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 drought in 2000, managers reduced floating plants to their lowest levels in public water bodies (1,500 acres) since records have been kept (a high of 125,000 acres was recorded in the early 1960s).

Department contractors appeared to turn the corner in floating plant management toward the end of 2003. Since most lake and river water levels have been at full capacity and above for more than a year, seedling germination should decline in 2004. Likewise, floating plants flushed into lakes and rivers from adjacent marshes should decline as waters are returning within their banks. While there is little room to improve upon the 98% maintenance level reported in 2003, the goal for 2004 is to reduce the overall acres of floating plants in public waters. About 40% of that acreage was reported in just two public waters in 2003; Rodman Reservoir and Lake Okeechobee.

Control of Hydrilla

Florida's hydrilla control program focuses on containing or eradicating pioneer colonies, before they become large-scale maintenance projects, and reducing established populations to sustain the various uses of Florida's public waters. Hydrilla infested as many as 280 public lakes and rivers. That number was reduced to 186 in 2003; 3/4 of which covered 10 acres or less. Most of the hydrilla control budget is spent on 20-25 waters; however these are some of the largest and most important water bodies in the state.

A problem occurring with the control of hydrilla in some lakes is due to its tolerance to fluridone. Fluridone is the main herbicide used to treat hydrilla. With tolerant hydrilla now dominating most large central Florida lakes, the standing crop is reduced by a high dose of fluridone, but the concentration cannot be maintained at the 16-21ppb dose now needed to kill sprouting tubers. Funds are insufficient, the prolonged high dose may impact native plants, and summer rains can flush expensive treatments from the flow through lakes. Low application rates of endothall have a synergistic effect on hydrilla with fluridone residues of 5ppb and above and will be applied as follow-up spot treatments in high use areas as part of the 2004 control campaign.

Control of Tussocks, Grasses, and Others

Inventories in 2003 found 17,703 acres of other invasive plants present in 87% of Florida's public waters. With the exception of about 11,000 acres of torpedograss in Lake Okeechobee, most populations are small and commingled with native plants making their detection and control difficult. Alternating periods of severe drought and flooding created floating vegetation and organic sediment islands, or tussocks, in many lakes. More than 4,500 acres of tussocks were identified at the end of 2003. About half are drifting freely with many of these blocking access and navigation or jamming against bridges and clogging flood control structures. Those with the potential for damaging public structures



are the highest management priorities for 2004.

Florida plant managers have the tools and infrastructure to control aquatic plants, and floating tussocks as well as the motivation to continually improve upon their craft. Consequently, Florida's aquatic plant management program has long served as a model for other states and countries interested in building comprehensive invasive species control programs.
 By Jeff Schardt
 Edited Daniel Willis

Exotic Snail Discovered in Central Florida Lake

On Tuesday, June 29th, Dana Denson from FDEP and Gloria Eby from the Seminole County Stormwater Division visited Lake Brantley in Longwood with the intent of collecting aquatic plants. When they arrived, they were surprised to find thousands of very large snails in the lake. They later identified them as the channeled apple snail (*Pomacea canaliculata*). This is not a native snail, but one that originated in South America. It has been introduced into many areas around the world, where it has become a very serious agricultural pest (mainly of rice and taro) and threatens



applesnail.net © Shreequair

many natural lakes and wetlands due to modification of habitat and competition with native species.

As reported in a 2001 LAKEWATCH article by Gary Warren of the Florida Fish and Wildlife Conservation Commission, the channeled apple snail is marketed as the golden apple snail in pet and aquarium shops. This exotic snail has become particularly prolific in south Florida canals and in lakes and ponds in the Tallahassee area. The proliferation of these species in the wild has caused concern among biologists who speculate that the larger non-native species may displace the native Florida apple snails from their habitats, disrupting the natural function of aquatic ecosystems.

Why are these snails a threat to native systems? They eat virtually all species of aquatic plants including native and non-native macrophytes. Channeled apple snails reproduce often during warm months with numerous small pink egg clusters. There are few predators in Florida for this exotic snail and the channeled apple snail is much larger than the native apple snail.

