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June 16, 2014

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Gloucester, MA 01930

Re: Offshore Finfish Culture Operations (NSGLC-14-04-04)

This product was prepared by the National Sea Grant Law Center under award number NA09OAR4170200 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusion, and recommendations are those of the authors and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

Dear Dave,

Please find attached the white paper addressing the permitting of offshore finfish culture operations as requested in your January 2014 Advisory Request. The attached information represents interpretations by the National Sea Grant Law Center of the relevant laws and regulations pertaining to finfish aquaculture in federal waters. It does not constitute legal representation of the Office of Aquaculture or its constituents.

At the request of the National Marine Fisheries Service Office of Aquaculture, the National Sea Grant Law Center conducted legal research and analysis to explore the potential permitting process for a hypothetical finfish culture operation in U.S. federal waters. In 2012, the Office of Aquaculture requested an analysis of the permitting process for a shellfish culture operation in federal waters. As the permitting framework is similar, several sections of that memorandum were included in the current white paper with minor changes.

Under the Magnuson-Stevens Fishery Conservation and Management Act, NOAA's National Marine Fisheries Service (NMFS) has authority to regulate fisheries in federal waters, including aquaculture. If a federally managed species is being cultured, operators must secure a permit from NMFS before culturing that species. If a non-federally managed species is being cultured, NMFS' role would be limited to Endangered Species Act and Essential Fish Habitat consultations with the U.S. Army Corps of Engineers during the § 10 Rivers and Harbors Act permitting process. States would also have the right to review the project pursuant to the federal consistency provisions of the Coastal Zone Management Act. In addition, aquaculture operations producing

100,000 pounds of fish or more per year would also need to obtain, pursuant to the Clean Water Act, a National Pollutant Discharge Elimination System permit from the Environmental Protection Agency.

I hope you find the results of our research helpful. Please let me know if you have any follow-up questions or concerns.

Sincerely,

A handwritten signature in blue ink that reads "Stephanie Showalter Otts". The signature is written in a cursive style.

Stephanie Showalter Otts
Director, National Sea Grant Law Center

OFFSHORE FINFISH CULTURE OPERATIONS: CURRENT LEGAL FRAMEWORK AND REGULATORY AUTHORITIES

NATIONAL SEA GRANT LAW CENTER

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At the request of the National Marine Fisheries Service Office of Aquaculture, the National Sea Grant Law Center conducted legal research and analysis to explore the potential permitting process for a hypothetical finfish culture operation in U.S. federal waters (i.e., within the U.S. Exclusive Economic Zone).¹ In 2012, the Office of Aquaculture requested an analysis of the permitting process for a shellfish culture operation in federal waters. As the permitting framework is similar, several sections of that memorandum are reproduced here with minor changes.

Under the Magnuson-Stevens Fishery Conservation and Management Act, NOAA's National Marine Fisheries Service (NMFS) has authority to regulate fisheries in federal waters, including aquaculture. If a federally managed species is being cultured, operators must secure a permit from NMFS before culturing that species. If a non-federally managed species is being cultured, NMFS' role would be limited to Endangered Species Act and Essential Fish Habitat consultations with the U.S. Army Corps of Engineers during the § 10 Rivers and Harbors Act permitting process. States would also have the right to review the project pursuant to the federal consistency provisions of the Coastal Zone Management Act. In addition, aquaculture operations producing 100,000 pounds of fish or more per year would also need to obtain, pursuant to the Clean Water Act, a National Pollutant Discharge Elimination System permit from the Environmental Protection Agency.

The information below represents interpretations by the National Sea Grant Law Center of the relevant laws and regulations pertaining to finfish aquaculture in federal waters. It does not constitute legal representation of the Office of Aquaculture or its constituents.

I. An Overview of Open Ocean Finfish Aquaculture

Open ocean finfish aquaculture generally involves the stocking of hatchery-reared fingerlings in offshore cages, where they are fed and grown to harvest size. Cage design and placement vary depending on the operation, and can include surface, sub-surface, and submerged cages. In the United States, researchers have been experimenting with open ocean finfish aquaculture for several years. For example, the Atlantic Marine Aquaculture Center at the University of New Hampshire has raised Atlantic cod, haddock, halibut, and flounder in submerged cage systems moored to the seafloor as part of various research projects since the late 1990's.²

Finfish aquaculture projects raise several environmental concerns, including potential impacts to native fish stocks from escapes or disease and impacts to water quality from excess feed or fish wastes. Still, most environmental impacts can be addressed through proper siting and project design. For example, the CuPod utilized by Kampachi Farms to grow almaco jack (*Seriola rivoliana*) off the coast of Hawaii has a mesh lining that is designed to prevent escapes, and the cage is sited in an area with strong currents that will dissipate excess feed and wastes.³

To date, no commercial-scale finfish aquaculture facilities have been permitted in federal waters. This is due in part to the complexity of the permitting process, as regulations specific to aquaculture have been either slow to develop or are nonexistent. Permits have been issued, however, for a number of small-scale, experimental operations. For example, Kampachi Farms' (formerly known as Kona Blue

¹ Federal waters starts at 3 nautical miles from the coastline in most states and extend to 200 nautical miles offshore. Exceptions to this include Texas, the west coast of Florida, and Puerto Rico where federal waters begin at 9 nautical miles from the coast.

² See *Finfish Aquaculture*, ATLANTIC MARINE AQUACULTURE CENTER, http://ooa.unh.edu/finfish/finfish_about.html (last visited Apr. 16, 2014).

³ NMFS, Environmental Assessment for the Issuance of a Special Fishing Permit to Authorize the Use of an Anchored Pod to Culture and Harvest a Coral Reef Ecosystem Management Unit Species, *Seriola rivoliana*, in Federal Waters West of Hawaii Island 3 (2013) [hereinafter Kampachi Farms EA].

Water Farms) operations are currently authorized by the National Marine Fisheries Service (NMFS) through a one-year Special Coral Reef Ecosystem Fishing Permit and the U.S. Army Corps of Engineers (Corps) under a § 10 Rivers and Harbors Act. Kampachi Farms plans to stock, grow out, and harvest 2,000 Almaco jack in federal waters approximately 5.5 nautical miles (nm) west of Keauhou Bay, Hawaii.⁴ This is a small-scale demonstration project involving a single CuPod tethered to a feed barge moored in waters approximately 6,000 feet deep.⁵ The permitting process for the Kampachi Farms' project is illustrative of how future finfish aquaculture projects may be authorized in federal waters.

