Management Profile for Gulf of Mexico Red Drum* at 3-33 to 3-37, https://www.gsmfc.org/publications/GSMFC%20Number%20317.1.pdf (2023).

the possibility of a fish escape event significantly raises the chance that any disease in the net pen will spread beyond the control of EPA or Ocean Era.

The lack of significant analysis for parasites and other diseases represents a gross failure by EPA to abide by federal law. EPA should not issue the permit without conducting an analysis of parasites and infections in red drum.

2. The net pen construction raises additional entanglement and oceanic pollution concerns.

The modified NPDES permit seeks to authorize the use of a polyethylene terephthalate monofilament (KikkoNet) for the net pen instead of woven copper alloy wire, which was the material authorized in the original permit.[59]

As with the analysis of parasites, EPA simply defers, without conducting any analysis of its own, to Ocean Era's assertions: "Ocean Era reported that there is no functional difference between the two cage materials in terms of entanglement risk or other concerns."[60] But EPA cannot simply rely on the permit applicant in issuing a NPDES permit; EPA must conduct its own analysis.

According to the National Oceanic and Atmospheric Administration (NOAA), "entanglement of marine life is a global problem that results in the death of hundreds of thousands of marine mammals and sea turtles worldwide every year."[61] Around the world, waste monofilament from fishing entangles these animals, often slowly killing them by preventing them from swimming, foraging, or defending themselves against predators.

For example, when monofilament line entangles bottlenose dolphins—as one study demonstrated specifically in the Gulf of Mexico—this led to starvation, systemic infections, and debilitation from severe tissue damage, pain and distress, and in some cases, death.[62] In that study, the dolphin at issue was even disentangled by a multi-agency team yet died only a couple years later. The study concluded that damage to breathing and eating abilities contributed to the animal's "failure to thrive."[63]

Another study, this time focusing on sea turtles, mentions at least three ESA-protected species who became wounded by marine debris entanglement.[64] After noting that marine

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[59] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 4.
[60] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 4.
[61] NOAA, *Entanglement of Marine Life: Risks and Response*, https://www.fisheries.noaa.gov/insight/entanglement-marine-life-risks-and-response.
[62] Marks et al., *A case study of monofilament line entanglement in a common bottlenose dolphin* (Tursiops truncatus): *entanglement, disentanglement, and subsequent death*, 16 BMC Veterinary Research 223 (2020), https://bmcvetres.biomedcentral.com/articles/10.1186/s12917-020-02436-x.
[63] *Id.* at 6.
[64] Franzen-Klein et al., *Diagnosis and Management of Marine Debris Ingestion and Entanglement by Using Advanced Imaging and Endoscopy in Sea Turtles*, 30 J. Herpetological Medicine and Surgery 74 (2020), https://bioone.org/journals/journal-of-herpetological-medicine-and-surgery/volume-30/issue-2/17-09-

debris ingestion and entanglement "have caused morbidity and mortality in multiple marine species, including all seven species of sea turtles," the study showed what great lengths are necessary to attempt to save an entangled animal. Some combination of radiography, ultrasonography, and endoscopy were necessary to save the life of the sea turtles in question. Without such an intensive and invasive procedure, the turtles would have died.

When sea turtles become entangled, the material cuts into their bodies, making it difficult to swim and potentially leading to suffering and death.[65] This raises serious concerns for the five ESA-listed sea turtle species which are found in the vicinity of the VE facility: green turtle, hawksbill turtle, leatherback turtle, Kemp's ridley turtle, and loggerhead turtle. Sadly, entanglements involving sea turtles are so common that NOAA maintains a "Sea Turtle Disentanglement Network" specifically to address this problem. NOAA states that "entanglements may prevent the recovery of endangered and threatened sea turtle populations."

