

On Our Pond

Quarterly Newsletter Published by Hillsborough County Public Works



Algae: It's Not All Bad

Page 3

Lake Mango Taking Charge



Lake residents volunteered for a source tracking study to compare water coming into the lake with water in the lake.

2

Love Your Lakes Grant



A cost-share program that provides matching funds for lake, pond and shoreline projects.

5

Investing in Infrastructure and Amenities

Aging infrastructure calls for changes that include new wastewater pipes and the proposed addition of a County park.

7

HCFLGov.net/HCH2o

(813) 744-5671

Lake Mango Taking Charge

Lake Mango is a man-made lake near Brandon. Like most excavated waterbodies, it is very green. Residents use the lake for skiing and swimming, so they are interested in improving its conditions.



Hillsborough County's Lake and Stream Management Program worked with the residents to create a simple source tracking study to compare water coming into the lake with water in the lake. The results should tell us if the nutrients are already in the lake or coming from outside.



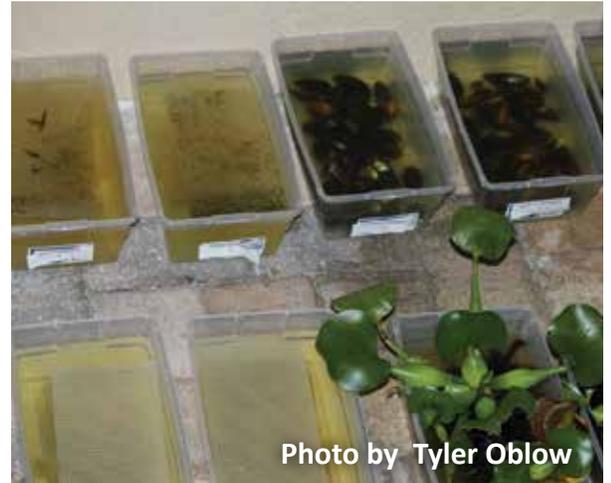
A team of residents volunteered to take samples twice a month at pipes around the lake. The program provided equipment and free analysis through Florida Lakewatch. The last sample was taken in December. Now we are waiting on the results. Based on the results, residents will undertake actions to help improve the conditions in the lake.

With just a little effort, Lake Mango residents are showing that they can take charge of their lake conditions.

Lake Mango Student Wins First Place in Science Fair With Lake Ecology

Tyler Oblow is a fifth grade student that lives on Lake Mango. His mom volunteered to help with the source tracking study mentioned in the article above. When it came time for Tyler's science fair project, he wanted to do something to help his lake. He got in touch with the Lake and Stream Management Program to go over some ideas. He really liked the idea of biofiltration and wanted to learn more.

Tyler researched biofilters (living filters) and wanted to test three different types: mussels, plants, and algae. He decided to measure the water clarity, since that was what they really cared about in the lake. He made miniature biofiltration devices and included one without the biofilter to act as the control for comparison. Each bin was then filled with lake water.



Over the course of his study, Tyler completed five trials. He even learned how to post-process his data to make sure it was accurate. His hypothesis was that the mussels would do the best job. He based his assumption on the initial research he did on the amount of water mussels can filter. To his surprise, he found that algae was by far the better cleaner.

Tyler's insightful study is a perfect example of how any of us can follow the scientific method to come up with very real and useful results. Tyler told me that he might want to be an environmental scientist someday. Well Tyler, my friend, you don't have to wait. You already are one!

Algae: It's Not All Bad

To some people who live on a pond or lake, algae is enemy number one. Algae can make the water a murky green color, some algae smell bad, and some can release toxins. Algae can also block light and add muck to the bottom of the waterbody. But it is not all bad. There are many different types of algae. Each has its own habitat and conditions for growth. Many types are not harmful at all, such as the little fuzzy kind that attaches to rocks and underwater plants in very healthy waters. To understand the good points, let's talk about some ecology.

Algae grow very fast. This makes them strong competitors for food, a.k.a. nutrients. When a waterbody is overloaded with nutrients and can no longer support larger plants and animals, algae can often still grow. Some people call this a "dead" waterbody, but it actually supports more life than it did before. It is just not the kind of life we typically think of in a waterbody.

Algae fill an important role by using the overabundance of nutrients in the waterbody. If we were to stop



Algae blooms can block light and add muck to the bottom of a waterbody.

adding nutrients, eventually that waterbody would recover and turn into a different system, one with less algae. However, once the waterbody is so damaged that algae dominate, it may take a really long time to fix itself...like centuries. But it can because algae will continue to cycle nutrients into the soil.

Imagine if we could use that amazing power to rapidly take up nutrients to help a waterbody recover even faster. Well we can! Devices called algae scrubbers harness the power of algae while controlling the downsides.

Algae scrubbers all look a little different, but they function essentially the same way. Water is brought into a treatment area, like a shallow pond, a flow way, or even a small container for an aquarium. That treatment area has screens or some feature for algae to attach to. As water flows slowly across it, algae take up the nutrients and grow. The filtered, cleaner water then goes back to the waterbody. All scrubbers have a way to keep the algae in the treatment area. Some are manually cleaned while others automatically collect the dead algae before it flows out. The dead algae can then be used for fuel, fertilizer, or food for animals.