II. Federal Authorities

A. National Marine Fisheries Service

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 (Magnuson Act or MSA) asserted federal jurisdiction over wild fish stocks found within U.S. federal waters⁶ and established eight regional Fisheries Management Councils (Councils) to develop fishery management plans (FMPs), including annual catch limits, for fisheries under their respective authority requiring conservation and management.⁷ These FMPs are reviewed by NMFS and, upon approval, implemented by the agency through the issuance of regulations.⁸

Fish species that are subject to an FMP are referred to as federally managed species. The jurisdiction of the Councils and NMFS under the Magnuson Act extend only to these managed species. Species not requiring conservation and management (i.e., no regulatory action is needed to prevent overfishing) are not managed by the Councils or NMFS. Because there are no FMPs for these species, there are no federal regulations controlling how such species are caught. As discussed below, whether the Magnuson Act applies to aquaculture operations in federal waters depends on the type of species being cultured.

Congress defined "fishing" as "the catching, taking, or harvesting of fish" and any operations at sea in support of such activities.⁹ In 1993, NOAA's Office of General Counsel issued a legal opinion concluding that "aquaculture facilities are subject to the [Act] because they engage in the 'harvest' of fish from the EEZ."¹⁰ In the NOAA attorneys' opinion, the inclusion of the term "harvesting" is significant as it broadens the reach of the Magnuson Act beyond traditional fishing activities (i.e., catching fish).¹¹ According to the NOAA attorneys, "harvesting connotes the gathering of a crop" and aquaculture operations involve "plans to plant, cultivate, and harvest" fish.¹² Aquaculture is therefore "fishing" under the MSA.

To date, this legal interpretation has withstood legal challenge from opponents who argue that aquaculture is beyond the scope of NMFS' authority under the Magnuson Act. In 2012, the U.S. District Court for the District of Hawaii upheld the agency's reasoning set forth in the 1993 memo in a challenge

⁴ See NMFS, Notice of Availability of Final Environmental Assessment and Finding of No Significant Impact for the Issuance of a Special Coral Reef Ecosystem Fishing Permit, 78 Fed. Reg. 66683 (Nov. 6, 2013) [hereinafter SCREFP Notice].

⁵ Kampachi Farms EA, *supra* note 3.

⁶ 18 U.S.C. § 1801(b)(1).

⁷ *Id.* § 1852.

⁸ 16 U.S.C. § 1854.

⁹ *Id.* § 1802(16).

¹⁰ Memorandum from Jay S. Johnson, NOAA Deputy General Counsel, and Margaret F. Hayes, NOAA Assistant General Counsel for Fisheries, to James W. Brennan, NOAA Acting General Counsel 1 (Feb. 7, 1993) (discussing the regulation of aquaculture in the EEZ).

¹¹ *Id.*

¹² *Id.*

to the issuance of a Special Coral Reef Ecosystem Fishing Permit to Kona Blue Water Farms to culture almaco jack in federal waters off the coast of Hawaii. The plaintiffs, Kahea and Food and Water Watch, argued that NMFS did not have the authority to issue the permit as Kona Blue proposed to engage in aquaculture, not fishing. The court reviewed NMFS' permitting decision under the "arbitrary and capricious" standard as required by the Administrative Procedure Act.¹³ The court held NMFS's "determination that KBWF's project falls within the term 'harvesting' was reasonable. The project involves growing and gathering a 'crop' of almaco jack to sell for human consumption."¹⁴

1. Culture of Federally Managed Species - Authorization under FMPs

Regional fishery management councils may amend existing FMPs or develop new FMPs to facilitate aquaculture operations in federal waters.¹⁵ Upon approval, NMFS implements the Councils' FMPs by issuing regulations and serving as the official regulatory agency. For example, the culture of live rock is authorized under the joint Coral Amendment 2 to the Fishery Management Plan for Coral and Coral Reefs of the Gulf of Mexico and South Atlantic (Coral FMP). Under this Coral FMP, a federal permit is necessary to culture live rock in federal waters of the Gulf of Mexico and South Atlantic. Each permit is site specific and sites are limited to 1 acre (0.4 hectare) in size.¹⁶ Currently, the federal live rock permitting program is only active in federal waters of the Gulf of Mexico and South Atlantic off the coast of Florida.

Aquaculture operations involving federally managed species subject to FMPs can be authorized or restricted by NMFS even if the FMP does not directly address aquaculture. For instance, NMFS has authorized Kampachi Farms' aquaculture demonstration projects through permits issued under regulations implementing the Western Pacific Regional Fishery Management Council's Fishery Ecosystem Plan for the Hawaii Archipelago (Hawaii FEP).¹⁷ Unlike a traditional FMP that focuses on a single species, the Hawaii FEP is a comprehensive ecosystem-based approach that address all managed species with the ecosystem. The Hawaii FEP does not authorize aquaculture directly, unlike the Coral FMP. As mentioned above, Kampachi Farms stocks and harvests almaco jack. This species is managed by the Council through the Hawaii FEP. The CuPod gear used by Kampachi Farms is not an approved gear type under the Hawaii FEP.¹⁸ Individuals seeking to fish for managed species with new gear must apply for a Special Coral Reef Ecosystem Fishing Permit.¹⁹ Special permits are generally valid for one year after the date of issue.²⁰ Most recently, NMFS issued a Special Coral Reef Ecosystem Fishing Permit to Kampachi Farms in October 2013.²¹

2. Gulf of Mexico Aquaculture FMP

In January 2009, the Gulf of Mexico Fishery Management Council approved, and subsequently submitted to NMFS, the Fishery Management Plan for Regulating Offshore Marine Aquaculture in the Gulf of Mexico (Aquaculture FMP). The purpose of the Aquaculture FMP is "to develop a regional

¹³ See 5 U.S.C. § 706(2)(A).

¹⁴ Kahea v. National Marine Fisheries Service, Civil No. 11-00474, Summary Judgment Order (Apr. 27, 2012).

¹⁵ See also William J. Brennan, *To Be or Not to Be Involved: Aquaculture Management Options for the New England Fishery Management Council*, 2 OCEAN & COASTAL L. J. 261 (1997).

¹⁶ See 50 C.F.R. §§ 622.220(a)(3); 622.225(a)(1).

¹⁷ See SCREFP Notice, *supra* note 4.

¹⁸ 50 C.F.R. § 665.227(a).

¹⁹ *Id.* §§ 665.227(d); 665.224(a)(1)(iii).

