

Greetings Lake Amory Residents!

Please find the latest bioassessment report for your lake below. Key highlights of this update include:

- Bladderwort update
- Bladderwort fact sheet
- Hydrilla status
- Herbicide treatment status for each section of the lake
- Continued encouragement to plant native aquatic plants along your shoreline
- Recommendations for you and your lake

Observations:

3/16/2016

On **March 16th, 2016**, Seminole County Lake Management Program biologist, Thomas Calhoun surveyed the aquatic plants in **Lake Amory**.

Yellow blooms from the submersed species bladderwort were reaching the surface in many of the shallow areas of the lake, and the abundant growth of the bladderwort had created some access issues. The bladderwort that was restricting access will be targeted with the next few herbicide treatments. Hydrilla was not found during this inspection.

Photo: Yellow blooms from the submersed species bladderwort reaching the surface.



Cactus Canal and **Outfall Canal** were found to be in good condition. Invasive emergent vegetation included: alligator weed, elephant ear, salvinia and torpedo grass. Bladderwort had increased in this area since the previous inspection and was “topped out” (reaching the surface) in water depths less than 3 feet. Also, the small floating plants salvinia and azolla had increased in this area.

Photo: Bladderwort “topped out” along the shoreline of Cactus Cove.



Photo: Example of Azolla.



The **Bird Island** area was found to be in good condition. Native emergent vegetation spike rush and duck potato were doing very well. Many of the invasive species, such as barnyard grass and primrose willow, had died from previous herbicide treatments. Bladderwort was not reaching the surface and not blocking access during the inspection.

Photo: Bladderwort blooming around Bird Island.



The Cove was found to be in great condition. Native emergent vegetation was in good condition with canna doing particularly well. Submersed aquatic vegetation in this area included roadgrass and bladderwort.

Photo: Bladderwort found in The Cove area.



The **Lake Proper** area was found to be in good condition as well. The emergent blooms from bladderwort were reaching the surface in the access corridors. Emergent vegetation included: canna, buttonbush, rush fuirena, pennywort, yellow cow lily, fragrant water lily, pickerelweed, duck potato, carolina willow, and bulrush. Invasive species in this area included: alligator weed, elephant ear, torpedo grass and salvinia.

Photo: Lake Proper.



The grass carp barrier was found to be in good condition. No triploid (sterile) grass carp fish were observed during the inspection. The water elevation at the time of inspection was 40.0ft above sea level.

4/19/2016

On **April 19th, 2016**, Seminole County Lake Management Program biologist, Thomas Calhoun surveyed the aquatic plants in **Lake Amory**.

Bladderwort blooms were no longer reaching the surface and all areas of the lake were accessible. Hydrilla was not found during this inspection.

Cactus Canal and **Outfall Canal** were found to be in good condition. Invasive emergent vegetation included: alligator weed, elephant ear, salvinia and torpedo grass. Bladderwort had increased in this area and was “topped out” (reaching the surface) in water depths less than 3 feet.

Photo: Bladderwort “topped out” along the shoreline of Cactus Cove.



The **Bird Island** area was found to be in good condition. Spike rush and duck potato, native emergent vegetation, were doing very well. Many of the invasive species such as barnyard grass and primrose willow had died from previous herbicide treatments. Bladderwort was not reaching the surface and not blocking access during the inspection.

Photo: Duck potato expanding around Bird Island.



The Cove was found to be in great condition. Native emergent vegetation was doing well and minimal invasive vegetation was found. Submersed aquatic vegetation in the area included roadgrass and bladderwort.

Photo: Bladderwort found in The Cove area.



The **Lake Proper** area was found to be in good condition as well. The access corridors were open and accessible. Fragrant water lily had expanded in this area since the previous inspection. Emergent vegetation included: canna, buttonbush, rush fuirena, pennywort, yellow cow lily, fragrant water lily, pickerelweed, duck potato, carolina willow, and bulrush. Invasive species found in this area included: alligator weed, elephant ear, torpedo grass and salvinia.

Photo: Lake Proper.



The grass carp barrier was found to be in good condition. No triploid (sterile) grass carp fish were observed during the inspection.

Photo: Fragrant water lily.



