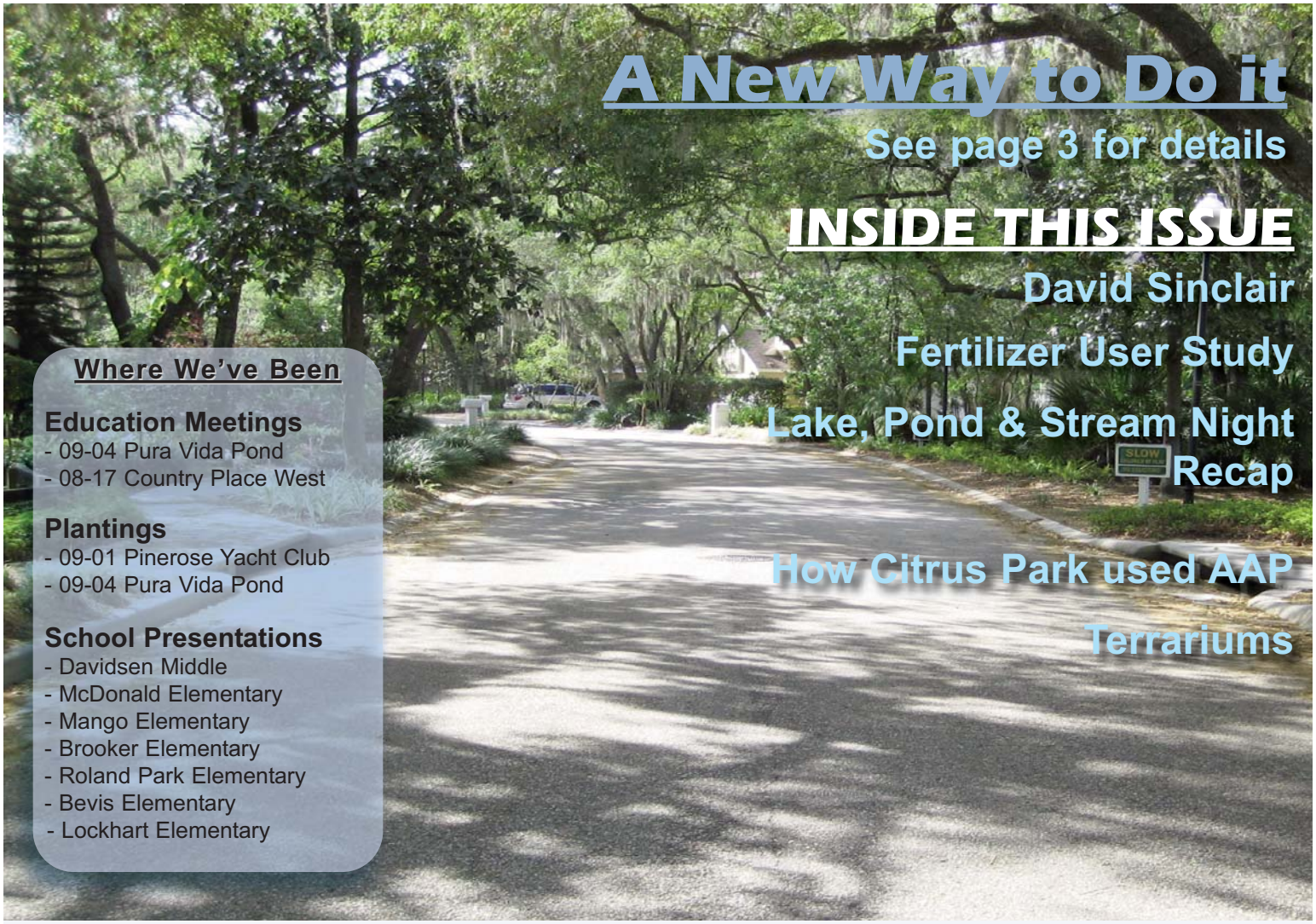
On Our Pond

A NEWSLETTER FOR CLEANER WATER & BETTER AQUATIC ENVIRONMENTS IN HILLSBOROUGH COUNTY

Volume 15, No 2
Summer 2009



A New Way to Do it

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On Our Pond
Quarterly Newsletter Published By:
Hillsborough County Public Works
Specialized Services
2420 N. Falkenburg Rd.
Tampa, FL 33619
(813) 744-5671
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Also inside, our regular series:

Adopt-A-Pond is sponsored by Hillsborough County, and the Northwest Hillsborough, Hillsborough River, and Alafia River Basin Boards of the Southwest Florida Water Management District, and YOU!

