



FLORIDA LAKE MANAGEMENT SOCIETY

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Letter from the President

I first want to thank all of the FLMS members who help with the NALMS conference this November in Miami. I have had a tremendous amount of correspondence from the NALMS membership complementing FLMS on the success of the conference from all aspects.

In case you haven't checked us out on the web I invite you to take a peek. Erich Marzolf has done a fantastic job of making the newsletter available electronically.

The FLMS 12th Annual Conference will take place in Tallahassee this May. As if there hasn't been enough excitement in Tallahassee lately, Sean McGlynn has promised to overwhelm us with an excellent technical program and a glimpse of the numerous lake problems in the area. The City and Chamber of

Commerce so are grateful for the opportunity to host this event that the Chamber is providing a grant and the City is providing transportation. Sean promises, "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." Get those abstracts ready to send to Sean.

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Note from the Publisher

We encountered some problems with the mailing of the fall 2000 FLMS newsletter for which I am sorry. If you did not receive the newsletter this fall you still can take a look at it on the FLMS website at http://www.nalms.org/flms/pdf_files/newsletter_sept2000.pdf. An advantage of the web is that we are able to use color in the online newsletter. We will also keep back issues on the web so you don't have to rummage around your office tracking one down. Finally, having them on the web makes them easier to share with colleagues and friends.

SMALL ALTERATIONS TO PARKING LOTS CAN REDUCE STORM RUNOFF AND POLLUTION LOADS

Florida's lakes are being rapidly degraded by storm runoff from urban development. For seriously impaired lakes visible signs include obnoxious vegetation, dying fish and oily scums; but even in seemingly healthy lakes much less obvious signs of eutrophication are also taking place such as the

loss of species diversity and changing lake dynamics. One method to reduce runoff impacts is to provide opportunities for soil infiltration as soon as rain hits the ground. Where soils contain any degree of clay or humus, the earth is a powerful filter that can protect lakes from urban contamination. It takes only a few inches of soil to trap and accumulate oils, metals and nutrients. As long as the infiltrating runoff contains only the common, mostly biodegradable, constituents from residential and commercial development then it is within most soil's treatment capacity. Although most nitrogen compounds tend to decompose and return to the atmosphere, nitrates may be an exception to removal by soils since inorganic nitrogen is exceedingly soluble and can migrate to the groundwater supply. Although infiltration by itself will probably not solve all runoff pollution problems, when it is used in conjunction with other techniques, it can reduce impervious areas and thereby help reduce runoff to pre-development levels.

Impervious surfaces, such as parking lots and rooftops, cause more stormwater runoff and pollutant loads than almost any other type of land use. Researchers have shown that as little as ten percent impervious surfaces in the watershed can impact the

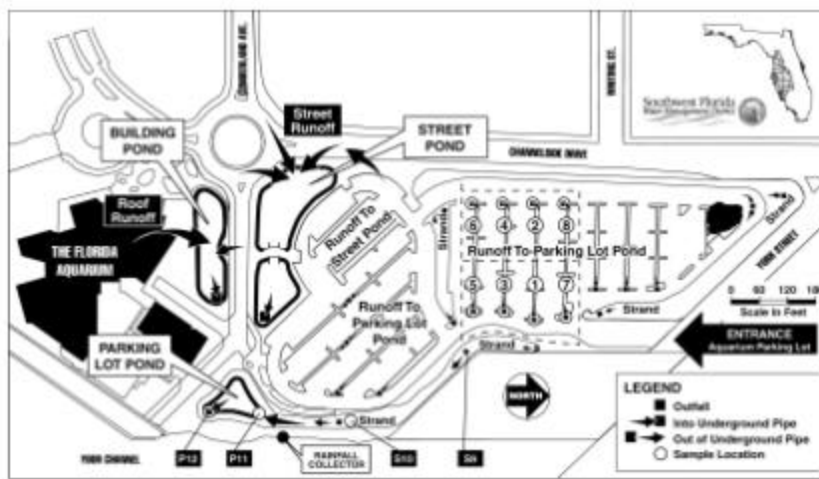
biology of lakes causing loss of species diversity. These hard surfaces, which often replace natural vegetative cover, increase both the volume and peak rate of runoff and also provide a place for traffic-generated residues and airborne pollutants to accumulate and become available for washoff. Additionally, urban runoff management as it is practiced today increases flooding during wet years and decreases base flow during dry years by short circuiting ground water transport and increasing evaporation. Detention of stormwater within recessed landscaped depressions is a technique used in many localities to ameliorate some of these effects.

