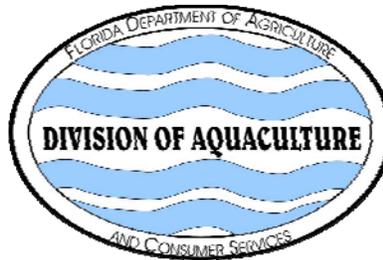


AQUACULTURE BEST MANAGEMENT PRACTICES RULE

January 2007

Prepared by the Florida Department of Agriculture and Consumer Services
CHARLES H. BRONSON, Commissioner



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CHAPTER 5L - 3 AQUACULTURE BEST MANAGEMENT PRACTICES

- 5L-3.001 Purpose.
- 5L-3.002 Definitions.
- 5L-3.003 Requirement for an Aquaculture Certificate of Registration.
- 5L-3.004 Aquaculture Best Management Practices Manual.
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- 5L-3.006 Minimal Impact Aquaculture Facilities.
- 5L-3.007 Failure to Comply With the Best Management Practices.

5L-3.001 Purpose.

This rule establishes application procedures and best management practices, as provided by Chapter 597, Florida Statutes, to be followed by aquaculture producers in order to obtain an aquaculture certificate of registration from the Florida Department of Agriculture and Consumer Services.

Specific Authority 570.07(23), 597.004(2)(b) FS. Law Implemented 597.002, 597.003(1)(a)(j), 597.004(2) FS. History - New 10-4-00.

5L-3.002 Definitions.

Definitions used in Rule 5L-3, F.A.C.

- (1) "Department" means the Florida Department of Agriculture and Consumer Services.
- (2) "Individual Production Unit" means any pond, tank, raceway, marine net pen, or integrated aquacultural system constructed and maintained in accordance with Aquaculture Best Management Practices wherein aquatic species are cultured.

Specific Authority 403.0885(5) FS. Law Implemented 570.07(23), 597.002, 597.003(1)(a)(j), 597.004(2) FS. History -- New 10-4-00.

5L-3.003 Requirement for an Aquaculture Certificate of Registration.

All aquaculture producers shall have an aquaculture certificate of registration from the Department and apply the best management practices identified in this rule. The aquaculture certificate of registration shall have a duration as specified in Section 597.004(6), F.S., unless suspended or revoked by the Department for failure to comply with Section 597.004, F.S. and Section 597.0041(1), F.S.

Specific Authority 570.07(23), 597.004(2)(b) FS. Law Implemented 597.003, 597.004, 597.0041 FS. History -- New 10-4-00.

5L-3.004 Aquaculture Best Management Practices Manual.

- (1) The Best Management Practices manual used by the Department under Chapter 5L-3, F.A.C., is adopted and incorporated by reference in this section. The manual is listed below by subject title and date. Copies of the manual may be obtained by contacting the Division of Aquaculture, 1203 Governor's Square Boulevard, 5th Floor, Tallahassee, FL 32301, (850) 488-4033 or from the Division of Aquaculture's website at www.FloridaAquaculture.com.
- (2) Aquaculture Best Management Practices Manual, January, 2007.
- (3) The following documents have been adopted by reference into the Aquaculture Best Management Practices Manual, January 2007 and are also incorporated by reference into this rule:
 - (a) USDAS/NRCS Agricultural Handbook, 590 (September, 1997), http://ftp.wcc.nrcs.usda.gov/downloads/hydrology_hydraulics/misc/ponds.pdf .
 - (b) University of Florida IFAS Circular No. 334 (February, 1999) <http://edis.ifas.ufl.edu>.
 - (c) NRCS Conservation Practice Standard Code 327, Conservation Cover (July, 1998), http://efotg.nrcs.usda.gov/references/public/IA/N327_10-2003.pdf
 - (d) NRCS, FOTG Commercial Fishponds 397 (March, 2003), <http://efotg.nrcs.usda.gov/references/public/AL/tg397.pdf>.

Specific Authority 570.07(23), 597.004(2)(b), 791.07 F.S.

Law Implemented 570.0705, 597.003, 597.004 F.S.

History-New 10-4-00, Amended 12-29-02, 6-8-04, 11-22-05, 4-9-07.

5L-3.005 Aquaculture Certificate of Registration.

- (1) Any person engaging in aquaculture must be certified by the department. The applicant for a certificate of registration shall submit the following to the department:
 - (a) Applicant's name/title.
 - (b) Company name.
 - (c) Complete mailing address.
 - (d) Legal property description of all aquaculture facilities.
 - (e) Actual physical street address for each aquaculture facility.
 - (f) Description of production facilities.
 - (g) Aquaculture products to be produced.
 - (h) Fifty dollar annual registration fee.

- (2) The Department shall issue an aquaculture certificate of registration when an applicant:
 - (a) Has submitted the required information pursuant to Section 597.004(1), F.S.;
 - (b) Signs a statement of intent to comply with the BMPs in Rule 5L-3.003, F.A.C.;
and
 - (c) Pays the appropriate fee to the Department.

Specific Authority 570.07(23), 597.004(2) FS. Law Implemented 597.003(1)(a), 597.004 FS. History New 10-4-00.

5L-3.006 Minimal Impact Aquaculture Facilities.

- (1) When determined by the Division of Aquaculture's evaluation of facility design and on site inspections, the following individual production units are deemed to have minimal impacts on water resources and are not required to follow the effluent treatment BMPs in Rule 5L-3.004, F.A.C. All other applicable Rule 5L 3.004, F.A.C., BMPs must be followed.
 - (a) Recirculation systems that do not discharge to waters of the state.
 - (b) A floating native marine bivalve culture system which does not use feed or fertilizer inputs.
 - (c) Raceway or down-weller systems for native marine bivalves that utilize less than 800 square feet of raceways or down-wellers, and do not add supplemental algae as a food source.
 - (d) Fee fishing operations with a standing crop of less than 1000 pounds of fish per acre.
 - (e) Individual production units producing less than 10,000 pounds of product per year that minimize the release of sediments off site by using an on site ditch system with a minimum 100 linear feet of ditch between production water entry point and the discharge point and 1 foot of free board at the discharge point control structure.
 - (f) Aquaculture systems that do not discharge production unit water to surface waters of the state.
- (2) Aquaculture facilities which do not qualify as minimal impact aquaculture facilities are required to follow all applicable BMPs in Rule 5L-3.004 F.A.C., in order to be certified.

Specific Authority 570.07(23), 597.004(2)(b) FS. Law Implemented 597.002, 597.003(1)(a),(j),

597.004 FS. History New 10-4-00.

5L-3.007 Failure to Comply With the Best Management Practices.

If any aquaculture producer fails to comply with the best management practices required for certification, the Department shall take action consistent with its authority to assure proper implementation and compliance with Section 597.0041, F.S. Any person who violates any provision of Chapter 597, F.S. or Rule 5L-3 F.A.C., commits a misdemeanor of the first degree, and is subject to a suspension or revocation of his or her certificate of registration. The Department may, in lieu of, or in addition to the suspension or revocation, impose on the violator an administrative fine in an amount not to exceed \$1,000 per violation per day.

- (1) First time offenders will receive written notice of the BMP deficiencies and given 60 days to comply.
- (2) Operators not in compliance with BMPs after 60 days will be fined \$100 - \$500 per day per occurrence depending upon the type of violation and circumstances contributing to the violation.
- (3) Second time violators will be fined \$500 - \$750 per day per occurrence depending upon the type of violation and circumstances contributing to the violation.
- (4) Third time violators will be fined \$750 - \$1,000 per day per occurrence depending upon the type of violation and circumstances contributing to the violation.
- (5) Continued failure to comply will result in the suspension/revocation of the producer's aquaculture certificate and an administrative fine of \$1,000 per day per occurrence until compliance is obtained.
- (6) Repeat offenders will be subject to suspension/revocation of the producers aquaculture certificate and an administrative fine of \$1,000 per day per occurrence until compliance is obtained and the department will request that legal measures be initiated to impose misdemeanor charges.
- (7) Any person failing to meet the BMPs and/or refusing to implement the BMPs must obtain all necessary permits/authorizations required by the Department of Environmental Protection, Water Management District, Florida Fish and Wildlife Conservation Commission and any other appropriate regulatory authority.

Specific Authority 597.07(23), 597.004(2)(b) FS. Law Implemented 597.004, 597.0041 FS. History New 10-4-00.

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INTRODUCTION

The Florida aquaculture industry has a vested interest in protecting and managing environmental resources. As conscientious environmental stewards, this responsibility lies with each aquatic farmer. This manual establishes the Best Management Practices (BMPs) for aquaculture facilities in Florida. By legislative mandate, the BMPs in this manual are intended to preserve environmental integrity while eliminating cumbersome, duplicative and confusing environmental permitting and licensing requirements. Aquaculturists following these practices meet the minimum standards necessary for protecting and maintaining offsite water quality and wildlife habitat. These practices represent a mutually beneficial relationship between commercial aquaculture production and natural resource protection. These BMPs were developed specifically for Florida aquaculture to protect Florida's natural resources and as required by Florida law are to be applied at all certified aquaculture operations. As part of the annual aquaculture certification process, you, the Florida aquaculturist, have pledged your intention to implement these practices as part of the ongoing daily management practices at your facility.

Unless authorized in statute the BMPs enumerated in this manual do not supersede other applicable federal or local authorities nor natural resource collection authorizations. Therefore, aquaculture facility operators need to be aware of the pertinent environmental regulations that affect surface water quality, navigability, wetland dredge and fill, and/or endangered species issues. The Fish and Wildlife Conservation Commission (FWC) must approve collection of broodstock, from natural populations, for aquacultural purposes. **Furthermore, operators need to recognize that there are other federal and local regulations not specifically listed in this manual which relate to solid and hazardous waste disposal, worker safety and building and zoning considerations.**

Specific aquatic species omitted from this BMP manual were not intentional. Rather, they are covered under the broad generic categories applicable to all of Florida's aquaculture. All certified aquaculturists are required to follow the BMPs in Chapters II through VI and XIII through XVIII, including obtaining necessary federal permits. Those few species specifically identified in this manual have unique circumstances requiring more specific management practices to mitigate the potential for environmental impacts. For a complete list of BMPs required for your aquatic species, see the Appendix on page 65.

For additional information about these aquaculture BMPs, general aquaculture information or assistance in clarifying requirements specific to your aquaculture operation, please contact the Florida Department of Agriculture and Consumer Services (FDACS), Division of Aquaculture at 1203 Governor's Square Boulevard, Fifth Floor, Tallahassee, Florida 32301, phone 850/488-4033.

II. COMPLIANCE MONITORING

The Best Management Practices (BMPs) in this manual are intended for implementation by all holders of Aquaculture Certificates of Registration. Anyone conducting aquacultural activities not in compliance with this manual and/or not certified by the FDACS is in violation of Florida Law, and is subject to the penalties described below and required to obtain any and all permits required by the appropriate state regulatory agencies (i.e., FDEP, WMD, FWC).

Pursuant to Sections 597.004(2)(c) & (d), Florida Statutes (F.S.),

Notwithstanding any provision of law, the Florida Department of Environmental Protection (FDEP) is not authorized to institute proceedings against any person certified under this section to recover any costs or damages associated with contamination of groundwater or surface water, or the evaluation, assessment, or remediation of contamination of groundwater or surface water, including sampling, analysis, and restoration of potable water supplies, where the contamination of groundwater or surface water is determined to be the result of aquaculture practices, provided the holder of an aquaculture certificate of registration:

1. Provides the department with a notice of intent to implement applicable best management practices adopted by the department;
2. Implements applicable best-management practices as soon as practicable according to rules adopted by the department; and
3. Implements practicable interim measures identified and adopted by the department which can be implemented immediately, or according to rules adopted by the department.

There is a presumption of compliance with state groundwater and surface water standards if the holder of an aquaculture certificate of registration implements best-management practices that have been verified by the FDEP to be effective at representative sites and complies with the following:

1. Provides the department with a notice of intent to implement applicable best management practices adopted by the department;
2. Implements applicable best-management practices as soon as practicable according to rules adopted by the department; and
3. Implements practicable interim measures identified and adopted by the department which can be implemented immediately, or according to rules adopted by the department.

Pursuant to Chapter 597, F.S., certified aquaculturists must fully implement all applicable BMPs described in this manual. The BMPs must be implemented upon initiation of operation and maintained for the duration of that phase of operation by the holder of an Aquaculture certificate of registration and followed for the term of the certificate. As such, FDACS authorized representatives will periodically visit the site to inspect the facility and records as required herein.

In order to remain in good standing with the Department's Aquaculture Certification Program, the following compliance requirements are minimum expectations and should be fully understood and adhered to:

A. COMPLIANCE REQUIREMENTS

1. All applicable BMPs must be implemented immediately and followed for the full term of the certificate.
2. Upon signature and submission of an application for Aquaculture Certification, the applicant has filed a notice of intent that he or she will comply with the BMPs described in this manual.
3. Representatives of the Department will periodically conduct an unannounced physical inspection of the farm and a review of records (where required), to ascertain compliance with BMPs.
4. Operators of aquaculture facilities that are unable or unwilling to comply with the BMPs or whose proposed activities are not covered by the BMPs will be directed to the appropriate regulatory agencies to obtain applicable permits. When an operator chooses the permit option, failure to comply with the permit conditions will subject the operator with the enforcement action of the permitting agency and enforcement by FDACS pursuant to Rule 5L-3.007, Florida Administrative Code (F.A.C.).

B. INSPECTION PROTOCOL

The Department will conduct unannounced on site inspections at least once during each year and reinspections as needed.

The certified facility must maintain and provide access to copies of pertinent records as required by subsequent sections in this manual.

C. PENALTIES

Any person who violates any provision of Chapter 597, F.S., or Chapter 5L-3, F.A.C., commits a misdemeanor of the first degree, and is subject to a suspension or revocation of his or her certificate of registration. Pursuant to section 597.0041(2)(a), Florida Statutes, “The department may, in lieu of, or in addition to the suspension or revocation, impose on the violator an administrative fine in an amount not to exceed \$1,000 per violation per day.” Please see Rule 5L-3.007, FAC for specific administrative fine criteria, generally described as follows:

- (1) First time offenders will receive written notice of the BMP deficiencies and will be given 60 days to comply.
- (2) Failure to comply after 60 days may result in an administrative fine of up to \$1,000 per day per occurrence until compliance is obtained.
- (3) Continued failure to comply will result in the suspension/revocation of the producers Aquaculture Certificate and an administrative fine of up to \$1,000 per day per occurrence until compliance is obtained.
- (4) Repeat offenders will be subject to suspension/revocation of the producers Aquaculture certificate and an administrative fine of up to \$1,000 per day per occurrence until compliance is obtained and the Department will request that legal measures be initiated to impose misdemeanor charges.
- (5) Any person who violates the above Statutes, rules or these BMPs is not afforded protection from costs for evaluation assessment, and/or remediation of contamination of groundwater or surface waters determined to be a result of non-compliance with these BMPs. Please see Sections 597.004(2)(c) and (d), Florida Statutes.

III. FEDERAL PERMITTING

WETLANDS PROTECTION PROGRAMS

The United States Army Corps of Engineers (ACOE) regulatory program is one of the oldest in the Federal Government and includes the Rivers and Harbors Act of 1899 which establishes permit requirements to prevent unauthorized obstruction or alteration of any navigable water of the United States. This navigable water's jurisdiction includes all navigable fresh waters and ocean waters out to a distance of 200 nautical miles. Section 10 of this act covers construction, excavation, or deposition of materials in, over, or under such waters which could affect the course, location, condition, or capacity of those waters. Section 9 of this act typically applies to dams and dikes.

The Federal Water Pollution Control Act as amended in 1977 and commonly referred to as the Clean Water Act (CWA), includes Section 404 authorizing the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into waters of the United States. While the ACOE acts as the lead permitting agency, the Environmental Protection Agency has veto powers and may invoke this authority at any time.

The basic form of authorization used by the ACOE is the Individual Permit. Another form of authorization is the General Permit that typically covers activities the ACOE has identified as substantially similar in nature and causing only minimal environmental impacts. Nationwide General Permits may be applicable to some aquaculturists contemplating activities in the defined waters.

The Coastal Zone Management Act of 1972 (Section 307) requires applicants to certify that projects are in compliance with an approved State Coastal Zone Management Program and that the State concurs with the applicant's certification prior to issuance of an ACOE permit. Pursuant to Section 380.205, F.S., Coastal Zone means "an area of land and water from the territorial limits to the most inland extent of marine influences." Florida Coastal Zone provisions generally apply only in the geographical area encompassed by 35 Florida coastal counties listed in the Final Environmental Impact Statement for the Florida Coastal Management Program. Moreover, an aquaculturist proposing works on any state sovereign lands would also be required to contact the FDACS, Division of Aquaculture to obtain a state sovereign land's authorization.

The federal definition for agriculture does not include aquaculture. Therefore, regarding wetlands protection, the ACOE is the lead federal agency. As such, many of the conventions developed by the NRCS pursuant to the Food Security Act (Swamp buster provisions) do not apply; thus, wetland determinations (i.e., prior converted) should not be taken for granted and you must receive all required Corps approvals/permits before construction activities commence.

IF THERE IS ANY DOUBT WHETHER THE PROPOSED ACTIVITIES WILL

IMPACT WETLANDS, contact either the FDACS, Water Management Districts, or DEP and the ACOE for assistance, as the state and federal wetland delineation methodology and extent of jurisdiction are not the same.

SURFACE WATER DISCHARGE

Responsibility for implementing and enforcing the National Pollutant Discharge Elimination (NPDES) Permitting Program has been delegated from the U.S. Environmental Protection Agency to the Florida Department of Environmental Protection. The applicable Federal rules and regulations are contained in Code Federal Regulation Title 40 Chapter I Part 122.24 and Part 122.25. The corresponding State rules and regulations can be found in Rules 62-620, 62-621, and 62-660, F.A.C. The NPDES Program provides controls for larger aquaculture operations. Should an aquaculture facility exceed the NPDES size thresholds the aquaculture effluent BMP will not apply and instead permits from the FDEP must be obtained. Section IV, subsection A, of this document provides further detail.

IV. WATER RESOURCES

A. WATER SUPPLY CONSIDERATIONS

Most aquaculture facility operators will require a water source to either augment existing water supplies or provide makeup water lost to evaporation or percolation. This water source can exist as groundwater, surface water, or seawater. Regulations and permitted water use criteria varies among the five water management districts. Typically before a user can receive a water use/consumptive use permit, the applicant must establish that the proposed water use satisfies a three-prong test found in section 373.223, F.S. New applicants must demonstrate that the proposed use is reasonable and beneficial and, will not interfere with any existing legal use of water. The use must also be consistent with the public interest test.

The Water or Consumptive Use Permit allows a user to withdraw a specified amount of water from either a groundwater well or from an allowable surface water source. These permits are categorized as either Individual Permits (requiring Governing Board approval) or General Permits (staff level approval). They typically require an application fee and are issued for 10 to 20 years. Some water management districts have declared certain groundwater basins as severely stressed and have designated “Water Use Caution Areas” which may have more stringent permit issuance criteria and require well metering to track the amounts withdrawn. Water management districts (in some cases the delegated local county government) also issue Well Construction Permits which are generally required if the aquaculturalist either plans to have a new well constructed, or needs to repair or plug an existing well. ***Please note that the aquaculture BMP manual is not designed to replace the need for water use or well drilling permits; therefore, it is imperative for all water use situations that operators contact their local water management district Water Use Permitting Department to determine permitting requirements.***

Best Management Practices:

- Contact the water management district and/or the FDACS, Division of Aquaculture staff before constructing a well or withdrawing water from an unpermitted regulated well.

B. WATER CONSERVATION AND RE-USE

The thoughtful use and management of water resources can improve productivity and profitability, and provide measurable returns to Florida’s environment.

Best Management Practices:

- Use water conservation practices where appropriate and feasible to minimize water use. Water conservation and re-use practices may include:

- Recirculation systems
- Maintaining proper free board levels
- Maintaining perimeter ditches
- Retaining production water on site
- Water re-use practices
- Reclaimed water
- Alternate water sources

C. SALTWATER SOURCES

There may be circumstances where aquaculture operations will need saline water to culture certain organisms, especially those which require a marine environment during a portion of their life cycle (i.e., shrimp or clam hatcheries). There are two environmental issues which may arise: (1) potential permitting issues associated with withdrawal of saline water. If you are using saline water, check with your WMD to determine if the quality of your water requires a permit and, (2) potential impacts to freshwater systems from saline water discharge.

Best Management Practices:

- Saline water shall not be discharged to freshwater environments.
- When utilizing a near shore saline water source, the intake and discharge pipes should be located so as not to interfere with navigation.
- Facilities should be designed and installed to avoid or minimize impacts to resources, including scouring caused by discharge pipes.

D. RECIRCULATING WATER SYSTEMS

These systems rely on the construction of permanent structures, recirculation apparatus, tanks, and other features. These systems treat and reuse all, or a major portion of their production water. While the volume of effluent from a recirculating/intensive system does not typically approach the quantity associated with the more traditional forms of aquaculture, the concentration of nutrients associated with the effluent is usually greater.

Best Management Practices:

- Design the system for no direct off-site discharge of production water. Effluents must be treated and retained on site, or discharged to a permitted sanitary sewer system. Treatment techniques include, but are not limited to percolation ponds, irrigation systems or filter strips. These techniques may be utilized individually or in combination with other approved treatment methods. Please note that discharging production water to a sanitary sewer system will require authorization/permitting from the local municipal

wastewater treatment plant authority.

- Design a waste treatment system to accommodate the semi solid waste stream and non-recycled production effluent from filters and solids separators. Dispose of waste solids in a legal manner that will not cause environmental degradation. Potential options for solids treatment and disposal include; composting followed by appropriate land application as a soil amendment or disposal at a sanitary landfill.

E. EFFLUENT TREATMENT

Effluent treatment BMPs are required of all certified aquaculturists except for those certified facilities, as specified in Rule 5L-3.006 F.A.C., that are determined to have a minimal impact on the surrounding environment or are required to obtain an NPDES permit (see appendix page 103, Code of Federal Regulations). These facilities are, however, required to follow all other applicable BMPs.

Effluent or production water discharge from culture systems typically contain suspended and settleable solids, both organic and inorganic, as well as other dissolved compounds as a result of feeding and other farm activities. It is necessary for aquaculturists to manage effluent or production water discharge to prevent or minimize environmental impact to receiving waters. Because of the variation in production systems (e.g., ponds, cages or net pens, tanks and raceways), stocking rates, feed types, feed volumes, and feeding frequencies, in combination with variable site characteristics; several options for management of effluents are recommended as best management practices. Contact the Division of Aquaculture for assistance in determining which option is most appropriate for your aquaculture operation.

Best Management Practices:

- DETENTION FACILITY OPTION: Treatment of effluent prior to discharge to waters of the state by detention or temporary storage in a pond or ditch system is an acceptable practice. Maximum feeding rates for production units utilizing a detention pond system are: 1) 180 pounds/acre/day for a one-day detention period; and 2) 360 pounds/acre/day for a five day detention period. Aquaculturists interested in this treatment option should contact the FDACS, Division of Aquaculture.
- FILTER STRIP OPTION: Treatment of effluent by passing it through a constructed or natural filter strip, of appropriate dimensions, prior to discharge to waters of the state is an effective means of reducing effluent pollutants. A filter strip of vegetated land is utilized and designed such that water will flow in a thin sheet slowly across it. This strip allows for capture of sediment, organic matter and other pollutants by deposition, infiltration, absorption, decomposition and volatilization. Aquaculturists interested in this treatment option should contact the FDACS, Division of Aquaculture for assistance.
- WETLAND TREATMENT OPTION: Discharge of effluent from a detention facility,

filter strip or minimal impact facility, implementing the BMPs in this section, into or through constructed wetlands prior to discharge to waters of the state provides an effective and environmentally sound means of providing additional treatment. Existing facilities previously authorized to discharge into a natural wetland may also utilize this option.

- INTEGRATED PRODUCTION OPTION: Effluent from aquaculture production units can be re-used for the purposes of producing a secondary aquaculture crop, agronomic crops or aquatic plants or combinations thereof. This option allows for numerous design opportunities including water recirculation. Preliminary research has shown promising results in improving water quality. This type of practice may provide adequate treatment itself or provide improvements in water quality allowing for a reduction in the scale of effluent treatment infrastructure. Utilization of this option may require additional treatment prior to discharge to waters of the state. Aquaculturists interested in this treatment option should contact the FDACS, Division of Aquaculture.

