

Florida LAKEWATCH



Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume 46 (2009)

Doing More for Less-Florida LAKEWATCH Why Support Volunteer Monitoring?

These are tough economic times and everyone is tightening his or her belt for the future. The State of Florida and our local governments are also looking to cut costs, but where should the cuts come from? Florida has over 7,700 lakes and more than 8,000 miles of coastline. Water quality monitoring, data analysis, and involvement of individual citizens are key to water resource management (see



Florida LAKEWATCH founder and Director, Dan Canfield (right) with Assistant Director Mark Hoyer.

Florida LAKEWATCH

years. Because volunteers can collect credible data more frequently (typically monthly) than professionals, researchers use the information to evaluate trends and managers use the information to solve problems.

Unfortunately, the good work done by the volunteers is seldom brought to the attention of elected officials. Agency spokespeople, when

Integrated Water Quality Assessment for Florida: 305(b) Report and 303(d) List Update). But, professionals lack sufficient funds to adequately monitor Florida's vast aquatic resources and the situation shall get worse as money gets tighter.

So, what is the solution? The answer is Volunteer Water Quality Monitoring! All across

the United States and Canada, the use of volunteer samplers is a proven, cost-effective approach when vast aquatic resources need monitoring. Information obtained by volunteers is of research quality and numerous studies have shown that well-trained volunteers provide water quality data as good as those obtained by professionals. Volunteers are reliable and often sample for

asked, often dismiss volunteer monitoring as a "feel good" approach. They will say the agency cannot use the "volunteer collected" data because it does not meet their "high" quality assurance/quality control standards. Of course, the Spokesperson is lobbying for their



agency's budget and is not about to tell elected officials how they can, through the funding of volunteer monitoring, leverage limited public funds to monitor the most number of water bodies and monitor them frequently enough to detect water quality changes.

So, what does the future hold for LAKEWATCH? The future should be very bright because LAKEWATCH volunteers collect far more water quality, fisheries and general limnological information than the professionals and at a fraction of the cost!

Volunteer programs like LAKEWATCH provide research quality data that are routinely used by local, state, and federal agencies to address environmental concerns in Florida and solve problems!

Because the Florida Legislature created LAKEWATCH within the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS), funding is leveraged to help develop undergraduate and graduate students (work force

development) for employment in the agencies and businesses that work on water restoration and management issues. Through the UF/IFAS Cooperative Extension Service, LAKEWATCH conducts statewide public outreach programs. LAKEWATCH also works directly with the University of South Florida to support the statewide Water Atlas that brings timely information to millions of Floridians.

The future, however, may be very bleak for volunteer monitoring unless those who know of the great benefits inform everyone else. In the case of Florida LAKEWATCH, everyone knows LAKEWATCH, but no one knows what LAKEWATCH does because advocacy is not what LAKEWATCH does. The focus was working with the volunteers and getting the water quality-monitoring job done!

How do the people speak up? Locally, contact your family, friends, those charged with managing your local water resources and explain how the volunteers are saving the tax

payers large amount of dollars. Volunteer monitoring is also a statewide and federal concern, so discuss your support with those charged with managing state and federal water resources. Remember volunteer water quality monitoring programs are like volunteer fire departments, they will be there for you!

Below are some talking points that many of you have asked for to help educate your fellow citizens on the value of volunteer programs like LAKEWATCH.

UF/IFAS' Florida LAKEWATCH PROGRAM

Florida LAKEWATCH, a proven 23-plus year volunteer monitoring program established by the Florida Legislature (F.S. 1004.49) that has achieved statewide, national, and international recognition as a model program.

LAKEWATCH is a part of the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS). LAKEWATCH has become a major platform for research, teaching and extension/outreach activities for many UF/IFAS water programs.

LAKEWATCH has partnered with over 2000 volunteers to collect research water quality data from over 1000 Florida lakes, hundreds of near-shore coastal water, and river locations.

LAKEWATCH and is now one of the largest providers of water quality data to the Florida Department of Environmental Protection.



Dan Willis

Through the UF/IFAS Cooperative Extension Service, LAKEWATCH conducts statewide public outreach programs like this one at the Lake County Waterfest.

LAKEWATCH water quality data is of research quality and has been used by scientists around the world in peer-reviewed scientific publications.