What can be done to help control and prevent the spread of these snails? Do not release aquaria kept animals into natural water bodies. Do not transfer channeled apple snails to other water bodies. Lakeshore residents can remove egg clusters and adult snails from their lakes by hand since these snails are harmless to humans.

If you need additional information on this invasive snail, contact Dana Denson at 407 894-7555, extension 2355 or Gary Warren at 352 392-9617, extension 279.

Florida LAKE WATCH

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 Layout by Jenney Kellogg

Florida LAKEWATCH



Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume XXX 2005+

Hurricanes and Lakes: The Good, The Bad, and The Ugly...

The devastation that Hurricanes Charlie, Francis, Jeanne and Ivan had on Florida this year has to measure in billions of dollars and that is not accounting for the suffering that Florida residents endured long after the hurricanes were gone. Some of the impacts these hurricanes had on Florida lakes were obvious and instant and others may be long term and hard to measure. Hurricanes and lakes have been linked for thousands of years and depending on the unique characteristic of each lake the effects on individual lakes can be good, bad and even ugly. To address some hurricane impacts on Florida lakes the Central Florida Chapter of the Florida Lake Management Society held a public meeting December 2, 2004, that highlighted some effects of hurricanes on Central Florida lakes.

Rick Baird from the Orange County Environmental Protection Division reported the following information on fecal coliform counts in Orange County Lakes:

During the three hurricanes that passed through Central Florida this summer many sewage lift stations lost power, and as designed, discharged thousands of gallons of untreated sewage to surface waters. However, this design did limit the number of homes that were flooded with raw sewage to only one or two in all of Orange County. In addition, out of over 400 lift stations that were without power only about 40 actually discharged to a lake. In addition, no lift station was found to be discharging after 24 hours of weather conditions being declared safe. In every case the Utilities



03 Sep 2004 12:00 GMT / 03 Sep 2004 08:00 AM EDT

Department either had a private contractor pumping hauling to functional lift stations or had an emergency back up generator onsite until normal power was restored.

The Orange County Environmental Protection Division (EPD) sampled 48 water bodies within 24-48 hours of the hurricanes passing through the area. (author's note: Some of these included unfenced retention ponds. We considered unfenced retention ponds to be similar to a lake relative to the potential for a kid to fish or go wading.) Initially, fecal coliform counts ranged from a high of 9,000 CFU/100mL in one lake to 10 or 20 CFU 100/mL. However, in almost all cases the counts returned to below 200 within a few weeks. This confirmed classic textbook responses to bacteria die off in the environment.

After the hurricanes, some lakes started to rise and did not stabilize until the drainfields of some older homes were submerged. In the water column above these drainfields fecal coliform counts rose to well over 200 CFU/100mL. These areas remain slightly higher today and we are continuing to monitor them.

Tim Egan from the City of Winter Park reported the following impacts to the City of Winter Park Lakes and Waterways:

One of the first things on peoples minds when preparing for a hurricane is flooding from heavy rains or storm surge. In Winter Park we experienced some minor problems related to water levels, but flooding of homes from rising lake waters did not occur. After Hurricane Frances, and rains that followed, the chain peaked at elevation 67.9 feet, 1.4 feet above the ordinary high. This was high enough to inundate some docks, and worry owners of low lying houses. Having three storms in a row, with heavy rains in between, caused the water levels to remain high for a month, increasing the potential for erosion and dock damage from boat wakes. The high hurricane winds also caused

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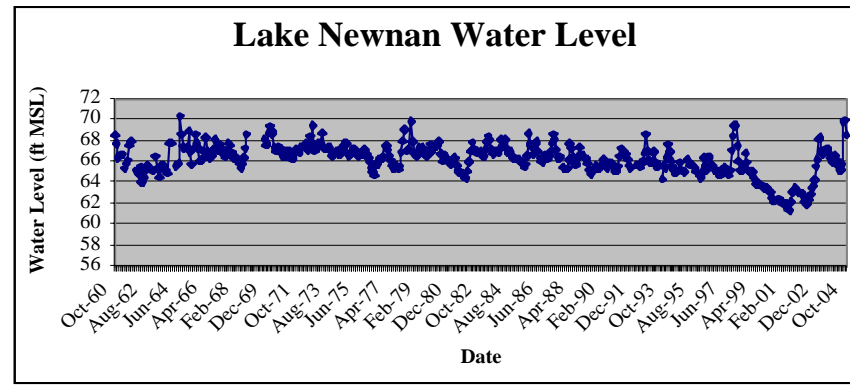


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small storm surges on the southern and western shores of Lake Virginia and Lake Maitland, resulting in severe but localized shoreline erosion.

