ORDINANCE 13.001

AN ORDINANCE TO REGULATE AQUACULTURE IN THE MARINE ENVIRONMENT

WHEREAS, the Mississippi Commission on Marine Resources (hereinafter referred to as the "Commission") is vested with the jurisdiction and authority over all marine aquatic life and is authorized to enact all regulations necessary for the protection, conservation and propagation of all shrimp, oysters, fish and crabs in the waters under the territorial jurisdiction of the State of Mississippi, as provided for in Miss. Code Ann. § 49-15-15; and

WHEREAS, the Commission is vested with the jurisdiction and authority over all coastal wetlands including the flora and fauna on and in the wetlands, and is charged with the protection of the coastal wetlands pursuant to the Coastal Wetlands Protection and Miss. Code Ann. § 49-27-1, et seq.; and

WHEREAS, the Commission on through the Mississippi Department of Marine Resources ("DMR") is charged with the responsibility of promulgating rules and regulations which specify design criteria to protect marine resources and to prevent the release of undesirable species from an aquaculture facility into the environment, as provided for in the Mississippi Aquaculture Act of 1988, Miss. Code Ann. § 79-22-15; now therefore,

WHEREAS, the Commission provides these requirements for aquaculture activities in marine waters that require a permit under the provisions of the Coastal Wetlands Protection Act and the Mississippi Aquaculture Act of 1988, and said requirements are to be used in making permit decisions regarding regulated activities in marine waters and provide regulatory guidance for industry and resource agencies.

BE IT ORDAINED BY THE MISSISSIPPI COMMISSION ON MARINE RESOURCES:

I. DEFINITIONS.

A. "**MILE"--**For the purposes of this ordinance, a mile shall be interpreted to mean one nautical mile.

B. "**NET-PEN**"--A net-pen shall refer to any aquaculture system that uses nets or cages suspended in the water column to grow fish or invertebrates.

C. "**ISLANDS"**—All islands in the territorial waters of the State of Mississippi,

which includes, but is not limited to, Petit Bois, Horn, East Ship, West Ship, Cat, Round and Deer Islands.

D. "**SHORELINE**" – That area where the water contacts the land including the mainland and all offshore and barrier islands.

II. REQUIREMENTS APPLICAPLE TO ALL AQUACULTURE OPERATIONS.

The following requirements shall apply to all types of aquaculture activities in the marine waters of the State of Mississippi.

A. All aquaculture permit applicants shall provide the DMR with a **site-specific** environmental assessment that describes the site characteristics and the potential impacts associated with the project. This assessment shall include but not necessarily be limited to information on bottom characteristics, hydrological characteristics (current speed and direction, temperature range, dissolved oxygen content range, etc.), proximity to habitats of special significance and endangered species that utilize the general area. Data from pre-existing studies may be used if it is applicable to the specific site.

B. Aquaculture operations shall not be located within 1,500 feet of any pipeline or submerged cable.

C. Discharges into the surrounding waters of any waste materials including, but not limited to, solids, debris, sanitary and kitchen wastes, oil and grease but excluding fouling organisms, the excrement of the cultured species, and commercially prepared feeds fed to them, shall be prohibited.

D. Aquaculture operations shall not locate within one mile of habitats of special significance. Habitats of special significance include habitats for endangered and threatened species, public oyster reefs, bird nesting areas, and sea turtle nesting grounds. Net-pen operations shall not locate within one mile of a seagrass bed. Molluscan shellfish operations must not locate within 1,500 feet of a seagrass bed.

E. In order to minimize the impacts to sea turtles, the structure and any associated vessels moored adjacent to it shall use external lighting systems composed of low pressure sodium vapor lights with a maximum of 55 watts per bulb or any other light source proven and documented not to disturb sea turtles. Coast Guard required navigation lights are exempt from this guideline.