In addition to educational outreach and water quality monitoring, LAKEWATCH data are routinely used (local, county, state agencies as well as private firms) to address long-term (over ten years) trends in water quality, which is only possible because of extremely reliable volunteers who have continuously monitored over 150 waters on a monthly basis over 15 years.



Steve Caton

Students examine a crawfish they collected with a dipnet during an on-site school field trip as part of the Fishing for Success youth education



The University of South Florida's WATERATLAS website. wateratlas.org

LAKEWATCH disseminates information directly to the public via the volunteers and through the University of South Florida's WATERATLAS (wateratlas.org).

LAKEWATCH contributes to Florida's Workforce Development efforts through its unique, and nationally awarded *Fishing for Success* youth education program as well as the education of graduate, students who ultimately serve as staff and leaders in Florida's water resource agencies.

LAKEWATCH is the most cost-effective water quality data collection platform in Florida because of its dedicated volunteers, and continues to conduct cutting-edge applied research on many aquatic resources. This applied research directly aids Florida's water resource agencies to insure ***"the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water for the people of Florida."***

Remember, volunteer water quality monitoring programs are like volunteer fire departments, they will be there for you!

It's about the habitat - Lake Panasoffkee

By Bob Wattendorf and Marty Hale, Florida Fish and Wildlife Conservation Commission

So you love nature and you love to fish. But sometimes you might wonder why you have to buy a fishing license or where your tax monies go. Are they really worth it, especially in this harsh economic climate?

If you've followed this column or spoken to a biologist, you've probably heard that fisheries management includes habitat management, people management and fish management. However, in the end, it's about the habitat. Without good water quality, appropriate water levels, the right substrate (lake-bottom soils) and aquatic vegetation or other places where fish want to live and feed, it is impossible to maintain a fishery.

Central Florida's Lake Panasoffkee is an excellent example of why these elements are vital and how your dollars are spent to improve our natural resources, in ways that couldn't possibly happen without you. The Lake Panasoffkee Restoration Council recently submitted a successful-completion report to the Legislature documenting a six-year, multimillion-dollar, multi-agency cooperative project.

Lake Panasoffkee, designated an Outstanding Florida Water, is a 4,460-acre Fish Management Area in Sumter County, near Interstate 75. In the 1950s, it was one of the state's best places to fish, with 15 active fish camps. However, by 1998, 12 of those camps had closed. A major



An aerial view of Lake Panasoffkee in Sumter County.

Lake Panasoffkee Restoration Council

reason was that the water level was no longer fluctuating allowing the lake to naturally cleanse itself, development in the watershed and nonnative plants had decimated the habitat and with it the lake's ability to sustain a fishery.

In 1998, the lake was designated as one of the Surface Water Improvement and Management Act's priority lakes, and planning for its restoration began. With so many millions of dollars at stake (\$28.3 million over 10 years), careful planning and interagency cooperation were essential. The Florida Fish and Wildlife Conservation Commission (FWC) contributed about \$2.3 million of that amount and ensured that fish and wildlife concerns were addressed, as well

as benefits for recreational users. The focus was on shoreline restoration, sediment control and removal, exotic species management, floating vegetation removal, navigation, water quality and specific fish habitat improvements.

A four-step restoration program started in 2003 and wrapped up in 2008:

First, a refined, pilot dredging technique restored public access and re-established a navigation channel at Coleman Landing.

Next, dredging removed more than 3 million cubic yards of sediment to create 765 acres of hard-bottom area suitable for native vegetation and native fish spawning, especially around historic spawning sites near Grassy and Shell points. The

effort also enhanced recreational access, navigation and fish populations.

After that, dredging another 4.9 million cubic yards of muck from the east side of Panasoffkee exposed 979 acres of healthy lake bottom.

Finally, to improve access and reduce the reintroduction of sediments and exotic plants into the lake, 41 residential canals were dredged.

Submerged aquatic vegetation is critical to healthy Florida lakes because it acts as a buffer against shoreline erosion, reduces sedimentation, cleanses the water and provides vital fish and wildlife habitat. By 2007, there was a dramatic improvement in the vegetation community. It not only maintained the 60-percent-minimal goal, it exceeded the goal and achieved 70-percent coverage.

