



March 11, 2015

U.S. Army Corps of Engineers, Los Angeles District
Regulatory Division, South Coast Branch
Attention: SPL-2014-00600-MBT
5900 La Place Court, Suite 100
Carlsbad, CA 92008

Sent via email to Melanie.B.Tymes@usace.army.mil

Re: Application for Permit No. SPL-2014-00600-MBT

Thank you for the opportunity to comment on Application for Permit No. SPL-2014-00600-MBT Rose Canyon Fisheries Sustainable Aquaculture Project (“permit” or “proposal”), a proposal for an off-shore finfish aquaculture project in federal waters approximately 4.5 miles from the San Diego coastline. San Diego Coastkeeper is a non-profit organization working to protect and restore fishable, swimmable, drinkable waters in San Diego County.

While we don’t doubt that offshore finfish aquaculture in the United States will be part of the overall strategy aimed at providing adequate food for the world’s population, San Diego Coastkeeper believes this project proposal is premature and must be postponed until a comprehensive federal policy is adopted for aquaculture projects in federal waters, as presently there exist significant legal and regulatory impediments to this project moving forward.

Because there is a substantial likelihood that this project would result in significant environmental impacts as discussed in detail below, an Environmental Impact Statement (EIS) is required. Further, with all due respect to the US Army Corps of Engineers (“the Corps”), the Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) should share lead agency responsibilities for NEPA review as opposed to the Corps serving as lead agency.

San Diego Coastkeeper respectfully requests a public hearing on this matter.

NEPA, Lead Agency, and Required Environmental Impact Statement (EIS):

As a preliminary matter, Coastkeeper strongly believes there exist federal agencies besides the Corps that are far better suited to act as lead agency for the NEPA process.

In the absence of comprehensive governing regulations and an express delegation of authority to the Corps for such activities, the EPA and NOAA should instead be lead agencies for NEPA review. With all due respect to the Corps and its talented staff, Coastkeeper does not believe the Corps is equipped with the expertise necessary on environmental review to be the lead agency on this issue.

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The justification for designating a lead agency besides the Corps stems partly from the fact that the Corps' supposed jurisdictional and governing authority here is narrow in scope and is far less focused than NOAA's or EPA's is in ensuring water quality and environmental resource protection and management. For example, NOAA's 2013-2019 Annual Guidance Memo indicates NOAA's express ongoing and continuing efforts include efforts "to end overfishing [and] enhance development of sustainable aquaculture..."¹, and NOAA Fisheries' purposes state that they are, "responsible for the stewardship of the nation's ocean resources and their habitat. [They] provide vital services for the nation: productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems."² To further demonstrate NOAA's expertise and commitment to aquaculture and its related environmental and other impacts, in 2011 NOAA released its Aquaculture Policy which specifies the goals, objectives, and priorities for all aquaculture-related activities. That policy specifies that, "NOAA is responsible for considering and preventing and/or mitigating potential adverse environmental impacts of planned and existing marine aquaculture facilities through the development of fishery management plans, permit actions, proper siting, and consultation with other regulatory agencies at the federal, state, and local levels."³

Importantly, NOAA itself has commented that comprehensive regulations are necessary. In its Aquaculture Policy NOAA calls on Congress to clarify regulatory authority related to aquaculture in federal waters in the context of other authorities, and, "to establish a coordinated, comprehensive, science-based, transparent" regulatory program.⁴ Appendix 1 of the Policy, titled *NOAA Guidance for Aquaculture in Federal Waters*, further shows that NOAA, perhaps acting in concert with the EPA, is the most appropriate lead agency for this issue. The National Ocean Policy Implementation Plan stresses the importance of NOAA in the aquaculture arena, and NOAA chairs the Aquaculture Regulatory Task Force.⁵ Finally, NOAA has developed a Code of Conduct for Responsible Aquaculture Development in the US Exclusive Economic Zone (EEZ).⁶

Likewise, the EPA wields a significant sphere of influence over aquaculture as witnessed by that agency's regulation of discharges from Concentrated Aquatic Animal Production (CAAP) point sources. In 2004 as a result of a settlement with NRDC, the EPA finalized effluent guidelines for CAAPs that set some minimum criteria for monitoring, reporting, and management practice plans for CAAP projects that ensure those effluent requirements are met.⁷ These guidelines,

¹ Available at http://www.ppi.noaa.gov/wp-content/uploads/2013-2019-AGM_final_signed120925.pdf. Last accessed February 19, 2015

² Available at http://www.nmfs.noaa.gov/aboutus/our_mission.html. Last accessed February 19, 2015.

³ *NOAA Marine Aquaculture Policy*, June 2011, p. 3. That section is preceded by, "The statutory basis for NOAA's aquaculture activities includes the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, the Endangered Species Act, the Coastal Zone Management Act, the National Marine Sanctuaries Act, and the Fish and Wildlife Coordination Act. Under these laws, in addition to the National Environmental Policy Act, NOAA is responsible..." *Id.* This policy was adopted only after extensive scientific and literary review and after consideration of public comments.

⁴ *NOAA Marine Aquaculture Policy*, June 2011, p. 6.

⁵ *National Ocean Policy Implementation Plan Appendix*, page 4.

⁶ See <http://www.nmfs.noaa.gov/trade/AQ/AQCode.pdf>, last accessed February 26, 2015.

⁷ See 40 CFR 451.1-451.24

while far from the type of over-arching comprehensive regulations needed to adequately address the impacts from aquaculture⁸, show that the EPA has a greater sphere of influence over the types of activities proposed by the applicant. Since the EPA's CAAP standards would apply to a production facility of the size proposed in this permit application, and given the EPA's knowledge of, and expertise in CAAP and CAFO permitting, the EPA should at the very least be a joint lead agency for NEPA purposes.

In stark contrast to NOAA's and EPA's stated authority, purposes, and spheres of influence over aquaculture, the Corps' purported jurisdiction is based on an 1899 act related to obstructions of navigable waters. Under Section 10 of that Act, permit authorization is based on considerations related to navigational impacts, as opposed to permitting of the commercial activity itself or authorization of private use of federal lands. Authority to govern other activities such as mineral extraction on the OCS or deepwater ports come from specific delegations of authority. And the Corps' own mission statement and description of purposes is limited to planning, designing and operating public works, management of construction of military facilities, and support of design and construction management of military and other federal agencies.⁹ With regard to the proposed project, the primary environmental review focus must be on water quality, sediment quality, and marine and coastal biological and fisheries resources and impacts. In every one of those areas, the Corps is not the federal agency that has the appropriate expertise or the resources to make the relevant decisions. All of those areas of concern and expertise more appropriately fall under the jurisdiction of NOAA and the EPA.¹⁰ Finally, due to the precedential and experimental nature of this endeavor and the myriad overarching and joint regulatory issues involved, should the Corps decide to be the lead agency we urge the Corps, NOAA, **and** the EPA to jointly serve as lead agencies under 40 CFR 1501.5 (b).

If, despite the obvious paramount interests in aquaculture by NOAA and the EPA, the Corps chooses to become the lead agency alone, Coastkeeper wants to remind the Corps that environmental review under Section 10 requires consideration of environmental impacts of the entire project including pollutant discharge, disease, impairments to genetic integrity of fish and wildlife, and benthic impacts. Under its current review procedure the Corps must also weigh the benefits of the project against unique environmental impacts on fish, marine mammals, birds,

⁸ Importantly, the effluent guidelines do not attempt to address issues such as impacts to predator behavior, disease, escapes, genetic drift, or any number of potential environmental impacts that will result from aquaculture projects. They are only meant to deal with some aspects related to discharges. Project proponents themselves note that no broad-based inclusive guidelines exist at the federal level. See *Final Report Rose Canyon Fisheries Sustainable Aquaculture Project*, Marine Research Specialists, September 2014, p. 17; "The RCF-SAP intends to work closely with the EPA, and other government agencies to assist in the development of offshore aquaculture effluent guidelines."