Even enormous marine mammals such as whales are at risk: "Entanglement is considered a primary cause of human-caused mortality in many whale species, especially right whales, humpback whales, and gray whales."[66]

The amount of monofilament line in U.S. waters has already spurred NOAA to provide grants for programs such as Boat U.S. Foundation's fishing line recycling program.[67] EPA must do proper environmental analysis on the effects of adding additional monofilament into the sensitive Gulf of Mexico on the environment, wildlife, and compliance with federal statutes.

Additionally, EPA has stated that instead of biodegrading,

> plastic waste often breaks down into tiny pieces known as microplastics (less than 5 mm in size), which are nearly impossible to clean up once they are in the environment. Microplastics can contain or absorb toxic chemicals potentially presenting toxicological risks for organisms that ingest them. When aquatic organisms eat these plastic particles, microplastics – and the chemicals they carry – can make their way up the food chain. In fact,

126/Diagnosis-and-Management-of-Marine-Debris-Ingestion-and-Entanglement-by/10.5818/17-09-126.short.

[65] NOAA, *Marine Debris Program, Wildlife Entanglement and Ghost Fishing*, https://marinedebris.noaa.gov/why-marine-debris-problem/wildlife-entanglement-and-ghost-fishing (Mar. 14, 2023).

[66] NOAA, *Entanglement of Marine Life: Risks and Response*, https://www.fisheries.noaa.gov/insight/entanglement-marine-life-risks-and-response. *See also* Marine Mammal Commission, *Rice's Whale*, https://www.mmc.gov/priority-topics/species-of-concern/rices-whale/ (stating that Rice's whales are affected by "entanglement in commercial fishing and aquaculture gear").

[67] Boat U.S. Foundation, *Fishing Line Recycling Matters*, https://www.boatus.org/clean-boating/recycling/fishing-line-recycling.

researchers have found microplastics in a variety of the fish and shellfish that people consume.[68]

EPA has submitted a draft NPDES permit with this net modification included, yet somehow failed to analyze the effects of this new netting material, including entanglements and microplastics. This represents yet another way in which the VE facility will constitute unreasonable degradation of the marine environment. As mentioned above, unreasonable degradation has three regulatory definitions.[69] Qualifying for any one of these definitions means unreasonable degradation exists. Risks from entanglements and microplastics meet at least two of these definitions. Entanglements threaten a wide variety of species, including fish, sea turtles, marine mammals, and birds, the killing of which would cause "significant adverse changes in ecosystem diversity, productivity, and stability."[70] Meanwhile, microplastics are already known to bioaccumulate in fish, with one meta-study showing that 60% of fish worldwide had microplastics in them.[71] This means that the VE facility, as an additional source of microplastics, represents a "threat to human health" through consumption of fish.[72]

This lack of analysis of entanglement and pollution also violates NEPA.' EPA failed to take a hard look at reasonably foreseeable effects from the use of the new net pen material, notably entanglements and pollution.

The increased risk of entanglement is likely to jeopardize numerous ESA-listed animals, in violation of the ESA. Several ESA-listed species reside in the vicinity of the VE facility, including fish (smalltooth sawfish, giant manta ray, and oceanic whitetip shark), marine mammals (manatees, sperm whales, Rice's whale, Atlantic spotted dolphin, and common bottlenose dolphin), sea turtles (green sea turtle, hawksbill, Kemp's ridley, leatherback, and loggerhead), and birds (piping plover and red knot).

All of these species can be killed or negatively impacted by the threat of entanglements. These species are attracted to aquaculture facilities both due to the high concentration of fish in the net pen and/or due to the resulting fish who aggregate around the facility. Much like the sea turtles described above, entanglements threaten all of these species by making it more difficult to eat, swim, escape predators, and by opening up the possibility of infections from wounds caused by entanglement or ingestion of hooks and other debris.[73]

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[68] EPA, *Learn About Aquatic Trash*, https://www.epa.gov/trash-free-waters/learn-about-aquatic-trash.
[69] 40 C.F.R. § 125.121.
[70] 40 C.F.R. § 125.121(e)(1).
[71] Sequeira et al., *Worldwide contamination of fish with microplastics: A brief global overview* (Nov. 2020), 160 Marine Pollution Bulletin 111681, https://www.sciencedirect.com/science/article/abs/pii/S0025326X20307992?via%3Dihub.
[72] 40 C.F.R. § 125.121(e)(2).
[73] NOAA Fisheries, *Frequent Questions—National Marine Mammal Entanglement Response Networks*, https://www.fisheries.noaa.gov/marine-life-distress/frequent-questions-national-marine-mammal-entanglement-response-networks. (June 26, 2024).