²⁰ See Kampachi Farms EA, *supra* note 3, at 104.

²¹ See SCREFP Notice, *supra* note 4.

permitting process for regulating and promoting environmentally sound and economically sustainable aquaculture” in the Gulf EEZ.²² The Aquaculture FMP seeks to establish a comprehensive framework for aquaculture in federal waters of the Gulf of Mexico.

The framework approach places NMFS on untested legal ground. As mentioned above, the Councils are authorized to develop FMPs for “each fishery under its authority that requires conservation and management.” The Magnuson Act was passed by Congress to primarily address management of wild fisheries, and the Councils’ authority to develop stand-alone aquaculture FMPs has not been tested in court.²³

Further, the broad scope of the Aquaculture FMP posed challenges for NMFS. At the time the Aquaculture FMP was submitted to NMFS, there was no national aquaculture policy to guide the agency’s review of this action. In a letter to the Gulf Council, the NMFS Assistant Administrator explained that the agency did not think it was “prudent” to approve the Aquaculture FMP without the existence of a national policy.²⁴ At the time, the only ground available for disapproval was a finding that aquaculture was not “fishing” under the MSA; a position the agency did not want to take.²⁵ To do so, according to NMFS, would mean that there “would be no overarching authority to address environmental and fishery concerns for aquaculture operations in the EEZ.”²⁶ Ultimately, no action was taken in the timeframe allowed by the MSA.²⁷ The Aquaculture FMP entered into effect by operation of law on September 3, 2009, when no action was taken by NMFS within 30 days of the close of the comment period.²⁸

Within 30 days of the Aquaculture FMP entering into effect by operation of law, the Gulf Restoration Network and Food and Water Watch filed a lawsuit challenging the Aquaculture FMP alleging violations of the MSA, the National Environmental Policy Act, and the Administrative Procedure Act. The Ocean Conservancy similarly filed an identical, but separate lawsuit. The two lawsuits were combined before going to trial.

In August 2010, the District Court for the District of Columbia dismissed the combined lawsuit for lack of standing, basically finding the plaintiffs filed their lawsuit too soon since the FMP alone has no regulatory effect.²⁹ The court explained that aquaculture operations cannot be permitted in the Gulf of Mexico until implementing regulations are issued by NMFS. The plaintiffs’ alleged injuries, therefore, were not actual or imminent nor were their claims ripe for judicial review.³⁰ Currently, the implementing regulations for the Aquaculture FMP are undergoing interagency review. It is expected that more lawsuits will be filed once the regulations are finalized and potential plaintiffs can establish standing.

Key Points: FMPs provide a mechanism by which the Councils and NMFS can authorize aquaculture operations for federally managed species in federal waters. However, the Aquaculture FMP is currently the only FMP to address aquaculture in federal waters and regulations are still in review. The applicability of the MSA therefore depends on whether the species being cultured is subject to an FMP (i.e., federally managed). If the proposed aquaculture operation involves the culture of a federally

²² Gulf of Mexico Fishery Management Council, Fishery Management Plan for Regulating Offshore Marine Aquaculture in the Gulf of Mexico 1 (2009).

²³ See Brennan, *supra* note 15, at 265-66.

²⁴ See Letter from James Balsiger, Acting Assistant Administrator for Fisheries, NOAA, to Robert Shipp, Chairman, Gulf of Mexico Fishery Management Council (Sept. 3, 2009).

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*; See also 16 U.S.C. § 1854(a)(3).

²⁹ Gulf Restoration Network v. National Marine Fisheries Service, 730 F. Supp.2d 157, 166 (2010).

³⁰ *Id.* at 167-172.

managed species, special permits may be required to use aquaculture gear, possess fish below minimum sizes, possess fish out of season, or exceed daily harvest limits. If the proposed aquaculture operation involves species that are not federally managed, a permit from NMFS would not be required. However, as discussed below, NMFS would still consult with other federal agencies (namely the Corps) to fulfill Endangered Species Act and Essential Fish Habitat responsibilities, discussed in more detail below.

B. U.S. Army Corps of Engineers

1. §10 Permit (Rivers and Harbors Act)

The Rivers and Harbors Act (RHA) provides the Corps with the authority to issue permits for obstructions “to the navigable capacity of any of the waters of the United States.”³¹ Corps regulations state that “the navigable waters of the United States over which 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).”³²

In limited circumstances, the Corps’ jurisdiction under the RHA extends beyond the territorial sea to the seaward limit of the outer continental shelf (200 nm). Section 4(e) of the Outer Continental Shelf Lands Act (OSCLA) states that “the authority of the Secretary of the Army to prevent obstruction to navigation in the navigable waters of the United States is extended to the artificial islands, installations, and other devices referred to in [§1333(a)].”³³ Navigable waters of the U.S. include the EEZ. Section 1333(a) extends federal jurisdiction to:

all artificial islands, and all installations and other devices permanently or temporarily attached to the seabed, which may be erected thereon for the purpose of exploring for, developing, or producing resources therefrom, or any such installation or other device (other than a ship or vessel) for the purpose of transporting such resources.³⁴

Pursuant to this authority, the Corps regulations require permits “for the construction of artificial islands, installations, and other devices on the seabed, to the seaward limit of the outer continental shelf.”³⁵

For operations culturing non-federally managed species, the primary federal permitting agency for offshore finfish culture operations would be the Corps under § 10. As mentioned previously, the Corps would then consult with NMFS for Endangered Species Act and Essential Fish Habitat purposes. For federally managed species where the culture is authorized through a NMFS permit, a § 10 permit would still be required.

2. § 404 Permit (Clean Water Act)

The Clean Water Act (CWA) aims “to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans”³⁶ by prohibiting the discharge of pollutants into these waters without a permit issued by the Environmental Protection Agency (EPA) (§ 402 NPDES Permits,

³¹ 33 U.S.C. § 403.

³² 33 C.F.R. § 329.12(a).

³³ 43 U.S.C. § 1333(e).

³⁴ *Id.* § 1333(a).

³⁵ 33 C.F.R. § 322.3(d).

