



FLORIDA LAKE MANAGEMENT SOCIETY

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Fall 2000

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Letter from the President

Just a very short message as I have been very busy putting the final touches on the program for the upcoming **NALMS 2000: Celebrating 20 Years of People Linking Lake and Watershed Management**. We have a great deal of participation from our membership on the agenda this November in Miami.

As far as my duties as president, I have the pleasure of working with an extremely enthusiastic Board. We hope to accomplish a great deal this year with help from our membership. This Board will provide sponsorship of regional meetings to be held in Tallahassee and Orlando.

Our Annual Conference is going to be held for the first time in Tallahassee. The Northwest Regional Chapter is very excited about getting this opportunity to share the

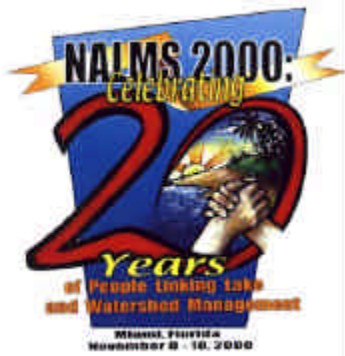
Florida Lake Management Society with the Tallahassee area.

We have a goal to increase our public outreach by offering a grant for lake restoration efforts and giving awards to a shoreline demonstration project.

I, along with the Board welcome suggestions on how FLMS can help with any lake management issues. I hope to see you in Miami.

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NALMS 2000

20th International Symposium of the North American Lake Management Society

Hurry, its not too late to make your plans to attend this year's

**NALMS conference
November 8th – 10
Wyndham Hotel
Miami - Biscayne Bay**

Meet the delegates, share the latest trends, and learn about the work on this continent and on others.

If you haven't made your plans, get busy now.

City of Maitland Helps Fund the Lake Charity Restoration Project

The Lake Charity Restoration Project was a collaborative effort between the Homeowners around Lake Charity, Orange County and the City of Maitland. The City and the Lakes Advisory Board (LAB) reviewed and approved the Lake Charity

Restoration plan in January of 2000, and the Florida Department of Environmental Protection (FDEP) issued an aquatic vegetation removal permit in May 2000.

Orange County provided 80% of the funds needed for the project with the use of a Municipal Separated Tax Unit (MSTU). The City of Maitland covered the rest of the funds. Additional funding for the project was obtained from the Florida Lakes Management Society (FLMS) for the installation of aquatic plants, Bald Cypress trees and educational signs.

A survey and the present low water level (11 feet below normal high water) put into evidence that the sedimentation process over the last 40 years has deposited over three feet of muck between the Druid Isle Lagoon and Lake Charity. The accumulation of muck has restricted water circulation and accelerated the growth of invasive plants and aquatic weeds in the lake.

The water circulation between the Druid Isle Lagoon and Lake Charity was completely restored during the first phase of



Construction underway

the project; 8 truck loads (approx. 144 cubic yards) of different types of weeds and invasive plants (i.e. hydrilla, cattails, etc.) were removed.

Three hundred cubic yards of muck were dredged in a small corridor (25 ft. wide x 300 ft. long) to restore the original grade and water circulation in the lake. The muck removed from the lake was recycled on-site along the end of Druid Isle, and used to build an environmental berm to prevent stormwater runoff pollution.

The second phase of the project will begin in the northwest part of the lake as soon as the water level permits the use of an airboat and a special rake for the removal of vegetation.



The lake restoration project focuses on the removal of invasive plants, aquatic weeds, dead woody plant materials and muck in Lake Charity.

For more information, contact:

**Sergio Duarte
Lakes Mgmt Coordinator
(407) 539-6252**

Shoreline Development Award Program

So how can your group receive FLMS assistance for a shoreline project? The Florida Lake Management Society (FLMS) sponsors an annual Shoreline Development Award. This program is open to all lakefront residents in Florida.

We are looking for a shoreline enhancement project that combines a beneficial, native, aquatic plant habitat with some simple stormwater treatment techniques.

Winners of the Shoreline Award receive \$200 and an engraved wooden sign signifying that they are the recipients of the FLMS Shoreline Development Award.

Not sure where to start?

The FLMS Shoreline Subcommittee is ready to answer any questions you may have. We can help you decide which aquatic plants are beneficial to the environment, what permits may be needed and who to contact, and how to construct simple stormwater treatment areas, such as a berm and swale system.

