

# **The Legal & Regulatory Environment: *Offshore Aquaculture Permitting Process in the Gulf of Mexico***

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The following report is a detailed listing regarding the regulatory structure for placing offshore aquaculture facilities in the Gulf of Mexico prepared for the Sea Grant Aquaculture Consortium. The report consists of the following:

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## ***Part I. Law, Policy and Regulatory Background***

Aquaculture is the fastest growing sector of the agriculture industry. It has gained particular importance in areas experiencing the continuing decline of wild fish populations. The U.S. National Aquaculture Act (NAA) found that legal concerns prevented aquaculture operations from becoming established or operating efficiently. While many environmental and marine laws passed after the NAA contemplated an aquaculture industry, they have generally failed to provide a streamlined mechanism to organize the rules and develop such an industry. Moreover, while a draft statute has been developed by agencies and reviewed in Washington, no act addresses mariculture specifically.

Action at the state level in the Gulf states has been limited as well. Although several states have applicable aquaculture statutes with coordinating regulations, the permitting process is far short of streamlined. Agencies in those states without statutes are forced to either move forward blindly with aquaculture development or halt efforts until legislation and regulations can be created. As many aquaculturists realize, the absence of such regulations can impede the progress of ocean aquaculture as much as too many regulations impede other land industries.

The need for legislative and regulatory action is highlighted by the conflicts aquaculturists may experience with other protected uses of the ocean such as commercial fishing, navigation, and recreational boating and swimming. Coastal states must protect such uses under the Public Trust Doctrine requiring a balancing of interests to ensure that one activity does not severely infringe on other uses. The following sections review the statutes in existence at the federal and gulf state level and the critiques that regulators and user groups have expressed regarding aquaculture ventures.

The National Aquaculture Act (NAA), passed in 1980, established a national policy of encouraging development of aquaculture in the United States. The NAA calls for the creation of a National Aquaculture Development Plan to identify species with significant commercial potential and include research and development, technical assistance, and training programs as necessary. The NAA also established an interagency Coordinating Group to increase the effectiveness and productivity of federal aquaculture programs and to assess the industry and its and report to Congress. Finally, the act created a National Aquaculture Information Center and called for a review of regulatory constraints that may have a negative impact on the industry.

Under the NAA, the Department of Agriculture is the lead federal agency for aquaculture. For ocean aquaculture, however, the Corps of Engineers has a primary review responsibility through its permit decision under the Rivers and Harbors Act and its public interest review. The Corps must balance between all reasonably expected benefits and detriments to the public interest, including environmental, economic, aesthetic, navigation, property rights, and international interests. The Environmental Protection Agency must permit those activities that discharge into waters of the United States under the Clean Water Act. In addition, the National Marine Fisheries Service and Fish and Wildlife Service have review and commenting responsibilities and the National Marine Fisheries Service authorizes the activity through an exempted fishing permit or a letter of authorization. The Coast Guard has authority over navigational hazards and regional fishery management councils have review under the Magnuson Act. Finally, a federal project must meet a coastal state's consistency requirements under the Coastal Zone Management Act. The federal permitting procedures appear to be disjointed for open ocean aquaculture but the interaction between agencies through procedures such as commenting and review lends itself to a comprehensive, streamlined permitting and monitoring program for the future. The comprehensive list of federal agencies, contact information, and necessary permits follows in Part II, with lists of the state agencies responsible for permitting in the five gulf states.

## ***Part II. Agencies, Authorities and Permits***

The following is the cumulative list of necessary permits & contacts for offshore aquaculture facilities in the Mississippi Sound and Gulf of Mexico. The following agencies have some regulatory or consultative authority regarding an aspect of offshore aquaculture.

### **I. Federal Agencies**

#### 1. National Marine Fisheries Service

##### *Authority*

Under the Magnuson-Stevens Fishery Conservation and Management Act, the National Marine Fisheries Service (NMFS) has regulatory responsibilities that will affect aquaculture development in the EEZ. The NMFS is responsible for managing commercial fishing operations which include aquaculture activities. (50 C.F.R. § 229.2 (1999).

For scientific research, the NMFS requires the applicant to apply for a Letter of Acknowledgment and the NMFS will inform the other agencies (the U.S. Coast Guard and state agencies, if necessary) that this activity is occurring in federal waters in the Gulf of Mexico.

##### *Permit*

The necessary item is a Letter of Acknowledgment by NMFS to conduct research in federal waters. This letter should be addressed to the South Regional Administrator, Dr. William Hogarth, explaining the proposal and including a copy. Mr. Pete Eldridge of NMFS recommended that a Principle Scientist contact Dr. Roy Crabtree who can help to construct the letter requesting the Letter of Acknowledgment.

An Exempted Fishing Permit from NMFS is required to hold juvenile fish in federal waters.

##### *Contact*

Mike Barnette  
Southeast Regional Office  
Sustainable Fisheries Division  
9721 Executive Center Drive North  
St. Petersburg, FL 33702  
ph: (727) 570-5305  
fax: (727) 570-5583  
e-mail: mike.barnette@noaa.gov

## 2. U.S. Army Corps of Engineers

### *Authority*

Under Section 10 of the Rivers and Harbors Act of 1899, as extended by the Outer Continental Shelf Lands Act (OCSLA), the Corps requires a permit for the creation of “any obstruction” in federal waters to preserve unhindered navigational access of the nation’s waters. (33 U.S.C. § 403 (1999).)

The OCSLA extended the Corps’ section 10 authority into the EEZ allowing the agency to regulate “installations and other devices permanently or temporarily attached to the seabed, which may be erected thereon for the purpose of exploring for, developing or producing resources from [the outer continental shelf].” (43 U.S.C. § 1333(a), (e) (1999).)