Hillsborough County Florida

Pond People Profile: David Sinclair

David Sinclair leads a life of service to our community and to those in need.

David Sinclair is the Group Rep for 06-17 Nutrixan pond in Town N Country. He was recently honored by the Tampa Hillsborough Human Rights Council for his work with the League of United Latin American Citizens (LULAC). David volunteers with LULAC to promote civil rights for hispanic citizens. He also serves as the Florida Vice President for the elderly where he helps elderly citizens have fair access to government services. This ties in with his profession as a social worker for seniors.

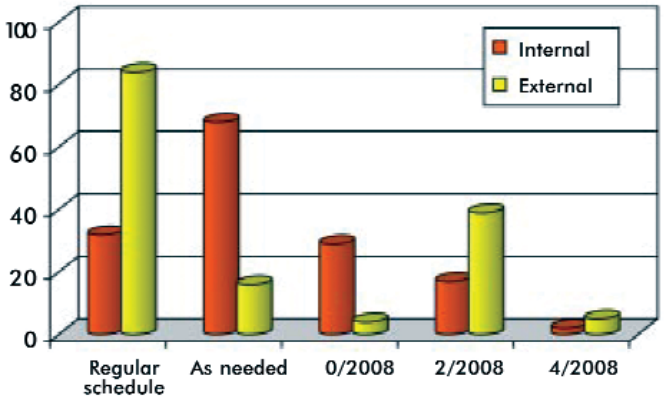
But David's service to our community didn't start there. Most of his life has been spent in such efforts. In 1972 he was involved in the UN World Environment Program where he organized the Alternative Conference on Human Environments in Europe. He was one of the founders of the Nestle boycott, which called for responsible marketing of infant formula, and he has worked for 15 years with nonprofit groups to help the homeless, refugees, farm workers, prisoners, and the mentally ill.

With Adopt-A-Pond, David has organized efforts on Nutrixan among the primarily Spanish-speaking residents in that community. He says that Adopt-A-Pond brings young and old together to benefit the environment, their community, and to allow families to share experiences in nature together. Through Adopt-A-Pond many of his group members have been able to share traditions in growing and working the land that they had feared would be lost on their urban children. David believes that as world citizens, we should consider environmental issues a matter of human rights.

Fertilizer User Study

The Stormwater Management Academy of the University of Central Florida recently completed a study in the Wekiva River Basin (near Orlando). The results are consistent with data gathered by Adopt-A-Pond. The study notes that 84% of respondents fertilize their yards. Of those respondents 59% fertilize their own yards (internal fertilizers). The study revealed with 95% confidence some differences between internal and external fertilizers (those who hire someone to do it).

Frequency of fertilizer application by homeowners who fertilize the yard themselves (Internal) and those who seek outside fertilizers (External)

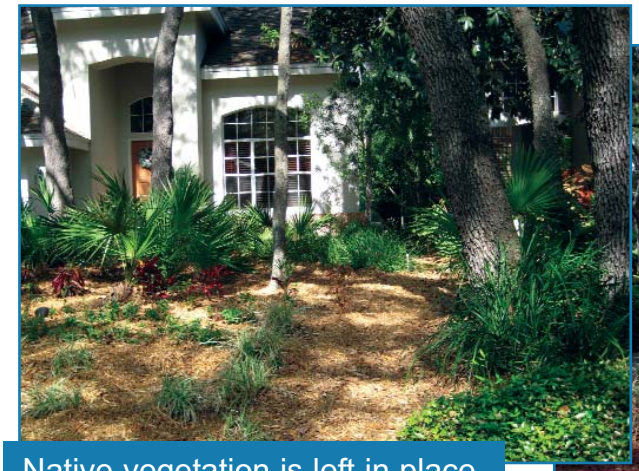


Reprinted from Florida Stormwater Education Newsletter, Winter 2009. http://www.stormwater.ucf.edu

