
The Newsletter for all the Friends of Lake Apopka

Making it **CLEAR**



The mission of FOLA is the restoration of Lake Apopka and surrounding wetlands

Message from the President

In 1991 FOLA organized, determined to make a difference. Our mission was the restoration of Lake Apopka and the adjacent wetlands and marshes on the northshore (former muck farms). For years we have supported St. Johns River Water Management District (SJRWMD) as we chipped away at what seemed at times to be an insurmountable goal. Staying true to our course with a focus on the 'total restoration', we are moving into what appears to be a new phase of the restoration with measurable improvements -- improvements that we can begin to get excited about.

The goals of the restoration plan for Lake Apopka call for reducing the amount of phosphorous (TP) going into the lake and the removal of TP from the lake as well as the restoration of the northshore back to wetlands, allowing for an increase in fluctuation of lake levels and restoring habitat.

To reduce the amount of TP entering the lake, 20,000 acres of agricultural land were acquired on the northshore, putting an end to pollutants loaded with TP being dumped into the lake from the muck farming. The Phosphorous Limitation Rule was passed putting additional requirements on development in the Apopka basin to further limit TP from going into the lake. Untreated discharges from surrounding communities and citrus plants were halted.

The Marsh flow -way, which acts as a man-made kidney, began operating in November of 2003. More than one and a half times the lakes volume has been filtered through the system, resulting in the removal of 30.9 million pounds of suspended solids, 685,800 pounds of nitrogen and 19,842 pounds of phosphorous.

Perhaps one of the most effective tools of the restoration has been the removal of 15 million pounds of gizzard shad. Labeled, "phosphorous pumps" by Dr. Gian Basili with SJRWMD, gizzard shad literally eat TP in the bottom sediments, and excrete TP back into the lake constantly recycling phosphorous back into the system.

Algae conditions in the lake destroyed habitat necessary for game fish such as bass and the population significantly de-

clined. Gizzard shad on the other hand not only survived, they became the dominant fish species in the lake. Years of harvesting gizzard shad has resulted in improvements to the water clarity by reducing the algae, which depends on TP for growth. Other lakes where harvesting shad has been successful have also seen a marked recovery in the food web, improving conditions for game fish populations. We are getting reports from local fisherman that catching bass has improved.

So, what does all of this mean? SJRWMD reports that they are now seeing an improvement in the water clarity by 54 percent and a 56 percent decline in TP levels from earlier conditions. This summer we could see TP levels even lower and improvements in water clarity even higher. Results for restoration on the northshore are as promising.

And, yes the battles are still out there and we continue to do the dance of the 'fire sparks' but it is nice (and rewarding) to see the change and to know that we have been good stewards.

This system, as so many others throughout the state and the world, had lost it all. What water continued to flow was ailing at best. Now, I believe we will know all those who have been involved have made a difference. I believe we have. Much healthier water will flow down stream through the Beauclair canal and as we look to the health of the Ocklawaha chain as a whole, the need to understand how each part effects the whole is critical. As the science takes us through every phase, grass root groups like FOLA are the voice needed to keep from "muddying up the waters".

Mona Phipps, President of FOLA

FOLA Public Meeting "West Orange Water"

Tanner Auditorium - Winter Garden

Thursday, April 3 at 7:00 PM

The Northshore Restoration Area (NSRA)

During the 1940's approximately 20,000 acres of wetlands along the northshore of Lake Apopka were lost to farming. In 1996 this area was bought with public dollars for restoration and as part of the plan to reduce phosphorous (TP) going into Lake Apopka. The amount of TP going into the lake from the years of farming played a major role in the decline of the lake and led to its label as "Florida's most polluted large lake".

As the plan for the restoration of Lake Apopka evolved it was understood that the role of the northshore was and is critical. Since over 85 percent of the phosphorous going into the lake was from the farms, stopping it was a given.

The first attempt at re-flooding part of the farms lands was cause for alarm when over 600 birds, mostly American white pelican, wood storks and great blue herons died from what was discovered to be Organochlorine pesticide (OCP). The birds accumulated OCPs by consuming contaminated fish. (A causative factor was remaining residues from agricultural practices). The restoration effort was put on hold as scientists working for St. Johns River Water Management District began to research the cause and effect of the avian mortalities. Not only would their findings help to guide the restoration of the farms, they will also be useful to other ecosystems impacted by agriculture.

Further exploration across the farms exposed areas defined as 'hot spots', which were high in pesticide levels. Mechanical remediation to reduce contaminant levels would become an important step before further flooding could occur on the farms. Because it was relatively clear of 'hot spots', the Duda farm was selected to be the test site for flooding. Two thousand acres were flooded and consistent monitoring showed no negative effects. Since then an additional 1,000 acres were OK'd for flooding by the USFWS, but have not yet been flooded because of the current drought. We support the District's plans to flood this area with water from Lake Apopka to accelerate the collection of data needed to allow flooding of successive phases.

After completing research into the fate of the pesticides, the SJRWMD began planning remediation of the contaminated soils in the NSRA. Original costs estimates were high, but after additional sampling of pesticide levels this past summer, they were able to refine areas needing mechanical remediation before wetland restoration could begin.