Please send an e-mail to Lucee Price (Liquidvzn@yahoo.com) or call 407-324-8695 for information on getting started.

Here's what you can do!

If you or anyone you know is planning to enhance their shoreline, let them know about the FLMS Shoreline Development Award program. All you need to do is:

1. Send a picture(s) of the shoreline before any work is done. (If available)
2. Explain, on one sheet of paper, the things you did to improve the shoreline area and why this will be beneficial to the surrounding environment. Include your name, address, and contact number or email address.
3. Send a picture(s) of the completed project.
4. Mail applications to:
FLMS Shoreline Development Award,
P. O. Box 950701, Lake Mary, FL, 32795-0701

Information must be received by April 1 of each year to be considered for the award.

Board of Directors' Meetings

The FLMS Board of Directors has established the following schedule of meetings for 2000-2001. The meetings are open to all FLMS members. Any FLMS member is invited to attend to view the Society

in action or provide input on current issues.

Meetings are held at the Reedy Creek Improvement District office at Disney and begin at 1 pm. For specific directions, contact any Board member.

- October 13, 2000
- November 17, 2000
- January 5, 2001
- February 16, 2001
- March 30, 2001
- May 11, 2001

Calendar of Events

- ◆ **October 3-5, 2000**
Florida Aquatic Plant Mgmt Society Meeting – Cocoa, FL
- ◆ **October 4-6, 2000**
Florida 25th Annual Conference on Water Management – Lake Buena Vista, FL
- ◆ **November 8-10, 2000**
NALMS 2000:
Celebrating 20 Years of People Linking Lakes and Watershed Mgmt – Miami, FL
- ◆ **November 11-16, 2000**
Wetland Systems for Water Pollution Control, Grosvenor Resort – Lake Buena Vista, FL
- ◆ **January 21-25, 2001**
Aquaculture 2001, World Aquaculture Society – Orlando, FL

◆ **February 12-16, 2001**
American Society of
Limnology and
Oceanography Aquatic
Sciences Meeting:
Making Connections in
the 21st Century –
Albuquerque, NM

◆ **March 21-23, 2001**
10th Annual
Southeastern Lakes
Management
Conference –
Knoxville, TN

◆ **May 21-24, 2001**
Florida Lake
Management Society
(FLMS) –
Tallahassee, FL

Florida Lake Management Society heads to Tallahassee for 12th Annual Meeting

This special Conference highlights an excellent technical program and outstanding attendance is anticipated based on the concentration of academic, government, and citizen activist organizations in the Tallahassee area.

Strong representation by experts, politicians, and citizens from around the state is also expected because the capitol city location provides a bonus opportunity for attendees to visit and conduct business with state offices and elected officials.

The Conference begins with Pre-Conference Workshops to be held on Monday, May 21.

The General Session, which will be held at the Augustus B. Turnbull, III Florida State Conference Center, starts on Tuesday, May 22 and continues through Thursday, May 24.

Registration is \$100 per person. This includes admission to the general sessions; breakfast, lunch and two breaks on May 22, 23 and 24; a copy of the Conference Proceedings; and an Exhibitors Social.

After April 21, a \$25 late fee will be added to the cost of registration. If you have questions, please contact Sean McGlynn, Conference Chair, at McGlynn Laboratories, Inc., (850) 222-4895 or email mcglynnlabs@cs.com.

To present a paper at the conference, please submit the title, author's name and address, and a 250-word abstract to Mike Scheinkman, Technical Program Chair, at the Florida Department of Environmental Protection, Bureau of Watershed Management, 2800 Blair Stone Rd., (MS#3570), Tallahassee, FL 32399-2400. Phone: (850) 921-9918. Fax: (850) 921-5217. E-mail scheinkman_m@dep.state.fl.us

Optional half-day pre-conference workshops addressing Environmental Statistics, TMDLs, QA/QC, Volunteer Issues, and BMP Optimization for Urban Retrofit Projects

and other special interest subjects are planned. Registration is \$35 per workshop.

Dinner can be enjoyed at the historic Lodge at Wakulla Springs State Park following a field trip to Lake Munson. Scenic wild life tours are also available.

A banquet and awards presentation will be held at the historic Nicholson's Farm House following a field trip to Lake Jackson, with its famous sinkhole.

Bicycles and in-line skates can be rented at the St. Marks Trailhead for excursions to the St. Marks Wildlife Refuge and Lighthouse on the coast. To add a romantic evening to your itinerary, a dinner cruise down the St. Marks River to the coast can be arranged.

