

Greetings Bear Gully Lake Residents!

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

- Status of Submersed Aquatic Vegetation (SAV)
- Status of shoreline emergent vegetation
- Continued encouragement to plant native aquatic plants along your shoreline
- Recommendations for you and your lake

On **April 9<sup>th</sup>, 2014**, Seminole County Lake Management Program staff (Gloria Eby, Thomas Calhoun, and student intern Sophia Pengra) surveyed the aquatic plants in **Bear Gully Lake**.

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: road grass, baby's tears, southern naiad, eelgrass, and bladderwort. Both bladderwort and eelgrass were present to a depth of 4.5 feet with bladderwort being the most abundant plant to a total depth of 5 feet. A small amount of hydrilla was found during this inspection at the inflow creek of Bear Gully. We recommend to spot treat the hydrilla at this location to prevent further infestation within the lake.

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



**Photos: Close-up of bladderwort (left) and southern naiad (right).**



Invasive vegetation observed during the inspection included: alligatorweed, elephant ear, dwarf papyrus, paragrass, water hyacinth, and torpedo grass. Torpedo grass is still present along most shorelines but it has decreased in extent and is no longer the dominant species in the lake. Native emergent plants (like pickerelweed, duck potato, maidencane, and floating lilies) continue to expand and compete with torpedo grass for space.

**Photo: Torpedo grass with water hyacinth present.**



Secchi reading (measurement for water clarity) was 1.7 feet at a depth of 7.2 feet which is a decrease from the prior reading of 3.1 feet. The lake appeared turbid (cloudy), which could be a result of recent rains. More information is available about Bear Gully Lake 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. Continue to treat the other invasive species found in your lake such as torpedo grass and hydrilla. This treatment can be managed by Seminole County through the establishment of a Municipal Service Benefit Unit (MSBU) for aquatic weed control services. 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/>. Control of aquatic and wetland plants may require a free Florida Fish and Wildlife Conservation Commission (FWC) aquatic plant control permit. Contact Alicia Knecht at (321)-246-0682 or [Alicia.Knecht@myFWC.com](mailto:Alicia.Knecht@myFWC.com) for more permit information.
3. 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.
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 assessments.

Bear Gully 9-11-2012

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
- Continued encouragement to plant native aquatic plants along your shoreline
- Recommendations for you and your lake

On **September 9<sup>th</sup>, 2013**, Gloria Eby, Thomas Calhoun, Marianne Pluchino, and Beth Stephens 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 5.2 feet, maximum depth of 20.3 feet, and is located in the Howell Creek watershed. Historical LVI scores range from 28 to 61 with 45 being the most current and in the healthy category.

<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: road grass, baby's tears, southern naiad, eelgrass, and bladderwort. A small amount of hydrilla was found during this inspection at the inflow of Bear Gully Creek. We recommend to spot treat the hydrilla at this location to prevent further infestation within the lake.

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



Invasive emergent vegetation observed during the inspection included: alligator weed, elephant ear, dwarf papyrus, para-grass and torpedo grass. Many Chinese tallow trees were also found along the shoreline. Torpedo grass is still present along most shorelines but it has decreased in extent and is no longer the dominant species in the lake. 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 and native grasses along shoreline.**



The lake elevation was 45.1 feet above sea level. Secchi (water clarity) was 3.1 feet at a depth of 7.2 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. Contact C. J. Green at (407) 858-6170 or [Carl.Greene@myFWC.com](mailto:Carl.Greene@myFWC.com) for a permit.

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 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.