### *Permit*

The necessary permit is the Section 10 Permit; a Nationwide or General permit may be available in which case the Corps issues a letter of permission that serves as the permit. The Corps considers a broad range of potential environmental and other impacts before issuing or denying a Section 10 permit for an open ocean aquaculture facility. These include effects and cumulative impacts upon the water quality; effects of the facility or structure on recreation, fish, and other wildlife; pollution; economic factors; safety; aesthetics; protection of navigational integrity; and accurate charting of any structures (if facility is present beyond X time, it is added to permanent chart).

There are several scenarios for receiving permission from the Corps:

#### a. Letter of Permission

If the structure to which the cage is attached does not interfere with navigation, the Corps will not require a permit, and will issue a Letter of Permission that states the Corps has reviewed the applicant’s proposal and will allow the proposed activities to be conducted as proposed. The letter serves as a permit from the Corps.

#### b. Existing Scientific Permits

There are also several existing General and Nationwide permits for scientific research in the Gulf. When the Corps receives the information regarding the structure and plans, it will determine if the project fits within one of those programs.

#### c. Anchoring/Mooring Structure Permit

Any permit issued by the Corps will be conditioned on compliance with the Coast Guard regulations regarding required marking (by lights, etc) of all structures. Moreover, the pilings or anchoring devices used to moor the cage, both in the Sound and out in the Offshore waters, will constitute “Permanent Anchorage” and, therefore, be subject to permitting by the Corps and Coast Guard regulations for marking.

*Contacts*

Mobile District (E of Pearl River)  
Davis Findley  
U.S. Army Corps of Engineers  
Mobile District  
P.O. Box 2288  
Mobile, AL 36628-0001  
ph: (334) 690-2658  
Siting Contact:  
Susan Rees (334-694-4141)

Vicksburg District (W of Pearl River)  
Beth Guines  
U.S. Army Corps of Engineers  
Vicksburg District  
4155 Clay Street  
Vicksburg, MS 39180  
ph: (601) 631-7071

Galveston District (coastal Texas)  
U.S. Army Corps of Engineers  
P.O. Box 1229  
Galveston, TX 77553-1229  
ph: (409) 766-3004

New Orleans District  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, LA 70160-0267  
ph: (504) 862-2201  
fax: (504) 862-1724

Jacksonville District  
U.S. Army Corps of Engineers  
P.O. Box 4790  
Jacksonville, FL 32232-0019  
ph: (904) 232-1650  
fax: (904) 232-2237

### 3. U.S. Environmental Protection Agency

#### *Authority*

Under Section 318 of the Clean Water Act, the EPA has asserted jurisdiction to require point source pollution discharge permits for aquaculture projects in the open ocean. (Regulations are located at 40 C.F.R. § 122.24 (NPDES)). The EPA delegates its authority for state water issues in Mississippi to the Mississippi Department of Environmental Quality.

In addition, the Ocean Dumping Act ( 33 U.S.C. § 1412 (1999)) grants authority to the EPA to permit the dumping of material into U.S. waters when such dumping will not unreasonably degrade or endanger human health or the marine environment, ecological systems, or economic potentialities. The criteria for reviewing such permits include the need for the proposed dumping; the effect of such dumping on human health and welfare, including economic, aesthetic, and recreational values; the effect of such dumping on fisheries resources, plankton, fish, shellfish, wildlife, shorelines and beaches; and the effect of such dumping on marine ecosystems.

#### *Permit*

The necessary permit is the National Pollution Discharge Elimination System (NPDES) permit which can be acquired through MDEQ. Also, an Ocean Discharge Permit may be necessary, depending on the amount of waste from the facility. The EPA is more concerned with the amount of feed put into the water than with the amount of waste actually existing in an offshore cage.

#### *Contact*

For Alabama, Mississippi and Florida  
Rolland Ferry  
USEPA, Region 4  
Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303-3104  
ph: (404) 562-9387  
e-mail: Ferry.Roland@epamail.epa.gov

For Louisiana and Texas  
Myron Knudson  
USEPA, Region 6  
1445 Ross Ave.  
Dallas, TX 75203  
ph (214) 665-6444

#### 4. Gulf of Mexico Fisheries Management Council

##### *Authority*

The Gulf of Mexico Fishery Management Council (Council) is one of eight regional Fishery Management Councils which were established by the Fishery Conservation and Management Act in 1976 (now called the Magnuson-Stevens Fishery Conservation and Magnuson Act). The Council is responsible for managing fishery resources from where state waters end out to the 200-mile limit of the Gulf of Mexico. According to the NOAA Office of General Counsel, aquaculture farms are subject to the Magnuson Act because harvesting fish from the EEZ by U.S. vessels constitutes “fishing” under the Act. This gives the Council the authority to manage aquaculture in the EEZ and requires it to amend appropriate fishery management plans to accommodate proposed farms.

On the regulatory front, the Fisheries Management Councils are becoming involved in the decision-making process for offshore permitting for aquaculture. Because permit-granting may involve the granting of exclusive use in a designated area to an aquaculture business, the traditional users of the resource must be incorporated into the regulatory process.

##### *Permit*

There is no necessary permit but the Council has issued a Mariculture Policy and, under new Essential Fish Habitat regulations, an applicant may be required to provide information about potential impacts to fishing habitat and information to amend fishery management plans. The Council is responsible for commenting on the proposed facility.

The Executive Director, Mr. Wayne Swingle, recommends writing a letter to the Council explaining the facility and future plans, possibly making a presentation to the Council at its monthly. The Corps usually consults with the Council and/or Mr. Swingle, so it would be beneficial to provide Mr. Swingle with information during the application process.

##### *Contact*

Wayne Swingle  
Executive Director  
Gulf of Mexico Fishery Management Council  
The Commons at Rivergate  
3018 U.S. Highway 301 North, Suite 1000  
Tampa, Florida 33619-2266  
ph: (813) 228-2815, 888-833-1844 (toll-free)  
fax: (813) 225-7015  
e-mail: [wayne.swingle@gulfcouncil.org](mailto:wayne.swingle@gulfcouncil.org)

5. Department of Agriculture

*Authority*

The National Aquaculture Act Development Act of 1980 established a coordinating group, the Joint Subcommittee on Aquaculture (JSA), chaired by the U.S. Department of Agriculture. The JSA has been responsible for developing the National Aquaculture Development Plan, which identifies the relative roles of the U.S. Departments of Agriculture, Interior, and Commerce, and establishes a strategy for the development of an aquaculture industry in the United States.

