

STATE/TERRITORY PERMITS AND REGULATIONS IMPACTING THE AQUACULTURE INDUSTRY

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PREFACE

This report provides an overview of permits and regulations impacting the aquaculture industry. More specifically, this study compiles the permits and regulations concerned with the aquaculture industry by the individual state/territory.

There are some overlaps in the compiling of the permits and regulations, due to the requirements imposed on the Federal and Regional levels. In addition, there are varying requirements for each state/territory. In some instances, district, township, and city or village requirements are listed.

Most permits or regulations were listed with a summarization of pertinent information and an address or phone number to further help the user's investigation. Although every attempt was made to provide a comprehensive list it is recommended that the user verify the information with each respective state coordinator/contact before proceeding with the development of an aquaculture facility.

It is intended for this document to be continuously updated to attempt to keep pace with the ever changing Aquaculture Industry.

ACKNOWLEDGMENTS

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NOTE: THESE PERMITS REPRESENT THOSE REQUIRED AT THE TIME THIS DOCUMENT WAS PREPARED. PLEASE CHECK WITH THE LISTED AGENCIES FOR MORE INFORMATION. CONTACT COUNTY OR LOCAL OFFICES FOR NECESSARY PERMITS.

INTRODUCTION

The Aquaculture Act of 1980 called for a compilation of regulations and permits impacting the aquaculture industry. During the years that followed, several projects at state and regional levels have been undertaken to accomplish this task. Although each of these were valuable in their own right, none provided a comprehensive picture of all state and territorial aquaculture regulations and permits. In 1993, the United States Department of Agriculture, Cooperative States Research Service, through the auspices of the Joint Subcommittee on Aquaculture, contracted with the Maryland Department of Agriculture to undertake this task, utilizing a new network of state aquaculture contacts that had been organized that year, the National Association of State Aquaculture Coordinators (NASAC). A research instrument previously developed and tested in Maryland and Washington was used for this purpose. The format provides critical information about specific permits which can be used to determine if they apply to various locations, technologies and species associated with aquaculture in a state. In place of full text of regulations, statutory and regulatory references are provided.

Early in the project it became evident that any documentation resulting from such a project would be dynamic and must be available in a form that can be updated. Consequently, hard copy information is presented in a loose leaf format so data can be replaced in a cost effective manner. The information is also available in electronic form.

Before discussing pertinent information about permits, it is necessary to, first, determine the breadth of the topic to be covered. Although definitions of aquaculture are usually all inclusive, without regard to whether a facility is located in the mountains, plains or coastal areas, it becomes apparent that most states have confined their regulatory authority to upland or coastal zones rather than addressing open ocean state waters. Nevertheless, the United Nations Food and Agricultural Organization has developed a definition of the art and science of aquaculture:

" . . . the farming of aquatic organisms including fish, mollusks, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultured."

Most states and federal agencies use a general definition recognizing the culture of animals and plants in a water environment as being aquaculture. A drastically shortened and simplified definition is: "Aquaculture is the business of farming aquatic plants and animals". The variety of species raised, from alligators to zebra fish, and the different culture systems, earthen ponds to fiberglass tanks in climate controlled structures, coupled with development and investment from nontraditional agricultural businesses has caused considerable conflict with environmental and natural resource regulatory agencies and private groups. The newness and relative small size of U.S. aquaculture leads to conflict

across lines of authority for many environmental and resource management agencies. These regulators are dealing with complex issues of human health, clean water, clean air, and ecosystem disruption. In most cases, they have responded by tweaking existing industrial permits to fit aquacultural operations.

Further exacerbating the situation, aquaculture frequently finds itself dealing with socioeconomic issues, history, and in some cases, a strong commercial fishery lobby. In many coastal states, aquaculture has been perceived as a threat, to be controlled through regulations, so it will remain a cottage industry much the same as the individual commercial fisherman.

Predictably, aquafarmers have protested the involvement of environmental and resource regulators and the additional costs and time delays associated with acquisition of permits.

EXECUTIVE SUMMARY

An examination of permits and regulations impacting the aquaculture industry reveals certain broad categories of permits common to all states. With few, if any, exceptions all permits involve four issues:

Water Use
Effluent Discharge
Production
Marketing

A central theme that transcends all of these issues is the protection of natural resources and wild stocks of aquatic animals.