³⁶ 33 U.S.C. § 1251(a)(6).

discussed in more detail below), Corps (§404 Dredge and Fill Permits), or an authorized state agency.³⁷ The act defines “discharge of a pollutant” as the “addition of any pollutant to navigable waters from any point source,”³⁸ such as a pipe, ditch, or other “discernible, confined and discrete conveyance”³⁹ and “any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.”⁴⁰

The CWA defines navigable waters as “the waters of the United States, including the territorial seas.”⁴¹ The territorial seas are defined as “the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.”⁴²

The ocean is defined as “any portion[s] of the high seas beyond the contiguous zone.”⁴³ While that definition could theoretically apply to all the world’s oceans, nations have limited rights under international law to regulate activities on the high seas, which is defined in Article 86 of U.N. Convention on the Law of the Sea (UNCLOS) as “all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State.”⁴⁴ Although the United States has not ratified the treaty, the government does recognize the jurisdictional zones laid out in UNCLOS as customary international law.⁴⁵

“The most logical construction [of the CWA] is that federal jurisdiction over point source discharges currently extends 200 nautical miles out to sea.”⁴⁶ That construction is based on President Ronald Reagan’s assertion of U.S. jurisdiction over a 200-mile Exclusive Economic Zone (EEZ) in 1983.⁴⁷ Pursuant to the plain language of the statute and U.S. assertions of ocean jurisdiction through presidential proclamations, the addition of a pollutant from a point source other than a vessel or other floating craft within 200 nm from shore is prohibited by the CWA unless authorized by a permit from the EPA.

Finfish aquaculture activities would require a § 404 permit from the U.S. Army Corps of Engineers if they involve the discharge of dredged or fill material, a specific type of pollutant, into waters of the

³⁷ *Id.* §§ 1311(a), 1342(a).

³⁸ *Id.* § 1362(12)(A).

³⁹ *Id.* § 1362(14).

⁴⁰ *Id.* § 1362(12)(B).

⁴¹ *Id.* § 1362(7).

⁴² *Id.* § 1362(8).

⁴³ *Id.* § 1362(10). There is some debate regarding whether navigable waters includes the contiguous zone (CZ). The CZ is defined as the “entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone.” Article 24 of the Convention of the Territorial Sea and the Contiguous Zone allows coastal nations to claim a twelve-mile CZ, as measured from the baseline or shore. Following the negotiation of the U.N. Convention on the Law of the Sea (UNCLOS), which allows nations to claim a 24-mile CZ, President Clinton extended the U.S. CZ to 24 nm by presidential proclamation. Although the CWA has not been amended to reflect this extension of jurisdiction, the disparity has no practical implications due to the CWA’s definition of ocean.

⁴⁴ United Nations Convention on the Law of the Sea, Dec. 10, 1982, 21 I.L.M. 1261 (entered into force Nov. 16, 1994).

⁴⁵ See U.S. Oceans Policy, Statement by the President, Mar. 10, 1983, 19 Weekly Comp. Pres. Doc. 384 (1983). (recognizing that UNCLOS “contains provisions with respect to traditional uses of the oceans which generally confirm existing maritime law and practice and fairly balance the interests of all states.”)

⁴⁶ Robin Kundis Craig, *Urban Runoff and Ocean Water Quality in Southern California: What Tools does the Clean Water Act Provide?*, 9 CHAPMAN L. REV. 313, 333 (2006).

⁴⁷ Exclusive Economic Zone of the United States of America, Presidential Proclamation 5030, 48 Fed. Reg. 10,605 (March 10, 1983).

United States.⁴⁸ Regulations issued by the Corps define dredged material as “material that is excavated or dredged from the waters of the United States”⁴⁹ and fill material as “material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a waterbody.”⁵⁰

With respect to Kampachi Farms’ Velella Gamma Trial, the Corps determined that no discharge of dredged or fill material would occur during installation and therefore no § 404 permit was required. The Velella Gamma Trial involves the use of one submerged net pen tethered to a feed barge, which is attached to a single-point mooring on the seafloor.⁵¹ Kampachi Farms’ proposed mooring is a 15,000-pound gravity anchor. This anchor design does not require the removal or addition of material to the ocean floor, and no dredging or filling activities would occur during its placement. Even if some dredging occurred during the installation of such anchors, the slight amount of dredged material would likely be considered incidental fallback and qualify for an exemption to the permitting requirement.⁵²

Key Points: Finfish culture systems anchored to the seabed or structures built to support such operations in federal waters would be an obstruction to navigation and a § 10 RHA permit would need to be obtained from the Corps. Small-scale aquaculture projects involving minimal disturbance of the seafloor are unlikely to require § 404 permits. Commercial-scale operations, however, with multiple moorings or mooring designs that require excavation work might trigger the § 404 permit requirement.

C. Environmental Protection Agency (§402 NPDES Permits)

Because an offshore finfish aquaculture system would fall within the geographic scope of the CWA, as mentioned earlier, the operator may have to obtain a National Pollution Discharge Elimination System (NPDES) permit from the EPA. Whether a NPDES permit is required depends on (1) whether the byproducts of aquaculture operations are considered “pollutants” and (2) whether the aquaculture system is a point source.

Aquaculture Byproducts = Pollutant?

Pollutants, as defined under the CWA, include “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.”⁵³ The most relevant category of pollutants into which aquaculture wastes and byproducts could fall is that of “biological materials.” The CWA does not directly define which substances constitute biological materials; however, within the last decade, federal circuit courts have addressed this issue. In 2002, the federal district court in Maine held that non-native salmon that escaped from net pens fell within the category of “biological material” and are therefore pollutants under the CWA.⁵⁴ Further, the court found that salmon urine and feces were pollutants under the CWA and could be classified as “biological materials” or “agricultural wastes.”⁵⁵ Because finfish operations

⁴⁸ 33 U.S.C. § 1344(a). *See also*, U.S. Army Corps of Engineers, Reissuance of Nationwide Permits, Final Notice, 72 Fed. Reg. 11,092, 11,122 (Mar. 12, 2007).

⁴⁹ 33 C.F.R. § 323.2(c).

⁵⁰ *Id.* § 323.2(e).

⁵¹ Velella Gamma Notice, *supra* note 35.

⁵² *See* 33 C.F.R. 323.2(d)(2)(iii).

⁵³ 33 U.S.C. § 1362(6).

⁵⁴ U.S. Public Interest Research Group v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 247 (D. Me., 2002).

⁵⁵ *Id.*

may release pollutants, such as escaped fish, chemicals and excess feed, into the marine environment, NPDES permits may be required under the CWA.

Offshore Finfish Aquaculture System = Point Source?