*Permit*

None. The Department of Agriculture provides research and a variety of services (see [http://ag.ansc.purdue.edu/aquanic/jsa/federal\\_guide/usda.htm](http://ag.ansc.purdue.edu/aquanic/jsa/federal_guide/usda.htm)) but has not maintained a regulatory role in mariculture.

Contact

Sarah Harris  
Southern Regional Aquaculture Center  
Delta Research and Extension Center  
Mississippi State University  
127 Experiment Station Road  
P.O. Box 197  
Stoneville, Mississippi 38776  
phone: (662) 686-3285  
fax: (662) 686-3569  
e-mail: [sharris@drec.msstate.edu](mailto:sharris@drec.msstate.edu)

6. U.S. Coast Guard

*Authority*

The U.S. Coast Guard is responsible for the regulation and enforcement of various activities in the navigable waters of the U.S. and requires that such aquaculture-related structures are marked with lights and signals in order to ensure safe passage of vessels. Installation and maintenance of the markers must be done by the aquaculturist as long as the structures are located in navigable waters. The Coast Guard provides detailed requirements for markings.

*Permit*

The requirements for marking structures are often included as stipulations for permit approval with the Corps of Engineers or EPA. The aquaculturist must ensure markings are done properly but does not need to file an individual application directly with the Coast Guard.

*Contact*

For offshore Texas, Louisiana, Mississippi, Alabama and Florida (W of Appalachicola)

Rick Harrison

Chief of Private Aid to Navigation

Eighth Coast Guard District

Hale Boggs Federal Bldg.

501 Magazine St.

New Orleans, LA 70130-3396

ph: (504) 589-6235

fax: (504) 589-6654

For offshore Florida (E of Appalachicola)

U.S. Coast Guard Seventh District

Aids to Navigation

Federal Building

51 SW 1<sup>st</sup> Avenue

Miami, FL 33130

ph: (305) 350-5654

7. U.S. Fish and Wildlife Service

*Authority*

When there is federal involvement (a permit, license, funding, etc.) in a permit under review by the Corps, the FWS comments on the proposed action under authority of:

Fish and Wildlife Coordination Act (general to all species, including plants)

Endangered Species Act

Marine Mammal Protection Act (very limited authority)

The FWS has not exercised their authority under the MMPA in the southeast. This authority is used in states like California where species like sea otters are present. As such, FWS' familiarity with that authority in this region is rather limited, but Randy Roach would be the contact if it should come up.

Mr. Roach advised that his agency would probably have no involvement in a "cage culture" environment unless the agency discovered that a "take" of some covered species was involved. If a private entity were undertaking a commercial venture, the FWS would not comment unless asked to do so, and the responsibility to avoid any take rests on the private entity.

*Permit*

Comment/Review only.

*Contact*

Randy Roach, Assistant Field Supervisor

Baldwin County, Alabama Field Office

P. O. Box 1190

Daphne, AL 36526

Ph: (334) 441-5181

Fax: (334) 441-6222

8. Minerals Management Service

*Authority*

The Outer Continental Shelf Lands Act established jurisdiction over submerged lands on the outer continental shelf and the Minerals Management Service has authority over lease sites on the shelf. Consult the MMS if the project will be near or attached to an oil or gas platform or if ownership will be transferred.

*Permit*

For platform removal approval or transfer of ownership.

*Contact*

Gulf of Mexico OCS Region

1202 Elmwood Park Blvd.

New Orleans, LA 70123-2394

ph: (504) 736-2894

**B. Alabama**

1. Alabama Department of Conservation and Natural Resources

*Authority*

This agency has no written policies with regard to offshore mariculture but the Department of Conservation may consider on or offshore mariculture proposals on a case-by-case basis.

*Lands Division - Permit:* A standard lease from the state is required, called a Bottom Lease.

*Marine Resources Division - Permit:* Comments on proposals in the interest of the State Wildlife & Fisheries for the state.

*Contact*

Vern Minton, Director of Marine Resources  
Steven Heath, Head Marine Biologist  
P. O. Drawer 458  
Gulf Shores, AL 36547  
Ph: (334) 968-7577 or 968-7576  
Fax: (334) 968-7307  
Email: [rvminton.amrdgs@gulftel.com](mailto:rvminton.amrdgs@gulftel.com) or [sheath@gulftel.com](mailto:sheath@gulftel.com)

2. Alabama Department of Environmental Management

*Authority*

The ADEM regulates discharge into public waters of the state and has authority over the state's Coastal Area Management Program. (Alabama Code 9-7-20.) The responsibilities of the Alabama Coastal Program are divided between the Alabama Department of Economic and Community Affairs (ADECA) and the Alabama Department of Environmental Management and advised by the Coastal Resources Advisory Committee (CRAC). ADECA is responsible for overall management of the program including planning, fiscal management, and public information and education. ADEM is responsible for coastal area permitting, regulatory and enforcement functions, and for water quality regulation (Alabama Code § 22-22-9). The program goal is to protect and, where possible, to enhance or restore coastal resources.

*Permit:* Discharge permit, and Consistency Review.

*Contact*

John Poole	Gil Gilder
ADEM, Chief, Permits & Services Division	ADECA, Coastal Programs Office
P.O. Box 301463	1208 Main Street
Montgomery, AL 36130-1463	Daphne, AL 36526
ph: (334) 271-7714	ph: (334) 626-0042
fax: (334) 271-7950	fax: (334) 626-3503
e-mail: <a href="mailto:permitsmail@adem.state.al.us">permitsmail@adem.state.al.us</a>	e-mail: <a href="mailto:ala-coastal@surf.nos.noaa.gov">ala-coastal@surf.nos.noaa.gov</a>

## C. Florida

Florida enacted its Aquaculture Policy Act in the late 1980s and established the Department of Agriculture and Consumer Services (FDACS) as the lead agency. The Florida Aquaculture Plan was recently updated and proposed rules are soon to be adopted making FDACS a “one-stop shop” for aquaculture in Florida. The Bureau of Aquaculture Development provides extension and education services, assistance with business and production plan development, and guides applicants through the application processes to obtain permits from other agencies, all at no charge. This agency does conduct scheduled annual inspections of all certified aquaculture facilities.

