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William J. Brennan

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TO BE OR NOT TO BE INVOLVED: AQUACULTURE MANAGEMENT OPTIONS FOR THE NEW ENGLAND FISHERY MANAGEMENT COUNCIL

*William J. Brennan**

I. INTRODUCTION

In 1995, several issues arose which prompted the New England Fishery Management Council (the Council) to assess its ability to administer siting proposals for aquaculture and other similar projects in the Exclusive Economic Zone (EEZ). At the request of the Aquaculture Committee Chairman, this author prepared a report for the Council entitled "Background Information and Recommendations for New England Fishery Management Council Development of an Aquaculture Policy and Management Strategy."[1] Aquaculture is positioned to move

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* M.A., Marine Policy, University of Rhode Island; B.S., Marine Biology, University of Maine. William Brennan is in private practice as a marine and environmental affairs specialist. Previously he was the Commissioner of the Maine Department of Marine Resources. He has also been a legislative assistant in the U.S. House of Representatives and a marine scientist with the National Marine Fisheries Service. This Commentary was adapted from a paper presented on Thursday, May 9, 1996, at the Open Ocean Aquaculture Conference in Portland, Maine.

1. WILLIAM J. BRENNAN, BACKGROUND INFORMATION AND RECOMMENDATION FOR NEW ENGLAND FISHERY MANAGEMENT COUNCIL DEVELOPMENT OF AN AQUACULTURE POLICY AND MANAGEMENT STRATEGY (1995). This report addresses: (1) the Council's legal authority, responsibility, and management options relative to aquaculture in the EEZ; (2) the Council's relationship to various federal agencies involved with aquaculture; (3) aspects of aquaculture management regimes in adjacent coastal states that may be applicable to the Council's activity; (4) mechanisms which the Council may use to allow, prohibit, or otherwise regulate aquaculture ventures in federal waters; and, (5) criteria to evaluate individual projects. *See generally id.* As many of the federal and state agencies whose programs are covered in the report were participants in the Open Ocean Aquaculture Conference, this Commentary will focus on the issues raised and recommen-

into the EEZ on a large scale basis, and the Council has an opportunity to manage this growth. This Commentary will explore the legal authority of the Council to affect aquaculture and its corresponding management options. It then identifies issues that need to be considered when formulating a management strategy and concludes that Council action will benefit aquaculturists and traditional fishermen alike.

This piece will start with a brief overview of the Council's legal authority vis-à-vis aquaculture. In discussing the legal authority over aquaculture, it is also important to bear in mind that no single federal agency has been delegated or statutorily charged with lead or overall responsibility to administer EEZ-based aquaculture. This situation adds to the confusion of project developers who must complete an array of permit applications and meet a variety of requirements, some duplicative, in order to undertake an EEZ-based aquaculture operation. Furthermore, unlike many of the coastal states,[2] the federal government does not have the legal authority to lease, license, or grant to the aquaculturist the proprietary right to use what is in essence public property.[3] As of September 1995, the Council had not made a formal decision to take an active role in aquaculture management, hence the title of this Commentary, "To Be or Not to Be Involved."

II. LEGAL AUTHORITY

In the opinion of NOAA General Counsel, with the concurrence of the Justice Department, aquaculture facilities are subject to the Magnuson Fishery Conservation and Management Act (Magnuson Act).[4] Accordingly, the New England Fishery Management Council can, at its discre-

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dations made in the report.

2. *Id.* at 7.

3. *Id.* at 11. Many believe that the legal protections afforded entrepreneurs and financiers through such proprietary rights are essential to fostering investment in the industry. *See* BRUCE H. WILDSMITH, AQUACULTURE: THE LEGAL FRAMEWORK 8-10 (1982).

4. 16 U.S.C. §§ 1801-1882 (1994), *amended by* Sustainable Fisheries Act, Pub. L. No. 104-297, 110 Stat. 3559 (1996); Memorandum from Jay S. Johnson, N.O.A.A. Deputy General Counsel, and Margaret F. Haues, N.O.A.A. Assistant General Counsel for Fisheries, to James W. Brennan, N.O.A.A. Acting General Counsel 1 (Feb. 7, 1993) (discussing the regulation of Aquaculture in the EEZ) *in* WILLIAM J. BRENNAN, *supra* note 1, at app. B, 1; Letter from Allen E. Peterson, Acting Regional Director, National Marine Fisheries Service-Northeast Region, U.S. Army Corps of Engineers, New England Division 4 (June 9, 1994) *in* WILLIAM J. BRENNAN, *supra* note 1, at app. C, 1.

tion, subject aquaculture facilities within the exclusive economic zone to regulation. The Magnuson Act provides discretionary authority to regulate fishing within the EEZ and delegates to regional fishery management councils the authority to prepare fishery management plans (FMPs) that, if approved by the Secretary of Commerce, can be implemented and enforced through federal regulation.[5] Domestic fishing is unrestricted unless and until an FMP is prepared, approved, and implemented. For the purposes of this Commentary, aquaculture is assumed to be a domestic fishing activity. However, there are provisions in the Magnuson Act which require separate permits for foreign aquaculture in the EEZ,[6] and the Council should contemplate the possibility of foreign aquaculture proposals.