⁹ See <http://www.swf.the Corps.army.mil/Careers/WhoWeAre.aspx>, last accessed March 2, 2015.

¹⁰ Interestingly, a 2014 law review article titled "Offshore Finfish Aquaculture in the US: An Examination of Federal Laws That Could be Used to Address Environmental and Occupational Public Health Risks" mentioned Section 10 only to make a point that it had "low potential" to address such issues, and barely made mention of Section 10 at all. *Int. J. Environ. Res. Public Health* 2014, 11, 11964-11985, found at www.mdpi.com/journal/ijerph.

commercial fisheries, and aesthetic values.¹¹ If the Corps moves forward as sole lead agency, Coastkeeper strongly urges the Corps to carefully and deliberately consider the significant impacts listed in the application, as well as others we list below that were omitted, during the NEPA and EIS process.

Federal/State Consistency:

Impacts to state waters are likely to result from activities associated with the proposal, including escapes, disease migration, genetic impacts to fish migrating into and from state waters, impacts to predators, and transport of fish through California waters, among others. Because state waters will be impacted by the proposed project due to the nature of the proposal and the proximity of the project, any environmental review that occurs must be done in the context of ensuring consistency with CA law under state the Coastal Zone Management Act (CZMA), California Coastal Act, the California Sustainable Oceans Act (S.B. 201), and other state laws governing coastal management¹².

Specifically, any governing regulations, requirements, or mitigation measures must be at least as stringent as the California Sustainable Oceans Act requirements in S.B. 201 for purposes of federal consistency.¹³ To ensure consistency with CA Coastal Act management policies, specifically Sections 30230-30237 and 30250-30255 of the Act, consistency with the CA Sustainable Oceans Act would be required. Additionally, California Fish & Game Code section 15008 lists specific factors that must be considered for this project to meet with federal consistency. That section provided a framework for managing marine finfish aquaculture in an environmentally sustainable manner that, at a minimum, considers all of the following factors:

- (1) Appropriate areas for siting marine finfish aquaculture operations to avoid adverse impacts, and minimize any unavoidable impacts, on user groups, public trust values, and the marine environment;*
- (2) The effects on sensitive ocean and coastal habitats;*
- (3) The effects on marine ecosystems, commercial and recreational fishing, and other important ocean uses;*
- (4) The effects on other plant and animal species, especially species protected or recovering under state and federal law;*
- (5) The effects of the use of chemical and biological products and pollutants and nutrient wastes on human health and the marine environment;*
- (6) The effects of interactions with marine mammals and birds;*

¹¹ This includes native fish in the area, as well as fish that are likely to be used as feed and the amount of fish meal necessary to produce commercially viable farmed fish.

¹² It should be noted that the state of California can apply state law extraterritorially to federal waters in instances where it is not preempted. *Skiriotes vs Florida*, 313 US 69, 77 (1941). As Congress has not preempted state regulation of offshore aquaculture, state regulation of this project would not be preempted.

¹³ See 33 CFR 320.4(h), 15 CFR 930.74 and 15 CFR 930.32, and <http://www.coastal.ca.gov/fedcd/listlic.pdf> (last accessed February 24, 2015).

- (7) The cumulative effects of a number of similar finfish aquaculture projects on the ability of the marine environment to support ecologically significant flora and fauna;
 - (8) The effects of feed, fish meal, and fish oil on marine ecosystems;
 - (9) The effects of escaped fish on wild fish stocks and the marine environment;
 - (10) The design of facilities and farming practices so as to avoid adverse environmental impacts, and to minimize any unavoidable impacts.
- Cal. Fish & Game Code § 15008

The California Fish and Game Code, in implementing SB 201, includes requirements that, “all facilities and operations shall be designed to prevent the escape of farmed fish into the marine environment”¹⁴, “a lease shall not unreasonably interfere with fishing or other uses or public trust values”¹⁵, “to reduce adverse effects on global ocean ecosystems, the use of fish meal and fish oil shall be minimized”¹⁶, “finfish numbers and density shall be limited to what can be safely raised while protecting the marine environment”¹⁷, and “the use of all drugs, chemicals, and antibiotics, and amounts used and applied, shall be minimized”¹⁸, among others.

While federal law is primarily silent on these issues and no such framework exists on that level, California has developed a robust and environmentally protective framework for managing marine finfish aquaculture. For consistency purposes, if allowed to move forward the project proponents must meet the California requirements at a minimum. Because this is the first operation of its kind, San Diego Coastkeeper strongly urges that measures employed to protect the environment exceed those measures listed in Section 15400, which expressly states such measures are *minimum* measures.¹⁹

Environmental Review Standards and Mitigation Measures:

In contrast to the environmental review required in other scenarios of federal oversight of private use of public lands (discussed in detail below), the Corps’ public interest and “environmental” review requirements under 33 CFR 325.3 and 320.4 lack adequate guidelines for review of the types of activities contemplated under this proposal. This is due to the intended application of those sections only to review for permits of navigational obstructions on waters of the U.S. Instead of a suite of review guidelines and requirements, the Corps’ review process considers vague “public interest” factors²⁰ without sufficient environmental consideration (including cumulative impacts), specific programmatic impacts and alternatives, or adequate constraints for informed agency decision-making.

¹⁴ CA F&G Code Section 15400(b)(9)

¹⁵ CA F&G Code Section 15400(b)(2).

¹⁶ CA F&G Code Section 15400(b)(3)

¹⁷ CA F&G Code Section 15400(b)(6)

¹⁸ CA F&G Code Section 15400(b)(7)

¹⁹ See CA Fish & Game Code Section 15400 (b), “Leases and regulations adopted by the commission for marine finfish aquaculture shall meet, *but are not limited to*, all of the following standards.” Emphasis added.

²⁰ See 33 CFR 325.3(c).

At the very least, a proper review of this proposal should consider each of the provisions of the CA Sustainable Oceans Act and EPA CAAP effluent guidelines. Instead, the Corps' review standards say only that "consideration of mitigation will occur throughout the permit application review process and includes avoiding, minimizing, rectifying, reducing, or compensating for resource loss".²¹

The permit notes that the applicant's proposed mitigation sequence is "avoidance/minimization/compensation". Without further explanation as to what specific measures will be taken or what thresholds define avoidance, there is insufficient guidance to determine how to proceed under Section 10.

Mitigation measures must first avoid, and then minimize, negative or deleterious impacts caused by the project's activities. Even under the weak and ill-defined Section 10 review factors and guidelines governing mitigation and review the applicant's proposed mitigation measures fail to offer actual mitigation for expected significant environmental impacts. Instead, the listed measures are largely just explanations that some action would need to be undertaken after-the-fact if negative impacts occur, or the measures simply refer to future permits that would be required. Few, if any, actual defined plans or mitigation measures are offered. The lack of Section 10 guidelines on environmental review and mitigation further exacerbate this issue through their lack of clarity. What is clear, however, is that Section 10 standard of review is inappropriate for proper environmental review of an activity with no federal regulations and that will have significant environmental impacts.

To illustrate why comprehensive aquaculture regulations are necessary, and why the proposed mitigation measures in the application fail to adequately address expected significant environmental impacts, we next turn to address those expected environmental impacts of this proposal and the applicant's proposed mitigation measures. While, as the applicant's own environmental report points out, "impacts on receiving waters from offshore aquaculture facilities have not been characterized to date,"²² there exists sufficient information to determine that activities would significantly impact the environment, thereby necessitating an EIS. The environmental report for this project²³, though insufficient in its analysis and assessment of each of the impacts likely to result from this proposal, itself offers insight into the fact that significant environmental impacts will result from the proposed activities.

