

Bear Gully 7-6-2011

Greetings Bear Gully Lake!

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

- Results from Lake Vegetation Index (LVI)
- Lake restoration event Saturday September 17th
- Status of Submersed Aquatic Vegetation (SAV)
- Status of shoreline emergent vegetation
- Continued encouragement of planting native aquatic plants along your shoreline
- Recommendations for you and your lake

The first **Bear Gully Lake Shoreline Restoration Event** is scheduled for **Saturday, September 17th from 9am-1pm**. On this date the Seminole County Lake Management and SERV Programs will bring in **volunteers and beautiful FREE aquatic plants** to help improve the water quality of your lake. We currently have 9 sites signed up for the event and we are looking forward to working with the community to help restore native aquatic vegetation to Bear Gully Lake.

We still need boats to help assist us in transporting volunteers from site to site. Please email Natalae Almeter at serv@seminolecountyfl.gov or call 407-665-2457 to sign up as a boat volunteer. The kick-off location will be at Dr. Graham's residence at 4305 BEAR GULLY RD.

On July 6th, 2011, Gloria Eby (Seminole County [SC] Senior Environmental Scientist), Marianne Pluchino (SC Senior Environmental Scientist), Thomas Calhoun (Seminole County Contracted Scientist) and Dean G Barber (Seminole County consultant) surveyed the aquatic plants and conducted a Lake Vegetation Index (LVI) assessment of **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 with a mean depth of 5.2 feet, maximum depth of 20.3 feet, located in the Howell Creek watershed. Historical LVI scores range from 28 to 45 with 45 being the most current and in the healthy category.

| LVI Range | Description |
|------------------|--------------------|
| 78-100 | Exceptional |
| 38-77 | Healthy |
| 0-37 | Impaired |

On **July 6th, 2011** Seminole County Lake Management Program (SCLMP) staff: Gloria Eby, Dean G Barber, Marianne Pluchino and Thomas Calhoun surveyed the aquatic plants of Bear Gully Lake.

The diversity of submersed aquatic vegetation (SAV) is very good with a total of 8 species and only one of those species being invasive exotic. The invasive exotic hydrilla was observed in the inflow creek off Goldenrod Drive and along the northwest shoreline in small amounts. It is suggested to spot treat the hydrilla immediately at the inflow creek using a granular form of Aquathol to prevent this plant from infesting the lake.

Photo: Hydrilla found in Bear Gully Creek (inflow creek)



Native SAV diversity consists of 8 species of which two, coontail and southern naiad are extending to a depth of 6 feet and musk grass to 7 feet. Other SAV observed included: roadgrass, filamentous algae, baby tears, bladderwort (*Utricularia inflata*) to 4 feet and eelgrass to 4 feet. Eelgrass continues to be the most observed aquatic plant in the shallow

areas, extending to the surface at several locations. Southern naiad was the most abundant SAV in the deeper areas.

Photo: Eelgrass blooms rising to the surface in shallow water



The most extensive population of emergent aquatic plants continues to be the invasive exotic torpedo grass. However, native emergent plants like pickerelweed, duck potato and the lilies are expanding, competing with torpedo grass for space. Secchi reading (measurement for water clarity) was 2 feet in 8.0 feet of water as was the previous reading. The elevation of the lake was 48.15 feet above sea level.

Photo: Example of torpedo grass that covers many shorelines



Lake Recommendations:

1 Participate in the upcoming Lake Restoration Event on **Saturday, September 17th from 9am-1pm**. Contact Natalae Almeter at serv@seminolecountyfl.gov for more information

2 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 shoreline (such as pickerelweed, canna and duck potato. Have at least one annual lake association meeting, invite guest speakers (such as county or state biologists) to discuss lake specific issues.

3 Treat invasive torpedo grass and other invasive aquatic plants along your waterfront. Either do it yourself by hand removal or obtain the necessary aquatic herbicide (we can provide some sources) or hire a contracted aquatic herbicide application company (we can provide a list of companies). Control of aquatic and wetland plants will in most cases requires a free Florida Fish and Wildlife Conservation Commission (FWC) aquatic plant control permit. Contact CJ Green at (407) 858-6170 or Carl.Greene@myFWC.com for a permit.

4 Increase educational outreach programs i.e. Shoreline Restoration Workshops (planting day scheduled; September 17, 2011).Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of pointless personal pollution by

using low fertilizer use; phosphorous free fertilizers; keeping a functional shoreline with beneficial native aquatic plants; keeping grass clippings out of your storm drains leading to the lake. All these activities aid in protecting your lake! Contact Seminole County Lake Management Program (407) 665-2439 for free educational programs available.

4 Treat or pull all the hydrilla at the inflow canal off of Goldenrod Drive. This will require several timely efforts, but done successfully, this will prevent the expansion of hydrilla within the lake