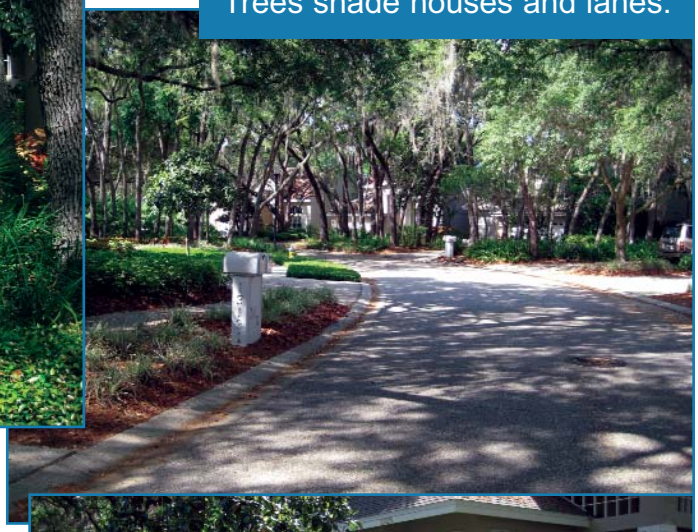
External fertilizers are less in touch with their fertilization and irrigation practices. They are more likely to use a set schedule for these practices without regard to actual lawn needs. They tend not to interact with neighbors regarding landscaping decisions and defer to landscapers to make decisions. In winter months, they are more likely to have applied fertilizer at least 2 times, where most internal fertilizers have applied none. When asked, 49% of external fertilizers said they will fertilize "next month" compared to 29% of internal fertilizers. Internal fertilizers were far more likely to apply fertilizer as needed, and not at all during dry months. Interesting...

For more info on the study, contact Leesa Souto at **lsouto@mail.ucf.org** or (321) 722-2123.

Another Way to Do It—Magdalene Reserve



Native vegetation is left in place.



Trees shade houses and lanes.

There's more than one way to cover the ground.

Magdalene Reserve sits off of Fletcher Ave in the northwest part of the county. This small neighborhood is barely noticeable, but inside there is no mistaking what makes this place different. Trees overhang the narrow lanes that meander through the lush vegetation. In the midst of this garden-like setting, houses seem to appear out of the woods as if they've always been there. It's a far cry from the typical wide expanses of grass with lollipop oaks, where stucco and asphalt shingles glare in the sun. Residents of Magdalene Reserve know they have something special. That's why many of them were attracted to the community. But it wasn't built as an eco-friendly community, nor as an ultra-exclusive enclave of the wealthy. So how and why did this particular subdivision turn into such a striking place?

I recently had the opportunity to talk with the designer , Thomas Levin. He told me it all started in the early 1990's, which was a pretty bad time for the housing market. His firm was hired to design the development. The owner wanted to keep the small oaks making up the shady canopy. This is unheard of in tract development. Usually, they clear, install the infrastructure, build the houses, and re-landscape. To save the trees, they had to be innovative. They looked at the site and found that if they narrowed the streets, they could meander through the trees. But this would require exceptions to the regulations. So they met with county and state officials to work out the details. Eventually they succeeded and came away with two extra salable lots. Since the streets and trees were going to make this place stand out, it only made sense to keep the landscaping consistent, so they developed a palette of plants that complimented the setting. Many times, they would leave natural vegetation in place, and there was virtually no use of turfgrass.

Word got out about a developer fighting to save trees so when the model opened, it was flooded with visitors. The unusual design quickly sorted out those who only wanted traditional lawns, and the community was born. While houses in the development didn't sell for more than similar units, Magdalene Reserve quickly sold out even in spite of the market.

Since then, development has continued almost unchanged. There are case studies of innovative designs, but the norm is still bulldoze and build. Though now, concepts such as Low Impact Development (LID) are at the forefront of people's minds in the industry and may soon be required. Some places have begun retrofitting older developments to give them a feel very much like Magdalene Reserve.

