

Please find the latest bioassessment report for your lake below. Our next scheduled survey will be August 20<sup>th</sup>; weather permitting. Key highlights of this update will include:

- Submersed aquatic vegetation (SAV) update- excellent diversity observed
- Hydrilla update- found sparsely intermixed with native SAVs
- Emergent plants- native maidencane found and increase in exotic torpedo grass observed
- Herbicide treatment status and effects of fluctuating lake levels
- Recommendations for you and your waterbody

On **June 18<sup>th</sup>, 2013**, Seminole County Lake Management Program (SCLMP) personnel Thomas Calhoun and Watershed Management intern, Joey Cordell, surveyed the aquatic plants in **Mirror Lake**.

Ten species of submersed aquatic vegetation (SAV) were found during the inspection, nine of which were native species. These native species included: lemon bacopa to 3 feet, smooth water hyssop to 2 feet, musk grass to 4 feet, road grass to 8 feet, baby's tears to 2 feet, southern naiad to 8 feet, stonewort to 2 feet, 2 types of bladderwort to 7 feet, and eelgrass to 7 feet. Southern naiad has expanded significantly since the previous inspection. Mirror Lake continues to show excellent diversity of SAVs.

**Photo: Southern naiad found during inspection.**





**Photo: Stonewort found during inspection.**



Hydrilla was the only invasive exotic species found and in less quantities than the previous inspection. It was sparsely intermixed with the native vegetation to a depth of 3 feet.

Barnyard grass and torpedo grass were showing signs of impact from the previous treatment. We observed that access corridors in the southern end of Mirror Lake were still open. The areas in the southern portion (especially the west and east corners) of the lake will be further treated as water levels allow. Water elevation plays a key role in how much the MSBU funded herbicide contractor can treat due to boat access. As water elevation rises, greater areas can be accessed and treated.

**Photo: Treated barnyard grass at the southern end of the lake.**



The water elevation at the time of inspection was 58.54 feet above sea level, an increase from the previous inspection reading of 57.50 feet. The secchi reading (measurement for water clarity) was 4.7 feet. No grass carp fish were seen during this inspection.

On **July 16<sup>th</sup>, 2013**, SCLMP personnel Thomas Calhoun and Watershed Management intern, Joey Cordell, surveyed the aquatic plants of **Mirror Lake**.

Ten species of submersed aquatic vegetation (SAV) were found during the inspection, nine of which were native species. These native species included: lemon bacopa to 3 feet, smooth water hyssop to 2 feet, musk grass to 4 feet, road grass to 8 feet, baby's tears to 3 feet, southern naiad to 7 feet, stonewort to 4 feet, 3 types of bladderwort to 7 feet, and eelgrass to 7 feet.

**Photo: Bladderwort found during the inspection.**



**Photo: Eelgrass found during inspection.**



Hydrilla was the only invasive exotic species found and in less quantities than the previous inspection. It was sparsely intermixed with the native vegetation to a depth of 3 feet along the eastern shore and in the inflow canal along the west shoreline. It is suspected that with the increase in water elevation, the grass carp fish will be able to consume and reduce the population of hydrilla establishing in shallow water.

**Photo: Hydrilla found during inspection.**



Barnyard and torpedo grass have been reduced in the southern portion of the lake. Please remember that as the water elevation rises or stays high, the herbicide contractor will be able to treat farther with each subsequent treatment. In other areas of the lake, torpedo grass has

expanded and will be targeted next month. Access corridors in the southern end of Mirror Lake were still open.

**Photo: Torpedo grass along the western shoreline.**



Native emergent vegetation found during the inspection included: canna lily, flat sedge, spike rush, pickerelweed, duck potato, and maidencane. Maidencane was observed expanding in several areas of the lake. Maidencane is a valuable common native emergent plant that provides food, protection, and nesting material for wildlife.

**Photo: Maidencane found during inspection.**



The water elevation at the time of inspection was 59.44 feet above sea level, an increase from the previous inspection reading of 58.54 feet. The secchi reading (measurement for water clarity) was 7.6 feet. No grass carp fish were seen during this inspection.