Photo by Mark Zivojnovich,
HydroMentia Technologies LLC

An algae scrubber is designed for algae to grow and take up nutrients as water flows over it. This one is located in Vero Beach, Florida.

Help Track Nonnative Freshwater Fish

Do you love fishing? You can use your passion for fishing to help track where nonnative freshwater fish are being caught.

The Florida Fish and Wildlife Conservation Commission (FWC) is partnering with the U.S. Fish and Wildlife Service and the app, Fishbrain, to record data on nonnative freshwater fish. They are interested in finding out where in Florida specific nonnative fish are found, including the Rio Grande cichlid, Jack Dempsey, blackchin tilapia, spotted tilapia, Nile tilapia, bullseye snakehead, clown knifefish, jaguar guapote, Mayan cichlid, blue catfish, and green sunfish.

To help, just download the app and record your catch. Biologists will use this information to monitor and track these fish throughout Florida. To learn more about nonnative fish, visit Fishbrain.com and MyFWC.com/nonnatives. The Fishbrain app is available for download at the Apple Store or Google Play.



Photos by Florida Fish and Wildlife

The Mayan cichlid (top) and bullseye snakehead (bottom) are a couple of the nonnative freshwater fish to be tracked in Florida.

Pond Plant Spotlight: Fakahatchee Grass

Fakahatchee grass (*Tripsacum dactyloides*) is a large Florida native grass that grows to six feet tall with a similar spread. The leaves of this grass are wider than some of the other native grasses you might find in the landscape, growing to one inch wide. This helps provide a nice, dense edging for a waterbody, like what was done along Longboat Landing's community pond in Northdale (see photo to the right). The roots grow deeper than turf grass and make this plant better at preserving the shoreline and preventing erosion.

Fakahatchee grass is easy to grow in the sun or part shade. The plant does well in moist soil, like around ponds, lakes, and streams. It provides visual interest to an area when planted as a background border or as a single clump, especially when paired with flowering plants and different shaped leaves. If there is a heavy frost, the leaves may turn brown, but just trim those leaves off in early spring and the new green leaves will fill in. This grass is a low maintenance plant that is great for even beginner gardeners.



Fakahatchee grass creates and preserves the natural shoreline for Longboat Landing's community pond, in Northdale.

Hillsborough County's Stormwater Environmental Programs Team

The Stormwater Environmental Programs Team is part of Hillsborough County's Public Works Department, Environmental Services Section. The team is responsible for ensuring compliance with the County's National Pollutant Discharge Elimination System (NPDES) permit. Below is a breakdown of the team's staff and their main job duties. If you would like to contact us about our programs, you may reach us at **(813) 744-5671**.

John McGee



- Lake & Stream Management Program
- NPDES Permit

Jennifer Aragon



- Adopt-A-Pond Program
- Stormwater Ecologist School Program

Dawn Ritter



- Total Maximum Daily Load Program

Wendy Grimes



- Water Quality Improvement Projects

Ryan Riordan



- Stormwater Erosion Control and Pollution Inspections

Love Your Lakes Grant

The Florida Lake Management Society (FLMS) has a cost-share program that provides matching funds for lake, pond and shoreline projects that help protect, preserve and restore Florida's water resources. Proposals are reviewed for the following criteria:

- **Monetary or labor match.**
- **Location** must be accessible to the public.
- **Signage** educating and explaining the project.
- **Water quality enhancement.**

The deadline to submit your application is **April 1, 2017**. Visit flms.net for the grant application. For questions, contact **Sergio Duarte** at **(352) 324-6141**.



Unsung Heroes: Marjory Stoneman Douglas

Thanks to the help of the well-spoken Marjory Stoneman Douglas, Florida's Everglades National Park exists today. Born April 7, 1890 in Minneapolis, Minnesota, Mrs. Douglas earned a Bachelor of Arts degree in English Composition at Wellesley College in Massachusetts. She later moved to Miami in 1915 to work as an assistant editor for her father at *The Miami Herald*.



Photo by Miami Herald (1987)

Mrs. Douglas had a passion for protecting the natural environment in Florida and wrote several editorials on this topic. After leaving the paper, she worked on writing short stories and also published a best-selling guide called *The Everglades: River of Grass*. This guide helped bring the public's attention to the Everglades and also helped change people's negative opinions about wetlands.

In 1947, Mrs. Douglas led the campaign to create and protect Everglades National Park. She also helped to found the conservation organization Friends of the Everglades in 1969.

Mrs. Douglas lived a long life to the age of 108. She died on May 14, 1998 at her home in Coconut Grove, Miami, Florida, but the results of her efforts carry on in the protection of this natural wonder called the Everglades.