Marine Water and Sediment Quality Mitigation:

Impact No. 1

Organic particulates discharged during aquaculture activities may locally degrade marine water quality.

²¹ 33 CFR 320.4(r).

²² *Final Report Rose Canyon Fisheries Sustainable Aquaculture Project*, Marine Research Specialists, September 2014.

²³ *Id.*

Proposed Mitigation Measure: Conduct a receiving-water monitoring program capable of delineating the extent of the discharge plume emanating from the net pens.

Drawing on language in the project proponent's own project assessment report,²⁴ expected water quality impacts include, "oxygen depletion in surrounding waters, degradation of benthic ecosystems, and the potential exacerbation of toxic algae blooms through nutrient loading."²⁵

As with many of the other listed potential impacts and measures discussed below, it is apparent to Coastkeeper that the applicant does not understand the meaning of the term "mitigation". Mitigation is meant to first and foremost avoid negative impacts to the environment. Only when such avoidance and prevention is not possible, mitigation is then meant to minimize those impacts, rather than to compensate after-the-fact for such impacts.

Simply monitoring for pollutants and determining the extent of a pollutant plume is not a mitigation measure. Our marine environments are not meant to function as proving grounds for private industry. Instead, mitigation must be the containment of any potential organic particulate discharge to the immediate area. In doing so, the project proponent would be required to follow the CA Sustainable Oceans Act and EPA's CAAP requirements **at a minimum**.

At several places in the project proponent's Final Report (which Coastkeeper obtained through the EPA because the report was not submitted to the Corps for consideration), it is mentioned that water quality impacts can be mitigated through dilution resulting from rapid current and water movement. While estimates of nutrient loading are not provided, studies have estimated nitrogen discharge levels of 52-95% N in feed is eventually lost as waste in marine fish cages.²⁶ Local and regional scale effects are to be expected despite the exposed nature of the site.²⁷ Coastkeeper does not believe the solution to pollution is dilution, and a more specific mitigation regime aimed at avoiding or preventing water quality degradation through source control is necessary.

Coastkeeper is further troubled by the fact that the proposed activity would be located directly over a reference site for Point Loma Ocean Outfall (PLOO). Coastkeeper has a long history working with the City to improve functionality and marine protection at the Pt. Loma

²⁴ *Id.*

²⁵ *Id.*, at p. 50.

²⁶ Price C, Black K, Hargrave B, Morris J. *Marine cage culture and the environment: effects on water quality and primary production*. *Aquac Environ Interact*. 2015;6:151-174 and Pearson TH, Black KD. *The environmental impacts of marine fish cage culture*. In: Black KD, ed. *Environmental Impacts of Aquaculture*. Boca Raton, FL: CRC Press; 2001:1-31.

²⁷ Sarà G, Lo Martire M, Sanfilippo M, et al. *Impacts of marine aquaculture at large spatial scales: Evidences from N and P catchment loading and phytoplankton biomass*. *Mar Environ Res*. 2011;71:317-324. and Tsagaraki TM, Petihakis G, Tsiaras K, et al. *Beyond the cage: Ecosystem modelling for impact evaluation in aquaculture*. *Ecol Modell*. 2011;222:2512-2523.

Wastewater Treatment Plant and PLOO.²⁸ The PLOO reference site over which these activities would be located currently serves as a reference, or “control”, site due to its relative ecological health, and sampling results from the PLOO outfall are compared to this reference site in order to determine whether PLOO discharges have any detrimental marine impacts, given the plant’s nature as the only remaining large treatment plant in the U.S. that does not operate at more advanced secondary treatment standards. What would result under this aquaculture proposal would be the nation’s first offshore experimental aquaculture project (which lacks environmental regulations) located in close proximity to the outfall of the nation’s last treatment plant operating under old standards. Coastkeeper fails to see how the proper safeguards could exist under this scenario to ensure benthic communities and water column are not degraded. Furthermore, given the relative health of the site over which this will take place, we are concerned that any activity would result in the degradation of the benthic community and water column, in violation of Clean Water Act anti-degradation requirements.

Impact No. 2

Deposition of excess feed, fecal matter, and fish excretions may adversely impact seafloor sediments.

Proposed Mitigation Measure: *Conduct a benthic impact assessment capable of detecting project-related changes to seafloor chemistry and benthic infaunal communities. If significant adverse effects on benthic quality are observed (as defined below), abatement measures will be instituted to reduce impacts to benthic sediments and communities.*

Importantly, and for consistency purposes, the California Ocean Plan allows for no degradation to occur to marine and benthic communities.²⁹ Yet, impacts to the seafloor, benthic communities, and marine life should be expected.³⁰ The benthic effects of fish farming in deep water are poorly understood³¹ and yet the expected increased dispersal of waste products in a deep, dynamic location results in potential effects at a much larger spatial scale.³² Numerous examples of both near- and far-field aquaculture-derived nutrient and contaminant loading of

²⁸ We have recently signed an agreement requiring the City of San Diego to modify the plant’s operations over the next 20 years in order to reduce discharges into the marine environment and produce potable recycled water.

²⁹ See *California Ocean Plan 2012*, p. iv, “The Ocean Plan is clear that there shall not be degradation of marine communities...due to waste discharges.”

³⁰ See *Final Report Rose Canyon Fisheries Sustainable Aquaculture Project*, Marine Research Specialists, September 2014, p. 55. “The most commonly reported and measurable effects of net pen aquaculture involve the near field excessive loading of bottom sediments with particulate organic matter,” and, “It is an accepted fact that seafloor accumulations of consumed feed and fecal waste can result in organic buildup that produces a variety of physical, chemical, and biological changes within the benthos.”

³¹ Holmer M. *Environmental issues of fish farming in offshore waters: perspectives, concerns and research needs*. *Aquac Environ Interact*. 2010;1:57-70.

³² Bannister RJ, Valdemarsen T, Hansen PK, Holmer M, Ervik A. *Changes in benthic sediment conditions under an atlantic salmon farm at a deep, well-flushed coastal site*. *Aquac Environ Interact*. 2014;5:29-47.

sediments exist in the literature.³³ Accumulation of sediment organic matter may lead to changes in secondary production and shifts in community structure.

As above, the project proponent does not propose measures aimed at preventing and avoiding impacts the benthic communities and instead proposes simply to conduct a benthic impact assessment. Appropriate mitigation measures must seek to prevent and avoid negative impacts to the benthos and water column. In keeping with California and EPA requirements, a benthic assessment should instead be a requirement before any permits are issued, but is not itself “mitigation”. Furthermore, what would constitute “abatement measures” is not defined, and as such these proposed measures lack specificity to the degree that they are devoid of all utility as far as allowing for meaningful public comment on their effectiveness as mitigation measures.

Proposed Mitigation Measure: *Model the nutrient (both dissolved and particulate wastes) dispersion around the net pens.*

Modeling of nutrient dispersion is also not a mitigation measure meant to prevent or avoid negative impacts, but is instead an after-the-fact information-gathering measure which would likely be necessary under any discharge permit.

Proposed Mitigation Measure: *Identify and implement all practicable net pen management practices to reduce excess nutrient discharges to the marine environment.*

There is no specificity with regard to these “net pen management practices”. The project applicant must define what those practices are with specificity in order to determine the true environmental impact, and those practices must be aimed at avoiding and preventing negative environmental impacts.

Impact No. 3

Antibiotics and other therapeutic chemicals released into the marine environment may adversely affect water and sediment quality.