Infiltration practices, which have been used effectively for about ten years in Maryland, can also decrease non-point source pollution loads. A low impact parking lot at the Florida Aquarium in Tampa was designed to take advantage of infiltration to test these techniques. To have swales in the parking lot without reducing the number of parking spaces, local ordinances had to be altered. Changing the rules by making each parking space two feet shorter provided the area for drainage depressions between parking rows and allowed the front end of vehicles to hang over a four foot wide grassed swale instead of

pavement. During construction, six basins in the parking lot were built using different paving material and different garden sizes to compare to two asphalt basins built with no swales (typical of most parking lots). The eight basins were instrumented to automatically measure flow and collect composite water quality samples during rain events to

would be 1.0 or 100 percent. At the Aquarium parking lot it took about 0.37 inches of rain to produce enough flow to collect water quality samples, except for the basins without a swale that produced runoff with almost every storm. During one year of study (1998-1999), the 29 rain events sampled showed the following results. The asphalt basins without a

including garden areas and swales had runoff coefficients of 0.10 to 0.20 which is comparable to runoff from undisturbed land. Other interesting results showed significantly higher metal concentrations measured in basins paved with asphalt and a significant correlation of nitrate concentrations in runoff compared to concentrations in rainfall.



quantify difference between basin types.

One way to compare the effect of the different paving types and planted gardens on hydrology is to compare runoff coefficients. The runoff coefficient accounts for the integrated effect of rainfall interception, infiltration, depression storage and temporary storage in transit. Engineers use runoff coefficients for design estimates and have developed typical ranges for various land uses - the range for paved areas such as parking lots is 0.70 to 0.95. If all the rain falling on a drainage basin ran off the coefficient

swale, but small garden areas, reduced the runoff coefficient from the lowest value of 0.70 used by engineers to between 0.51 to 0.58 or about 29 percent. The asphalt and cement basins, which had the same pervious areas also had similar runoff coefficients (0.33 to 0.35), and produced 33 percent less runoff than the basins without a swale typical of most parking lots. Porous paving in the parking stalls reduced runoff even more with 41 percent less runoff than the other basins with swales and 60 percent less runoff than the asphalt basins without a swale. In fact, basins with porous paving and

Stormwater managers should expect to see an increasing emphasis on controlling stormwater pollution as states, counties and municipalities adjust to major new requirements in federal water quality standards including establishment of Pollutant Load Reduction Goals (PLURG) and Total Maximum Daily Loads (TMDL). The goal of stormwater managers should be to reduce the volume of flow to pre-development levels because even if stormwater best management practices (BMPs) were successful in reducing concentrations to pre-development levels, pollutant loads to lakes would still increase since urban development as it is practiced today increases total storm runoff. At the Aquarium, since the swales in the parking lot are only the first in a series of BMPs – others include larger drainage ways called strands and a wet detention pond – it is expected that the entire treatment train will

eliminate stormwater discharged from the site except during the largest storms. So far this appears to be the case with only three storms (during the past two years) exceeding the capacity of the entire system, resulting in discharge to the bay. Other areas for stormwater pollution improvement are source reduction including constituents in construction products and airborne particles transported in atmospheric pollution.

A more detailed report about the parking lot is available by contacting Betty Rushton, Ph.D., Southwest Florida Water Management District, email betty.rushton@swfwmd.state.fl.us. More ideas about low impact development are available on the web at <http://lowimpactdevelopment.org>.

Call For Nominations - Annual FLMS Awards

FLMS bestows a number of awards to recognize the efforts of members of the community and professionals on behalf of Florida's aquatic resources. These are:

The Marjorie Carr Award - is the Society's highest award, given for A lifetime of work on behalf of Florida's aquatic

resources. The award is named in honor of the late Marjorie Carr, who among many activities was a founding member of Florida Defenders of the Environment, an organization which played a key role in bringing an end to the proposed Cross Florida Barge Canal.

The Edward Deevey, Jr. Award - is given to a scientist for outstanding contributions towards scientific understanding of Florida's surfacewater resources. Dr. Deevey was an internationally recognized limnologist who was affiliated with the Florida State Museum (now the Florida Museum of Natural History) at the time of his death.

