

Greetings Lake Amory!

Below please find the latest lake assessments for your lake. Our next lake inspection is scheduled for August 12th (weather permitting). Key highlights of this update will include:

- Lake Drawdown Effects (the good and the bad)
- Hydrilla/Coontail status (great treatment success)
- Continued encouragement of planting native aquatic plants along your shoreline (photo examples of suggested plants attached)
- Monthly herbicide treatment status
- Reminder; in efforts to create savings for the submersed hydrilla/coontail treatments, several months of services were scaled back. **September will not be serviced** as endorsed by your lake liaisons and
- Recommendations for you and your lake

**Observations:**

On **28 June 2011** Seminole County Lake Management Program, Thomas Calhoun (Assistant Scientist) and Dean Barber (SC Contractor), surveyed the aquatic plants of Lake Amory.

**Cactus Canal, Outfall Canal and Bird Island** was inspected on foot due to low water. Only a few sprigs of coontail were seen during the inspection and no hydrilla was found in any of these areas. Even with the low water, most of the native shoreline vegetation planted during the restoration events is still healthy and expanding. Areas within this portion of the lake are encouraged to plant shoreline natives, especially duck potato, as it has demonstrated lake wide that it can tolerate large lake level fluctuations. Cord grass is another plant that will greatly assist in reducing sediments from eroding into the lake in this area.

**Photo: Area within Outfall Canal that was previously topped out with hydrilla.**



In **The Cove**, no submersed aquatic vegetation was found. Native sedge and spike rush have established during low water levels. It is expected that the sedge will naturally be controlled as the lake level rises. Native shoreline vegetation that was planted last year (bulrush, spike rush) is expanding and doing well. In addition, duck potato and native canna along the planted parcel are expanding and doing well. Other areas are encouraged to plant shoreline natives, especially duck potato, as it has demonstrated lake wide that it can tolerate large lake level fluctuations.

**Photo: Entry to the Cove; emergent natives establishing on dry banks during low water elevation.**



The **Lake Proper** has been the least affected by the low water level with depths still reaching 15 ft. SAV found in the lake include coontail to a depth of 3 ft. and road grass found to a depth of 1 ft. No hydrilla was found in this area. The access corridors at time of inspection were too shallow to treat and will not be treated until the water level rises. There is a terrestrial grass that has started to grow on the exposed areas due to low water. Residents along the shoreline are encouraged to plant shoreline natives. Pickerel weed, canna, and duck potato are more suitable for this area due to the gradual sloping of the shoreline.

**Photo: Lake Proper in need of shoreline native plants.**



The secchi reading (measurement for water clarity) at the time of inspection was 3.7 feet in 15.2 feet of water. The lake elevation during the inspection was 38.64 ft, down from last month's reading of 38.77 ft. Seven triploid grass carp were seen during this inspection and the grass carp barrier was inspected and appeared to be in good condition.

**Observations:**

On **27 July 2011**, Seminole County Lake Management Program, Gloria Eby (Senior Scientist) and Thomas Calhoun (Assistant Scientist) surveyed the aquatic plants and conducted a Lake Vegetation Index (LVI) of Lake Amory.

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. Historical LVI scores range from 37-43 where 2 out of the 3 scores are in the "healthy" category.

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

**Cactus Canal, Outfall Canal and Bird Island** where inspected via canoe with the recent rise in water elevation. Lake elevation at time of this survey was 39.1 ft as compared to 38.64 ft in prior assessment. A few sprigs of coontail were seen during the inspection and hydrilla was found in inches of water where grass carp are unable to access to feed upon. Most of the native emergent vegetation planted during the restoration events is still healthy and expanding. Other

bare shoreline areas are encouraged to plant shoreline natives as recommended prior. Upon inspection, Bird Island was altered in that the lake bed was mounded and palms were planted on top of the mounds.

