Florida Lake Management Society

October 2009

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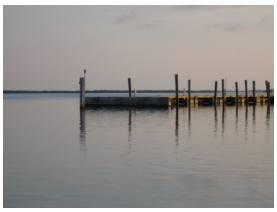
20th Annual Florida Lake Management Society and The North American Lake Management Society Southeast Regional Conference

The annual conference was held in Key Largo in June 2009. The venue was beautiful with the conference overlooking the Florida Bay. Although the conference felt the tough economic times with reduced attendance, the technical content of the meeting maintained and exceeded its high standards. Four well attended workshops were held on Monday, June 8, covering topics including TMDLs, dredging, algal I.D. and data analysis. The technical sessions included water quality, vegetation management, biological, regulatory and watershed management topics



FLMS was fortunate to have a record turnout of student attendees at this year's conference. They included students from the University of Florida, the University of Central Florida, the University of South Florida and the University of West Florida. All of the students volunteered throughout the conference, helping at the registration desk, presentations and at the different events. Thanks for all of your help!

Student Award Recipients (Jennifer Chastain, Dana Bingham, Joni Barreda) with Kelli Levy, FLMS President

The students were also active participants in the conference, presenting papers as well as posters. A FLMS student award committee consisting of select board members judged the student presentations and awarded monetary prizes to the top 3 student presenters. Judging was very difficult this year because of all the quality student presentations. But in the end, the first place student presentation was awarded to Dana Bingham, UF, the second place student presentation was awarded to Joni Barreda, UWF and the third place student presentation was awarded to Jennifer Chastain, UWF. Congratulations to all of the student presenters. We hope to see you back at next year's conference.

FLMS received a number of thanks from all of the students. Here are a few comments from students and their perspective of the conference:

"Throughout my graduate career, I have attended many national and international meetings. However, every year, I look forward to the FLMS conference. I greatly enjoy the FLMS conference because of the amalgamation of topics and professional expertise, but most importantly, it is the people that make FLMS wonderful. The friendly and caring people of FLMS offer an environment to feel comfortable to learn and express ideas, gain knowledge, and form relationships. Such environments can be hard to find, especially as a student. FLMS provides a unique opportunity for students to flourish in the lake management field. These opportunities are greatly appreciated. In the future, it would be great to see increased participation of students, so they too could experience such a welcoming and beneficial conference." Dana Bigham, University of Florida

"Attending FLMS was an amazing experience for me. As a volunteer for the conference, I worked at the registration desk, which offered me a different experience from school. Maybe this is nothing for American students, but for me, a Chinese girl, this is a new experience. I learned a lot from the sessions. Some speakers' presentations answered my question from my previous readings. My favorite session was on nutrient limitation, which is an interesting subject. The social part helped me understand more about the private companies here. Not like in China, where the government is totally in charge of environmental protection, private companies here can perform as the environmental protector. That's cool!" Linghan Don, University of Florida

"I was deeply impressed by FLMS conference; this may be because this was the first time I have been to conferences like this. But more importantly, it covered all the topics concerning lake management, which widened my eyes and let me know what was included in lake management. In the conference, most of speakers were passionate and illustrated their points very well. As an international student, this experience made me begin to learn the skills for speeches for conferences, which are important for my future. For the contents, from biological management to engineering designing, I realized water management can be diverse and combined. This conference was also the first time I attended a poster session. The poster session was a very good way for self-expression and communication. Since the atmosphere in the poster session was more free, I felt that I could freely and easily ask questions. In all, this conference held by FLMS was wonderful and I hope I can join the conference as a speaker or poster presenter next time." Jiexuan Luo, University of Florida

Survey of Toxic Algal Distribution in Florida Lakes

A manuscript summary from Lake and Reservoir Management: Bigham, D.L., M.V. Hoyer, D.E. Canfield, Jr.

