

# U.S. Army Corps of Engineers Regulation of Offshore Aquaculture

Worldwide, capture fisheries are already fully, or near fully, exploited, but seafood demand continues to increase with a growing global population. As demand rises, aquaculture takes on an increasing importance to the world food supply, and future increases in demand will require increased aquaculture production. Production has expanded dramatically in recent years to meet increasing demand, but little of this growth has occurred in the United States. The U.S. government and aquaculture industry are seeking to stimulate domestic growth, including by promoting a new industry sector located in offshore waters subject to federal jurisdiction.

Care is needed to ensure that the benefits of offshore aquaculture development are not offset—or exceeded—by environmental impacts. Among other impacts, aquaculture facilities may discharge pollutants such as excess feed, fecal matter, chemicals, and parasites; escaped cultured fish and shellfish may interbreed or compete with native stocks; and aquaculture may lead to harm to predators and protected species, such as whales. Multiple regulatory programs must work together in a clear and effective framework for these impacts to be appropriately addressed and balanced against the benefits of offshore aquaculture development.

## Role of the Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps, or USACE) regulates construction of aquaculture facilities in federal ocean waters pursuant to its authority under section 10 of the Rivers and Harbors Act of 1899 (RHA, or section 10). The Corps also administers regulatory programs under two other authorities, including section 404 of the Clean Water Act (CWA) and section 103 of the Ocean Dumping Act (ODA), but these authorities do not apply to aquaculture facilities in federal ocean waters beyond three nautical miles from shore.

Each offshore aquaculture facility anchored to the seabed of the outer continental shelf (OCS) beyond three nautical miles from shore must obtain an individual permit from the Corps before it can be installed or begin operations anywhere in federal ocean waters. Use of general permits is currently unlikely for offshore aquaculture. Interagency consultation and public comment are required to obtain an individual permit, ensuring a minimum level of transparency in project review. After consultation and review, the Corps evaluates how



the direct, indirect, and cumulative impacts of the proposed activity may affect the public interest. Based on this evaluation, the Corps will approve, approve with conditions, or deny the permit. Permit evaluations and decisions are made by individual Corps Districts.

In recent years, three Districts have received section 10 permit applications from entities proposing to install and operate aquaculture operations in federal ocean waters. These include separate applications to culture mussels off Cape Ann and on Horseshoe Shoals in waters off Massachusetts (New England District), an application to culture mussels and oysters on the San Pedro Shelf off California (Los Angeles District), and an application to culture Almaco jack, a reef fish, in waters off Hawaii (Honolulu District). In each of these four cases, the Corps has issued permits with conditions after public comment, environmental review pursuant to the National Environmental Policy Act (NEPA), and interagency consultation and state consistency review under the Coastal Zone Management Act, where required. Consultations have been conducted as necessary pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Endangered Species Act (ESA), and the National Marine Sanctuaries Act (Sanctuaries Act).

Interagency consultation and state consistency review have increased public attention and stakeholder input associated with the proposals and identified and addressed conflicts and environmental impacts that were not adequately considered in initial permit applications or through the Corps' public notice process.

For example, in recent applications, these processes have clarified conflicts and impacts related to:

- marine mammal entanglement;
- seafood safety (paralytic shellfish poisoning);
- commercial fishing (siting and gear conflicts);
- commercial shipping (siting and facility depth); and
- oil and gas development (infrastructure and supply route conflicts).

Consultation and consistency review not only identified these conflicts, but resulted in substantial changes in project design, size, and location to avoid and minimize conflicts and enabled the Corps to further address these issues through special conditions to its final RHA permits.

These changes in project design highlight the central value of interagency and intergovernmental processes in ensuring that Corps permits consider and avoid and mitigate the full range of environmental impacts associated with proposed activities. Robust processes and outcomes are especially important where a section 10 permit is the primary or only legal authorization needed to install and operate a facility, as was the case for three recent applications to establish mussel farms off Massachusetts and California, in which the species proposed for culture are not managed under federal fisheries laws and therefore do not require a MSA permit from the National Oceanic and Atmospheric Administration (NOAA) or a pollutant discharge permit from the U.S. Environmental Protection Agency (EPA) to begin operations.

## Recommendations

Based on an analysis of the legal and practical aspects of USACE section 10 permitting for offshore aquaculture facilities, we make the following recommendations, which—if adopted—will improve the function and consistency of permitting for this new activity and enhance environmental protection to ensure that offshore aquaculture in the United States proceeds in a sustainable manner:

- **The Corps can best protect the public interest by ensuring that offshore aquaculture activities are regulated in a manner consistent with nearshore aquaculture facilities.**

Offshore facilities enjoy a reduced regulatory burden in comparison to facilities in state waters. While facilities in federal waters may be subject to regulatory obligations under the MSA, CWA, and other federal laws, they generally are not subject to the suite of substantial and well-developed regulatory and permitting programs that apply in state, but not federal, waters, including section 404 of the CWA and state government leasing, licensing, and permitting programs. These programs impose important conditions to avoid and mitigate environmental impacts associated with facility siting, design, and operation that are not otherwise comprehensively addressed, but are nonetheless important, in offshore areas. Producers may enjoy a significant incentive to operate in federal ocean waters in the absence of comparable protections.