Trees knocked down by Hurricane Charley caused numerous blockages in Howell Creek between Lake Sue and Lake Virginia. This caused water in Lake Sue to rise two feet above it's ordinary high several days after the storm. All blockages were cleared within a week of the storm, and water levels on Lake Sue following Hurricanes Frances and Jeanne peaked half a foot lower even though there was more rainfall. All ditches and canals in Winter Park are currently open, and able to move water at full capacity. There are still numerous trees down along Howell Creek that will have to be removed eventually.

Power outages caused by Hurricane Charley resulted in numerous lift station failures, which in turn caused sewage spills in several locations. Elevated bacterial levels were measured in the chain for two weeks following the storm event. Sewer spills also occurred following Hurricanes Frances and Jeanne. These spills were caused by a combination of power outages, and overtaxing the system with too much water. Because the spills were diluted with groundwater and stormwater, the contamination



in the lakes was not as great as after Charley, and only persisted for a few days.

Long term impacts to water quality are difficult to determine at this time. Minor algae blooms, and reductions in water clarity have been observed, but it is not clear whether these changes are due to the influx of nutrients and organic material, or to cooler surface water temperatures which caused the lakes to turn over earlier than normal. Turnover, or mixing, usually occurs in Winter Park lakes between November and January, and is usually accompanied by minor algae blooms.

Here in Florida LAKEWATCH's backyard the lakes that have been suffering from a severe drought are full once again. A good example is

Lake Newnan, one of Alachua Counties outstanding fishing lakes almost completely dried up during the drought. Lake Newnan went from a 9,000 acre lake in 1998 (lake level of 70 ft Mean Sea Level) to only about 2,500 acres (lake level of 61 ft MSL) in 2001 and 2002. After hurricanes Francis and Jeanne dropped approximately 25 inches of rain you can see on the chart that the lake is once again full. The great news is that the Black Crappie population in Lake Newnan managed to produce a strong year class of fish in the spring of 2003 and Eric Nagid of the Florida Fish and Wildlife Commission stocked 250,000 fingerling Largemouth Bass into the lake on May 2004. If the lake continues to hold water Lake Newnan should once again support an excellent fishery. So even though the hurricanes caused severe damage to the state there is always a silver lining.

FROM HURRICANE WATCH BACK TO LAKEWATCH

Several folks tried to follow their normal routine of sampling and found that the weather was just not cooperating. Others sampled, but could not drop off samples at the collection center as it was closed. Similar circumstances around the State have led our volunteers to ask some very important questions regarding samples and sampling as a result of the hurricanes this past summer.

When do we resume our sampling routine?

If you missed 1 or 2 months of sampling don't worry about the missed opportunity, the storms affected everyone in the State. Just pick up where you left off. Get back into a comfortable and safe routine and keep the samples coming. All our collection centers are open again with

most closed centers reopening within a few days of the last hurricane.

Are the samples I collected still going to be okay?

Many volunteers and collection centers around the State lost power for several days and folks are concerned about the reliability of their samples. As troubling and inconvenient as these outages were, rest assured the majority of the samples are going to be okay for the analyses we perform. The Florida LAKEWATCH program analyzes total nutrients from the sample bottles our volunteers collect. This means that any changes that might occur within the sealed bottle that has thawed should not yield results too different from samples kept frozen. Additionally, the chlorophyll filters are stored in a bottle of silica gel desiccant to eliminate moisture thus reducing the

chances of mold growing on the filters.

When will we be evaluating the results of the hurricanes on stored samples?

As we approach the traditional end of the calendar year Florida LAKEWATCH Staff will be sending out reminders to volunteers to get their samples in as expeditiously as possible. The actual evaluation of all lakes will need to take into account samples from the last few months of the year to really assess the impacts of the storms. When most of the samples have been analyzed we will be able to evaluate the summer storms' impact on sampling events as well as the variability in nutrients and chlorophyll.

