LAKE OF THE WOODS

BIOASSESSMENT/INSPECTION REPORT
March through May 2015

Greetings Lake of the Woods residents!

Below please find the latest bioassessment for your lake below. Key highlights of this update will include:

- Current information about hydrilla & other submersed aquatic vegetation (SAV)
- Expansion of native SAV
- Continued encouragement to remove torpedo grass
- Recommendations for you and your lake

Bioassessment

On **March 3rd, 2015**, Seminole County Lake Management Program (SCLMP) staff, Thomas Calhoun and Gloria Eby, surveyed the aquatic plants in **Lake of the Woods.**

No hydrilla was found during the inspection. This species will continue to be closely monitored to see if further treatment is needed.

Native SAV was very healthy and was expanding around the lake. Native species found during the inspection included coontail to 9 ft, southern naiad to 3 ft, and eelgrass to 8 ft. Eelgrass blooms were abundant and in some places looked like an algae bloom. The beneficial native coontail has expanded significantly since the previous inspection.

Photo: Coontail found to a depth of 9 feet.

Photo: Eelgrass blooms reaching the surface.

We found many boat docks with restricted access due to topped out eelgrass. As previously mentioned, if SAV is blocking access to your boat dock you can apply for an aquatic plant removal permit through the Florida Wildlife Conservation Commission http://www.myfwc.com/license/aquatic-plants. Or contact FWC regional biologist Kristine.Campbell@MyFWC.com at 407-858-6170 to obtain your free permit.

Some of the native emergent vegetation including pickerelweed and fire flag was still showing signs of winter die back. It is expected that these species will recover and continue to expand along with duck potato, canna and maidencane in the coming months. Invasive emergent vegetation observed included: alligator weed, dwarf papyrus elephant ear and torpedo grass. The northern canal was treated for lily pads and was found clear of vegetation. Torpedo grass remains to be minimal within the lake.

Photo: Stand of fire flag showing signs of winter die back.

Photo: Treated canal on northern shoreline.

Secchi disk (water clarity) reading was 8.2 ft in a depth of 14.5 ft, an increase from last month's reading of 3.8 ft. The lake gauge level was 74.6 ft above sea level. One triploid grass carp fish was observed.

Bioassessment

On **May 6th, 2015**, Seminole County Lake Management Program (SCLMP) staff, Thomas Calhoun, Joey Cordell, and Sophia Pengra, surveyed the aquatic plants in **Lake of the Woods.**

A few sprigs of hydrilla were found during the inspection near the boat ramp and dock. This species will continue to be closely monitored to see if further treatment is needed.

Native SAV was very healthy and was expanding around the lake. This beneficial vegetation continues to compete for space with hydrilla. Native submersed species found during the inspection included bladderwort, southern naiad to 3 ft, coontail to 8 ft, and eelgrass to 8 ft. Eelgrass was the dominant SAV species observed. We found many boat docks with restricted access due to topped out eelgrass. As previously mentioned, if SAV is blocking access to your boat dock you can apply for an aquatic plant removal permit through the Florida Wildlife Conservation Commission http://www.myfwc.com/license/aquatic-plants. Or contact FWC regional biologist, Kristine Campbell, at 407-858-6170 to obtain your free permit.

Photo: Eelgrass

Photo: Eelgrass, algae, and a few sprigs of invasive hydrilla

Native emergent vegetation observed during the survey included: canna, pennywort, yellow cow lily, fragrant water lily, maidencane, pickerelweed, duck potato, Carolina willow, buttonbush, bulrush, fireflag, bur-marigold, water hemlock, and climbing hempweed. Maidencane and pickerelweed have both rebounded from seasonal dieback. Invasive emergent vegetation observed included: alligator weed, elephant ear, umbrella grass, water primrose, Chinese tallow, Brazilian pepper, creeping oxeye, and torpedo grass. It was noted that minimal torpedo grass was observed.

Photo: Pickerelweed (Native)

Photo: Bulrush (Native)

A substrate algae bloom was observed along the western shoreline of the lake. Large algae blooms will deplete the lake's dissolved oxygen levels, which can kill fish. Algae blooms are

caused by high levels of phosphates. The most common sources for excess phosphates are fertilizer runoff and yard clippings. To help prevent algae blooms, residents can reduce overall fertilizer use, only use phosphorus-free slow release nitrogen fertilizer brands when fertilizers are needed, and prevent yard clippings from falling in the lake.