Even if the aquaculture byproducts are classified as pollutants, NPDES permits are only required for discharges of pollutants from a *point source*. Point sources are defined as “any discernable, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.”⁵⁶

Aquaculture operations that meet the definition of Concentrated Aquatic Animal Production Facilities (CAAPFs) are considered point sources.⁵⁷ EPA defines CAAPFs as “a hatchery, fish farm, or other facility which meets the criteria in Appendix C of [40 C.F.R. Part 122]” or is designated as such on a case-by-case basis.⁵⁸ Pursuant to Appendix C, a hatchery, fish farm, or other facility is a CAAPF for purposes of § 122.24 if it contains, grows, or holds cold water fish species or other aquatic animals “in ponds, raceways, or other similar structures which discharge at least 30 days per year,” except:

1. Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and
2. Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.⁵⁹

According to Appendix C to Part 122, cold water aquatic animals “include, but are not limited to, the Salmonidae family of fish; e.g., trout and salmon.”⁶⁰

The limits are different for warm water fish species, which “include, but are not limited to, the *Ameiuride*, *Centrarchidae* and *Cyprinidae* families of fish; e.g., respectively, catfish, sunfish, and minnows.”⁶¹ A hatchery, fish farm, or other facility is a CAAPF if it contains, grows, or holds “warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year,” except for:

1. Closed ponds which discharge only during periods of excess runoff; or
2. Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.⁶²

In 2002, the U.S. Court of Appeals for the Ninth Circuit in *Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Resources, Inc.*⁶³ considered the issue of whether a mussel aquaculture operation was a point source. The Ninth Circuit found while the mussel operation contained, grew, or held “cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year,” it was not a CAAPF because farm did not add feed

⁵⁶ 33 U.S.C. § 1362(14).

⁵⁷ 40 C.F.R. § 122.24(a).

⁵⁸ *Id.* § 122.24(b).

⁵⁹ 40 C.F.R. pt. 122, app. C at (a).

⁶⁰ *Id.* app. C.

⁶¹ *Id.*

⁶² *Id.* app. C at (b).

⁶³ 299 F.3d 1007 (9th Cir. 2002).

to the waters surrounding the facilities. Therefore, “its facilities fall under the second exception to CAAPF classification” for cold water facilities.⁶⁴

The CAAPF permitting requirements likewise did not apply to Kampachi Farm’s Velella Gamma trial. The project involves the culture of 2,000 warm water fish, weighing approximately 8,000 pounds.⁶⁵ Because the proposed production levels fell below the limits set forth in EPA regulations (100,000 pounds), the project did not fall within the permitting requirements of the NPDES program.⁶⁶

It is important to note, however, that even if the aquaculture operation does not meet the CAAPF production or feed criteria, the EPA has the discretion, on a case-by-case basis, to “designate any ... cold water aquatic animal production facility as a concentrated aquatic animal production facility upon determining that it is a significant contributor of pollution to waters of the United States.”⁶⁷ If so designated, the offshore aquaculture operation would need a NPDES permit from EPA to operate.⁶⁸

Key Points: The NPDES permit requirements are likely to be triggered by a commercial scale offshore aquaculture facility. CWA § 402 permits may be required because (1) pollutants are likely to be discharged and (2) aquaculture cages would be considered point sources. However, as demonstrated by the recent Velella Gamma trial, small-scale projects fall within the CAAPF exemptions and therefore do not need to obtain § 402 permits.

III. Environmental Reviews and Federal Interagency Consultations

A. National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires that federal agencies prepare an Environmental Impact Statement (EIS) for “major federal actions significantly affecting the quality of the human environment,” which include issuances of permits.⁶⁹ The issuance of a § 10 permit by the Corps or a permit by NOAA under an FMP is a federal action; however, the determination of whether the permitting of an offshore finfish culture operation would “significantly affect the quality of the human environment” is project-specific. EISs are only required for federal actions with significant effects. Federal agencies usually start with an Environmental Assessment (EA) to evaluate whether the proposed project will have a significant effect on the environment. Corps regulations state that “[m]ost permits will normally require only an EA.”⁷⁰ If, following a thorough analysis of the possible environmental impacts, the permitting agency concludes that the issuance of the permit and the resulting project will have a significant effect, the agency is required to prepare a more detailed EIS. If the agency concludes an EIS is not required, the agency will issue a FONSI (Finding of No Significant Impact).⁷¹ NMFS, for example, issued an EA and FONSI with respect to Kampachi Farms’ permit application for the Velella Gamma Trial filed in early 2013.⁷²

⁶⁴ *Taylor Resources*, 299 F.3d 1007 at 1018.

⁶⁵ Kampachi Farms EA, *supra* note 3, at 39.

⁶⁶ *Id.*

⁶⁷ 40 C.F.R. 122.24(c).

⁶⁸ *Taylor Resources*, 299 F.3d 1007 at 1018, fn 11.

⁶⁹ 42 U.S.C. § 4332(C).

⁷⁰ 33 C.F.R § 230.7(a).

⁷¹ *Id.* § 230.11.

⁷² See U.S. Army Corps of Engineers, Honolulu District, Public Notice of Application for Permit POH-2012-00016 (Mar. 12, 2013), available at <http://www.poh.usace.army.mil/Media/PublicNotices/tabid/972/Article/473651/poh-2012-00016.aspx> [hereinafter Velella Gamma Notice].

B. Endangered Species Act (ESA)

Section 7 of the Endangered Species Act (ESA) requires federal agencies to “insure that any action authorized, funded, or carried out by such 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 [critical] habitat.”⁷³ If an agency’s action may adversely affect a marine species protected under the ESA, the agency must consult with NMFS or the U.S. Fish and Wildlife Service (FWS), depending on the species affected, before taking action. Section 7 consultations may occur in conjunction with other environmental reviews, such as the preparation of an EA or EIS pursuant to NEPA.

Consultation under § 7 usually begins with informal consultation. If during informal consultation, the federal agency determines, with the written concurrence of NMFS or FWS, that the action is not likely to adversely affect listed species or critical habitat, no further action is necessary.⁷⁴ However, if the agency action is likely to adversely affect listed species or critical habitat, formal consultation with NMFS or FWS is required.⁷⁵

During formal consultation, the consulting agency evaluates the potential effects of the action on listed species or critical habitat and details its findings in a Biological Opinion. If NMFS or FWS concludes that the proposed agency action is likely to result in “jeopardy” or “adverse modification of critical habitat,” the Biological Opinion will identify “reasonable and prudent alternatives” the federal agency can implement to minimize the potential harm.⁷⁶ Following the issuance of a Biological Opinion, the federal agency determines how to proceed. If jeopardy or adverse modification is likely, the federal agency may decide to implement the “reasonable and prudent alternatives,” modify the project, decline to proceed, or disagree with the consulting agency and apply for an exemption under other provisions of the ESA.