Lake Newnan
6. 15. 2001

Featured Fish

The Swamp Darter

The swamp darter is a small fish that is rare in Florida lakes and is usually found as a solitary specimen. The species is found as far north as southeastern Maine and as far west as Texas and Oklahoma. It currently has no commercial or sportfish value but, according to Robert Schmidt in the June 1983 issue of American Currents, can make a desirable aquarium fish.

This fish has a slender, elongate body that is green to tan above with dark green to brown mottling on the side. The back has 8 to 12 dark blotches and the belly is whitish with dark specks. The dorsal fin (the one on top of the fish) is split into two fins and the fish can grow up to 2 inches in length.

Swamp darters occur in clear or dark coastal streams, ponds, lakes and swamps. They are usually found in or near aquatic plants that are rooted in mud, sand or detritus. They feed mainly on small insects and crustaceans caught near or on aquatic vegetation. This small fish species preys on the smaller organisms that are just visible to the naked eye.

Mating occurs in early to late spring in the Northeast and probably somewhat earlier here in Florida. A. M. Fletcher, in a 1976 article in American Currents, recorded the mating behavior of the Swamp darter. The male darter spreads his fins and "dances" before the female and swim side by side through the plants where eggs are deposited on the leaves of the aquatic plants.



Distribution in Florida

These short-lived fish rarely live for more than two years in the wild. In a study of fish in Florida lakes, the swamp darter was found in 39 of 60 lakes sampled; however, they were never found in very high numbers in any one lake. These lakes varied in size, depth and water chemistry,

which suggests that swamp darters should be common in Florida lakes. However, due to their very small size and relative low abundance in lakes, are rarely seen by the general public.

Featured Bird

Roseate Spoonbill (Ajaia ajaja)

Phylum: Chordata
Class: Aves
Order: Ciconiiformes
Family: Threskiornithidae
Genus: Ajaia

Also known as "flame bird" or "pink curlew," the beautiful Roseate Spoonbill has a whitish-pink head and breast with bright pink wings and an orange-pink tail. The shoulder of the wings and lower belly are often a deeper crimson color. This species has long pink legs for wading and is fairly large, attaining about 28"- 32" in height with a wingspan of up to 53 inches.

The Roseate Spoonbill was not one of the birds most frequently sighted by Florida LAKEWATCH volunteers. In fact, it was relatively rare when compared to other species observed on Florida lakes. The Roseate Spoonbill was observed on only 6 of the 89 lakes participating in the Florida LAKEWATCH surveys and only a single bird was reported for each sighting. Five of the lakes were located in Hillsborough County and one lake was in adjacent Pinellas County. Both counties are near saltwater estuaries, the preferred habitat of this species.

The bill is the most striking anatomical feature of the Roseate Spoonbill. Long and straight, but flattened out at the end like a spatula or spoon, the super sensitive bill of this bird helps it feed on small fish, shrimp, snails, and other aquatic invertebrates. The bill has touch receptors that allow this species to feel for prey. When the Roseate Spoonbill sweeps its open bill from side to side underwater, it easily detects any contact with prey items. The prey are then snapped up and eaten. This is why Roseate Spoonbills are considered to be tactile feeders.

The range of the Roseate Spoonbill includes the coasts of Texas, Louisiana, and South Florida. It is also found in the tropics and in Central and South America. This species prefers mangrove swamps, tidal ponds, saltwater lagoons, and areas with brackish water. Florida



Roseate Spoonbill

Nancy Camel

LAKEWATCH volunteers have also occasionally sighted this bird utilizing lakes near coastal areas.

The Roseate Spoonbill flies with its neck outstretched and is usually silent but sometimes makes low croaks and clucking sounds. It builds a bulky nest of sticks and bark preferring mangroves or similar low bushes and trees. These birds tend to nest in colonies and the females lay 2-3 dull-white eggs with dark streaks and blotches. The chicks hatch in about 3 weeks and are able to leave the nest and fly in from 35-42 days.

The young birds are lighter colored than adults, being generally white with a slight pinkish tinge on the wings. As they reach maturity over a three-year period, the pink color intensifies. This species was widely hunted for its beautiful plumage around the early 1900's and the population dramatically declined. After Roseate Spoonbills received protection from hunting, the population has made a strong comeback.