**Photo: Hydrilla sprig found along shallows near Bird Island.**



**Photo: Unnatural alteration of lake bed.**



In **The Cove**, sparse submersed aquatic vegetation was found which includes hydrilla and filamentous algae. The native sedge and spike rush that established during low water have been naturally controlled by the rise in lake level. Native shoreline vegetation that was planted last year (bulrush, spike rush) is expanding and doing well. In addition, duck potato and native canna plantings along the planted parcel are expanding and doing well. Other areas are encouraged to plant, especially duck potato, as it has demonstrated lake wide it can tolerate the large lake level fluctuations. Sheen was noticed on the water's surface, characteristic of plant breakdown where the stored oils of the plant (hydrocarbons) are released. In addition, floating

duckweed was present in small populations as time of survey and will be treated upon next service date.

**Photo: Duck potato and canna plantings expanding and doing well.**



**Photo: Water fluctuation and natural plant community control. Photos taken June 23<sup>th</sup> (left) then again on July 27<sup>th</sup> (right).**



**Photo: Cove area in need of shoreline native plants.**



The **Lake Proper** SAV found in the lake includes road grass, red ludwigia, and bladderwort. No hydrilla was found in this area. The access corridors at time of inspection were recently treated and appeared open. The terrestrial grass that has started to grow on the exposed areas due to low water was treated. Closest to the golf course within the wetland, barnyard grass and dog fennel were observed. Of which upon adequate water elevation, given boating access, contractor will treat these species.

As prior, the residential shoreline is encouraged to be planted with natives; pickerelweed, canna, and duck potato are more suitable for this area due to the gradual sloping of the shoreline.

**Photo: Low water elevation found in lake.**



The secchi reading (measurement for water clarity) at the time of inspection was 4.6 ft. in 16.1 ft. of water. Eleven triploid grass carp were seen during this inspection and the grass carp barrier was inspected and appeared to be in good condition.

**Photo: Hydrilla sprig found along shallows near Bird Island.**



Water fluctuations play an important role in the ecosystem. The rise and fall of the water can change the plant communities from non-native to native and vice versa. Exposing the lake bed to sunlight allows for the buildup of sediment/organics to bake, consolidate and thus improve the water quality of the lake. Often during drawdown, seeds from plants grow (germinate) mainly wetland type plants. This is a natural defense to impede non-natives from establishing; then becoming the dominant emergent plant.

Again, as reminder, in efforts to create savings for the submersed hydrilla/coontail treatments, several months of services were scaled back. **September will not be serviced** as endorsed by your lake liaisons. The lake will be serviced the week of August 15th (weather permitting). Lake Amory was previously serviced at the end of month and will now be serviced mid-month.

### **Lake Recommendations:**

1 Work together or establish a lake association with other lakefront owners. Have at least one annual lake association meeting, invite guest speakers (such as county or state biologists) and discuss lake specific issues, especially lake management recommendations. Seminole County Lake Management staff would be glad to present our findings from this and other surveys to the community. Contact Gloria Eby at (407) 665-2439.

2 Increase native aquatic plantings along shoreline (such as pickerelweed, duck potato, and canna). Native shoreline plants help absorb nutrients from rain-fall/run-off improving habitat and water quality and reduce shoreline erosion which imports sediments/organics into the lake. Over time, this process will fill the lake creating a wetland type of environment. Planting natives now can assist in slowing this process down (which is formally known as eutrophication). In addition, native plantings can reduce your herbicide costs/needs providing a savings to you!

3 Increase educational outreach programs i.e. Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of pointless personal pollution Contact Seminole County Lake Management Program, Gloria Eby, (407) 665-2439 for assistance.

4 Help spread the word! Obtain email addresses from neighbors not currently on the distribution list. Valuable information is contained within these assessments.

Greetings Lake Amory!