### 1. Florida Department of Agriculture and Consumer Services

#### *Authority*

The Florida Department of Agriculture and Consumer Services is the state’s lead aquaculture agency. FDACS administers the Aquaculture Certification program under Florida Code § 597 and the Sovereign Submerged Lands Leasing Program under Florida Code § 253. Details on the Certification and Leasing programs can be found on Florida’s official aquaculture website (see [www.floridaaquaculture.com](http://www.floridaaquaculture.com)).

#### *Permitting*

##### Aquaculture Certification

To obtain the Aquaculture Certification, an aquaculturist must provide to FDACS’ Bureau of Aquaculture Development a plan for compliance with Florida’s Best Management Practices for Aquaculture or obtain an exemption from the Bureau of Aquaculture Development. The Best Management Practices are set out in Florida Administrative Code proposed rule 5L-3. The various exemptions are also listed in proposed rule 5L-3, and they include systems not making discharges into waters of the state, those engaged in certain marine bi-valve culture systems which circulate natural sea water without adding anything to the water, fee-fishing sites with less than 1,000 pounds of fish per acre, and individual production units producing less than 10,000 pounds per year of product.

An application may be obtained from the Bureau of Aquaculture Development, and requires the names, address and phone number of the applicant, information on the facility location, a description of the production facilities and a list of the products cultured together with estimates of annual production. The fee for application is \$50.00, and the Certification expires on June 30 of each year.

##### Sovereign Submerged Lands Lease

Submerged lands owned by the State of Florida may be leased for aquaculture activities, upon the recommendation of FDACS to the Board of Trustees of the Internal Improvement Trust Fund (the “Board”). The Board is composed of the Florida Legislature, the Governor and his Cabinet.

The Bureau of Aquaculture Development (the “Bureau”) provides applicants with the AquaPak, which includes an application form, guidelines for completion and a list of steps involved in the application review and approval process. First, the lease site must be identified and submitted with a description of the proposed activity, a business plan, and a \$200.00 application processing fee. The Bureau then conducts a comprehensive four to six week review of the proposal and makes a site

inspection to determine the suitability of the site for the proposed use. Once a satisfactory review has been performed, there is a public notice period, and the Bureau makes its recommendation to the Board. The Board makes all final leasing determinations, and the entire application process can be completed in six months to one year. Current lease rates are \$15.95 per acre per year, with a \$5.00 per acre surcharge.

*Contact*

Florida Department of Agriculture and Consumer Services  
Bureau of Aquaculture Development  
Mark Berrigan, Bureau Chief  
1203 Governor's Square Boulevard  
Tallahassee, Florida 32301  
ph: (850) 488-5471  
fax: (850) 410-0893  
e-mail: berrigm@doacs.state.fl.us

2. Florida Department of Environmental Protection

*Authority*

The Department of Environmental Protection (FDEP) administers Florida's NPDES permitting authority. Because of recent streamlining in the aquaculture regulatory process in Florida, an NPDES permit may or may not be required for an aquaculture facility.

*Permit*

NPDES permits are not required of aquaculture facilities in compliance with the FDACS' Best Management Practices for storm and wastewater. If, however, a facility is large enough to require an individual NPDES permit under the federal guidelines, FDEP will require NPDES permitting. Most larger farms are required to obtain an NPDES permit from FDEP. Any dredge or fill activities will also require a permit from FDEP.

*Contact*

Florida Department of Environmental Protection  
Industrial Wastewater Section  
Michael Bateman  
2600 Blair Stone Rd.  
Tallahassee, FL 32399-2400  
ph: (850) 921-5330  
fax: (850) 488-6579  
e-mail: Michael.bateman@dep.state.fl.us

### 3. Florida Fish & Wildlife Conservation Commission

#### *Authority*

Since the streamlining of Florida's regulatory program for aquaculture, the Fish & Wildlife Conservation Commission (FWCC) has very limited authority over the marine species in the state. The remaining authority is derived from Florida Statutes section 372.072 (4)(a).

#### *Permit*

FWCC's permitting authority has been relegated to FDACS, but aquaculturists who plan to cultivate game/sport fish, such as redfish, snook or sea trout, are required to work with FWCC to ensure compliance with FWCC guidelines and procedures designed to control poaching of wild stock.

#### *Contact*

Bob Palmer, Bureau Chief  
Florida Fish and Wildlife Conservation Commission  
620 South Meridian Street  
Tallahassee, FL 32399-1600  
ph: (850) 487-0554  
fax: (850) 487-4847  
email: marine@gfc.state.fl.us

### 4. Florida Water Management Districts

Each of the five districts permits consumptive uses of Florida's water resources within their district, but a permit is not required for aquaculture facilities using tidal body salt water exclusively. Local ordinances are likely to require a permit for fresh or brackish waters consumed from an aquifer or well, but only when an annual average of more than 100,000 gallons/day will be consumed or the intake pipe has a diameter of four (4) inches or more.

## **D. Louisiana**

Louisiana is developing its marine aquaculture program. Limited permitting for mariculture is allowed (Title 56, section 579) on private property in the coastal zone. The users must show separation of domestic stock from wild stock and sets reporting requirements. The regulations currently apply to oyster cultivation only, which is done in brackish waters. Louisiana has no permitting provisions for public waters.

### 1. Louisiana Department of Wildlife and Fisheries

#### *Authority*

Louisiana currently has no permit system for offshore aquaculture facilities in public waters. The agency with authority is the Louisiana Department of Wildlife and Fisheries.