The Act's broad definition of "fishing" encompasses "the catching, taking, or harvesting of fish . . . or any operations at sea in support"[7] of such activity that may result in the catching, taking or harvesting of fish.[8] Because harvesting implies the gathering of a crop, just as aquaculture facilities engage in the "harvest" of fish from the EEZ, any aquaculture facility located in the EEZ is within the purview of the Act and, therefore, subject to management plans developed by a regional council. The Vessel Documentation Act[9] further supports the theory that aquaculture is considered fishing. The Act's definition of "fisheries" includes "planting, cultivating, catching, taking, or harvesting fish . . . in the exclusive economic zone."[10]

Furthermore, any vessel, including a barge, used to support aquaculture activities and facilities is considered a fishing vessel under the Magnuson Act[11] and is subject to regulation beyond documentation and endorsement at the discretion of a regional fishery management council.[12] Thus, a structure used to support and anchor net pens for finfish aquaculture would also be subject to the Magnuson Act as a "fishing vessel,"

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5. 16 U.S.C. §§ 1852(h), 1854(a) (1994), *amended by* §§ 107(f), 109(a), 110 Stat. at 3572, 3581.

6. 16 U.S.C. § 1824(b) (1994), *amended by* § 105(d), 110 Stat. at 3564-65. *See also* Memorandum from Jay S. Johnson and Margaret F. Hayes to James W. Brennan, *supra* note 1, at app. B, n.3.

7. 16 U.S.C. § 1802(10) (1994).

8. *Id.*

9. 46 U.S.C. §§ 12101-12123 (1994).

10. 46 U.S.C. § 12101(a)(1).

11. *See* 16 U.S.C. § 1802(11) (1994).

12. 16 U.S.C. § 1853(b)(1) (1994).

which is broadly defined by the Act to include "other craft which is used for . . . aiding or assisting . . . any activity relating to fishing, including . . . storage."[13]

III. MANAGEMENT OPTIONS

The management options available to the New England Fishery Management Council are limited to essentially two management mechanisms. First, the Council can prepare a FMP amendment for the proposed aquaculture venture that either exempts or permits activities that are otherwise prohibited.[14] The Council can also prepare an amendment to prohibit the proposed aquaculture activities if it can demonstrate that the project poses adverse impacts to the fishery resource, its habitat, or the fishery management objectives for that species.[15] An FMP amendment may address certain obstacles such as minimum fish size or other restrictions on the use of certain gear types, etc., and thus can grant specific exemptions and permissions to undertake the activities proposed by the developer.[16] Each plan amendment, however, must adhere to all of the Magnuson Act's requirements.[17] When the administrative time frame and necessary workload is taken into consideration, this management approach is unreasonable given the likelihood that additional aquaculture proposals will be forthcoming and will require subsequent project-specific amendments to the same FMP.

The second and preferable alternative to the project-specific approach of the FMP amendment process is an amendment that provides blanket permission or exemption from provisions of an FMP to accommodate aquaculture generically. Incorporation of this "framework" mechanism would facilitate consideration of individual projects.[18] The framework mechanism enables the establishment of project-specific special management zones where necessary and provides the Council with the ability to tailor conditions or restrictions it deems necessary to meet the conserva-

13. 16 U.S.C. § 1802(11).
14. *See* 16 U.S.C. § 1852(h) (1994), *amended by* § 107(f), 110 Stat. at 3572.
15. *See* 16 U.S.C. § 1853(b)(4) (1994).
16. 16 U.S.C. § 1853(b)(3)-(4) (1994), *amended by* § 108(c)(1), 110 Stat. at 3575.
17. 16 U.S.C. § 1853(a) (1994), *amended by* §§ 108(a)-(b), 110 Stat. at 3574-75.
18. Framework provisions allow a certain degree of flexibility to modify fishery management plans after they have been adopted. Framework mechanisms have become more commonly used by the New England Fishery Management Council as its plans have become more complex. *See* BRENNAN, *supra* note 1, at 15.

tion objectives of the FMP in question. The framework mechanism also provides the Council with the opportunity to receive the necessary public comment concerning the specific project under consideration. Over the long run this approach is more time efficient than a project-specific amendment, especially if a uniform application with parameters for project consideration is established as part of the framework mechanism.

