

LAKE MANAGEMENT NEWSLETTER

Managed by Seminole County Lake Management Program • Winter 2023

Winter 2023

Our Seminole County Lake Management Program (SCLMP) would like to wish you a happy 2023! We have an exciting Lake Management Newsletter for you, with lots of new features. We hope you will enjoy reading about your lake or pond. Please contact Thomas Calhoun at tcalhoun@seminolecountyfl.gov or 407-665-2459 with any questions.

In This Edition

- Highlights for each lake and pond
- Upcoming meetings with waterway communities
- Results of LVI assessments
- New glossary section
- Staff updates, including new members!

“The Seminole County Watershed Management Division’s Mission is to Protect, Conserve and Restore Seminole County’s water resources.”

[Seminole County Watershed Management Website](#)



Quick Links

- [SCLMP website](#)
- [Water Atlas](#)
- [MSBU website](#)

Waterway Assessments

Lake Amory

The recent Hurricanes increased water levels to record highs. The carp barrier received no damage during and after the storms allowing adequate flow. **No Hydrilla** was observed in our recent inspections. The areas around Lake Proper and Bird Island were looking great; the **tussocks** were removed. The bladderwort was growing in the shallower water in this area but requires no treatment at this time. The Cove was in good condition and clear; we are managing the torpedo grass and alligatorweed. With water levels high, these are the only plants that can be treated without potential harm to home-owners' yards. The outfall canal is clear, vegetation around the carp barrier continues to be treated as growth pops up. All of Lake Amory access corridors are open and accessible.

LVI Score: 50

Category: Healthy; August 2022. This is an improvement from the Impaired score of 41 from the previous year. The increase in score was due to an increase in dominant native taxa.



Lake Asher

A new lily pad treatment plan is in effect, allowing lily pads to grow and absorb nutrients on the west side and allowing more access for residential access on the east side of the lake. Eel grass is a native SAV that absorbs nutrients, but it can impede access to the lake. Treatments are being made to reduce eel grass in areas of homeowner lake access. Algae is treated as needed; colder weather restricts algae's ability to grow. Invasive shoreline plants are treated when they appear.

LVI Score: 55

Category: Healthy; 9/12/22. This was an increase from an Impaired score of 41 in 2021, due to an increase in dominant native taxa.



Belair Lake

Water levels in past inspections were high due to the recent storms. Water continues to flow out of Deforest and into Lockhart Smith Canal but is slowing as we get closer to normal levels. **No Hydrilla** was noticed in recent inspections. Torpedo grass and alligatorweed are being treated. Bladderwort is being monitored but no treatment action is required at this time. Bladderwort is a native aquatic plant that is carnivorous, feeding on mosquito larva. Access corridors are being maintained and are accessible. The canal to East Crystal is being maintained to allow access in and out.

LVI Score: 59

Category: Healthy, August 2022. This is attributed to having an abundance of native sensitive taxa that inhabits the water body. This was the first year an LVI was conducted.



Lake Burkett

As of May 12, Orange County has restocked Lake Martha and Lake Burkett with 220 grass carp for *Hydrilla* maintenance. No *Hydrilla* or other invasive SAV were observed during the most recent inspections. Access corridors are open, accessible, and will continue to be maintained. Treatments of lily pads continue to be conducted to control overgrowth. Tussocks can be formed from uprooted lily pads. Native SAV such as bladderwort, eel-grass, milfoil, and lemon bacopa were observed in recent inspections. This native SAV will help improve water quality and outcompete *Hydrilla* for space.

LVI Score: 59*

Category: Healthy, most recent LVI in 2021*. This score was attributed to the high percentage of native taxa within the water body.



Buttonwood Pond

The shoreline plants installed at the May 2022 SERV event have been impacted by the high-water level from the recent hurricanes. The October SERV event will be rescheduled for Spring 2023. A reduction in Chara, a native species of SAV, was observed in our recent inspections. We will continue monitoring the invasive plants and treat them when they appear.