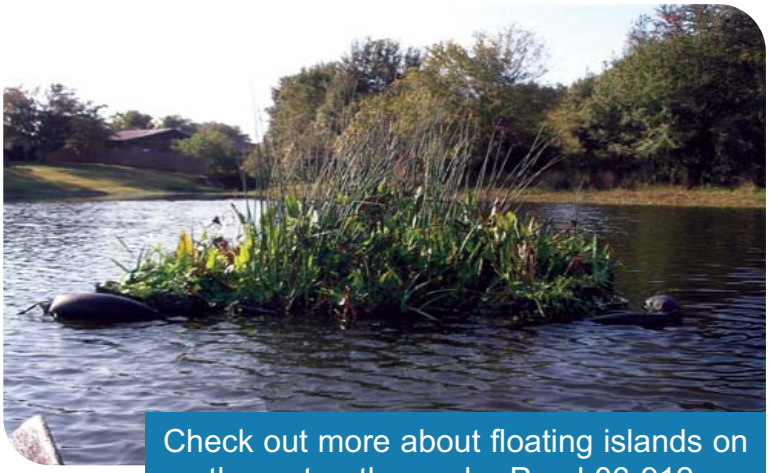
The concept can even be scaled down to a restoration level where individuals, or even blocks or HOAs could undertake the task to change the way their yards and communities look. This not only creates a more appealing and unique place to live, but benefits our health by reducing noise, heat, and polluted air and runoff. For help in changing your community, contact us at mcgeej@hillsboroughcounty.org or the Florida Yards & Neighborhoods Program at 744-5519.

Education & Innovation in Citrus Park

By Don Hardy, 06-912 Representative.

For the majority of us, Biology was a mandatory class in high school. We all remember cutting up the frog but beyond that we may have retained little. For me, Adopt-A-Pond took me back to class.

Neighbors were complaining about the duckweed covering the pond, demanding that something be done. I came up with a few options to get it out, but once we removed the duckweed, on came the algae bloom. I was in over my head, so I went back to Biology 101. I looked into dissolved oxygen, nitrogen, phosphorus, and potassium...and I thought Chemistry was behind me.



Check out more about floating islands on the wateratlas under Pond 06-912.

My pond problem turned out to be excessive nutrients: nitrogen and phosphorus. Hence, duckweed began to flourish to the point it covered the pond. In fact, the problem was not the duckweed, that was nature's solution. Once removed, the nutrients were left behind. The sun now beat down on the water, making a perfect incubator for algae growth. I needed a way to consume the nutrients. I studied scientific reports and found wetlands were the answer. I needed to build wetlands and plant nutrient consuming plants. Finding lowlands suitable for planting proved difficult in my pond. I needed a way to place the plants that would move up and down with the water level.

A floating island project was born. Bulrush, canna lily, blue flag iris, and pickerelweed were chosen to become nutrient absorbers. It turned out better than expected. The plant root systems not only take out the nutrients but put back oxygen. The oxygen is needed by beneficial bacteria. The beneficial bacteria consume nitrogen and inhibit the growth of algae. The plant grouping has not only been beautiful to look at but a huge nitrogen consuming engine powered by the sun. The plants uptake the nitrogen and phosphorus, and store it in the plant structure itself.

In a matter of months Adopt-A-Pond put me through one Biology course after another. I am a far better steward of our planet today than I ever was before.

Bulrush is hearty and great for any water body.

Pond Plant Spotlight– Bulrush

Soft-stem Bulrush (*Scirpus validus*) is a native-Florida plant found in freshwater marshes, lakes, and streams. It can grow in water up to 6 ½ feet deep and measure 10 feet tall, but stays smaller in shallower water. Stems grow close together from underground rhizomes, and are ¾" in diameter at the base, tapering to points at the top. Stems are slightly rounded, spongy, and soft to the touch. It produces small nutlets that are used for food by a wide variety of waterfowl, marsh birds, and upland birds. Geese, ducks, and other animals will eat the stems and rhizomes.

Bulrush provides nesting material and cover for a wide variety of wildlife, habitat for invertebrates, and shelter for young fish. The Florida Fish and Wildlife Conservation Commission lists bulrush as one of the most desirable aquatic plants, as well as one of the easiest to maintain and use in landscaping.

Lake & Stream News

Septic Tank Mapping needs you!

Septic tanks are basically mini sewer treatment devices that many people install for homes that do not have access to sanitary sewer. They can be very effective at cleaning sewage, but they require consistent upkeep to perform well. Unmaintained septic tanks, while they will still allow toilets to flush for many years, stop treating the water and simply flush untreated sewage out into the surrounding area. This can pose a serious public and environmental health issue.