It is not unreasonable to assume, particularly with advances in ocean and aquaculture technology, that research projects or commercial scale aquaculture ventures will eventually be proposed which involve all of the species currently under the New England Council's management. In fact, there are fishery resources in the EEZ not currently under the Council's management that may be of interest to aquaculturists who have successfully conducted ventures involving these species in coastal waters.[19] The burden on the Council to amend existing plans and establish new plans could be significant if not overwhelming, particularly if interest in EEZ-based aquaculture increases. Given this scenario, the Council would be far better served by developing one overarching aquaculture FMP which would enable the Council to administer all forms of aquaculture that may be proposed for EEZ waters.

A general aquaculture FMP could greatly reduce the burden on the New England Fishery Management Council to amend existing FMPs to accommodate projects for various species under its management. This approach would, in essence, incorporate all permissions or exemptions for aquaculture activities that are otherwise prohibited in all existing FMPs and would also enable the use of a framework mechanism to address individual projects as presented above. However, this approach does not appear to be available due to the limitations of the Magnuson Act. The Act authorizes a council to prepare management plans for "each fishery . . . that requires conservation and management[,]"[20] and defines a fishery as "one or more stocks of fish which can be treated as a unit for purposes of conservation and management."[21] Although the "harvest" of fish via aquaculture is considered to be equivalent to fishing and is subject to council management,[22] aquaculture per se is not a "fishery" as defined by

19. One example of a coastal resource with potential for EEZ aquaculture beyond the scope of a current FMP is the Blue Mussel.

20. 16 U.S.C. § 1852(h)(1) (1994), *amended by* § 107(f)(1) 110 Stat. at 3573.

21. 16 U.S.C. § 1802(8)(A) (1994).

22. *See supra* note 7, and accompanying text.

the Magnuson Act.[23] As such, a council does not appear to have the authority to prepare an aquaculture FMP. Furthermore, as an FMP of this nature would be primarily process oriented, it would run afoul of prohibitions contained in the Magnuson Act guidelines.[24]

Many aspects of aquaculture such as the engineering and design of surface structures and mooring systems, the biological and chemical evaluations of waste discharge, and navigational issues associated with structure location, are technical in nature and fall under the purview of several federal agencies.[25] No governmental entity has yet assumed responsibility to manage the issues of privatization associated with aquaculture and potential fishery interactions. The issues of privatization are central to the aquaculture debate, and as the New England Fishery Management Council has significant expertise in addressing gear conflicts,[26] the Council should extend its oversight to issues associated with the allocation of space in the EEZ for aquaculture projects proposed within its geographical area.

The Magnuson Act provides a council with discretionary authority to "designate zones where, and periods when, fishing shall be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear."[27] These zones, or Special Management Areas (SMAs),[28] have been used often by the New England Council in a variety of management plans—mostly to close areas for the protection of spawning aggregates of fish—and could certainly be used to afford aquaculture ventures a modicum of exclusivity. Considering that aquaculture ventures contemplate proprietary, exclusive, or at least preemptive use of public waters, it is not unreasonable for the Council to discuss whether the use of "rents" or

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23. *See* 16 U.S.C. § 1802(8)(A) (1994).

24. *See* 16 U.S.C. § 1851(a)(3) (1994) (National Standard 3), *amended by* § 106(a), 100 Stat. at 3570. The Magnuson Act guidelines are based on the national standards. 16 U.S.C. § 1851(b) (1994). Under the Guidelines for Fishery Management Plans, National Standard 3 provides that "an individual stock of fish shall be managed as a unit throughout its range." 50 C.F.R. § 602.13 (1996).

25. Federal agencies involved with the regulation of aquaculture include: the Army Corps of Engineers, the Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Department of Agriculture, and the National Marine Fisheries Service. *See generally*, Ronald J. Rychlak & Ellen M. Peel, *Swimming Past the Hook: Navigating Legal Obstacles in the Aquaculture Industry*, 23 ENVTL. L. 837 (1983).

26. *See* BRENNAN, *supra* note 1, at 11-12.

27. 16 U.S.C. § 1852(b)(3); *see* BRENNAN, *supra* note 1, at 11-12, app. A.

28. *See* BRENNAN, *supra* note 1, at app. A.