Antique lovers can look forward to a tour of the nearby Town of Havana, which is full of old goods waiting to be rediscovered.

The Museum of Florida History, the Mary Brogan Museum of Art and Science, the Capitol Building and other downtown attractions are all within walking distance of the Doubletree Downtown Hotel offering additional respite from the convention experience.

Accommodations have been arranged with the Doubletree Hotel, 101 South Adams Street, Tallahassee, FL 32301.

Shuttle services will be provided. It is suggested that you make your reservation early by calling (850) 224-5000. Rooms are available at a special conference rate of \$82 per night only until April 7, 2001.

Chapter News

Central Florida Chapter

Are you interested in the state of Central Florida's lakes?

The Central Florida Lake Management Society was designed to be a forum in which citizens and professionals can meet to identify, educate, and correct the problems concerning our lakes. We meet the first Tuesday of each month at 7 p.m. in the council chambers of the Orange County Administration Building on Rosalind Ave. and Church St. in Downtown Orlando. For more information, please contact Jeff Reine at (407) 886-3939 or at jeffr@aquaticceco.com.

The CFLMS newsletter is an excellent place to share professional experiences, advertise educational programs or promote local events. If you have comments or wish to participate in the newsletter, please contact Sergio Duarte at (407) 539-6203 or e-mail: sduarte@ci.maitland.fl.us

Northwest Florida Chapter

The primary focus of our Chapter is the 12th Annual FLMS Statewide Convention, which will be held in Tallahassee, May 21-24, 2001. To achieve that goal we have been having weekly organizational meetings. Those who would like to become involved please contact Seán McGlynn, Conference Chair at (850) 222-4895 or mcglynnlabs@cs.com. The Chapter has been busy during the drought. Low lake levels have presented some unique opportunities. In February the Chapter helped organize a cleanup of Lake Jackson. Over 500 volunteers carted off 4.5 tons of trash from the dry lakebed. On June 24 the Chapter assisted staging an event that involved over 300 runners. This was the Lake Jackson Bare Bottom 5K, a foot race on the dry lake bottom, which raised more than \$2000.00 for local charities. In October the Chapter also assisted in organizing the Big Bend Environmental Forums 'Local Candidate Forum' where candidates for office met the public to discuss and debate Environmental Issues. The Chapter was instrumental in facilitating the Lake Munson Cleanup held on 9 September 2000. Over 175 volunteers took advantage of the dry lake bottom to remove over 24 tons of trash.

Areas of the lake had become sites where the thoughtless dumped refrigerators, tires and household garbage rather than cart them off to the local landfill. All around the lakebed were cans, bottles and coolers - suggesting that "fisherman" is actually synonymous with "beer drinker". After getting our hands truly dirty, we cleaned them at the 'H2O Project', an Art Exhibit currently on display at the 621 Gallery, composed of over 50 Paintings and Sculptures on Aquatic themes. This exhibit was opened with a Community Forum and panel Discussion, moderated by Helge Swanson of Swanson and Associates, Inc., including Jess VanDyke and Eric Livingston (FDEP), Tyler Macmillan (NWFWM), Craig Diamond and Bill Lesman (City of Tallahassee). It succeeded in bringing together the public and private sectors in a lively discussion of current water management issues. The reception that followed at the 621 Gallery successfully merged the disciplines of Art and Science. The Chapter would like to assist in sponsoring similar events in other regions of the Florida Panhandle, please contact your Chapter President, Sean McGlynn.

Lake Jackson Natural Drawdown and Restoration Efforts

By Tyler Macmillan and Seán McGlynn

Lake Jackson, near Tallahassee in Leon County, has done its disappearing trick again. The extended drought and the exceptionally dry summer months of 1999 caused lake levels to drop rapidly. The central portion of Lake Jackson, a 4001-acre, closed-basin lake, designated an Outstanding Florida Waterbody and Aquatic Preserve, vanished into Porter Hole Sink on September 16, 1999, exposing 750 acres of lake bottom.

Lake Jackson is one of the most popular spots in the region for fishing, wildlife viewing and other watersports. The draining event, witnessed by area residents and lake managers, was quite a scene. Local fishermen waded in the rapidly receding pool, catching large bass by hand before the fish got sucked down the sinkhole.

