

Florida Aquaculture

Watching for La Niña: Winter weather prediction

By Deborah Hanley, PhD, Meteorologist, Division of Forestry

La Niña conditions are present across the tropical Pacific. According to the National Climate Prediction Center, sea surface temperature (SST) anomalies have become increasingly negative in the central equatorial Pacific. Nearly all of the dynamical and statistical models predict a weak-to-moderate La Niña persisting through early 2008. Recent equatorial Pacific SST trends and model forecasts indicate La Niña conditions will likely strengthen during the next several months.

Current Conditions: The past 12 months have been exceptionally dry resulting in very low ground water levels in most of the state. Lake Okeechobee reached a record low level during the spring months and remains over 5 feet below its historical average. Water restrictions are still in effect for

parts of South Florida due to the extremely low lake levels. Wildfire activity was much higher than experienced over the past several years. Severe drought conditions still persist over parts of the Florida Panhandle and southwest Florida. Low aquifer and river levels are likely to continue with the outlook for drier than normal conditions through the winter and spring months. Shorter term drought indices show wet conditions along the east coast due to plentiful tropical moisture over the past several weeks. A return to dry conditions will rapidly return this area to a drought condition this winter.

Fall-Winter Outlook: With an active hurricane season still anticipated, there is a good chance that the area will see one or more widespread rain events from a tropical system.

Tropical storms and even hurricanes are a vital component of the late summer and fall climate in the Southeast, which would otherwise be quite dry without their contribution. Although tropical storm season ends November 30th, significant storms have impacted the state in late October and November in past years (e.g. Hurricane Opal 1995).

La Niña conditions usually bring a warmer and drier cool season (October through March) to Florida. With the arrival of La Niña, there is a good chance that drought conditions, currently ranging from exceptional across much of Alabama and Georgia to moderate in South Florida, will continue and possibly worsen throughout the winter and into next spring. *Continued on page 3*

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Aquaculture Coordination grant builds interagency appreciation

An interagency grant between the Florida Department of Environmental Protection, Coastal Management Program, and the Division was recently completed to improve coordination and cooperation between state agencies that manage marine resources.

Some of the activities and results included: 11 statewide agency aquaculture Best Man-

agement Practice outreach workshops focused on Aquatic Preserves and National Estuarine Research Reserves, four aquaculture industry workshops to report the agency workshop results and solicit farmer perspectives regarding working in Aquatic Preserves, and the distribution of a technical bulletin that described the value and importance of the

Aquatic Preserves to marine aquaculturists and how they might interact with Preserve staff.

Marine resource managers commented that:

- Commercial shellfish aquaculture "adds value" to the Aquatic Preserves economically and socially
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Mark your calendar and plan to attend **Aquaculture America '08** that will be held February 9-12, 2008 at Disney World's Coronado Springs Resort in Orlando. **Marine Ornamentals '08: Collection, Culture, and Conservation** will be held concurrently. An early registration discount ends on December 10th. Go on-line to <https://www.was.org> for information and registration.

World Wildlife Fund initiates Mollusc Aquaculture Dialogues

Since the early 1990s, the World Wildlife Fund (WWF) has spearheaded the creation of certification programs for forestry (Forestry Stewardship Council), fisheries (Marine Stewardship Council), agriculture (Protected Harvest), and climate (Climate Savers Program). All of the programs:

- Are built on a consensus about the key environmental impacts
- Identify and support the adoption or adaptation of better management practices that significantly reduce or eliminate those impacts
- Determine globally acceptable performance levels
- Contribute to global shifts in performance within an industry

A similar approach is being used for the Aquaculture Dialogues which began in 1999. WWF collaborates with producers, buyers, nonprofit organizations and other stakeholders to develop credible,

voluntary standards geared toward minimizing or eliminating the main environmental and social impacts caused by aquaculture.

WWF's approach to developing standards for molluscs is different than the approach used for other aquaculture species. Rather than conducting dialogue meetings on a global scale, WWF convenes regional dialogues. This strategy addresses the fact that there are significant differences between the way in which various types of molluscs are produced in various regions of the world. As a result, the environmental and social impacts are different. The strategy also recognizes that most mollusc aquaculture is done on a smaller scale than that used for other types of fish farming.