"royalties" are appropriate in the context of aquaculture; rather than permit fees, which can not exceed the administrative costs incurred in issuing the permits.[29]

IV. ISSUES

The advent of proposals to undertake aquaculture research and development projects in the EEZ raises a number of issues, many of which have been addressed to varying degrees at the coastal state level where aquaculture development has been focused.[30] These issues break along many lines and include difficult questions concerning the privatization of a public resource and the preemptive use of areas that may have been historically utilized by conventional fishing gear. There are also biological questions concerning habitat, genetics, water quality, the use of antibiotics, and whether environmental monitoring is appropriate or necessary.[31] Additionally, there are technical questions regarding the siting and placement of the structures necessary to support offshore aquaculture activities within navigable waters, the minimization of pen-raised products escaping into the wild, and their interactions with endangered and threatened species.[32] Other issues concern the complexity of the regulatory process and the coordination of oversight activities by various federal agencies.[33] Finally, there are a number of legal questions concerning rights, obligations, protection, and compliance.[34]

The New England Fishery Management Council's legal authority to manage aquaculture in the EEZ appears to be established, although it is not required to do so as other federal agencies possess the necessary permitting authority.[35] The Council, however, will be petitioned by

29. *See* NATIONAL RESEARCH COUNCIL, MARINE AQUACULTURE, OPPORTUNITIES FOR GROWTH 56 (1992).

30. BRENNAN, *supra* note 1, at 7.

31. *See generally*, NATIONAL RESEARCH COUNCIL, *supra* note 29, at 92-107.

32. *See id.* at 137-40, 101-06.

33. Tim Eichenberg & Barbara Vestal, *Improving the Legal Framework for Marine Aquaculture: The Role of Water Quality Laws and the Public Trust Doctrine,* 2 TERR. SEA J. 339, 395, 399 (1992).

34. *Id.* at 339-40.

35. *See* BRENNAN, *supra* note 1, at 11. *See also* Rychlak & Peel, *supra* note 25, at 848-54 (discussing authority of Environmental Protection Agency to issue permits for aquaculture facilities under section 404 of the Clean Water Act, for the discharge of dredged or fill material, and under the National Pollutant Discharge Elimination System program of section 402 of the Clean Water Act, for the discharge of pollutants; and the

developers to amend existing FMPs to permit certain operations, such as the handling of undersize fish, which are otherwise prohibited or restricted.[36]

In addition to its obligation to amend existing management plans, the Council, under the National Environmental Policy Act,[37] would be relegated to advisory status concerning aquaculture proposals in the event that the Council opts not to develop an aquaculture focused management mechanism.[38] In this situation, the Council would be disadvantaged in attempts to manage the user conflicts which overshadow all fishery management activities, leaving this vexing issue to be addressed by other federal agencies which have neither the expertise, or more importantly, a forum familiar to the various stakeholders within which the attendant issues can be presented and discussed.

Furthermore, it is important to reiterate that neither the Council nor the Secretary of Commerce has the legal authority to convey, through lease or other vehicle, proprietary rights to the ocean bottom or water column above.[39] From the perspective of an aquaculturist, the inability to secure exclusive or proprietary rights can be a significant deterrent to investors and thus inhibit development.[40] As the Council has already generally experienced, the preemptive use of ocean bottom areas and the "privatization" of a public resource are issues which generate significant controversy, pitting traditional fishermen against aquaculturists.[41] The allocation of space, however, is the central issue in the debate over aquaculture in the EEZ, and this debate should be moderated by the New England Fishery Management Council, which is the only entity in the region with the necessary expertise, experience, and statutory mechanisms to effectively deal with the issue.

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authority of the Army Corps of Engineers to issue permits under section 10 of the Rivers and Harbors Act of 1899, for facilities constituting obstructions to navigable waters).

36. Prior to the enactment of the Sustainable Fisheries Act in October 1996, the Council also maintained an obligation to comment upon projects affecting fishery habitat with the jurisdiction of the Council. *See* 16 U.S.C. § 1852(1)(B) (1994), *repealed by* § 107(g), 110 Stat. at 3572.

37. 42 U.S.C. § 4321-4370d (1994).

38. *See* 42 U.S.C. § 4532(C) (1994). *See also* 40 C.F.R. § 1501.6(b) (1995).

39. BRENNAN, *supra* note 1, at 11.

40. *See* WILDSMITH, *supra* note 3, at 93.