As the primary or sole permitting agency for many offshore aquaculture projects, the Corps has both the responsibility and legal authority to ensure that the federal government does not allow facilities to avoid important environmental protections by locating in federal ocean waters. Section 10 provides authority to consider direct, indirect, and cumulative impacts of offshore aquaculture facility construction and operation and to impose conditions to avoid and mitigate those impacts. The Corps can best protect the public interest using this broad authority to incorporate permit conditions equivalent to those applicable in nearby state waters. However, if the Corps declines to address certain reasonably foreseeable impacts arising from facility operation, it must provide a clear and convincing rationale for that determination, especially as other agencies (including NOAA) often lack regulatory authority to address potentially excluded impacts.

- **The Corps can improve offshore aquaculture permitting by issuing guidance for Districts on offshore permit considerations and consultations.**

The Corps is often the central permitting authority for offshore aquaculture projects, and its Districts have necessarily taken a lead role in permitting despite limited or no prior experience with offshore aquaculture. As a result, District offices cannot rely on a background of similar cases, and the resulting permitting processes and associated permit conditions may differ substantially from District to District, even for similar proposals. By developing guidance for

Districts on what impacts they may need to consider during public interest review and what consultations may be required, the Corps could provide an important source of information to assist Districts faced with section 10 permit applications for offshore aquaculture facilities and improve consistency in the review and resolution of applications, and streamline the permitting process for applicants.

While guidance for Corps personnel on RHA implementation for offshore aquaculture is vital to assist Districts in consistently, efficiently, and effectively processing permits, such guidance could be developed in collaboration with other agencies. The Regulatory Working Group of the Interagency Task force on Aquaculture is working to develop coordinated procedures for permitting under section 10, the MSA, and section 402 of the CWA. This framework could be extended to support guidance for each agency's staff to assist them in meeting their statutory obligations while being cognizant of other agency processes.

- **Legislative or regulatory action is required to ensure that floating, unmoored aquaculture facilities on the Outer Continental Shelf do not become a hazard to navigation.**

The RHA and Outer Continental Shelf Lands Act (OCSLA) authorize the Corps to regulate offshore aquaculture facilities on the OCS, but this authority extends only to facilities that are “permanently or temporarily attached to the seabed.” As a result, unmoored facilities beyond state jurisdiction do not require section 10 permits, even though such facilities have the potential to affect navigation. A regulatory change or legislation to extend the Corps' section 10 authority may be required to ensure that all offshore aquaculture facilities are appropriately regulated to ensure that they do not become a hazard to navigation.

- **The Corps can protect the public interest by ensuring that all permits and associated data are made publicly available in a database.**

The Corps can better support its staff and strengthen the quality of permit applications by developing a public permit database that contains key permit documentation. While the Corps maintains a permit database, the public interface is not searchable and contains only information on permit decisions and location rather than links to the underlying public notice, permit, administrative record, or other documentation. As a result, freedom of information requests are required to obtain information on permits, significantly increasing the difficulty of assessing whether permits consistently require key conditions, such as generation and disclosure of monitoring or other data. By conditioning permits on public access to data and developing a public, searchable database, the Corps could enable producers to build upon past experience in project siting and design, assist public stakeholders in understanding and reviewing the impacts associated with this new industrial sector, and help District staff develop more effective permits on shorter time frames by enabling them to quickly identify conditions used in similar projects in the past and to assess the effectiveness of those permit conditions.

- **The Corps can support effective permitting by supporting and participating in multi-stakeholder development of a tool for offshore aquaculture site selection and facility design.**

Site selection is critical to avoid and minimize the potential environmental impacts and user conflicts associated with offshore aquaculture. Despite substantial effort by applicants to work with other user groups to select acceptable sites, however, siting has consistently proven to be a major sticking point in recent permitting processes. The Corps can support effective and efficient offshore aquaculture permitting by working collaboratively with other agencies and stakeholders to develop a site selection and facility design tool. This tool should leverage and build upon Corps data and other existing data sets and tools, such as the Northeast Ocean Data Portal and Marine Cadastre, and should be designed to help applicants predict and minimize conflicts and impacts and identify promising sites for production. Such a tool would provide an important platform for pre-application consultation with the Corps, other agencies, and key stakeholder groups.

For more information, please refer to *U.S. Army Corps of Engineers Regulation of Offshore Aquaculture*, a 2015 publication of the Environmental Law Institute.



Find out more at [www.eli-ocean.org/fish/offshore-aquaculture](http://www.eli-ocean.org/fish/offshore-aquaculture)



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ENVIRONMENTAL LAW INSTITUTE  
1730 M Street, N.W., Suite 700  
Washington, D.C. 20036  
Telephone: (202) 939-3800  
Fax: (202) 939-3868  
[www.eli.org](http://www.eli.org)  
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