#### *Permits*

A Mariculture Permit may be required after the coastal use permit issued by Department of Natural Resources and a lease from State Land Office have been obtained.

#### *Contact*

Dr. R. Glenn Thomas, Habitat Programs Manager  
Marine Fisheries Division, Louisiana Department of Wildlife & Fisheries  
P. O. Box 98000  
Baton Rouge, LA 70898  
Ph: (225) 765-2956

### 2. Louisiana Department of Natural Resources

#### *Authority*

Louisiana Department of Natural Resources relies heavily on the assessment made by Wildlife and Fisheries in the regulation of coastal uses. Past mariculture issues involved cultivation of redfish inshore in old abandoned oil and gas canals. If activities complied with Health and Wildlife and Fisheries regulations and the users held a Wildlife and Fisheries permit, DNR waived involvement. In the past, DNR has gotten involved in the past when a significant structure was erected that affected wetlands.

#### *Permit*

Coastal Use Permit, if required after the Wildlife and Fisheries assessment.

#### *Contact*

Terry Howey, Coastal Management Division Administrator  
Office of Coastal Restoration & Management  
P. O. Box 44487  
Baton Rouge, LA 70804  
ph: (225) 342-7591  
fax: (225) 342-9439

3. Louisiana State Land Office

*Authority*

The State Land Office has authority over the use of the water bottoms and air space above the water in the state. (Louisiana Revised Statutes Ann. section 30:172.)

*Permit*

For commercial ventures, Louisiana's SLO charges \$0.02/sq. ft. to lease a water bottom. The Lands Office advised that when projects have a scientific or otherwise public purpose, the SLO looks for exceptions to the fee requirement, usually successfully. The state does, however, want to be held harmless and would require an indemnification agreement to cover any damages suffered, such as vessel collisions with the structure.

*Contact*

Synthia Marcelin, Contract/Grants Reviewer  
(Oversees water bottom leases and permits)  
Clay Carter, Lands Manager  
(Makes recommendations to Director of SLO)  
Louisiana State Land Office  
P. O. Box 44124  
Baton Rouge, LA 70804  
Ph: (225) 342-0120  
Fax: (225) 342-5458  
Email: smarcel@doa.state.la.us

4. Louisiana Department of Environmental Quality

*Authority*

The Department of Environmental Quality has authority over the water quality for the waters of Louisiana. (Louisiana Revised Statutes Ann. section 30:2074).

*Permit*

Cheryl Lejeun, Industrial Permits Coordinator, advised that NPDES water permits would be required by Louisiana DEQ for an some aquaculture activities, but not usually for those conducted for scientific or research purposes.

*Contact*

Cheryl Lejeune, Industrial Permits Coordinator  
Office of Environmental Services  
P. O. Box 82135  
Baton Rouge, LA 70884-2135  
Ph: (225) 765-0199  
Fax: (225) 765-0222  
Email: cheryl\_1@deq.state.la.us

## **E. Mississippi**

### **1. Mississippi Department of Agriculture**

#### *Authority*

Under the Mississippi Aquaculture Act of 1988, the Department of Agriculture and Commerce is the responsible agency for permitting aquaculture activities in both fresh and marine waters. The law states:

“The Department shall issue a cultivation permit for any aquaculture facility located, in whole or in part, in the Mississippi Sound, the Gulf of Mexico, or bays or estuaries thereof at such time that such facility complies with all state and federal requirements to protect marine resources.” MISS. CODE ANN. § 79-22-17 (1999).

The Department must approve the proposed aquaculture facility design and may conduct periodic inspections. The Department may prohibit the culturing of any species at any location if it determines that it would be detrimental to the public interest and presents its determination in writing with supporting justification.

When you apply with the Department of Agriculture, the agency will distribute the permit application to other federal and state agencies. These agencies are:

U.S. Army Corps of Engineers  
Environmental Protection Agency  
Mississippi Department of Marine Resources  
Mississippi Department of Environmental Quality  
Mississippi Secretary of State’s Office

#### *Permit*

Aquaculture Permit.

#### *Contact*

Gene Robertson  
P.O. Box 1609  
Jackson, MS 39215-1609  
ph: (601) 359-1100  
fax: (601) 354-6290

### **2. Mississippi Department of Marine Resources**

#### *Authority*

The Mississippi Department of Marine Resources has responsibility for regulating activities under the Mississippi Coastal Wetlands Protection Act that affect any coastal wetland. (Miss. Code Ann. § 49-27-5 (1999)). Generally, any aquaculture operation that is to be sited in an area below the high tide line, in coastal wetlands, or in areas suitable for water-dependent industries must obtain a permit from the DMR.

One obstacle facing aquaculture in Mississippi waters is the completion by DMR of the Marine Aquaculture Environment Monitoring Program Guidelines, which were drafted for an earlier aquaculture project but never completed.

*Permit*

The necessary permit is the wetlands permit but the DMR will also be responsible for granting consistency under the Mississippi Coastal Program and the Coastal Zone Management Act.

For information purposes, DEQ's concerns during the last project were hundred of lbs of feed/day, the length of time cage in place and how long various species will actually be captured and held.

*Contact*

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Coastal Ecology  
1141 Bayview Ave, Ste 101  
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fax: (228) 374-5008

Other contacts: Daryll Evans - Director of Coastal Ecology Division

3. Mississippi Secretary of State

*Authority*

The Secretary of State is responsible for permitting uses and conserving the state lands, including public trust tidelands, of Mississippi. Aquaculture activities that propose to use the water column or sea bottom require an aquaculture lease from the Secretary. The amount of annual rent is negotiated and the parcel is required to be identified and well-marked.

*Permit*

The necessary permit is an Aquaculture Lease of Public Trust Tidelands.