Lake Recommendations:

- 1- Work together or establish a lake association with other lakefront owners. Have at least one annual lake association meeting, invite guest speakers (such as county or state biologists) and discuss lake specific issues, especially lake management recommendations. Seminole County Lake Management staff would be glad to present our findings from this and other surveys to the community. Contact Seminole County Lake Management Program at (407) 665-2439 with questions or to schedule a meeting.
- 2- Increase native aquatic plantings along the shoreline (such as pickerelweed, duck potato, and canna). Native shoreline plants help absorb nutrients from rainfall/run-off, thereby improving habitat and water quality, and reducing shoreline erosion of sediments/organic matter into the lake. Without management, this erosion and sedimentation will fill the lake over time, creating a wetland-type of environment. Planting native species now can assist in slowing this process (formally known as eutrophication). In addition, native plantings can reduce your herbicide costs/needs, thereby providing a savings to you!
- 3- Utilize the valuable educational outreach programs that are available, such as Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN) interactive presentations,

and Lake Management Video mail-outs. Implement a media campaign within the community about reducing personal pollution by: decreasing overall fertilizer usage, **using only phosphorous-free and slow-release nitrogen fertilizers**, keeping a functional shoreline with beneficial native aquatic plants, and keeping grass clippings out of your lake and the stormdrains that lead to the lakes. All of these activities aid in protecting your lake! Contact Seminole County Lake Management Program (407) 665-2439 for more information regarding the free educational programs available.

- 4- Help spread the word! Obtain email addresses from neighbors not currently on the distribution list in order to share this information with others. Valuable information is contained within these reports.



Bladderwort (*Utricularia species*): A Florida Native

14 Species of Bladderwort exist in Florida, all of which are native.

Identification

Bladderworts are annual or perennial plants which lack roots and are free floating. The entire free-floating plant is typically 8 inches tall with yellow, purple, or white flowers that rise above the water's surface. Underwater, the plant has fleshy, inflated stems that are filled with air and allow it to float. The leaves are forked and often have a very fine capillary appearance.

This unique carnivorous plant utilizes small oval "bladders" on its underwater leaves to trap and digest small aquatic organisms. Hairs at the edge of the bladder act as a trigger, causing the trap to spring open and draw in water (and organisms) when contacted.

Wildlife Value

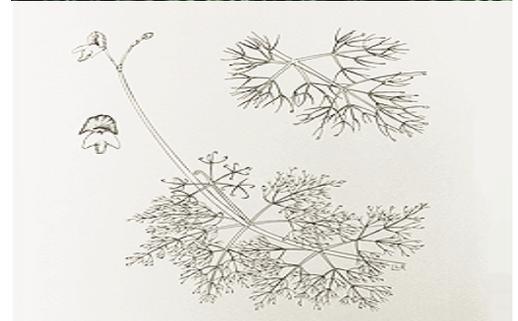
Common bladderwort is used by several insects, waterfowl, and mammals as a food source. The stems also provide shelter and a place for wildlife to lay eggs.

Native submersed aquatic plants provide habitat for several micro- and macroinvertebrate species, which in turn provide a source of food for fish and other aquatic wildlife species including reptiles, amphibians, and waterfowl. Once aquatic plants die, their decomposing parts provide food (referred to as "detritus") for several aquatic invertebrates.

Additionally, native submersed plants play an important role in the aquatic ecosystem by reducing nutrients within the waterbody and by competing with invasive species for space.

Control

Although native, bladderwort may impede recreational access. For questions concerning control of bladderwort or to apply for a free aquatic plant removal permit, please contact your state agency, the Florida Fish and Wildlife Conservation Commission, online at: <http://myfwc.com/license/aquatic-plants> or by calling 407-858-6170.



Sources:

Stitch, L. (n.d.). *Common Bladderwort*. U.S. Forest Service. Retrieved from http://www.fs.fed.us/wildflowers/plant-of-the-week/utricularia_macrohiza.shtml

Texas A&M AgriLife Extension. (2015). *Bladderwort*. Retrieved from <http://aquaplant.tamu.edu/plant-identification/alphabetical-index/bladderwort/>

Wellendorf, N. (2011, April 27). *How to Distinguish the Aquatic Bladderworts* [PDF]. Retrieved from <http://www.dep.state.fl.us/water/bioassess/docs/plants/field-id-utricularia-species.pdf>