Lake Brantley 2009-2010

On **27 January 2010**, Gloria Eby, Dean G Barber (SC Consultant), Thomas Calhoun (SC Assistant Scientist) and Fred Streetman (Lake Brantley Lake Management Association President) surveyed the aquatic plants in Lake Brantley. The major concern still is hydrilla *(Hydrilla verticillata)* which was the dominant plant observed throughout the lake to a depth of 22 feet. Although Hydrilla was the dominant plant found it was not topping out and not the dominant plant in the shallow water (less than 6 ft). Four native submersed aquatic vegetation (SAV) including: water-milfoil (*Myriophyllum laxum*), baby tears *(Micranthemum glomeratum),* southern niad *(Najas guadalupensis),* stonewort *(Nitella spp)* and eelgrass *(Vallisneria americana)* were more prevalent in this area. Baby tears were seen to a depth of 10 feet, thick and healthy. These plants continue to make it more difficult for the hydrilla to expand in the shallow area of the lake. Other native SAV included: lemon bacopa (Bacopa *caroliniana*), fanwort (Cabomba caroliniana), and road grass (Eleocharis *baldwinii*).

The Secchi (water quality) was 9.8 feet at a depth of 21 feet. Historic Secchi readings, from 1973 to present, including 100 samples, has been 0.5-17.1 ft. This information and much more is available on the Seminole County Water Atlas at: http://www.seminole.wateratlas.usf.edu

On **16 April 2010**, Gloria Eby, Dean G Barber (SC Consultant) and Thomas Calhoun (SC Assistant Scientist) surveyed Lake Brantley. Hydrilla *(Hydrilla verticillata)* has seen a significant reduction and is only found to a depth of 8ft compared to January's observation of 22ft. Three native submersed aquatic vegetation (SAV) including: water-milfoil (*Myriophyllum laxum*), baby tears *(Micranthemum glomeratum)* and eelgrass *(Vallisneria americana)* were where also found up to 8ft. These plants continue to make it more difficult for the hydrilla to expand in the shallow area of the lake and are starting to compete for space in the deeper areas of the lake. Other native SAV included: lemon bacopa (Bacopa *caroliniana*), musk grass *(Chara spp.)* fanwort (Cabomba caroliniana), and road grass (Eleocharis *baldwinii*).

Additionally, we inspected the Lake Rena area for post-hydrilla treatment effects and found no hydrilla within this area.

The Secchi (water quality) was 9.2 feet at a depth of 23 feet. Historic Secchi readings, from 1973 to present, including 100 samples, has been 0.5-17.1 ft. The lake elevation at the time of inspection was 45.15ft above sea level. This information and much more is available on the Seminole County Water Atlas at:
<http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7519>

On **23 June 2010,** Seminole County Lake Management Program (SCLMP) personnel Gloria Eby, Thomas Calhoun and Dean G Barber with Marianne Pluchino and Shannon Wetzel, surveyed the aquatic plants in **Lake Brantley** and conducted a Lake Vegetation Index (LVI). As indicated in the 16 April 2010 survey and this survey, hydrilla has seen a significant reduction throughout the lake. This invasive exotic was observed to a depth of 12 feet, compared to 8 feet in April and 22 feet in January.

Populations observed have less plant density and not as extensive as has been noted in the past, where hydrilla was the dominant aquatic plant in the lake. This is no longer apparent. Native submersed aquatic vegetation (SAV) including: lemon bacopa observed to a depth of 7 feet,

musk grass to 17 feet, road grass to 15 feet, baby tears *(Micranthemum glomeratum)* to 7 feet, southern naiad to 17 feet, stonewort to 12 feet and eelgrass to 9 feet. Baby tears and eelgrass were co-dominant on 2 of the 4 sectors surveyed. The abundance and diversity of these native SAV from shallow water to a depth of 17 feet will be a key factor in preventing hydrilla from coming back.

Naturally, all indications are that the triploid grass carp fish have reduced the hydrilla population. Invasive emergent aquatic plants and trees observed included: wild taro or elephant ear, water hyacinth, punk tree or melaleuca, and torpedo grass. Water hyacinth that had been restricted to the canal adjacent to Classic Drive, is now showing up at locations throughout the lake. Melaleuca consist of a few trees at about four sites throughout the lake, but primarily on the SE side. Torpedo grass is present on the shoreline of most owners' waterfront.

The Secchi (water clarity) was 11.2 feet at a depth of 15.1 feet. The lake elevation was 45.18 feet above sea level. This information and much more is available on the Seminole County Water Atlas at:
<http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7519>

On **7 September 2010,** Seminole County Lake Management Program (SCLMP) personnel Gloria Eby, Thomas Calhoun and Dean G Barber surveyed the aquatic plants in **Lake Brantley.** Native submersed aquatic vegetation (SAV) include: lemon bacopa observed to a depth of 2 feet, musk grass only seen in the canals, road grass to 10 feet, baby tears *(Micranthemum glomeratum)* to 7 feet, southern naiad only in the western canals, milfoil (*Myriophyllum laxum/pinnatum*) to 10 feet, stonewort (*Nitella*) to 7 feet and eelgrass to 10 feet. Generally these species have been reduced, especially musk grass, southern naiad and stonewort, which were not observed in deeper waters as noted in previous surveys. However, baby tears, stonewort and eelgrass were still the most abundant SAV in waters from the shoreline to a depth of 10 feet.

The invasive exotic hydrilla was observed mostly in depths from 5-10 feet. The plant was sparse and continues to decline. During the 28 October 2009 it was noted that "*hydrilla, which continues to be the dominant plant, was observed to a depth of 24 feet with strands up to 20 ft in length*". Previously, hydrilla covered the lake bottom being the only aquatic plant in waters 17-24 feet deep, not allowing any other plant to establish. For the last 2 surveys (4/16/2010 & 6/23/2010), hydrilla is reducing throughout the lake as result of the triploid grass carp fish.

On **19 October 2010,** Seminole County Lake Management Program (SCLMP) personnel Marie Lackey, Thomas Calhoun and Dean G Barber were joined by Fred Streetman, President of the Lake Brantley Lake Management Association Inc. to survey the aquatic plants in **Lake Brantley.** Native submersed aquatic vegetation (SAV) observed include: lemon bacopa observed to a depth of 8 feet, road grass to 8 feet, filamentous algae, baby tears *(Micranthemum glomeratum)* to 7 feet, milfoil (*Myriophyllum laxum/pinnatum*) to 10 feet, stonewort (*Nitella*) to 3 feet, two bladderworts (*Utricularia gibba* and *U. purpurea*) and eelgrass to 10 feet. All these native SAV's are decreasing except for the milfoil and eelgrass. The milfoil is mostly restricted to the NW corner of the lake, whereas the eelgrass is throughout the lake. The eelgrass is the most abundant SAV followed by stonewort and filamentous algae. Both species are reaching the water surface from depths of 4-5 feet. Only one plant of hydrilla was observed.

Only a few water hyacinth plants were observed in the lake, however, the canal adjacent to Hickory Drive and between Lake Brantley Terrace and Cherry Hill Circle had about 0.1 acres in each. There are less hyacinths in the Hickory Drive canal than reported on the last survey, 7 September 2010. Torpedo grass continues to be the most abundant emergent aquatic plant present on the shores of most owners' waterfront.

Thirteen grass carp were observed, all at least 2.5 feet in length. The Secchi (water clarity) was 8.6 feet in a depth of 19.3 feet, compared to 9.4 feet the previous survey. The lake elevation was 44.67 feet above sea level down from 45.04 feet.