

CHARLES H. BRONSON  
Commissioner of Agriculture

Florida Department of  
Agriculture and Consumer  
Services  
<http://web.doacs.state.fl.us>

# Florida Aquaculture

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Florida Volunteer Foundation  
1-800-FL-HELP-1 (1-800-354-3571)  
<http://www.flahurricanefund.org/>

## Highlights:

- Frances claims 200 million farm-raised clams on the Atlantic Coast.
- East Coast clam hatcheries down but not out.
- Heavy rains across Florida hamper cleanup and recovery.

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Division of Aquaculture

## Hurricane Frances Smashes Indian River Clam Farmers

Clam farmers along the Indian River suffered devastating damage by Hurricane Frances. Early reports from farmers indicate substantial loss of infrastructure that supports hard clam production and marketing including docks, boats, clam

seed hatcheries and raceways, processing plants, and associated buildings. Long time hard clam hatcheries that provide seed to Florida and out-of-state farmers through the Atlantic Coast region were severely damaged by high winds, tidal surge, and rain. It is estimated that 80 clam farmers along Florida's East Coast lost 200 million planted clams. About 1,285 acres of

sovereign submerged lands were adversely affected by the storm.



Planted clams were killed or scattered by pounding waves that scoured the river bottom and heavy rain that reduced salinities in the Indian River lagoon.

Damage to clam hatcheries, lost roofs, and power outages stopped algae production and stressed clam seed. It is estimated that clam seed will not be available for two to three months.

Heavy rainfall across the state, 11 inches reported in Lakeland and 10 to 12 inches in Cedar Key, flooded fish production ponds and lowered estuarine salinities. Stress to fish and clams may result in chronic mortality that will become evident over the next few weeks.

Coastal clam producers will be particularly hard hit in some areas when storm waters drain from coastal marshes and rivers and lower salinities. Phytoplankton speciation and abundance will be changed, or reduced, by the freshwater input which may yield poor quality food sources for hard clams seeking to recover from what will be weeks of physiological stress.

## Hurricane Frances Slows Recovery by Charley Damaged Farms

Heavy rains from Frances have slowed and frustrated farmers cleaning up after Hurricane Charley. Upland farms that lost buildings with production systems or the roofs on those buildings were beginning to rebuild following de-



lays to regaining electric power and finishing up insurance damage assessments. Clam farmers in the Port Charlotte and Pine Island Sound have been untangling balled up clam bags and looking forward to



rising salinities as Gulf and estuarine waters remixed. Frances' rains will slow these efforts for several more weeks as record floods in the Peace and Caloosahatchee Rivers empty into Charlotte Harbor and San Carlos Bay, respectively.

## Emergency Contact Information

### Florida Emergency Information Line

1-800-342-  
3557

#### Internet

<http://www.myflorida.com>.

#### Telephone Numbers

Agency for Workforce Innovation (unemployment claims) - 800-204-2418

American Red Cross - 800-435-7669

Construction Industry Licensing Board - 850-487-1395

DACS, Division of Consumer Services (to report price gouging and fraud) – 800-435-7352

Department of Financial Services (insurance complaints and assistance) - 800-22-STORM (800-227-8676)

Elder Services Hotline - 800-963-5337

Federal Emergency Management Agency (FEMA) – 800-621-3362

Florida Emergency Information Hotline - 800-342-3557

Florida Power and Light - 800-468-8243

Salvation Army (donation hotline) - 800-996-2769

USDA – Farm Service

Agency (Noninsured crop disaster assistance and agricultural emergency loan)