F. Generally, only non-lethal methods of predator control shall be allowed. However, the oyster drill (*Thais haemastoma* sp.) shall be exempt from this

guideline. To insure that the applicant has taken measures to prevent the deaths or harm of potential predators, a predator control plan that details the type of predator controls being proposed (i.e. mesh size of netting, color of netting, height of netting, etc.) for each aquaculture operation shall be approved by the DMR prior to the issuance of a permit.

G. Care shall be taken to avoid locating aquaculture operations in close proximity to federal navigation channels and dredged material disposal areas. Aquaculture operations shall not be sited within one-half (1/2) mile of the centerline of a federal navigation channel nor shall they be sited within a safety fairway, an anchorage area, or within the boundary of a dredged material disposal site unless specifically authorized by the U.S. Army Corps of Engineers and/or the U.S. Coast Guard.

H. All aquaculture operations must be properly marked and lighted in accordance with U.S. Coast Guard regulations.

I. All aquaculture operations shall minimize impacts to the natural scenic qualities of the coastal environments. The noise generated by the facility shall be minimized.

J. All applicants shall provide the DMR with a plan for securing or moving, if necessary, the aquaculture facility in the event of a significant storm or hurricane. The permitted facility shall comply with the approved storm plan in the event of a significant storm or hurricane.

III. REQUIREMENTS SPECIFIC TO FINFISH AND CRUSTACEAN AQUACULTURE.

A. Net-pen or other containment systems for culturing finfish, crustaceans or other non-molluscan marine organisms shall be located in waters of sufficient depth. A minimum clearance of 10 feet below the bottom of the net-pen system shall be maintained at all times. The distance shall be measured at mean low water. If monitoring indicates a serious problem with water quality or other environmental conditions at the site (i.e., when certain limits for specific parameters established in the monitoring program or by the Mississippi Department of Environmental Quality are exceeded), the operation must be adjusted to reduce impacts. Adjustments shall include, but are not–limited to, modifying the feeding rate or feeding schedule, reducing the amount of fish in the net-pen system, or increasing or decreasing the clearance under the nets to allow for increased water circulation.

B. Net-pen aquaculture operations shall not be located within two (2) miles of the shoreline.

C. Variations to the requirements in this section are allowed for cultivation of filter-

feeder species without commercial feeds, with approval by the Commission.

IV. REQUIREMENTS SPECIFIC TO MOLLUSCAN SHELLFISH AQUACULTURE.

A. Off-Bottom Culture.

1. Off-bottom culture of molluscan shellfish is defined as floating and/or suspended operations, that include, but are not limited to, long lines and rafts.

2. Molluscan shellfish aquaculture operations, which include support facilities, shall not be located within two (2) miles of the shoreline.

3. All off-bottom molluscan shellfish culture operations shall be designed to minimize impacts to water circulation patterns.

B. On-Bottom Culture in Offshore Waters.

1. On-bottom culture of molluscan shellfish in offshore waters includes any aquaculture operation that involves the use of cultch material, racks, cages or any structures to support shellfish which are, located more than 750 yards from the shoreline. Cultch material must be approved by the DMR, and approval, in part, will be based on the environmental safety and suitability of the material.

2. A minimum of six (6) feet of water at mean low water shall be maintained above on-bottom offshore water aquaculture operations at all times. The Commission may allow variance to this water depth requirement after review and approval.

3. Molluscan shellfish aquaculture operations which include support facilities shall not be located within two (2) miles of the shoreline.

C. On-Bottom Culture in Nearshore Waters.

1. On-bottom culture of molluscan shellfish in nearshore waters includes any aquaculture operation that involves the use of cultch material, racks, cages or any structures to support shellfish which are located within 750 yards of the shoreline. Cultch material must be approved by the DMR, and approval will be based on the environmental safety and suitability of the material.

2. On-bottom culture operations shall be designed to minimize the disruption of the natural movement of sediment in the nearshore areas.

3. Racks and cages must be arranged in rows with adequate spacing between rows to allow for reasonable ingress and egress to the shoreline. No racks or cages shall be located within 200 feet of the shoreline unless it can be proven that there will be no conflicts with the traditional user groups in the area (i.e. flounder fisherman, beachgoers, etc.).