Below please find the latest lake assessment for your lake. Our next lake inspection is scheduled for October 11th (weather permitting). Key highlights of this update will include:

- Hydrilla/Coontail status (great treatment success and grass carp effectiveness)
- Continued encouragement of planting native aquatic plants along your shoreline (photo examples of suggested plants attached)
- Monthly herbicide treatment status
- Reminder: in efforts to create savings for the submersed hydrilla/coontail treatments, several months of services were scaled back. **October will not be serviced** as endorsed by your lake liaisons and
- Recommendations for you and your lake

**Observations:**

On **September 28, 2011** Seminole County Lake Management Program, Gloria Eby (Sr. Environmental Scientist), Thomas Calhoun (Contracted Scientist) and Kathy Moore (MSBU Program), surveyed the aquatic plants of Lake Amory.

In **Cactus Canal, Outfall Canal, and Bird Island**, coontail and hydrilla were not found during this inspection as previously observed. Greater water elevation likely allowed the existing grass carp fish population to forage upon the hydrilla. In depths of 13 feet or less, no submersed aquatic vegetation (SAV) was found. Bird Island area continues to establish natives however torpedo grass is trying to establish amongst the natives making herbicide treatments selective. Water sprite previously establishing on the western bank has survived treatment and will continue to be treated once services resume in November. It is anticipated that with greater leaf foliage available, the herbicides will effectively be absorbed into the plant for a better kill. Areas within this portion of the lake are encouraged to plant shoreline natives, especially duck potato, as it has demonstrated lake wide that it can tolerate large lake level fluctuations. Cord grass is another plant that will greatly assist in reducing sediments from eroding into the lake in this area. The grass carp barrier was inspected and found to be in good condition.

**Photo: Area within Cactus Cove that previously had hydrilla topped out.**



**Photo: No SAV at 13 feet or less in Outfall Canal.**



**Photo: Overview photos of Outfall and Cactus Canals.**



**Photo: Overview of Bird Island and waterfowl highly utilizing the area.**



In **The Cove**, no SAV was found. Duck potato and native canna along the planted parcel are expanding and doing well. Water sprite previously establishing on the western bank was effectively reduced and will continue to be treated once services resume in November. Residents may hand pull these young plants with ease if so desired prior to next scheduled treatment. Other areas are encouraged to plant shoreline natives, especially duck potato, as it has demonstrated lake wide that it can tolerate large lake level fluctuations.

**Photo: Photos of the Cove. 70% of the water sprite within cove was effectively treated.**



**Lake Proper** SAV found includes bacopa to a depth of 3 feet and road grass found to a depth of 1 foot. No hydrilla was found in this area. The access corridors at time of inspection were open with assistance from the herbicide treatments. Residents along the shoreline are encouraged to plant shoreline natives. Pickerelweed, canna, and duck potato are more suitable for this area due to the gradual sloping of the shoreline.

**Photo: Access corridor in Lake Proper.**



The secchi reading (measurement for water clarity) at the time of inspection was 2.3 feet in 9.4 feet of water. The lake elevation during the inspection was 39.85 feet, up from last month's reading of 39.62 feet. Five triploid grass carp were seen during this inspection.

### **Lake Recommendations:**

1 Work together or establish a lake association with other lakefront owners. Have at least one annual lake association meeting, invite guest speakers (such as county or state biologists) and discuss lake specific issues, especially lake management recommendations. Seminole County Lake Management staff would be glad to present our findings from this and other surveys to the community. Contact Gloria Eby at (407) 665-2439.

- 2 Increase native aquatic plantings along shoreline (such as pickerelweed, duck potato, and canna). Native shoreline plants help absorb nutrients from rain-fall/run-off improving habitat and water quality and reduce shoreline erosion which imports sediments/organics into the lake. Over time, this process will fill the lake creating a wetland type of environment. Planting natives now can assist in slowing this process down (which is formally known as eutrophication). In addition, native plantings can reduce your herbicide costs/needs providing a savings to you!
- 3 Increase educational outreach programs i.e. Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of personal pollution. Contact Seminole County Lake Management Program Gloria Eby at (407) 665-2439 for assistance.
- 4 Help spread the word! Obtain email addresses from neighbors not currently on the distribution list. Valuable information is contained within these assessments.