LVI Score: N/A



Deforest Lake

Record rainfall from the storms increased the water level of Deforest. The carp barriers were raised before both storms to allow water to flow freely. **No Hydrilla** was observed in the recent inspections. The aeration systems were installed in October. Aerations systems enhance circulation, allowing water at the lake bottom to move to the surface. This increases the likelihood of oxygenation, reduces the chance of stratification. Enhanced circulation improves water quality, reduces the likelihood of algae, and improves fish habitat.

LVI Score: 34

Category: Impaired. The low score was attributed to a low number of native taxa in the water body. This was the 1st LVI assessment at Deforest.

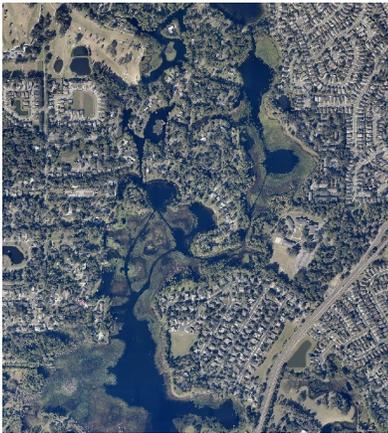


East Crystal Chain of Lakes

Water levels are starting to recede from the recent storms. **No *Hydrilla*** was observed in our recent inspections of East Crystal. Access corridors are being maintained and are open, allowing access to the entire chain. A tussock has popped up on the east side of the lake but is not impeding the accessibility of the lake. An LVI was conducted on East Crystal this year.

LVI Score: 58

Category: Healthy. This score is attributed to all the native taxa that inhabits the water-body. The native taxa help improve water quality, oxygenation, and wildlife habitat.



English Estates Pond

With the recent storms, excess water and nutrients may have entered the pond causing the slight algae bloom on the water's surface. Algae treatments using SeClear are occurring monthly. This product is designed to maintain healthy water quality by reducing phosphorous while controlling algae blooms. Invasive shore-line plants like alligatorweed and torpedo grass are treated upon observation. No SAV was noticed in the recent inspections. Any new lily pad growth is being treated to prevent spread including the large patch on the east side of the pond.

LVI Score: N/A



Grace Lake

Recent hurricanes Ian and Nicole brought the water level to historic levels. On September 29th of 2022, we recorded a water level on Grace Lake of 64.98 ft above sea level. Excess nutrients could have entered the lake from all the rainwater runoff from roads and lawns. Sprigs of *Hydrilla* were noticed along the shoreline of the lake. The native SAV southern naiad is currently topping out and out-competing *Hydrilla* for space. Treatment of *Hydrilla* is currently not necessary. In December 2022, 20 Grass carp were stocked to control *Hydrilla*. An access ramp is being constructed to reduce the creation of divots from inspections. Its construction has been delayed due to the high-water level.

LVI Score: 31

Category: Impaired; 9/29/22. This score reflects the scarcity of sensitive native taxa in the waterbody.



Horseshoe Lake

Hydrilla was observed in recent assessments. An integrated management plan (treatments, grass carp) is the best option for managing this invasive species. Treatments have been conducted monthly to knock *Hydrilla* off the surface. 50 grass carp were stocked into the lake in December 2022 to manage deeper submersed areas/new growth. Grass carp will be stocked at a rate that will allow them to consume *Hydrilla* without moving on to eat native SAV. Native eel-grass (SAV) has been observed expanding into deeper waters, which will limit the growth of *Hydrilla* via competition. Water hyacinth was not observed in recent lake inspections. Access corridors are open and accessible. The in-flow canal and out-fall area will continue to be monitored for blockage to ensure adequate water flow.

LVI Score: 44

Category: Healthy; August 2022. The score decreased from the previous LVI due to *Hydrilla* being observed in all sections sampled.



Howell Creek

An increase in water level and flow resulted from the fall hurricanes. The barriers downstream were opened to allow for better water flow and limit blockage before the storms and left open after the storms to allow the creek to return to normal water levels. Hydrilla in the creek will be treated when the flow of water reduces. Native eel-grass (SAV) in the creek is growing well and will spread into the space currently occupied by Hydrilla after the treatment. The City of Winter Park will treat their section of the creek for Hydrilla when the water flow slows as well. Invasive shoreline plants are being managed when they appear. Water hyacinth was not observed in our recent inspections.