D. In addition to aforementioned requirements for molluscan shellfish culture, an applicant must also abide by Commission's regulations and ordinances governing shellfish.

V. MONITORING PROGRAM REQUIREMENTS

A. Pre-Operational Environmental Survey

All aquaculture operations shall perform a Pre-Operational Environmental Survey (POES) no earlier than three months prior to operation and submit the data and findings in a report to the DMR. The POES shall characterize selected bottom sediment and water column conditions at the site prior to the commencement of the aquaculture operation. The POES shall include the following information:

1. Bathymetric Survey

A bathymetric survey using a continuous recording depth recorder or equivalent equipment shall be performed at the aquaculture site. The site shall be divided into an appropriate number of transects, based upon size of project. The results of this survey shall be submitted to the DMR in a tabulated and graphic form.

2. Sediment and Water Quality Analysis

A quantitative sampling device is to be used to collect sediment samples for chemical and biological analysis. The water column shall also be tested for selected environmental parameters. The number of water quality and sediment samples that will be required shall be based on the potential production level of the operation. Detailed sampling protocols and procedures are contained in the Marine Aquaculture Environmental Monitoring Program.

B. Operational Monitoring Program

A Marine Aquaculture Environmental Monitoring Program (MAEMP) developed by the DMR, or developed by the applicant and approved by the DMR, and shall be implemented before the aquaculture operation is initiated and the data and findings shall be submitted in a report to the

DMR in a format designated by the DMR. The MAEMP is intended to monitor potential changes in water and sediment quality resulting from the aquaculture operation. Secondly, it provides data with which to review the current environmental requirements for possible future modifications. As additional data are obtained on the environmental effects of aquaculture operations, the monitoring protocols as specified in the MAEMP may be revised. It is also possible that monitoring at some culture sites may be curtailed or eliminated entirely if little or no measurable effect on environmental quality is found. The determination to curtail, eliminate or refocus the monitoring at any site will be made after the DMR reviews the results obtained from the MAEMP.

The MAEMP consists of four principle elements: 1) hydrographic survey, 2) sediment chemistry, 3) water quality, and 4) benthic survey. The frequency, range, and duration of the monitoring will depend on the type and potential production level of the aquaculture operation. Detailed protocols and procedures applicable to monitoring the environmental parameters and report preparation are presented in the MAEMP.

Additionally, the applicant shall keep a daily record of the number of incidental deaths of coastal wildlife that occur within the leased area. This log shall be submitted to the DMR by the 10th of each month. The DMR shall be notified immediately upon the injury or death of any threatened or endangered species, marine mammal or raptor within the leased area.

VI. AQUACULTURE RESEARCH

State educational institutions conducting marine aquaculture projects shall comply with all provisions of this Ordinance, pursuant to Miss. Code Ann. § 79-22-29, but shall be exempt from fees, pursuant to Miss. Code Ann. § 79-22-31.

VII. ENFORCEMENT

Any person, firm or corporation violating any of the provisions of this Ordinance shall be, in addition to civil liability provided for in Miss. Code Ann. § 49-27-55, guilty of a misdemeanor, and on conviction, shall be penalized in accordance with Miss. Code Ann. § 49-27-57. Violations of more than one section or subsection of this Ordinance, or part thereof, shall be considered separate offenses and punished as such. In the case of continuing violations, each day shall constitute a separate offense.

Each section and subsection of this Ordinance shall be declared separable, and if any section or subsection or part thereof shall be held invalid or unconstitutional, the balance of said Ordinance shall remain in full force and effect.

This Ordinance shall be in effect and be in force from and after the 24th day of July, 2000.

Adopted this the 20th day of June, 2000.

MISSISSIPPI COMMISSION ON MARINE RESOURCES

By:_____
William Mitchell, Chairman

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

By:_____
E. G. Woods, Executive Director