Let us introduce to you the Water Atlas...

With over 7,800 lakes in the State of Florida and 67 counties, multiple state, county and city agencies involved in data collection and management, it can get quite frustrating when trying to obtain some information about a lake. The Florida Center for Community Design and Research at the University of South Florida in partnership with local, state, and federal government agencies has developed a resource that we think you should know about.

The Water Atlas Program is an Internet technology where people can find the majority of scientific data from multiple state, federal, and local sources (including LAKEWATCH data), in one easy to use location on the web. The Atlas websites contain historical and educational information and can also be used to communicate with the agencies responsible for water resource management. For example, with regard to lake management, you can find out if the water resource is currently being monitored, learn about volunteer opportunities, fill out online forms to report illegal dumping or discharge, and link to other lake management resources..

The Water Atlas websites are currently available for nine Florida counties (see the links listed below). The Atlas program is continually expanding and has a goal to serve all 67 counties in the State of Florida. Each county site, while slightly different in the features available, offers users the same look and feel and the sites make it easy for you to navigate between counties.

Florida LAKEWATCH sends the Florida Center for Community Design and Research at the University of South Florida (FCCDR/USF) the entire LAKEWATCH data base twice each year. Here is a summary of what LAKEWATCH sent for these nine Florida counties:

Seminole County - data for 97 LAKEWATCH water bodies,
Polk County - data for 92 LAKEWATCH water bodies,
Hillsborough County - data for 204 LAKEWATCH water bodies, stream segments, and adopt-a-ponds,
Lake County - data for 106 LAKEWATCH water bodies, and
Sarasota County - data for 6 LAKEWATCH water bodies.

The Southwest Florida Water Management District website includes the following counties (the amount of LAKEWATCH data provided is described in the parentheses):
Citrus County (data for 52 water bodies),
Hernando County (data for 1 water body),
Pasco County (data for 34 water bodies), and
Pinellas County (data for 21 water bodies).
So you might be asking what kind of information you can get at each webpage. Each website includes 4 main sections.

1) The Atlas section is the heart of the website. Here you can navigate through the county/district using an online map, view data on individual water resources, look at photo libraries of individual water bodies, and lots more. For each lake there is a tab for general information (which includes an aerial photo, lake characteristics, location, trophic state index, water clarity, water levels, report water pollution, & how to become a volunteer). There is also a water quality section that includes an overall trophic state index, nutrient chemistry, water clarity, whether it is listed as an impaired water, and advanced data features. The hydrology information includes water levels, bathymetric map, additional hydrology and geology information, and advanced data features information. The ecology section lists a plant species inventory, macroinvertebrate data, and grass carp permits. Oral history narratives are also available from folks living around some of the lake as well as photos of each lake.



*Note that this is an attempt to compile all relevant information to one website. Many lakes do not have all the information presented. The information is available only if one of the participating groups (Florida LAKEWATCH, Water Management District, County or City governments) has collected it and provided it to FCCDR/USF.

2)The Research section is a library of online documents and websites geared towards the scientific community. Here, you can access metadata information, documents, and advanced tools for graphing trends and downloading data.

3) The Management section is a library of online resources about what is being done to improve the management of water and related natural resources within the county/district.

4) The Education section is a library of websites and online documents intended to teach citizens about the scientific data presented on The Atlas and how to best take care of our vital water resources.

Main website: www.wateratlas.org (This site links to all water atlas pages listed below):
Seminole County: <http://www.seminole.wateratlas.org>
Polk County: <http://www.polk.wateratlas.org>
Hillsborough County: <http://www.hillsborough.wateratlas.org>
Lake County: <http://wateratlas.co.lake.fl.us>
Sarasota County: <http://www.sarasota.wateratlas.org>
Southwest Florida Water Management District (which includes Citrus, Hernando, Hillsborough, Pasco, and Pinellas Counties): <http://www.swfwmd.wateratlas.org>

For More Information on the Water Atlas Program at USF, Please Contact Shawn Landry at 813-974-4590.

Coming soon: The Water Atlas Program will include dedicated websites for Orange County, Manatee County, and Pinellas County.