³³ See, for example, Sarà G, Scilipoti D, Mazzola A, Modica A. *Effects of fish farming waste to sedimentary and particulate organic matter in a southern Mediterranean area (Gulf of Castellammare, Sicily): A multiple stable isotope study ($\delta^{13}C$ and $\delta^{15}N$)*. *Aquaculture*. 2004;234:199-213., Yokoyama H, Abo K, Ishihi Y. *Quantifying aquaculture-derived organic matter in the sediment in and around a coastal fish farm using stable carbon and nitrogen isotope ratios*. *Aquaculture*. 2006;254:411-425., Holmer M, Marba N, Diaz-Almela E, Duarte CM, Tsapakis M, Danovaro R. *Sedimentation of organic matter from fish farms in oligotrophic Mediterranean assessed through bulk and stable isotope ($\delta^{13}C$ and $\delta^{15}N$) analyses*. *Aquaculture*. 2007;262:268-280, Bannister RJ, Valdemarsen T, Hansen PK, Holmer M, Ervik A. *Changes in benthic sediment conditions under an atlantic salmon farm at a deep, well-flushed coastal site*. *Aquac Environ Interact*. 2014;5:29-47 Debruyne AMH, Trudel M, Eyding N, et al. *Ecosystemic effects of salmon farming increase mercury contamination in wild fish*. *Environ Sci Technol*. 2006;40(11):3489-3493., Nikolaou M, Neofitou N, Skordas K, Castritsi-Catharios I, Tziantziou L. *Fish farming and anti-fouling paints: a potential source of Cu and Zn in farmed fish*. *Aquac Environ Interact*. 2014;5:163-172..

Proposed Mitigation Measure. *Use of chemicals should be minimized by practicing preventive medicine, adopting biological controls, and adopting optimal/best aquaculture management practices.*

“Preventive medicine”, “biological controls”, and “optimal/best aquaculture management practices” are undefined. As no federal regulations exist yet to define what these definitions are, and what required BMPs must be implemented, each of these terms needs to be articulated and defined in much greater detail. Once again, the project proponent must explain in detail the mitigation measures that will be utilized to prevent and avoid impacts caused by the use of antibiotics and other chemicals introduced into the marine environment.³⁴

The applicant does not address the use of biocides or other antifouling mechanisms which would doubtless be extensive in a facility of this size, and may adversely impact both water and sediment quality³⁵ and could potentially become a human health risk when these chemicals accumulate in farmed and wild fish tissue. San Diego is already subject to Total Maximum Daily Loads (TMDLs) that resulted from harmful environmental impacts due to the use of biocides for anti-fouling purposes in salt water (for example, the Shelter Island TMDL). The use of net pens and other facility structures containing biocide would have significant environmental impacts.

Marine Biological Resources Mitigation:

Impact No. 1

Hard-bottom habitat, located within 1,600 m of project site and the fish pens, may potentially be impacted by the 3000kg anchors and associated anchor chains that will be used to moor the fish cage grids.

Proposed Mitigation Measure: *Anchor contact with hard-bottom structures in the project area shall be avoided. If hard substrate is encountered, the mooring grids and anchors will be re-sited to avoid it. After initial installation of the fish pens, inspections shall be conducted on an annual basis and after major storms to verify that anchors have not migrated, or come into contact with hard-bottom structures. (Inspection is not a mitigation measure) Anchors shall be repositioned if they contact or are in close proximity to hard-bottom features.*

This measure, at least, lists that anchor contact with hard-bottom structure shall be avoided, and is more along the lines of the type of mitigation measures required to prevent or avoid negative impacts. Still, more specificity is needed as to what measures will be deployed to

³⁴ See Burrige L, Weis JS, Cabello F, Pizarro J, Bostick K. *Chemical use in salmon aquaculture: A review of current practices and possible environmental effects.* Aquaculture. 2010;306(1-4):7-23., Cabello FC. *Heavy use of prophylactic antibiotics in aquaculture: a growing problem for human and animal health and for the environment.* Environ Microbiol. 2006;8(7):1137-1144., and Cabello FC, Godfrey HP, Tomova A, et al. *Antimicrobial use in aquaculture re-examined: its relevance to antimicrobial resistance and to animal and human health.* Environ Microbiol. 2013;15(7):1917-1942 for examples of impacts.

³⁵ Guardiola FA, Cuesta A, Meseguer J, Esteban MA. *Risks of using antifouling biocides in aquaculture.* Int J Mol Sci. 2012;13:1541-1560., Nikolaou M, Neofitou N, Skordas K, Castritsi-Catharios I, Tziantziou L. *Fish farming and anti-fouling paints: a potential source of Cu and Zn in farmed fish.* Aquac Environ Interact. 2014;5:163-172.

ensure avoidance, what measure would be required if avoidance is not possible, and what situations would require re-siting (which would require a new EIS).

Inspections for verification that impacts have not occurred are not mitigation measures. Instead, applicant must list with more specificity which measure would be used to ensure avoidance of anchor migration or contact with hard-bottom structures.

Impact No. 2

Wildlife may become entangled in the fish-pen nets.

Proposed Mitigation Measure: *The applicant shall implement specific measures to minimize harmful interactions with wildlife (e.g., marine mammals, birds, fish and turtles). A specific goal is to avoid entanglement of marine birds, mammals, turtles, and predator fish species in the various nets that will be utilized at the RCF-SAP. As proposed by the applicant, the use of physical predator deterrence methods, such as anti-predator netting and locating the farm away from known seal and sea lion haul-out areas will be implemented. A description of the nets to be used and their placement are described in detail in section 2.3 of this report. The applicant shall consult further with the appropriate state and federal agencies regarding net mesh sizes that will be used for the fish pens, in order to minimize potential entanglement of marine wildlife. The applicant shall consider the recommendations for preventing harmful interactions with marine mammals issued by the Environmental Assessment Office, Government of Canada, as they apply to the current industry rules and regulations in the U.S. (e.g.-only physical deterrence methods, guarding, and proper storage of materials that may attract predators are allowed in the U.S. net pen aquaculture industry). The applicant shall abide by the regulations set forth in the U.S. Marine Mammal Protection Act as well as document and report any interactions with wildlife, to the appropriate state and federal agencies.*

The applicant fails to detail which “specific measures” will be utilized to minimize harmful interactions with wildlife. Further, mitigation must first seek to avoid or prevent such harmful interactions, and the proponent fails to detail within the proposed mitigation measure how such avoidance and prevention will be achieved. Additionally, the mention of specific descriptions of the nets to be used as being in “section 2.3 of this report” is insufficient and confusing, as no report accompanied this permit’s submittal as far as Coastkeeper can tell. A copy of that report was made available to Coastkeeper by the EPA, only after project applicant denied access to Coastkeeper staff and board members when asked in a personal meeting.

Finally, the applicant fails to address the impacts of the expected aggregations of wild fish near the sea cages. Aquaculture practices have been known to attract large and persistent aggregations of fish³⁶, thereby having potentially large impacts on wild fish feeding behavior,

³⁶ See, for example, Machias A, Karakassis I, Giannoulaki M, Papadopoulou KN, Smith CJ, Somarakis S. *Response of demersal fish communities to the presence of fish farms*. Mar Ecol Prog Ser. 2005;288:241-250., Dempster T, Uglem I, Sanchez-Jerez P, et al. *Coastal salmon farms attract large and persistent aggregations of wild fish: An ecosystem effect*. Mar Ecol Prog Ser. 2009;385(Fao 2008):1-14., and Bustnes JO, Nygård T, Dempster T, et al. *Do salmon farms increase the concentrations of mercury and other elements in wild fish?* J Environ Monit. 2011;13:1687-1694.

energetics, fecundity, and migratory behavior, as well as the increased potential for disease transmission or genetic introgression between wild and farmed fish stocks.