Because the ocean is home to many threatened and endangered species, such as whales, turtles, and seabirds, § 7 Consultation will likely be triggered by permit applications for aquaculture operations in federal waters. The extent of that consultation, however, will depend on the design of the project and its potential impact on species protected by the ESA.

C. Magnuson-Stevens Fishery Conservation and Management Act: Essential Fish Habitat

In addition to consulting with NMFS on potential impacts to endangered species, federal agencies must consult with NMFS “with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat.”⁷⁷ As with ESA § 7 consultation, Essential Fish Habitat (EFH) consultation can be combined with other environmental reviews. During consultation, the Councils may comment on and make recommendations to NMFS and any federal or state agency concerning an activity that may affect the EFH of a fishery resource under its authority.⁷⁸ If NMFS receives information from a Council, another agency, or determines from other sources that the action would adversely affect EFH, NMFS is required to recommend measures that can be taken by the federal agency to conserve the habitat in question.⁷⁹

⁷³ 16 U.S.C. § 1536(a)(2).

⁷⁴ 50 C.F.R. § 402.13(a).

⁷⁵ *Id.* § 402.14(a).

⁷⁶ *Id.* § 402.14(h)(3).

⁷⁷ 18 U.S.C. § 1855(b)(2).

⁷⁸ *Id.* § 1855(b)(3)(A).

⁷⁹ *Id.* § 1855(b)(4)(A).

Within 30 days of receiving a recommendation from NMFS, the agency must provide a detailed written response that includes “a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on such habitat. In the case of a response that is inconsistent with the recommendations of the Secretary [of Commerce], the Federal agency shall explain its reasons for not following the recommendations.”⁸⁰

D. National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires federal agencies undertaking projects, including the issuance of permits, to “take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register [of Historic Places].”⁸¹ In addition, federal agencies must provide the Advisory Council on Historic Preservation (Advisory Council) and other interested parties, such as State Historic Preservation Officers, with the opportunity to comment.⁸² Usually, the § 106 process is coordinated with other required agency reviews, such as the district engineer’s review of a § 10 permit. Federal agencies are encouraged to insure that all NEPA documents include “appropriate scoping and identification of historic properties, assessment of effects upon them, and consultation leading to resolution of any adverse effects.”⁸³

In very broad terms, the § 106 process works as follows. The federal agency proposing the action must identify historic property within the area of potential effects, if any, and the potential effects.⁸⁴ If the federal activity is a type that does not have the potential to adversely affect historic property, or if no historic property is present, no further actions are required under § 106 beyond providing documentation of the agency’s findings to the Advisory Council and other consulting parties for review and comment.⁸⁵ However, if the undertaking would have adverse effects,⁸⁶ the consultation process continues and the agency must “develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties.”⁸⁷ While the federal agency must take the consulting parties’ and the Advisory Council’s comments into account during the decision-making process, the final decision about whether to take action remains with the action agency.⁸⁸

The permitting of a finfish culture operation in federal waters might trigger § 106 consultation. The § 106 process, for example, occurred during the permitting process for the Cape Wind project in federal waters off the coast of Nantucket because there was a disagreement between the Minerals Management Service and the Massachusetts State Historic Preservation Officer and other entities

⁸⁰ *Id.* § 1855(b)(4)(B).

⁸¹ 16 U.S.C. § 470f.

⁸² *Id.*

⁸³ 36 C.F.R. § 800.8(a)(3).

⁸⁴ *Id.* § 800.4(a).

⁸⁵ *Id.* § 800.3(a)(1).

⁸⁶ “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.” *Id.* § 800.5(a)(1).

⁸⁷ *Id.* § 800.6(a)(1).

⁸⁸ *Id.* § 60.2(a).

regarding whether Nantucket Sound was eligible for listing in the National Register.⁸⁹ Consultation, however, was not required with respect to the Velella Gamma Trial. After reviewing the National and State Registers of Historic Places, the Corps found no historic properties in the vicinity of the worksite and “determined that the proposed work has no potential to cause effect to any historic property.”⁹⁰

E. U.S. Coast Guard

Offshore finfish culture systems would require buoys, lights, beacons or other signals to mark its location. Consultation is therefore required with the U.S. Coast Guard. The CuPod and moored vessel used by Kampachi Farms must comply with applicable Coast Guard regulations, such as the lighting requirements for moored vessels found in 33 C.F.R. § 82.5. Fixed structures, such as a submerged cage array, might require an applicant to establish and maintain a Private Aid to Navigation (PATON).

Before establishing a structure in U.S. waters that may interfere with or restrict marine navigation, the owner or operator shall apply for Coast Guard authorization to mark the structure with lights and other signals for the protection of navigation.⁹¹ In determining whether an obstruction, such as a structure, is a hazard to navigation for the purposes of marking, the Coast Guard considers such things as the location of the obstruction in relation to the navigable channel and other navigational traffic patterns, the type of vessel traffic in the area, and the depth of water over the obstruction.⁹² PATONs must adhere to the permitting requirements outlined in regulations issued by the Coast Guard.⁹³

IV. State Authority

A. Coastal Zone Management Act

The issuance of a federal permit for an offshore finfish culture operation, whether by the Corps under § 10 or NMFS under a FMP, may trigger federal consistency review under the Coastal Zone Management Act (CZMA). The CZMA states that federal agency activities, including the issuance of permits, “within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs.”⁹⁴ The CZMA, therefore, provides a mechanism for states to review and influence federal permitting decisions. Because aquaculture operations in federal waters, especially those occurring close to the boundary between federal and state waters (generally 3 nm from shore), have the potential to affect land or water uses or the natural resources of a state’s coastal zone, permit applicants may need to prepare and submit consistency certifications to the adjacent state for review.

NOAA regulations require states to develop a list of federal licenses or permits that they wish to review for consistency.⁹⁵ Such lists typically include Corps § 10 and § 404 permits, as well as EPA § 402 permits. Applicants for listed permit activities taking place within the state’s coastal zone must “provide in the application to the licensing or permitting agency a certification that the proposed activity

⁸⁹ National Park Service, Determination of Eligibility Notification re: Nantucket Sound (January 2, 2010), *available at* <http://www.nps.gov/nr/publications/guidance/NantucketSoundDOE.pdf>.