- RETENTION OPTION OR ZERO SURFACE WATER DISCHARGE: Retention of all production unit effluent on site is considered proper management of effluent. This may be a viable option for certain facilities and can be accomplished by a variety of methods:
 1. RETENTION, EVAPORATION OR PERCOLATION PONDS - In certain locations, where the soil is highly porous allowing for water infiltration, a treatment pond may be constructed to hold all required discharge and allow for percolation. The volume of the pond is determined by the expected quantity of discharge and the evaporation and percolation rate of the soil, as determined by the USDA Natural Resources Conservation Service soil survey or independent testing. Under no circumstances are direct discharges, by pipes or other structures, to ground water authorized and construction in wellfield protection areas is strongly discouraged, but is not a requirement. Aquaculturists interested in this treatment option should contact the FDACS, Division of Aquaculture.
 2. FIELD APPLICATION - Applying effluent (freshwater only) to fields for irrigation purposes is an acceptable method of discharging production water. At a minimum the effluent must be applied at less than or equal to agronomic rates to a field where there is sustained vegetative cover.
 3. SEPTIC SYSTEM - In those situations where the effluent volume and the rate of discharge is determined appropriate by the Division of Aquaculture, a septic system is a suitable option for handling effluent. Aquaculturists interested in this treatment option should contact the FDACS, Division of Aquaculture, and comply with applicable requirements of the Department of Health and local governments regarding septic systems.

F. OTHER WATER QUALITY ENHANCEMENT PRACTICES

Several management practices when incorporated into the design and facility management can be utilized in conjunction with the treatment options to improve the water quality of effluents. These methods include: 1) aeration within a detention facility to increase dissolved oxygen, volatilization of gases and enhance bacterial oxidation of organic matter; 2) use of biological filtration to enhance the conversion of ammonia to nitrite and nitrite to nitrate; (this practice is useful for small volumes of water such as tank production systems); 3) chemical treatments to reduce concentrations of certain parameters of concern (such as the use of alum to reduce clay turbidity or the addition of beneficial bacteria to enhance oxidation of organic matter) (this method may only be effective with extended water residence times); 4) or previously authorized discharges to a natural wetland.

Best Management Practices:

- If an excavated pond discharges off site, limit the crop biomass to 1,500 pounds per surface acre or follow the effluent treatment guidelines found in this chapter.
- If an excavated pond discharges off site, limit feeding to five percent (5%) of biomass per day or follow the effluent treatment guidelines found in this chapter.
- For all pit pond use relating to aquaculture, submit a facility plan to the Division of Aquaculture for approval prior to beginning any construction. (If an excavated pond does not meet the NRCS pond bank slope requirements it shall be considered a “pit pond”.) USDAS/NRCS Agricultural Handbook, 590 (September, 1997) is hereby incorporated by reference into this manual.
- Pit ponds which penetrate or are directly connected to a Class I drinking water aquifer, as determined by depth of digging relative to the underlying aquifer, are limited to a crop biomass of less than 1500 pounds per surface acre and a limited daily feeding rate not to exceed 5% of biomass.
- Pit ponds with a crop biomass of less than 1500 pounds per surface acre should limit feeding to five percent (5%) of biomass per day.
- Pit ponds with a crop biomass greater than 1500 pounds per surface acre or ponds with feeding rates that exceed a five percent (5%) of biomass per day, should:
 - Utilize aerators, pumps, or other effective destratification methods, including limits on pond depth, to eliminate pond stratification.
 - Establish a feeding protocol which eliminates overfeeding.
 - Utilize cage systems which are designed to minimize feed loss and that allow for

the collection and removal of waste. Treatment of removed waste can be accomplished either by in-pond treatment, swale treatment, ditch system treatment, filter strip treatment, wet detention, and/or constructed wetlands, singly or in combination.

- Single inlet detention facilities must have a length to a width ratio of at least 1:1; multi-inlet detention facilities must maintain at least 100 linear feet between the outlet and inlets.
- Water quality treatment is to be accomplished via a combination of in-pond treatment, such as described in University of Florida IFAS Circular No. 334, (February, 1999) which is hereby incorporated by reference into this manual, or utilization of a vegetated filter strip with a minimum 15 minute travel times, or by using wet detention facilities with one or five day residence times based on feeding rates. For maintenance or harvesting purposes, scheduled pond drawdown(s) shall be accomplished in the following manner:
 - Ponds should be drained for harvesting and maintenance only as necessary.
 - Ponds should be drained during the dry season when possible.
 - For maintenance or harvesting purposes, scheduled pond drawdown(s) should be routed to existing onsite surface water management facilities, dry pond cells, filter strips via a pulsed dry season discharge, to adjacent crops at the proper agronomic rate, or distributed to adjacent ponds.
 - Routinely maintain pond/dike facilities to minimize seepage.
 - Control the rate and timing of discharge to assure the flow into surface waters and wetland will mimic predevelopment flow patterns.
 - Plant nurseries must follow all applicable BMPs including fertilizer recommendations referred to in the Aquatic Plants Chapter.

In lieu of the preceding effluent treatment BMPs, an aquaculture facility, at their option, may choose to be permitted pursuant to Part IV of Chapter 373 and/or NPDES.

G. DUAL USE OF PERMITTED STORM WATER TREATMENT PONDS

Although not encouraged, agricultural operators may look to diversify their business by the use of previously permitted stormwater treatment ponds. These “ponds” may have been permitted by either the regional water management district or the FDEP. These permitted-ponds may have been approved as part of a Management and Storage of Surface Waters (MSSW)

Permit or an Environmental Resource Permit (ERP). **FDACS does not recommend the use of stormwater treatment ponds for commercial food fish production.**

Best Management Practices:

- Modify existing MSSW/62-25 or ERP permits prior to utilizing stormwater treatment ponds for aquaculture production.
- Review the permitting history of the existing pond(s) and ascertain any special permitting conditions which may preclude the use of the pond for aquaculture.
- Limit crop biomass to 1,500 pounds per surface acre and feeding to five percent of biomass per day.
- Where stormwater ponds have been constructed for the treatment and nutrient uptake of receiving waters, aquaculturists should avoid adding feed to these ponds.
- No feed may be added to discharging systems.

Contact the FDACS, Division of Aquaculture before implementing the use of such ponds.

V. CONSTRUCTION

A. NEW CONSTRUCTION

Individuals and/or companies constructing new facilities on new farms must follow this section as well as all other applicable best management practices. A certificate holder following this section is provided a mechanism that identifies a new aquaculture operation as an agriculture enterprise that is in the development phase which has the final objective of commercial aquaculture production. When a first time applicant is applying for certification under this section, the interim certification is not to exceed 12 consecutive months. Failure to meet the development expectations of the construction plan and timeline will result in non-issuance of the aquaculture certification and subsequent referral to all other appropriate regulatory agencies. Upon receiving the interim certificate, the applicant can commence work on the facility.

Best Management Practices:

- A new farm or facility application for a certificate of registration shall contain the following information:
 - (a) Applicant's name/title.
 - (b) Company name.
 - (c) Complete mailing address.
 - (d) Legal property description for aquaculture facility.
 - (e) Actual physical street address for aquaculture facility.
 - (f) Description of production facilities, which shall include a construction plan and associated timeline.
 - (g) Species production plan and associated timeline.
 - (h) Description detailing implementation of appropriate BMPs.
 - (i) Fifty dollar annual registration fee.
- Construction must adhere to the requirements of Section V of the Aquaculture Best Management Practices Manual.
- As provided in Section V, subsection C, Aquaculture Best Management Practices, wetlands shall not be impacted.
- Supporting documentation to substantiate the above requirements must be maintained by the applicant and available for review upon request by the department.
- During the construction phase a certificate holder will be subject to unannounced inspections, one of which will be prior to the issuance of an aquaculture certification, to confirm compliance with all applicable best management practices and completion of construction/production timelines.
- The department may grant an extension provided the applicant requests, in writing, an

extension with sufficient and plausible detail explaining circumstances necessitating an extension.

- Any new construction/facilities not located on land zoned “agriculture/agriculture use” must comply with local construction and zoning regulations or obtain a variance.

B. AQUACULTURE POND RECLAMATION

Existing certified aquaculture facilities may reclaim constructed ponds to allow for alternative non aquaculture land use activities.

Best Management Practices:

- Reclamation processes must follow all aquaculture erosion control best management practices.
- Existing berms and/or dikes may be used to fill ponds so long as there is no change to existing offsite water flow patterns.
- Fill materials from off site may be utilized so long as the fill material is clean and free of debris and waste.
- The reclamation process is intended to return the site as near as feasible to its original topography.
- Once the reclamation process is completed any non aquaculture activity or construction must be permitted/authorized by the appropriate state and/or local regulatory agency(s).

C. WETLANDS PROTECTION

Wetlands are important components of Florida’s water resources. They provide spawning areas and nurseries for many species of fish and wildlife, storage of flood waters, uptake of nutrients in runoff water, habitat for plant and animal biodiversity, and recreational opportunities for the public. Wetlands are complex transitional ecosystems between aquatic and terrestrial environments. Prior to development, Florida’s wetlands (including open waters and seasonally flooded areas) covered about half of the state’s area. That area has been greatly reduced primarily due to early water management efforts focused on draining wetlands to facilitate development interests and augmentation of agricultural lands. Today, landowners may qualify for various USDA-NRCS incentive programs designed to encourage wetland restoration. Contact the FDACS, Division of Aquaculture or USDA for additional information.

D. ELIMINATION/REDUCTION OF WETLAND IMPACTS

Wetlands may exist as isolated features in the landscape or may be connected to other surface waterbodies such as rivers, streams, lakes and often have no discernable shoreline. A goal of this manual is to protect them from adverse impacts associated with dredging, filling, hydro-period alteration, expansion or reduction of watersheds, or degradation of water quality. **DO NOT CONDUCT DREDGE OR FILL ACTIVITIES IN WETLANDS OR WETLAND BUFFERS.** If plans include the construction of sea walls, bulkheads, beach armoring or similar structures, the following wetland BMPs do not apply. Please contact the Florida Department of Environmental Protection for authorization to construct these structures. It is the intent of this manual to employ BMPs which do not adversely affect onsite (project area) or offsite wetlands. As such, all proposed aquacultural operation designs must first consider elimination and/or reduction of wetland impacts through practicable design alternatives or modifications. Except as otherwise addressed in this BMP manual, aquacultural operations unable or unwilling to follow this wetland impact BMP must obtain applicable permits under Part IV of Chapter 373, F.S.

Note: Wetlands constructed (man-made) for water treatment purposes are not included in this Wetland Impact BMP.

Best Management Practices:

- Contact the FDACS, Division of Aquaculture to confirm the presence or absence of onsite and adjacent wetlands prior to initiating any aquaculture construction activities.
- All new pond construction must maintain a minimum 50 foot upland buffer from the boundary of all wetlands and or natural water bodies.
- If production exceeds 10,000 pounds/year, do not discharge any untreated effluents into wetlands.

Prior to construction of any land-based effluent treatment system (i.e., filter strip) ultimately discharging to surface waters, the determination of the landward extent of any receiving water must be made or verified by FDACS. This determination is necessary to prevent the location or inclusion of water treatment facilities in wetlands or other surface waters pursuant to Rule 62-340, F.A.C. or waters of the U.S.

E. FLOODPLAIN ISSUES

Floodplains are typically dry or semi-dry areas around rivers, lakes and near the coast, where water can overflow or pond for extended periods as a result of seasonal rainfalls. Flooding is a natural phenomenon and occurs when the amount of water flowing into an area exceeds the land's ability to store and convey the water. Facilities must be designed to reasonably prevent an increase in flooding of adjacent properties both up gradient and down gradient of the proposed aquacultural activity. Flood information can be obtained from the local county planning and zoning office or by contacting the FDACS, Division of Aquaculture.

Best Management Practices:

- Prior to any new construction within the 100-year flood zone, submit a facility plan to the Division of Aquaculture.

F. EROSION CONTROL GUIDELINES

During the construction phase of your project, care must be taken to prevent or control erosion and sediment deposition and potential adverse effects to water quality or due to increased runoff rates downstream from your facility. Sediment loads to aquatic environments can block waterways, kill aquatic plants and reduce oxygen levels. Sediments from stormwater runoff may also be associated with the transport of unwanted chemicals and nutrients to aquatic environments. **Be sure to obtain all necessary construction, zoning and consumptive water use permits before site clearing and construction commence.**

Note: Pursuant to section 604.50, Florida Statutes, any nonresidential farm building located on a farm is exempt from the Florida Building Code and any county or municipal building code. This does not supersede requirements of local comprehensive plans and/or local zoning codes.

Best Management Practices:

- Select a site where the natural drainage patterns can be incorporated into the facility design to move water more effectively while avoiding “in stream” construction.
- Where it is necessary to modify the natural onsite drainage patterns use *swales* and/or *berms* to direct surface water flow through, or around your property in order to maintain natural off-site drainage patterns. Criteria for these and other surface water control techniques can be obtained from the local Natural Resources Conservation Service (NRCS) office.
- Stabilize exposed soils to prevent erosion and use silt barriers around wetlands and other surface waters to prevent inadvertent filling by sedimentation.
- Terrain alterations are permitted so long as the alterations do not cause an increase in offsite silting or flooding. Acceptable alterations include, but are not limited to, removal of trees, vines, bushes, and other vegetative ground cover. Any standard agricultural practice may be utilized such as, but not limited to, mowing, disking, plowing, and dragging, in addition to tree cutting and stump removal.
- Use recommended methods (NRCS Conservation Practice Standard Code 327, Conservation Cover (July, 1998), which is hereby incorporated by reference into this manual) to reduce surface water velocity in order to prevent erosion, and to promote the removal of suspended solids.

G. WATER ATTENUATION CRITERIA

As a requirement of Florida Law, aquaculture BMPs are primarily designed to replace the existing pertinent industrial wastewater requirements under Chapter 403, F.S., and the existing pertinent Environmental Resource Permits requirements under Chapter 373, Part IV, F.S.

H. STORMWATER SOURCES AND MANAGEMENT

Florida receives an average 50" of rainfall from about 120 storms a year. Given the intensity and frequency of these storms, the resulting stormwater runoff can present a risk to sensitive downstream receiving water bodies both in terms of its potential to transport pollutants (natural or synthetic) from the land and in the volume/rate of discharge. Of primary importance is the so-called "first flush." This term describes the washing action that stormwater has on accumulated pollutants in a watershed. Studies in Florida have determined that the first one-inch of runoff generally carries 90% of pollutants released by virtue of the storm induced discharge.

Before you settle on a final design for your facility, consider the following issues and the impact each may have on your design and the impact your design may have on your site and on surrounding properties.

Where and how much water flows onto your property?

Where and how much water flows off your property?

What are the predominant soil types on your property?

Are your soils susceptible to excessive runoff?

How much new impervious surface are you adding to your operation/property?

Will the proposed activity significantly increase or decrease the flow and timing off your property?

Best Management Practices:

- Where appropriate, incorporate into the final design any design modifications, features necessary to minimize the potential impacts of commingling surface water and production water.
- Know your operation - knowledge of the composition of your production water effluent, utilization of other water quality BMPs enumerated in this manual, and knowledge of local rainfall patterns will benefit your operation in terms of design efficiency.

I. INDUSTRY SPECIFIC CRITERIA

All new construction activities which will create more than two acres of impervious surface must provide stormwater treatment holding capacity for the 25 year, 24 hour rainfall

event. For assistance in determining the required holding capacity, contact the FDACS, Division of Aquaculture or consult a stormwater engineer.

In addition to complying with the water quality and attenuation criteria outlined below, aquacultural operators must also comply with all BMPs pertaining to their species which appear in the tabbed section(s) at the back of this manual. For purposes of this BMP manual, the water quality and attenuation (flood protection) criteria have been grouped together. Rather than deal with each segment of the aquaculture industry differently, the criterion is segmented and arranged on the basis of *earthen aquacultural systems and recirculating intensive aquacultural systems*.

Best Management Practices:

- Construction that cumulatively results in more than two acres of impervious surface must provide 24-hour storage for the 25-year, 24-hour rainfall event. (Production pond water surface area is not considered impervious.)
- Construction that cumulatively results in 5% or more impervious surface, which is greater than two acres, must hire a State of Florida licensed Professional Engineer to demonstrate that there will be no adverse downstream impacts. (Production pond water surface area is not considered impervious.)

J. EXCAVATED PONDS

Best Management Practices:

- Ponds must be constructed in accordance with the USDA-NRCS Field Office or IFAS guidelines (USDA NRCS Agriculture Handbook No. 590, Ponds – Planning, Design, Construction or NRCS, FOTG Commercial Fishponds 397 (March, 2003) which is hereby incorporated by reference into this manual) or a department approved design and shall maintain a minimum one-foot of freeboard.
- Ponds should typically be constructed with no discharge; ponds which are designed to discharge or could be expected to discharge should demonstrate the ability to follow the Effluent Treatment BMPs.
- Remove all undesirable trees, stumps, and brush which may hinder harvest activities or undermine the integrity of berms and dams, or create safety hazards.
- Where necessary, design and install upland excavated sediment sumps landward of wetland buffers to minimize scouring and sediment transport.
- Use spreader swales and other functionally equivalent devices to mimic sheetflow when

discharging into wetlands.

- Maintain existing watersheds and point(s) of discharge during pre and post development conditions.

K. EMBANKMENT PONDS

Watershed production ponds have limited use and design opportunities. In hilly terrain, aquaculturists may take advantage of runoff from rainfall within the watershed. Watershed to pond surface acreage ratios vary from site to site, with soil types being the determining factor. When ponds are built in series, less water is required for maintenance, and the last pond in the series may be used for one (1) day production water treatment. Supply water for aquaculture watershed fish production ponds typically comes from watershed runoff and springs, but ground water wells are also recommended as supplementary water supplies, provided that applicable consumptive use permits are obtained. Because each site will have specific requirements, the aquaculturist must submit a facility plan to the FDACS, Division of Aquaculture for approval prior to beginning any construction. Some options for you to consider in the planning process are:

Create harvest and access areas during pond construction.

Utilize cage culture where ponds are deep and/or irregular shaped.

Determine the potential for impact upon surrounding property and historical water flow rates and design your facility to eliminate adverse impacts.

Determine if impounded water poses a safety hazard to downgrade residents and/or property and design your facility to eliminate any safety hazards.

Best Management Practices:

- Submit a facility plan to the Division of Aquaculture for approval prior to beginning any construction.
- Follow recommended USDA NRCS Agriculture Handbook No. 590, Ponds – Planning, Design, Construction.
- Provide erosion controls
- Stabilize pond banks during construction
- Remove all undesirable trees, stumps, and brush which may hinder harvest activities or undermine the integrity of berms and dams, or create safety hazards.

- When utilizing drain-harvesting, construct catch basins and holding structures at the drain intake or outfall.

Avoid digging a pond that penetrates a Class I drinking water aquifer. If a pond penetrates a Class I drinking water aquifer, the applicant will be limited to less than 1,500 pounds per surface acre stocking density and daily feeding rates not to exceed 5% of biomass. The pounds per surface acre are determined by multiplying the known fish population by the average fish weight and dividing that number by the total surface acres.

For embankment and/or excavated ponds, initial stocking density shall be a minimum of 1,000 fish or 1,000 pounds of fish per surface acre.

L. ABOVE GROUND PRODUCTION CONTAINERS

Best Management Practices:

- Place intake and discharge pipes in a location which minimizes environmental and aesthetic impacts.
- When discharging to waters of the State, pipes must be situated to prevent excessive scouring of the bottom.

M. PIT PONDS

Rock, sand and phosphate mining operations throughout the state have resulted in the construction of thousands of “pit” ponds in Florida. These pits are very common in southern Florida where large quantities of fill material have been excavated for use in road construction. The vast acreage and tremendous water volume in these water bodies have sparked a great deal of interest from prospective fish culturists. If you are new to this industry or have limited aquaculture experience, **don’t be deceived**. These systems may be an inexpensive source of vast quantities of water; however, they also involve significant challenges in terms of animal containment, animal harvest, water quality, and animal health. Inexperienced culturists often greatly overestimate the production capacity of these systems and fail to recognize the significant disadvantages. Limitations on biomass are included to minimize eutrophication and associated fluctuations in water quality. It is important to avoid overfeeding which is costly and can lead to water quality issues. Adhering to the BMPs outlined in the previous “Water Resources” section will assist you in maintaining water quality and decrease the chance of a catastrophic crop loss due to oxygen depletion.

- Ponds which do not meet the NRCS pond bank slope requirements shall be considered “pit ponds”.

Best Management Practices:

- Pit ponds with a crop biomass of less than 1,500 pounds per surface acre should limit feeding to five percent (5%) of biomass per day.
- Pit ponds with a crop biomass greater than 1,500 pounds per surface acre or ponds with feeding rates that exceed a five percent (5%) of biomass per day, should:
 1. Utilize aerators, pumps, or other effective, including limits on pond depth, destratification methods to eliminate pond stratification.
 2. Establish a feeding protocol which eliminates overfeeding.
 3. Utilize cage systems which are designed to minimize feed loss and to allow for the collection and removal of waste. Floating cage technology is encouraged.
 4. Treatment can be accomplished either by in-pond treatment, swale treatment, ditch system treatment, filter strip treatment, wet detention, and/or constructed wetlands, singly or in combination.
- Limit crop biomass to less than 1,500 pounds per surface acre and a limited daily feeding rate not to exceed 5% of biomass for pit ponds which penetrate or are directly connected to a Class I drinking water aquifer.
- For embankment, excavated, and pit ponds initial stocking density shall be a minimum of 1,000 fish or 1,000 pounds of fish per surface acre.

N. PIPE PLACEMENT

If pipes are used to discharge water from an aquaculture operation they should use the following:

Best Management Practices:

- Pipes must be placed in a location and in a manner which minimizes environmental and aesthetic impacts.
- Discharge pipes must be situated to prevent excessive scouring of the bottom in the receiving waters.

O. AQUACULTURE DOCKS

This BMP is intended for the construction of aquaculture docks originating on upland property and extending on or over wetlands and other surface waters, including either privately-held or State-owned (sovereignty) submerged lands. Aquaculture-dependent docks are docks used exclusively for aquaculture purposes or private single-family residential docks with dual aquaculture and recreational use by the adjacent upland residents. To qualify under these

provisions, docks must be less than or equal to 2,000 square feet total surface area over wetlands and other surface waters, moor 4 or fewer vessels, must be associated with a certified aquaculture facility or activity, and must comply with all of the best management practices listed below.

Docks larger than 2,000 square feet, moor more than 4 vessels, or which cannot meet or follow all of the BMPs listed below must obtain an Environmental Resource Permit from the Florida Department of Environmental Protection.