Submitted by Dana Bigham, University of Florida

Microcystin is an algal toxin produced by some strains of cyanobacteria (Botes et al. 1984, Sivonen and Jones 1999). Reported cases of livestock, wildlife, pet fatalities, and also human death have been attributed to consumption of freshwaters with elevated microcystin concentrations (Steyn 1943, Ashworth and Mason 1946, Carmichael 1986, Carmichael 1994, Jochimsen et al. 1998). These and other reports have garnered public attention and there are now increasing efforts to measure microcystin concentrations in lakes.

This study was one of the first statewide (FL) evaluations of microcystin concentrations in a large number of subtropical lakes. A 187 Florida lakes were sampled six times from January to December 2006. Annual average microcystin concentrations of the 187 Florida lakes ranged from non-detectable (<0.1 µg/L) to 12 µg/L, with concentrations in individual water samples (N = 862) ranging from non-detectable to 32 µg/L. Only 7% of all the individual samples exceeded the World Health Organization (WHO) drinking guidance value of 1 µg/L, while three individual water samples collected from two lakes (0.3%,) exceeded the WHO recreational guidance value of 20 µg/L. Six hypereutrophic lakes (Harris Chain of Lakes, Lake County, Florida), where microcystin concentrations exceeding the WHO drinking water guidance value were previously documented (Williams et al. 2007), were studied from September 2006 to August 2007 and showed 40% of the samples exceeded 1 µg/L, while none exceeded 20 µg/L.

Seasonality, trophic state, and water chemistry variables (i.e., total phosphorus, total nitrogen, and chlorophyll concentrations) were examined to better understand factors related to microcystin in Florida lakes. The following is a brief summary of some interesting results included in this study.

(1) Microcystin concentrations were significantly different among the time periods sampled- 1: January to February, 2: March to April, 3: May to June, 4: July to August, 5: September to October, and 6: November to December.

(2) The percentage of lakes with detectable microcystin increases with trophic state.

(3) Seasonal trends were present among this sample of Florida lakes.

(4) As total algal biomass increased, microcystin concentrations increased.

(5) Tables relating chlorophyll concentration and Secchi depth to microcystin concentration were constructed for use in predicting the probability that microcystin concentrations in a Florida lake would be detectable and/ or exceed the drinking water/ recreational guidance values. The tables show as chlorophyll concentrations increase, the probability of encountering elevated microcystin concentrations increase and as Secchi depth decreases, the probability of encountering elevated microcystin concentrations increases.

It is important to note, intense algal blooms could occur at any time and place within a lake and, wind can concentrate blooms on shorelines or in specific areas of the lake (Verhagen 1994, Falconer et al. 1999). Therefore, the spatial coverage of sampling may be limited, constraining the ability to capture peak blooms and areas of the lake with higher microcystin concentrations. The sporadic occurrence of these elevated microcystin concentrations, illustrates the spatial and temporal variability in microcystin concentrations within and among individual lakes. Such variability highlights the importance of how every additional study of microcystin in lakes adds to our ability to understand and predict the occurrence and concentrations of microcystin.

Therefore, despite the small apparent microcystin risk identified for this sample of Florida lakes, further, more frequent, sampling is needed in high use areas (i.e. swimming and water intakes). This study is very valuable to lake managers as it identifies not only a subtropical distribution of microcystin, but suggests some common relationships that are applicable to microcystin lake management worldwide. More detailed results and explanations are available in the manuscript entitled, Survey of toxic algal (microcystin) distribution in Florida lakes, accepted for publication in Lake and Reservoir Management, September 2009 issue.

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Central Chapter Update

The Central Chapter of FLMS held it's quarterly meeting on the shores of East Lake Tohopekaliga. The meeting was hosted by Osceola County, Reedy Creek Improvement District and the City of St. Cloud. Lunch was sponsored by United Phosphorus, Inc. This was the largest Central Chapter meeting with over 75 attendees. A number of experts spoke about flood control, erosion control and aquatic plant management at the meeting.

The Central Chapter members also voted in a new group of officers.