⁹⁰ Velella Gamma Notice, *supra* note 35.

⁹¹ 33 C.F.R § 64.21.

⁹² *Id.* § 64.31.

⁹³ *Id.* §§ 66.01-1 – 66.01-55.

⁹⁴ 16 U.S.C. § 1456(c)(1)(A).

⁹⁵ 15 C.F.R. § 930.53(a).

complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program."⁹⁶ After receipt of its copy of the applicant's certification, states have six months to review the consistency certification and notify the responsible agency as to whether it concurs with or objects to the applicant's consistency certification.⁹⁷ States may also issue a "conditional concurrence."⁹⁸ In its concurrence letter to the federal agency, the state must explain "why the conditions are necessary to ensure consistency with specific enforceable policies of the management program."⁹⁹ If the federal agency and the applicant are unwilling to modify the application and project proposal pursuant to the state's conditions, the state's conditional concurrence is treated as an objection.¹⁰⁰

The situation is a little more complex for applicants in federal waters. Applicants are only required to submit consistency certifications for activities outside a state's designated coastal zone when the project location falls within a geographic area described in the state's list of federal license and permit activities subject to consistency review.¹⁰¹ If a state has not set forth a geographic location for a particular listed activity, the federal license or permit activity is considered an "unlisted activity" and different procedures must be followed.

Consistency certifications are only required for unlisted activities if the state receives approval from the Director of NOAA's Office of Ocean and Coastal Resource Management (OCRM) to conduct a consistency review. A state must request approval to review an unlisted activity within 30 days of receiving notice of the permit application.¹⁰² "The sole basis for the Director's approval or disapproval of the State agency's request will relate to whether the proposed activity's coastal effects are reasonably foreseeable."¹⁰³ In its request, the state must therefore provide support for its assertion that coastal effects are reasonably foreseeable.¹⁰⁴ The federal agency and applicant have 15 days to submit comments to the Director in response to the state's request.¹⁰⁵

In general, the Director is to issue a decision within 30 days of the state's notice.¹⁰⁶ If the Director disapproves the state's request, consistency review is not required and the federal agency may move ahead with the permitting process. If the state's request is approved, however, the federal agency and applicant must comply with the consistency certification procedures. The applicant must amend the permit application by including a consistency certification and provide that certification, along with the necessary data and information, to the state for review.¹⁰⁷

When the consistency certification procedures apply, states effectively have a veto over federal permits. If the state objects, the federal agency may not issue the permit. Applicants may appeal a negative consistency determination to the Secretary of Commerce who may override the state's objection if he finds "that the activity is consistent with the objectives of [the CZMA] or is otherwise necessary in the interest of national security."¹⁰⁸ Because a state's objection to a consistency certification could prevent the project from moving forward completely, federal regulations direct

⁹⁶ 16 U.S.C. § 1456(c)(1)(C)(3)(A).

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ 15 C.F.R. § 930.4(a)(1).

¹⁰⁰ *Id.* § 930.4(b).

¹⁰¹ *Id.*

¹⁰² *Id.* § 930.54(b).

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* § 930.54(c).

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* § 930.54(e).

¹⁰⁸ *Id.*

federal agencies and applicants “to develop conditions that, if agreed to [by the State] during the State agency’s consistency review period and included in a Federal agency’s final decision ... would allow the State agency to concur with the federal action.”¹⁰⁹

Consistency review of activities in federal waters will differ among states and projects. Not all states will seek to exercise their CMZA authority and not all who do will receive approval to review unlisted activities. The recent permitting experiences of three aquaculture projects proposed by Northeast Massachusetts Aquaculture Center (MA, shellfish), KZO Sea Farms (CA, shellfish), and Kampachi Farms (HI, finfish) are illustrative. In all three cases, the § 10 RHA permits were unlisted activities due to a lack of geographic descriptions.

In 2012, the California Coastal Commission (CCC) requested approval to review the § 10 RHA permit application of KZO Sea Farms to construct a shellfish farm approximately four miles offshore of Huntington Beach, California.¹¹⁰ In its request, the CCC argued that the proposed project would have reasonable foreseeable effects on wildlife, habitat, and uses of the California coastal zone due to, among other things, the risk of entanglement, ship strikes, marine debris, and displacement of fishing effort.¹¹¹ KZO Sea Farms submitted comments in response to the state’s request, asserting that the proposed impacts were unlikely to occur. Despite finding that KZO Sea Farms “makes a convincing argument that the direct impacts to the coastal resources ... are minimal and insignificant,” OCRM approved the CCC’s request to conduct a consistency review.¹¹² When seeking to review an unlisted activity, “a state need only show that coastal effects are reasonably foreseeable.”¹¹³ According to OCRM, if there is a reasonably foreseeable risk that cannot be ruled out on the basis of experience, the standard of review has been met by the state.¹¹⁴ KZO Sea Farms filed a consistency certification in 2013 and received the CCC’s concurrence in January 2014 after agreeing to incorporate thirteen conditions proposed by CCC staff.¹¹⁵

A year later, Massachusetts sought to review a similar shellfish project in federal waters off the Massachusetts coast. In March 2013, OCRM denied Massachusetts’s request to review the Northeast Massachusetts Aquaculture Center’s § 10 RHA permit application. OCRM found that the state failed to meet its burden of showing reasonably foreseeable effects to the state’s coastal zone.¹¹⁶ The denial was based primarily on the state’s failure to clearly articulate how the project would impact state coastal

¹⁰⁹ *Id.* § 930.4(a).

¹¹⁰ See Letter from Alison Dettmer, Deputy Director, Energy, Ocean Resources and Federal Consistency Division, California Coastal Commission, to Donna Wieting, Acting Director, Office of Ocean and Coastal Resource Management, National Oceanic & Atmospheric Administration (Mar. 22, 2012) (on file with author).

¹¹¹ *Id.*

¹¹² Letter from Margaret Davidson, Acting Director, Office of Ocean and Coastal Resource Management, to Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division, California Coastal Commission (June 19, 2012) (on file with author).

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ See Memorandum from Cassidy Teufel, Env. Scientist, California Coastal Commission, to Coastal Commissioners and Interested Parties re: Addendum to Staff Report for Consistency Certification CC-035-12, KZO Sea Farms (Jan. 7, 2014), available at <http://documents.coastal.ca.gov/reports/2014/1/W16a-1-2014.pdf>.