LVI Score: N/A



Lake Howell

The carp barrier downstream of Lake Howell was opened so that water flow would not be restricted by clogging debris during Hurricanes Ian and Nicole. *Hydrilla* was observed in recent inspections and is being controlled by triploid grass carp. Invasive water hyacinth was also found on the lake. Our herbicide contractor was notified and has treated the hyacinth. Since the treatment, water hyacinth has not been observed during inspections. Invasive *Hygrophilla* (SAV) was observed as well, and treatments are underway to control the spread of this species. Native eel-grass (SAV) is helping to prevent the spread of invasive SAV by outcompeting the invasive plants for space around the waterbody. A reduction in algae was noticed in the overall lake since last year. Access corridors are open, accessible, and continue to be maintained.

LVI Score: 43

Category: Healthy; August 2022. The score decreased from previous years due to the reduction in native sensitive taxa.



Lake Mills

Baby's tears (a *Hydrilla* look-a-like) grows slowly in winter, but rapidly in the summer. Treatment of this plant requires FWC permitting; up to 1 acre of floating baby's tears can be treated per month. Management of baby's tears is conducted to prevent canals from being congested and to prevent overgrowth. **No *Hydrilla*** was observed during recent inspections on Lake Mills. The submersed vegetation density of the lake was mapped in December and results can be accessed through the Seminole County Water Atlas in upcoming months. With the recent hurricanes, the carp barriers were raised to allow water to flow freely and limit any blockage. The barriers were lowered after conditions returned to normal.

LVI Score: 63

Category: Healthy; mid 2022. Mills has remained in the healthy category for the past fifteen years due to the abundance of native taxa surrounding the lake.



Mirror Lake

In December 2022, 31 Grass carp were stocked into Mirror to help control the *Hydrilla*. Native SAV species including lemon bacopa, baby's tears, bladderwort, and eel-grass are doing well. Lily pads are being managed for access corridors to allow recreational ease around the lake. A native lily pad called American lotus has been observed in the southern lobe. Treatments of this lily pad will be made to control its growth as it can grow exceptionally fast. Mechanical removal of tussocks from the lake is planned. Bladderwort is treated when it breaks the surface of the water to reduce its impact of boat access and corridors. An access ramp was installed for better accessibility to the lake for its residents and contractors.

LVI Score: 46

Category: Healthy; July 2022. This is the twelfth consecutive year Mirror Lake remains in the Healthy Category.



Myrtle Lake

The water level continually rose after hurricanes Ian and Nicole, reaching a height of 49.6 feet above sea level in mid-November. The carp barrier was monitored for any blockage to allow adequate drainage during and after the storms. *Hydrilla* was noticed around the lake, in places less than 2 ft deep, just off the shoreline. In our most recent inspection, we noticed a reduction in the *Hydrilla*. 34 grass carp were recently stocked in December 2022 to control this invasive plant. An access ramp is being installed to reduce erosion from boat launches. Treatment of the north access canal is completed; the vegetation left in the canal will be maintained at its current size.

LVI Score: 52

Category: Healthy; August 2022. Myrtle Lake has been in the Healthy category for three consecutive years.



Lake Pickett

Cattails are being maintained to halt their undesirable spread. The beneficial SAV bog moss has been found expanding to deeper depths. Invasive plants/nuisance plants such as *Hydrilla*, water hyacinths, and water lettuce were not observed in our latest lake inspections. Orange County plans to stock grass carp early this year for *Hydrilla* prevention.

LVI Score: 68*

Category: Healthy, most recent LVI from 2021*. This slight increase in score from the previous year is attributed to a high population of native taxa with few invasive taxa.



Pine Lake

The aeration system was installed in October. This will circulate the water to support oxygenation, which will reduce the chance of algae blooms. In the recent inspections of Pine Lake, **no *Hydrilla*** was detected. Access corridors are open and being maintained to allow access to the East Crystal Chain of Lakes. Invasive torpedo grass, alligatorweed, and parrots feather are being treated to prevent their spread. The lily pads are being maintained to prevent new growth. Recent water quality sampling has shown stormwater runoff coming from Country Club Oaks pond and Country Club Rd is low in nutrients.