It is up to EPA to ensure that its actions do not jeopardize ESA-listed animals, and it has not done so here.

B. The baseline environmental conditions of the Gulf of Mexico, which have changed since EPA last conducted its analysis of the Permit, indicate that the VE facility is likely to lead to unreasonable degradation and jeopardize threatened and endangered species.

As EPA itself admits, "[c]limate change is happening."[74] The Summer of 2023 was Earth's hottest summer on record, and several of the other hottest years have occurred in the last decade.[75] Climate change is thus a reality, and EPA must analyze its effects. Somehow, the word "climate" does not appear once in EPA's analysis document.

Common impacts of climate change include more frequent and intense floods, droughts, heat waves, and extreme cold events such as what NOAA called "The Great Texas Freeze."[76] In fact, it was the latter event which caused Ocean Era's hatchery partner to suffer a power failure, causing the "total loss of the conditioned almaco jack broodstock."[77] Ocean Era intends to use this same hatchery for its red drum broodstock.

With climate change continuing, "hurricanes will become stronger and more intense."[78] This could be seen in 2024, as multiple massive hurricanes struck Florida within two weeks of each other. In fact, 2024 is now tied for the year with the most hurricanes to make landfall in Florida.[79] And while climate change may not lead to more frequent hurricanes, hurricanes are already getting more powerful and dangerous.[80]

This presents several issues that EPA should analyze in conjunction with the modified NPDES permit. For starters, a hurricane could wreak havoc on the VE facility, causing it to unmoor or break open, and allowing fish to escape. EPA's statement that "the incidental release of red drum due to fish escapes is not authorized under the current permit" does nothing to ensure that fish escapes won't occur.[81]

Living organisms are pollutants under the CWA's definition of biological materials. Under the CWA, EPA must affirmatively find that any of the VE facility's discharges will not cause

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[74] EPA, *Impacts of Climate Change*, https://www.epa.gov/climatechange-science/impacts-climate-change.
[75] NASA, *The Effects of Climate Change*, https://science.nasa.gov/climate-change/effects/.
[76] NOAA, The Great Texas Freeze: February 11-20, 2021, https://www.ncei.noaa.gov/news/great-texas-freeze-february-2021.
[77] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)*, Appendix A – Email from Ocean Era at 2.
[78] NASA, *The Effects of Climate Change*, https://science.nasa.gov/climate-change/effects/.
[79] The Florida Times-Union, *Florida just ties record with 3 hurricanes making landfall in single year* (Oct. 18, 2024), https://www.jacksonville.com/story/weather/hurricane/2024/10/18/florida-hurricanes-debby-helene-milton-tie-record-landfalls/75718304007/.
[80] Smithsonian Magazine, *Atlantic Hurricanes Are Getting More Dangerous*, More Quickly (Oct. 19, 2023), https://www.smithsonianmag.com/science-nature/atlantic-hurricanes-are-more-likely-to-power-up-quickly-180983104/.
[81] EPA, *EPA's analysis supporting the draft modified NPDES permit for Ocean Era (FL0A00001)* at 6.

unreasonable degradation of the marine environment.[82] Yet that is exactly what would occur if a fish escape were to happen, and issuing this NPDES permit is likely to result in a fish escape. Climate change makes it more likely that such an event will occur, and that any hurricane will intensify more rapidly, limiting the response time to avoid catastrophe.