*Contact*

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Office of the Secretary of State  
P.O. Box 97  
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e-mail: mbretz@sos.state.ms.us

#### 4. Mississippi Department of Environmental Quality

##### *Authority*

The Mississippi Department of Environmental Quality is responsible for regulating discharges into the waters of Mississippi. (Miss. Code Ann. § 49-17-1, *et. al.* (1999).) In addition, the EPA has delegated its authority for state water issues in Mississippi to the Mississippi Department of Environmental Quality, making the MDEQ responsible for granting NPDES permits.

##### *Permitting*

The MDEQ will determine the need for an NPDES permit for marine net-pen aquaculture on a case-by-case basis. The MDEQ contact, Mr. Steve Spengler advised that a permit may not be necessary for temporary research sites. MDEQ requires scientific information during the application process, and suggests contacting this agency before filling out a DEQ application.

The possible necessary permits are:

NPDES Discharge Permit

Water Quality Certification

Possible Health Department (if living quarters are constructed on the site)

##### Contact

Steve Spengler

Mississippi Department of Environmental Quality

P.O. Box 20305

Jackson, MS 39289-1305

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## **F. Texas**

### 1. Texas Department of Agriculture

#### *Authority*

The Texas Department of Agriculture (TDA) is the lead agency charged with regulation of aquaculture in Texas. Specifically, TDA is statutorily required to encourage the raising of cultured species, development of the aquaculture industry and the marketing of aquaculture products. Texas Agriculture Code § 12 et seq.

The Agriculture Code authorizes both TDA and the Texas Parks and Wildlife Department to adopt rules to carry out their respective duties. It also authorizes TDA to establish record-keeping requirements for commercial aquaculture facilities. Texas Agriculture Code § 134 et seq. As of July 1, 2000, TDA is still working to promulgate these requirements.

#### *Permitting*

An Aquaculture License must be obtained from TDA prior to beginning operations. Texas Agriculture Code § 134.011(b)(2). Attached as Exhibit F1 is the standardized form to be submitted together with \$100.00 to TDA. The same form is used for Fish Farm Vehicle Licenses required by § 134.012, below. Before an Aquaculture License will be granted by TDA, an applicant must obtain either a permit for wastewater disposal or a Certificate of Exemption from Texas Natural Resource Conservation Commission (TNRCC). Copies of all applications are sent to TPWD and TNRCC for review within 10 days of receipt by TDA.

In addition to the Aquaculture License, an aquaculturist in Texas must obtain Fish Farm Vehicle Licenses from TDA for all vehicles used to transport cultured species from a private facility for sale. Texas Agriculture Code § 134.012. Licenses must be purchased for each truck in operation, including vehicles from which fish are sold by a non-aquaculturist. The only exemption is for the vehicle owned and operated by the holder of an aquaculture license, and a copy of the aquaculture license must be kept in the vehicle. The cost is \$100.00 per vehicle, and the form is attached as Exhibit F1.

#### *Penalties*

The penalty for unlawfully fishing or taking fish from an aquaculture facility is the penalty imposed for a third degree felony, and all other statutory violations are Class C, B and A misdemeanors. Texas Agriculture Code § 134.023

The Texas Water Code provides for institution of suit by state agencies for injunctive relief and civil penalties. Texas Water Code § 7.

#### *Contact*

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Austin, Texas 78711

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5. Texas Natural Resource Conservation Commission (TNRCC)

*Water Quantity*

*Authority*

TNRCC is charged with approving water appropriation permits for mariculture operations using brackish or marine waters. Permits are generally required to appropriate water belonging to the State of Texas. Texas Water Code § 11 et seq.

*Permitting*

No permit is required to appropriate waters for mariculture activities, but notice must be given to TNRCC of intent to appropriate water for mariculture activities. Texas Water Code § 11.1421. Notice must be given prior to appropriating, and each appropriation must be reported. No permit is required to appropriate water from the Gulf, its adjacent bays and arms for mariculture operations. The amount appropriated is that “appropriate” to the mariculture activities as determined by TNRCC.

TNRCC may, after notice and hearing, issue an order requiring interruption or reduction of the appropriation if it determines there is an interference with the “natural productivity” of bays and estuaries because of low freshwater inflows.

*Contact*

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Division of Water Permits and Resource Management  
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Austin, TX 78711-3087  
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e-mail: iortiz@tnrcc.state.tx.us

*Water Quality*

*Permitting*

Commercial shrimp-culture facilities in the coastal zone must obtain a site-specific wastewater discharge permit from TNRCC. Texas Agriculture Code § 134.013. Prior to issuance of the permit, an applicant must provide an environmental report on the conditions at the proposed site. The report must assess potential impacts on sensitive aquatic habitats, significant impacts related to the construction or operation of the facility and any mitigation actions proposed by the applicant. The report must be provided to TNRCC and TDA. TNRCC must consider this report before making a determination on the wastewater discharge permit, and TDA will only require the report if the

proposed activity will occur within the coastal zone, which is defined by the TPWD. TNRCC is required to establish guidelines for this report and its requirements. Licenses are valid for two years.

All other aquaculture operations must obtain either an individual permit, permission from TNRCC to operate under a General Permit, or a Certificate of Exemption. Individual permits are obtained in much the same way as the shrimp-culture permits described above, and the cost is approximately \$350.00. As of July 10, 2000, the General Permit is still in the promulgation stages, having just been submitted for public notice and comment. The anticipated cost for application review under the General Permit is \$100.00. Applicants for Certificates of Exemption are required to complete the application under Texas Administrative Code §30.321, Subchapter O. Only those facilities which recycle all water, rely only upon evaporation or otherwise conduct no activities recognized as discharge by TNRCC can be certified as exempt.

An aquaculture-specific facility fee limit is imposed by Texas Water Code § 26.0292, which limits total fees to \$5,000 annually. Fees are assessed according to the pollutant load of the facility.