Chapter Chair:	Sherry Brandt Williams SJRWMD
President:	Ron Novy Orange County
Vice President:	Sergio Duarte Orange County
Secretary:	Marissa Rodriguez City of Maitland
Treasurer:	David Mahnken E Sciences, Inc.

Welcome to the new Central Chapter officers and please contact them if you would like to participate in chapter meetings or if you have any ideas for expanding the membership of the chapter.

The next Central Chapter meeting will be hosted November 3rd by the City of Maitland, City of Winter Park and City of Orlando. Meeting details will be provided at a later date.

Remember...You don't have to live or work in Central Florida to attend, if you're interested in Chapter information, please contact flms@aol.com

Love Your Lake Cost Share Program

FLMS has created a cost-share program that funds lake, pond and shoreline projects demonstrating management techniques that help protect, preserve and restore Florida's aquatic resources. Each year FLMS solicits grant proposals describing successful management projects. FLMS will provide matching funds for expenses incurred by the selected applicant. Expenditures may be in the form of labor or monetary contributions utilized in the program. Proposals are reviewed by a selection committee based on the following criteria:

Love Your Lake Deadline

March 1, 2010

Monetary or labor match — programs encouraging community involvement are strongly recommended.

Location — project must be accessible to the public (may include large communities or neighborhoods—dependent on accessibility).

Signage — educational component explaining project.

Water quality enhancements — examples include xeriscaping, environmental berm and swale, and other innovative erosion control techniques.

"Love Your Lake" project proposals must be submitted by March 1, 2010. Projects must be completed by May 1, 2010. If you have any questions, please e-mail Ann Shortelle at abshortelle@mactec.com.

For more details about the "Love Your Lake" cost-share program, please visit www.flms.net.

Central Florida Zoo LYL Project

Editor's Corner

There are all kinds of exciting things happening with FLMS and lake management throughout the state! These include "Love Your Lakes" projects, new proposed statewide nutrient criteria and revised stormwater rules, TMDLs and BMAPs.

I encourage each of you to get involved with your local FLMS chapter and attend the annual meeting to keep up to date on the many lake management issues evolving. Don't forget to spread the word about our new free student membership to all of the future limnologists out there.

The goal of the FLMS newsletter is to provide a method to inform all FLMS members of the activities and efforts throughout all of Florida. Please let me know of any other upcoming events, conferences or articles that you would like included in the newsletter.

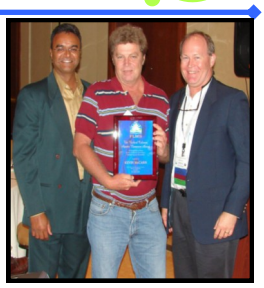
Please send comments and information to:

Shannon Carter Wetzel

swetzel@seminolecountyfl.gov

2009 FLMS Award Winners

The Richard Coleman Aquatic Resources Award was awarded to Kevin McCann with the City of Orlando. He has been responsible for restoring, protecting and advancing our understanding of Florida's aquatic resources. He has committed his career to public service and as a result of his efforts and tenacity, the City's lakes are much cleaner today.



Kevin McCann (middle), Shailesh Patel (left) and Clell Ford (right)

The Edward Deevey, Jr. Award was awarded to Mike Coveney for contributing to our scientific understanding of Florida's water bodies. Mike is the technical program manager at the SJRWMD. He has been instrumental to many of the District's large scale restoration efforts and continuing to provide the science behind the District's restoration efforts.

Dr. Mike Coveney , SJRWMD

The President's Award was awarded to Todd Olson for his contributions to the Florida Lake Management Society. Todd is the chief marketing officer for Aquatic Vegetation Control. Todd contributed countless hours coordinating this year's annual conference. Well Done and Thank-You Todd!

Todd Olson (left) and Shailesh Patel (right)

NALMS has launched their new website at

www.nalms.org

If you haven't already taken a little time to look at the new website features, find a few minutes to check it out!

Doing More For Less
Florida Lakewatch
Why Support Volunteer Monitoring?