Highlands County has a website with similar information as listed above. Unless otherwise indicated, water quality summaries were created by the US Soil and Water Conservation Department in Highlands County using data collected through the Florida LAKEWATCH program. There is a direct link to the relevant LAKEWATCH site, listing LAKEWATCH's water chemistry and aquatic plant summaries—including bathymetric maps. Photos are also included for many of the lakes. LAKEWATCH has provided Highlands County data on 72 water bodies.

<http://www.highlandsswcd.org> (click on the Lakes Information and Photos link located on the left of the page).

Lakewatch Welcomes 5 New Graduate Students

Lakewatch welcomes the help of 5 Masters students working under Dr. Daniel Canfield of the University of Florida Department of Fisheries and Aquatic Sciences. They will be assisting with plant surveys and water chemistry sampling. Each of their names and projects are listed below.



Alexis Caffrey is studying relations between some limnological factors and the maximum depth of colonization of freshwater submersed macrophytes in several Florida lakes.



Heather Hammers is creating a model for Alum utilization in freshwater lakes in Florida.



Laura Magner-Stockman is studying the effects of artificial aeration on muck-bottom freshwater lakes in Florida.



Jenney Kellogg is studying carbon dioxide levels and emissions from Florida lakes and rivers.



Whitney Stambaugh is studying human perceptions of lake health based on aesthetic values to determine minimum lake values.

The Aquatic Plant Maintenance Program in Florida Public Waters during the 2002-2003 Fiscal Year

The management of aquatic plants in Florida public waters is carried out by the Bureau of Invasive Plant Management within the Florida Department of Environmental Protection. The mission of Florida's aquatic plant management program is to reduce negative impacts of invasive non-native plants, (such as floating water hyacinth and submersed hydrilla), as well as nuisance native plants, (including floating islands, or tussocks, that jeopardize navigation, bridges and flood control structures). Invasive, non-native plants infest 94% of the 450 public lakes and rivers inventoried in 2003. These water bodies comprise 1.26 million acres of fresh water where fishing alone is valued at over \$1.5 billion annually. Eradicating invasive plants once they are established is difficult, if not impossible; therefore, continuous maintenance is critical to sustaining navigation, flood control, and recreation while preserving native plant habitat on sovereign state lands. The goals of Florida's invasive aquatic plant management program include:

- Reducing the abundance of invasive exotic aquatic plants impacting Florida public water bodies.
- Emphasize management of water hyacinth, water lettuce, and hydrilla.
- Eradicate new infestations of invasive aquatic plants.
- Begin to manage established stands of other aquatic plants.

•Managing established invasive exotic aquatic plants through maintenance programs to sustain attributes such as navigation, flood control, and recreation while preserving or enhancing diverse native vegetation communities for fish and wildlife habitat.

•Integrating biological, chemical, mechanical, and physical control techniques into cost-effective and environmentally compatible invasive plant management programs.

•Assessing and incorporating, where appropriate, new technologies and techniques that enhance invasive exotic aquatic plant management objectives.

Florida Statute §369.22 (3), requires that nonindigenous aquatic plants be managed at the lowest feasible levels, a concept known as maintenance control, in order to reduce:

- sedimentation (lake aging)
- native plant damage
- management costs
- navigation problems
- transportation problems
- flood control problems
- loss of habitat
- loss of recreation
- loss of property values
- use of herbicides

Aquatic plant management is a craft that blends predictable sciences of chemistry and hydrology with the highly variable parameters of biology and meteorology, for application in venues with boundaries defined by human behavior and economics.

Control of Floating Vegetation

As droughts end, and waters re-flood, dried water hyacinth and water lettuce seeds germinate, resulting in an explosion of new growth. At the height of the

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FISHING FOR SUCCESS

Daniel Canfield and Charles Cichra received a USDA Honor Award for Excellence in 2003 for establishing the innovative Fishing for Success program to introduce at-risk youth and other young people to aquatic systems, environmental stewardship and aquaculture.

Created in 1998, the Fishing for Success program at the University of Florida's Institute of Food and Agricultural Sciences was initially designed as a mentoring and career-counseling program for underprivileged youth. However, a growing demand from teachers, parents, and local youth groups resulted in an expansion of the program and collaboration with other aquatic education efforts in the UF/IFAS Department of Fisheries and Aquatic Sciences.