LVI Score: N/A



Spring Lake

Before Hurricanes Ian and Nicole, the carp barriers were lifted to allow easier waterflow. No damage to the barriers or structures took place. A slight algae bloom occurred, mostly accumulating in the south-east side of the lake. This was most likely caused by runoff bringing in excess nutrients from the recent storms. The algae will be monitored to see if a treatment will be necessary. In recent inspections a few patches of *Hydrilla* were noticed along the shoreline in shallow depths. A treatment plan for *Hydrilla* was established. After treatment, in December **42 triploid grass carp were stocked** into Spring Lake. Grass carp primarily target *Hydrilla* as a food source, so growth and spread of this invasive should be halted. Invasive torpedo grass and alligatorweed are also being treated along the shoreline. All access corridors are being maintained and are open and accessible.

LVI Score: 53

Category: Healthy. This result is due to native species being dominant in the waterbody.



Spring Wood Lake

In recent inspections, no *Hydrilla* was observed. Invasive torpedo grass and alligatorweed continue to be treated, preventing growth into the water. Bacopa and road grass, native species of SAV, are starting to grow. The presence of native SAV will bring benefits to the lake such as nutrient reduction, improvement of fish habitat, and competition for any invasive species. Lily pads are being maintained, allowing the access corridors to stay open and accessible.

LVI Score: 40

Category: Impaired, August 2022. The low LVI score is due to a lack of sensitive native taxa.



Springwood Waterway

Lemon bacopa, a native species found at the entrance of the waterway, is being maintained. The fragrant waterlily found in the waterway in a few spots is also being monitored and maintained, allowing for boat accessibility. Invasive torpedo grass and alligatorweed continue to be treated along the shoreline. The beneficial native shoreline plants installed along the edge (pickerel weed, fire flag, duck potato and bull rush) are growing exceptionally well.

LVI Score: N/A



Sweetwater Lake

The Salvinia treatment was a success, opening the waterbody back up. With the recent hurricanes, the rainfall helped to flush out the Sweetwater canal system. Treatments will continue as normal due to the high nutrient intake of the Sweetwater system. The lake portion of Sweetwater will have the lily pads thinned out for more open water that will enhance flow. The native shoreline vegetation (pickerelweed, duck potato, canna, and fire-flag) is all growing well. Native vegetation will help improve water quality by uptake of excess nutrients. Invasive alligatorweed and torpedo grass continue to be treated along the shoreline as they appear. Algae (Lyngbya) growth has recently been limited due to cooler weather.

LVI Score: N/A



Lake Sylvan

Hurricanes Ian and Nicole brought a lot of rainfall to the area. Before the storms the weir on the north side of the lake was lowered, allowing the excess water to flow out. The lake is now reaching its normal water levels. *Hydrilla* was observed in the most recent inspection, mostly in the southern end of the lake. Triploid grass carp will be ordered and stocked early next year to control the *Hydrilla*. Several native species of SAV were also observed including lemon bacopa, eel-grass, bladderwort, and road grass. These plants contribute to the water quality of Lake Sylvan. The access corridors were open and accessible and continue to be monitored.

LVI Score: 62

Category: Healthy; mid 2022. Lake Sylvan has remained in the Healthy category for several years.. The score reflects the abundance of native sensitive taxa that are dominant the ecosystem



Lake Tuskawilla

Record high water levels were recorded after Hurricanes Ian and Nicole. The carp barriers were removed before the storms to prevent any blockage, allowing better water flow. After the storms, Tuskawilla was declared a no-wake zone due to water levels. The barriers remain off; a plan is in place to redesign the barrier to increase surface area and maximize water movement. **No Hydrilla** was discovered in recent inspections. The grass carp seem to be keeping the *Hydrilla* in check. Native eel-grass (*Vallisneria americana*) is starting to take root in the waterbody. This native SAV will benefit the lake through nutrient reduction, improved water quality, and providing competition for space with the invasive *Hydrilla*.