*Contact*

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Texas Natural Resource Conservation Commission  
Wastewater Permitting  
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3. Texas Parks and Wildlife Department

*Authority*

The Texas Parks and Wildlife Commission (TPWD) is required by the Agriculture Code to adopt rules regulating exotics and enforce them. Texas Agriculture Code § 134.020. TPWD regulates exotic fish, shellfish, and aquatic plant species in order to protect indigenous Texas species and aquatic habitats. TPWD is required to make a list of exotics for which a permit will be required, define the zone inside which exotics will be excluded, approve shellfish disease specialists for the disease free certification of exotics, adopt rules to regulate exotics, and issue Exotic Species Permits for the possession, propagation, sale and transportation of exotics under TPWD Code § 66.007. Additionally, TPWD is authorized to inspect aquatic products at the dealer/handler's place of business during normal business hours, and no person may refuse the inspection. P&WD Code § 47.037.

TPWD also has the water quality control enforcement authority for violations affecting aquatic life and wildlife. Water Code § 26.129. Section 66 of the TPWD Code prohibits any person from catching or taking aquatic life from any private waters without consent, TPWD Code § 66.002, and defines the penalties for violations of that prohibition in TPWD Code § 66.012.

Statistical information on the harvest of aquatic products in Texas must be gathered and compiled by TPWD under TPWD Code § 66.019.

### *Permitting*

The TPWD Code, like the Agriculture Code, requires aquaculturists and those transporting aquatic products to obtain and keep the standard fish farm vehicle/aquaculture licenses. TPWD Code § 66.014. A special license issued by TPWD is required to collect, hold or propagate indigenous fish or aquatic life, when Texas law regulates those activities. TPWD Code § 43.021.

A dealer's license must be obtained by any person transporting aquatic products or bringing them into the state under TPWD Code § 47.018, and aquatic products transportation invoices must be prepared by the shipper and kept with the products under TPWD Code § 47.0181. Wholesale fish dealers not licensed under §134.011 of the Agriculture Code must be licensed by TPWD. TPWD Code § 47.009. The same license requirements are imposed upon retail fish dealers under TPWD Code § 47.011 and upon bait fish dealers under TPWD Code § 47.014.

A permit must be obtained from TPWD for introduction of any aquatic products into public waters, and the Department is charged with establishing the rules and regulations governing those permits. TPWD Code § 66.015. This section exempts native "non-game" fish, as defined by the Commission, except where threatened or endangered fish are present.

TPWD Rules § 57.111 et seq. outline TPWD's regulation of exotics. Prior to importing live exotic shellfish, documentation of the inspection and certification of the exotics as disease-free must be provided to TPWD, and the importer must receive acknowledgment that such documentation has been received. Monthly certification is required for certain species, and additional examinations and certifications are required before the first discharge of waste in any calendar year.

To obtain an Exotic Species Permit, an applicant must possess either a valid Fish Farmer's License, a TNRCC permit for operation of a wastewater treatment facility, a TPWD approved research proposal or operate a public aquarium. The application fee is \$250.00, and the applicant must complete TPWD's application form and submit an accurate-to-scale plat of the facility. TPWD Rules § 57.117. Applicants must also meet all the disease free certification requirements in TPWD Rules § 57.114, and facilities located within the exclusion zone must submit and obtain approval of an Emergency Plan to prevent the release or escape of exotics during a natural catastrophe, such as a hurricane or flood. Permits expire every year on December 31.

### *Contact*

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#### 4. Texas Agency Cooperation

### *Generally*

TNRCC must provide copies of applications for aquaculture wastewater discharge permits to TDA and TPWD. All three agencies shall each appoint one representative to review aquaculture wastewater discharge permits. Texas Agriculture Code § 134.031. TPWD has the authority in consultation with TNRCC to establish guidelines that identify sensitive aquatic habitats in the coastal zone, those guidelines to be used by TNRCC in reviewing applications for new aquaculture facilities or expansions of existing facilities in the coastal zone. As of July 1, 2000, the timing of the application-sharing described above is subject to a Memorandum of Understanding, which has not yet been completed. The representative group charged with reviewing the permits has not yet convened, and the Memorandum of Understanding will define the make-up of this review group.

#### *Collective Permitting*

A 1999 amendment to the Water Code requires TNRCC, DOA and the P&WD to collectively permit discharges of suspended solids from aquaculture (specifically shrimp) facilities in the coastal zone. Texas Water Code § 26.0345.

#### *General Permits*

Water Code § 26.040 Issuance of General Permits

A copy of the Draft General Permit to Dispose of Wastes is attached and is current through December 20, 1999. The permit is aquaculture-specific, and it allows discharge subject to Texas Surface Water Quality Standards, the regulations imposed by TNRCC and the State of Texas.

### 5. Texas Department of Health

#### *Authority*

The Texas Department of Health (TDH) is authorized to regulate molluscan shellfish, including oysters, clams, mussels and scallops under the Texas Aquatic Life Act, Texas Health and Safety Code § 436.001 et seq. TDH's regulatory authority extends to ensure the shellfish are harvested from approved waters. TDH is responsible for licensing and inspecting seafood processors and distributors, and has adopted the federal regulations governing seafood processors, Title 21 of the Code of Federal Regulations, part 123. The Manufactured Foods Division may become involved when unauthorized antibiotics or other adulterants are used on cultured products.

#### *Permitting*

Anyone taking, selling, offering for sale, or holding for sale molluscan shellfish from a restricted or conditionally restricted area, as defined by TDH, must obtain a permit from TPWD and have those activities supervised by TPWD. TDH's regulatory role is primarily that of an inspector charged with determining the suitability of an area for the taking or holding of molluscan shellfish. Areas are to be classified according to the categories in the National Shellfish Sanitation Program Manual of Operations as an approved, conditionally approved, restricted, conditionally restricted or prohibited area. TDH Code § 436.101. The director must also designate growing areas as closed or open areas.