Impact No. 3

The deposition of uneaten fish food and fish feces on the seafloor may potentially alter the benthic community in the proposed project area.

Proposed Mitigation Measure: *As required by the EPA as part of the NPDES permit process, a benthic monitoring program shall be initiated at the project site that is subject to review and approval by the EPA. The applicant has proposed a benthic monitoring program that includes monitoring of the health and community composition of benthic epi- and infaunal communities in addition to various physical and physiochemical measures. The proposed monitoring program incorporates adequate reference sites and satisfies BACI criteria. Additional information regarding the design of the monitoring program is provided in Section 4.1, Marine Water Quality, Mitigation Measure No. 2.*

Simply referencing a separate permit application, without specifics included in that permit application or measures aimed at avoiding and preventing impacts to the benthic community (such impacts are prevented under the California Ocean Plan and Clean Water Act), is insufficient mitigation. Numerous studies have documented changes in benthic communities near deep well-flushed farms.³⁷ Examples of potential adverse impacts include changes in community structure, with opportunistic, pollution-tolerant species becoming abundant and local extinction of sensitive species.³⁸ Organic enrichment of benthic sediments may increase microbial production resulting in increased oxygen demand and potential hypoxia. Increased numbers of sulfate-reducing bacteria have been linked to offshore aquaculture sites leading to accumulation of sulfides in sediments.³⁹

Impact No. 4

Cultured fish may escape from containment, impacting the genetic integrity of wild populations.

Proposed Mitigation Measure: *As part of the project's best management practices, the applicant will develop and implement a comprehensive loss-control plan. At minimum, the plan will include: equipment standards, equipment installation protocols, preventative maintenance plans, integrated predator deterrence plans, and a containment management system that includes documentation of management actions and external audits. Plans should allow for*

³⁷ See Kalantzi I, Karakassis I. *Benthic impacts of fish farming: Meta-analysis of community and geochemical data.* Mar Pollut Bull. 2006;52:484-493., Borja Á, Rodríguez JG, Black K, et al. *Assessing the suitability of a range of benthic indices in the evaluation of environmental impact of fin and shellfish aquaculture located in sites across Europe.* Aquaculture. 2009;293(3-4):231-240., and Bannister RJ, Valdemarsen T, Hansen PK, Holmer M, Ervik A. *Changes in benthic sediment conditions under an atlantic salmon farm at a deep, well-flushed coastal site.* Aquac Environ Interact. 2014;5:29-47..

³⁸ Holmer M. *Environmental issues of fish farming in offshore waters: perspectives, concerns and research needs.* Aquac Environ Interact. 2010;1:57-70., Mirto S, Gristina M, Sinopoli M, et al. *Meiofauna as an indicator for assessing the impact of fish farming at an exposed marine site.* Ecol Indic. 2012;18:468-476.

³⁹ Yoza BA, Harada RM, Nihous GC, Li QX, Masutani SM. *Impact of mariculture on microbial diversity in sediments near open ocean farming of Polydactylus sexfilis.* Ecol Indic. 2007;7:108-122.

continuous improvement and revisions as more innovations in farming methods and technology become available.

Escapes are common in the aquaculture industry and can be massive.⁴⁰ Among the impacts of escapes are genetic contamination of the wild genome, competition with wild fish for food and favorable space, predation on wild fish, and disease and parasite transmission, to name a few.⁴¹ The proposed measures merely mention that BMPs will be devised by the project proponent, but once again there exists no specificity whatsoever as to what those BMPs will actually be.

Mitigation measures must prevent or avoid the escape of fish. Coastkeeper is concerned that language in the proposal contemplates escapes as something that would occur, with a goal to “allow for continuous improvement and revisions”. Such language indicates appropriate measures would not be implemented from the outset. Our concerns are further heightened by the admitted experimental nature of this program as a whole. This project cannot and should not be permitted as an experiment, or under some form of iterative process as the applicant suggests. The strictest of measures that aim to prevent and avoid negative impacts are required at the onset, especially in light of the lack of comprehensive regulations over aquaculture in the offshore environment.

Furthermore, under 33 USC 1362(6), escaped fish in and of themselves are considered a pollutant under the Clean Water Act⁴², and would be subject to that act’s strictest requirements for pollutant discharges.

Impact No. 5

The pathogens or diseases associated with the cultured species may be transferred to wild fish stocks or to the fish community residing in the project area.

Proposed Mitigation Measure: *A comprehensive health management program consisting of the early detection of infectious agents, monitoring of environmental conditions, good husbandry practices, good nutrition, and disease control and eradication, as proposed by the applicant, shall be implemented (See Appendix III). Disease identification, control and reporting practices shall be conducted in accordance with applicable state or federal regulatory criteria (See Section*

⁴⁰ Naylor R, Burke M. *Aquaculture and Ocean Resources: Raising Tigers of the Sea*. Annu Rev Environ Resour. 2005;30:185-218., and *Issue Brief, February 2013* from Food and Water Watch, listing numerous examples of mass escapes.

⁴¹ Holmer M. *Environmental issues of fish farming in offshore waters: perspectives, concerns and research needs*. Aquac Environ Interact. 2010;1:57-70., Toledo-Guedes K, Sanchez-Jerez P, Benjumea ME, Brito A. *Farming-up coastal fish assemblages through a massive aquaculture escape event*. Mar Environ Res. 2014;98:86-95., and Noble T, Smith-Keune C, Jerry D. *Genetic investigation of the large-scale escape of a tropical fish, barramundi *Lates calcarifer*, from a sea-cage facility in northern Australia*. Aquac Environ Interact. 2014;5:173-183..

⁴² See 33 USC § 1362(6). “The term “pollutant” means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, **biological materials**, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste **discharged into water.**”

2.7). Under this plan, disease outbreaks will be minimized. When an outbreak does occur, it will be detected quickly and controlled as rapidly as possible.

The proposed mitigation measures lack any specificity. Mention is made to an “Appendix III”, but Coastkeeper can find no appendix to the materials submitted in support of the permit application. Pathogen and parasite transmission between farmed and wild stocks of fish is a persistent and unresolved issue.⁴³ Any measures must be specific, and must be devised to avoid and prevent disease and pathogen transfer to fish in the marine environment.

In personal communications Coastkeeper staff and Board members had with representatives from the Rose Canyon Fisheries (RCF) about how they plan to address disease impacts, RCF representatives responded that one strategy they might implement would be to “inbreed the hell out of them” to the point where escaped fish would be weak or unfit for survival in a natural environment upon escaping. Coastkeeper has grave concerns that such practices would create unhealthy fish that are prone to disease, further exacerbating significant environmental impacts.

Impact No. 6. *Increased vessel traffic resulting from the proposed project may impact marine mammals and sea turtles.*

Proposed Mitigation Measure: *Vessel operators shall be trained to recognize and avoid marine mammals and turtles during their transits to and from the project site and during their operations at the project site. Once trained, vessel operators shall be re-trained on an annual basis. At a minimum, vessel operators shall implement the following procedures should marine mammals be encountered at sea.*

- *Support vessels shall make every effort to maintain a distance of >1,000 feet from sighted whales and other endangered or threatened marine mammals and sea turtles.*
- *Support vessels will not cross directly in front of migrating whales.*
- *When paralleling whales, support vessels will operate at a constant speed that is not faster than the whales’ speed.*
- *Female whales will not be separated from their calves.*
- *Support vessels will not be used to herd or drive whales or other marine life.*
- *If a whale engages in evasive or defensive action, support vessels would drop back until the animal calms or moves out of the area.*
- *Collisions or with marine wildlife shall be reported promptly to the federal and State agencies listed below pursuant to each agency’s reporting procedures.*

While an increase in vessel traffic is likely to have significant impacts to marine mammals and sea turtles, it is not the only source of likely impacts to marine mammals and sea turtles that would result from this project. Location of the cages and the aquaculture activities themselves are likely to impact marine mammals and sea turtles, both of whom deserve special protections under state and federal wildlife laws. Further, the project would attract predatory activity,

⁴³ Krkosek M, Ford JS, Morton A, Lele S, Myers RA, Lewis MA. *Declining Wild Salmon Populations in Relation to Parasites from Farm Salmon*. Science (80-). 2007;318:1772-1775., and Nowak BF. *Parasitic diseases in marine cage culture - An example of experimental evolution of parasites?* Int J Parasitol. 2007;37:581-588.

which itself could interfere with the natural behaviors of migratory and other marine life. Mitigation measures must be devised with more specificity to avoid and prevent such impacts.