Similarly, the VE facility will rely on land-based remote operations. Because extreme hot, cold, or flooding events are more likely with continuing climate change, this makes it more likely that the land-based operations will be unable to fully control the VE facility 45 miles out in the ocean. Whether it is the raising/lowering of the net pen due to storms, automated feeding systems, or other "best practices" to avoid pollution and comply with the NPDES permit, climate change has the potential to throw a wrench in any of these processes. EPA must analyze climate change's potential to affect this project, rather than ignore climate change altogether in its analysis.

Lastly, climate change in general will continue to negatively impact the Gulf of Mexico. In one 2023 study, NOAA found that the waters of the Gulf of Mexico have increased at double the rate of the global ocean between 1970 and 2020.[83] An unprecedented heat wave in July 2023 "caus[ed] unprecedented heat stress conditions in the Caribbean Basin, including waters surrounding Florida and in the Gulf of Mexico."[84]

As it gets warmer, the Gulf will continue to be a more sensitive body of water. Specifically, climate change will also exacerbate HABs. EPA has known about this connection for a long time. In 2013, an EPA fact sheet admitted that "much of the evidence presented in this fact sheet suggests that the problem of harmful algal blooms may worsen under future climate scenarios."[85] Since then, including since EPA last conducted analysis on this issue, climate change has continued, and more studies have linked climate change with HABs. For example, a study from 2020 that EPA has not mentioned found that "HABs display expansion in range and frequency in response to climatic and non-climatic drivers."[86]

A 2023 study conclusively linked climate change to the rise in cyano-HABs, a subset of HABs.[87] That study found that warming waters increased both the frequency and intensity

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[82] 40 C.F.R. § 125.123.
[83] NOAA, *The Gulf of Mexico is Getting Warmer: New Study Quantifies 50-Year Warming Trend*, https://www.ncei.noaa.gov/news/gulf-mexico-getting-warmer (citing Wang et al., *Upper Oceanic Warming in the Gulf of Mexico between 1950 and 2020*, 36 J. Climate 2721 (Apr. 15, 2023), https://journals.ametsoc.org/view/journals/clim/36/8/JCLI-D-22-0409.1.xml).
[84] NOAA, *The ongoing marine heat waves in U.S. waters, explained* (July 14, 2023), https://www.noaa.gov/news/ongoing-marine-heat-waves-in-us-waters-explained.
[85] EPA, *Impacts of Climate Change on the Occurrence of Harmful Algal Blooms* (May 2013), https://www.epa.gov/sites/default/files/documents/climatehabs.pdf.
[86] Christopher Gobler, *Climate Change and Harmful Algal Blooms: Insights and perspective*, 91 Harmful Algae 101731 (Jan. 2020), https://www.sciencedirect.com/science/article/pii/S1568988319302045.
[87] Saurabh Chatterjee et al., *Cyanobacterial Harmful Algal Bloom Toxin Microcystin and Increased Vibrio Occurrence as Climate-Change-Induced Biological Co-Stressors: Exposure and Disease Outcomes via Their Interaction with Gut–Liver–Brain Axis*, 15 Toxins 289 (Apr. 17, 2023), https://www.mdpi.com/2072-6651/15/4/289.

of cyano-HABs.[88] Another study released just this year found that the combination of increased discharge of nutrients coupled with climate change, "significantly affects the growth, species composition, toxin production, and toxicity of HAB-forming species."[89] This study specifically mentioned nutrients such as nitrogen and phosphorous fuel HABs, which are the main nutrients the VE facility will discharge.[90]

A 2023 review of climate change's impact specifically on the Gulf of Mexico found that climate change "is poised to exacerbate impacts of coastal eutrophication" in the Gulf of Mexico.[91] Eutrophication just means an overabundance of nutrients in the water, and all sources agree this fuels HABs. In fact, "**[m]any** of the fundamental elements that regulate algal development, such as water temperature, nutrients, light, and grazers, are controlled by climate."[92] Another study has shown that, new HAB-causing species have become more prominent in the Gulf of Mexico in the last decade, and stated that that "improved identification of HAB species" is needed in the Gulf of Mexico.[93] Collectively, this portrays an enormous threat that, while already existing, is exacerbated both by continuing climate change and the additional nutrients discharged by the VE facility. EPA should analyze these impacts before issuing the current NPDES permit.