The plan now includes reestablishing an infrastructure that sets up discrete flooding blocks and uses a specialized plow to invert the contaminated soils before flooding occurs. The soil inversion is accomplished by a modified "Baker Plow." This plow creates a furrow over three feet deep, where each subsequent pass in the field places the contami-

nated soil (top 12 inches) in the bottom of the furrow and then places the clean material from underneath on top. Working during the past year, the contractor achieved reduction of pesticide levels of 55 percent to 85 percent after the plow. Based on these results, the District expects to complete the remediation within the next two years, allowing re-flooding of the NSRA and wetland growth by 2010.

It gets even better! The USDA is providing matching funds in two cost-share agreements to complete this work.



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So many encouraging effects come from this it is hard not to get excited with the outcome. Because of the re-flooding, fewer nutrients will be pumped into the lake, accelerating expected improvements to water quality, increased fluctuation of water levels, and a personal favorite, restored habitat. We have also been able to work with staff at SJRWMD for options to establish the loop trail across the NSRA. Timing is everything!

It is also extremely important that we continue to oppose the CUP permit application proposal from the City of Apopka for water withdrawal from the Lake Apopka ecosystem. An adequate surplus water supply is critical for the re-flooding, and each independent flooding block must be flooded, monitored and deemed safe for habitat before additional blocks can be flooded. With the necessary permit language protecting the lake and restoration efforts, proposed withdrawal is not a reliable source for a water supply. Considering the cost associated with the infrastructure necessary for the City of Apopka to reach their goals, it is not a wise decision on a number of levels.

We will soon have a place to store the summer rains and an ecosystem that needs it!

Keeping you in the Loop

With the accelerated timeframe for the restoration of the northshore of Lake Apopka, FOLA and members of the Green Mountain Scenic Byway have been working with staff from SJRWMD to look at options for the loop trail to cross the farms. It may still be a few years away but a plan is emerging to get the trail across the north shore!



The planning firm of Glatting Jackson recently completed the Green Mountain Scenic Byway Master Plan for the scenic byway corridor. The plan sup-

ports FOLA's Master Plan for a Greenways and Trails system around the lake. The Corridor Master Plan has recommended an option for the Clay Island Trailhead off of the Byway (CR 455) and offered a concept plan (pictured at right). This trailhead is very important to both the loop trail and the scenic byway corridor. While Clay Island offers hiking, biking, equestrian uses, wildlife viewing and environmental education there is no direct access to Clay Island from the byway. The loop trail also needs an entrance to the restoration area to complete the trail. The existing grades of the trailhead could also serve as an official overlook for the byway, with views of the restoration area and across Lake Apopka.

The timing for working together could not be better. The restoration plan calls for the creation of a detailed infrastructure offering perfect timing for us to move forward with our project. Plans for the loop trail have been in the works for eight years but once the restoration plan was finalized, looking at ways to get the trail across was no longer an obstacle.

With help from FOLA, the Green Mountain Scenic Byway Committee will be working on completing a National Scenic Byways grant for the Clay Island Trailhead. We plan to have an application ready for the 2009 funding cycle. The developers of Sugarloaf Mountain will also play an important role in access to Clay Island and coordination with them is vital. The key at this point is to continue to work together to make this loop trail and the Clay Island Trailhead a reality. It could be quite the adventure!

Clay Island Trailhead Conceptual Plan

This trailhead provides a connection to the proposed multi-use trail that follows the boundary of the Sugarloaf Mountain development and access into the Clay Island area.



Membership Application for Friends of Lake Apopka

Name _____

Business/Organization _____

Address _____

City/State/Zip _____

Phone / Fax/ email _____

Volunteer / Interests _____

- _____ Student or Youth—\$3.00
- _____ Individual—\$10.00
- _____ Family—\$15.00
- _____ Sponsor, Corporation or Organization—\$25.00
- _____ Patron—\$100.00

Please mail this form with your check. Your interest in **Friends of Lake Apopka** is vital to the ongoing restoration effort.

Make check payable to: FOLA

Mail to: Friends of Lake Apopka
PO Box 770355
Winter Garden, FL 34777

Friends of Lake Apopka Public Meeting - "West Orange Water"



The Friends of Lake Apopka annual meeting is scheduled for **Thursday, April 3 at Tanner Auditorium in Winter Garden at 7:00 PM.** The topic will be "West Orange Water" with the focus on three important issues facing the community.

- Where do current water supplies come from?
- What are the alternatives if we run out of water?
- What current steps are being taken to conserve water?

The concerns surrounding water are important to every resident of West Orange County. Speakers representing Orange County, St. Johns River Water Management District, Winter Garden, Ocoee, Oakland and a representative from Conserve II have agreed to participate. Jim Thomas will also give an update on the restoration of Lake Apopka and the North Shore.

FOLA will also be welcoming new board members, Stephanie Berry from Winter Garden and Rick Pollard from Oakland. Both have been attending FOLA board meeting for some time and will be a welcome addition to the board.

The community is encouraged to attend and learn about these important issues surrounding water and how local and State entities are planning for the future of this fragile resource. Light refreshments will be served compliments of Oakland Park, a 'Green Development' in Oakland and Winter Garden, being developed by Castle and Cooke.

You can find continued current information on the restoration of Lake Apopka and water issues on our website.

- Special report by FOLA board member Jim Hawley on the Conservation of Reuse Water.
- Photos of the Ocklawaha River taken during the Rally for the Rivers 2008.
- Links to current SJRWMD research.
- See the excellent St. Petersburg Times Special Report on Vanishing Wetlands.
- Lake Apopka Basin Master Plan

www.foia.org

Webmaster, FOLA board member John Deam