41. *See, e.g.*, Memorandum from New England Fishery Management Council Staff to the Sea Scallop Committee (May 23, 1996) (on file with the *Ocean and Coastal Law Journal*) (discussing relocation compromises between fishing community and proponents of sea scallop aquaculture project in federal waters off the coast of Martha's Vineyard).

The need for the Council to develop an aquaculture policy and management strategy for EEZ-based aquaculture projects is underscored by the prospect that debate over allocation of space will be renewed each time such a project is proposed. In addition, EEZ-based aquaculture is a component of the New England fisheries, for which the Council has management responsibility, and the Council should become involved. Furthermore, the likelihood that the Council's workload will be increased by aquaculture proposals—if FMPs are amended in a piecemeal fashion—should also provide substantial motivation for the Council to address this issue in a strategic fashion.

Based upon these factors, the Council should, as a first order of business, develop an aquaculture policy that will aid the development of an aquaculture management strategy. Additionally, the Council should be circumspect in determining which issues to address in formulating a management strategy, selecting only those that are clearly germane to the Council's fishery management role. Although this recommendation may appear to be self-evident, a brief reflection upon any past fishery management debate confirms that tangential and non-germane issues often interfere with discussion of the matter at hand. The Council's role in addressing potential fishery interactions encompasses the possible effects of aquaculture on traditional fisheries or management objectives of existing plans. In this context, the Council is also the most appropriate forum for the debate about allocation of space, resource utilization, and cost and benefit comparisons. However, issues such as genetic interactions, design of surface structures and mooring systems, water column chemistry and the like are beyond the scope of the Council's expertise and should be left to those agencies with the statutory responsibility and necessary expertise.

The history of federal regulation of aquaculture in the marine environment is relatively short and has mostly been confined to regulation of development in coastal state waters.[42] Due to the overlay of various state and federal requirements, the application and permitting process in this geographic area can be extremely complex.[43] To minimize the complexity, several states have or are in the process of developing a cooperative application and review procedure for aquaculture administration.[44] Many of the federal agencies that are involved with aquaculture are authorized

42. *See* BRENNAN, *supra* note 1, at 7-10.
43. Eichenberg & Vestal, *supra* note 33, at 395.
44. BRENNAN, *supra* note 1, at 7-10.

to enter into cooperative arrangements with other entities, including the Council, in the discharge of agency responsibility. Should the Council move forward to develop a role in EEZ-based aquaculture, it should do so with a view towards facilitating, rather than complicating, an already complex process. Accordingly, the Council should work closely from the outset with other cognizant federal agencies.[45]

The Council can help facilitate the process by positioning itself as the point of contact for potential aquaculture developers, and by providing information and federal permit application materials in a manner similar to the cooperative application and review procedure utilized by several state fishery resource agencies.[46] The Council's early involvement with individual project development will enable consultations with developers which could aid in avoiding projects or project elements that would otherwise pose conflicts with the Council's management activity. As locational matters are often the most significant hurdle for potential ventures to overcome, dealing with this matter at the outset could minimize some of the problems that are encountered when projects are presented to the public.

V. CONCLUSION

While the Council currently has taken little more than an advisory position in the developing debate, it cannot continue to overlook the growing interest in aquaculture as an investment opportunity and as an alternative to traditional fisheries. Nor can it overlook the fact that several federal agencies are increasing their involvement with EEZ-based aquaculture. The Council's involvement should be viewed by both aquaculture proponents and opponents alike as providing a more appropriate forum for debate about possible fishery interactions than the forum provided under the U.S. Army Corps of Engineers Section 10 process,[47] or under the Environmental Protection Agency's National Pollutant

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45. The Council should also appoint a representative to attend meetings of the Joint Subcommittee on Aquaculture, particularly its Task Force on federal regulatory involvement, established under the National Aquaculture Act of 1980, 16 U.S.C. §§ 2801-2810 (1994). *See* JOINT COMMITTEE ON AQUACULTURE, AQUACULTURE IN THE UNITED STATES: STATUS, OPPORTUNITIES, AND RECOMMENDATIONS 15 (1993).

46. *See, e.g.*, Eichenberg & Vestal, *supra* note 33, at 396-98 (discussing proposed joint permitting procedure in Maine).

47. The River and Harbors Act of 1899, 33 U.S.C. § 403 (1994).

Discharge Elimination System permit[48] reviews. The development of a Council aquaculture policy and management strategy could facilitate the development of EEZ-based aquaculture in a fashion that does not threaten the traditional fisheries and provides both sides with a more rational expectation of outcomes.

48. The Federal Water Pollution Control Act, 33 U.S.C. § 1342 (1994); 40 C.F.R. pt. 125 (1995).