Recent electrofishing samples have shown large numbers of threadfin shad (excellent bass and

speckled perch forage) and largemouth bass in the 1- to 3-pound range with very full stomachs. Obviously, bass are feeding heavily on the readily available threadfin shad. Try fishing with a floating Rat-L-Trap or shallow-diving crankbait with chartreuse in it (to match the threadfin's yellow/green tail). Jerkworms and spinnerbaits will also produce schooling-size bass.

Local anglers are concluding

that this has been one of the best years in the lake's history for catching schooling-size largemouth bass. Mr. Jim Veal Sr., owner of Pana Vista Lodge, reported seeing more schooling bass this year than in the past 50 years he has been associated with the lake. FWC biologist, Bret Kolterman, also observed more bass this year than in the previous 20 years he has been sampling the lake. Bret reported seeing more 3-5 pound bass this year and expects that Panasoffkee should



Dredging removes bottom muck allowing rooted plants to grow and successful fish spawning.

be producing more trophy bass in the near future. Most bass collected during electrofishing samples were hanging off the shoreline in slightly deeper water.

Electrofishing samples also showed large numbers of smaller-sized bluegill around eel grass beds and near shore. Good numbers of 9 to 10-inch bluegill were also observed. Fishing with crickets or grass shrimp around eel grass beds should work well

for the available bream.

The increase in open-water habitat from dredging, along with the abundance of threadfin shad have combined to produce a renewed black crappie fishery. Anglers reported good catches of large crappie this season, and biologists have seen more crappie in their sampling. FWC freshwater fish biologists predicted recently that Lake Panasoffkee will be one of the best bream-fishing sites in the state during 2009. Two new fish

camps have opened, helping the local economy and drawing in additional anglers from around the country.

Florida's recreational freshwater fisheries generate \$2.4 billion in local economic impact annually and support 23,500 jobs (2006 National Survey of Fishing, Hunting and Wildlife-Related

Recreation, conducted by the U.S. Census Bureau). And don't forget to add in the enhanced real estate and quality-of-life values

associated with living near a healthy lake, the countless hours of enjoyment experienced by those recreating on and around the water and the benefits to our native fish and wildlife gained by habitat restoration.



Goliath Grouper Biology

By John Stevely, Sea Grant Extension Agent



Tom Special

A goliath grouper off the East coast of Florida.

At a recent artificial reef workshop organized by Florida Sea Grant in Palmetto, world renowned fisheries biologist Dr. Chris Koenig (Florida State University) shared the results of the goliath grouper biology research he has recently completed. I know you will find these results to be fascinating.

What is juvenile goliath grouper habitat?

A variety of methods were used to study juvenile goliath groupers in mangrove habitat. Mangrove habitat is essential

for juvenile survival and the Ten Thousand Islands and Everglades in southwest Florida is the most important source of juvenile recruitment, but other areas in Florida are also important. Juveniles remain in mangrove habitat for the first 5 to 6 years of life and they move offshore when they reach about 36 inches in length. The abundant food and shelter results in higher survival (95%) and rapid growth (4.5 to 6 inches/year). They tend to not move much and usually stay within 100 yards (meters) of the same spot.

What do goliath grouper eat?

Most local anglers and divers are convinced that this massive grouper (can weigh up to 800 lbs!) eats other small grouper and reef fish found on the reefs they inhabit. However, this does not appear to be true. Dr. Koenig found that 85% of the diet consisted of crustaceans, most of which were crabs. The remaining 15% of the diet primarily consisted of slow-moving fishes such as burrfish, catfish, toadfish etc. They forage for food during daylight and are mostly inactive during the night.

How much do goliath grouper move around?

I already mentioned that juveniles don't move much. The same is true of adults with many tagged fish found gathered at the same spot. When juveniles move out of mangrove habitat, they may disperse far and wide. One juvenile tagged in the Ten Thousand Islands was recaptured on the central east coast of Florida in the Indian River area. Adults can also migrate up to 100 miles to spawning aggregation sites.

When and where do goliath grouper spawn?

Most of the spawning aggregations found to date are off of southwest Florida, but additional aggregations have recently been found off of central east coast. These aggregations usually contain less than 100 individuals. Spawning occurs in late summer or early fall. Dr. Koenig found that spawning occurs on dark nights (new moon particularly) between 10 p.m. and 3 a.m. (so sometimes they are active at night). Such spawning behavior is likely an adaptation to avoid egg predation.