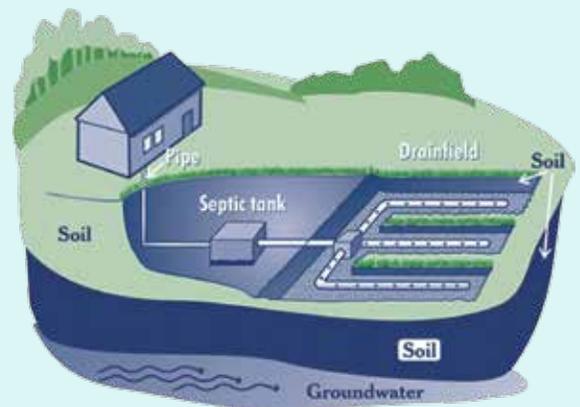
Protect Your Septic System

According to the Florida Department of Health, there are more than 120,000 septic systems throughout Hillsborough County. Does your home sewage drain to a septic system? One sign is that your utility bill most likely will not have a charge for wastewater treatment.

If you have a septic system, remember to:

- Have your tank inspected and pumped at least every 3 to 5 years.
- Keep vehicles off your septic tank and drainfield.
- Direct gutter downspouts away from your drainfield.
- Reduce your water usage and spread out laundry loads throughout the week to prevent your tank from being overloaded.
- Only flush human waste; no medicine, paint, biodegradable/flushable wipes, oil/grease, strong household cleaners, etc.
- Special additives are not needed to improve or assist your septic tank once it is under way.

Do not wait until your plumbing backs up or your yard become squishy with sewage. Take action now by setting a reminder to have your tank inspected and pumped. Good maintenance not only helps keep your septic system working for years to come, it also helps protect local lakes, ponds and streams.



Investing in Infrastructure and Amenities

Aging infrastructure is a concern across our nation. Municipalities, like Hillsborough County, must replace aging infrastructure once it reaches the end of its useful life to ensure reliable service and minimize service disruptions.

That takes foresight, planning and investing in new facilities—exactly what Hillsborough County is doing with its Northwest Hillsborough Wastewater Consolidation Program. This far-reaching program includes:

- retiring two outdated wastewater treatment plants,
- installing new wastewater transmission pipelines,
- expanding the Northwest Regional Water Reclamation Facility,
- building two new pump stations to transfer water from the old plants to the Northwest Plant, and
- installing new reclaimed water mains to return reclaimed water back to the service areas.

The County's \$240 million wastewater consolidation program will serve the northwest region's wastewater needs for decades while saving money, saving energy and minimizing future rate increases.

One plant that the County plans to retire is the Dale Mabry Wastewater Treatment Plant, located in Carrollwood. This plant is more than 40 years old and it is at the end of its useful life. The County is currently installing new pipelines and a new pump station to divert wastewater flow from this area to the Northwest facility. Once construction is completed, the County will operate the new equipment for several months, after which it will retire the Dale Mabry plant.



A dog park, similar to the one shown here, is just one of the many amenities being recommended for this park.

Public Park

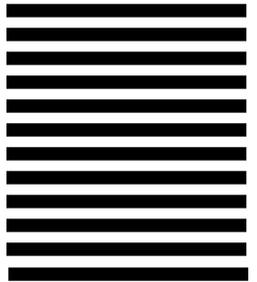
Some facilities will remain on the west side of the Dale Mabry site, but the County plans to repurpose about 40 remaining acres as a public park, once the old facilities are removed. The County has been working closely with the community on the proposed park, which will be done in phases. The first phase includes site work and park infrastructure, like landscaping, potable and reclaimed water, electric/power, irrigation, roadways, paving, building renovation and signage.

Once completed, the proposed park will have an array of amenities. Recommended amenities include a walking/jogging trail, playground, dog park, plant/butterfly garden and more. The community project will enhance the area and serve residents with numerous benefits. For more information on the future park, contact **Kyla Booher** at **(813) 307-1891**.

More information on the Northwest Hillsborough Wastewater Consolidation Program can be found at HCFLGov.net/wwc.

The Adopt-A-Pond Program
Hillsborough County Public Works
Environmental Services
2420 N. Falkenburg Road
Tampa, FL 33619
1384

PRESORTED
STANDARD
U.S. POSTAGE PAID
Tampa, FL 33601
Permit No 295



**Hillsborough
County Florida**

Hillsborough County Board of County Commissioners
An Affirmative Action-Equal Opportunity Employer

Program Reminders and Updates

Attention 2014 Adopt-A-Pond groups, including:

- Gene Roberts Pond
- Henderson Subdivision Pond
- Longboat Landing (LBL) Ponders
- St. Timothy Catholic Church
- The Citrus Pointe Pond Team
- Amber Place Subdivision
- Oakcrest Pond
- Jillian Pond
- Beacon Meadows East

Many of you have made great improvements to your pond over the last two years since joining the program. Congratulations!

There is one more year left on your three year Adopt-A-Pond application. In December 2017, the Adopt-A-Pond program coordinator will perform your final pond inspection and close your application. Take the next year as an opportunity to do a final planting and schedule a workday to remove weeds and pick-up trash, as needed. Get your pond looking its best for the final inspection. If you have any questions about pond maintenance, contact **Jennifer Aragon**, Adopt-A-Pond Program Coordinator, at **AragonJ@HCFLGov.net** or **(813) 744-5671**.



The Citrus Pointe Pond is one of the 2014 ponds that has made great improvements to their pond environment.