Photo: Algae bloom along western shoreline.

Secchi disk (water clarity) reading was 7.0 ft in a depth of 10.4 ft. This was an increase from last survey's reading of 6.2 ft. The lake gauge level was 74.31 ft above sea level, a slight decrease from last month's reading of 74.56. No triploid grass carp fish were observed.

Recommendations for your waterbody:

1. Continue to work together with other lakefront owners to control and if possible, eliminate invasive plants observed during this survey and increase native aquatic plantings along shoreline (such as pickerelweed and duck potato). Have at least one annual lake association meeting to discuss lake specific issues.

2. Utilize the valuable educational outreach programs that are available, i.e. Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN) interactive presentations, and Lake Management Video mail-outs. Implement a media campaign within the community to reduce 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

storm drains 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.

3. Control of aquatic plants (such as eelgrass) could require a Florida Fish and Wildlife Conservation Commission (FWC) aquatic plant control permit. Contact Kris Campbell at 407-858-6170 or Kristine.Campbell@myfwc.com for a permit and recommendations.

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.

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www.seminole.wateratlas.org

Lake Management website: http://www.seminole.wateratlas.usf.edu/LakeManagement

Mosquito Control website: http://www.seminolecountyfl.gov/pw/mosquito

Seminole Education, Restoration & Volunteer (SERV) Program

SEMINOLE COUNTY WATERSHED MANAGEMENT DIVISION

Aquatic Plant of the Month

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.

SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

Sources:

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

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

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

SEMINOLE COUNTY WATERSHED MANAGEMENT DIVISION

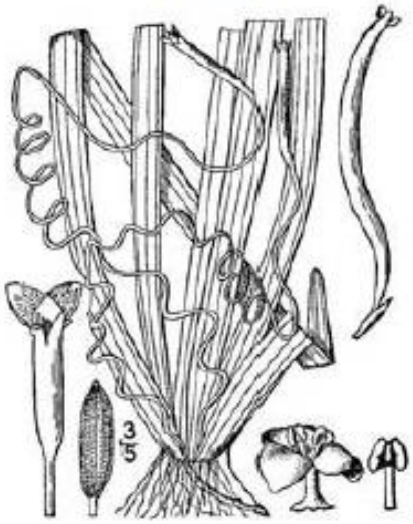
Aquatic Plant of the Month

Eelgrass (*Vallisneria americana*): A Florida Native

Eelgrass, also known as tapegrass, is native to the state of Florida.

Identification

Eelgrass is a submersed, perennial plant that can be found throughout the state in both still and flowing waters. Eelgrass leaves often resemble tape or ribbon. They are about an inch wide with raised veins and rounded tips. The leaves can grow several feet in length and their upper parts can often be found floating along the water surface. Eelgrass produces both male and female flowers, however, the small, white female flowers are most often seen, as their long, corkscrew-like flower stalks reach the surface of the water.

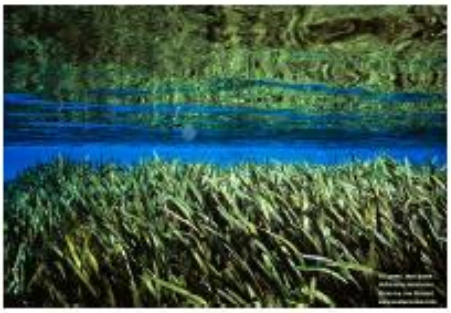


Wildlife Value

Eelgrass is an important food source for the endangered West Indian manatee (*Trichechus manatus*) and various species of waterfowl. Additionally, eelgrass provides important habitat, protection, and nursery grounds for fish.

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, eelgrass may impede recreational access. For questions concerning control of eelgrass 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.

SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

Sources:

NOAA. (2012, October 22). *Eelgrass-Habitat of the Month*. Retrieved from http://www.habitat.noaa.gov/abouthabitat/eelgrass.html

UF/IFAS. (2014). *Eel-grass, tape-grass*. Retrieved from http://plants.ifas.ufl.edu/node/465

UF/IFAS. (2014). *Algae*. Retrieved from http://plants.ifas.ufl.edu/manage/why-manage-plants/algae

Washington State Department of Ecology. (n.d.). *Vallisneria Americana*. Retrieved from http://www.ecy.wa.gov/programs/wq/plants/plantid2/descriptions/valame.html