What is the status of the goliath grouper stock?

Goliath grouper were once very abundant; however, due to fishing pressure, they were nearly eliminated. Regulation



Dom Nozzi

A goliath grouper photographed on a dive tour in Jupiter Florida.

passed in the early 1990's prohibited taking goliath grouper. Now, many years later, populations seem to be recovering, especially along Florida's southwest coast. Many anglers and divers report that they have become extremely abundant and may be "overpopulating" wrecks and reefs and depleting other reef fish. Goliath grouper have become accustomed to eating hooked fish making it essentially impossible for an angler to successfully bring a hooked fish to the boat. Spear fishermen increasingly report alarming encounters with goliath grouper aggressively attacking speared fish. Many

folks have suggested that perhaps the time has come to allow keeping a limited number of goliath grouper fish. What little scientific data that is available indicates goliath grouper abundance is increasing. However, the data is very limited and is not available for its entire geographic range. Thus, there is a great deal of uncertainty in projecting when goliath grouper abundance will have fully recovered. Because of its demise in the past, my opinion is that fisheries scientists will want to have very good data before any type of harvesting is allowed. Stay tuned!

Volunteer Bulletin Board

From the Water Lab

Before finishing your lake monitoring duties, please check your data sheets and water bottles for accuracy. Be sure to double-check the stations locations and their numbers and remember that sampling stations should be consistent for each sampling event. In other words: Stations 1, 2 and 3 do not simply refer to the order in which you happen to collect water on a given day, but should instead refer to fixed GPS locations. Thanks you and keep up the good work!

No longer sampling?

If you are no longer able to monitor your lake, please let us know as soon as possible so that we can find a new volunteer to train and continue the work that you have started! It will also enable us to maintain consistent data if we can train someone before the next sampling date arrives.

Kit Roundup

If you are no longer able to sample and you have sampling materials that are in your way, collecting dust, let us help! Please give us a call and we'll make arrangements to pick up the materials so that we can revamp them and re-use them. Like everything else these days, the kits have become more expensive, so we need to be more diligent in collecting and re-circulating the unused materials. Thanks for your help!

Collection Center News

The following collection center has been reactivated:

Sarasota

South Florida Water Management District
Resource Data and Restoration
6750 Fruitville Road
Sarasota, FL 34240
Contact: Kevin Coughlin
941-377-3722 Ext. 6553
kevin.coughlin@swfwmd.state.fl.us

...a hook and a line and the fishin's just fine!

Fishing For Success (FFS) is a multifaceted program that uses fishing and other related activities as the "hook" to introduce children of all ages to various aspects of fisheries and aquatic environmental sciences. The current program began in 1998, and has constantly evolved to meet the needs of 4-H extension faculty, teachers, youth group leaders and the community at large. The initial focus of the program was to provide mentoring and career counseling to a small group of underprivileged youth.

Fishing for Success is part of the UF/IFAS Fisheries and Aquatic Sciences program in the School of Forest Resources and Conservation and [Florida LAKEWATCH](#) with help from the Florida Fish and Wildlife Conservation Commission, the Gainesville Police Department, and the Alachua County Sheriff's Office.

Today, through a combination of on-site and off-site tours, demonstrations, hands-on activities, and community fishing events, the program provides education, recreation, and rehabilitation therapy to a large, broad demographic slice of the population. Participation in FFS programs tripled from 2003-2004 and totaled **17,197** in 2007.

Aluminum Can Recycling: You can help FFS by collecting cans. Funds received from recycled cans help support the program. Join with us and other groups and save those cans! Drop them off here or bring them to Family Fishing Days. For more information: Dan Canfield Jr. decand@ufl.edu

*I made a wish I'd catch a
fish and get it on to
shore.*

*With Mom and Dad to
cheer me on, I think I'll
fish for more!*

LAB NOTES

From Florida LAKEWATCH Chemist Claude Brown



David Watson

Claude Brown, Chemist

From the Water Lab: Farewells and Arrivals

We bid farewell to valued laboratory technician and gracious friend Kelly Schulz. Kelly has departed the lab team and returned to school to study medical technology. Kelly's long-time service from 1996 to 2009 is greatly appreciated. Kelly's good nature, genuine smile, and sense of humor will be sorely missed. We wish her much success and joy in her studies and new career. Dedicated long-time technicians: Tad DeGroat, Wanda Garfield, and Ivelisse Ruiz-Bernard

continue to form the core of our reorganized Florida LAKEWATCH water lab team. This July Dorota Roth joined us.