LVI Score: 55

Category: Healthy, September 2022. The score reflects the abundance of native taxa around the waterbody. The lake has been in the Healthy category for 13 years.



Lake of the Woods

With the massive water intake from Hurricanes Ian and Nicole, runoff bringing in excess nutrients has caused algae blooms and rampant growth of coontail. Coontail is a free floating, native species of SAV with no roots; it tends to accumulate on the wind driven side of the waterbody. A perimeter treatment for the reduction of algae and coontail was conducted, which reduced growth. *Hydrilla* was observed in a few areas in recent inspections, but it is being contained and outcompeted by the native eel-grass. Triploid grass carp acquisition is in progress for *Hydrilla* and eel-grass control. The SERV planting event that took place in early fall along the shoreline of Lake of the Woods HOA did extremely well.

LVI Score: 37

Category: Impaired, July 2022. This score was due to a reduction in sensitive native taxa that inhabits the waterbody.



Glossary (A-L)

Access Corridor- An area free of aquatic vegetation, which provides access to open water.

Aeration System- a device designed to help introduce dissolved oxygen into a waterbody to improve the quality and health of that waterbody.

Alum (aluminum sulfate)- A compound used to reduce the amount of the nutrient phosphorus in the water.

Aquatic Plant- plants growing in water either floating on the surface, growing up from the bottom of the water body or growing under the surface of the water.

BioBase- A program using sonar to map out in detail the depth, aquatic vegetation abundance, and bottom hardness.

Carp Barrier- A barrier constructed at the outflow of the waterbody, allowing water to move through but not allowing the carp to escape.

Emergent Aquatic Plant- Rooted to the lake bottom, but their leaves and stems extend out of the water.

Eutrophication- The process of a waterbody that becomes enriched in dissolved nutrients.

Floating Leaved Plants- A plant typically rooted in the bottom sediments with leaves floating on the water surface.

Free Floating Plants- Plants floating on the surface with roots in the water column.

Frodus- A device tossed to the bottom of the lake that can collect submersed aquatic vegetation that cannot be seen from the surface.

Hydrilla- An invasive submersed aquatic plant, was introduced to Florida in 1950-1951 through the aquarium trade. *Hydrilla* is highly adaptable, growing in almost any freshwater systems. Each stem can grow 1-4 inches a day and can grow off broken segments.

Invasive Species- A nonnative organism that has spread or expanded its range from the site of its original introduction and has the potential to cause harm to the environment, the economy, or to human health.

Littoral Zone- The down-sloping shelf of a pond or lake. Stretches from the high-water mark to the shore and into the area where the sunlight penetrates through to the sediments at the bottom of a waterbody (shallow water area near the shoreline).

LVI- Lake Vegetation Index, a bioassessment procedure that measures the degree to which a freshwater lake supports a healthy, well-balanced plant community.

Glossary (N-W)

Native Species- An organism that occurs naturally in that ecosystem through natural distribution.

Nonnative Species- An organism that does not occur naturally in an area but is introduced through deliberate or accidental human activities. This category includes invasive species as well as organisms that do not cause ecological or economic harm.

Normal Highwater Elevation- The visible line along the shoreline where water has had a long-term presence.

Outflow- The location where water from the lake or pond discharges downstream.

SAV- Submersed Aquatic Vegetation.

Secchi- A disc with alternating black and white quadrants. It is lowered into the waterbody until it can no longer be seen by the observer. This is the Secchi depth, a measure of the transparency of the water.

SERV- Seminole Education, Restoration and Volunteer. A program that works to actively restore and educate people on how to protect the waterways and natural areas of Seminole County.

Shoreline Ordinance- Any shoreline alteration within unincorporated Seminole County will require a permit. The Ordinance is in place to protect the waterbodies from environmental stressors.

Shoreline Vegetation- Vegetation growing along the shoreline. Landscape can include upland plants growing in drier soils, transitioning to wetland species along the water's edge, and then emergent aquatic vegetation growing directly in the water.