Eight months later (May 7, 2000) the northern half of the lake drained into Lime Sink. This time anglers were traveling from as far away as the Carolinas to catch trophy bass before they plummeted into the

Floridan Aquifer.

This is the fifth time in the last 100 years that Lake Jackson's waters have disappeared beneath the ground. In 1956 attempts were made to plug both sinks with cement. This is the first time that both Lime and Porter Sinks have opened since then.

Unlike previous vanishings, this time lake managers were prepared to take advantage of the natural event. The SWIM/Lake Jackson Management Plan and a number of studies have long emphasized the need to remove nutrient rich sediment from the southern portion of the lake. This area had been drastically impacted by nutrient pollution which caused excessive plant and algae growth and altered the ecology of the lake.

Anticipating that conditions would be favorable enough to begin work with earthmoving equipment late in the fall of 1999, the Northwest Florida Water Management District (NFWMD) organized the Lake Jackson "Drawdown Interagency Restoration Team" (DIRT). Preparing the permits and addressing the logistics of this ambitious project, DIRT, composed of lake managers from Leon County, the Friends of Lake Jackson, the Florida Fish and Wildlife Conservation Commission (FWC), McGlynn Laboratories, Inc. (MLI),

the Florida Department of Environmental Protection (FDEP) and the Northwest Florida Water Management District (NFWMD) began meeting a full six months before Lake Jackson went dry.

The first piece of heavy equipment began digging on the lake bottom the day before the sinkhole went dry and the work has continued nonstop. The focus of the first phase was to restore two southern arms of the lake; Meginniss and Fords Arms, which are on the receiving end of tributaries that drain heavily urbanized portions of the watershed, including Interstate 10.

The project concept is relatively simple. First, a one to three foot deep layer of organic muck overlaying the sandy natural lake bottom is windrowed with bulldozers, track excavators and other equipment. Next, after a few days of drying, it is trucked off the lake bottom to a disposal site. Lead 210 dating has shown that the organic muck layer is of recent historic origin.

By the end of July 2000, over 1.5 million cubic yards of muck was removed and contractors had been tasked with removal of another 500,000 cubic yards.

On July 8, 1999, two full months before the Lake went dry, the Leon County Commission approved

\$2,000,000 in the 1999 Stormwater Capital Improvement Revenue bond issue for Phase I of the restoration of Lake Jackson, the removal of nutrient laden organic muck from Meginniss and Fords Arms.

Additional funding was secured once the project got underway – the NFWFMD put \$500,000 into the project in November 1999 to supplement the approximately \$100,000 it had already spent on design, permitting, coordination and sediment analysis. The FWC was also able to contribute an additional \$200,000. DEP added \$250,000 (plus in-kind lab services).

Then, on February 8, 2000, the Leon County Commission reallocated \$2,460,250 from two planned Lake Jackson stormwater retrofit projects to continue and expand Phase II of the massive restoration effort underway on the lake.

The 2000 Florida Legislature approved an additional \$2,650,000 to fund Phase III of the restoration, extending muck removal operations to the Church Cove and Brill Point areas in the central portion of the lake. The DIRT team, and the Friends of Lake Jackson, a citizens group, were quite aggressive (and successful) at seeking funding for this restoration project.

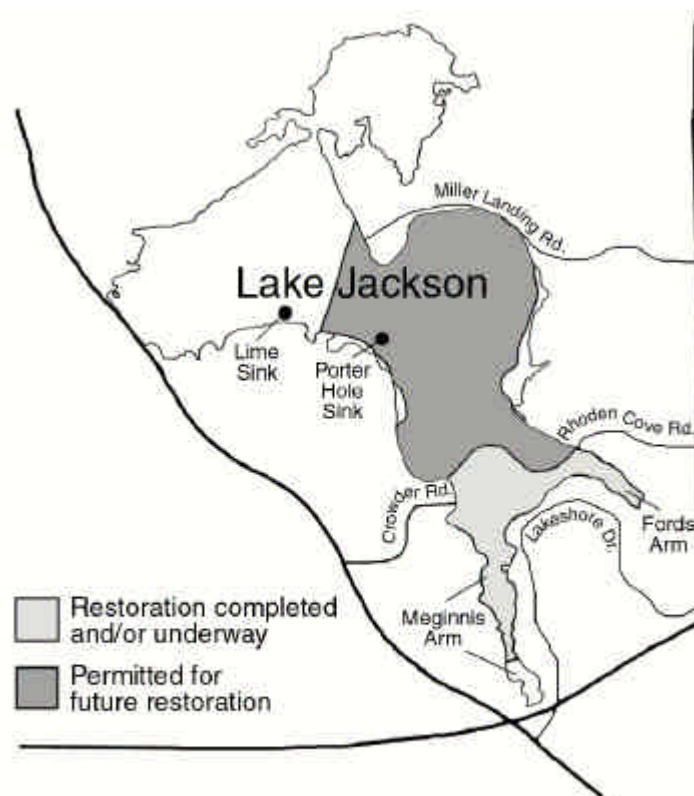
The total project funding has now exceeded 8 million dollars, and will ultimately result in the removal of about 2 million cubic yards of organic muck from over 600 acres of lake bottom. During the height of the restoration effort, over 15,000 cubic yards (over 800 truckloads) of organic muck were being removed each day.