Best Management Practices:

- Prior to notifying the FDACS, Division of Aquaculture of the intent to construct an aquaculture dock on or over sovereignty submerged lands, aquaculturists shall obtain the required proprietary authorization from the Board of Trustees of the Internal Improvement Trust Fund, pursuant to Chapter 253, F.S., and Chapter 18-21, F.A.C.
- Prior to construction, certified aquaculturists must notify the FDACS, Division of Aquaculture of their intent to construct an aquaculture dependent dock, in accordance with all aquaculture Best Management Practices requirements. Notification shall include a draft plan of the structure and proof of riparian rights for docks on or over sovereignty submerged lands or equivalent rights for docks on or over privately held lands.
- Construction of docks shall:
 1. Comply with the permitting requirements of the U.S. Army Corps of Engineers; contact the FDACS, Division of Aquaculture for a U.S. Army Corps of Engineers application for Works in the Waters of Florida;
 2. Meet all applicable local zoning and building requirements;
 3. When constructing in waters frequented by manatees, all in-water construction follow standard manatee protection construction conditions of the Florida Fish and Wildlife Conservation Commission that may be found at <http://www.myfwc.com/manatee/permits/Standard Condln-waterWork.pdf>;
 4. Be constructed or held in place by pilings so as not to involve filling or dredging other than that necessary to install the pilings;
 5. Ensure that portions of the structure used for docking vessels are constructed in waters that are sufficiently deep to avoid bottom scouring by vessel operation or by prop dredging by ensuring that a minimum of one foot clearance is provided between the deepest draft of a vessel and the top of any submerged resources at mean or ordinary low water;

6. Be located in areas with no resources when such areas are available.
7. Meet the following additional criteria if structures must be located in areas with resources:
 - a. Avoid or minimize impacts, including shading, associated with construction or docking of vessels to areas with resources such as corals; emergent and submerged aquatic vegetation; mangrove swamps; coastal and freshwater marshes; oyster bars; archaeological and historical sites; endangered or threatened species habitat; and, colonial water bird nesting sites.
 - b. Construct the main access dock not to exceed 6 feet in width and the terminal platform not to exceed 8 feet in width;
 - c. Finger piers shall not exceed 3 feet in width and 25 feet in length;
 - d. Align the structure so as to minimize the size of the footprint of the dock or pier and associated mooring areas over the resource to be protected;
 - e. Construct walkway surfaces utilizing deck planking no more than eight inches wide and spaced no less than one-half inch apart after shrinkage; alternative materials, such as grating, may be utilized provided they allow light penetration that meets or exceeds that of wood construction;
 - f. Construct the main access dock and terminal platform a minimum of five (5) feet above mean or ordinary high water;
 - g. A step-down platform may be constructed, comprising up to 25 percent of the surface area of the terminal platform, at a lower elevation to facilitate access to a vessel;
 - h. Use only approved marine construction materials for dock construction.
8. Not impact more than 500 square feet in Outstanding Florida Waters, or 1,000 square feet outside of Outstanding Florida Waters, of emergent or submerged aquatic vegetation, naturally occurring oyster and clam beds or hard bottom communities by dock construction or boat mooring areas;
9. Be located to ensure that boat access routes avoid injury to marine or freshwater submerged aquatic vegetation or other aquatic resources in the surrounding areas;

10. Not substantially impede the flow of water or create a navigational hazard and meet all applicable federal navigation right-of-way and setback requirements;
11. Not include any aquaculture processing facilities, boat repair facilities or fueling facilities;
12. Not infringe on the riparian rights and setback provisions of adjacent property owners pursuant to Chapter 18-21, F.A.C. or extend across property lines on privately owned lands, except where applicant has received and provides to the Division a copy of written permission from the adjacent property owner agreeing to the infringement;
13. Not extend waterward of the mean or ordinary high water line more than 500 feet or 20 percent of the width of the water body at that particular location, whichever is less;
14. Limit trimming of vegetation, such as mangroves, to the minimum necessary for construction of the access walkway; and
15. For all private residential single-family docks located in aquatic preserves; all docks located in Lake Jackson, Boca Ciega Bay or Pinellas County Aquatic Preserves; and all docks located in Biscayne Bay Aquatic Preserve shall comply with the applicable provisions of 18-20, F.A.C. or 18-18, F.A.C. The applicable rule provisions, whether more or less stringent, shall supersede the BMPs listed above.

VI. NON-NATIVE AND RESTRICTED NON-NATIVE SPECIES

A native species is a species within its natural range or natural zone of dispersal, within the range it could or would occupy without direct or indirect introduction and/or care by humans. Non-native species are those species not defined as native.

Restricted non-native species include all species that are listed as restricted species in Rule 68A-23.008(2)(a) F.A.C. See the appendix for the complete list.

A. NON-NATIVE SPECIES CONTAINMENT

Aquaculturists who possess non-native species are responsible for preventing their release to the environment.

Best Management Practices:

- All holding, transport, and culture systems must be designed, operated and maintained to prevent the liberation of non-native aquatic species into waters of the state. Any method of containment that will effectively prevent non-native species from being released may be utilized.
- Written authorization may be required from FWC and the U.S. Fish and Wildlife Service prior to importing non-native aquatic species from outside the U.S.

B. RESTRICTED NON-NATIVE SPECIES CONTAINMENT

Facilities culturing restricted non-native species must adhere to the following BMPs, as well as the BMPs listed for non-native species.

Best Management Practices:

- Restricted non-native species cultured outdoors may only be held in a water body which has the lowest point of its levee, dike, bank, or tank at an elevation at least one foot above the 100-year flood elevation as determined by elevation maps issued by the National Flood Insurance Program of the Federal Emergency Management Agency (FEMA).
- All holding, transport, and culture systems must consist of a solid construction, and be designed to prevent the escape of adult fish, juvenile fish, and eggs.
- The facility must have effective measures in place to prevent the theft of restricted non-native species.

- Live sale or transfer of restricted non-native aquatic species or their hybrids is limited to those individuals specifically authorized by the Florida Department of Agriculture and Consumer Services (FDACS) or the Fish and Wildlife Conservation Commission (FWC).
- Written records of live restricted species purchases, sales and transfers must be maintained and available for inspection for a period of two years.
- Written authorization must be obtained annually from FDACS to possess restricted non-native species.
- Written authorization may be required by FWC to import restricted non-native aquatic species.
- The culture of an Australian red claw (*Cherax quadricarinatus*) is limited to tank culture only. All systems will be designed to meet the minimum requirements set forth above, as well as preventive measures to assure that the species is unable to crawl out of the tank system.

C. ALTERNATIVE CONTAINMENT PRACTICES

(Any system may be utilized as long as it meets the containment requirements above)

- No discharge or zero discharge production systems are designed to ensure that water from the production unit is not discharged from the facility. This includes design parameters and management practices to ensure that stormwater does not cause the system to discharge.
- Screened discharge systems utilizing screen or filter devices at the point of production unit discharge or at the point of discharge from the operation or effluent treatment facility (such as a detention or retention pond). A screen or filter device must be sized so as to retain the smallest size fish or egg. Examples of screened/filter systems include a series (multiples are used to ensure at least one screen is in place while others are cleaned) of mesh screens capable of screening all water, a dry bed filter constructed with gravel and sand to trap eggs and fish, a commercially available micro screen solids filter, or a pond trap with screened discharge.
- Disinfection or sterilization techniques such as ultraviolet light (UV), ozone or chlorine may be utilized in conjunction with the above mentioned methods to ensure that live organisms do not escape the facility.
- Use biological controls (i.e. stock detention ponds with native predatory fish such as large mouth bass)

D. PROHIBITED SPECIES

Prohibited Aquatic Species are not eligible for culture and may not be possessed in Florida. “Prohibited” and “Restricted” Aquatic Species are identified by s.370.081 and 369.251, F.S., Rule 68A-23.008(3) F.A.C. and Rule 62C-52.011 F.A.C. and as referenced in the appendix (page 66).

Best Management Practice:

- Anytime a prohibited species is discovered at a certified facility, it is to be immediately disposed of according to the Mortality Removal BMP.

E. TRANSGENIC SPECIES

Transgenic aquatic organisms are defined as organisms whose genomes have been modified by the introduction or deletion of specific genetic material. Organisms created by hybridization or polyploidy techniques do not fall under this definition.

Best Management Practice:

- Certified aquaculturist must supply all information requested by the FDACS, Division of Aquaculture.
- Certified aquaculturists must apply to and receive from the FDACS, Division of Aquaculture, written authorization prior to culturing any transgenic aquatic species. Authorization will only be considered:
 - 1) after all requested information is provided;
 - 2) after the Division has received a recommendation from the Transgenic Aquatic Species Advisory Committee;
 - 3) after the Department has reviewed all other information that has been submitted by the public; and
 - 4) if upon review of all the foregoing it can be determined that authorization will not pose a threat to the public health, safety, and welfare.
- Certified aquaculturists must adhere to all stipulations required in the FDACS, Division of Aquaculture written letter of authorization.

VII. MARINE NET PENS AND CAGES

Net pens and cages are submerged, suspended, floating or other holding systems that utilize a netting (fiber or metal) to contain and culture marine fish or crustaceans. This chapter pertains only to the operation of net pens or cages (hereinafter referred to as “net pens”) that are located in the marine waters of the State of Florida and produce less than 100,000 pounds of live weight product annually.

Marine waters, for the purposes of this Best Management Practice (BMP), are defined as being between Florida’s near shore and inshore waters and Florida’s seaward boundaries. Florida’s near shore and inshore waters and seaward boundaries are described in the State Constitution as being waters between 3.45 and 10.376 statute miles seaward of the Gulf of Mexico coastline and between 1.15 and 3.45 statute miles seaward of the Atlantic Ocean coastline.

Net pen operations must acquire: 1) an annual Aquaculture Certificate of Registration; 2) a sovereignty submerged land and water column lease; and 3) if the aquaculture facility produces more than 100,000 pounds of live weight product annually, a National Pollution Discharge Elimination System (NPDES) permit. Bivalve molluscs (clams, mussels, scallops or oysters) being produced for sale as food for human consumption can only be cultured within the boundaries of state managed Shellfish Harvesting Areas. Contact the Division of Aquaculture for Aquaculture Certificate of Registration, sovereignty submerged land and water column lease, and shellfish harvest area, harvesting, and processing information. Contact the Florida Department of Environmental Protection, Industrial Wastewater Program, for NPDES permit information.

Net pen operators who do not operate their aquaculture facilities in compliance with the sovereignty submerged land and water column lease conditions and this *Aquaculture Best Management Practice Manual* risk the revocation of the lease instrument and/or Aquaculture Certificate of Registration and enforcement action including administrative fines.

A. SITE SELECTION

Appropriate site selection for net pens is critical for the minimization of potential environmental impacts, and optimal fish health and performance. Wise site selection has significant potential to reduce the risk of net pen environmental impacts. With the exception of site selection, net pen farm operators have little ability to control the environmental conditions their fish may experience. Sites with frequent, extreme weather or sea-state conditions that would limit the grower’s access to the farm site and cultured animals should be reconsidered. Harmful algal blooms (i.e., red tide) are common in Florida waters. Net pen operators should investigate red tide history for the location that they are considering.

In addition to BMP compliance, the Division of Aquaculture will review Aquaculture Certificate of Registration applications based upon their relative distance to other net pens that may be in the area to assess potential cumulative environmental impacts. The number of net pens or their configuration in certain marine environments may require additional environmental, farm design or production information from the applicant to determine potential cumulative environmental impacts.

Best Management Practices:

- Evaluate each potential farm site to ensure that environmental conditions on the farm site are appropriate for the species being considered for culture and the equipment proposed for use.
- A Farm Site Plan that maps the location of the net pens, anchoring, and feeding systems must be submitted with an Aquaculture Certificate of Registration application to the Division of Aquaculture. Net pens and anchors must be mapped using Global Positioning System (GPS) or latitude/longitude coordinates. The Farm Site Plan must be maintained, updated and made available for review by Division of Aquaculture personnel during compliance inspections.
- Select sites with good water exchange, sufficient depth, and current velocity.
- Sites must have a sand or mud bottom.
- Sites for polyculture of finfish and filter-feeding shellfish (mussels, clams, oysters or scallops) can only occur in Shellfish Harvesting Areas classified and managed by the Division of Aquaculture. This is not a requirement where shellfish are being used solely for the ecological benefits they provide and will not be sold as a food product. Contact the Division of Aquaculture for information about shellfish harvest areas, harvesting, and processing.

B. FEED MANAGEMENT

Waste feed and fish feces constitute most of the wastes generated by a net pen farm. An effective way to reduce the potential environmental impact of net pens is to aggressively and proactively manage feed selection, distribution and utilization.

Effective feed management is based on two components: waste reduction and optimal feed conversion ratio. Waste reduction focuses on ensuring that feed used by the farm is not lost or discharged prior to intake by the fish. Optimal conversion focuses on ensuring that all feed offered to the fish is actually consumed, digested, and utilized. Monitoring long- and short-term changes in feed conversion ratios allows farmers to quickly identify significant changes in feed consumption and waste production rates in individual net pens.

Best Management Practices:

- Operate feed storage, handling, and delivery methods to minimize waste and the creation of fine particles of feed.
- Maintain feed conversion ratio records by using feed and fish biomass inventory tracking systems.
- Minimize nutrient and solids discharges through optimization of efficient feed formulations. Use formulations designed to enhance nitrogen and phosphorus retention efficiency, and reduce metabolic waste output.
- Feed manufacturer labels, or copies thereof, must be retained for the prior two years of operation. Labels must be made available for review by Division of Aquaculture personnel during compliance inspections.
- Use efficient feeding practices, monitor active feed consumption, and reduce feed loss. The appropriate quantity and type of feed for a given species is influenced by fish size, water temperature, dissolved oxygen levels, health status, reproductive status, and management goals. Feed particle size should be appropriate for the size of fish being fed. Feeding behavior must be observed to monitor feed utilization and evaluate health status.
- Maintain and properly operate feeding equipment.
- Feeding at slack tide is prohibited.
- Conduct employee training in fish husbandry and feeding methods to ensure that workers have adequate training to optimize feed conversion ratios.
- Wherever practical, interactive feedback feeding systems such as video, “lift-ups,” Doppler, sonar, infrared, or equivalent methods should be used to monitor feed consumption, and reduce feed waste.
- Color video or still photographic surveys will be conducted twice per year (January 1 and June 30) of the sea floor under and adjacent to each net pen on a 100 meter transect up the prevailing current from the edge of the net and 100 meters down the prevailing current from the edge of the net pen to determine solids loadings and whether eutrophication of the local environment is occurring as a result of food loss and fish excretion. Monitoring will include recording the date(s) on which monitoring was conducted, a site schematic of the video track(s) or still photos in relation to the net pen, and Global Positioning System (GPS) locations of the beginning and end points for the transects. The video survey shall be continuous. Still photographs shall be taken at least every 5 meters. The video or photographic survey will document sediment type and

color as well as features such as erosional and depositional areas, flora and fauna and their relative abundance, feed pellets, and any other manmade debris. Images shall be of sufficient detail and clarity to allow for the accurate assessment of benthic conditions. The camera must be positioned at a height above the substrate that will provide approximately one square meter of bottom coverage and illuminated with sufficient artificial light to enable the accurate identification of epibenthic organisms and sediment conditions. A brief written narrative with the tape or photographs describing current speed and direction and reference points shall be included. The tape or photographs with narrative will be submitted to the Division of Aquaculture within 60 days of the survey completion.

- The feeding of wet feeds (ground or whole fish or shellfish and other raw meat or plant materials) is prohibited.
- Physical disturbance of the bottom such as harrowing, dragging or other mechanical means shall not be used to mitigate the benthic impacts of feed or fish excretion.

C. SOLID WASTE MANAGEMENT AND DISPOSAL

Sources of solid waste include biofouling organisms that colonize nets, mortalities, feedbags, packaging materials, scrap rope and netting, worn or broken net pen structural components, and other miscellaneous items. Net pen operators must make every effort to collect and properly dispose of solid waste.

Proper fish health management is the best means for reducing costly mortalities in net pens. Optimizing fish health will reduce the need to deal with dead fish. Even under optimal conditions some mortality will occur. Net pens, by their very design, contain and collect mortalities and this result facilitates mortality monitoring and their timely removal.

Best Management Practices:

- Develop a Solid Waste Management plan. This plan must identify all wastes generated on a site or from an aquaculture facility. The Solid Waste Management Plan must be submitted with an Aquaculture Certificate of Registration application and maintained, implemented, and made available, upon request, to Division of Aquaculture personnel. At a minimum, waste management plans must address:

- Human waste
- Feedbags
- Scrap rope
- Scrap netting
- Buoys and weights
- Fish mortalities
- Spoiled feed

Packaging materials
Fouling organisms
Any other solid waste

- Mortalities will attract predators and contribute to fish health problems. Mortalities must be collected regularly and as frequently as possible (weather permitting) to avoid accumulation at the net pen bottom.
- Farmers must use collection and removal methods that do not stress remaining animals or compromise net integrity. Mortalities must be stored and transported in closed containers with tight fitting lids. Mortalities must be returned to shore, disposed of and notification given in accordance with Chapter XIV Mortality Removal.
- Farmers must avoid the discharge of substances associated with in-place net cleaning. Implement gear and management strategies to reduce biofouling that will minimize or eliminate the need for on-site net cleaning. Strategies may include, but not be limited to: stocking mullet (*Mugil spp.*), sheepshead (*Archosargus probatocephalus*), or similar native species in the net pen to biologically control fouling, use of fouling resistant materials (e.g., copper alloy netting), net changing, rotating cage designs, or the application of antifoulant coatings.
- On-site mechanical cleaning must include methods to prevent the accumulation of solids on the sea floor or the release of solids that cause or contribute to water quality impairment.
- The use of biocidal chemicals for cleaning nets on-site is prohibited.
- Copies of antifoulant coating product labels must be provided to the Division of Aquaculture prior to use. Antifoulant coating use and restrictions as described in Chapter 376, Pollutant Discharge Prevention and Removal, Florida Statutes; Chapter 487, Pesticide Regulation and Safety, Florida Statutes; Federal Insecticide, Fungicide and Rodenticide Act; and Organotin Antifouling Paint Control Act must be followed. The use of organotin or petroleum based antifoulant products such as creosote, oils, bitumen, coal tar, or greases are prohibited.
- All feed bags, spoiled feed, packaging materials, waste rope and netting, or worn structural components must be collected, returned to shore and disposed of properly. Recycling is strongly encouraged.

D. ESCAPE MANAGEMENT

The escape of cultured species may pose a variety of potential risks to marine species and ecosystems or unrelated economic activities. Three effective ways to reduce potential environmental impacts by escapees are prevention, genetic compatibility or genetic isolation.

Prevention involves proactively reducing the potential causes of escape. Escape risks associated with net pen aquaculture in areas inhabited by large number of sharks is high and the success of the operation will depend on the implementation of efficient yet passive and environmentally-sound methods of predator deterrence. In tropical and subtropical waters all over the world, sharks attack dead fish that sink to the bottom of net pens. Sharks attacks can tear holes into the netting that are large enough to allow fish to escape. Sharks are common in Florida waters. For these reasons, efficient methods of predator control such as anti-predator netting are required. Escape response actions such as net repair and animal recovery plans, will help mitigate the impact of escapes. All net pen farm operators must continuously strive to reduce escape risk through net pen maintenance and frequent net pen structural monitoring.

Genetic compatibility can be achieved through implementation of the following BMPs and consultation with the Division of Aquaculture. Genetic isolation is accomplished by using sterile stock or strains that are unable to interbreed with wild fish or unlikely to survive in the wild.

Best Management Practices:

- Net pen culture of species not native to Florida waters or transgenic species is prohibited.
- If genetic studies are not available that indicate broodstock are genetically similar to and originate from the same genetic stock as conspecific wild animals in the net pen locality, the following requirements for broodstock animals apply: 1) broodstock must originate from waters of the Gulf of Mexico east of the Mississippi River outflow to produce juveniles for stocking net pens in state waters of the Gulf or broodstock must originate from waters of the Atlantic Ocean to produce juveniles for stocking net pens located in state waters of the Atlantic and, 2) broodstock for pelagic species may only be collected within a 300 kilometer (186 mile) radius distance from the net pen site or broodstock for estuarine species may only be collected within a 100 kilometer (62 mile) radius distance from the net pen site.
- Obtain a Special Activity License from the Florida Fish and Wildlife Conservation Commission for the collection of wild broodstock pursuant to Rule 68B-8.011, Florida Administrative Code.
- The intentional release of fish or shellfish to state waters beyond the confines of the net pens is prohibited unless a Special Activity License from the Florida Fish and Wildlife

Conservation Commission has been obtained pursuant to Rule 68B-8.010, Florida Administrative Code.

- Loss-Control and Escape Recovery Plan must be submitted with an Aquaculture Certificate of Registration application and maintained, implemented and made available to Division of Aquaculture personnel during compliance inspections. Plans must include a site-specific analysis of the potential risks of escapes, their causes, and the specific procedures employed by the farm to reduce risk. Loss-control plans must be designed to address the principle causes of escape (equipment failure, operational errors, and predator attacks) and must include: 1) minimum equipment and operating standards; 2) emergency repair procedures; 3) escape recovery procedures; 4) practices and equipment that reduce the need for predator reduction/destruction (i.e., anti-predator nets or equivalent equipment); and (5) preparations for severe weather (i.e., hurricanes). The Loss Control and Escape Recovery Plan must include a notification procedure to inform the Division of Aquaculture when fish are not recovered following an escape.
- The facility manager or designated representative will report, within 24 hours, any escape to the Division of Aquaculture. The report must include species identification, approximate size and number of fish, and location.
- Fish transfers such as stocking, grading, transfer, or harvest must be conducted in appropriate weather conditions and under constant visual supervision. Equipment appropriate to the weather and net pen or cage designs must be used. Where necessary or appropriate, shields or additional netting must be used to prevent stray fish from escaping during transfer.
- All holding, transportation, and culture systems must be designed, operated and maintained to prevent escape. Implement Chapter XVI Shipment, Transportation and Sale.
- Net pens must be obtained from a manufacturer or supplier whose equipment design specifications and manufacturing standards meet generally accepted standards prevalent in the aquaculture industry.
- All nets in use must be made from ultraviolet light stabilized compounds.
- Net pen design, specification, and installation must be commensurate with the prevailing conditions and capable of withstanding the maximum weather and sea conditions prevailing at the site. A written statement from the net pen manufacturer certifying that net pen(s) have been assembled and moored to their specifications must be available to Division of Aquaculture personnel during compliance inspections.

- To prevent fish from jumping out of the primary containment nets, surface net pens must have jump nets installed that are an appropriate height for the species being cultured.
- Nets must be secured to the cage collar such that the collar bears the strain and not the handrail of the net pen.
- Net weights, when used, must be installed to prevent chafing. A second layer of net must be added one foot above and below wear points. The use of weight rings is recommended at appropriate sites.
- A Net Pen Structure and Mooring System Preventative Maintenance Program must be submitted with an Aquaculture Certificate of Registration application and maintained, updated, implemented and made available to Division of Aquaculture personnel during compliance inspections. The program must have the ability to: 1) identify individual nets, net pen structures, mooring systems and 2) schedule and document regular maintenance and testing. Nets or net pen structural components that fail testing standards must be retired and disposed of properly. The program must document regular maintenance and repair: the nature of the maintenance or repair, date conducted, any supporting documentation for new materials used, and the identity of the individuals or firms that conducted the maintenance.
- Mooring system designs must be compatible with the cage systems they secure. Mooring systems must be installed in consultation with the net pen manufacturer or supplier. Mooring system design, specification and installation must be commensurate with the prevailing conditions and capable of withstanding the maximum weather and sea conditions prevailing at the site. A mooring system schematic must be included and updated as a component of the Farm Site Plan. Design maximums must be recorded in the Net Pen Structure and Mooring System Preventative Maintenance Program.
- Facility operators must inspect and adjust mooring systems on a biannual basis and prior to and immediately following a tropical storm or hurricane. New components must undergo their first inspection no later than six months after deployment. A diver or remote camera must regularly and visually inspect subsurface mooring components. Special attention must be given to connectors and rope/chain interfaces. Chafe points must be identified, inspected, and biofouling removed. With the exception of anchors, mooring systems must be hauled out of the water for a visual inspection of all components at least every five years. When considering what inspection method to employ, net pen operators must consider the relative risks and benefits associated with the inspection method.
- Shackles used in mooring systems must be either safety shackled, wire-tied, or welded to prevent pin drop-out.

- Where appropriate, bird nets must be used to cover net pens in order to reduce the risk of escape due to bird predation. Bird nets must be constructed using appropriate materials and mesh sizes designed to reduce the risk of bird entanglement. Implement Chapter XV Preventing Wildlife Depredation.
- Develop a service vessel Standard Operating Procedure (SOP). Vessel operations around a net pen site can cause escapes. All vessel operators must receive appropriate training in the operation of the vessel. The service vessel SOP must be made available to the Division of Aquaculture prior to compliance visits.

E. AQUACULTURE FACILITY OPERATIONS AND MAINTENANCE

Net pen farms are expensive to install and operate. Operators are subject to elevated public scrutiny because they are located in and actively utilize public waters. Net pen farms operate in these public waters under the provisions of sovereignty submerged land and water column lease instruments and an Aquaculture Certificate of Registration that can be revoked by the State of Florida. Net pen operators who do not operate their facilities in compliance with lease conditions and the *Aquaculture Best Management Practices Manual* directly jeopardize their investment and risk the revocation of the lease instrument and/or Aquaculture Certificate of Registration and enforcement action including administrative fines.

Best Management Practices:

- Farmers must conduct annual, systematic reviews of their operations and provide those reviews to Division of Aquaculture personnel during compliance inspections.
- When considering modifications to existing farming practices, procedures or structures, growers must conduct a review of the type and extent of probable environmental impacts that may occur as a result of the new methods and amend their existing operational practices to mitigate potential impacts.
- When conducting activities such as stocking/seeding, harvesting, feeding, grading, thinning, transfer, cleaning, gear maintenance or fallowing, all standard operating procedures must include diligent efforts to minimize probable environmental impacts.
- Comprehensive stocking and production strategies that optimize production while minimizing environmental impacts must be used. Production planning must include a systematic review of any probable and cumulative environmental impacts that would be associated with a particular production plan or method.
- Nets and moorings must be maintained in a whole and intact condition. No gear may be abandoned. Storage of nets or gear on the bottom is prohibited. Any net or gear

accidentally dropped or lost during storm events that is not recovered immediately shall be tagged with a float, positioned using differential Global Positioning System, and reported to the Division of Aquaculture within 24 hours. The lost net or gear shall be recovered within 30 days of the date lost. The Division of Aquaculture shall be notified on the date the net or gear is recovered.