The Scott Driver Award is given to a citizen activist who has demonstrated outstanding commitment to promoting the restoration, protection and/or appreciation of Florida's aquatic resources. Scott Driver was active in several major lake management efforts in south Florida before his death. He was active in Lake Okeechobee protection efforts and helped found the Friends of Lake Istokpoga. He was also a member of the steering committee that formed the Florida Lake Management Society.

The Aquatic Resources Award - is presented to a professional serving in government or the private sector in recognition of

their efforts to restore, protect and advance our understanding of Florida's aquatic resources.

The Marjory Stoneman Douglas Award - is given to individuals in the media in recognition of their efforts to inform the public on aquatic resources issues. The award is named after the longtime champion of one of Florida's most unique environments; the Everglades. Beginning with her authorship of "Everglades - River of Grass", which remains one of the most significant environmental publications in Florida, Ms. Douglas was a tireless advocate for the protection and restoration of the 'glades.

The Bob Graham Award - given to an individual in elected office in recognition of their commitment to conserve, protect and restore Florida's surfacewater resources. Named after former Governor and current U.S. Senator Bob Graham, who is remembered for his support of many environmental initiatives, both as Governor and Senator.

Submit nominations for one or more of these awards to Curtis Watkins and Sean McGlynn either via a phone call (850/222-4895) or as an email to mcglynnlabs@cs.com. Nominations are due by April 1, 2001.

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 11 am. For specific directions, contact any Board member.

- January 5, 2001
- February 16, 2001
- March 30, 2001
- May 11, 2001

Calendar of Events

Φ **January 21-25, 2001**
Aquaculture 2001,
World Aquaculture
Society –
Orlando, FL

Φ **February 12-16, 2001**
American Society of
Limnology and
Oceanography Aquatic
Sciences Meeting:
Albuquerque, NM

Φ **March 21-23, 2001**
10th Annual
Southeastern Lakes

Management
Conference –
Knoxville, TN

Φ **May 21-24, 2001**
Florida Lake
Management Society
Tallahassee, FL

Φ **November 7-9, 2001**
North American Lake
Management Society
Madison, WI

Don't forget to check out
the FLMS website at
www.nalms.org/flms.

First Call For Officer Nominations

The Florida Lake Management Society is YOU, the membership, and it is your energy and efforts that help make this organization go. Please consider helping your Society by agreeing to serve as an Officer or Director. Nominations are now being solicited for persons to serve as:

- **Officers (serve a 1-year term): President Vice President, Secretary, or Treasurer**
- **Directors (serve a 2-year term): 4 open seats for 2001-2002**

Nominated persons should agree beforehand to accept the nomination and serve, if elected.

Nominations should be forwarded to Lucee Price via email

(filmshome@yahoo.com).
Nominations are due by
April 1, 2001.

Chapter News

Central Florida Chapter General Membership Meeting

A general membership meeting will be held January 11, 2001 at 7:00 PM in the Board of Orange County Commissioners' Chambers. The chambers are located in the County Building in downtown Orlando on Rosalind between Jefferson and Church Streets. There's a parking garage across from the County Building on Jefferson St.

Topics: Local Lake Re-Vegetation Success Stories

- Lake Killarney
- Lake Fairview
- Lake Arnold

The meeting will also include a general re-organization discussion of the Central Florida Chapter of FLMS

This is a great opportunity to share information and keep up with the latest lake management issues throughout the year with your Central Florida colleagues. You don't have to wait for the annual meeting anymore! Come out and support the Central Florida Chapter.

We look forward to seeing some old FLMS faces as well as lots of new members. Remember to bring your ideas and suggestions!

If you have any questions call Shannon Carter at 407-858-6100.

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.



**Second Call for Papers and Announcement of the
Florida Lake Management Society's
11th Annual Conference
Tallahassee, Florida
May 21-24, 2000**

Deadline For Papers: March 1, 2001

The Florida Lake Management Society (FLMS) was created in 1988 with the goal of promoting the protection, enhancement, conservation, restoration, and wise management of Florida's freshwater resources, while also providing a forum for education and information exchange. To that end, symposiums are held each year to provide presentations of interest to scientists, water resource managers, and also the lay public. In fact, one of the stated goals of these conferences is to facilitate a technology transfer from professional scientists to resource managers and to shoreline property owners about how they can protect and enhance their local waters. It also provides an excellent opportunity for professionals to receive input from citizens. Attendance for the 2001 symposium is expected to be high as Tallahassee is notoriously hopping with academic, governmental, and citizen activity.