The initial focus will be on North America and one additional region, before expanding into two more regions. WWF

expects that standards will be developed by the end of 2008 for clams, oysters, scallops, mussels, and abalone. One to two additional years will be needed to vet, field test, and finalize the standards.

WWF and the Pacific Shellfish Growers Association hosted a mollusc dialogue during September and the next dialogue is scheduled for Monday, February 11th, during the Aquaculture America '08 Conference that will be held at Disney World's Coronado Resort in Orlando.

Contact Leslie Sturmer, UF-Shellfish Extension Program, at 352-543-5057 or Inst@ufl.edu for information to participate.

For more information about the mollusc dialogues, visit <http://www.worldwildlife.org/ci/dialogues/mollusc.cfm> or contact Aquaculture Program Officer Colin Brannen at colin.brannen@wwfus.org or 202-778-9534.

Alligator egg collection numbers down by Allen Register, Alligator Egg Collection Coordinator

The public land, alligator egg collection was not as successful this year as it was last year as far as total number of eggs were concerned. The farmers took a big hit in some areas that are traditionally good. For example, in 2006 Lake Okeechobee yielded almost 19,000 eggs, but during 2007, with the water level at an

all time low, no eggs were collected. Another area that took a big hit was Fellsmere which normally yields 5,000 to 6,000 eggs. Less than 400 were collected in 2007.

On the bright side, nine new areas were added to the public collection, with Newnans Lake producing 911 eggs. Lake Iamonia and Lake Micco-

sukee produced large numbers as well.

It was a disappointing year with 26,588 eggs collected compared to over 45,000 eggs in 2006. However, Florida alligator farmers are very excited about the future and the potential for collecting in the new areas.

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through a commercial enterprise of importance to area residents that has few environmental effects.

- There are common interests between Aquatic Preserve managers and commercial aquaculturists in that 1) maintaining or improving water quality is very important to the success of both interests, and 2) there are potentially damaging effects by recreational users (e.g., water quality, seagrass damage, lost fishing gear) to the Preserves and growing shellfish.
- They would include commercial aquaculture in current management plan revisions and consult with the Division of Aquaculture in that regard.
- They were interested in creating

working relationships with farmers to gain the benefit of farmer observations of conditions, changes, or activities on the Aquatic Preserves that they have neither the manpower nor money to patrol on a daily basis.

- They would welcome participation by the Division and shellfish farming community during presentations to land planning agencies that support land planning decision making to preserve or improve surface water management or treatment to protect coastal water quality.

Issues identified by the Aquatic Preserve managers included:

- Shellfish farming equipment (bags and predator deterrent netting) had been found outside the aquaculture lease areas. They wished to know who to contact to clean up the lost materials.

- Aquaculture lease markers were not being maintained and wanted to know that if an Aquaculture Use Zone was abandoned could those lease markers be removed.

- Farmers utilize genetically compatible broodstock to produce clam seed.

They also requested aquaculture lease location maps and acreage totals (North Indian River, Charlotte Harbor/Pine Island Sound, and Florida Keys National Marine Sanctuary).

The grant final report is available on-line at <http://www.FloridaAquaculture.com> with embedded links to the *Aquaculture and Aquatic Preserves Technical Bulletin*.

Florida seafood consumer survey available

Understanding the profile of seafood consumers is a key factor in product development and marketing. In May, the Florida Department of Agriculture and Consumer Services' Marketing Division contracted with TelOpinion Research to conduct a survey of Florida consumers to determine their seafood consumption preferences. Four hundred telephone interviews were conducted throughout the state. The following are some of the highlights of the results.

Although chicken was the most frequently consumed protein source, 52% of the respondents indicated they ate seafood one to two times per week. Another 12% said they ate it three or more times per week. Over one-third chose seafood when eating

out at a restaurant at least 25% to 50% of the time.

The primary factors determining their seafood purchases were quality and health benefits. When asked if labeling influenced their purchase decisions, it was a toss up with 45% saying yes and 48% saying no. Over half said they noticed the origin of the seafood 25% or more of the time. Fifty-four percent indicated they purchased Florida seafood 25% or more of the time. Consumers prefer knowing that the product comes from Florida over the local harvest area. Over half of the purchases were made at a supermarket. Thirty percent were made at small seafood markets.