By removing nutrient rich muck that was deposited in Lake Jackson by agricultural runoff in the first half of the century and urban stormwater runoff in the last 50 years, we are turning the clock back on this premier Florida lake, famous for its trophy bass fishing.

The natural drawdown has also provided some

opportunities for other important work – it isn't often that you can do work on a lake bottom without getting wet! Toward that end, FLMS Northwest Chapter members assisted with the planning of a lake bottom "Trash Tournament" in February 2000 and a foot race held on the dry lake bottom, the "Lake Jackson Bare Bottom 5K."

The Trash Tournament attracted over 500 participants and resulted in the removal of about 9 tons of garbage from the lake bottom, while the 5K raised over \$2000 for local charities. Leon County has also repaired boat ramps; FDEP and Leon County have been eradicating the invasive Chinese Tallow tree that has colonized the Lake basin. A lot can be



Shaded areas are not exact. Some shaded areas may not be targeted for sediment removal activities. Map is for illustrative purposes only.

accomplished in a dry lake!

The Florida Geological Survey (FGS), FDEP, MLI, and others have been doing extensive surveying and research at Porter Hole sink, even "spelunking" the dry caves of Porter Hole. Exploration of the caverns began on the 15th of October after flow into the Porter Hole sink ceased. Caverns beneath the lake, extending to the northwest and southeast were explored. The passage to the southeast leads to submerged caverns and is the potentiometric surface of the Floridan Aquifer.

In all, 36 slots and 4 loops of dry caverns, measuring 278.8 feet in length have been mapped. Long cores taken at several sites through the lake indicate a broad range of karst activity throughout the basin. Portions of northern Lake Jackson once were canyons 100 feet deep. Tree scars pockmarked sediments uncovered by the water coursing through the ravine leading to Porter Hole Sink, evidence of the ever changing plant communities within the Lake Jackson basin. An acceptance rate of 12 cfs was measured at Porter Hole Sink. Lime Sink had an acceptance rate less than 5 cfs. A number of publications can be expected in the future. Much has been learned concerning the implementation and effects of fire ecology and the succession of plant

communities in the dry lake. We will learn even more when the water returns!

For anyone with an interest in Lake Jackson, some pictures and information are posted on the web at:

<http://tlhwww1.dep.state.fl.us/geo/eduresrc/sinkintro.htm>;
<http://www.co.leon.fl.us/lcswm/video/lakejack.htm>;
<http://www.co.leon.fl.us/jackson/main.htm>; and
<http://www.co.leon.fl.us/lcswm/video/lakejack/portsink/portsink.htm>.



FLMS is a proud member of the Environmental Fund for Florida (EFF) and hopes you will consider making a payroll deduction to support EFF and Florida's environmental groups.

Check with your employer and EFF to see how easy it is to support EFF. www.envirofundforflorida.org

FLMS Membership form
Florida Lake Management Society

(A Chapter of the North American Lake Management Society)

P.O. Box 950701, Lake Mary, FL 32795-0701

Name: _____ Affiliation: _____
Address: _____ City: _____
County: _____ State: _____ Zip: _____
Phone: Home: () _____ Email: _____
Work: () _____ Fax: _____

Annual Dues (Includes Newsletter)

- Individual \$15
- No n-Profit Organization \$35
- Business/Corporate \$65
- Contributor \$100
- Sponsor \$250

Please make checks payable to: The Florida Lake Management Society and return to the above address.

FLMS is a 501c (3) Tax Exempt Organization – Donations are Tax Deductible

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Florida Chapter
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