- Nets, mooring and rigging lines, and anti-predator equipment must be stretched tight and held taut and maintained in a manner to diminish the likelihood of entangling finfish, decapod crustaceans, sea birds, marine mammals, and sea turtles.
- Maintain and make available to the Division of Aquaculture, upon request, a Marine Entanglement Log for finfish, decapod crustaceans, sea birds, marine mammals, and sea turtles. The Log should identify the species, size, number, date of entanglement, and disposition of the species.
- Consider potential impacts on water circulation patterns when installing net pens and their associated mooring systems. Gear deployment must optimize circulation patterns and maximize water exchange through the pens, thereby improving fish health and reducing benthic impacts.
- Design and operate harvest procedures and equipment in a fashion that reduces any associated discharges. Harvest and post-harvest vessel and equipment clean-up procedures must minimize wastes discharged overboard.
- Consider the practicality of polyculture using shellfish and/or marine plants to reduce the contribution of nutrients and particulate matter to waters outside the farm lease.
- Farm support vessels must be fueled at licensed fueling stations.
- All fuel or oil spills must be reported as required by law to the appropriate state and federal authorities. Appropriate clean-up and repair actions must be initiated as soon as possible.
- Farm support vessels of the appropriate size must have approved Marine Sanitation Devices (MSD) on board. All human wastes must be disposed of according to applicable state and federal regulations.

F. HEALTH MANAGEMENT

Fish health management involves proactively managing culture species, pathogens and environment to maximize optimal conditions for sustained growth and health. Preventing and mitigating health risk factors, stress or nutritional and environmental problems, which could kill

fish, impair immune function or trigger disease, are crucial to achieve effective health management. Fish health management must balance disease risk and treatment with public health, the environment, and farm economics including the risks from and to wild fish.

Best Management Practices:

- Net pen facilities must maintain documentation identifying the source of all eggs, fry, fingerlings or adult fish.
- All purchases of live fish, regardless of life stage, must be accompanied by a USDA accredited veterinarian signed "Certificate of Veterinary Inspection" attesting to the good health of the species.
- Limit contact among groups of animals, workers, and equipment through disinfection/decontamination procedures.
- Facilities that use different life stages in the production process must implement quarantine/isolation or disinfection procedures to reduce the risk of pathogen translocation.
- Facilities must notify their aquatic animal health professional or the Florida Department of Agriculture and Consumer Services, Division of Animal Industry, State Veterinarian's Office in the event that diseases or pathogens are observed in cultured stocks, and before disposing of fish that manifest disease symptoms.
- Health management records must be retained for at least two years to document behavioral changes, clinical signs of disease, treatment procedures, or unusual mortality rates. These records will be made available for inspection by the Division of Aquaculture upon request.
- Implement the requirements of Chapter X Shellfish Culture, Chapter XIII Health Management, Chapter XVII Aquaculture Chemical and Drug Handling, and Chapter XVIII Aquatic Animal Welfare.

G. RECORD-KEEPING

Farm Records identified in this chapter must be updated, maintained and made available to Division of Aquaculture personnel during compliance inspections or upon request by the Division of Aquaculture. Farmers may keep and analyze additional records related to feeding, chemical use, water quality, serious weather conditions, fish culture operations, and inventory to facilitate improvements in the efficiency of farm input use. Such records must be reviewed by the farmer periodically to determine if they are useful and to provide insight into opportunities to improve farm operations.

Best Management Practices

- Maintain the records required by the *Aquaculture Best Management Practices Manual* for a minimum of two years in a form readily and immediately available to Division of Aquaculture personnel during compliance visits or to the Division of Aquaculture upon request.
- The processes and procedures utilized to collect and analyze environmental data (physical, chemical or biological) must be documented in a Quality Assurance Project Plan. Farm operators must submit such plans to the Division of Aquaculture during the aquaculture certification process.

VIII. MARINE SHRIMP CULTURE

Shrimp aquaculture technology is in a process of continual evolution, evaluation and improvement. These BMPs are intended to help shrimp producers set high standards and maintain environmental compatibility.

A. SITE SELECTION

Proper site selection can eliminate many potential problems while not impacting competing users of the coastal zone.

Best Management Practices:

- Shrimp culture systems located on lands not zoned agricultural must comply with local construction and zoning regulations.

B. CONTAINMENT

Systems must be designed to accommodate rainfall events and to prevent storm waters from causing the escape of cultured shrimp and discharge of production waters into waters of the State. Similarly, aquaculture production units and aquaculture systems must be designed to prevent native species and other unwanted species from entering the system and interacting with domesticated animals.

Best Management Practices:

- Live non-native shrimp must not be sold or used as live bait.
- Sales of live non-native shrimp must be accompanied with a written statement informing the purchaser that live non-native shrimp can not be sold or used as live bait
- All holding, transport, and culture systems must be designed, operated and maintained to prevent the liberation of non-native aquatic species into waters of the State.

C. EFFLUENT TREATMENT

Off site discharges to surface waters of the state must follow these treatment practices.

Best Management Practices:

- Discharge of effluents from marine shrimp production facilities must comply with the BMPs stated in Section IV, subsection E, Water Resources, Effluent Treatment.

- Shrimp production facilities must place screens with mesh sizes sufficient to prevent escape of the cultured shrimp at all discharge control points.
- In the event of an outbreak of “Yellow Head”, “White Spot”, “Taura Syndrome,” or any other harmful pathogen, as determined by the State Veterinarian, all water from production ponds and facilities, which may discharge into marine estuarine watersheds, must be contained and chlorinated (recommended calcium hypochlorite) prior to discharging into retention (detention) ponds or facilities.
- Use redundant barrier, containment or disinfecting procedures.

D. MARINE SHRIMP HEALTH

PLEASE REFER TO THE HEALTH MANAGEMENT AND THE SHRIMP HEALTH BMP REQUIREMENTS LISTED IN SECTION XIII, HEALTH MANAGEMENT.

See Appendix for complete list of all required BMPs for shrimp.

IX. STURGEON CULTURE

Florida sturgeon culture is currently limited to the native Atlantic sturgeon, *Acipenser o. oxyrinchus*, and a few nonnative species by the restrictions imposed by Florida law, the Atlantic States Marine Fisheries Commission's Interstate Fishery Management Plan for Atlantic Sturgeon, and the Endangered Species Act. Sturgeon aquaculture is a capital intensive, high-risk effort requiring the holding of sturgeon for five to eight years in culture before product is available for market. Very thorough investigation and planning is encouraged before investing in land and production systems.

A. FACILITY OPERATIONS

Best Management Practices:

- Pursuant to Chapter 68A-27, F.A.C., operators culturing native sturgeon (shortnose and Gulf sturgeon) must comply with resource management policies and recommendations, which prohibit the capture of wild native anadromous sturgeon, regardless of life stage, for broodstock or seedstock and prohibits the release of sturgeon fry, fingerlings, juveniles, or adults.
- Live Atlantic sturgeon, including non U.S. origin Atlantic sturgeon can not be sold or transferred to the aquarium/ornamental fish trade.

B. SITE SELECTION/FACILITY DESIGN

Best Management Practices:

- Facilities must be designed, operated and maintained with geographical and/or physical barriers in place to prevent the release of a cultured sturgeon.
- Outside facility construction within the 100-year flood zone as delineated by FEMA - Flood Insurance Rate Maps is discouraged. However, if any portion of the outside facility is to be constructed within the 100-year flood zone, the facility must be designed so that the minimum control elevation is at least 1 foot above the 100-year flood elevation.
- Physical barriers or management practices must be designed/implemented to prevent the escape of all life stages of sturgeon to surface waters of the State. Biosecurity features include but are not limited to:
 - Covered tanks/ponds containing fish weighing less than 4 lbs. Containment berms
 - Predator stocked retention/detention ponds
 - Screened discharge pipes with proportionately sized screen mesh to contain all life stages in the pond

- Redundant barriers, containment or disinfecting procedures
- Facilities located on lands not zoned agricultural must comply with local construction and zoning regulations.

C. REPORTING

Best Management Practices:

- All imports of live sturgeon must be accompanied by a signed "Certificate of Veterinary Inspection" attesting to the good health of the sturgeon.
- Facilities should notify the FDACS, Division of Animal Industry, State Veterinarian's Office in the event of disease or other suspected pathogens observed in cultured stocks. Aquaculturists should also contact the Division before disposing of sturgeon manifesting symptoms of disease.
- Health management records must be available for review for at least two years to document any significant behavioral changes, clinical signs of disease, or unusual mortality rates that are noted during daily health monitoring.
- In the event of a release of sturgeon into surface waters of the State, the facility manager or designated representative must report the release within 24 hours, to the FDACS, Division of Aquaculture. The report should include the species released, the approximate size and number of fish released, the exact location of the released, the name of the receiving body of water, and the approximate volume of water released.
- The facility must maintain for inspection, documentation identifying the source of all adult fish, fingerlings, fry, and eggs of sturgeon imported into the state for at least two years.

See Appendix for complete list of all required BMPs for sturgeon.

X. SHELLFISH CULTURE

Shellfish culture, hard clams, mussels, scallops, and oysters, occurs on sovereignty submerged lands leased from the State of Florida. In addition to inspecting farms for compliance with the aquaculture BMPs, the Division accepts applications for sovereignty submerged state lands and regulates and inspects shellfish processing plants for compliance with shellfish handling, labeling and food safety protection requirements.

A. UPLAND FACILITY OPERATIONS

Best Management Practices:

- Sovereign submerged lands authorizations must be obtained for structures located on or above state-owned submerged lands. Contact the FDACS, Division of Aquaculture for information.
- The facility must be located so that it minimizes environmental impacts and minimizes risks to public health
- Facilities located on lands not zoned agricultural must comply with local construction and zoning regulations.
- Land-based facilities must be designed and operated in a manner which minimizes adverse impacts to the receiving waters, adjacent wetlands, and uplands.
- Pumping, intake and discharge systems must be designed in a manner which does not create currents which increase sedimentation, scouring, turbidity, or in anyway damage the surrounding habitat.
- Sediment removal and disposal must be conducted in a manner that eliminates or minimizes adverse impacts to the receiving waters.
- Shell stock shall not be used to fill wetlands or placed on sovereignty submerged lands. Shell stock may be disposed of in appropriate upland areas, landfills, or designated shell recycling areas.
- Hatchery operators must maintain records of all brood stock purchases and seed sales for a period of two years. These records must be available for inspection by the Division upon request.
- Florida based clam hatcheries selling seed must be certified as a clam hatchery facility. Clam seed sold/transferred from these certified facilities must be accompanied with an

aquaculture certification number attached to all product containers and associated sales documentation.

B. SUBMERGED LANDS - GROW-OUT

Best Management Practices:

- Aquaculturists culturing shellfish on Sovereign Submerged Lands (state-owned) shall obtain an aquaculture lease or other SSL authorization and remain current with annual fees and conditions of that authorization agreement.
- Follow all the terms and conditions of the Sovereignty Submerged Land Aquaculture Lease, and be fully compliant with provisions of Chapters 253, 258, Part II, 597, F. S., Chapters 5L-1, 5L-3, F.A.C.
- Aquaculturists culturing shellfish on privately held submerged lands shall provide a development plan for culture operations and must have an aquaculture certificate from the FDACS, Division of Aquaculture.
- Prior to commencement of the aquaculture activities on the approved grow-out site, properly post the grow-out boundaries to delineate the corners and perimeters, as per the lease agreement. Markers should be sufficient to warn mariners passing in the vicinity of the lease of the potential hazards to navigation.
- Authorized activities on the grow-out site are those activities allowed in the lease agreement or development plan for culture operations. For example: planting shellfish cultivated from eggs, transplanting and relaying live stocks, placement of cultch material, harvesting clams, the installation and removal of nets, bags, or other devices, and the placement of markers that designate the corners and perimeters of the culture area.
- No vessel of any description shall be moored on or adjacent to the grow-out premises for a period exceeding twenty-four hours, regardless of whether the vessel is periodically moved.
- Mechanical harvesting is prohibited on aquaculture grow-out areas unless specified in the lease agreement or development plan for culture operations.
- Culture materials (cultch) placed on the grow-out area must be a suitable substrate for attachment of oyster larvae: such as natural molluscan shells; fossilized shell; coral, and other aquatic organisms; lithic materials such as crushed and graded limestone, granite, and gravel which contain calcium carbonate and/or fossilized organisms; or recycled materials which contain lithic fractions and calcium carbonate, including crushed and

graded concrete. Exceptions to this list of generally accepted cultch materials must be specifically approved and identified within the aquaculture lease agreement.

- Non-natural materials placed in the water or on submerged lands shall be anchored to the bottom. This includes any protective netting used to cover the bags.
- Bags, cover nets, and/or trays used in the culture operation shall be removed from the water during all mechanical cleaning, maintenance and repair operations. During harvest, culture bags and cover nets shall be rinsed/cleaned over the grow-out area to allow sediments to remain in the lease area. Mechanical or hydraulic devices shall not be used below the water for the cleaning of the submerged structures. Use hand tools for cleaning shellfish, bags, and other structures under water.
- All culture materials, cover nets, bags or other designated markers placed on or in the water shall be clean and free of pollutants including petroleum based products such as creosote, oils and greases, or other pollutants. Compounds used as preservatives must be used in accordance with the product label.
- The aquaculturist is responsible for collection and proper disposal of all bags, cover netting or other materials used in the culture of shellfish on submerged lands or when such materials are removed during harvesting or become dislodged during storm events.
- Producers must maintain records of all seed purchases and seed sales for a period of two years. These records must be available pursuant to the annual lease audit requirement of the Sovereignty Submerged Land Aquaculture Lease.

C. PUBLIC HEALTH PROTECTION

Best Management Practices:

Shellfish grown by the aquaculturist shall comply with provisions of Chapters 5L-1, 5L-3, F.A.C., and Chapter 597, F.S.

- Shellfish harvested by the aquaculturist to be sold in any market, other than seedstock shall comply with provisions of Chapter 5L-1, F.A.C.
- Follow all National Shellfish Sanitation Program criteria when consistent with Florida's Comprehensive Shellfish Control Code. (U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration, "Model Ordinance 1999" of the National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish)

- Direct sales of aquaculture products from the farmer to the retailer or consumer are prohibited: sale for market must be to a facility possessing a valid shellfish processing plant certification.
- Seed clams (*Mercenaria spp.*) must be relocated from harvest waters classified as restricted or prohibited to an approved classified water location for grow-out prior to reaching 16mm in shell length.
- Seed oysters (*Crassostrea virginica*) must be relocated from harvest waters classified as restricted or prohibited to an approved classified water location for grow-out prior to reaching 25mm in shell length.
- Obtain authorization from the Division prior to conducting activities associated with transplanting and relaying of wild shellfish stocks.
- Obtain authorization from the Division to relay market-size shellfish stocks to or from leases that are temporarily or permanently closed to direct-to-market sale.
- Relaying must comply with the provisions of subsection 5L-1.009, F.A.C.
- Transport, harvest or sale of shellfish, other than seedstock as defined in this section, from a grow-out facility (lease) which is closed for public health purposes to another growout facility is prohibited without a valid special activity license for relaying.
- Grading of clams must be performed by the aquaculturists over his lease (approved waters) or at a certified shellfish processor.
- Washing of clams may be performed by the aquaculturist over his lease (approved waters) or at a land-based facility which possesses an Aquaculture Certification and is specifically identified as a clam washing facility or at a certified shellfish processing facility.

D. GENETIC PROTECTION

Best Management Practices:

- Aquaculturists who intend to sell or use hard clam seed stocks for further grow-out in the State of Florida must use broodstock which originated from Florida waters in their genetic selection program. Documentation of brood stock origin must be obtained by the hatcheries.
- Aquaculturists located on Atlantic coast waters, who intend to sell or use oyster seed stocks for further grow out in the State of Florida must use broodstock which originated

from Florida Atlantic coast waters in their genetic selection program. Aquaculturists located on Gulf Coast waters, who intend to sell or use oyster seed stocks for further grow-out in the State of Florida, must use broodstock which originated from Florida waters of the Gulf of Mexico in their genetic selection program.

- Aquaculturists culturing shellfish, other than oysters and hard clams, located on Atlantic coast waters, who intend to sell or use seed stocks for further grow out in the State of Florida must use broodstock which originated from Florida Atlantic coast waters in their genetic selection program. Aquaculturists located on Gulf Coast waters, who intend to sell or use seed stocks for further grow-out in the State of Florida must use broodstock which originated from Florida waters of the Gulf of Mexico in their genetic selection program.
- All shellfish must be transported or shipped in distinct containers identified by the producer's Aquaculture Certificate Number.
- If producers buy clam seed stocks from an out-of-state source, the hatchery must utilize Florida broodstock in their genetic selection program. Documentation of brood stock origin must be obtained from the hatchery.
- If producers buy oyster seed stocks from an out-of-state source, the hatchery must utilize brood stock from the Florida waters of the Gulf of Mexico in their genetic selection program. Documentation of brood stock origin must be obtained from the hatchery.
- Only the cultivation of indigenous, or hybrids of indigenous shellfish should be placed on submerged lands. Each certificate holder shall notify the Division of the species of shellfish being cultured in Florida waters.

E. DISEASE PREVENTION

The following best management practices are to protect endemic shellfish populations from the potential introduction and transfer of diseases. They should be employed during all production and transport phases to provide responsible resource management, and reduce or eliminate the risk of disease introduction or transfer.

Best Management Practices:

- Shellfish imported from out-of-state sources for aquacultural purposes must be accompanied by documentation from a licensed veterinarian certifying that the stock does not show clinical signs of any disease pathogen which may pose a threat to natural shellfish populations.

- Stock must currently be free of the following pathogens: Quahog Parasite Unknown (QPX) in clams; *Haplosporidium nelsoni* (MSX), and *Perkinsus marinus* (Dermo) in oysters.
- Because of the known threat of introduction of MSX from oyster stocks grown in the waters of the Atlantic Ocean or drainages into the Atlantic Ocean; the sale of oyster stocks from Atlantic Coast waters is prohibited for use in Florida Gulf Coast waters.
- Florida Gulf Coast hatcheries and nurseries can only provide oyster seed for grow-out in Florida Gulf Coast waters.
- Florida Atlantic Coast hatcheries and nurseries can only provide oyster seed for grow-out in Florida Atlantic Coast waters.
- The producer's Aquaculture Certification Number must accompany bivalves being transported from a hatchery or nursery and to or from growout areas.
- All bivalve facility operators will notify the Florida Department of Agriculture and Consumer Services, Division of Animal Industry, State Veterinarian's Office, 2700 N. John Young Parkway, Kissimmee, FL 32741, phone 407/846-5200 Ext. 226, within 24 hours of any suspected disease outbreaks, (specifically, MSX and Dermo in oysters and QPX in clams).

F. RESOURCE PROTECTION

Perform all aquaculture activities in such a manner so that there will not be an adverse impact on significant resource habitats such as seagrass communities, naturally occurring oyster and clam beds, corals, attached sponges or attached macro marine algae beds or endangered species such as manatees and sea turtles.

See Appendix for complete list of all required BMPs for clams/shellfish.

XI. LIVE ROCK CULTURE

Live rock consists of geologically distinct substrate placed on the ocean bottom to attract colonizing plant and invertebrate species. The rock is collected after several years of culture and sold into the marine aquaria trade. The use of sovereign submerged state lands for Aquaculture requires that the operator obtain a submerged land's Aquaculture lease. Persons interested in conducting Aquaculture activities on or above state lands should contact the FDACS, Division of Aquaculture for assistance.

Best Management Practices:

- Natural rock used for a substrate must be geologically distinguishable from naturally occurring rock in the area of the lease.
- Substrate materials, natural or artificial rock must be approved by the FDACS, Division of Aquaculture, prior to deposition on submerged lands or in an upland facility.
- A geologist's lithographic description of the substrate material must be retained until the time of sale and must be made available for inspection by the FDACS, Division of Aquaculture upon request.
- Substrate material should be sufficiently free of sediment and fines so that the deployment does not result in turbidity violations inside or outside of the lease boundary.
- Substrate deployment should be conducted in a manner that minimizes turbidity and does not result in adverse impacts to natural fishery habitats or other benthic resources. Use of native live rock is prohibited.
- Substrate materials should be handled and stored in a manner that minimizes on-site and off-site impacts.
- Substrate containing marine life species not native to Florida waters can only be cultured in upland facilities which sterilize any discharge water or are managed as closed systems having no offsite discharge.

See Appendix for complete list of all required BMPs for live rock.

XII. AQUATIC PLANTS

The aquatic plant industry in Florida produces high quality plants for three primary markets: aquariums, water gardening and wetland mitigation and restoration.

A. FERTILIZER APPLICATION

Best Management Practices:

- Apply fertilizer to substrate during preparation of the grow-out tank while it is dry. Use a slow release fertilizer and evenly incorporate it into the soil.
- If it is necessary to apply fertilizer into a grow-out tank or pond which is inundated, use fertilizer spikes which can be pushed into the substrate near the target plant. Once the “food spike” is below the surface, it should be covered with soil; to prevent the loss of nutrients to the water column.
- Minimize the need for additional fertilizer by maintaining a static water level in the production tanks or ponds.

B. REGULATORY REQUIREMENTS

Aquatic plant nurseries are regulated by two divisions within the FDACS, the Division of Aquaculture and the Division of Plant Industry. The Division of Aquaculture reviews all aquaculture activities, including aquatic plants to insure compliance with all aspects of this BMP manual. The Division of Plant Industry regulates the horticulture sector which propagates plants for resale.

The primary role of the Division of Plant Industry, with respect to the aquatic plant industry, is to oversee the import and export of non-native species. The purpose of this oversight is to prevent the introduction and spread of nuisance plants or disease which may displace native species and negatively impact Florida’s ecosystems. There are two classes of “Prohibited Aquatic Plants”:

Class I – These plants may not be possessed, collected, transported, cultivated or imported.

Class II – These plants may be cultured in an aquatic plant nursery for sale out of state, and only with approval of DPI.

A listing of all Class I and Class II Prohibited Aquatic Species is found in Rule 62C-52.011 F.A.C. and is referenced in the appendix.

Best Management Practices:

- It is prohibited to possess and culture Class I aquatic plants. If you discover a Class I species in a shipment you receive, or on your facility, contact FDACS, Division of Plant Industry at once.
- Do not import, cultivate or export Class II Prohibited Species without prior authorization from FDACS, Division of Plant Industry. If you intend to handle Class II Prohibited Species, you must provide the necessary measures to ensure that these plants do not escape your facility into the surrounding environment. These methods are outlined in the containment section of the “Non-native and Restricted Non-native Species” chapter of this manual. While the aforementioned chapter primarily addresses biosecurity for nonnative fish species, the containment strategies are also applicable to the containment of non-native plants.

See Appendix for complete list of all required BMPs for aquatic plants.

XIII. HEALTH MANAGEMENT

Good aquatic animal health practices are necessary for the success of any aquaculture production facility. Animals are naturally healthy. A sound management and sanitation program will greatly minimize pathogens and disease in your facility. *Knowing the health status of aquatic animals, followed by early diagnosis or prevention of disease is critical to successful production.* Disease prevention is based on good animal husbandry practices, including the reduction of animal stress, minimization of pathogens in the culture environment, and quarantine of unhealthy animals. The FDACS strongly encourages aquaculturists to develop a written aquatic animal health management plan for their facility. The following BMPs, when used in consultation with an aquatic animal health professional or the Florida State Veterinarian Office, are intended to provide the basic components of an aquatic health management plan.