Commercial and Recreational Fishing:

Impact No. 1

The proposed project would result in adverse impacts to commercial fishing operations in the San Diego area.

Proposed Mitigation Measure: *To the maximum extent possible, the fish cages shall be placed in the smallest footprint possible without compromising water or sediment quality. This placement would minimize the area potentially lost to commercial fishing operations.*

Proposed Mitigation Measure: *The mitigation measure regarding Avoidance of hard-bottom structures, Marine Biological Resources, Section 4.1.2, also applies to this impact.*

The application completely fails to address impacts to commercial and recreational fishing that are likely to occur from escapes, disease transmission, wild fish aggregations, predation behavior changes, and cumulative environmental impacts, including water quality impacts. The commercial fishing industry of San Diego has suffered substantial impairment over the years due to lax or ineffective management of wild commercial fisheries and fish populations.⁴⁴ Activities associated with this project are likely to result in disease transmission, genetic alteration of native and wild populations due to escapes, and increased predatory presence in the area. These impacts will affect commercial fishing operations above and beyond the simple “footprint” and siting issues noted in the proposed measures in the immediate vicinity of the project area because such impacts cannot be contained. These additional impacts to commercial fishing activities in the San Diego area must be accounted for in detailed cumulative mitigation measures that will avoid or prevent those impacts to commercial fishing above and beyond the measures meant to address the environmental impacts of the activities alone.

Impact No. 2. *The proposed project would result in adverse impacts to recreational fishing activities in the San Diego area.*

Proposed Mitigation Measure: *The two mitigation measures for impacts to commercial fishing (above) would also apply to recreational fishing impacts. No additional mitigation measures are proposed.*

See our comments above related to commercial fishing operations, as many of the same concerns and requirements are present and apply to both.

⁴⁴ A Pew Charitable Trust article noted just this week that Pacific sardine populations have dwindled to the point that “it can no longer sustain a commercial fishery”. See <http://www.pewtrusts.org/en/about/news-room/news/2015/03/06/bad-news-on-the-west-coast-pacific-sardines-are-collapsing>, last visited March 11, 2015.

Marine Traffic:

Impact No. 1. *Vessels that transit through or operate in the project area can accidentally run into the project fish pens.*

Proposed Mitigation Measure: *Vessel operators shall be notified of the project and its location. A project announcement should be posted in the Notice to Mariners (USCG publication). The U.S. Department of Commerce, NOAA, shall also be notified so navigational charts can be updated to show the location and extent of the fish pens. Additionally, the fish pens shall be marked with lights and radar reflectors mounted onto surface buoys in accordance with USCG regulations (72 COLREGS and all amendments), and as determined by the issuance of the USCG Aids to Navigation Permit.*

Proposed Mitigation Measure: *Notices that describe and illustrate the net pen locations and markings shall be posted at the Harbor Patrol or Harbor Masters offices at the two regional harbors (San Diego and Mission Bay).*

Proposed Mitigation Measure: *Monitors at the project site will contact vessels or boaters by marine radio if they approach too close to the net pens. Boaters should be notified by the monitors of potential conflicts and hazards.*

Impact No. 2. *The frequency of vessel collisions in the project area will increase due to the increase in traffic from the supply vessels that will be used to support the proposed project.*

Proposed Mitigation Measure: *The Mitigation Measures for Impact No. 1 apply.*

While these mitigation measures appear to be more specific than most other listed measures, we wish to point out that project applicant has proposed to cordon off a portion of public trust lands and waters from vehicle and other activities without a property right to do so.

Additional Expected Impacts:

In addition to the applicant-listed impacts that are likely to result from the proposed activities, Coastkeeper wishes to list the following additional significant and substantial environmental impacts that are likely to result (though this list is meant to be illustrated rather than fully inclusive of all possible impacts).

Cumulative Impacts and Feed/Fish Meal

Not mentioned in the Application are impacts associated with fish feed on fish populations as a whole. It is likely that fish meal will be the primary diet fed to farmed fish, as the fish proposed for farming are carnivorous. According to some estimates, carnivorous fish species require 5

times as much fish biomass in feed as is produced.⁴⁵ The outcome, then, is the exploitation of one fish source (likely a wild source), to produce a marketable product in an inefficient and unsustainable manner. Farming high trophic species also increases the opportunity for toxin accumulations (such as mercury).⁴⁶ Further, there is documented spillover into the surrounding environment.⁴⁷

Overall Cumulative Impacts

Besides analysis of each individual impact, project proponents must analyze and mitigate for the cumulative impacts of the activities that are likely to have significant environmental impacts.⁴⁸

Waste from gutting or processing of fish on-site

Besides the expected pollutants listed (including escaped fish, antibiotics, fish feces, etc.), significant environmental impacts are likely to result from waste associated with the gutting and/or processing of fish on-site. Such impacts must be avoided or prevented through specific and detailed mitigation measures.

Impacts to whale migration behavior, sea lion/seal behavior, dolphin behavior, and predator behavior associated with the aquaculture activities

Applicant must include an analysis of expected impacts to whale migration behavior and health, sea lion and seal behavior and health, dolphin behavior and health, and impacts to other predator behavior. Applicant must also include detailed mitigation measures to avoid or prevent significant impacts.

Harmful Algae Blooms

High nutrient levels associated with the proposed activities can stimulate harmful algae blooms, which can result in the death of marine organisms.⁴⁹ Applicant must include detailed mitigation measures to avoid or prevent significant impacts.

Permitting Jurisdiction:

Importantly, Coastkeeper has serious doubts about the project's ability to move forward under the current regulatory permitting scheme. As a threshold matter it is unlikely the Corps has jurisdiction or authority to issue a permit for the proposed aquaculture project. Instead, the Corps' Section 10 jurisdiction is limited to a review for placement of structures in federal waters

⁴⁵ Naylor RL, Hardy RW, Bureau DP, et al. *Feeding aquaculture in an era of finite resources*. Proc Natl Acad Sci U S A. 2009;106(36):15103-15110.

⁴⁶ Debruyne AMH, Trudel M, Eyding N, et al. *Ecosystemic effects of salmon farming increase mercury contamination in wild fish*. Environ Sci Technol. 2006;40(11):3489-3493.

⁴⁷ Id.

⁴⁸ Besides those expected impacts listed above, such impacts include "nutrient and chemical wastes, water use demands, aquatic animal diseases and invasive species, potential competitive and genetic effects on wild species, effects on endangered or protected species, effects on protected and sensitive marine areas, effects on habitat for other species, and the use of forage fish for aquaculture feeds". *NOAA Marine Aquaculture Policy*, June 2011.

⁴⁹ *Final Report*, p. 50.

within three nautical miles that may inhibit or otherwise impact navigation upon those waters.⁵⁰ Any exercise of jurisdiction outside that zone to “wider zones” is only recognized under “special regulatory powers exercised over the outer continental shelf”.⁵¹ Thus, the Corps’ own regulations recognize that any exercise of Corps jurisdiction outside of the initial three nautical miles zone applied to outer continental shelf (OCS) is limited to special circumstances and require specific regulatory delegations from Congress.