WATER USE

In reality, there are very few permits which are exclusive to aquaculture. Most apply to other agricultural and industrial practices, as well. The following categories of water use permits generally reflect the application of existing regulations to aquaculture:

- Ground/Surface Water Appropriation
- Tidal Wetlands
- Non-tidal Wetlands
- Submerged Land Leases
- Water Column Leases
- Well Construction
- Pond Construction
- Waterway Construction
- Water Quality Certification

It may appear that submerged land and water column leases fit more appropriately as production permits, however, their main purpose is to afford access to publicly controlled waters. Water quality certification is not a separate permit but is applied as part of the review process for certain state and federal permits. With the advent of recirculating systems, the demand for large quantities of water such as that used in trout raceways or catfish ponds has diminished. Consequently, some states which have established threshold levels of water use for traditional agricultural practices, such as irrigation or livestock watering, do not require separate permits for aquaculture. Maryland, for example, exempts businesses that use less than 10,000 gallons of water a day.

EFFLUENT DISCHARGE

The U.S. Environmental Protection Agency(EPA), through its National Pollutant Discharge Elimination System (NPDES) has set the stage for action by state environmental agencies to regulate effluent discharge from aquaculture facilities. Aquaculture operations culturing warm water species (catfish, crawfish, hybrid striped bass, shiners, ornamental

fish, etc.) that discharge more than 30 days annually or produce more than 100,000 pounds (45,454 kg) round weight product annually must apply. Farms culturing more than 20,000 pounds (9,000 kg) of cold water species (salmonids) annually and providing at least 5,000 pounds (2,272 kg) of feed and discharging more than 30 days per year must apply. The U.S. EPA has delegated authority for issuing discharge permits to states adhering or adding further restrictions to these guidelines. According to information supplied for this study, all responding states but the following nine issue their own permits:

Arkansas	Maine	New Mexico	
Idaho	Massachusetts		Oklahoma
Illinois	New Hampshire		South Dakota

In addition to traditional discharge permits, some states require specialized ones. Arizona and Hawaii offer underground injection as a viable means of disposing of waste water and Hawaii may issue a zone of mixing permit in conjunction with an NPDES permit in coastal areas. As is true for pond construction permits, water quality certification is also part of the procedure necessary for obtaining a discharge permit. Maine is a good example of how a state can consolidate the procedure for obtaining several state and federal permits into one application process, thus, simplifying permitting for producers.

Responses to this study indicated a trend in discharge parameters of concern to states/territories. The following are listed in order of most frequently to least frequently appearing in regulations:

- Solids
- Dissolved Oxygen
- pH
- Ammonia/Nitrogen
- Phosphorus
- Biological Oxygen Demand (BOD)
- Toxics

Enforcement of permit parameters varies widely among states. Generally, excess levels of most factors simply triggers corrective measures, but the least mentioned parameter, toxics, nearly always results in severe penalties or fines. The severity and immediacy of the damage (fish kills) that may result from toxic substances designed to benefit aquaculture operations, but accidentally discharged into the environment, frequently causes environmental agencies to react forcibly. Other factors which will impact how environmental agencies administer discharge permits include the method of disposal, discharge to surface/ground water or discharge via land/crop application. Additionally, some states consider aquaculture effluent as industrial waste, while others treat it the same as other agriculture manures.

Fee structures for aquaculture waste water discharge vary greatly among states. Most states have a flat application fee of between \$50 and \$1000, with an annual fee based on flow rates. Many charge \$1 per 1000 gallons per day. For flow through systems (raceways) this can become a substantial cost factor in an operation. Frequently, there are

threshold levels of water flow under which no fee is charged. Maryland is one case in point. A fee is not levied for facilities discharging less than 1 million gallons a day. In reality, these fees are not the major concern in discharge permits. Compliance costs usually far exceed permit costs because the burden of monitoring is placed on the producer, not the agency. Environmental agencies frequently require growers to obtain the professional services of private certified chemistry labs to assure accuracy of submitted data, thus adding another layer of operating costs.