A. HEALTH BMPs FOR ALL SPECIES

- Contact your aquatic animal health professional or the Florida State Veterinarian's Office in the event of any unusual or abnormal occurrences of disease or pests affecting your aquatic species.
- Written authorization may be required from the State Veterinarian prior to importing non-native aquatic species from outside the U.S. Additional authorizations may be required prior to the importation of non-native aquatic species. Please contact, USDA, USFWS, and FWC for more information regarding any requirements they may impose.
- All health records must be retained for at least two years by certified aquaculturists. These records, at a minimum, shall include:

- Aquaculture Certification Number
- Name and Address of consignor
- Name and Address of consignee
- Date of Shipment
- Date of entry/receipt
- Species
- Total number of aquatic animals by species
- Any pertinent recent test results performed to the group of aquatic animals

- Follow accepted animal husbandry practices to maintain a favorable growing environment, such as but not limited to, the following:

- Avoid over crowding
- Maintain proper nutritional programs
- Promptly remove uneaten or undigested food
- Promptly remove dead animals
- Maintain high quality water and oxygen levels

Minimize stress such as high light intensity, handling, and extreme or rapidly changing temperatures

- Aquatic animals affected by an abnormal occurrence of disease and an undetermined disease should be sent to a diagnostic laboratory for analysis.
- Use medications and remedial agents consistent with the label instructions or as directed by a licensed veterinarian.
- Institute effective biosecurity measures consistent with BMPs found herein.
- Educate personnel on the normal behavioral patterns of aquatic species, to easily distinguish abnormal behavior patterns as a means for early recognition of stress or disease.
- When necessary, establish adequate quarantine practices and procedures.
- Establish a parasite diagnosis and control program.

B. HEALTH BMPs FOR TROPICAL ORNAMENTAL FISH

Tropical fish have not been identified as a vector for human or food fish disease, but recipient states and countries have proposed precautionary regulatory measures to control and prevent disease outbreaks. It is critical to the continued and uninterrupted marketing of tropical ornamental fish that Florida's reputation for high-quality, healthy fish be protected and maintained. As critical components of the effort to attain this goal, the Florida State Veterinarian Office may inspect tropical ornamental fish farms on an annual basis (for more information please contact the State Veterinarians Office at 850/410-0909) and farmers must include their Aquaculture Certificate Number on packaging and business related documents related to the sales and shipping of their ornamental species. The following best management practices have been developed to insure that vigorous, healthy fish are sold.

- Educate yourself as much as possible regarding fish health management and the husbandry requirements of the fish species that you are raising. Sources of information include fish health management classes offered by the University of Florida and a Fish Health Video series produced by the University of Florida and distributed by the Florida Tropical Fish Farms Association, among others.
- Institute a daily program of observing fish behavior and feeding activity to detect disease problems.

- Periodically test water quality for dissolved oxygen, pH, temperature, ammonia and nitrite, total alkalinity and total hardness. Know the physiological limits of your species. Establish control and response actions when deviating from normal values. Document all corrective actions.
- Feed a high quality diet proper for the species you are raising. Store feeds and medications under cool, dry conditions to prevent degradation.
- Sanitize nets and fish handling equipment to prevent the spread of disease.
- Provide employee education on the importance of facility cleanliness, safety, cleaning and disinfecting for good animal health.
- Promptly remove pathogen harboring organic debris from tanks or ponds.
- Sanitize tanks or ponds following disease outbreaks or before stocking with new populations.

C. HEALTH BMPs FOR SHRIMP

Aquatic animal health is a critical concern of all shrimp farmers. Good aquatic animal health practices begin in the hatchery and continue on the farm. Aquatic animal health protocols for marine shrimp are in a developing stage which will be refined by continuous research, new sampling technology, and health practices.

- Broodstock, nauplii and post larvae (PLs) must only be obtained from facilities whose health records document, at a minimum, the absence of disease manifestations and/or outbreaks, which include “Yellow Head”, “White Spot”, “Taura Syndrome” or any other harmful pathogen as determined by the State Veterinarian, within the past 8 months at closed recirculating systems, 12 months at facilities with open ponds. Substantiation of clean health, at the minimum, must include those health records maintained by the seller and verification of clean health provided by a licensed veterinarian.
- Broodstock brought into a facility must be isolated from the remaining stocks in the hatchery until their disease free health status is verified.
- All live shrimp, regardless of life stage, sold to a Florida facility/operator must be accompanied by a signed "Certificate of Veterinary Inspection" from a licensed veterinarian. The “Certificate of Veterinary Inspection” at a minimum should identify the type test performed and the dates of such testing for “Yellow Head”, “White Spot”, “Taura Syndrome” or any other harmful pathogen as determined by the State Veterinarian.

- All health management documentation and records must be retained for at least two years by certified aquaculturists. These records will be made available for inspection by the FDACS, Division of Aquaculture upon request.
- Any cultured shrimp released from a certified facility into waters of the State must be reported, as soon as practical, with the details of the release, to the FDACS, the Division of Aquaculture.
- Certified aquaculturists and/or his aquatic animal health professional will notify the Florida Department of Agriculture and Consumer Services, Division of Animal Industry, State Veterinarian's Office, 407/846-5200 Ext. 226, 2700 N. John Young Parkway, Kissimmee, Florida 34741, in the event of an outbreak of "Yellow Head", "White Spot", "Taura Syndrome" or any other harmful pathogen as determined by the State Veterinarian.

D. HEALTH BMPs FOR STURGEON

- All imports of live sturgeon must be accompanied by a signed "Certificate of Veterinary Inspection" attesting to the good health of the sturgeon.
- Facilities should notify their aquatic animal health professional or the FDACS, Division of Animal Industry, State Veterinarian's Office in the event that diseases or other suspected pathogens are observed in cultured stocks, and before disposing of sturgeon that manifest symptoms of disease.
- Health management records should be retained for at least two years to document any significant behavioral changes, clinical signs of disease, or unusual mortality rates that are noted during daily health monitoring procedures. These records will be made available for inspection by the FDACS, Division of Aquaculture upon request.
- In the event of a release of sturgeon into surface waters for the state, the facility manager or designated representative will report, within 24 hours, the release to the FDACS, Division of Aquaculture. The report should include the species released, the approximate size and number of fish released, the exact location of the released, the name of the receiving body of water, and the approximate volume of water released.
- The facility should maintain documentation identifying the source of all adult fish, fingerlings, fry, and eggs of sturgeon imported into the state for at least two years.

E. HEALTH BMPs FOR MARINE BIVALVES:

- Bivalves imported from out-of-state for aquacultural purposes must be accompanied by documentation from a licensed veterinarian certifying that the stock is free of the following pathogens: Quahog Parasite Unknown (QPX) in clams; *Haplosporidium nelsoni* (MSX), and *Perkinsus marinus* (Dermo) in oysters. If future additional pathogens are identified as posing a threat to natural stocks, this list may be updated.
- Hatchery operators will maintain records of all brood stock purchases and seed sales for a period of two years. These records will be made available for inspection by the FDACS, Division of Aquaculture upon request.
- The producer's Aquaculture Certification Number must identify bivalves being transported from a hatchery or nursery.
- All bivalve facility operators will notify the Florida Department of Agriculture and Consumer Services, Division of Animal Industry, State Veterinarian's Office, 2700 N. John Young Parkway, Kissimmee, FL 32741, phone 407/846-5200 Ext. 226, within 24 hours of any confirmed disease outbreaks, (specifically, MSX and Dermo in oysters and QPX in clams).

SEE INDIVIDUAL SPECIES SECTIONS FOR SPECIFIC HEALTH BMPS
OR CONTACT THE DIVISION OF AQUACULTURE

XIV. MORTALITY REMOVAL

DISPOSAL OF DEAD ANIMALS

Mortalities and culls removed from production must be handled using the following BMPs.

Best Management Practices:

- Pursuant to Chapter 5C-25, F.A.C., only humane methods may be used for the euthanasia of aquaculture species.
- Sanitize or disinfect and then dispose of organisms(s) in a sanitary and humane fashion in accordance with applicable local and state regulations.
- Contact the FDACS, Division of Aquaculture for additional information.

XV. PREVENTING WILDLIFE DEPREDATION

Wild animals contribute to our enjoyment of nature and outdoor recreation, but they can also damage property, agriculture, natural resources and threaten human health and safety. Numerous species of wildlife prey on aquaculture species or serve as vectors for disease, both of which may cause substantial losses. Protecting aquaculture species may require using several different methods of deterrence or control. Operators must be aware of and abide by all State and Federal laws regarding appropriate control methods for predatory species. The BMPs listed below should be followed to deter or control animal pests successfully and legally. For a specific animal predation control permit, contact USDA Wildlife Services, 2820 E. University Ave, Gainesville, Florida at 352/377-5556 or 1408 24th Street S.E., Ruskin, Florida at 813/671-5230, Ext. 105. Questions may be directed to the Division of Aquaculture, 1203 Governor's Square Boulevard, #5, Tallahassee, Florida at 850-488-4033.

Best Management Practices:

- Follow all State and Federal laws and regulations that apply to the nuisance species as most birds, mammals, and reptiles are protected by law and require a State or Federal permit to trap or shoot.
- Implement a variety of non-lethal techniques before adopting lethal methods.
- Depending upon location and situation, adhere to the following publications which are incorporated by reference into this manual.

Booth, T. W. (1994) Prevention and Control of Wildlife Damage, Bird Dispersal Techniques. USDA-APHIS-Wildlife Services
http://wildlifedamage.unl.edu/handbook/handbook/allPDF/bird_e19.pdf

or

Gorenzel, W. P. (1994) Prevention and Control of Wildlife Damage, Bird Damage at Aquaculture Facilities. USDA-APHIS-Wildlife Services
http://wildlifedamage.unl.edu/handbook/handbook/allPDF/bird_e5.pdf

- Follow all provisions of federal or state depredation permits.
- Use of noise producing devices, including propane cannons and pyrotechnics are suitable best management practices for the control of birds but should be limited to the minimal amount needed for adequate control.
- Devices should only be used from sunrise to sunset.

- Adhere to the provisions of Chapter 5A-3, F.A.C. to obtain proper authorization prior to use of pyrotechnic devices controlled by Chapter 791, F.S.

Propane cannons and pyrotechnic devices should be strategically located and operated to minimize offsite impact. Use of simple blast shields to reduce the noise projected behind the cannon may be appropriate when located near residential developments.

XVI. SHIPMENT, TRANSPORTATION AND SALE

During shipment and transportation, care must be taken so that potential for escape of aquacultural products is minimized, and state laws are met in the identification of products. The following BMPs will apply to all certified aquaculturists.

Best Management Practices:

- Aquaculture products must be identified with an Aquaculture Certificate number, while possessed, transported or sold from harvest to point of sale. The receipt, bills of sale, bills of lading, or other such manifest must show the certificate number and where the product originated. And if the product is sold to a Florida grow-out facility, the Aquaculture Certificate number of the buyer must also be included. Sale records must contain at least the following information:
 - Date of Sale
 - Name and address of Seller
 - Seller's Aquaculture Certificate number
 - Name and address of the Purchaser
 - Purchaser's Aquaculture Certificate number (if a Florida Certified Aquaculture Facility)
 - Quantity and species identification of aquaculture product sold
- Aquaculture products must be transported in containers that separate aquaculture products pursuant to Chapter 597, F.S., from wild stocks, and such containers must be identified by tags or labels which are securely attached and clearly displayed.
- Records of all live purchases and/or all live sales of restricted species as listed in Rule 68A-23.008, F.A.C., sturgeon, marine shrimp and marine bi-valves must include the date of shipment, name, address, and Aquaculture Certification Number(s) of the supplier and the recipient if purchased or sold in Florida. Records must be retained by the hatchery or farm and available for inspection for at least two years. Invoices or bills of lading containing the above information is sufficient to meet this BMP requirement.
- Fish of the genus *Centropomus* (snook) or the genus *Micropterus* (black bass) may be cultured for stocking purposes only. Buying, selling, bartering, trading or exchanging of these species for human consumption is prohibited.
- The possession of snook must be in compliance with the requirements of the Florida Fish and Wildlife Conservation Commission (FWC).

XVII. AQUACULTURE CHEMICAL AND DRUG HANDLING

Florida's water resources are particularly susceptible to contamination because of the State's unique geology and hydrology. Groundwater supply often lies at or near the surface, and users of agrichemicals and drugs need to consider the soil's susceptibility to leaching, distance to the water table, slope of the land, and distance to surface water which could provide a direct pathway to ground water. Clay or muck soils are capable of binding certain pesticides with repeated applications. Proper handling, application and disposal practice through the use of BMPs can prevent the contamination of soil, surface waters, and ground water.

A. CHEMICAL USAGE AND HANDLING

Best Management Practices:

- Follow all product label directions for use, storage and disposal.
- Use in accordance with all applicable Federal and State guidelines and laws.

B. SPILL MANAGEMENT

Best Management Practices:

- Immediately contain and dispose of spilled or leaking materials by utilizing barriers and/or absorbent material such as activated charcoal, cat litter, dry sand, or soil in accordance with manufacturers' recommendations and/or State and Federal laws.
- No spills or leaks shall be left unattended.

For additional information about chemical usage, copies of additional chemical data or if you are interested in becoming a licensed chemical applicator, please contact the FDACS, Division of Aquaculture at 850/488-4033.

C. DRUG USAGE AND HANDLING

Best Management Practices:

- All drugs, therapeutic substances, and antibiotics must be used, applied, stored, or disposed only as directed by an FDA approved product label or as prescribed by a Florida licensed veterinarian.
- Drugs may not be used or prescribed for extra-label use when the drug label prohibits extra-label use.

XVIII. AQUATIC ANIMAL WELFARE

Successful aquatic animal husbandry demands that animals be held in healthy environments and fed a healthy diet. Farm raised aquatic animals must be raised under optimal conditions using humane practices. Aquatic animals for slaughter shall be quickly prepared for rapid processing. Aquatic animals reared for stocking in public waters shall be transported under good environmental conditions if the fish are to survive.

Best Management Practices:

- Follow the provisions of Section 828.12, F.S., Cruelty to Animals.
- Comply with Aquaculture Best Management Practices, section XIV. Mortality Removal
- Comply with Aquaculture Best Management Practices, section XV. Preventing Wildlife Depredation.
- Comply with Aquaculture Best Management Practices, section XVI. Shipment, Transportation, and Sale.
- Comply with Aquaculture Best Management Practices, section XVII. Aquaculture Chemical and Drug Handling.

Compliance with these BMPs will ensure aquatic animals are being handled humanely.

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Chapter XI - Live Rock Culture
Chapter XIII - Health Management
Chapter XVI - Shipment, Transportation and Sale

Chapter XVII - Aquaculture Chemical and Drug Handling
Chapter XVIII – Aquatic Animal Welfare

Shrimp:

Chapter II - Compliance Monitoring
Chapter III - Federal Permitting
Chapter IV- Water Resources
Chapter V - Construction
Chapter VI - Non-native and Restricted Non-native Species
Chapter VIII - Marine Shrimp Culture
Chapter XIII - Health Management
Chapter XIV - Mortality Removal
Chapter XV - Preventing Wildlife Depredation
Chapter XVI - Shipment, Transportation and Sale
Chapter XVII - Aquaculture Chemical and Drug Handling
Chapter XVIII – Aquatic Animal Welfare

Sturgeon:

Chapter II - Compliance Monitoring
Chapter III - Federal Permitting
Chapter IV - Water Resources
Chapter V - Construction
Chapter IX - Sturgeon Culture
Chapter XIII - Health Management
Chapter XIV - Mortality Removal
Chapter XV - Preventing Wildlife Depredation
Chapter XVI - Shipment, Transportation and Sale
Chapter XVII - Aquaculture Chemical and Drug Handling
Chapter XVIII – Aquatic Animal Welfare

Tilapia:

Chapter II - Compliance Monitoring
Chapter III - Federal Permitting
Chapter IV - Water Resources
Chapter V - Construction
Chapter VI - Non-Native and Restricted Non-Native Species
Chapter XIII- Health Management
Chapter XIV- Mortality Removal
Chapter XV - Preventing Wildlife Depredation
Chapter XVI - Shipment, Transportation and Sale
Chapter XVII - Aquaculture Chemical and Drug Handling
Chapter XVIII – Aquatic Animal Welfare

RESOURCES FOR AQUACULTURE INFORMATION

Division of Aquaculture

Florida Department of Agriculture and Consumer Services
Division of Aquaculture
1203 Governors Square Boulevard, 5th Floor
Tallahassee, Florida 32301
(850) 488-4033
www.floridaaquaculture.com

Natural Resources Conservation Service (NRCS) Area Offices -

State Office
P.O. Box 141510
Gainesville, Florida 32614-1510
(352) 338-9500

Area 1 Administrative Office
4155 Hollis Drive
Marianna, Florida 32448-2708
(850) 482-2002

Area 2 Administrative Office
3804 South First Street
Lake City, Florida 32025-4212
(904) 755-5100

Area 3 Administrative Office
5700 Lake Worth Road, Suite 100
Lake Worth, Florida 33463-3213

University of Florida (IFAS)

Tropical Aquaculture Laboratory (ornamental fish)
1408 24th Street, Southeast
Ruskin, Florida 33570
(813) 671-5230
(813) 671-5234 FAX

Cedar Key Field Station (shellfish)
P.O. Box 89
Cedar Key, Florida 32625
(352) 543-5057
(352) 543-6958

Department of Fisheries and Aquatic Sciences
7922 Northwest 71st Street
Gainesville, Florida 32606
(352) 392-9617

State of Florida Veterinarian's Office
Florida Department of Agriculture and Consumer Services
Division of Animal Industry
2700 N. John Young Parkway
Kissimmee , Florida 34741
(407) 846-5200 Ext. 226

Florida Fish and Wildlife Commission Regional Offices -

Northwest Region
3911 Highway 2321
Panama City, Florida 32409-1658
(850) 265-3676
24-Hour Law Enforcement: (850) 245-7710

North Central Region
3377 E. US Highway 90
Lake City, Florida 32055
(386) 758-0525
24-Hour Law Enforcement: (850) 758-0529

Northeast Region
1239 S.W. 10th Street
Ocala, Florida 34474-2797
(352) 732-1225
24-Hour Law Enforcement: (352) 732-1228

Southwest Region
3900 Drane Field Road
Lakeland, Florida 33811-1299
(863) 648-3203
24-Hour Law Enforcement (863) 648-3200
South Region

8535 Northlake Boulevard
West Palm Beach, Florida 33412
(561) 625-5122
24-Hour Law Enforcement: (561) 625-5122

Monroe and Collier County 24-Hour Law Enforcement
(305) 289-2320

U.S. Fish and Wildlife Service District Offices -

6620 Southpoint Drive S, Suite 310
Jacksonville, Florida 32216
(904) 232-2580

1601 Balboa Avenue
Panama City, Florida 32405
(850) 769-0552

1339 20th Street
Vero Beach, Florida 32960
(772) 562-3909

Water Management District Offices –

Northwest District
Rt. 1 Box 3100
Havana, Florida 32333-9700
(850) 539-5999

St. Johns River District
P.O. Box 1429
Palatka, Florida 32178-1429
1 (800) 725-5922

Suwannee River District
9225 County Road 49
Live Oak, Florida 32060
1 (800) 226-1066

South Florida District
3301 Gun Club Road

West Palm Beach, Florida 33416-4680
1 (800) 432-2045

Southwest Florida District
U.S. Highway 41 South
Brooksville, Florida 34609-6899
1 (800) 423-1476

Department of Environmental Protection – District Offices

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794
(850) 444-8300

Northeast District
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
(904) 448-4300

Central District
33319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
(407) 894-7555

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318
(813) 744-6100

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901
(941) 332-6975

Southeast District
400 North Congress Avenue
West Palm Beach, Florida 33401
(561) 681-6600

U.S. Army Corps of Engineers, District Offices –

Jacksonville District Regulatory Office – SAMOP-S

P.O. Box 4970

Jacksonville, Florida 32232-0019

(904) 232-1666

Chapter 5A-3, Florida Administrative Code

Agricultural and Fish Hatchery Use of Firecrackers

5A-3.001 Application to Sheriff for Use of Firecrackers.

5A-3002 Acquisition of Firecrackers.

5A-3.001 Application to Sheriff for Use of Firecrackers.

Any person who is engaged in agricultural works or who operates a fish hatchery may use firecrackers solely and exclusively for the purpose of frightening birds from doing harm to any such person's agricultural works for fish hatchery operation; provided that any such person shall first file with the sheriff of the county in which he is engaged in agricultural works or the operation of a fish hatchery a statement in writing that he is engaged in agricultural works, describing the nature of such, or that he operates a fish hatchery, describing the nature of such, and desires to use firecrackers to frighten birds from harming his agricultural works or his fish hatchery operation and that firecrackers will be used solely and exclusively for that purpose.

Specific Authority 791.07 FS. Law Implemented 791.07 FS. History - Repromulgated 12-31-74, Amended 12-21-75, Formerly 5A-3.01.

5A-3.002 Acquisition of Firecrackers.

Any person may acquire from any authorized person firecrackers for purposes state in Section 5A-3.001, F.A.C., upon presenting a copy of his statement filed with the sheriff.

Specific Authority 791.07 FS. Law Implemented 791.07 FS. History - Repromulgated 12-31-74, Amended 12-21-75, Formerly 5A-3.02.

AQUACULTURE AUTHORITY

Rule 62C-52.011, Florida Administrative Code Prohibited Aquatic Plants

- (1) Class I Prohibited Aquatic Plants -- Under no circumstances will these species be permitted for possession, collection, transportation, cultivation, and importation except as provided in Rule 62C-52.004, F.A.C.:

SCIENTIFIC NAMES

COMMON NAMES

<i>Alternanthera philoxeroides</i>	Alligatorweed, green lead plant
<i>Casuarina spp.</i>	Australian Pine
<i>Crassula helmsii</i>	Swamp stone crop
<i>Eichhornia spp.</i>	Waterhyacinth
<i>Hydrilla verticillata</i>	Hydrilla, Florida elodea, stargrass, oxygen grass
<i>Ipomoea aquatica</i>	Water spinach
<i>Ipomoea fistulosa</i>	
<i>Lagarosiphon spp.</i>	African elodea
<i>Limnocharis flava</i>	Sawah flowing rush
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Melaleuca quinquenervia</i>	Melaleuca
<i>Mimosa pigra</i>	Giant sensitive plant, cat's claw
<i>Monochoria hastata</i>	
<i>Monochoria vaginalis</i>	
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil
<i>Nechamandra alternifolia</i>	
<i>Oryza rufipogon</i>	Wild Red rice
<i>Pontederia rotundifolia</i>	Tropical pickerelweed
<i>Salvinia spp., (excluding S. minima)</i>	
<i>Schinus terebinthifolius</i>	Brazilian-pepper
<i>Sparganium erectum</i>	Exotic bur-reed
<i>Stratiotes aloides</i>	Water-aloe, soldier plant
<i>Trapa spp.</i>	Water chestnut
<i>Vossia cuspidata</i>	Hippo grass

- (2) Class II Prohibited Aquatic Plants -- These species are considered to be highly invasive and noxious in localized areas of the State of Florida. These plants may be cultured in a nursery regulated by the Department of Agriculture and Consumer Services pursuant to s. 581.031, 581.131, and 581.145, F.S., and shall only be sold out of state upon approval by the Department of Agriculture and Consumer Services. These species shall not be

imported or collected from the wild. They must be contained in such a manner so as to prevent the dissemination from the nursery premises.

SCIENTIFIC NAMES

COMMON NAME

Hygrophila polysperma

Hygro

Limnophila sessiliflora

Ambulia

Pistia stratiotes

Waterlettuce

- (3) The department is authorized to designate additional plants to be prohibited by emergency order as provided in Rule 62C-52.012, F.A.C.
- (4) The prohibited aquatic plant list comprises the most recent and accepted scientific and common names of the prohibited aquatic plant species. However, the prohibited status also applies to any synonyms.
- (5) The department is authorized to consider a plant for inclusion on the prohibited plant list when it displays, or when there is scientific evidence to believe it could display in the Florida environment, one or more of the following characteristics:
 - (a) The tendency to spread or become invasive in an ecosystem, sometimes in a rapid manner, so as to impair the ecosystems ability to function by altering its productivity, decomposition, water fluxes, nutrient cycling and loss, soil fertility, erosion, dissolved oxygen concentrations, or its ability to maintain its existing species diversity.
 - (b) The propensity to invade and disrupt aquatic and wetland ecosystems in other areas or in other countries with climates similar to that of Florida.
 - (c) The ability to create dense, monospecific stands or monotypic stands which displace or destroy native plant habitat, destroy fish and wildlife habitats, inhibit water circulation, hinder navigation and irrigation, or severely restrict the recreational use of waterways.
 - (d) The ability to resist effective management by present technology or available management agents so that only extraordinary efforts, such as repeated chemical treatments at high dosage rates, can bring about effective management.

Specific Authority 369.25, 369.251 FS.

Law Implemented 369.25, 369.251 FS.

History - New 8-11-86, Amended 6-13-93, Formerly 16C52.011.

Rule 68A-23.008, Florida Administrative Code

Introduction of Non-Native Aquatic Species in the Waters of the State; Provisions for Sale and Inspection of Fish for Bait or Propagation Purpose; Diseased Fish.