Alachua, Bradford Counties- 352-376-7414

Calhoun, Franklin, Gulf, Liberty Counties - 850-674-8388

Charlotte, Lee Counties - 239-997-7331

Columbia, Union Counties- 386-752-8447

Duval, Baker, Nassau Counties- 904-266-0088

Escambia County- 850-587-5345

Gadsden County- 850-627-6365

Gilchrist, Dixie Counties - 352-463-2358

Hamilton County - 386-792-1308

Hardee, DeSoto, Manatee, Sarasota Counties - 863-773-4764

Hendry, Collier, Glades Counties- 863-983-7250

Highlands County- 863-385-7853

Hillsborough, Pinellas Counties - 813-752-1474

Holmes County - 850-547-2850

Jackson County - 850-526-2610

Jefferson, Leon, Wakulla Counties - 850-997-2072

Lafayette, Taylor Counties - 386-294-1851

Lake, Orange Counties- 352-742-7005

Levy County- 352-486-2125  
Madison County- 904-973-2205

Marion County - 352-732-7534

Miami-Dade, Monroe Counties - 305-242-1197

Okaloosa County - 850-682-2416

Okeechobee County - 863-763-3345

Osceola, Brevard Counties - 407-847-4201

Palm Beach, Broward Counties - 561-283-2285

Pasco, Hernando Counties - 352-588-5211

Polk County - 863-533-2051

Putnam, Clay, Flagler, St. Johns Counties - 386-328-5051

Santa Rosa County - 850-623-2441

St. Lucie, Indian River, Martin Counties - 772-461-4546

Sumter, Citrus Counties - 352-793-2651

Suwannee County - 386-362-2681

State Office (Gainesville) - 352-379-4500

Volusia, Seminole Counties- 386-734-2535

Walton County - 850-892-3712 ext. 2

Washington, Bay Counties - 850-638-1982

Volunteer Florida Foundation (to donate money or volunteer) - 800-354-3571

### Restricted Species Authorization—What does it mean?

The Division of Aquaculture regulates commercial aquaculturists through the Aquaculture Certification and the Best Management Practices programs. The Aquaculture Certification Program promotes the growth of aquaculture by implementing the Aquaculture Best Management Practices (BMPs) by which aquaculturists can

design and operate their facility without degrading water quality or the environment. Florida law requires that all aquaculture producers be certified and comply with the BMPs.

The BMPs allow the farmer the flexibility to custom design their facility so that it meets their specific needs. However, there is one area

of the BMPs where the farmer must follow specific criteria pertaining to the containment, culture and sale of non-native and restricted non-native species.

On-farm authority for the non-native aquatic species regulation was transferred from the Florida Fish and Wildlife Conservation

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Commission (FWC) to the Division of Aquaculture. The Division's BMPs enforce requirements similar to FWC's rules (Chapter 68A-23.008, Florida Administrative Code) that concern possession, culture and containment of prohibited and restricted non-native species.

In brief, all holding, transport and culture systems of non-native species must be designed, operated and maintained to prevent escape into Florida waters. Restricted non-native species can only be cultured in tanks or ponds with the lowest point of the tank or berm at least one foot above the 100-year flood elevation as determined by the Federal Emergency Management Agency (FEMA). Additionally, all holding, transport and culture systems utilized in restricted species culture must be designed to prevent the escape of adult, juvenile, fry and eggs. The Department will issue a Restricted Species Authorization to certified aquaculture facilities which meet these containment criteria. The certified producer can only sell, transport, or convey live restricted animals to someone having a Restricted Species Authorization. The certified producer must maintain and make available to the Department for inspection, the records of all live sales. Restricted species, on ice (as dead animals),

can be sold to the general public, without the record-keeping requirement. The culture facility must also be secure from theft of restricted species.

Presently, there are only a

few restricted non-native species being utilized in the aquaculture industry. Tilapia, grass carp and red-claw crawfish are examples. Of the tilapia, there are four species and many hybrids commonly cultured in Florida. *Oreochromis aurea* (blue tilapia), *Oreochromis nilotica* (Nile tilapia), *Oreochromis mossambica* (Mossambique tilapia), *Oreochromis hornorum* and the hybrids of these species are all considered restricted throughout Florida. An exception is that *Oreochromis aurea* (blue tilapia) is not restricted in FWC's North Central Region (Citrus and Hernando Counties only), Northeast Region (all counties, except Duval and Nassau), South Region and Southwest Region.

