

Greetings Bear Gully Lake Residents!

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

- Results from the Lake Vegetation Index (LVI)
- Status of Submersed Aquatic Vegetation (SAV)
- Status of shoreline emergent vegetation
- Increase in presence of hydrilla observed
- Continued encouragement to plant native aquatic plants along your shoreline
- Recommendations for you and your lake
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On **September 9<sup>th</sup>, 2013**, Gloria Eby, Thomas Calhoun and Marianne Pluchino surveyed the aquatic plants and conducted a Lake Vegetation Index (LVI) assessment in **Bear Gully Lake**.

The LVI was created by the Florida Department of Environmental Protection as a rapid screening tool (bioassessment) for ecological condition; it determines how closely a lake's flora (aquatic plants) resembles that of an undisturbed lake.

Bear Gully Lake is 137 surface acres in size with a mean depth of 5 feet, maximum depth of 20 feet, and is located in the Howell Creek watershed. Historical LVI scores range from 27 to 58 with 46 being the most current and in the healthy category. The native SAV eelgrass was dominate vegetation in 3 of the 4 sections surveyed attributing to the score in the healthy range.

<b>LVI Range</b>	<b>Description</b>
78-100	Exceptional
38-77	Healthy
0-37	Impaired

The diversity of submersed aquatic vegetation (SAV) was very good with a total of 5 native species and one exotic species observed. The native species included: baby's tears to 2 feet, southern naiad to 6 feet, eelgrass to 6 feet, and 2 types of bladderwort to 6 feet.

Hydrilla sprigs were found during this inspection at the inflow of Bear Gully Creek as well as several other locations in the lake. This is an increase in hydrilla from previous inspections. **Hydrilla should be heavily monitored to see if any action will be necessary (grass carp stocking, spot treatments).**

**Photo: Hydrilla found at the inflow of Bear Gully Creek.**



Invasive emergent vegetation observed during the inspection included: alligatorweed, elephant ear, dwarf papyrus, para-grass and torpedo grass. Chinese tallow trees and Brazilian pepper were also found along the shoreline. Native emergent plants like pickerelweed, duck potato, maidencane, and floating lilies continue to expand and compete with torpedo grass for space.

**Photo: Stand of duck potato.**



The lake elevation was 49.8 feet above sea level. Secchi (water clarity) was 2.5 feet at a depth of 7.3 feet. More information is available on the Seminole County Water Atlas: <http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7513>

### **Lake Recommendations:**

1 Work together or establish a lake association with other lakefront owners to control, and if possible eliminate invasive plants and increase native aquatic plantings along the shoreline (such as pickerelweed, canna, and duck potato). Have at least one annual lake association meeting; we recommend inviting guest speakers such as county or state biologists to discuss lake-specific issues.

2 Remove torpedo grass and other invasive aquatic plants along your waterfront and replace with native aquatic plants that are more beneficial for your lake. You can remove the plants by hand, obtain the necessary aquatic herbicide to treat them (we can provide information about herbicide sources), or hire a contracted aquatic herbicide company to do the application (we can provide a list of companies). Control of aquatic and wetland plants will in most cases require a free Florida Fish and Wildlife Conservation Commission (FWC) aquatic plant control permit. Please contact FWC regional biologist Alicia Knecht at (321) 246-0682 or [Alicia.Knecht@myfwc.com](mailto:Alicia.Knecht@myfwc.com) to obtain this permit. For more information please visit FWC's website at: <http://www.myfwc.com/license/aquatic-plants/>.

3 Lake management could be conducted by Seminole County by establishing a Municipal Service Benefit Unit (MSBU); this is a funding format for aquatic weed control via special assessment. For additional information contact Carol Watral at (407) 665-7164 or [cwatral@seminolecountyfl.gov](mailto:cwatral@seminolecountyfl.gov) or <http://www.seminolecountyfl.gov/fs/msbu/>.

4 Increase educational outreach programs such as Shoreline Restoration Workshops Florida Yards and Neighborhoods (FYN), and Lake Management Video mail-outs. Promote the reduction of pointless personal pollution by using less total fertilizer, only using phosphorous-free and slow-releasing nitrogen based fertilizers, keeping a functional shoreline with beneficial native aquatic plants, and keeping grass clippings out of your storm drains that lead to the lake. All of these activities aid in protecting your lake! Contact Seminole County Lake Management Program (407) 665-2439 to learn about the free educational programs available.