To help us monitor and avoid such problems, Hillsborough County has been attempting to map septic tanks in the county for several years. This may seem like a simple task, but in a growing region like ours, there are large areas that now have sanitary sewer where it wasn't available before. This means there are houses that still have septic tanks interspersed through areas that don't. To further complicate things, some houses that had tanks have hooked up to sanitary sewer, and there is no single filing system to track any of this. Nonetheless, we have made tremendous progress with the help of the Florida Center for Community Design and Research at USF.

Using what bits of reliable information we could piece together from various sources, we have created an interactive map of septic tanks that includes a ranking system to identify how likely an area is to have septic tanks. As with any large effort like this, errors work in and need to be "ground truthed" as we say.

That's where you come in. Please go to **www.hillsborough.wateratlas.org** and click on Septic Tank Study under Recent News on the left side of the page. This will give you instructions on how to use the mapping tools to find your location and verify if you have a septic tank or not. If you are already familiar with the Atlas mapping feature, you can simply go to the map and get started.

Every person that verifies for us helps us improve the map and the mapping process in general. Please help us keep our residents safe and our waters clean for fishing, swimming, and everything else.

Restoration Grants

The Florida Lake Management Society is offering five grants of $200 to residents for lake restoration projects in Hillsborough County.

To qualify, the project must be on a lake in unincorporated Hillsborough County. The lake must have an active Lakewatch volunteer.

For details on how to apply, check out the announcement at **www.hillsborough.wateratlas.org** or call 744-5671.

USF UNIVERSITY OF SOUTH FLORIDA LAKEWATCH

www.hillsborough.wateratlas.org

Lake, Pond & Stream Night 2009

Lake, Pond & Stream Night is our annual celebration of all our program participants' efforts. It's a great time to see what other groups are doing and learn more about lakes, ponds, and streams. This year the event was held on April 3rd at the Museum of Science and Industry (MOSI) in Tampa. We had 22 exhibitors, 3 special presentations, and lots of giveaways. Over 300 people attended.

Attendees could browse exhibits and complete our Exhibit Challenge for raffle tickets. They could also participate in a focus group on pet waste education, learn about worm composting, and ask our panel of experts about ponds and lakes. Raffle tickets were also given out for participating in one of the presentations. In addition, all MOSI exhibits were open for free and attendees could receive a discount on IMAX and the Body Worlds special engagement.

Once again, I'd like to thank all our exhibitors and program participants who attended. Thanks for another great event, and thanks for all you do throughout the year to care for our water resources.

Exhibitors helped guests learn more about programs, products, and services related to lakes, ponds & streams.

A Special Thank You to all of our Sponsors

Ayers Associates
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and Speakers

John Walkinshaw & Katie Downey
Barbara Watson
Chris Capkovic, Jim Griffin, Don Hardy

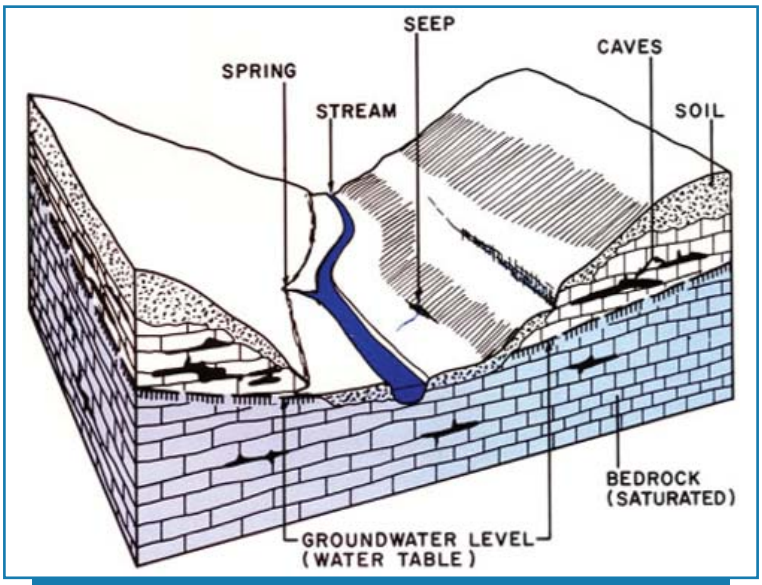
Officer Snook greeted guests of all ages and passed out free T-shirts!