- (1) No person shall transport into the state, introduce, or possess for any purpose that might be reasonably expected to result in liberation into the waters of the state, any aquatic species not native to the state, without having secured a permit from the Commission, except:
 - (a) Fathead or tuffy minnow (*Pimephales promelas*).
 - (b) Variable platy (*Xiphophorus variatus*).
- (2) Restricted non-native aquatic species:
 - (a) The following aquatic species or hybrids thereof may be possessed only under permit from the executive director.
 1. Bighead carp (*Aristichthys nobilis*).
 2. Bony-tongue fishes [family Osteoglossidae, all species except Silver arowana (*Osteoglossum bicirrhosum*)].
 3. Dorados (genus *Salminus*, all species).
 4. Freshwater stingrays (family Potamotrygonidae, all species).
 5. Grass carp (*Ctenopharyngodon idella*); restrictions and requirements described in Rule 68A-23.088, F.A.C.
 6. Nile perches (genus *Lates*, all species).
 7. Silver carp (*Hypophthalmichthys molitrix*).
 8. Snail or black carp (*Mylopharyngodon piceus*).
 9. Tilapias [*Tilapia (Oreochromis) aurea*, *T. (O.) hornorum*, *T. (O.) mossambica* and *Tilapia (O.) nilotica*]. *T. (O.) aurea* may be possessed, cultured, and transported without permit in the following areas: North Central Region, Citrus County only; Northeast, South and Southwest regions.
 10. Walking catfish (*Clarias batrachus*).
 11. Australian red claw crayfish (*Cherax quadricarinatus*; tank culture systems only).

12. Blue catfish (*Ictalurus furcatus*), except north and west of the Suwannee River blue catfish may be possessed without permit.
 13. Red swamp crayfish (*Procambarus clarkii*) and white river crayfish (*Procambarus zonangulus*), except that pond aquaculture is prohibited. Red swamp crayfish and white river crayfish may be possessed west of the Apalachicola River or imported for direct sale to food wholesalers and food retailers for re-sale to consumers without permit.
- (b) Prior to the issuance of such permit, the facilities where the restricted aquatic species are to be kept and waters where their use is intended may be inspected by Commission personnel to assure that adequate safeguards exist to prevent escape or accidental release into the waters of the state. Permits for restricted aquatic species may be issued by the Commission subject to the following:
1. Restricted aquatic species held outdoors may only be held in a water body that has the lowest point of the top edge of its levee, dike, bank, or tank at an elevation of at least one foot above the 100-year flood elevation determined by reference to elevation maps issued by the National Flood Insurance Program, U.S. Department of Housing and Urban Development. Such water body shall have no water discharge or shall be constructed with a fish barrier system designed to prevent escape of adult fish, juvenile fish and fish eggs in the water effluent discharged from the permittee's property. Such water body also shall be inaccessible to the public.
 2. Restricted aquatic species held indoors may only be held in culture systems having no water discharge, having a water discharge through a closed drain system, or other system designed to prevent discharge of water containing adult and juvenile fish and fish eggs from the permittee's property.
- (c) Permits may be granted for research or to commercial import or export facilities or public aquaria involved in educational efforts. Permits shall not be issued for display in private aquaria.
- (d) Any person engaged in aquaculture who possesses a valid certificate of registration from the Department of Agriculture and Consumer Services issued pursuant to Chapter 597, F.S., and who is authorized to possess restricted aquatic species in accordance with such chapter is exempt from the permit requirement in paragraph 68A-23.008(2)(a), F.A.C.
- (3) Prohibited non-native aquatic species:
- (a) No person shall import, sell, possess or transport in state any of the following live aquatic species or hybrids thereof:
 1. African electric catfishes (family Malapteruridae, all species).

2. African tigerfishes (subfamily Hydrocyninae, all species).
 3. Airbreathing catfishes (family Clariidae, all species except *Clarias batrachus*).
 4. Candiru catfishes (family Trichomycteridae, all species).
 5. Freshwater electric eels (family Electrophoridae, all species).
 6. Lampreys (family Petromyzonidae, all species).
 7. Piranhas and pirambebas (subfamily Serrasalminae, all species).
 8. Snakeheads (family Channidae, all species).
 9. Tilapias [(*Tilapia*, *Sarotherodon* and *Oreochromis* genera) all species except *Tilapia (Oreochromis) aurea*, *T. (O.) hornorum*, *T. (O.) mossambica* and *Tilapia (O.) nilotica*].
 10. Trahiras or tigerfishes (family Erythrinidae, all species).
 11. Airsac catfishes (family Heteropneustidae, all species).
 12. Green sunfish (*Lepomis cyanellus*).
 13. Australian crayfish (Genus *Cherax*, except for tank aquaculture of *Cherax quardricarinatus*).
 14. Zebra mussels (*Dreissena polymorpha*).
 15. Mitten crabs (genus *Eriocheir*), or any part thereof.
- (b) Limited exceptions to this subsection may be made by permit for viewing at large public aquaria or for research, provided Commission-approved maximum security requirements are met. Research permits for prohibited aquatic species shall be subject to the following:
1. The research permit shall expire 12 months from the date of issuance.
 2. A detailed research proposal shall accompany the application for the research permit. Such proposal shall state with particularity the research objectives, methodology and study duration, and outline planned safeguards that shall assure proper containment of the species.
 3. A detailed annual report of research findings, which shall include a description of activities undertaken in the permit period, progress toward

research project objectives and proposed activities to be undertaken in the ensuing months, shall be submitted prior to renewal of the research permit. Receipt and approval by the Commission is a condition precedent to renewal of the research permit. This information shall be available for public dissemination.

4. All research on prohibited fishes shall be conducted in indoor facilities in containers or tanks having no water discharge or having a water discharge through a closed drain system that terminates in a dry-bed, wastewater pond.
 5. No research, or viewing at large public aquaria, permits shall be granted for piranhas and pirambecas (subfamily Serrasalminae, all species).
- (4) No person shall allow or permit any freshwater aquatic organism not native to the state to remain in the waters of any propagating pool or pond which is no longer maintained or operated for the production of such non-native species.
 - (5) The presence of any species designated in subsections (2) or (3) in any propagating pool or pond shall constitute possession by the owner or operator of the pool or pond.
 - (6) Hatcheries shall maintain written records such as shipping tickets, invoices, bills of lading, or other records of sales, purchases, or transfers showing numbers of organisms in the shipment, source of supply or disposition of imported freshwater fish. Such records shall be maintained until December 31 of the following year.
 - (7) Any representative of the Commission may inspect all records, ponds, pools, vehicles and other facilities used to produce, grow, store or transport freshwater fish. Inspection may be made of such facilities wherein foreign or non-native species of freshwater fish are propagated for any commercial purpose so as to determine that such species or their eggs are not allowed to escape into the waters of the state or to determine whether freshwater aquatic organisms are infected or diseased. In the event that an epizootic aquatic disease among cultured aquatic organisms presents a threat to public health or to the fish or wildlife resources, freshwater aquatic organisms exposed or exhibiting such disease may be quarantined, confiscated or destroyed as a public nuisance without compensation to anyone having a financial interest in such organisms.

- (8) Any fish or aquatic organism which may be discovered in ponds, pools, vehicles or other facilities and which in the determination of the executive director would be detrimental to freshwater fish if released or placed in the waters of the state, shall be confiscated and destroyed as a public nuisance.

Specific Authority Art. IV, Sec. 9, Fla. Const.

Law Implemented Art. IV, Sec. 9, Fla. Const.

History--New 8-1-79, Amended 6-4-81, 6-21-82, 7-1-84, Formerly 39-23.08, Amended 4-13-88, 7-1-89, 10-30-89, 7-1-92, 7-1-94, 4-12-98, Formerly 39-23.008, Amended 10-10-00, 7-1-01, 7-1-02, 7-1-04.

Section 370.081, Florida Statutes

Illegal importation or possession of nonindigenous marine plants and animals; rules and regulations.

- (1) It is unlawful to import or possess any marine plant or marine animal, not indigenous to the state, which, due to the stimulating effect of the waters of the state on procreation, may endanger or infect the marine resources of the state or pose a human health hazard, except as provided in this section.
- (2) Marine animals not to be imported shall include, but are not limited to, all species of the following:
 - (a) Sea snakes (Family Hydrophiidae), except as provided in subsection (4);
 - (b) Weeverfishes (Family Trachinidae); and
 - (c) Stonefishes (Genus *Synanceja*).
- (3) The Fish and Wildlife Conservation Commission is authorized to adopt, pursuant to chapter 120, rules and regulations to include any additional marine plant or marine animal which may endanger or infect the marine resources of the state or pose a human health hazard.
- (4) A zoological park and aquarium may import sea snakes of the family Hydrophiidae for exhibition purposes only under the following conditions:
 - (a) Only male sea snakes may be possessed.
 - (b) A zoological park and aquarium possessing sea snakes shall not be located in a coastal county and shall have no contiguous connection with any waters of the state.
 - (c) Each zoological park and aquarium possessing sea snakes shall provide quarterly reports to the department regarding the number of each species of sea snakes on the premises and any changes in inventory resulting from death or additions by importation.
 - (d) Sea snakes shall not be released into the waters of the state.
 - (e) Each zoological park and aquarium possessing sea snakes shall post with the commission a \$1 million letter of credit. The letter of credit shall be in favor of the State of Florida, Fish and Wildlife Conservation Commission, for use by the commission to remove any sea snake accidentally or intentionally introduced into waters of the state. The letter of credit shall be written in the form determined by the commission. The letter of credit shall provide that the zoological park and

aquarium is responsible for the sea snakes within that facility and shall be in effect at all times that the zoological park and aquarium possesses sea snakes.

- (f) A zoological park and aquarium shall not barter, sell, or trade sea snakes within this state.
 - (g) A zoological park and aquarium that imports sea snakes may bring the sea snakes into this state only by airplane that may only land at an airport located in a noncoastal county within this state.
 - (h) A zoological park and aquarium possessing sea snakes shall abide by all statutory and regulatory requirements of the Fish and Wildlife Conservation Commission with respect to venomous reptiles.
- (5) It is unlawful to release into the waters of the state any nonindigenous saltwater species whether or not included in subsection (2) or prohibited by rules and regulations adopted pursuant to subsection (3) or authorized by subsection (4).

History.--s. 1, ch. 71-68; s. 1, ch. 77-65; s. 1, ch. 92-60; s. 220, ch. 94-356; s. 11, ch. 98-333; s. 102, ch. 99-245.

CHAPTER 597
AQUACULTURE

- 597.001 Florida Aquaculture Policy Act; short title.
- 597.0015 Definitions.
- 597.002 Legislative declaration of public policy respecting aquaculture.
- 597.0021 Legislative intent.
- 597.003 Powers and duties of Department of Agriculture and Consumer Services.
- 597.004 Aquaculture certificate of registration.
- 597.0041 Prohibited acts; penalties.
- 597.0045 Cultured shellfish theft reward program.
- 597.005 Aquaculture Review Council.
- 597.006 Aquaculture Interagency Coordinating Council.
- 597.010 Shellfish regulation; leases.
- 597.020 Shellfish processors; regulation.

597.001 Florida Aquaculture Policy Act; short title.--This chapter may be cited as the "Florida Aquaculture Policy Act."

History.--s. 1, ch. 84-90; s. 1, ch. 93-152.

597.0015 Definitions.--For purposes of this chapter, the following terms shall have the following meanings:

- (1) "Aquaculture" means the cultivation of aquatic organisms.
- (2) "Aquaculture producers" means those persons engaging in the production of aquaculture products and certified under s. 597.004.
- (3) "Aquaculture products" means aquatic organisms and any product derived from aquatic organisms that are owned and propagated, grown, or produced under controlled conditions. Such products do not include organisms harvested from the wild for depuration, wet storage, or relay for purification.
- (4) "Commissioner" means the Commissioner of Agriculture.
- (5) "Department" means the Department of Agriculture and Consumer Services.

History.--s. 7, ch. 91-187; s. 23, ch. 96-247; s. 10, ch. 99-390.

597.002 Legislative declaration of public policy respecting aquaculture.--The Legislature declares that aquaculture is agriculture and, as such, the Department of Agriculture and Consumer Services shall be the primary agency responsible for regulating aquaculture, any other law to the contrary notwithstanding. The only exceptions are those areas required by federal law, rule, or cooperative agreement to be regulated by another agency. The Legislature declares that, in order to effectively support the growth of aquaculture in this state, there is a need for a state aquaculture plan that will provide for the coordination and prioritization of state aquaculture efforts and the conservation and enhancement of aquatic resources and will provide mechanisms for increasing aquaculture production which may lead to the creation of new industries, job opportunities, income for aquaculturists, and other benefits to the state. The state aquaculture plan shall guide the research and development of the aquaculture industry. Funds designated by the Legislature for aquaculture research and development or for contracting for aquaculture research and development shall be used to address the projects and activities designated in the state aquaculture plan. Any entity receiving legislative funding for aquaculture research and development programs shall report annually to the department all activities related to aquaculture to facilitate coordination and compliance with the state aquaculture plan.

History.--s. 2, ch. 84-90; s. 3, ch. 90-92; s. 8, ch. 91-187; s. 24, ch. 96-247; s. 24, ch. 98-333.

597.0021 Legislative intent.--

- (1) It is the intent of the Legislature to enhance the growth of aquaculture in this state, while protecting Florida's environment.
- (2) It is also the intent of the Legislature to give the department the duty to coordinate and assist the development of aquaculture.
- (3) It is the intent of the Legislature that the Aquaculture Review Council and the Aquaculture Interagency Coordinating Council are established to provide a means of communication between the aquaculture industry and the regulatory agencies.

History.--s. 1, ch. 87-367; s. 4, ch. 90-92; s. 9, ch. 91-187; s. 29, ch. 91-201; ss. 2, 6, ch. 93-152; s. 25, ch. 96-247.

597.003 Powers and duties of Department of Agriculture and Consumer Services.--

- (1) The department is hereby designated as the lead agency in encouraging the development of aquaculture in the state and shall have and exercise the following functions, powers, and duties with regard to aquaculture:
 - (a) Issue or deny aquaculture certificates that identify aquaculture producers and aquaculture products, and collect all related fees.
 - (b) Coordinate the development, annual revision, and implementation of a state aquaculture plan. The plan shall include prioritized recommendations for research

and development as suggested by the Aquaculture Review Council, the Aquaculture Interagency Coordinating Council, and public and private institutional research, extension, and service programs.

- (c) Develop memoranda of agreement, as needed, with the Department of Environmental Protection, the Fish and Wildlife Conservation Commission, the Florida Sea Grant Program, and other groups as provided in the state aquaculture plan.
- (d) Provide staff for the Aquaculture Review Council and the Aquaculture Interagency Coordinating Council.
- (e) Forward the annually revised state aquaculture plan to the commissioner and to the chairs of the House Committee on Agriculture and Consumer Services and the Senate Committee on Agriculture 1 month prior to submission of the department's legislative budget request to the Governor.
- (f) Submit the list of research and development projects proposed to be funded through the department as identified in the state aquaculture plan, along with the department's legislative budget request to the Governor, the President of the Senate, and the Speaker of the House of Representatives. If funded, these projects shall be contracted for by the Division of Aquaculture and shall require public-private partnerships, when appropriate. The contracts shall require a percentage of the profit generated by the project to be deposited into the General Inspection Trust Fund solely for funding aquaculture projects recommended by the Aquaculture Review Council.
- (g) Provide developmental assistance to the various sectors of the aquaculture industry as determined in the state aquaculture plan.
- (h) Assist persons seeking to engage in aquaculture when applying for the necessary permits and serve as ombudsman to resolve complaints or otherwise resolve problems arising between aquaculture producers and regulatory agencies.
- (i) Develop and propose to the Legislature legislation necessary to implement the state aquaculture plan or to otherwise encourage the development of aquaculture in the state.
- (j) Issue or deny any license or permit authorized or delegated to the department by the Legislature or through memorandum of understanding with other state or federal agencies that furthers the intent of the Legislature to place the regulation of aquaculture in the department.
- (k) Make available state lands and the water column for the purpose of producing aquaculture products when the aquaculture activity is compatible with state resource management goals, environmental protection, and proprietary interest

and when such state lands and waters are determined to be suitable for aquaculture development by the Board of Trustees of the Internal Improvement Trust Fund pursuant to s. 253.68; and be responsible for all saltwater aquaculture activities located on sovereignty submerged land or in the water column above such land and adjacent facilities directly related to the aquaculture activity.

1. The department shall act in cooperation with other state and local agencies and programs to identify and designate sovereignty lands and waters that would be suitable for aquaculture development.
2. The department shall identify and evaluate specific tracts of sovereignty submerged lands and water columns in various areas of the state to determine where such lands and waters are suitable for leasing for aquaculture purposes. Nothing in this subparagraph or subparagraph 1. shall preclude the applicant from applying for sites identified by the applicant.
3. The department shall provide assistance in developing technologies applicable to aquaculture activities, evaluate practicable production alternatives, and provide agreements to develop innovative culture practices.
 - (1) Act as a clearinghouse for aquaculture applications, and act as a liaison between the Fish and Wildlife Conservation Commission, the Division of State Lands, the Department of Environmental Protection district offices, other divisions within the Department of Environmental Protection, and the water management districts. The Department of Agriculture and Consumer Services shall be responsible for regulating marine aquaculture producers, except as specifically provided herein.
 - (2) The department may employ such persons as are necessary to perform its duties under this chapter.

History.--s. 3, ch. 84-90; s. 1, ch. 86-111; s. 5, ch. 87-367; s. 2, ch. 88-377; s. 10, ch. 91-187; s. 3, ch. 93-152; s. 467, ch. 94-356; s. 26, ch. 96-247; s. 25, ch. 98-333; s. 225, ch. 99-245; s. 25, ch. 2000-364; s. 38, ch. 2001-63.

597.004 Aquaculture certificate of registration.--

- (1) **CERTIFICATION.**--Any person engaging in aquaculture must be certified by the department. The applicant for a certificate of registration shall submit the following to the department:
 - (a) Applicant's name/title.
 - (b) Company name.
 - (c) Complete mailing address.
 - (d) Legal property description of all aquaculture facilities.

- (e) Actual physical street address for each aquaculture facility.
- (f) Description of production facilities.
- (g) Aquaculture products to be produced.
- (h) Fifty dollar annual registration fee.
- (i) Documentation that the rules adopted herein have been complied with in accordance with paragraph (2)(a).

(2) RULES.--

- (a) The department, in consultation with the Department of Environmental Protection, the water management districts, environmental groups, and representatives from the affected farming groups, shall adopt rules to:
 - 1. Specify the requirement of best-management practices to be implemented by holders of aquaculture certificates of registration.
 - 2. Establish procedures for holders of aquaculture certificates of registration to submit the notice of intent to comply with best-management practices.
 - 3. Establish schedules for implementation of best-management practices, and of interim measures that can be taken prior to adoption of best-management practices. Interim measures may include the continuation of regulatory requirements in effect on June 30, 1998.
 - 4. Establish a system to assure the implementation of best-management practices, including recordkeeping requirements.
- (b) Rules adopted pursuant to this subsection shall become effective pursuant to the applicable provisions of chapter 120, but must be submitted to the President of the Senate and the Speaker of the House of Representatives for review by the Legislature. The rules shall be referred to the appropriate committees of substance and scheduled for review during the first available regular session following adoption. Except as otherwise provided by operation of law, such rules shall remain in effect until rejected or modified by act of the Legislature.
- (c) Notwithstanding any provision of law, the Department of Environmental Protection is not authorized to institute proceedings against any person certified under this section to recover any costs or damages associated with contamination of groundwater or surface water, or the evaluation, assessment, or remediation of contamination of groundwater or surface water, including sampling, analysis, and restoration of potable water supplies, where the contamination of groundwater or surface water is determined to be the result of aquaculture practices, provided the holder of an aquaculture certificate of registration:

1. Provides the department with a notice of intent to implement applicable best-management practices adopted by the department;
 2. Implements applicable best-management practices as soon as practicable according to rules adopted by the department; and
 3. Implements practicable interim measures identified and adopted by the department which can be implemented immediately, or according to rules adopted by the department.
- (d) There is a presumption of compliance with state groundwater and surface water standards if the holder of an aquaculture certificate of registration implements best-management practices that have been verified by the Department of Environmental Protection to be effective at representative sites and complies with the following:
1. Provides the department with a notice of intent to implement applicable best-management practices adopted by the department;
 2. Implements applicable best-management practices as soon as practicable according to rules adopted by the department; and
 3. Implements practicable interim measures identified and adopted by the department which can be implemented immediately, or according to rules adopted by the department.
- (e) This section does not limit federally delegated regulatory authority.
- (f) Any aquatic plant producer permitted by the department pursuant to s. 369.25 shall also be subject to the requirements of this section.
- (g) Any alligator producer with an alligator farming license and permit to establish and operate an alligator farm shall be issued an aquaculture certificate of registration pursuant to this section. This chapter does not supersede the authority under chapter 372 to regulate alligator farms and alligator farmers.
- (3) FEES.--Effective July 1, 1997, all fees collected pursuant to this section shall be deposited into the General Inspection Trust Fund in the Department of Agriculture and Consumer Services.
- (4) IDENTIFICATION OF AQUACULTURE PRODUCTS.--Aquaculture products shall be identified while possessed, processed, transported, or sold as provided in this subsection.
- (a) Aquaculture products shall be identified by an aquaculture certificate of registration number from harvest to point of sale. Any person who possesses aquaculture products must show, by appropriate receipt, bill of sale, bill of lading, or other such manifest where the product originated.

- (b) Marine aquaculture products shall be transported in containers that separate such product from wild stocks, and shall be identified by tags or labels that are securely attached and clearly displayed.
- (c) Each aquaculture registrant who sells food products labeled as "aquaculture or farm raised" must have such products containerized and clearly labeled in accordance with s. 500.11. Label information must include the name, address, and aquaculture certification number. This requirement is designed to segregate the identity of wild and aquaculture products.

(5) SALE OF AQUACULTURE PRODUCTS.--

- (a) Aquaculture products, except shellfish, snook, and any fish of the genus *Micropterus*, and prohibited and restricted freshwater and marine species identified by rules of the Fish and Wildlife Conservation Commission, may be sold by an aquaculture producer certified pursuant to s. 597.004 without restriction so long as product origin can be identified.
- (b) Aquaculture shellfish must be sold and handled in accordance with s. 597.020.

(6) REGISTRATION AND RENEWALS.--

- (a) Each aquaculture producer must apply for an aquaculture certificate of registration with the department and submit the appropriate fee. Upon department approval, the department shall issue the applicant an aquaculture certificate of registration for a period not to exceed 1 year. Beginning July 1, 1997, and each year thereafter, each aquaculture certificate of registration must be renewed with fee, pursuant to this chapter, on July 1.
- (b) The department shall send notices of registration to all aquaculture producers of record requiring them to register for an aquaculture certificate. Renewal notices shall be sent to the registrant 60 days preceding the termination date of the certificate of registration. Prior to the termination date, the registrant must return a completed renewal form with fee, pursuant to this chapter, to the department.
- (c) Any person whose certificate of registration has been revoked or suspended must reapply to the department for certification.

History.--s. 27, ch. 96-247; s. 54, ch. 97-98; s. 26, ch. 98-333; s. 11, ch. 99-390; s. 78, ch. 2000-158; s. 27, ch. 2000-364.

597.0041 Prohibited acts; penalties.--

- (1) It is unlawful for an aquaculture registrant to:
 - (a) Commingle in the same container any shellfish aquaculture product with any wild product;

- (b) Transport by vessel over water both wild and aquaculture products of the same species at the same time; or
 - (c) Violate any provision of this chapter or chapter 500.
- (2) (a) Any person who violates any provision of this chapter or any rule promulgated hereunder is subject to a suspension or revocation of his or her certificate of registration or license under this chapter. The department may, in lieu of, or in addition to the suspension or revocation, impose on the violator an administrative fine in an amount not to exceed \$1,000 per violation per day.
- (b) Except as provided in subsection (4), any person who violates any provision of this chapter, or rule hereunder, commits a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083.
- (3) Any person certified under this chapter who has been convicted of taking aquaculture species raised at a certified facility shall have his or her certificate revoked for 5 years by the Department of Agriculture and Consumer Services pursuant to the provisions and procedures of s. 120.60.
- (4) Any person who violates any provision of s. 597.010 or s. 597.020, or any rule adopted under those sections, commits a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083 for the first offense; and for the second or any subsequent offense within a 12-month period, commits a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083.

History.--s. 28, ch. 96-247; s. 12, ch. 99-390; s. 28, ch. 2000-364; s. 39, ch. 2001-63.

