

IMPACT

 University of Idaho
Cooperative
Extension System

Twin Falls County, 246 3rd Ave. East, Twin Falls, ID 83301, Phone: (208) 734-9590

Idaho Waste Management Guidelines for Aquaculture Operations

The Situation

In 1990, the Middle Snake River was declared water-quality limited by the Department of Environmental Quality (DEQ). This designation required the Environmental Protection Agency (EPA) under the federal Clean Water Act to institute a Total Maximum Daily Load (TMDL) pollution allocation for each industry impacting water quality. Aquaculture, being a point-source, was regulated under the National Pollutant Discharge Elimination System (NPDES) permit limiting the discharge of solids. The TMDL, however, required an additional limitation on phosphorous discharge.

To meet the new regulatory requirements, fish producers wanted to either modify their existing waste management systems or do a complete facility reconstruction. However, all plans and specifications for the construction, modification, expansion or alteration of waste treatment or disposal facilities for aquaculture must be submitted to and approved by DEQ before construction may begin. The problem was that DEQ lacked the technical information to review plans and specifications, and fish producers lacked the technical information required to develop plans and specifications.

Our Response

Beginning in 1992, Extension in cooperation with the aquaculture industry, DEQ, and the Idaho Department of Agriculture, began development of

“Idaho Waste Management Guidelines for Aquaculture Operations.” The purpose of the guidelines is to: describe basic waste management systems and practices; educate owners and operators on effective waste management systems; educate regulatory agencies and the public on aquaculture waste management systems; and identify Best Management Practices. Extension searched the scientific literature and built a library of work, which became the foundation of the guidelines. Extension also wrote two chapters of the guidelines and provided editorial review.

The guidelines were officially approved, published and distributed in 1997 by DEQ. Extension obtained a critical issues grant of \$700.00 that went toward publication costs. In addition to the hard copies, the guidelines were published on the web at: http://www2.state.id.us/deq/ro_t/tro_water/aquacult_open.htm.

Program Outcomes

Twenty-two facilities have used the guidelines to either modify their waste management systems or have done a complete facility reconstruction. The guidelines, according to fish producers, have made the approval process much easier and has speeded up the process because they knew what to include in the plans and specifications submitted to DEQ. The design criteria and formulas in the guidelines were easy to understand and to implement in their plans and specifications. One producer stated his company

went from marginal compliance with the NPDES permit to well within compliance as a result of modifications done to their settling basins, based upon guideline design criteria. Several other producers have also seen improvements in their effluent water quality. Those that converted from earthen ponds to concrete raceways using the guidelines report reduced labor requirements. Concrete raceways are also easier to manage and to keep clean, resulting in improved water quality and fish health. One producer has seen an increase in profitability as a result of reconstruction.

DEQ concurs with the fish producers, stating water quality has improved as a result of the guidelines and that the approval process is much easier for both producers and DEQ.

Cooperators and Co-Sponsors

Idaho Aquaculture Industry
Idaho Department of Environmental Quality
Idaho Department of Agriculture

For More Information

Gary Fornshell
Extension Educator
University of Idaho
Twin Falls County Cooperative Extension Office
246 3rd Ave. East
Twin Falls, ID 83301
Voice Phone: (208) 734-9590
Fax: (208) 733-9645
E-Mail: gaformsh@uidaho.edu