Producers must remember that live restricted tilapia species cannot be sold to the general public, in spite of the demand of certain

ethnic markets to purchase live swimming fish.

*Ctenopharyngodon idella* (grass carp) are primarily utilized as aquatic weed control. The grass carp can only be sold as a sterile, triploid fish to people that possess FWC authorization or certified aquaculturists with written authorization to possess a restricted species. Certified aquaculturists wishing to culture grass carp for sale must utilize specialized equipment to certify each fish has three sets of chromosomes (a triploid). The FWC will also make periodic inspections of facilities culturing grass carp.

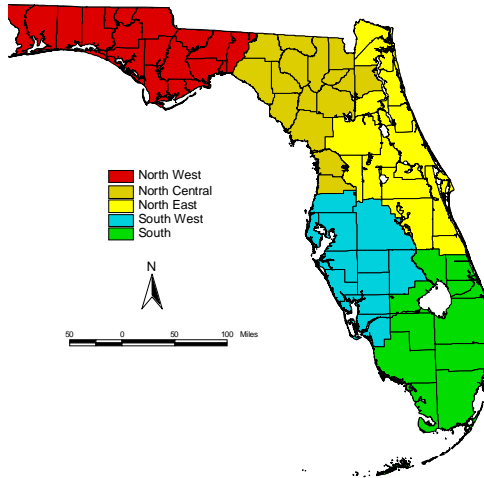
Certified aquaculture producers may culture *Cherax quadricarinatus*, in tanks only, with specific requirements to prevent their escape. All other members of the Australian red-claw crayfish belonging to the genus *Cherax* are prohibited in Florida.

Occasionally, the Division will receive an inquiry regarding the culture of "Georgia giant bream". This fish is a hybrid whose parentage includes a prohibited fish: the *Lepomis cyanellus* (green sunfish). It is for this reason that this hybrid is prohibited.

Culture of restricted species for personal consumption, or as a hobby, will not be authorized through the Division of Aquaculture.

For more information, contact Neil Aymond in Tallahassee at 850-488-4033 or Mike Miltner and Wesrick Stephens in Bartow at 863-519-8459.

FISH AND WILDLIFE COMMISSION'S REGIONAL DISTRICTS



Live restricted species can only be sold to individuals possessing written authorization to process a restricted species. Sales records must be made available for inspection by the Division of Aquaculture.

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We're on the Web!  
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Special Note: Several of the weather and water quality monitoring stations operated by the Division near aquaculture lease areas are not functioning because of hurricane damage or disrupted telecommunications.



Frances blankets Florida with heavy rains.

The Division of Aquaculture's responsibilities include certifying commercial aquaculturists through an annual registration, implementing on-farm Aquaculture Best Management Practices to meet the State of Florida's environmental goals, managing 1.4 million acres of coastal waters for the harvest or culture of wholesome shellfish, implementing the National Shellfish Sanitation Program through inspection of shellfish processing plants and product, and managing submerged sovereign land leases for aquacultural purposes.



Additional information about Florida aquaculture or Division programs can be obtained from the following offices.

<b>Apalachicola Shellfish Center:</b>	<b>850-653-8317</b>
<b>Bartow Field Office:</b>	<b>863-519-8459</b>
<b>Cedar Key Field Lab:</b>	<b>352-543-5181</b>
<b>Murdock Field Lab:</b>	<b>941-255-7405</b>
<b>Palm Bay Field Lab:</b>	<b>321-984-4890</b>
<b>Panama City Field Lab:</b>	<b>850-236-2200</b>
<b>Tallahassee Office:</b>	<b>850-488-4033</b> or <b>488-5471</b>

*Benefiting Commercial Aquaculture,  
Conserving Natural Resources*

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