597.0045 Cultured shellfish theft reward program.--There is created a cultured shellfish theft reward program, to be administered by the department, for the purpose of granting rewards to persons who provide information leading to the arrest and conviction of individuals illegally possessing, harvesting, or attempting to harvest cultured shellfish.

- (1) Each person who provides information leading to the arrest and conviction of an individual or individuals for illegally possessing, harvesting, or attempting to harvest cultured shellfish and for whom the respective state attorney notifies the department of such assistance, in writing, shall be eligible for a reward of up to \$2,500; except that law enforcement officers and department personnel, and members of their immediate families, shall not be eligible for rewards under the program. The department shall, by rule, establish a graduated reward payout schedule.
- (2) The General Inspection Trust Fund of the department may be used for the cultured shellfish theft reward program, for deposit of general revenue funds and donations received from interested individuals, and for granting rewards to persons who provide information leading to the arrest and conviction of persons illegally possessing,

harvesting, or attempting to harvest cultured shellfish. The granting of rewards shall be subject to legislative appropriations to fund the program.

- (3) The department may promote the cultured shellfish theft reward program to provide for public recognition of the rewards and to improve compliance with laws prohibiting illegal possession and harvesting of cultured shellfish.

History.--s. 13, ch. 99-390.

597.005 Aquaculture Review Council.--

- (1) **COMPOSITION.**--There is created within the department the Aquaculture Review Council to consist of nine members as follows: the chair of the State Agricultural Advisory Council or designee; the chair of the Aquaculture Interagency Coordinating Council; and seven additional members to be appointed by the commissioner, including an alligator farmer, a food fish farmer, a shellfish farmer, a tropical fish farmer, an aquatic plant farmer, a representative of the commercial fishing industry, and a representative of the aquaculture industry at large. Members shall be appointed for 4-year terms. Each member shall be selected from no fewer than two or more than three nominees submitted by recognized statewide organizations representing each industry segment or the aquaculture industry at large. In the absence of nominees, the commissioner shall appoint persons who otherwise meet the qualifications for appointment to the council. Members shall serve until their successors are duly qualified and appointed. An appointment to fill a vacancy shall be for the unexpired portion of the term.
- (2) **MEETINGS; PROCEDURES; RECORDS.**--
 - (a) The members of the council shall meet at least quarterly; shall elect a chair, a vice chair, a secretary, and an industry representative to the Aquaculture Interagency Coordinating Council; and shall use accepted rules of procedure. The terms of such officers shall be for 1 year.
 - (b) The council shall meet at the call of its chair, at the request of a majority of its membership, at the request of the department, or at such times as may be prescribed by its rules of procedure. However, the council shall hold a joint annual meeting with the Aquaculture Interagency Coordinating Council.
 - (c) A majority of the members of the council constitutes a quorum for all purposes, and an act by a majority of such quorum at any meeting constitutes an official act of the council.
 - (d) The council secretary shall keep a complete record of the proceedings of each meeting, which record shall include the names of the members present and the actions taken. Such records shall be kept on file with the department, and these

records and other documents about matters within the jurisdiction of the council shall be subject to inspection by the members of the council.

- (3) RESPONSIBILITIES.--The primary responsibilities of the Aquaculture Review Council are to:
- (a) Formulate and recommend to the commissioner rules and policies governing the business of aquaculture by studying and evaluating aquacultural issues.
 - (b) Provide aquaculture industry recommendations for research and development to be included in the annual revision of the state aquaculture plan.
 - (c) Submit to the commissioner on an annual basis:
 - 1. A prioritized list of research projects to be included in the department's legislative budget request. Each year, the council shall review the aquaculture legislative budget requests submitted to the department and rank them according to the state aquaculture plan.
 - 2. Recommendations to be forwarded to the Speaker of the House of Representatives and the President of the Senate on legislation needed to help the aquaculture industry.
 - 3. Recommendations on aquaculture projects, activities, research, and regulation and other needs to further the development of the aquaculture industry.
 - (d) On a quarterly basis, review and discuss problems that serve as barriers to the growth and development of aquaculture.
 - (e) Assist the department in carrying out duties identified in s. 597.003 by studying aquaculture issues and making recommendations for regulating and permitting aquaculture and in the development, revision, and implementation of the state aquaculture plan.
 - (f) Provide input to the department to perform studies, identify needs, research issues, write reports, record actions and meetings of the council and, in general, conduct the business of the council.
 - (g) Receive input from state agencies and public and private institutions on aquaculture research, service, development, and regulatory needs.
 - (h) For any problem that cannot be solved through simple cooperation or negotiation, provide an issue analysis to the Aquaculture Interagency Coordinating Council and to the chairs of the legislative appropriations committees. The analysis shall include, but not be limited to, specific facts and industry hardships, regulatory

provisions, questions relative to the issue, and suggestions for solving the problem.

- (i) Provide the Governor, the President of the Senate, the Speaker of the House of Representatives, and the chairs of legislative committees having primary jurisdiction over either the subject of aquaculture or the budget of the Department of Agriculture and Consumer Services, by August 1 of each year, a list of prioritized research needs critical to development of the aquaculture industry.
- (4) EXPENSES; PER DIEM.--Members of the council shall receive expenses and per diem for travel, including attendance at meetings, as allowed state officers and employees pursuant to s. 112.061.

History.--ss. 5, 8, ch. 84-90; s. 7, ch. 87-367; ss. 3, 5, 6, ch. 88-377; s. 5, ch. 90-92; s. 11, ch. 91-187; ss. 4, 6, ch. 93-152; s. 29, ch. 96-247; s. 27, ch. 98-333; s. 29, ch. 2000-364.

597.006 Aquaculture Interagency Coordinating Council.--

- (1) CREATION.--The Legislature finds and declares that there is a need for interagency coordination with regard to aquaculture by the following agencies: the Department of Agriculture and Consumer Services; the Office of Tourism, Trade, and Economic Development; the Department of Community Affairs; the Department of Environmental Protection; the ¹Department of Labor and Employment Security; the Fish and Wildlife Conservation Commission; the statewide consortium of universities under the Florida Institute of Oceanography; Florida Agricultural and Mechanical University; the Institute of Food and Agricultural Sciences at the University of Florida; and the Florida Sea Grant Program. It is therefore the intent of the Legislature to hereby create an Aquaculture Interagency Coordinating Council to act as an advisory body as defined in s. 20.03(9).
- (2) COMPOSITION.--The head of each agency listed in subsection (1) shall designate an aquaculture coordinator to act as the aquaculture contact person regarding the statutory responsibilities of the agency and to serve as a member of the Aquaculture Interagency Coordinating Council, except that the Vice President for Agricultural Affairs of the University of Florida or designee shall represent the Institute of Food and Agricultural Sciences.
- (3) MEETINGS; PROCEDURES; RECORDS.--The coordinating council shall meet at least quarterly.
 - (a) A chair and vice chair shall be elected by the membership and shall serve for 1 year, commencing in September. The chair shall preside at all meetings and shall call a meeting of the coordinating council as often as necessary to transact business. Meetings shall include at least one joint annual meeting with the Aquaculture Review Council. The coordinating council may designate subcommittees from time to time to assist in carrying out its responsibilities.

- (b) A majority of the members shall constitute a quorum, and action by a majority of a quorum shall be official.
 - (c) The department shall have primary responsibility for providing administrative and staff support services for the coordinating council and shall maintain a complete record of the proceedings of each meeting, which record shall include the names of members present and the actions taken. Such records shall be kept on file with the department, and these records and other documents about matters within the jurisdiction of the coordinating council shall be subject to inspection by the members of the coordinating council.
- (4) **PURPOSE AND RESPONSIBILITIES.**--The purpose of the coordinating council is to establish positive interagency cooperation to foster the development of the state's aquaculture industry. In carrying out this purpose, the coordinating council shall:
- (a) Serve as a forum for the discussion and study of governmental regulations relating to aquaculture.
 - (b) Review and discuss aquaculture issues developed by the Aquaculture Review Council.
 - (c) Formulate responses to industry issues, as presented by the Aquaculture Review Council, which include solutions and policy alternatives to facilitate aquaculture development.
 - (d) Review the recommendations for short-term research projects submitted to the commissioner by the Aquaculture Review Council. The coordinating council shall forward any pertinent comments to the commissioner.
 - (e) Review the results of the aquaculture research projects funded by the department.
 - (f) Establish and maintain effective and cooperative linkages between member agencies, the Aquaculture Review Council, and public and private institutional research, extension, and service programs, so that recommendations for improvement are responsive to the needs of aquaculture.
 - (g) Prepare an annual report to be submitted by December 1 of each year to the Governor, the President of the Senate, the Speaker of the House of Representatives, the chairs of the legislative appropriations and agriculture committees, and the heads of each agency represented on the coordinating council. This report shall describe all actions and include all recommendations of the coordinating council, as well as the responsive actions taken by the agencies. This report shall provide a list of all aquaculture activities undertaken by member agencies. The list shall include the needs each activity is designed to address, the results, the funds expended on each activity, and the source of those funds.

- (h) Develop guidelines for use by member agencies when reporting any aquaculture activities.

History.--ss. 6, 8, ch. 84-90; ss. 4, 5, 6, ch. 88-377; s. 6, ch. 90-92; s. 12, ch. 91-187; ss. 5, 6, ch. 93-152; s. 468, ch. 94-356; s. 226, ch. 99-245; s. 30, ch. 2000-364.

¹**Note.**--Section 69, ch. 2002-194, repealed s. 20.171, which created the Department of Labor and Employment Security.

597.010 Shellfish regulation; leases.--

- (1) **LEASE, APPLICATION FORM.**--When any qualified person desires to lease a part of the bottom, water column, or bed of any of the water of this state for the purpose of growing oysters or clams, as provided for in this section, he or she shall present to the department a written application pursuant to s. 253.69.
- (2) **LANDS TO BE LEASED.**--The lands leased shall be as compact as possible, taking into consideration the shape of the body of water and the condition of the bottom as to hardness, or soft mud or sand, or other conditions that would render the bottoms desirable or undesirable for the purpose of oyster or clam cultivation.
- (3) **SURVEYS, PLATS, AND MAPS OF REEFS.**--The department shall accept, adopt, and use official reports, surveys, and maps of oyster, clam, or other shellfish grounds made under the direction of any authority of the United States as prima facie evidence of the natural oyster and clam reefs and beds, for the purpose and intent of this chapter. The department may also make surveys of any natural oyster or clam reefs or beds when it deems such surveys necessary and where such surveys are made pursuant to an application for a lease, the cost thereof may be charged to the applicant as a part of the cost of his or her application.
- (4) **EXECUTION OF LEASES; LESSEE TO STAKE OFF BOUNDARIES; PENALTY FOR FAILURE TO COMPLY WITH REGULATIONS.**--When a survey of the lands to be leased has been completed pursuant to s. 253.69 and filed with the department, and the cost thereof paid by the applicant, the department may execute in duplicate a lease of the water bottoms to the applicant. One duplicate, with a plat or map of the water bottoms so leased, shall be delivered to the applicant, and the other, with a plat or map of the bottom so leased, shall be retained by the department and registered in a lease book which shall be kept exclusively for that purpose by the department; thereafter the lessees shall enjoy the exclusive use of the lands and all oysters and clams, shell, and cultch grown or placed thereon shall be the exclusive property of such lessee as long as he or she shall comply with the provisions of this chapter and chapter 253. The department shall require the lessee to stake off and mark the water bottoms leased, by such ranges, monuments, stakes, buoys, etc., so placed and made as not to interfere with the navigation, as it may deem necessary to locate the same to the end that the location and limits of the lands embraced in such lease be easily and accurately found and fixed, and such lessee shall keep the same in good condition during the open and closed oyster or clam season. All

leases shall be marked according to the standards set forth in s. 253.72. The department may stipulate in each individual lease contract the types, shape, depth, size, and height of marker or corner posts. Failure on the part of the lessee to comply with the orders of the department to this effect within the time fixed by it, and to keep the markers, etc., in good condition during the open and closed oyster or clam season, shall subject such lessee to a fine not exceeding \$100 for each and every such offense.

(5) LEASES IN PERPETUITY; RENT.--

(a) All leases issued previously under the provisions of s. 370.16 shall be enforced under the authority of this chapter, notwithstanding any other law to the contrary, and shall continue in perpetuity under such restrictions as stated in the lease agreement. The annual rental fee charged for all leases shall consist of the minimum rate of \$15 per acre, or any fraction of an acre, per year and shall be adjusted on January 1, 1995, and every 5 years thereafter, based on the 5-year average change in the Consumer Price Index. Rent shall be paid in advance of January 1 of each year or in the case of a new lease at the time of signing, regardless of who holds the lease.

(b) All fees collected under this subsection and subsection (6) shall be deposited in the General Inspection Trust Fund and shall be used for shellfish aquaculture activities.

(6) FORFEITURE FOR NONPAYMENT.--All leases shall stipulate that failure to timely pay the rent on or before January 1 of each year shall cause the department, at its discretion, to terminate and cancel the lease after the department has given the lessee 30 days' written notice of the nonpayment. If after receiving the notice the lessee chooses to keep the lease, the lessee shall pay the rental fee plus a \$50 late fee within the 30-day period. After the 30-day notice has expired, the department may take possession of the lease and all improvements, assets, clams, and oysters thereon.

(7) SURCHARGE FOR IMPROVEMENT OR REHABILITATION.--A surcharge of \$10 per acre, or any fraction of an acre, per annum shall be levied upon each lease, other than a perpetual lease granted pursuant to chapter 370 prior to 1985, and deposited into the General Inspection Trust Fund. The purpose of the surcharge is to provide a mechanism to have financial resources immediately available for improvement of lease areas and for cleanup and rehabilitation of abandoned or vacated lease sites. The department is authorized to adopt rules necessary to carry out the provisions of this subsection.

(a) Moneys in the fund that are not needed currently for cleanup and rehabilitation of abandoned or vacated lease sites shall be deposited with the Chief Financial Officer to the credit of the fund and may be invested in such manner as is provided for by statute. Interest received on such investment shall be credited to the fund.

(b) Funds within the General Inspection Trust Fund from receipts from the surcharge established in this section shall be disbursed for the following purposes and no others:

1. Administrative expenses, personnel expenses, and equipment costs of the department related to the improvement of lease areas, the cleanup and rehabilitation of abandoned or vacated aquaculture lease sites, and the enforcement of provisions of this section.
2. All costs involved in the improvement of lease areas and the cleanup and rehabilitation of abandoned or vacated lease sites.
3. All costs and damages which are the proximate results of lease abandonment or vacation.

4. Reward payments made pursuant to s. 597.0045.

The department shall recover to the use of the fund from the person or persons abandoning or vacating the lease, jointly and severally, all sums owed or expended from the fund.

(8) CULTIVATION REQUIREMENTS.--

- (a) Effective cultivation shall consist of the growing of the oysters or clams in a density suitable for commercial harvesting over the amount of bottom prescribed by law. This commercial density shall be accomplished by the planting of seed oysters, shell, and cultch of various descriptions. The department may stipulate in each individual lease contract the types, shape, depth, size, and height of cultch materials on lease bottoms according to the individual shape, depth, location, and type of bottom of the proposed lease. Each lessee leasing lands under the provisions of this section or s. 253.71 shall begin, within 1 year after the date of such lease, bona fide cultivation of the same, and shall, by the end of the second year after the commencement of such lease, have placed under cultivation at least one-half of the leased area and shall each year thereafter place in cultivation at least one-fourth of the leased area until the whole, suitable for bedding of oysters or clams, shall have been put in cultivation. The cultivation requirements for perpetuity leases granted pursuant to chapter 370 prior to 1985 under previously existing law shall comply with the conditions stated in the lease agreement, and the lessee or grantee is authorized to plant the leased or granted submerged land in both oysters and clams.
- (b) These stipulations apply to all leases granted after the effective date of this section. All leases existing prior to the effective date of this section will operate under the law that was in effect when the leases were granted.

- (c) When evidence is gathered by the department and such evidence conclusively shows a lack of effective cultivation, the department may revoke leases and return the bottoms in question to the public domain.
 - (d) The department has the authority to adopt rules pertaining to the water column over shellfish leases. All cultch materials in place 6 months after the formal adoption and publication of rules establishing standards for cultch materials on shellfish leases that do not comply with such rules may be declared a nuisance by the department. The department has the authority to direct the lessee to remove such cultch in violation of this section. The department may cancel a lease upon the refusal by the lessee violating such rules to remove unlawful cultch materials, and all improvements, cultch, marketable oysters, and shell shall become the property of the state. The department has the authority to retain, dispose of, or remove such materials in the best interest of the state.
- (9) LEASES TRANSFERABLE, ETC.--The leases in chapters 253 and 370 shall be inheritable and transferable, in whole or in part, and shall also be subject to mortgage, pledge, or hypothecation and shall be subject to seizure and sale for debts as any other property, rights, and credits in this state, and this provision shall also apply to all buildings, betterments, and improvements thereon. Leases granted under this section cannot be transferred, by sale or barter, in whole or in part, without the written, express approval of the department, and such a transferee shall pay a \$50 transfer fee before department approval may be given. Leases inherited or transferred will be valid only upon receipt of the transfer fee and approval by the department. The department shall keep proper indexes so that all original leases and all subsequent changes and transfers can be easily and accurately ascertained.
- (10) CANCELLATION OF LEASES TO NATURAL REEFS OR BEDS.--Any person, within 6 months after the execution of any lease, may file a petition with the department for the purpose of determining whether a natural oyster or clam reef or bed having an area of not less than 100 square yards existed within the leased area on the date of the lease, with sufficient natural or maternal oysters or clams thereon (not including coon oysters) to have constituted a stratum sufficient to have been resorted to by the public generally for the purpose of gathering the same to sell for a livelihood. The petition shall be in writing addressed to the department, verified under oath, stating the location and approximate area of the natural reef or bed and the claim or interest of the petitioner therein and requesting the cancellation of the lease to the natural reef or bed. A petition may not be considered unless it is accompanied by a deposit of \$500 to defray the expense of the department's investigation of the matter. Upon receipt of such petition, the department shall cause an investigation to be made into the truth of the allegations of the petition, and, if found untrue, the \$500 deposit shall be retained by the department to defray the expense of the investigation, but should the allegations of the petition be found true and the leased premises to contain a natural oyster or clam reef or bed, as described in this subsection, the \$500 deposit shall be returned to the petitioner and the costs and expenses of the investigation taxed against the lessee and the lease canceled to the extent

of the natural reef or bed and the same shall be marked with buoys and stakes and notices placed thereon showing the same to be a public reef or bed, the cost of the markers and notices to be taxed against the lessee.

(11) WHEN NATURAL REEFS OR BEDS MAY BE INCLUDED IN LEASE.--

- (a) When an application for a submerged land lease for cultivating shellfish is filed, and when a resource survey of such lands identifies natural oyster or clam reefs or beds, the department shall determine if such reefs and beds are to be included in the leased area. The department, if it deems it to be in the best interest of the state, may include such natural reefs or beds in a lease. In those cases where a natural area is included in a lease, the department shall fix a reasonable value on the same, to be paid by the applicant for lease of such submerged land. No natural reefs shall be included in any shellfish or aquaculture lease granted in Franklin County.
- (b) The department shall determine and settle all disputes as to boundaries between lessees. The department shall, in all cases, determine whether a particular submerged land area contains a natural reef or bed or whether it is suitable for raising oysters or clams.

(12) FRANKLIN COUNTY LEASES.--On and after the effective date of this section, the only leases available in Franklin County shall be those issued pursuant to ss. 253.67-253.75; chapter 370 leases shall no longer be available. The department shall require in the lease agreement such restrictions as it deems necessary to protect the environment, the existing leaseholders, and public fishery.

(13) TRESPASS ON LEASED BEDS; PROTECTION OF LEASE AREAS.--

- (a) Any person who willfully takes oysters, shells, cultch, or clams bedded or planted by a licensee under this chapter, or grantee under the provisions of heretofore existing laws, or riparian owner who may have heretofore planted the same on his or her riparian bottoms, or any oysters or clams deposited by anyone making up a cargo for market, or who willfully carries or attempts to carry away the same without permission of the owner thereof, or who willfully or knowingly removes, breaks off, destroys, or otherwise injures or alters any stakes, bounds, monuments, buoys, notices, or other designations of any natural oyster or clam reefs or beds or private bedding or propagating grounds, or who willfully injures, destroys, or removes any other protection around any oyster or clam reefs or beds, or who willfully moves any bedding ground stakes, buoys, marks, or designations placed by the department, commits a violation of this section.
- (b) Harvesting shellfish is prohibited within a distance of 25 feet outside lawfully marked lease boundaries or within setback and access corridors within specifically designated high-density aquaculture lease areas and aquaculture use zones.

(14) SHELLFISH DEVELOPMENT.--

- (a) The department shall improve, enlarge, and protect the natural oyster and clam reefs and beds of this state to the extent it may deem advisable and the means at its disposal will permit.
- (b) The Fish and Wildlife Conservation Commission shall, to the same extent, assist in protecting shellfish aquaculture products produced on leased or granted reefs and beds.
- (c) The department, in cooperation with the commission, shall provide the Legislature with recommendations as needed for the development and the proper protection of the rights of the state and private holders therein with respect to the oyster and clam business.

(15) SPECIAL ACTIVITY LICENSES.--The department is authorized to issue special activity licenses, in accordance with s. 597.020, to permit the harvest or cultivation of oysters, clams, mussels, and crabs.

(16) STAKING OFF WATER BOTTOMS OR BEDDING OYSTERS WITHOUT OBTAINING LEASE.--Any person staking off the water bottoms of this state, or bedding oysters on the bottoms of the waters of this state, without previously leasing same as required by law commits a violation of this section, and shall acquire no rights by reason of such staking off. This provision does not apply to grants heretofore made under the provisions of any heretofore existing laws or to artificial beds made heretofore by a riparian owner or his or her grantees on the owner's riparian bottoms.

(17) SHELLFISH HARVESTING SEASONS; SPECIAL PROVISIONS RELATING TO APALACHICOLA BAY.--

- (a) The Fish and Wildlife Conservation Commission shall by rule set the noncultured shellfish harvesting seasons in Apalachicola Bay.
- (b) If the commission changes the harvesting seasons by rule as set forth in this subsection, for 3 years after the new rule takes effect, the commission, in cooperation with the department, shall monitor the impacts of the new harvesting schedule on the bay and on local shellfish harvesters to determine whether the new harvesting schedule should be discontinued, retained, or modified. In monitoring the new schedule and in preparing its report, the following information shall be considered:
 - 1. Whether the bay benefits ecologically from the new harvesting schedule.
 - 2. Whether the new harvesting schedule enhances the enforcement of shellfish harvesting laws in the bay.

3. Whether the new harvesting schedule enhances natural shellfish production, oyster relay and planting programs, and shell planting programs in the bay.
 4. Whether the new harvesting schedule has more than a short-term adverse economic impact, if any, on local shellfish harvesters.
- (18) REMOVING OYSTERS, CLAMS, OR MUSSELS FROM NATURAL REEFS; LICENSES, ETC.; PENALTY.--
- (a) It is unlawful to use a dredge or any means or implement other than hand tongs in removing oysters from the natural or artificial state reefs or beds. This restriction shall apply to all areas of Apalachicola Bay for all shellfish harvesting, excluding private grounds leased or granted by the state prior to July 1, 1989, if the lease or grant specifically authorizes the use of implements other than hand tongs for harvesting. Except in Apalachicola Bay, upon the payment of \$25 annually, for each vessel or boat using a dredge or machinery in the gathering of clams or mussels, a special activity license may be issued by the Fish and Wildlife Conservation Commission pursuant to subsection (15) or s. 370.06 for such use to such person.
 - (b) Approval by the department to harvest shellfish by dredge or other mechanical means from privately held shellfish leases or grants in Apalachicola Bay shall include, but not be limited to, the following conditions:
 1. The use of any mechanical harvesting device other than ordinary hand tongs for taking shellfish for any purpose from public shellfish beds in Apalachicola Bay shall be unlawful.
 2. The possession of any mechanical harvesting device on the waters of Apalachicola Bay from 5 p.m. until sunrise shall be unlawful.
 3. Leaseholders or grantees shall notify the department no less than 48 hours prior to each day's use of a dredge or scrape in order for the department to notify the Fish and Wildlife Conservation Commission that a mechanical harvesting device will be deployed.
 4. Only two dredges or scrapes per lease or grant may be possessed or operated at any time.
 5. Each vessel used for the transport or deployment of a dredge or scrape shall prominently display the lease or grant number or numbers, in numerals which are at least 12 inches high and 6 inches wide, in such a manner that the lease or grant number or numbers are readily identifiable from both the air and the water.