¹¹⁶ See Letter from Margaret Davidson, Acting Director, Office of Ocean and Coastal Resource Management, to Bruce Carlisle, Director Office of Coastal Zone Management, Executive Office of Energy and Environmental Affairs (Mar. 19, 2013) (on file with author).

resources and uses. Massachusetts' request included only general statements of potential effects at the project site.¹¹⁷

Most recently, in October 2013, Hawaii determined that a federal consistency review was not required with respect to Kampachi Farms' § 10 RHA permit and Special Coral Reef Ecosystem Fishing Permit for the Velella Gamma trial. The state's decision appears to have been based solely on the location of the project. The state concluded a review was not required "because the ocean aquaculture facility and operation will occur outside of the jurisdiction of the Hawaii CZM Program's enforceable policies."¹¹⁸

Key Points: Permits for aquaculture projects in federal waters are subject to state consistency review, most likely as unlisted projects. Most applicants will not be required to submit consistency certifications with their applications. However, they should be prepared to work with the states in the event a state seeks approval from OCRM to review the project for consistency. As illustrated by the KZO Sea Farms case, arguments can be made that aquaculture operations in federal waters will have reasonably foreseeable effects in a state's coastal zone, which would merit state consistency review of an unlisted project.

V. Property Rights and Liability Issues

For aquaculture operations in state waters, a state may grant an operator property rights to a particular parcel of water bottom or water column through an aquaculture lease. Generally, a lease conveyance would grant the lessee exclusive cultivation and harvesting rights over any fish cultured under the lease. The fish cultured under the lease are the exclusive property of the lessee, who may limit public access to protect the aquaculture product.

Currently, no federal agency has the authority to issue leases for aquaculture in federal water and, therefore, no leasing process is in place. Rather, an aquaculture operation would receive an RHA § 10 permit. An RHA permit, "does not convey any property rights, either in real estate or material, or any exclusive privileges."¹¹⁹ In fact, the Corps regulations require § 10 permit applications to be signed as an "affirmation that the applicant possesses or will possess the requisite property interest to undertake the activity proposed in the application."¹²⁰ However, at this time, there is no mechanism in place to grant property interests in offshore waters for aquaculture purposes.

A similar property rights issue arose in the Corps' grant of a permit for the construction of a data tower for the Cape Wind project. At the time, there was no program to grant leases for renewable energy projects on the Outer Continental Shelf (OCS). A group challenged the Corps' issuance of the permit on several grounds, one of which being that the Corps should not have granted the permit, as there was no mechanism in place to grant a property interest on the OCS for renewable energy projects.¹²¹ The U.S. Court of Appeals for the First Circuit upheld the district court's decision finding that the regulations only required the applicant to affirm that it would possess the necessary property

¹¹⁷ See Letter from Bruce Carlisle, Director Office of Coastal Zone Management, Executive Office of Energy and Environmental Affairs, to Margaret Davidson, Acting Director, Office of Ocean and Coastal Resource Management (Jan. 4, 2013) (on file with author).

¹¹⁸ See Letter from Jesse K. Souki, Director, Office of Planning, State of Hawaii, to George P. Young, Chief, Regulatory Branch, U.S. Army Corps of Engineers, Honolulu District (Mar. 25, 2013) (on file with author); Letter from Jesse K. Souki, Director, Office of Planning, State of Hawaii, to Michael D. Tosatto, Regional Administrator, Pacific Islands Regional Office, National Marine Fisheries Service (Oct. 28, 2013) (on file with author).

¹¹⁹ 33 C.F.R. § 320.4(g)(6).

¹²⁰ *Id.* § 325.1(d)(7).

¹²¹ *Alliance to Protect Nantucket Sound, Inc. v. U.S. Dep't of the Army*, 288 F. Supp. 2d 64 (D. Mass. 2003).

interest and that the Corps lacked the authority to consider whether the applicant did in fact have the requisite property interest during its public interest review.¹²² The U.S. Department of Interior has since established a framework to grant leases and other property interests for renewable energy projects on the OCS.¹²³ At this point, an offshore finfish aquaculture facility would lack the property interest required by Corps regulations; however, as illustrated in the Cape Wind case, this would not be a barrier for the Corps in issuing an RHA § 10 permit for an aquaculture operation.

While the recipient of an RHA § 10 permit may not have a real property interest in the ocean space at issue, an owner of the aquaculture facility would maintain personal property rights over the cultured fish and aquaculture facilities. “Personal property” is defined as “everything that is the subject of ownership, not coming under denomination of real estate,” while “real property” is defined as “land, and generally whatever is erected or growing upon or affixed to land.”¹²⁴ Cultured finfish would receive the same property rights protections available to other personal property. For example, if someone were to take the fish or damage the aquaculture facilities, then he or she would be subject to private civil actions (lawsuits) and potentially criminal prosecution by appropriate authorities, most likely the federal government as the aquaculture lease would be on federally managed land. Presumably, an aquaculture operator could get insurance coverage to cover damage and theft. Insurance could also reduce an operator’s exposure to liability for damage to other people’s property caused by his aquaculture gear. However, as noted in the U.S. Commission on Ocean Policy Final Report, due to the mix of regulations and the lack of a guarantee of exclusive use of space in offshore areas, insurance coverage may be “difficult to obtain.”¹²⁵

VI. Summary

Under the current legal framework, NFMS and the eight Regional Fishery Management Councils have authority to regulate fisheries in federal waters, including aquaculture. If a federally managed species is being cultured, aquaculture operators must secure a permit from NMFS before culturing that species. If a non-federally managed species is being cultured, NMFS’ role would be limited to ESA and EFH consultations with the Corps during the RHA § 10 permitting process. Consultations with other agencies, such as the Bureau of Ocean Energy Management and the Food and Drug Administration, may also be necessary depending on the location and design of the project. For operations growing at least 100,000 pounds of fish a year, an NPDES permit would also be required from the EPA. In addition, states would have the right to review the project pursuant to the federal consistency provisions of the CZMA.

¹²² *Alliance to Protect Nantucket Sound, Inc. v. U.S. Dep’t of the Army*, 398 F.3d 105, 112 (1st Cir. 2005).

¹²³ For more information on this leasing process, see *Renewable Energy*, BUREAU OF OCEAN ENERGY MANAGEMENT, <http://www.boem.gov/Renewable-Energy/> (last visited June 13, 2014).

¹²⁴ *Black’s Law Dictionary* 564 (2nd Pocket Ed. 2001).

¹²⁵ FINAL REPORT ON THE U.S. COMMISSION OF OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY 333 (2004).