Another 2023 study by NOAA found that "[a]ll species in the Gulf of Mexico are projected to experience high or very high exposure to climate-driven change in environmental variables."[94] Almost half (48%) of species are moderately or highly vulnerable.[95] Warmer waters can negatively impact factors such as population growth rate, early life stage survival, and spawning.[96] This means that any pollution from the VE facility is discharging into an already highly-sensitive body of water.

Given that climate change has changed baseline conditions, it is much more likely that pollution from the VE facility will trigger HABs that jeopardize threatened and endangered species in the Gulf of Mexico. HABs usually result in "massive fish kills, deaths of marine

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[88] *Id.*
[89] Zhangxi Hu et al, Editorial: *The impacts of anthropogenic activity and climate change on the formation of harmful algal blooms (HABs) and its ecological consequence*, 11 Frontiers in Marine Sci. 1397744 (Mar. 26, 2024), https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2024.1397744/full.
[90] *Id.*
[91] Sunkara et al, *The Gulf of Mexico in trouble: Big data solutions to climate change science*, 10 Frontiers in Marine Sci. 1075822 (Mar. 14, 2023), https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2023.1075822/full.
[92] *Id.* (emphasis added).
[93] Gaonkar et al, *Metabarcoding reveals high genetic diversity of harmful algae in the coastal waters of Texas*, Gulf of Mexico, 121 Harmful Algae 102368 (Jan. 2023), https://www.sciencedirect.com/science/article/abs/pii/S1568988322001962?via%3Dihub.
[94] NOAA Fisheries, *Results from the Gulf of Mexico Climate Vulnerability Analysis for Fishes and Invertebrates*, https://www.fisheries.noaa.gov/resource/document/results-gulf-mexico-climate-vulnerability-analysis-fishes-and-invertebrates (citing Quinlan et al., *Results from the Gulf of Mexico Climate Vulnerability Analysis for Fishes and Invertebrates*, NOAA Technical Memorandum NMFS-SEFSC-767 (2023)).
[95] *Id.*
[96] *Id.*

mammals and seabirds, and alteration [i.e., degradation] of marine" environments.[97] The phytoplankton that comprise these HABs release a toxin, stab other organisms with their shells, or deplete dissolved oxygen in the water, causing marine animals to suffocate.[98] Animals who don't reside in the water, such as seabirds, can become sick and die due to ingesting contaminated fish.[99] EPA should ensure that these effects of climate change and increased threats from HABs are taken into consideration before issuing the modified permit.

C. The permit modifications continue to fail to address concerns Friends of Animals had with the previous NPDES permit.

EPA explicitly states that it will not consider comments unrelated to the modified conditions of the NPDES permit.[100] However, if the Director receives "any new information," he or she may determine whether cause for revocation of the permit exists.[101] Thus, FoA submits the following comments that indicate that the permit should be revoked, and that EPA should not issue a modified permit.

1. The VE facility will act as a fish-aggregating device, raising numerous concerns for ESA-listed species.

EPA did not fully consider the significant threats that the VE facility poses as a fish-aggregating device (FAD). EPA acknowledged that the VE facility will attract marine life and generate increased traffic by acting as a FAD. This means that many species, including ESA-listed species, will congregate near the facility. Furthermore, as Ocean Era has touted in the past, recreational and sports fishers will congregate around the facility due to the FAD causing a concentration in fish. Often, fishers will construct their own FADs to take advantage of this phenomenon, going so far as to construct biodegradable FADs.[102]

FADs present multiple concerns. First, ESA-listed animals are likely to become entangled or injured by the net pen and mooring system. Second, ESA-listed animals could be struck by either Ocean Era vessels or recreational vessels attracted to the grouping of fish. Lastly, these recreational vehicles could easily catch or harm ESA-listed animals who happen to be in the area.

