

Aquaculture Regulation Under the Clean Water Act

Aquaculture Expansion Threatens Water Quality

Aquaculture is an increasingly important component of the world food supply. Global capture fisheries are fully, or near fully, exploited, so future increases in seafood demand will require increased aquaculture production. Production has expanded dramatically to meet this 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.

Offshore aquaculture will play an important role in sustaining global food security and providing economic benefits, but it is also associated with a variety of environmental impacts. Aquaculture facilities discharge a number of pollutants that may affect the environment, including excess feed; fecal matter and other wastes; chemicals such as hormones and parasiticides; parasites; and escaped cultured fish and shellfish that may interbreed or compete with native stocks.

Role of the Clean Water Act

Existing laws and regulations, including the Clean Water Act (CWA), play a vital role in protecting water quality and addressing potential harms arising from offshore aquaculture. The objective of the CWA “is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” To achieve this goal, the CWA makes unlawful “any discharge of any pollutant” from a point source into federal ocean waters without a permit from the Environmental Protection Agency (EPA). Because the CWA applies to all of the pollutants that aquaculture facilities may release into the environment, it provides a

crucial foundation for controlling water pollution and minimizing the water quality impacts arising from offshore aquaculture development.



The CWA authorizes EPA to control pollutant discharges, but current application of the Act to this nascent industry leaves regulatory gaps. The Act requires that all point sources, including offshore aquaculture facilities, obtain a permit from EPA to discharge “any pollutant” into federal ocean waters. However, under EPA regulations, aquaculture facilities are not considered point sources if they produce less than a threshold amount per year—for example,



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20,000 pounds per year for cold water facilities—unless EPA designates them as point sources on a case-by-case basis. Many offshore facilities do not meet the threshold and, therefore, have not been required to obtain a permit. Aquaculture facilities that do require a permit very often only have to comply with best management practices rather than meet specific numeric criteria based on observed water quality. Further, the existing criteria do not explicitly address all pollutants—most notably, escaped organisms are not included in current best management practices. Also, while Section 403 of the CWA directs EPA to



prevent undue degradation of ocean waters, the current Ocean Discharge Criteria used to achieve this mandate do not identify the information needed for EPA or the public to determine whether offshore aquaculture meets that standard. Nor does EPA provide specific guidance on how the agency will determine when degradation may be “unreasonable.” As a result, the current Criteria are of limited use in developing the information required to understand pollutant discharges from aquaculture facilities and their impacts on the marine environment.

Recommendations

EPA can—and should—use its existing authority under the Clean Water Act to develop appropriate tools to address these issues and establish adequate oversight of offshore aquaculture facilities. Specifically, EPA can improve current practice by:

- **confirming that all offshore facilities that discharge into the ocean—and particularly facilities using novel or untested technologies—are point sources that must obtain a discharge permit;**
- **improving the standards for offshore aquaculture facility permits to include numeric limits for all types of discharges, including escapes of cultivated fish; and**
- **identifying data needs and developing requirements for monitoring and reporting for all facilities in the ocean, regardless of the facility’s size or output, to allow determination of whether a proposed facility may cause unreasonable degradation of the ocean.**

These changes would allow EPA to more effectively safeguard water quality and develop a more sophisticated understanding of the impacts of offshore aquaculture on marine resources.

For more information, please refer to *Offshore Aquaculture Regulation Under the Clean Water Act*, a 2012 publication of the Environmental Law Institute, Emmett Environmental Law & Policy Clinic at Harvard Law School, and The Ocean Foundation.

Find out more at www.eli-ocean.org/fish/offshore-aquaculture