Spot Treatment- A treatment for small patches of aquatic vegetation for maintenance and prevention of further growth into the water body.

Submersed Aquatic Vegetation- Aquatic plants that live at or below the water surface.

Taxa- A collection of one or more populations of organisms (taxa: plural, taxon: singular).

Triploid Grass Carp- A fish used in controlling aquatic vegetation. These carp are genetically altered (triploid) at hatcheries to prevent spawning in Florida waters.

Tussocks- A floating island made up of peat, mud, and plants.

Whole Lake Treatment- Treatment of an entire water body for aquatic vegetation.

Harmful Algae Blooms (HABs): New Hotline and Alerts

The Florida Department of Environmental Protection (FDEP), in conjunction with the Florida Department of Health (FDOH), has a new hotline and alert system for reporting observations of algae blooms: 1-855-305-3903, www.reportalgalbloom.com. Upon receiving hotline information, FDEP will sample the reported waterbody for the presence of blue-green algae. Bloom event information is then released by FDOH through Alert Seminole, a FREE automated, emergency notification system. Residents interested in receiving Alert Seminole notifications via email or phone can register [HERE](#). Residents can also check out blue-green algae sampling efforts with the interactive Algal Bloom Sampling Status Dashboard: <https://floridadep.gov/algalbloom>.

What is blue-green algae?

Blue-green algae is an ancient¹ microorganism that is found naturally in aquatic environments. Although commonly referred to as “algae”, it is actually a type of bacteria called cyanobacteria. Cyanobacteria acts like a plant or algae in that it feeds through photosynthesis and derives its energy from the sun. This free floating organism also fixes nitrogen from the atmosphere, which certain plants need to survive. As with true algae, blue-green algae blooms tend to be more extensive and last longer in waterbodies with excess nutrients (nitrogen and phosphorus). These blooms can occur at any time, but they are most prevalent in the summer and early fall when temperatures are high and storms bring extra nutrient pollution into our lakes, ponds, and rivers.

Is blue-green algae harmful?

Some types of blue-green algae, but not all types, can produce toxins that affect public health and contribute to environmental problems. The World Health Organization considers toxin levels under 10 micrograms/liter to “represent a low-level risk for adverse health outcomes from short-term recreational exposure; however, certain sensitive populations (e.g., children, the elderly and immunocompromised populations) may still be at risk even at low concentrations and should avoid any exposure².” Wildlife and pets can also be affected. Please visit the [FDOH website](#) to learn more about how to keep your family and pets safe from HABs.

¹Whitton, B.A., editor. "The fossil record of cyanobacteria". *Ecology of Cyanobacteria II: Their Diversity in Space and Time*. Springer Science & Business Media, 2012, p. 17.

²Florida Department of Environmental Protection - Freshwater Algal Blooms FAQs: <https://floridadep.gov/comm/comm/documents/freshwater-algal-bloom-faqs-2019>.

LakeWatch

Consider joining Florida LAKEWATCH, a citizen volunteer lake monitoring program that facilitates "hands-on" citizen participation in the management of Florida lakes, rivers and coastal sites through monthly monitoring activities. For more information, you can visit the website at <http://lakewatch.ifas.ufl.edu/> or contact Jason “Mo” Bennett (jpb@ufl.edu, 352-273-3639).



Report algal blooms at
www.reportalgalbloom.com
or call toll-free any time:
1-855-305-3903

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Seminole County Shoreline Protection Ordinance Approved

The Board of County Commissioners approved the Shoreline Protection Ordinance on April 27, 2021. Please see the key highlights below, or review the full ordinance [here](#).

Key Highlights

1. Any shoreline alteration will require a Seminole County Shoreline Alteration Permit unless it meets one of the exceptions.
2. Exceptions to the Shoreline Alteration Permit include:
 - Shorelines on waterbodies that are less than 2 acres or over 160 acres (shorelines on waterbodies larger than 160 acres require FWC permit).
 - If aquatic vegetation is removed via physical or mechanical methods within an access corridor of 50 feet or 50% of shoreline, whichever is less.
 - These rules only apply to shorelines within the unincorporated limits of Seminole County, and not to areas within city boundaries.
 - Permits will soon be available through the Seminole County's online permitting system (<https://www.seminolecountyfl.gov/departments-services/development-services/building/>).
 - The SPO requires new waterfront development or significant redevelopment to protect its shoreline by installing berm and swale systems or a vegetative buffer to reduce the stormwater runoff and associated pollutants from reaching the waterbody.