This second call for papers for the conference identifies topics we would like to emphasize and gives guidance about formatting that will help us prepare the best possible program. Although every submission will be considered, those that are fresh, formatted properly and in tune with the final agenda have the best chance of being selected. Ten main program sessions will be offered, each consisting of three or four presentations. Ideas for the content of these sessions include technical talks about algae, macrophytes, sediments, biology (fish, birds, and reptiles), bioassessment tools and Karst systems. Talks that are oriented towards the general public addressing restoration activities, new approaches to watershed management, opportunities for citizen involvement, and interacting with elected officials are also desired. The proposed program is still very fluid. We hope this announcement does not discourage anyone from submitting an abstract (or idea) for consideration on unique and different topics. The final program will be established based on the type, number and quality of abstracts/ideas received. We look forward to hearing from you and seeing you in Tallahassee at the conference in May.

Please submit a 250 word abstract by January 31, 2001 as an attachment in Microsoft Word 1997 via e-mail to: michael.scheinkman@dep.state.fl.us or by postal mail (include a hard copy and IBM compatible disk) to: Michael M. Scheinkman, Florida Department of Environmental

Protection, 2600 Blirstone Road, Mail Station 3570, Tallahassee, Fl 32399-2400, Phone (850) 921-9918, Fax (850) 921-5217.

TITLE: USE ALL CAPS

FORMAT: Single-spaced, 12 point New Times Roman Font

AUTHORS: Provide name(s) and affiliation(s) of author(s) including addresses, phone and fax numbers, and E-mail addresses. Underline the name(s) of the presenting author(s).

BODY: The body of the abstracts should state the purpose, results and relevant conclusions of the paper in less than 250 words!

Notification of Acceptance will be made by February 15, 2001. All accepted authors will be required to submit a two-page extended abstract by March 15, 2001 that may include illustrations for inclusion in the proceedings that will be distributed at the conference. Details regarding the extended abstract and preparing for the presentations will be included with the Acceptance Notification. Each presenter will be allowed approximately 15 – 20 minutes, which includes set-up, presentation, and questions and answers. All presenters are required to register for the full conference. Poster Sessions are also a possibility.

Of special interest are the pre-conference workshops that are scheduled for Monday, May 21 providing an opportunity for more thorough discussions of selected topics. Workshop concepts being considered are Bioassessment training (including algae, benthos and macrophyte identification); STORET training: Quality Assurance of Data (QA/QC); multi-agency Geographic Information System (GIS) issues, applications and training; sediment and erosion control training; environmental statistics and stormwater BMPs by Harvey Harper; and Florida Yards and Neighborhoods training. At least one workshop will be dedicated to volunteer monitoring and LAKEWATCH activities. A post-conference workshop that provides help from FDEP with the Total Maximum Daily Load (TMDL) process may be offered on Friday May 25.

Field trips are planned for Monday May 21 and Thursday May 24 highlighting local lakes and management activities and popular attractions such as the Wakulla Springs and Lodge and the historic Nicholson's Farm House Restaurant. Tours of the 'City of Wonders Exhibit' at the Mary Brogan Museum of Arts and Science (which details the life of a water droplet falling on a modern city as it makes its way to the Aquifer) and state of the art stormwater facilities including Lake Ella (Florida's first Alum treatment stormwater pond) may also be offered. The format of this dynamic convention in Tallahassee will give citizens a rare opportunity to discuss issues of concern, as well as share their successes in lake management. The Workshop fee is \$35. Registration for the entire program of General sessions that begin on Tuesday May 22 is \$100 per person. A daily registration fee of \$35 is an option for attending the General sessions. A late fee of \$25 will be added to registration fees after April 21. Make your reservations now. Conference information and registration forms are available on the web at www.nalms.org/flms/florida.html. For more details concerning the conference, workshops, exhibiting or sponsorship opportunities, please contact Sean McGlynn at McGlynn Laboratories, Inc., 568 Beverly Court, Tallahassee, Fl. 32301, Phone: 850/222-4895 Fax: (850) 222-4895, or E-mail: mcglynnlabs@cs.com.

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: _____

Areas of Shareable Knowledge _____

Annual Dues (Includes Newsletter)

- | | | | |
|---------------------------|------|---------------|-------|
| • Individual | \$15 | • Contributor | \$100 |
| • Non-Profit Organization | \$35 | • Sponsor | \$250 |
| • Business/Corporate | \$65 | | |

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

North American Lake Management Society
Florida Chapter
Florida Lake Management Society
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