Minimal preparation time and simplicity also seemed to be a common theme among those that indicated they ate seafood at home. Over half said they only spent 15-30 minutes to prepare a seafood meal at home. The top cooking methods, in order of preference, included baked (24%), fried (21%), broiled (19%) or grilled (13%).

The top seafood species that had been consumed in the past six months by participants were shrimp (43%), salmon (12%), tilapia (8%), grouper (6%) and clams (5%). About half said they do like to try different types of seafood.

To receive a copy of the "Florida Seafood Survey," contact Phyllis McCranie via email at mccranp@doacs.state.fl.us or call 850-488-0163.

FFA officers tour Florida aquaculture

The annual Florida Future Farmers of America State Officers' visit to the Department was held during the week of October 2nd. They go to each division and learn about the division's responsibilities as well as the extent of the department's duties.

The officers spent a day with the Division of Aquaculture touring shellfish processing plants, the Division's Apalachicola Lab and going out into Apalachicola Bay and trying their hand at water sampling. Division staff explained the importance of inspection at the processing plants for sanitat-



tion standards, provided direct interaction with the Division's lab personnel to connect the importance of the lab with the field operations. Staff also explained the requirements of continuous shellfish harvest area monitoring to ensure the safest quality

product is available to the public.

After the individual officers pulled their water samples they were treated to watching oystermen tong oysters, cull them and then sample the famous Apala-

chicola oyster right out of the bay.

This year's officers are: Hilary Webb, State FFA President, Charlotte High School; Amy Johnson, Area 1 State Vice-President, Marianna High School; Jeffery Williams, Area 2 State Vice-President, Bell High School, Gilchrist County; Shannon Craig, Area 3, State Vice-President, New Smyrna Beach High School; Jeanette Hicks, Area 4, State Vice-President, Lake Wales High School; Erika Barth, Area 5, State Vice-President, Sickles High School, Hillsborough County; Kara Cozine, Area 6, State Vice-President, Ft. Pierce Westwood High School; and, Jamie Fussell, State FFA Secretary, Desoto County High School.

The officers serve for one year before continuing on with their education and careers.

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If below normal rainfall occurs during the cool season, moisture recharge of groundwater, soils, ponds and reservoirs will be limited. Southeastern states depend on water recharge during the cool season. Water conservation and storage in smaller ponds and canals is recommended over the next several months in anticipation of below normal rainfall during the winter and spring. In addition the risk of increased wildfires should be expected during the winter and spring wildfire season in Florida.

The Southeast Climate Consortium has estimated the impacts on climate based on past La Niña events. For central Florida, the probability of normal or above rainfall for January 2008 is only 8%. The chance of moderately dry (rainfall amounts from just below normal to half of normal) is 20%, and for very dry conditions 72% (less than half of normal rainfall). For the Panhandle of Florida, the probability of normal or above rainfall in January 2008 is 20%, for moderately dry 50%, and for very dry 30%.

Although rainfall levels across parts of the state have been near normal over the

past month and there is still a good chance of more tropical moisture being received before the end of the hurricane season, water levels will quickly recede once the dry conditions return. Water should be conserved now in anticipation of dry conditions this winter. La Niña events tend to bring warmer temperatures to the state which will help prevent damaging freeze and frost conditions to crops and other agricultural interests.

For more information, visit the Division of Forestry's weather website: http://www.fl-dof.com/fire_weather/tropical.html.

**Charles H. Bronson
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**Benefiting commercial aquaculture,
Conserving natural resources**

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The Division of Aquaculture's responsibilities include certifying all legitimate 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 periodic 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.

Apalachicola Shellfish Center:	850-653-8317
Bartow Field Office:	863-519-8459
Cedar Key Field Lab:	352-543-5181
Palm Bay Field Lab:	321-984-4890
Punta Gorda Field Lab:	941-833-2552
Panama City Field Lab:	850-236-2200
Tallahassee Office:	850-488-4033 or 488-5471

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