Hillsborough County Florida

Volume 27, No. 4 | Fall 2026

On Our Pond

Quarterly Newsletter Published By: Hillsborough County Environmental Services Division



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Information About Super El Niño

You may hear people talking about the impending super El Niño and how it will impact the weather. But what does this mean for stormwater ponds? An El Niño weather pattern is generally characterized by cooler air temperatures and an increase in rain chances. While cooler air won't necessarily be bad for stormwater ponds, more rain could have some negative impacts. As of now, the El Niño is projected to be the strongest in recorded history, but we can only draw conclusions based on previous years.

When rain chances increase, there is also an increase in the potential for erosion along pond banks from wave action as well as surface runoff. Weather events typically mean an increase in wind and therefore more waves. While the waves in a stormwater pond look nothing like the ocean, they still affect the shoreline by slowly breaking down the sediment. Sediment also breaks down from an increase in stormwater runoff because the runoff, traveling at higher speeds due to an overall increase in impervious surfaces, undercuts the shoreline as it rushes towards the pond.

Another negative impact from increased rain chances is the potential for more pollutants to reach the pond. Stormwater pollutants can be nutrients such as nitrogen and phosphorus, sediments, heavy metals, herbicides and pesticides, etc. In general, whenever it rains, there is potential for these pollutants to enter a stormwater pond. The increased chances of rain just increase that potential. Residents who live on stormwater ponds should be extra cautious with their fertilizer applications, pesticide applications, and in general what they leave on their lawn. While the ban on nitrogen fertilizers is over for the year, residents need to be more aware of their applications and not apply when heavy/continuous rain is expected. Fertilizer runoff into stormwater ponds causes a spike in nutrients that can lead to algae blooms and fish kills. If your pond doesn't already have a vegetative buffer, now would be a great time to establish one to help reduce the amount of pollutants reaching the pond. More information about vegetative buffers can be found in the On Our Pond Summer 2024 newsletter.



Storm Drain Marking Program

Did you know that Hillsborough County provides storm drain markers to residents for free? Storm drain markers are placed on curb inlets as reminders that storm drains are only for rain - not oil, grass clippings, leaves, fertilizers, trash, or pet waste! Kits can be requested and include storm drain markers, glue, and door hangers to let everyone in the neighborhood know about the markers and the message they carry. Go to https://hillsborough.wateratlas.usf.edu/adopt-a-pond/storm-drain-marking-kit.aspx and fill out the requested information for your storm drain marking kit today!

Why We Haven't Planted Ponds in 2026

2026 has been an unusually slow year for Adopt-A-Pond plantings. So, what changed from previous years? This year in particular has been exceptionally dry because of the ongoing drought. Most of the plants Adopt-A-Pond provides are classified as emergent vegetation, which means they are rooted in water with a majority of the plant above the water line. Pond levels have been so low that there is nothing but dry soil where emergent plants go. If the program were to move forward with planting, the plants would not survive. The images on the right are an example of the normal water level compared to the water level during the drought. Established emergent plants can survive periods of drought and flooding, but new plants have no chance of survival in dry conditions.



The typical water level in this pond



The water level during the drought

So, what can residents do to help their ponds when water levels are so low? If the water levels in your pond are low, that's a great time to remove trash/debris that is usually underwater. Also, it's the perfect time to remove invasive vegetation such as peruvian primrose willow. This invasive plant, shown below, is best removed manually by pulling up the entire plant along with the roots. Peruvian primrose willow grows very quickly and can be quite large (as seen in the picture below where it stands about 8ft tall), so removing it before it gets too big is the best method.



Ponds and How We Fix Them

Some of the common problems associated with stormwater ponds are algae growth, invasive vegetation overgrowth, and shoreline erosion. However, there is not a one-size-fits-all solution to fix all three problems. Each individual problem needs a unique management plan. So, what should you do if you see one of the following problems? Pictured below are ponds in Hillsborough County with different problems. Next to each picture is the recommended maintenance for each problem.



Salvinia

This pond is covered almost entirely in salvinia (*Salvinia minima*). The maintenance recommendation would be manual removal by skimming it off the top of the water. However, keep in mind that fragmentation can propagate the plant, leaving the possibility of it coming back. If chemical methods are deemed necessary, the most widely used and effective are diquat, glyphosate, flumioxazin, or carfentrazone-ethyl. Routine maintenance will be required to keep the salvinia from taking over again.



Algae

This pond is starting to get a bad algae problem in one corner, and the residents don't know why. Upon further investigation it was discovered that the lawn maintenance company was getting grass clippings into the pond. The wind was bringing most of the vegetation into one corner, creating an algae problem. The maintenance recommendation in this case is to make sure all grass clipping are directed back onto the grass. What might seem like a small task can have a big impact on water quality, and the algae should start to go away.



Hydrilla

It's sometimes hard to see because it grows under the water, but this pond has a very bad hydrilla (*Hydrilla verticillata*) problem. Hydrilla is an invasive, submerged plant that can grow several inches a day. This plant can reproduce from broken fragments, will grow and spread via rhizomes, and even spread due to special turions. The recommended maintenance for hydrilla is a multi-modal approach including physical and biological control. For a more in-depth maintenance plan, check out the Spring 2026 newsletter article "The La Paloma Pond Revitalization Project."