Dorota comes to us from Dr. Phlips lab in the program of Fisheries and Aquatic Sciences. Dorota brings strong skills and technical expertise in chemical analyses. Dorota also possesses a bright, cheery, can-do spirit and strong work ethic. Dorota is currently leading the lab team in cross-training for all analyses. All team members will complete cross training by year's end to better serve our volunteers and meet laboratory goals. We all welcome Dorota as a great addition to our dynamic lab team.



Mark Hoyer

Dorota Roth joined the LAKEWATCH lab this July.

If you drop by, you will notice the

laboratory has undergone a slight shift in work areas to facilitate processing of samples and subsequent analyses. The team has identified several areas where we can expedite processing of samples in order to get results back to our volunteers in a timely manner. New computer programs and spreadsheets have been employed to decrease turn-around time for most samples. There will still be a delay for a few months, but everything will be in place before the end of this year.

On a final note, please don't forget to take your Secchi transparency readings every month, especially those months you are not collecting water samples. Extra blank data sheets can be found at all our collection centers, and if necessary we can mail you some. The importance of your data sheets cannot be over emphasized. These snapshots in time provide our data managers a way to evaluate lake conditions for months without water chemistry results. Variability in Secchi visibility is the most observable way to detect underlying changes in lake conditions. These observations help make sense of the water chemistry samples that will follow from samples collected in the next month. Thanks to all our volunteers for their continued sampling and support.

Exotic fish poster now available

“Don’t release exotic pets!” That’s the message behind a colorful new poster available through a joint effort between the Florida Fish and Wildlife Conservation Commission (FWC) and the Florida Outdoor Writers Association (FOWA). The 20”x36” poster, titled “Some of Florida’s Exotic Freshwater Fishes,” displays 17 species of nonnative fishes currently established in Florida. These exotic species were introduced by man from foreign countries, and with a single exception, are unwanted residents in the Sunshine State.

There are currently 34 reproducing exotic fishes established in Florida, according to the FWC’s Division of Habitat and Species Conservation. The poster depicts the most widespread or commonly caught species. Wildlife artist Diane Rome Peebles produced 15 illustrations used in this poster, along with two other illustrations done for the FWC several years ago by well-known wildlife artist, Duane Raver. University and federal government researchers familiar with the exotic fish advised the artists to help create attractive, detailed and accurate depictions.

The new “Exotic Freshwater Fishes” poster was designed as a sister-publication to the FWC’s

“Freshwater Fishes” poster.

“FWC actually initiated the project several years ago,” said FWC biologist Paul Shafland, who along with biologist John Cimbaro created the poster’s design. “Without FOWA’s generous funding, it would not have come to fruition at this time. We are very grateful for their contribution.”

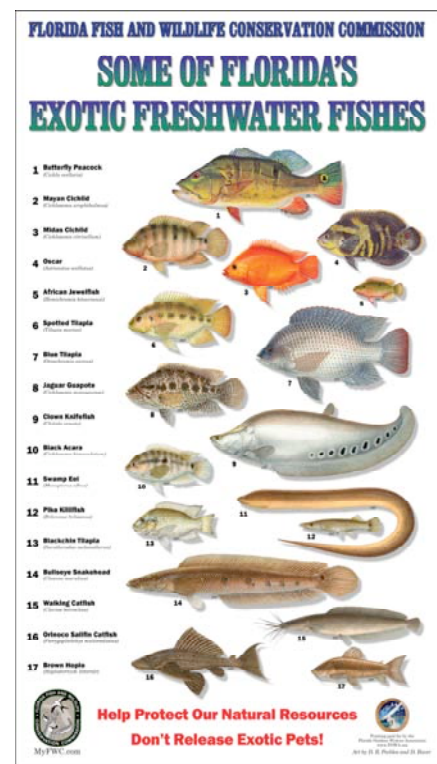
FOWA provided \$2,500 for printing of 9,300 posters, which are being made available to the public at no cost.

“It is illegal to release any non-native fish or any other non-native organism in Florida,” said Scott Hardin, FWC’s Exotic Species coordinator. “The only way to really stop exotics is to let people know they should never release them.”