It is anticipated that the Corps could interpret 33 CFR 322.3(b) to allow for Corp permits over structures in the OCS in this case under Outer Continental Shelf Lands Act (OCSLA).⁵² The OCSLA, however, specifically deals only with devices attached to the seafloor for the purposes of extracting mineral resources such as, “oil, gas, sulphur, geopressured-geothermal, and associated resources, and all other minerals which are authorized by an Act of Congress to be produced from ‘public lands’.”⁵³ Based upon the inherent limitation of Corps’ jurisdiction, and the specific enumerated circumstances under which the Corp may permit activities outside of the three-mile zone, it is clear that aquaculture activities do not fit within the definition of projects to which the special regulatory expansion of Corps jurisdiction would apply. Therefore, the Corps would not have jurisdiction in the OCS to permit aquaculture projects or structures.

Even if the Corps did have jurisdiction to permit a structure on the OCS under Section 10, it currently does not have the authority to permit the proposed activity itself. Importantly, the OCSLA regulations of 33 CFR 320.2(b) expressly state that the Secretary of the Army’s jurisdiction is to “prevent obstruction to navigation in the navigable waters of the United States” by such devices.⁵⁴ That section further states that “Section 10 of the Rivers and Harbors Act...prohibits the unauthorized obstruction or alteration of any navigable water of the United States”.⁵⁵ Clearly the Corps’ Section 10 permitting authority, if present at all in the OCS, applies only to structures and is meant to deal only with navigational obstruction issues absent any additional associated “special regulatory powers”.⁵⁶

Just as problematic for project proponents is the lack of property right, or even a regulatory vehicle through which a property right could be granted, without the express authorization or delegation of authority. Even if the Corps in implementing its Section 10 permitting authority ignored the limitations on its jurisdiction outside of the three-mile zone and further ignored the fact that Section 10 permits are navigational permits for navigational obstruction purposes, the

⁵⁰ See 33 CFR 329.12(a) “The navigable waters of the United States over which the Corps of Engineers regulatory jurisdiction extends include all ocean and coastal waters within a zone three geographic (nautical) miles seaward from the baseline (the Territorial Seas). Wider zones are recognized for special regulatory powers exercised over the outer continental shelf”.

⁵¹ *Id.*

⁵² 43 USC 1333

⁵³ 43 CFR 1331(q).

⁵⁴ 33 CFR 320.2 (b).

⁵⁵ *Id.*

⁵⁶ 33 CFR 329.12(a). See also 33 USC 320.2(b), 43 USC 1333(a) and (e) which collectively state that the Corps’ authority outside of that zone extends only to installations attached to the seabed for the purposes of exploring for, developing or producing mineral resources therefrom.

Corps still could not permit this project because the project proponent does not (and would not) hold a property right to use and occupy federal public trust lands and waters, and the Corps does not have the delegated authority to convey that right. Section 10 provides for a navigation permit, and the aquaculture activities themselves are not under the purview or delegated authority of Section 10.⁵⁷ As discussed in more detail below, in the absence of a clear Congressional delegation of authority to permit the proposed activities, and without associated implementation and governing regulatory program elements providing guidance on appropriate environmental review, leasing requirements, best management practices, and mitigation measures, the Corps lacks authority to issue a permit for the proposed aquaculture farm. Congress, and Congress alone, is possessed with “paramount rights” over the OCS land and waters as public trust property, and Congress has not delegated permitting authority for aquaculture activities.⁵⁸ Importantly, the Corps general policies for evaluating permit applications themselves state that “authorization of work or structures by DA does not convey a property right.”⁵⁹ Absent any other express right given by Congress via direct approval or delegated authority, the Corps lacks jurisdiction to issue Section 10 permits in offshore waters for aquaculture purposes⁶⁰ and the proposed activities cannot be permitted, as Congress alone holds the authority to approve property rights to federal holdings. **Stated simply, absent an affirmative Congressional action, there currently exists no authority within the federal government to comprehensively review, permit, lease, and provide appropriate regulatory oversight of aquaculture projects in federal public trust lands.**⁶¹

Examples where the Corps does have special delegated Congressional authorization to allow for use and occupancy of activities on and in the OCS include: for oil and gas development the Outer Continental Shelf Lands Act (OCSLA)⁶²; for thermal energy conversion the Ocean Thermal Energy Conversion Act (OTECA)⁶³; and for deepwater port construction the Deepwater Port Act (DWPA)⁶⁴. Importantly, each of those uses is accompanied by a comprehensive regulatory scheme specific to those activities which they govern, and each contains a provision on use and occupancy requirements granting some right to the activity in federal lands and waters.⁶⁵ For

⁵⁷ See 33 USC 403.

⁵⁸ The Supreme Court held that the United States was entitled to, “exercise sovereign rights over the seabed and subsoil underlying the Atlantic ocean, lying more than three geographical miles seaward from the ordinary low-water mark and from the outer limits of the inland waters on the coast, extending seaward to the outer edge of the continental shelf; and that the rule, that the paramount rights to the offshore seabed inhere in the United States as an incident of national sovereignty, was confirmed by the Submerged Lands Act of 1953 and the Outer Continental Shelf Lands Act of 1953”. *United States v. Maine*, 420 U.S. 515 (1975)

⁵⁹ 33 CFR 320.4(g).

⁶⁰ As discussed below, Congress has specifically stated under which circumstances the Corps does have permitting authority over certain activities on the OCS, including for extractive energy resources (43 USC 1332), deepwater ports (22 USC 1501-1524), and thermal energy facilities (42 USC 9101-9168).

⁶¹ 43 USC 1331-1356

⁶² 43 USC 1331-1332.

⁶³ 42 USC 9101-9168.

⁶⁴ 33 USC 1501-1524.

⁶⁵ See. 33 USC 1501-1452; 42 USC 9101-9168; 42 USC 1331-1356. Equally telling is the fact that each of those sections of special delegation contains elements such as (1) resource-specific environmental standards; (2) enumerated criteria upon which a decision must be made (as opposed to mere “factors” in

example 42 USC 9111(a) governing ocean thermal facilities states that, “no person may engage in the *ownership, construction, or operation* of an ocean thermal energy conversion facility which is documented under the laws of the United States, which is located in whole or in part between the highwater mark and the seaward boundary of the territorial sea of the United States, or which is connected to the United States by pipeline or cable, *except in accordance with a license issued pursuant to this chapter*”.⁶⁶ The whole purpose of passing these laws was to delegate powers over these uses and activities, and *these “special” uses and activities alone*, in federal public trust lands and waters. Aquaculture activities presently enjoy no such special regulatory authority or delegation required outside of the three-mile zone.

