

originally developed or intended for aquaculture. Fish farms may be subject to the same permits, application procedures, fee structure and monitoring requirements as larger industrial dischargers or municipal wastewater treatment facilities.

Federal and state regulatory programs serve to protect and maintain water quality by setting standards for all receiving waters. On balance, the aquaculture industry benefits from the enforcement of these standards.

Compliance with standards set for different classes of water bodies may be an issue of contention between regulators and individual aquaculturists in certain areas or situations. However, it is the absence or technical inconsistency of state discharge policies and procedures for aquaculture that often is cited as one of several important regulatory constraints to regional development.

Research has shown that the relative nutrient load and potential impact of aquaculture operations on water quality tends to be low and highly localized when compared to other industrial and municipal activities. Basic treatment of effluents to remove settleable solids generally improves water quality to levels compatible with State standards. Moreover, aquaculture effluents and solid wastes are ideally suited for integration with other forms of agriculture as plant irrigants, fertilizers or animal feeds. The general consensus of the aquaculture industry is that current regulatory policies in many states are in need of review and revision to reflect these differences.

In the Northeastern Region (Figure 1), some states have begun this process by recognizing the beneficial reuse value of aquaculture effluents and solid wastes for agriculture. States are also developing permit requirements and fees specifically for aquaculture or are developing general permits designed to manage a range of production methods and levels through the use of best management practices (BMPs).

Federal Regulation of Aquaculture Discharges

This discussion of the federal role in aquaculture waste disposal is limited to the principal legislation authorizing federal regulation of surface water discharges and water quality in tidal and non-tidal waters: 1) the Federal Water Pollution Control Act of 1972, reauthorized as the Clean Water Act (CWA) in 1977; and 2) the Rivers and Harbors Act of 1899. The two agencies primarily involved in administering federal law and water quality provisions are the U.S. Environmental Protection Agency (EPA) and the Army Corps of Engineers (ACOE).

Other practices such as ocean dumping, and hazardous waste disposal, covered by various federal statutes under the Clean Water Act, the Resources Conservation and

Recovery Act, and/or the Marine Protection, Research and Sanctuaries Act, are not included in this publication. For a complete discussion and review of federal policies for regulating all classes of waste disposal from aquaculture facilities, see Bastian, 1991 (under References/Suggested Additional Reading on page 8).

U.S. Environmental Protection Agency

Federal regulation of aquaculture effluents falls primarily under the jurisdiction of the U.S. Environmental Protection Agency (EPA). Under the Clean Water Act, the EPA has the authority to regulate all discharges of pollutants from point sources (ie., pipes and other outfalls) and non-point sources (land runoff).

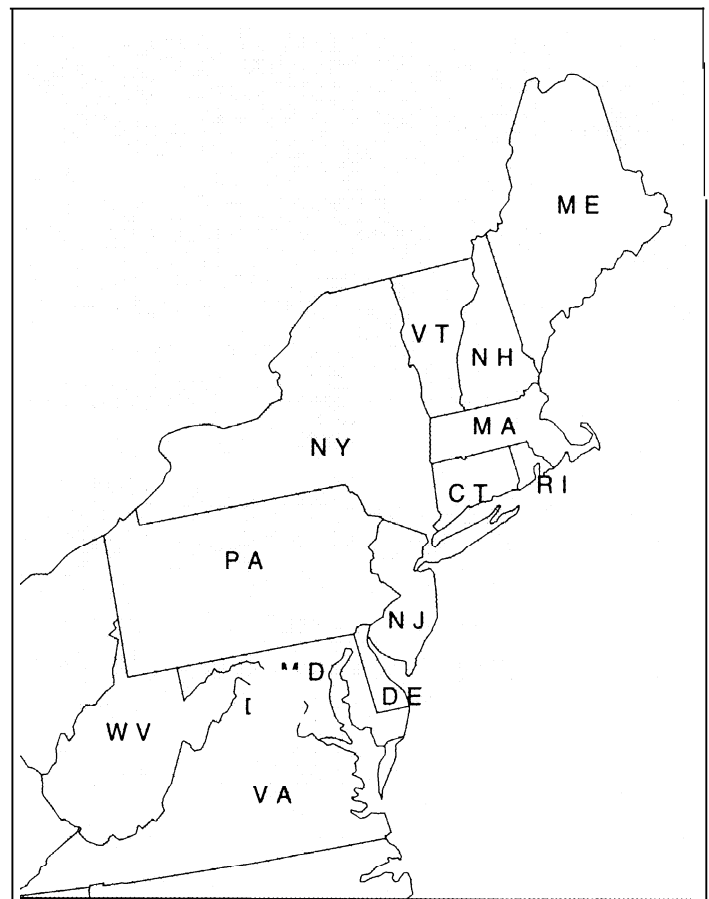


Figure 1. States in the Northeastern Region.

The goals of the legislation are “to restore and maintain the chemical, physical and biological integrity of the nation’s waters.” To accomplish this, EPA policy supports the use of best available technology (BAT) and/or best management practices (BMPs) to reduce or minimize waste output or recycle waste products as beneficial resources. Examples include the use of effluents as irrigation water and organic solids for soil enrichment, fertilizer and animal feed