The VE facility will still act as FAD under the proposed modification. The associated concerns remain and are exacerbated by the additional entanglement and oceanic pollution

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[97] NOAA, *Harmful Algal Blooms Observing System, What are HABs?*, https://habsos.noaa.gov/what-are-habs.
[98] U.S. National Office for Harmful Algal Blooms, *Impacts of Harmful Algal Blooms*, https://hab.whoi.edu/impacts/.
[99] *Id.*
[100] EPA, *Public Notice, Notice of proposed issuance of a modified National Pollutant Discharge Elimination System (NPDES) permit (FL0A00001)* at 1.
[101] 40 C.F.R. § 122.62.
[102] Morena et al., *The Jelly-FAD: A paradigm shift in the design of biodegradable Fish Aggregating Devices*, 147 Marine Policy 105352 (Jan. 2023), https://www.sciencedirect.com/science/article/pii/S0308597X22003992.

concerns related to the use of a polyethylene terephthalate monofilament (KikkoNet) for the net pen, as discussed above.

2. The VE facility will likely contribute to more intense and more frequent harmful algal blooms.

Harmful algal blooms (HABs) can be incredibly destructive events, decimating local wildlife of all types and causing respiratory issues for humans. These HABs already form and bloom off the coast of Florida. Excess nutrients such as nitrogen and phosphorous feed these HABs, and that is exactly what the VE facility will dump into the ocean. Nitrogen and phosphorous mainly come from excess fish feed and fish waste that flow through the pen.

EPA even stated that HABs in southwestern Florida are "on the rise in frequency, duration, and intensity in the gulf," and that HABs generally start offshore and make their way inland.[103] The additional fuel that the VE facility will provide to HABs in the form of nitrogen and phosphorus only makes this threat worse.

In the past three years, after the majority of EPA's analysis of the VE facility took place, the Gulf of Mexico continues to degrade due to multiple effects. Overall, the content of nitrogen and phosphorus inflow into the Gulf has increased.[104] As discussed above, climate change has warmed and altered the ecosystem, leading to instability and unexpected effects. HABs have already existed in the Gulf, but "appear to be expanding and intensifying,"[105] In 2022, scientists encountered the toxic dinoflagellate *Pyrodinium bahamense* in the Southeast Gulf of Mexico for the first time.[106] In short, the existing baseline conditions of the Gulf of Mexico are worse than when EPA conducted its original analysis. By all accounts, climate change is not going to stop, meaning the conditions will only continue to worsen. This means HABs will continue to have an even stronger impact in the Gulf of Mexico.

EPA stated that existing studies do not "document a clear effect," but the scientific literature (see section B above) shows that this link is in fact clear. EPA's apparent misunderstanding of the science is even more reason for EPA to analyze the effect of climate change on HABs. Instead, EPA failed to abide by its duty to affirmatively find that the discharges will not cause an unreasonable degradation. If EPA is unable to obtain sufficient information on any proposed discharge to make a reasonable judgment as to its environmental effect, "no permit shall be issued."[107]

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[103] EPA, *Ocean Discharge Criteria Evaluation* at 34 (pre-modification analysis).
[104] Sunkara et al, *The Gulf of Mexico in trouble: Big data solutions to climate change science*, 10 Frontiers in Marine Sci. 1075822 (Mar. 14, 2023), https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2023.1075822/full (citing Tian H, et al.).
[105] Juan Jose Dorantes-Aranda, *Harmful Algae Impacting Aquatic Organisms: Recent Field and Laboratory Observations*, 15 Toxins 339 (May 15, 2023), https://www.mdpi.com/2072-6651/15/5/339.
[106] Nuñez-Vasquez et al., *Paralytic Shellfish Toxins of Pyrodinium bahamense (Dinophyceae) in the Southeastern Gulf of Mexico*, 14 Toxins 760 (Nov. 3, 2022), https://www.mdpi.com/2072-6651/14/11/760/pdf.
[107] 33 U.S.C. § 1343(c)(2).