Board of County Commissioners approved the Shoreline Protection Ordinance on 4/27/21.

Please reach out to Thomas Calhoun for more information or further questions about this important program: tcalhoun@seminolecountyfl.gov, 407-665-2459.



Lake Tuskawilla shoreline

Ordinance webpage

Please [click this link](#) to visit the Shoreline Protection Ordinance webpage for more information and FAQs about the new ordinance. Contact: Shoreline@seminolecountyfl.gov or 407-665-2459,

Winter: Slow Release Nitrogen

As we enter a different time of year, we are reminded that aside from the change in temperature, we need a change in our fertilizing philosophy. The use of fertilizer containing nitrogen becomes acceptable during the non-restricted season (October 1st – May 31st), but it must contain 65% or more slow release nitrogen. Throughout the year, fertilizers containing phosphorous can only be applied to lawns and gardens with a certified soil or tissue test that verifies there is a phosphorus deficiency. It is also important to remember that no fertilizer may be applied within fifteen (15) feet of any pond, lake, stream, canal, or other waterbody, including wetlands.

Goal of Fertilizer Ordinance

These restrictions and guidelines have been put in place to deal effectively with stormwater runoff. Stormwater runoff, which includes excess fertilizer, is a major source of pollution flowing into our natural waterbodies. As a result, the Seminole County Board of County Commissioners approved a Fertilizer Ordinance, effective February 28, 2017, that regulates fertilizers containing nitrogen and/or phosphorous and provides specific management guidelines for fertilizer application. The overall goal of the Ordinance is to minimize negative impacts to our natural waterbodies.



For more details, visit the [Fertilizer Ordinance webpage](#).

Upcoming Events

It's time for the annual MSBU lake/pond community meetings! Meetings will start the week of January 24th, 2023. Contact your lake liaison or Tony Cintron (acintron@seminolecountyfl.gov, 407-665-5264) if you have not yet found out about the date of the meeting for your waterway.



Fall Fertilizer PSA

Fertilizer PSAs

To view our Fertilizer PSAs, as well as some Seminole County Lake Management videos, visit the [Watershed Management Playlist](#) on YouTube.

Recommendations & Additional Information

- There have been lots of changes in LMP! We are excited to announce that Thomas Calhoun is now in the position of LMP Program Manager, Tony Cintron is now the LMP Senior Environmental Scientist, and Daniel Barber and Chad Day are our LMP Lake Management Technicians. Let's congratulate them on their new respective positions.
- If your lake is greater than 160 acres, and you are interested in altering your shoreline or treating exotic vegetation with an herbicide, please remember that you must apply for a free aquatic plant removal permit through the Florida Wildlife Conservation Commission (FWC) <http://www.myfwc.com/license/aquatic-plants> or contact FWC Regional Biologist, Andrew Lawrence (Andrew.Lawrence@MyFWC.com, cell: 407-269-4298).
- Work together with other lakefront owners. Have at least one annual lake association meeting, invite guest speakers (such as Seminole County or state biologists) and discuss lake-specific issues, especially nutrient/lake management recommendations. Seminole County Lake Management Program staff would be glad to present their findings from their Bioinspections. Also continue to increase native aquatic plantings along the shoreline (such as pickerelweed, duck potato, and canna).
- Water quality and biological information, such as the Lake Vegetation Index (LVI) for each lake, can be found on the Seminole County Water Atlas (<http://www.seminole.wateratlas.usf.edu/>). You can also visit our website (<http://www.seminolecountyfl.gov/LMP>) to watch educational videos and download lake management pamphlets.
- For individual Lake Management Plans: Click on Active MSBUs at www.seminolecountyfl.gov/msbu



East Crystal Chain of Lakes

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