### **Recommendations for waterbody:**

- 1 Work together 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 nutrients/lake management recommendations. SCLMP staff will be glad to present our findings from this and other surveys. Continue to increase native aquatic plantings along shorelines (such as pickerelweed, duck potato and canna).
- 2 Consider increasing street sweeping services during times of peak leaf fall to ensure that this debris does not enter waterways. Leaf debris contains high levels of phosphorous that can negatively impact your lakes.
- 3 Increase educational outreach programs, i.e. Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of personal pollution by: decreasing fertilizer usage; using only phosphorous free fertilizers; keeping a

functional shoreline with beneficial native aquatic plants; keeping grass clippings out of your lake and the storm drains that lead to the lake. All 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.

Greetings Mirror Lake residents and Happy New Year!

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

- Water elevation returning to normal elevations
- Native Submersed Aquatic Vegetation (SAV) status
- Hydrilla observations
- Recommendations for you and your waterbody

On **December 28<sup>th</sup>, 2012**, Seminole County Lake Management Program (SCLMP) personnel, Thomas Calhoun, and Water Quality intern, Devin Whitney, surveyed the aquatic plants of **Mirror Lake**.

There was a large amount of submersed aquatic vegetation (SAV) found during this inspection. Native SAV included: lemon bacopa to a depth of 3 ft, coontail to a depth of 5 ft, southern naiad to a depth of 3 ft, stonewort to a depth of 2 ft, bladderwort to a depth of 6 ft, baby's tears to a depth of 2 ft, road grass to a depth of 3, musk grass to a depth of 3 ft, and eelgrass to a depth of 6 ft.

Hydrilla was found mixed with native vegetation to a depth of 6 feet. We will continue to monitor the hydrilla to see if conducting spot treatments or stocking grass carp will be necessary.

**Photo: Bladderwort found during inspection.**



The access corridors in the southern end of Mirror Lake are now open. Treatment of the invasive species, torpedo grass, continues to be successful in other areas of the lake. Pickerelweed was also noted to be expanding in many areas around the lake.

**Photo: Area treated in the southern portion of the lake.**



The water elevation at the time of inspection was 57.64 ft above sea level. The Secchi Disk was visible on the lake bottom at 7.8 feet. Two grass carp were observed during this inspection.

10/23/2012

On **October 23<sup>rd</sup>, 2012**, Seminole County Lake Management Program (SCLMP) personnel, Thomas Calhoun, and Water Quality staff, Marie Lackey, surveyed the aquatic plants of **Mirror Lake**.

Water levels in Mirror Lake are returning to normal, providing access to most areas of the lake again. Seminole County herbicide contractors will continue to treat and open corridors as necessary to reestablish normal conditions.

**Photo: Open access corridor.**



The native SAV found during this inspection included: lemon bacopa to a depth of 1 ft, coontail to a depth of 5 ft, southern naiad to a depth of 5 ft, stonewort to a depth of 2 ft, bladderwort to a depth of 5 ft, baby's tears to a depth of 1 ft, road grass to a depth of 4 feet, and eelgrass to a depth of 3 ft.

**Photo: Stonewort found during inspection.**



Hydrilla was found growing sparsely along the shoreline in shallow water, intermixed with native SAV. We will continue to monitor hydrilla growth within the lake to see if any further action will be necessary.

**Photo: Hydrilla found during inspection.**



The water elevation at the time of inspection was 58.25 ft above sea level. Secchi reading was 6.2 feet in a total depth of 8 feet. No grass carp were observed during this inspection.

**Recommendations for waterbody:**

- 1 Work together 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 nutrients/lake management recommendations. SCLMP staff would be glad to present our findings from this and other surveys. Continue to increase native aquatic plantings along shorelines (such as pickerelweed, duck potato and canna).
- 2 Consider increasing street sweeping services during times of peak leaf fall to ensure that this debris does not enter waterways. Leaf debris contains high levels of phosphorous that can negatively impact your lakes.
- 3 Increase educational outreach programs, such as Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN), and Lake Management Video mail-outs. Promote reduction of pointless personal pollution by using low levels of fertilizers, 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 these activities aid

in protecting your waterbody! Contact Seminole County Lake Management Program (407) 665-2439 about free, available educational programs.