Moreover, some people consider releasing exotic pets inhumane because most will die shortly after being released. However, those that survive could have detrimental environmental effects.

FWC has a three-pronged approach to exotic fishes: prevention of illegal exotic fish releases through education, development of specific regulations, and law enforcement; assessment of those exotic fishes

already present in Florida to understand what their effects really are; and management which aims to reduce the abundance of these unwanted residents. One management approach is to encourage people to fish for exotic fishes they can eat. The only exceptions to this are the Butterfly Peacock Bass which was purposefully released by FWC to eat other exotic fishes, while increasing recreational angling opportunities in metropolitan Southeast Florida canals; and the Triploid Grass Carp which have been introduced to eat exotic vegetation.



The “Exotic Fishes” poster is available in a reduced printable size at Myfwc.com/images/Conservation/FW_Exotics_Poster_Small.jpg or a full size poster can be picked up at any of the FWC’s regional offices. More information about exotic species in Florida can be found at MyFWC.com/WildlifeHabitats/Nonnative_index.htm. In the meantime, remember: “Help protect our natural resources – Don’t release exotic pets!”

Outstanding LAKEWATCH Volunteer

John Brenneman was a long-term supporter of LAKEWATCH, so much, that he was able many years ago to get part of his job description to include LAKEWATCH duties. John believed that including water related issues in Polk County into the extension services was extremely important. John worked for the UF/IFAS Cooperative Extension office in Polk County for 34 years. John passed away on June 22nd, 2009 after a long battle with cancer. He will be remembered by everyone that knew him as kind, generous, and devoted to his family.

John received his Bachelors of Sciences in Agriculture and his Masters of Science degree in Agriculture Management and Resource Development from the University of Florida. John was a certified instructor for Florida's Master Naturalist Program in Wetland, Coastal

lake front property owners on issues related to water quality and quantity and the management of the fisheries and aquatic plants. John also coordinated the Polk County Extension Water School, a program that provides local officials with information to address water issues and policies. John was also a member of the Florida Lake Management Society. John worked extensively with the LAKEWATCH program

Hillsborough County. John received the 1991 National Association of County Agricultural Agents Distinguished Service Award and in 2003 received the Art Hornsby Distinguished Extension Professional and Enhancement Award. John was promoted to the director of the Polk County Extension office in 2005 where his many years of experience and knowledge provided guidance to



David Watson

John talks with a LAKEWATCH volunteer at the Polk County LAKEWATCH Regional Meeting.

and Upland Modules. John developed a program called "Living on the Lake" and published a newsletter, *Life on the Water*. This program and newsletter were used to educate

and all the volunteers associated with the program. John trained volunteers, monitored the collection centers for supplies, and helped with educational meetings in Polk and

that office.

John was married to his wife Terri for 36 years and they were the proud parents of 4 children.

Florida



LAKEWATCH

This newsletter is generated by the Florida LAKEWATCH program, within UF/IFAS. Support for the LAKEWATCH program is provided by the Florida Legislature, grants and donations. For more information about LAKEWATCH, to inquire about volunteer training sessions, or to submit materials for inclusion in this publication, write to:

Florida LAKEWATCH
Fisheries and Aquatic Sciences
School of Forest Resources and Conservation
7922NW71stStreet
Gainesville,FL 32653

or call

1-800-LAKEWATCH(800-525-3928)
(352)392-4817

E-mail: fl-lakewatch@ufl.edu
<http://lakewatch.ifas.ufl.edu/>

All unsolicited articles, photographs, artwork or other written material must include contributor's name, address and phone number. Opinions expressed are solely those of the individual contributor and do not necessarily reflect the opinion or policy of the Florida LAKEWATCH program.

John was a Sunday school teacher and a deacon at his Lakeland church. John attributed his educational achievements and his interest in the community to the 4-H program that his parents involved him in as a child.

John was devoted to giving his all to the natural resources of Polk County. He was a lifelong resident of Polk County and he

exemplified what a public servant should be in his job at the University of Florida's Extension services. It was a pleasure to work with John through the LAKEWATCH Program. We commend him for the time and energy and devotion to protecting Florida's valuable natural resources and educating the residents of Polk County.



John and LAKEWATCH Regional Coordinator Eric Schulz talk at the Polk County Regional meeting.

David Watson