Sanitary surveys of the areas from which oysters are harvested are to be conducted by TDH, and the meat of the oysters must also be sampled at the earliest time following the designation as a closed area. The oyster program must also be consistent with the National Shellfish Sanitation Program. TDH Code § 436.104. TDH issues shellfish certificates and licenses for the processing of crabmeat. TDH Code § 436.111. Applications are first filed with TDH, then the director or an authorized agent

inspects the property for conformity with TDH rules. TDH Code § 436.113. Certificates expire on August 31 of each year, and licenses on the last day of February each year. TDH Code § 436.113.

*Contact*

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Texas Department of Health  
Seafood Safety Division  
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fax: (512) 719-0220  
email: Mike.Ordner@tdh.state.tx.us

6. Texas Bureau of Land Management

*Authority*

Texas Natural Resources Code § 51 authorizes surface leasing by the Texas General Land Office (TGLO). All lands and waters are held in trust to the Permanent School Fund, and all revenues generated by mineral, land or seabed leases belong to that fund. Texas, unlike most states, claims territorial waters out to ten (10) miles from shore.

*Leasing*

Applicants interested in leasing Texas land or waters for aquaculture are encouraged to contact the TGLO very early in the planning process. The application consists of two main parts. The first requires the name, address and financial status of the applicant, a description of the proposed location and a statement of the parameters of the project. The second portion involves a due-diligence examination of the first portion by TGLO to determine the nature of the lessee, creditworthiness of the lessee, and the soundness and feasibility of the overall aquaculture proposal. TGLO then uses the results of that examination to determine the rental fee, which consists of a base fee and a royalty-style rent based on the revenue or income of the project.

*Contact*

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### ***Part III: Critiques of Offshore Aquaculture***

A. Pollution

One of the main concerns of the public and agencies will be pollution. Regarding the destruction of the benthic community from waste feed & fecal deposition, Dr. Cornell Ladner of the Mississippi DMR suggested that the ideal system is one that collects the waste products, harvests them, and does something



### C. Species

Several concerns regarding marine species exist:

Protection of marine mammals

Protection of native species

Introduction of nonindigenous species

Potential impact on non-target bacteria from use of antibiotics in fish feed

Infection of wild stocks by diseases carried by cultured fish.

### D. Public Perception & User Conflicts

There may be substantial opposition to aquaculture, founded primarily upon:

1. Ignorance about aquaculture generally
2. Pollution in other states from utilization of poor technology. For example, the pollution to Texas shrimping and degradation of the environment because of foul odors and decreases in property values has been a public concern.
3. Aquaculture may interfere with the public use and enjoyment of the ocean.
4. Aquaculture may have a negative impact on existing recreational and commercial fisheries.

## ***Part IV: Appendices***

### **A. Federal and State Agencies**

#### **FEDERAL WATERS**

U.S. Department of Agriculture - Head agency for National Aquaculture Plan and Efforts  
National Marine Fisheries Service - Authorization for a managed species, exempted fishing permit  
U.S. Environmental Protection Agency - NPDES Permit, Ocean Dumping Permit  
U.S. Fish and Wildlife Service - Commenting only  
U.S. Army Corps of Engineers - Navigation impairment, wetlands  
U.S. Coast Guard - Structure Marking requirements  
Gulf of Mexico Fishery Management Council - EFH Consultation/Commenting  
State Coastal Zone Management Program - Coastal Zone Consistency

#### **ALABAMA**

Alabama Department of Conservation and Natural Resources - bottom lease, commenting  
Alabama Department of Environmental Management - discharge permit

#### **FLORIDA**

Florida Department of Agriculture and Consumer Services - certification  
Florida Department of Environmental Protection - special activity license, dredge permit  
Fish and Wildlife Conservation Commission - commenting, species permits

#### **LOUISIANA**

Louisiana Department of Wildlife and Fisheries - Mariculture permit  
Louisiana Department of Natural Resources - coastal use permit  
Louisiana State Land Office - lease  
Louisiana Department of Environmental Quality - possible discharge permit

#### **MISSISSIPPI**

Mississippi Department of Agriculture - Aquaculture Permit  
Mississippi Department of Marine Resources - Wetlands Permit, Coastal Zone Consistency  
Mississippi Department of Environmental Quality - Water Quality (EPA-NPDES Permit)  
Mississippi Secretary of State - Tidelands Lease

#### **TEXAS**

Texas Department of Agriculture - possible Aquaculture permit  
Texas Natural Resource Conservation Commission - wastewater discharge permit  
Texas Department of Parks and Wildlife - nonindigenous species permit, if necessary

B. Relevant Federal and State Code Sections

Agriculture and Food Act of 1980 - 5 U.S.C. §5315, et seq.

Clean Water Act - 33 U.S.C. § 1251

Coastal Zone Management Act, 1990 and 1996 Amendments - 16 U.S.C. § 1451

Columbia River Basin Fishery Development Program - 16 U.S.C. § 835

Commercial Fisheries Research and Development Act - 16 U.S.C. §§ 742(c), 779

Endangered Species Act - 16 U.S.C. § 1531

Fish and Wildlife Act of 1956 - 15 U.S.C. § 715c - 3; 16 U.S.C. § 742a

Fish and Wildlife Coordination Act - 16 U.S.C. § 661

Interjurisdictional Fisheries Act - 16 U.S.C. §§ 742c, 779, 4001

Magnuson-Stevens Fishery Conservation and Management Act - 16 U.S.C. § 1801

Marine Mammal Protection Act - 16 U.S.C. § 1361

Marine Protection, Research and Sanctuaries Act - 16 U.S.C. § 1401

National Sea Grant College Program Act - 33 U.S.C. § 1121

National Environmental Policies Act - 42 U.S.C. § 4321

National Aquaculture Act of 1980 - 16 U.S.C. § 2801

Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 - 16 U.S.C. § 4701

Outer Continental Shelf Lands Act - 16 U.S.C. § 1456

Rivers & Harbors Act of 1899 - 33 U.S.C. § 401

Saltonstall-Kennedy Act - 15 U.S.C. § 713c

Title XI, Merchant Marine Act of 1936 - 46 U.S.C. § 221

Water Resources Development Act - 16 U.S.C. § 460d