PRODUCTION

Permits which fall under the category of production tend to relate more to the species being propagated and frequently are the purview of fish and game rather than environmental agencies. They include:

- Aquaculture Permits
- Importation (shipping)
- Species Permits
- Propagation/Possession Permits
- Collection Permits
- Stocking Permits

Production permits and regulations include the aquaculture permit that is needed in most states simply to be in business. For the most part these permits are predicated on the facility being constructed in a manner that will preclude cultured fish from escaping into the wild. Most production permits are issued by fish and game or natural resource agencies specifically to protect wild stocks and, therefore, involve non-indigenous species and aquatic animal health provisions throughout. The regulatory strategies adopted by resource managers to permit ownership and sale of existing economically important species may involve onerous and costly tagging, and size or paperwork standards. The problem lies in the arena of enforcement. The farming of traditionally wild species complicates differentiation and identification of poached, out-of-season or undersized species. In several cases this problem has been resolved through clear documentation of ownership and sale from the farm to the buyer. The typical invoicing and delivery paperwork is sufficient to prove the legality of a farm raised species. In other cases, overpowering antipathy by special interest groups to the commercial sale of certain aquatic species will probably always be a barrier to farmers. A good example is large mouth black bass.

Non-indigenous species are generally defined as those species found beyond their natural range. Many aquacultural species fall into this category. There is growing national concern regarding the costs of controlling harmful non-indigenous species that have been intentionally or unintentionally introduced. The potential negative effects of these introductions include: spread of parasites and pathogens, disruption of natural ecosystems, and damage to existing agricultural and industrial operations.

MARKETING

The final category of permits deals with activities associated with marketing or processing. In most states, the aquaculture permit is all that is needed for marketing, but some may require an additional permit or license, especially when dealing with shellfish. Marketing permits may include:

- Wholesale Fish Dealers
- Retail Sales License
- Processing/Food Establishments
- Fee Fishing (Pay Lake) License
- Shellfish Depuration

Although shellfish depuration may be considered a production practice it is being included here as an activity which supports marketing of the final product. Because some states/territories have special concerns for specific species requirements, enforcement of marketing permits may vary from one species to another. This is evident in Maryland's requirement for containers and receipts associated with sales of striped bass (rockfish) to include a 14 digit alpha-numeric code that can be used to easily trace shipments of product back to the point of origin.

CONCLUSION

Most states have between four and ten permits or licenses required to be involved in aquaculture. Florida, New York and Texas each have over twenty. Eight of Florida's thirty six (36) permits deal with alligators and alligator products alone. It's fairly easy to point to instances which depict overregulation. But, as advocates for aquaculture, it is up to the industry to provide accurate information which will help create a comfort level for regulators. Regulators are building a database of information and an appreciation and understanding of aquaculture. As this report on state/territory permits and regulations impacting the aquaculture industry attests, numerous aquaculture specific permits have evolved to "fit" water farming and are being modified in positive ways to recognize the benign character of most aquacultural activities.

In many cases, state and federal agencies have been unfairly criticized for creating a labyrinth of permits and regulations. They are interpreting the will of legislators and special interest groups that charge them with broad mandates to protect the environment. A carefully applied combination of thorough preparation, common sense, logical thinking and professional behavior will result in timely decisions regarding permit applications.

Keep in mind the importance of regulatory agencies as sources of benefit for your community and the future of aquaculture in the United States. Much of the knowledge to maintain, spawn, grow-out and harvest aquacultural species has come from federal and state facilities that have been active since the 1930's. Natural resource managers are as interested, as the industry is, in insuring aquaculture's future in the United States but they have an additional charge of insuring this happens in a responsible manner.

RECOMMENDATION

Become involved in the process.

Every state in which aquaculture flourishes has active trade organizations, industry advisory bodies to government and supportive legislators. To help yourself and the industry, seek these resources out, make use of their knowledge, provide creative answers to difficult questions and support responsible best management practices and quality assurance programs.

Aquaculture is the wave of the future and will provide nutritious seafood, valuable consumer products, important medical advances and improved quality of life for mankind on into the next century and beyond.

STATE/TERRITORY PERMITS AND REGULATIONS IMPACTING THE AQUACULTURE INDUSTRY is a compilation intended for informational purposes. It does not replace, supersede, or otherwise effect any agency rule, regulation, procedure, or responsibility or effect any regulatory or review requirement. Interested parties should contact appropriate agencies directly for current information or contact the office of your state or territory aquaculture coordinator identified in the appendix. The reader is also encouraged to begin an in-depth discussion with appropriate aquaculture coordinators, extension representatives, and aquaculture trade associations to develop an understanding of the environmental and resource management framework specific to your region.