Torpedograss

This pond has a torpedograss (*Panicum repens*) problem, but that isn't as unique as the previous ponds. Almost all ponds have torpedograss growing around the perimeter in some form. The recommended maintenance is chemical with quarterly treatments. Torpedograss grows from long rhizomes, so manual removal will not address the problem. Quarterly treatments is typically the sweet spot because there has to be green, living plants for the herbicide to work. Keep in mind, torpedograss will not be removed permanently which is why regular maintenance is so important to keep it from taking over.



Erosion

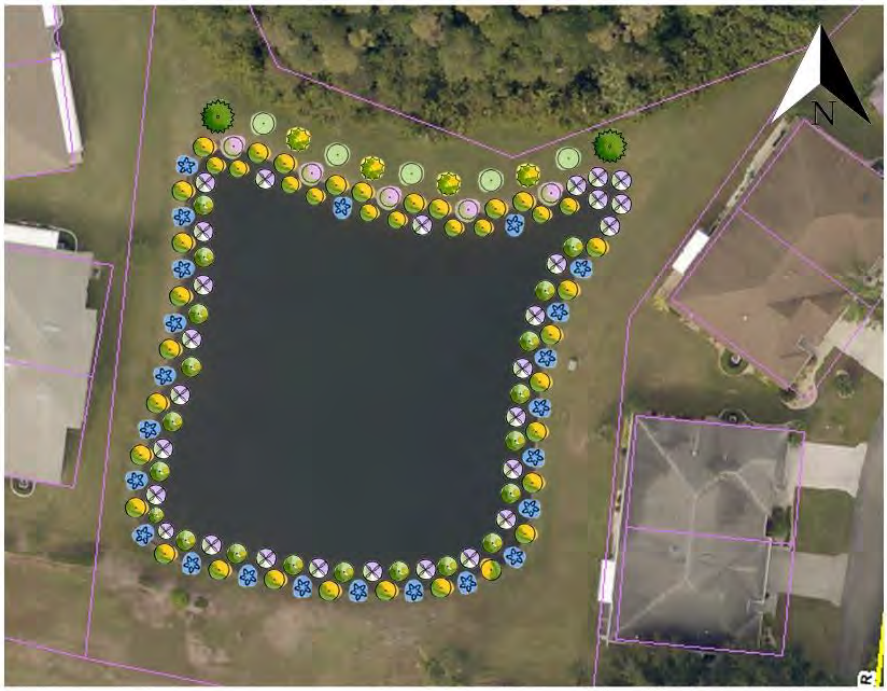
This pond is starting to lose shorline because of erosion. To minimize further erosion, it is recommended to plant dense emergent vegetation in the water in front of the eroding shoreline. The plants help by slowing down wave action that typically hits the shoreline. Also, the root systems help stabilize the sediment. If the problem is already requiring further action, there are ways to rebuild the shoreline. It is very important that vegetation is immediately planted on the newly reconstructed shoreline to prevent it from eroding away.



Can you identify the problems in the pond to the left? Use the examples above to help!

How We Design Ponds for the Adopt-A-Pond Program

As mentioned in a previous On Our Pond Newsletter, Hillsborough County provides free pond recommendation reports to residents within the unincorporated portion of the county. These reports document current pond conditions, provide best management practices for invasive vegetation, and even include recommendations for native vegetation that would benefit the pond. If you've ever been in the Adopt-A Pond Program though, you may have noticed the County also provides planting plans and narratives. The plans show an aerial view of the pond with different symbols all representing different plants and where they should be planted. The narrative goes into more detail about how far apart plants should be planted, at which water depth they should be planted, and how far from the shoreline they should go. The goal of these two documents together is to allow residents to conduct their pond plantings with the highest chance of success in establishment. But how are these plans created? The county will first make an in-person visit to a pond to see the shoreline, water depths, existing vegetation, etc. This will give an idea as to what plants are more likely to thrive, what parts of the shoreline can and can't be planted, and what invasive/nuisance vegetation needs to be removed before planting. The next step is collaboration with the pond group and/or the residents living around the pond as well as the aquatic management company maintaining the pond (if there is one). This step is crucial to determining which plants are favored, if height of plants is a concern, if there are anywhere plants should not go, and how the management company will need to change their treatments to ensure new vegetation has the best chance at success. Once everything is decided, it is time to measure the perimeter of the pond using GIS software to estimate the quantity of plants needed. As seen below, the result is a planting plan. Combined with the narrative, these documents have helped groups plant ponds all over Hillsborough County.



Key

- Duck potato
- Pickerelweed
- Blue flag iris
- Golden canna
- Swamp rosemallow
- Muhly grass
- Fakahatchee grass
- Bald cypress





What kind of animals do you see on your stormwater ponds?

How to Identify and Report an Illicit Discharge

Have you seen something other than stormwater entering a stream or lake, or witnessed somebody dumping something down a storm drain? Are you concerned about sediment washing away from a construction site? Hillsborough County makes it easy to report illegal dumping or discharges. Here is a link to report discharges or dumping into waterbodies, curb inlets, or stormwater ponds: https://hillsborough.wateratlas.usf.edu/atlas-forms/ReportPollution.

To report illicit discharges, first make sure to write down key information. Don't be brief; describe everything you know about the situation. It is essential to thoroughly describe the facts. Describe exactly where the problem occurred, including the address. Be specific about how much material you saw. Describe the people involved. Was the weather an important factor? What was the exact time and duration of the event? Listed below is a brief example of the information you will need to report:

- Date and time of incident
- Location of incident
- A description of the illegal activity witnessed
- Waterbody (optional)
- Photos (optional)
- Contact information (optional)

Examples of illicit discharges you can report!



Sediment tracking from a nearby construction site



Resident blowing yard debris down a storm drain