It is important to note that on at least several occasions lawmakers have proposed federal legislation aimed at granting delegated authority to one agency or another to issue offshore aquaculture permits, establish environmental requirements, and facilitate cooperation between interested agencies. An example of one such attempt was S1195, which, in the words of Deputy Assistant Secretary for Oceans and Atmosphere (NOAA) Timothy Keeney, would, “authorize the Secretary of Commerce to issue offshore aquaculture permits and to establish environmental requirements,” among other things.⁶⁷ To date each of those efforts has failed. Until and unless such authorization succeeds the required authority is not present, as Congress’ inability to pass aquaculture regulations cannot be deemed an abdication of its responsibilities towards public lands.⁶⁸

By way of example of the type of authority required, many other federal laws and regulations exist that govern the use and occupancy of public trust lands and the property rights necessary to undertake such activities. In each case a governing regulatory scheme is present that includes, among many other specific considerations for the particular activity in question, rules that govern the use and occupancy of public trust resources when those resources are utilized or consumed for private gain. Among those regulations is the Federal Land Policy and Management Act (FLPMA) which includes language that requires the Secretary to manage lands through “leases, licenses, published rules, or other instruments”, for, “the use, occupancy, and development of the public lands”.⁶⁹ Under the rule, the Bureau of Land Management has issued

Section 10); (3) standards to guide decision-making on the balancing of interest in making decisions; (4) delegation of power to the appropriate agencies with relevant expertise; (5) **land use authorization mechanisms**; (6) competitive bidding procedures; (7) **fair market value requirements to ensure return to the government and taxpayers for the use of public trust resources**; (8) **specification of areas to be off-limits to development**; (9) due diligence requirements; (10) enforcement and citizen suit provisions; and (11) mandatory roles for state and local governments. These are not provided for in Section 10 because that section of the RHA is not intended to be the basis upon which land use or aquaculture project decisions would be made. All of the listed elements are missing from section 10 review and permitting criteria.

⁶⁶ 42 USC § 9111, italics added.

⁶⁷ From *Hearing before the Subcommittee on National Ocean Policy Study*, June 8, 2006. Accessed at <http://www.gpo.gov/fdsys/pkg/CHRG-109shrg64706/html/CHRG-109shrg64706.htm> on February 24, 2015.

⁶⁸ See *Light v. United States*, 220 US 523, 537 (1911), “All the public lands of the nation are held in trust for the people of the whole country. And it is not for the courts to say how that trust shall be administered. That is for Congress to determine.”

⁶⁹ 43 USC § 1732(b)

extensive policies to guide development of projects utilizing federal public trust lands. In the context of the marine environment, similar principles and requirements can be found in the Ocean Thermal Energy Conversion Act, which establishes a licensing system for the location of those facilities and requires the involvement of other agencies with relevant experience.⁷⁰ Such a comprehensively devised system to govern activities that utilize federal public trust lands only makes sense when considered alongside Congress' duties toward the citizenry with respect to those lands. Presently, comparable regulations for aquaculture projects are completely lacking at the federal level.

Analogous programs also exist on the state level, as with California's aquaculture regulations adopted via S.B 201. Besides the numerous and rigorous permitting requirements that apply to aquaculture projects in California, California Fish and Game Regulations and Code contain lengthy conditions for the leasing of water bottoms for aquaculture.⁷¹

For these same reasons that the Corps does not have this authority, no other Federal agency possesses the authority to confer a property right and permit the proposed activities on federal lands and waters, as there are no laws existing that authorize the use and occupancy of federal lands and waters offshore for these purposes. Section 402 permits, like Section 10 permits, are limited in scope. Section 10 permits convey only a limited right for a structure within a navigational context, and Section 402 EPA Clean Water Act permits convey to a discharger nothing more than a limited right to discharge pollutants under certain conditions⁷². In neither case does the permitting agency have authority to permit the activity itself or to convey property rights to occupy and utilize Federal lands and waters in this particular manner. Obtaining a couple of permits for structures and discharges does not in itself allow for the use and occupancy of federal public trust lands without an express authorization from Congress and associated regulatory mechanism.

It stands to reason that if the Corps interprets its own jurisdiction to allow for permitting of this activity under Section 10 outside of the initial three-mile zone, it would essentially read out of existence the language in 33 CFR 329.12(a) which requires delegation of "special regulatory powers" to the Corps for specific instances outside of the three-mile zone. It would follow that OCSLA, OTECA, or DWPA would not be necessary at all if the Corps jurisdiction extends to the OCS without the delegation of such express special regulatory powers in those Acts.

It is clear to us that regardless of which agency or agencies take the lead on this proposal for NEPA purposes, there exists no apparent delegated Congressional authority to any federal agency under current law or regulations that would allow for the permitting of the proposed activities. No agency currently has regulatory authority to convey rights to federal lands for

⁷⁰ 42 USC § 9111

⁷¹ See CA Fish and Game Code Section 15400 governing leasing requirements which states, "(b) a person shall not engage in marine finfish aquaculture in ocean waters within the jurisdiction of the state without a lease from the commission.", and CA Fish and Game regulations at 14 CA ADC section 237.

⁷² See 40 CFR 451.2(j), "Permitting authority means EPA or the State agency authorized to administer the NPDES permitting program for the receiving waters into which a facility subject to this Part discharges."

private commercial aquaculture purposes without express Congressional delegation, mandate, or consent. Because no such authority exists, the US Army Corps of Engineers (“the Corps”) and other agencies should deny and refuse to proceed on permits for these proposed activities. San Diego Coastkeeper cannot think of a single example where private use and exploitation of federal lands held in the public trust can be used without some form of right, be it via lease obtained through a bidding process, license, or other mechanism. As it exists, the current scheme would allow for private parties to utilize federal lands for their own use and profits without permission. This is not permissible in any area of federal land use regulations, whether on land or out at sea.

Besides the obvious many legal issues, from a practical perspective Coastkeeper is concerned that the lack of existing regulations governing offshore industry will lead to the unlawful use of public lands and inadequate environmental review or mitigation for what will be significant environmental impacts resulting from this proposal. Further, even assuming this project could somehow be permitted and begins operating, there exist no regulations with guidance on how multiple independently-operated future projects could co-exist in federal waters without property rights, or how the cumulative environmental impacts of multiple projects would be assessed.

Conclusion:

As an organization that is keenly interested in the viability of long-term sustainable wild commercial fisheries, water quality, marine and benthic integrity, and the health of our local and offshore marine ecosystem, it is clear to Coastkeeper that unless and until national federal regulations governing environmental and other considerations for aquaculture are promulgated, permission cannot be granted for this project, and there exists no way to be sure adequate environmental review will take place and that appropriate measures and practices will be employed regarding particular proposals.

It is important for us to put this project and its proposed activities into perspective while considering the applicant’s own words. Most telling about this proposal is the very prevalent language in the Executive Summary for the Rose Canyon Fisheries project that calls this proposal a “demonstration project” and part of their “research and development”.⁷³ The application itself states that, “demonstrating the efficacy of the venture at the initial scale of production will ensure that all the proper safeguards are in place before scaling up further.”⁷⁴ Additional language in the permit indicates this project is very much intended to be an experimental pilot project; (“If successful, this project...”).⁷⁵ All of this suggests that what is being sought is approval for an experimental pilot project with a commercial purpose. Proper legal mechanisms and safeguards must first be in place prior to the project receiving approval since adverse impacts are required to be avoided if at all possible. Those mechanisms and safeguards currently do not exist.

⁷³ *Executive Summary, Rose Canyon Fisheries*, page 6.

⁷⁴ Permit application, page 4.

⁷⁵ Permit application, page 10.

At present, no federal agency has the authority to permit the proposed activities in and on public lands and waters. Even if the interested federal agencies did have such actual authority, the EPA and NOAA are far better suited in this instance to act as co-lead agencies for NEPA review for the reasons mentioned above. Finally, due to the substantial likelihood that this project would result in significant environmental impacts, an EIS is required.

Based upon the above, and given the experimental and precedential nature of this project and proposal, the lack of regulatory authority to permit the activities proposed, as well as the likely significant environmental impacts that will result to waters in the San Diego region, **San Diego Coastkeeper respectfully requests *at least one* public meeting on this matter.**

Thank you for the opportunity to comment on the Rose Canyon Fisheries demonstration project. Please feel free to contact me with any questions or for additional feedback. We look forward to working with all interested parties toward development of a meaningful, effective, and truly sustainable approach to fisheries management in our region.

Sincerely,



Matt O'Malley
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