Any violation of this paragraph or of any other statutes, rules, or conditions referenced in the lease agreement shall be considered a violation of the license and shall result in revocation of the lease or a denial of use or future use of a mechanical harvesting device.

- (c) Oysters may be harvested from natural or public or private leased or granted grounds by common hand tongs or by hand, by scuba diving, free diving, leaning from vessels, or wading. In Apalachicola Bay, this provision shall apply to all shellfish.

(19) FISHING FOR RELAYING OR TRANSPLANTING PURPOSES.--

- (a) The department shall designate areas for the taking of oysters and clams to be planted on leases, grants, and public areas. Oysters, clams, and mussels may be taken for relaying or transplanting at any time during the year so long as, in the opinion of the department, the public health will not be endangered. The amount of oysters, clams, and mussels to be obtained for relaying or transplanting, the area relayed or transplanted to, and relaying or transplanting time periods shall be established in each case by the department.
- (b) Application for a special activity license issued pursuant to subsection (15) for obtaining oysters, clams, or mussels for relaying from closed public shellfish harvesting areas to open areas or certified controlled purification plants or for transplanting sublegal-sized oysters, clams, or mussels must be made to the department. In return, the department may assign an area and a period of time for the oysters, clams, or mussels to be relayed or transplanted to be taken. All relaying and transplanting operations shall take place under the direction of the department.
- (c) Relayed oysters, clams, or mussels shall not be subsequently harvested for any reason without written permission or public notice from the department.

(20) OYSTER AND CLAM REHABILITATION.--The board of county commissioners of the several counties may appropriate and expend such sums as it may deem proper for the purpose of planting or transplanting oysters, clams, oyster shell, clam shell, or cultch or to perform such other acts for the enhancement of the oyster and clam industries of the state, out of any sum in the county treasury not otherwise appropriated.

(21) DREDGING OF DEAD SHELLS PROHIBITED.--The dredging of dead shell deposits is prohibited in the state.

(22) COOPERATION WITH UNITED STATES FISH AND WILDLIFE SERVICE.--The department shall cooperate with the United States Fish and Wildlife Service, under existing federal laws, rules, and regulations, and is authorized to accept donations, grants, and matching funds from the Federal Government in order to carry out its oyster resource

and development responsibilities. The department is further authorized to accept any and all donations including funds, oysters, or oyster shells.

(23) OYSTER AND CLAM SHELLS PROPERTY OF DEPARTMENT.--

- (a) Except for oysters used directly in the half-shell trade, 50 percent of all shells from oysters and clams shucked commercially in the state shall be and remain the property of the department when such shells are needed and required for rehabilitation projects and planting operations, in cooperation with the Fish and Wildlife Conservation Commission, when sufficient resources and facilities exist for handling and planting such shell, and when the collection and handling of such shell is practicable and useful, except that bona fide holders of leases and grants may retain 75 percent of such shell as they produce for aquacultural purposes. Storage, transportation, and planting of shells so retained by lessees and grantees shall be carried out under the conditions of the lease agreement or with the written approval of the department and shall be subject to such reasonable time limits as the department may fix. In the event of an accumulation of an excess of shells, the department is authorized to sell shells only to private growers for use in oyster or clam cultivation on bona fide leases and grants. No profit shall accrue to the department in these transactions, and shells are to be sold for the estimated moneys spent by the department to gather and stockpile the shells. Planting of shells obtained from the department by purchase shall be subject to the conditions set forth in the lease agreement or in the written approval as issued by the department. Any shells not claimed and used by private oyster cultivators 10 years after shells are gathered and stockpiled may be sold at auction to the highest bidder for any private use.
- (b) Whenever the department determines that it is unfeasible to collect oyster or clam shells, the shells become the property of the producer.
- (c) Whenever oyster or clam shells are owned by the department and it is not useful or feasible to use them in the rehabilitation projects, and when no leaseholder has exercised his or her option to acquire them, the department may sell such shells for the highest price obtainable. The shells thus sold may be used in any manner and for any purpose at the discretion of the purchaser.
- (d) Moneys derived from the sale of shell shall be deposited in the General Inspection Trust Fund for shellfish programs.
- (e) The department may publish notice, in a newspaper serving the county, of its intention to collect the oyster and clam shells and shall notify, by certified mail, each shucking establishment from which shells are to be collected. The notice shall contain the period of time the department intends to collect the shells in that county and the collection purpose.

- (24) OYSTER CULTURE.--The department, in cooperation with the Fish and Wildlife Conservation Commission and the Department of Environmental Protection, shall protect all clam beds, oyster beds, shellfish grounds, and oyster reefs from damage or destruction resulting from improper cultivation, propagation, planting, or harvesting and control the pollution of the waters over or surrounding beds, grounds, or reefs, and to this end the Department of Health is authorized and directed to lend its cooperation to the department, to make available its laboratory testing facilities and apparatus.
- (25) REQUIREMENTS FOR OYSTER OR CLAM VESSELS.--
- (a) All vessels used for the harvesting, gathering, or transporting of oysters or clams for commercial purposes shall be constructed and maintained to prevent contamination or deterioration of shellfish. To this end, all such vessels shall be provided with false bottoms and bulkheads fore and aft to prevent onboard shellfish from coming in contact with any bilge water. No dogs or other animals shall be allowed at any time on vessels used to harvest or transport shellfish. A violation of any provision of this subsection shall result in at least the revocation of the violator's license.
- (b) For the purpose of this subsection, "harvesting, gathering, or transporting of oysters or clams for commercial purposes" means to harvest, gather, or transport oysters or clams with the intent to sell and shall apply to a quantity of two or more bags of oysters per vessel or more than one 5-gallon bucket of unshucked hard clams per person or more than two 5-gallon buckets of unshucked hard clams per vessel.

History.--s. 31, ch. 2000-364; s. 741, ch. 2003-261.

597.020 Shellfish processors; regulation.--

- (1) The department is authorized to adopt by rule regulations, specifications, and codes relating to sanitary practices for catching, cultivating, handling, processing, packaging, preserving, canning, smoking, and storing of oysters, clams, mussels, scallops, and crabs. The department is also authorized to license shellfish processors who handle oysters, clams, mussels, scallops, and crabs when such activities relate to quality control, sanitary, and public health practices pursuant to this section and chapter 500. The department is also authorized to license or certify, for a fee determined by rule, facilities used for processing oysters, clams, mussels, scallops, and crabs, to levy an administrative fine of up to \$1,000 per violation per day or to suspend or revoke such licenses or certificates upon satisfactory evidence of any violation of rules adopted pursuant to this section, and to seize and destroy any adulterated or misbranded shellfish products as defined by rule.
- (2) A shellfish processing plant certification license is required to operate any facility in which oysters, clams, mussels, scallops, or crabs are processed, including but not limited to: an oyster, clam, mussel, or scallop cannery; a shell stock dealership; an oyster, clam, mussel, or scallop shucking plant; an oyster, clam, mussel, or scallop repacking plant; an

oyster, clam, mussel, or scallop controlled purification plant; or a crab or soft-shell crab processing or shedding plant.

- (3) The department may suspend or revoke any shellfish processing plant certification license upon satisfactory evidence that the licensee has violated any regulation, specification, or code adopted under this section and may seize and destroy any shellfish product which is defined by rule to be an adulterated or misbranded shellfish product.
- (4) Any license or certification authorized and issued under this chapter shall automatically expire on June 30 of each year.

History.--s. 1, ch. 65-110; ss. 25, 35, ch. 69-106; s. 6, ch. 83-134; s. 2, ch. 84-121; ss. 4, 5, ch. 86-219; ss. 5, 19, ch. 86-240; s. 218, ch. 94-356; s. 13, ch. 96-247; s. 44, ch. 99-245; s. 32, ch. 2000-364; s. 42, ch. 2002-295.

Note.--Former s. 370.071.

CHAPTER 791
SALE OF FIREWORKS

- 791.001 Application and enforcement.
- 791.01 Definitions.
- 791.012 Minimum fireworks safety standards.
- 791.013 Testing and approval of sparklers; penalties.
- 791.015 Registration of manufacturers, distributors, wholesalers, and retailers of sparklers.
- 791.02 Sale of fireworks regulated; rules and regulations.
- 791.03 Bond of licensees.
- 791.04 Sale at wholesale, etc., exempted.
- 791.05 Seizure of illegal fireworks.
- 791.055 Restrictions upon storage of sparklers.
- 791.06 Penalties.
- 791.07 Agricultural and fish hatchery use.

791.001 Application and enforcement.--This chapter shall be applied uniformly throughout the state. Enforcement of this chapter shall remain with local law enforcement departments and officials charged with the enforcement of the laws of the state.

History.--s. 6, ch. 87-118.

791.01 Definitions.--As used in this chapter, the term:

- (1) "Distributor" means any person engaged in the business of selling sparklers to a wholesaler.
- (2) "Division" means the Division of the State Fire Marshal of the Department of Financial Services.
- (3) "Explosive compound" means any chemical compound, mixture, or device the primary or common purpose of which is to function by the substantially instantaneous release of gas and heat.
- (4) (a) "Fireworks" means and includes any combustible or explosive composition or substance or combination of substances or, except as hereinafter provided, any article prepared for the purpose of producing a visible or audible effect by

combustion, explosion, deflagration, or detonation. The term includes blank cartridges and toy cannons in which explosives are used, the type of balloons which require fire underneath to propel them, firecrackers, torpedoes, skyrockets, roman candles, dago bombs, and any fireworks containing any explosives or flammable compound or any tablets or other device containing any explosive substance.

- (b) "Fireworks" does not include sparklers approved by the division pursuant to s. 791.013; toy pistols, toy canes, toy guns, or other devices in which paper caps containing twenty-five hundredths grains or less of explosive compound are used, providing they are so constructed that the hand cannot come in contact with the cap when in place for the explosion; and toy pistol paper caps which contain less than twenty hundredths grains of explosive mixture, the sale and use of which shall be permitted at all times.
- (c) "Fireworks" also does not include the following novelties and trick noisemakers:
1. A snake or glow worm, which is a pressed pellet of not more than 10 grams of pyrotechnic composition that produces a large, snakelike ash which expands in length as the pellet burns and that does not contain mercuric thiocyanate.
 2. A smoke device, which is a tube or sphere containing not more than 10 grams of pyrotechnic composition that, upon burning, produces white or colored smoke as the primary effect.
 3. A trick noisemaker, which is a device that produces a small report intended to surprise the user and which includes:
 - a. A party popper, which is a small plastic or paper device containing not more than 16 milligrams of explosive composition that is friction sensitive, which is ignited by pulling a string protruding from the device, and which expels a paper streamer and produces a small report.
 - b. A booby trap, which is a small tube with a string protruding from both ends containing not more than 16 milligrams of explosive compound, which is ignited by pulling the ends of the string, and which produces a small report.
 - c. A snapper, which is a small, paper-wrapped device containing not more than four milligrams of explosive composition coated on small bits of sand, and which, when dropped, explodes, producing a small report. A snapper may not contain more than 250 milligrams of total sand and explosive composition.

- d. A trick match, which is a kitchen or book match which is coated with not more than 16 milligrams of explosive or pyrotechnic composition and which, upon ignition, produces a small report or shower of sparks.
- e. A cigarette load, which is a small wooden peg that has been coated with not more than 16 milligrams of explosive composition and which produces, upon ignition of a cigarette containing one of the pegs, a small report.
- f. An auto burglar alarm, which is a tube which contains not more than 10 grams of pyrotechnic composition that produces a loud whistle or smoke when ignited and which is ignited by use of a squib. A small quantity of explosive, not exceeding 50 milligrams, may also be used to produce a small report.

The sale and use of items listed in this paragraph are permitted at all times.

- (5) "Manufacturer" means any person engaged in the manufacture or construction of sparklers in this state.
- (6) "Retailer" means any person who, at a fixed place of business, is engaged in selling sparklers to consumers at retail.
- (7) "Seasonal retailer" means any person engaged in the business of selling sparklers at retail in this state from June 20 through July 5 and from December 10 through January 2 of each year.
- (8) "Sparkler" means a device which emits showers of sparks upon burning, does not contain any explosive compounds, does not detonate or explode, is hand held or ground based, cannot propel itself through the air, and contains not more than 100 grams of the chemical compound which produces sparks upon burning. Any sparkler that is not approved by the division is classified as fireworks.
- (9) "Wholesaler" means any person engaged in the business of selling sparklers to a retailer.

History.--s. 1, ch. 20445, 1941; s. 1, ch. 57-338; s. 1, ch. 84-201; s. 1, ch. 87-118; s. 36, ch. 89-233; s. 1906, ch. 2003-261.

791.012 Minimum fireworks safety standards.--The outdoor display of fireworks in this state shall be governed by the National Fire Protection Association (NFPA) 1123, Code for Fireworks Display, 1995 Edition, approved by the American National Standards Institute. Any state, county, or municipal law, rule, or ordinance may provide for more stringent regulations for the outdoor display of fireworks, but in no event may any such law, rule, or ordinance provide for less stringent regulations for the outdoor display of fireworks. The division shall promulgate

rules to carry out the provisions of this section. The Code for Fireworks Display shall not govern the display of any fireworks on private, residential property and shall not govern the display of those items included under s. 791.01(4)(b) and (c) and authorized for sale thereunder.

History.--s. 1, ch. 96-285.

791.013 Testing and approval of sparklers; penalties.--

- (1) A person who wishes to sell sparklers must submit samples of his or her product to the division for testing to determine whether it is a sparkler as defined in s. 791.01. Such samples must be received by the division by September 1 to be considered for approval the following year. On February 1 of each year the division shall approve those products which it has tested and found to meet the requirements for sparklers. All approved sparkler products are legal for sale until January 31 of the following year. The list of approved sparkler products shall be published in the Florida Administrative Weekly and shall prominently state the dates between which the products may be sold. The division shall make copies of this list available to the public. A product must be tested and approved for sale in accordance with the rules adopted to implement this section. Beginning February 1, 1988, only those products approved by the division may be sold in the state. The State Fire Marshal shall adopt rules describing the testing, approval, and listing procedures.
- (2) Any person who alters an approved sparkler product, so that it is no longer a sparkler as defined in s. 791.01, and subsequently sells the product as if it were approved is guilty of a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083. Any person who fraudulently represents a device as approved for sale as a sparkler product when it is not so approved is guilty of a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083.
- (3) For purposes of the testing requirement by this section, the division shall perform such tests as are necessary to determine compliance with the performance standards in the definition of sparklers, pursuant to s. 791.01. The State Fire Marshal shall adopt, by rule, procedures for testing products to determine compliance with this chapter. The division shall dispose of any samples which remain after testing.

History.--s. 2, ch. 87-118; s. 21, ch. 93-276; s. 1222, ch. 97-102.

791.015 Registration of manufacturers, distributors, wholesalers, and retailers of sparklers.--

- (1) **REGISTRATION REQUIREMENTS.**--Any manufacturer, distributor, wholesaler, retailer, or seasonal retailer of sparklers who wishes to do business in this state or to otherwise sell, ship, or assign for sale its products in this state must register annually with the division on forms prescribed by the division. Any retailer who sells sparklers at more than one retail location may submit one registration form for all such locations but must

provide the address of each location with the registration form; however, any retailer may submit multiple registration forms.

- (2) **REGISTRATION FORM.**--The registration form filed with the division must be notarized and must include the following information: business name; address; telephone number; officers, if the business is a corporation; and an individual designated as a contact person.
- (3) **FEES.**--
 - (a) Each manufacturer, distributor, or wholesaler must pay an annual registration fee to be set by the division not to exceed \$1,000. Each seasonal retailer must pay an annual registration fee to be set by the division not to exceed \$200. Each retailer shall pay an annual registration fee to be set by the division not to exceed \$15 for each retail location registered. Each certificateholder wishing to have a duplicate certificate issued for one which is lost or to reflect a change of address shall request such duplicate in writing and shall pay a fee of \$5.
 - (b) Revenue from registration fee payments shall be deposited in the Insurance Regulatory Trust Fund for the purposes of implementing the registration and testing provisions of this chapter.
- (4) **RULES.**--The State Fire Marshal may adopt rules prescribing registration forms required by this section.

History.--s. 3, ch. 87-118; s. 37, ch. 89-233; s. 21, ch. 2000-370; s. 1907, ch. 2003-261.

791.02 Sale of fireworks regulated; rules and regulations.--

- (1) Except as hereinafter provided it is unlawful for any person, firm, copartnership, or corporation to offer for sale, expose for sale, sell at retail, or use or explode any fireworks; provided that the board of county commissioners shall have power to adopt reasonable rules and regulations for the granting of permits for supervised public display of fireworks by fair associations, amusement parks, and other organizations or groups of individuals when such public display is to take place outside of any municipality; provided, further, that the governing body of any municipality shall have power to adopt reasonable rules and regulations for the granting of permits for supervised public display of fireworks within the boundaries of any municipality. Every such display shall be handled by a competent operator to be approved by the chiefs of the police and fire departments of the municipality in which the display is to be held, and shall be of such a character, and so located, discharged, or fired as in the opinion of the chief of the fire department, after proper inspection, shall not be hazardous to property or endanger any person. Application for permits shall be made in writing at least 15 days in advance of the date of the display. After such privilege shall have been granted, sales, possession, use, and distribution of fireworks for such display shall be lawful for that purpose only. No permit granted hereunder shall be transferable.

- (2) A sparkler or other product authorized for sale under this chapter may not be sold by a retailer or seasonal retailer unless the product was obtained from a manufacturer, distributor, or wholesaler registered with the division pursuant to s. 791.015. Each retailer and seasonal retailer shall keep, at every location where sparklers are sold, a copy of an invoice or other evidence of purchase from the manufacturer, distributor, or wholesaler, which states the registration certificate number for the particular manufacturer, distributor, or wholesaler and the specific items covered by the invoice. Each seasonal retailer shall, in addition, exhibit a copy of his or her registration certificate at each seasonal retail location.

History.--s. 2, ch. 20445, 1941; s. 1, ch. 61-312; s. 4, ch. 87-118; s. 1223, ch. 97-102.

791.03 Bond of licensees.--The board of county commissioners shall require a bond deemed adequate by the board of county commissioners from the licensee in a sum not less than \$500 conditioned for the payment of all damages which may be caused either to a person or to property by reason of the licensee's display, and arising from any acts of the licensee, his or her agents, employees or subcontractors.

History.--s. 3, ch. 20445, 1941; s. 1, ch. 61-312; s. 1224, ch. 97-102.

791.04 Sale at wholesale, etc., exempted.--Nothing in this chapter shall be construed to prohibit any manufacturer, distributor, or wholesaler who has registered with the division pursuant to s. 791.015 to sell at wholesale such fireworks as are not herein prohibited; to prohibit the sale of any kind of fireworks at wholesale between manufacturers, distributors, and wholesalers who have registered with the division pursuant to s. 791.015; to prohibit the sale of any kind of fireworks provided the same are to be shipped directly out of state by such manufacturer, distributor, or wholesaler; to prohibit the sale of fireworks to be used by a person holding a permit from any board of county commissioners at the display covered by such permit; or to prohibit the use of fireworks by railroads or other transportation agencies for signal purposes or illumination or when used in quarrying or for blasting or other industrial use, or the sale or use of blank cartridges for a show or theater, or for signal or ceremonial purposes in athletics or sports, or for use by military organizations, or organizations composed of the Armed Forces of the United States; provided, nothing in this chapter shall be construed as barring the operations of manufacturers, duly licensed, from manufacturing, experimenting, exploding, and storing such fireworks in their compounds or proving grounds.

History.--s. 4, ch. 20445, 1941; s. 1, ch. 61-312; s. 5, ch. 87-118.

791.05 Seizure of illegal fireworks.--Each sheriff, or his or her appointee, or any other police officer, shall seize, take, remove or cause to be removed at the expense of the owner, all stocks of fireworks or combustibles offered or exposed for sale, stored, or held in violation of this chapter.

History.--s. 5, ch. 20445, 1941; s. 1225, ch. 97-102.

791.055 Restrictions upon storage of sparklers.--

- (1) Sparklers shall not be stored or kept for sale in any store:
 - (a) In which paints, oils, or varnishes are manufactured or kept for use or sale unless the paints, oils, or varnishes are in unbroken containers.
 - (b) In which resin, turpentine, gasoline, or flammable substances or substances which may generate vapors are used, stored, or offered for sale unless the resin, turpentine, gasoline, or substances are in unbroken containers.
 - (c) In which there is not at least one approved chemical fire extinguisher ready, available, and equipped for use in extinguishing fires.
- (2) When sparklers are in storage to be offered for sale at retail, a sign shall be conspicuously displayed over the entrance to the room in which the sparklers are stored, which sign reads: "CAUTION SPARKLERS-NO SMOKING." No person shall be in such room while in possession of a lighted cigar, cigarette, or pipe.

History.--s. 2, ch. 84-201.

791.06 Penalties.--Any firm, copartnership, or corporation violating the provisions of this chapter shall be guilty of a misdemeanor of the first degree, punishable as provided in s. 775.083 or, in the case of individuals, the members of a partnership and the responsible officers and agents of an association or corporation, punishable as provided in s. 775.082 or s. 775.083.

History.--s. 6, ch. 20445, 1941; s. 756, ch. 71-136.

791.07 Agricultural and fish hatchery use.--Nothing in this chapter shall prohibit the importation, purchase, sale, or use of fireworks used or to be used solely and exclusively in frightening birds from agricultural works and fish hatcheries; and such use shall be governed entirely by the rules prescribed by the Department of Agriculture and Consumer Services.

History.--s. 1, ch. 29780, 1955; s. 1, ch. 57-336; ss. 14, 35, ch. 69-106; s. 1, ch. 82-109.

SELECTED CITATIONS OF CODE OF FEDERAL REGULATIONS

Code of Federal Regulations, Title 40, Chapter 1, Part 122.24

Section 122.24 Concentrated aquatic animal production facilities (applicable to State NPDES programs, see Section 123.25)

- (a) *Permit requirement.* Concentrated aquatic animal production facilities, as defined in this section, are point sources subject to the NPDES permit program.
- (b) *Definition.* *Concentrated aquatic animal production facility* means a hatchery, fish farm, or other facility which meets the criteria in appendix C of this part, or which the Director designates under paragraph (c) of this section.
- (c) *Case-by-case designation of concentrated aquatic animal production facilities.*
 - (1) The Director may designate any warm or cold water aquatic animal production facility as a concentrated aquatic animal production facility upon determining that it is a significant contributor of pollution to waters of the United States. In making this designation the Director shall consider the following factors:
 - (i) The location and quality of the receiving waters of the United States;
 - (ii) The holding, feeding, and production capacities of the facility;
 - (iii) The quantity and nature of the pollutants reaching waters of the United States; and
 - (iv) Other relevant factors.
 - (2) A permit application shall not be required from a concentrated aquatic animal production facility designated under this paragraph until the Director has conducted on-site inspection of the facility and has determined that the facility should and could be regulated under the permit program.

[48 FR 14153, Apr. 1, 1983, as amended at 65 FR 30907, May 15, 2000]

Section 122.25 Aquaculture projects (applicable to State NPDES programs, see Section 123.25)

- (a) *Permit requirement.* Discharges into aquaculture projects, as defined in this section, are subject to the NPDES permit program through section 318 of CWA, and in accordance with 40 CFR part 125, subpart B.

- b) *Definitions.* (1) *Aquaculture project* means a defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals.
- (2) *Designated project area* means the portions of the waters of the United States within which the permittee or permit applicant plans to confine the cultivated species, using a method or plan or operation (including, but not limited to, physical confinement) which, on the basis of reliable scientific evidence, is expected to ensure that specific individual organisms comprising an aquaculture crop will enjoy increased growth attributable to the discharge of pollutants, and be harvested within a defined geographic area.

Appendix C to Part 122 -- Criteria for Determining a Concentrated Aquatic Animal Production Facility (Section 122.24)

A hatchery, fish farm, or other facility is a concentrated aquatic animal production facility for purposes of §122.24 if it contains, grows, or holds aquatic animals in either of the following categories:

- (a) Cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year but does not include:
 - (1) Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and
 - (2) Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.
- (b) Warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:
 - (1) Closed ponds which discharge only during periods of excess runoff; or
 - (2) Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

"Cold water aquatic animals" include, but are not limited to, the *Salmonidae* family of fish; e.g., trout and salmon.

"Warm water aquatic animals" include, but are not limited to, the *Ameiuride*, *Centrarchidae* and *Cyprinidae* families of fish; e.g., respectively, catfish, sunfish and minnows.