3. The VE facility still presents the potential for fish escapes.

The new modifications to the net pen system do not eliminate the possibility of fish escapes. Open-net pen systems are "the most vulnerable to escapes" of aquaculture systems.[108] The fact that red drum is native to the Gulf of Mexico does not address these concerns, either, as it did not with the previously permitted species. Several risks from fish escapes of even native fish still exist with the VE facility. EPA did not discuss the possibility of, or harms stemming from, fish escapes in its most recent analysis.

Fish escapes, even from native species present many concerns for the receiving waters. For example, they can "mask wild stock overexploitation, confound stock assessments, alter genetic diversity, increase the risk of spreading pathogens and parasites, and compete with wild conspecifics."[109] Disease transfer is one of the largest threats that fish escapes present. Disease transfer is the transfer of diseases to endemic populations. For example, it has been suggested that the particular strain of *Streptococcus iniae* isolated from wild fish (*Pomadasys stridens and Synodus variegatus*) collected in Israel may have been an exotic strain originating from red drum being reared in nearby cages.[110]

This is particularly true given the likely application of antibiotics and other pharmaceuticals, which could help spur antibiotic-resistant forms of bacterial infections. These could spread to local populations, whether or not they are other members of the red drum species. The escaped fish could then compete with wild stocks of fish or decimate local populations with the spread of disease.

As long as aquaculture facilities like the VE Facility are not fully contained, it is impossible to prevent the escape of farmed fish into the wild.[111] Since it is such a new and untested industry in federal waters, there are serious risks that EPA failed to consider. For example, EPA did not discuss how the prevalence and distribution of pathogens in wild populations could be better characterized to understand the risks of disease transmission to farmed fish. EPA also failed to analyze the potential population level impacts of offshore escapes on marine ecosystems. Finally, EPA did not consider the impacts of constant, low-level "leaks" compared to one massive escape event.[112] These are threats that EPA has not analyzed, making it likely that any one of these serious risks could devastate wildlife and the marine environment in violation of multiple federal statutes.

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[108] SeaChoice.org, *Escapes*, https://www.seachoice.org/info-centre/aquaculture/escapes/.
[109] Toledo-Guedes et al., *Domesticating the Wild: the Influence of Aquaculture Escapes on Two Iconic Mediterranean Species*, (Oct. 10, 2024) (preprint), https://www.researchsquare.com/article/rs-3458560/v1.
[110] Food and Agriculture Organization of the United Nations, *Cultured Aquatic Species Fact Sheets* - Sciaenops ocellatus, https://www.fao.org/fishery/docs/CDrom/aquaculture/I1129m/file/en/en_reddrum.htm.
[111] Fujita et al., *Toward an environmentally responsible offshore aquaculture industry in the United States: Ecological risks, remedies, and knowledge gaps*, 147 Marine Policy 105351 (Jan. 2023), https://www.sciencedirect.com/science/article/pii/S0308597X22003980.
[112] *Id*.

Together, these effects of fish escapes form a distinct possibility of degradation of the marine environment. Under the CWA, EPA must find that any discharge (including biological materials such as fish) will not cause unreasonable degradation.[113] Without having dealt with the numerous concerns raised by potential fish escapes, EPA cannot meaningfully say that no unreasonable degradation will occur. Therefore, EPA should not issue the modified permit until it can comply with the CWA.

CONCLUSION

For these reasons, Friends of Animals urges EPA to not move forward with issuing NPDES Permit FL0A00001. EPA has not conducted the full analysis required by multiple federal statutes, and the VE facility presents many risks that EPA has not meaningfully addressed. EPA should continue to conduct additional environmental analysis as highlighted above, and as required by law, before deciding whether to issue this permit.

Sincerely,

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[113] 40 C.F.R. § 125.123.