The response has been phenomenal, according to Chuck Cichra and Daniel Canfield, professors in the department who developed the program.

"To date, approximately 50,000 children from more than half the counties in Florida have been involved in Fishing For Success," Cichra said. "In 2001, more than 9,800 people participated – three times the participation of the previous year. Since then, 9,500 to more than 12,000 youth, parents, and teachers have annually experienced hands-on learning in the program's various activities."

When groups are unable to come to Gainesville because of financial or transportation constraints, Fishing For Success takes the program to them through presentations on morphology, biology, and ecology of fish and aquatic invertebrates; career seminars and fairs; and interactive exhibits at youth fairs, special events and museums. Whenever possible, live fish and invertebrates are displayed at these events.

In recognition of the program's contribution to youth education, the Department of Fisheries and Aquatic Sciences was named the 2001 Florida Wildlife Federation's Conservation Educator of the Year. For more information on Fishing For Success, visit <http://fishweb.ifas.ufl.edu/FishSUCCESS/FishSuccess.htm>

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Chuck Cichra, (352) 392-9617, Ext.249, fish@ufl.edu

Volunteer Community Service Hours

LAKEWATCH has volunteers from many different backgrounds. The program has retirees who have worked in the automotive industry, research fields, and military, as well as people who are currently employed as professionals in the medical, legal, and business fields. The program has homemakers, mechanics, nursery owners and recently, young adults.

Most people in the program sample because they enjoy the lake from a recreational, environmental, or ownership aspect. They care deeply about preserving the water body for future generations. However, a growing part of our volunteers are young adults. LAKEWATCH has been fortunate to have young adult volunteers who are using the time for community service hours needed to graduate high school and/ or for scholarships.

Heather Vanheuveln is a senior at North Miami Beach Senior High in Miami-Dade County and has been sampling Sky Lake for our program since September 2000. Heather needed 25 community service hours to graduate; she exceeded this number by 49 hours by volunteering for LAKEWATCH.

Robert is a junior at Park Vista Beach High School in Palm Beach County and is sampling Lake Charleston. He uses the community service hours for the Bright Futures Scholarship.

For whatever reason the teenagers are using the community service hours, there are certain requirements, such as:

1. Students must volunteer for a non-profit agency or organization other than hospitals, veterinarians, day care facilities or human societies.
 2. Volunteer services are to be completed on the student's own time.
 3. They may not be paid for their services.
 4. Volunteer service may not be performed for family members.
 5. Services performed as a result of disciplinary actions cannot be used.
- These are just a few requirements that seem to be common to all types of community service programs. However, each school and college has its own guidelines that must be checked by the volunteer.

Volunteering is not a new way of helping non-profit organizations. The American Association of the Red Cross (now the American Red Cross) began helping people in 1881. With society changing faster than ever, and the need for volunteers increasing, young adults are a resource we will not overlook. They are becoming a very integral part of LAKEWATCH.

Volunteer Bulletin Board

Notice to all active volunteers:

Keep those samples flowing!

Recently, all active samplers were sent a post card reminding them to deliver all frozen water and chlorophyll samples to their collection center as soon as possible. There will be a LAKEWATCH staff person picking water up from all collection centers in December and January (there are 70 collection centers in 38 counties). Getting the frozen water to the LAKEWATCH lab in a timely fashion this late in the year is essential for us to prepare the annual data reports on schedule.

If you have delivered your 2004 samples, THANK YOU!

If you still have 2004 frozen water and chlorophyll samples in your freezer, please take the time to get them to the collection center as soon as possible.

We'd also like to take this opportunity to thank all of you for your hard work and dedication—without you this data would not be collected!

BASS Relocating to Central Florida

It's official! The largest fishing organization in the world will soon call the Sunshine State home. In October of 2004, BASS/ESPN Outdoors announced that the company would relocate from its current headquarters in Montgomery, Alabama, to Celebration, Florida. "Moving to Walt Disney World will tremendously enhance our ability to grow the sport," said ESPN and ABC Sports President George Bodenheimer. "Our efforts to expand our reach and improve the fishing experience for millions of visitors will clearly benefit from the unique combination of fantastic fishing venues and the marketing capabilities of both groups."