Refresher Course: Water Levels

In times of drought, water level becomes a concern for waterfront residents. We get plenty of calls asking what can be done about water level.

Unfortunately, there isn't much anyone can do to get water into a water body when it's in short supply everywhere in the region. But sometimes it helps to understand the big picture.

All fresh water bodies in Florida are supplied by just two sources: rainfall, and groundwater. (Groundwater is actually supplied by rainfall as well, so this is really just one source.) Water bodies can get water from one or both of these places.



This diagram illustrates how water is connected.

In the case of groundwater, there can be springs, which are direct flowing connections to the aquifer, and seeps, which is when groundwater moves through soils. Contrary to popular belief, most groundwater influence in this county is from seeps, not springs. Seepage happens when the surface of the land dips below the level of water in the soil, called the water table. Since water is fluid and 'seeks its own level' as they say, it spreads out perfectly level until it is stopped by something. (There are other hydraulic properties that can influence this, such as pumping, gradients, etc. but that's beyond this article.) Your pond, lake, or stream will only hold water if the water table is above the elevation of the pond, lake, or stream bed.

Water levels can be temporarily higher after a rain, which brings us to the other source of water. Rain enters water bodies by either directly falling into them, or flowing downhill on the ground to reach them. Since water moves across the ground faster than it moves through soils, it will stack up in water bodies after a rain. But it will quickly go back down to the water table level as the water has time to soak through the soil.

The fact that water bodies are so low right now is a direct indication of how little water there is. Rain has been scarce, and that reduces groundwater levels. To make matters worse, when there is less rain, we have to take more water from rivers and wells to meet the demand...which goes up because people want to irrigate more...so it's a vicious cycle that can only be broken by conserving water and avoiding uses that are not necessary, or by getting a whole lot of rain. Obviously we can only control one of those factors.

Rainfall patterns can be influenced by human activities, such as development, in what is known as the heat island effect. This happens when large areas of heat-reflecting surfaces such as pavement and roofs create rising columns of hot air. This drives moisture up in the atmosphere. It tends to be drier on the windward side of a heat island and wetter on the back...like a reverse rain shadow.

Sometimes of course, rain water doesn't flow quickly into waterways. Wetlands act as large sponges that slow water and hold it back. The more wetlands can hold, the less drastic dry periods will be. But on the reverse, wetlands need to fill up before they will spill over into water bodies. This means it will take a long period of rain to really bring up water levels. And it will take even more to truly replenish the groundwater and relieve the drought.

In the meantime, we can all help by enhancing and protecting wetlands and keeping water only for necessary uses. If your pond is bare, plant it! If your yard depends on more water than it can naturally get, change it! This way we'll use water wisely: reducing demand when it's scarce, and saving it for another dry time when it's plentiful. Rain is never guaranteed, and our water is all connected. Unfortunately, we take it for granted that the tap will always flow when we turn the handle.

The Adopt-A-Pond Program
Hillsborough County Public Works Dept.
Specialized Services
2420 N Falkenburg Rd.
Tampa, FL 33619
Bill to Mail Code 1384

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Watershed Presentations

Any groups or organizations interested in hearing about the Hillsborough River watershed are invited to contact the Hillsborough River Watershed Alliance. The presentation **"Making Better Choices for a Healthy Watershed"** highlights the watershed, its environmental status, impacts on water quality, what residents can do to reduce pollution, and where to get help in protecting the watershed. The program is free.

For more information or to book a presentation, please contact the Hillsborough River Watershed Alliance at **hrwafl@verizon.net** or call (813) 245-0583.

Make a Terrarium

A terrarium is a garden in a closed container. Because it's closed, you can watch the water cycle in action and grow some beautiful plants too. Here's a terrarium you can build yourself.

Mrs. Drake's 1st grade at Mango Elementary made terrariums!

You need two 2-liter soda bottles; clear is best. Take the labels off, then cut them both in half carefully. Keep the bottoms and recycle the spouts (they make great funnels.) Next fill one bottom half-way with potting soil. Plant your favorite plants in the dirt. Small plants from pond edges usually do well in terrariums. Be careful to dig up the roots without hurting them. Water your new plant until the soil is pretty wet. If you are using plants that grow in wet places, make it soggy. Then flip over the other bottom and carefully slide it over the plants. Now place your terrarium in a sunny spot, but not too hot, and watch it grow!