Submitted By Mark Hoyer

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 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 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 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 those charged with managing our aquatic systems. 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 charges with managing state and federal water resources. Remember volunteer water quality monitoring programs are like volunteer fire departments, they will be there for you!

Shoreline Development Funding Program

Did you know?

The Florida Lake Management Society (FLMS) sponsors an annual Shoreline Development Funding Program. The FLMS will provide specific grants through local sponsors such as governments and environmental organizations to distribute to shoreline homeowners for enhancement projects that combine a beneficial, native, aquatic plant habitat with some simple stormwater treatment techniques. Each homeowner may receive up to $200 for projects approved by the local sponsor and FLMS.

Local Sponsors

FLMS offers this program to local governments and environmental organizations for distribution to selected shoreline homeowners. Each organization can apply for up to $1,000 to distribute. This program can be integrated into an existing water quality effort such as Adopt-A-Shore, Adopt-A-Pond, or other volunteer-oriented efforts. The sponsoring agency will administer the grants through selection of participants and verification of project completion. FLMS will approve each grant.

Grant selection process

Each homeowner must submit an application that includes:

- -name, address, and contact number or email address
- -pictures of the shoreline before any work is done. (if available)
- -explanation on one sheet of paper of the proposed improvements to the shoreline area and why this will be beneficial to the surrounding environment.

Upon completion of the project

Each homeowner or local entity must submit:

- -a brief description of the completed projected
- -receipts for any purchases
- -pictures of the completed project

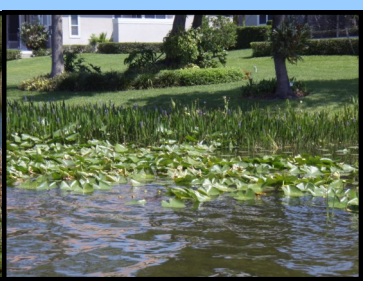
Not sure where to start?

The FLMS Shoreline Funding Program is administered by a local entity. The sponsoring agency 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 contact Ann Shortelle, at (352) 333-2623.

Send individual proposals to:

FLMS
PO Box 950701
Lake Mary, FL 32795-0701



Florida Lake Management Society

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

E-mail: flmshome@aol.com

Join FLMS Now!

Annual Dues (Includes Newsletter)

Student / Volunteer FREE

Individual $25

Non-Profit Organization $35

Business/Corporate $65

Contributor $100

Check out the FLMS website for Society updates!

www.flms.net

Upcoming Conferences And Workshops

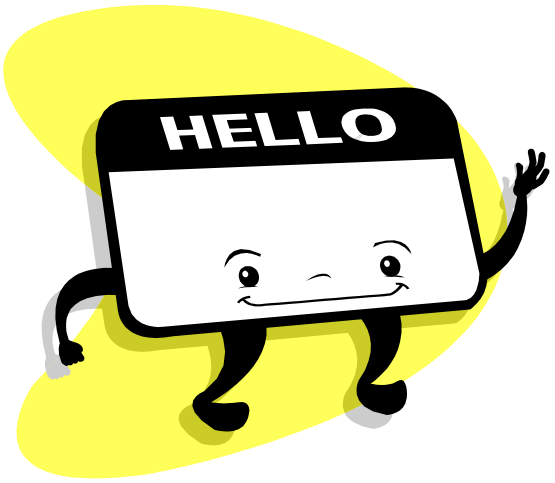
North American Lake Management Society 29th Annual International Symposium
October 28-30, 2009
Hartford, Connecticut

Florida Aquatic Plant Management Society 33rd Annual Training Conference
October 12-15, 2009
Hilton Daytona Beach Oceanfront Resort

Florida Association of Benthologists Annual Conference
December 1-3, 2009
Cedar Key, FL

Florida Stormwater Association 2009 Winter Conference
December 2-4, 2009
Hyatt Regency, Tampa

Joint ASLO and NABS Summer Meeting
Aquatic Sciences: Global Changes from the Center to the Edge
June 6-11, 2010
Santa Fe, New Mexico



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