Florida's natural resources stand to benefit from the move as well. The BASS Conservation Program already works closely with the Florida Fish and Wildlife Conservation Commission on natural resource issues in the state. However, Florida's waters are faced with various challenges. One of which is the perpetual problems surrounding aquatic vegetation management in many Florida lakes. BASS brings with it the ability to get anglers, property owners and other water users to the table to resolve conflicts surrounding aquatic plant management.

Florida has a wealth of outdoor recreational opportunities. BASS will work with legislators, universities, state agencies and the people of Florida to protect and enhance the state's natural resources for current and future generations.

New Florida Bass Conservation Center (FWC)

The Florida Fish and Wildlife Conservation Commissions formally began construction of the new Florida Bass Conservation Center (FBCC) in March 2004, at the Richloam State Fish Hatchery south of Webster. What began as a demolition project to remove the original bunk house and fish culture buildings at the Richloam facility has now grown to a full-scale construction project, which includes construction of a new maintenance and vehicle building, a fish harvest pavilion containing 14 covered concrete raceways for processing pond-harvested gamefish being prepped for

statewide stocking programs in Florida lakes and rivers, and a 30,000 square-foot fish production building. The fish production building will contain a series of offices, fish health and wet labs, and an intensive fish culture facility. The culture

facility will utilize 80-ft raceways for indoor spawning and advanced-size growout, 30-ft fiberglass raceways for fingerling rearing, 6-ft fry troughs, and an ambient/chilled incubation system capable of handling 120 individual spawning vessels. The water budget for the facility includes a massive recirculation system capable of recycling 90% of the water used during fish culture operations, making it one of the most eco-friendly in the nation.

Current funding for construction

includes \$12.1 million primarily from Federal and state sources, and as of December 2004 the project stands at 46% completion. Completion is set for September 2005, with the facilities first production sequence scheduled for spring 2006. Design fish production capabilities for the new culture facility and existing culture ponds are envisioned to yield 1.5 million Florida largemouth bass fingerlings, 1 million advanced sized (longer than 4 inches) Florida largemouth bass, 300,000 8-inch channel catfish (to support Urban Fisheries programs in the states' major metropolitan areas), 1 million striped bass and striped bass hybrids, and

between 1 and 3 million bream per year. There is a large research area designed into the main fish production building, which will permit a variety of funded research topics, including; fish nutrition, genetics, out-of-season spawning, and hormonal spawning controls. Early life history or other biological studies on Florida's imperiled

aquatic species may also be conducted at the Florida Bass Conservation Center. Future enhancements will depend on private sector funding and grants to add an impressive outreach and education facility including a "cracker-style" visitor center, public fishing area, picnic areas, nature trail and amendments to incorporate Great Florida Birding Trail and Florida National Scenic Trail users. Donors/sponsors are needed to make this happen, please contact Bob Wattendorf with any leads (850/488-0520; bob.wattendorf@MyFWC.com).

To keep up-to-date on progress visit MyFWC.com/Fishing/FBCC.



members.aol.com/austinfishclub/Bass04.htm

LAKEWATCH Thanks Information Specialist Amy Richard for Eight Years of Service



After eight years of editing information circulars, newsletters and many other LAKEWATCH materials, Amy Richard is leaving the staff to follow other career opportunities. Her contribution to the LAKEWATCH program will be long lasting, as the newsletters and circulars (listed below) she edited and produced will continue to educate a wide range of students, professionals and volunteers in many different states:

Information Circular #101. A beginners guide to water management-The ABCs, Descriptions of commonly used terms.

Information Circular #102. A beginners guide to water management-Nutrients.

Information Circular #103. A beginners guide to water management-Water clarity.

Information Circular #104. A beginners guide to water management-Lake Morphology.

Information Circular #105. A beginners guide to water management-Symbols, Abbreviations & Conversion Factors.

Information Circular #106. A beginners guide to water management-Bacteria.

Information Circular #107. A beginners guide to water management-Fish Kills.

Information Circular #108. A beginners guide to water management-Color.

Information Circular #109. A beginners guide to water management-Oxygen and Temperature.

LAKEWATCH gives a big thanks to Amy for her years of hard work and wishes her the best!!!