

Greetings Horseshoe Lake North residents!

Below, please find the latest bioassessment for your lake. Key highlights of this bioassessment include:

- Herbicide treatment updates
- Hydrilla update
- Native submersed aquatic vegetation (SAV)
- Invasive vegetation observations
- Native emergent vegetation observations
- Lake Watch Program
- SERV Planting Event
- Recommendations for you and your lake

Routine herbicide treatments will resume at the end of July. This treatment will focus on small pockets of water hyacinth, alligator weed, torpedo grass and the canal area.

5/18/2016

On **May 18th, 2016**, Seminole County Lake Management Program (SCLMP) personnel, Joey Cordell and Thomas Calhoun, surveyed the aquatic plants in **Horseshoe Lake North**.

Hydrilla was found in the canal during the inspection and will be scheduled for treatment.

Native SAV found included: roadgrass to a depth of 2 feet.

Photo: Example of roadgrass.



Invasive emergent species included: alligator weed, wild taro, primrose willow, and torpedo grass. Water hyacinth was observed in three small pockets.

Native emergent vegetation including: buttonbush, sawgrass, southern water grass, spatterdock, maidencane, cup-scale grass, pickerelweed, duck potato, bulrush, fire flag, climbing aster and canna lily.

Photo: Native southern water grass.



The canal was also inspected and was in great condition.

Photo: Duckweed and salvinia found in the canal.



The Lake Watch program is a valuable tool to monitor your lake's water quality. We recommend keeping up to date with monthly sampling to better capture trends in the water chemistry.

The Secchi measurement (water clarity) was 2.8 feet in a total depth of 7.8 feet. The lake elevation was 36.80 feet above sea level at the time of inspection. The grass carp barrier was inspected and found to be clear of debris and in good condition. No grass carp were observed during the inspection.

6/13/2016

On **June 13th, 2016**, Seminole County Lake Management Program (SCLMP) personnel, Joey Cordell and Alyssa Alers, surveyed the aquatic plants in **Horseshoe Lake North**.

Herbicide treatment was suspended for the month of June due the June 6th restoration event.

Hydrilla was not found during the inspection.

Native SAV found included: roadgrass and stonewort. Both species were found in low quantities.

Photo: Example of stonewort.



Invasive emergent species included: alligator weed, wild taro, primrose willow, and torpedo grass. Water hyacinth was not observed. Invasive species abundance was low.

Native emergent vegetation including: buttonbush, sawgrass, water grass, spatterdock, maidencane, pickerelweed, duck potato, lizard's-tail, bulrush, fire flag, climbing aster, and bur-marigold.

Photo: Pickerelweed.



On June 6th, lake residents and volunteers came out to help Seminole County's SERV program plant native vegetation along the shoreline of North Horseshoe Lake. Those species planted included: duck potato, pickerelweed, sawgrass, arrow head, canna, and fire flag. Having a healthy population of shoreline vegetation filters runoff pollutants, protects against erosion, and provides habitat for the wildlife.

Photo: SERV planting site.



The Lake Watch program is a valuable tool to monitor your lake's water quality. We recommend keeping up to date with monthly sampling to better capture trends in the water chemistry.

The canal was also inspected and was in great condition.

The Secchi measurement (water clarity) was 3.0 feet in a total depth of 11.0 feet. The lake elevation was 36.76 feet above sea level at the time of inspection. The grass carp barrier was inspected and found to be clear of debris and in good condition. No grass carp were observed during the inspection.

7/21/2016

On **July 21th, 2016**, Seminole County Lake Management Program (SCLMP) personnel, Joey Cordell and Thomas Calhoun, surveyed the aquatic plants in **Horseshoe Lake North**.

One sprig of hydrilla was found at the beginning of the canal during the inspection.

Invasive emergent species included: alligator weed, wild taro, primrose willow, bur-head sedge and torpedo grass. Torpedo grass and alligator weed were noted as increasing since the last inspection. Small patches of water hyacinth were observed in several areas around the lake.

Photo: Pocket of Water Hyacinth.



Native emergent vegetation including: buttonbush, sawgrass, southern water grass, spatterdock, maidencane, pickerelweed, duck potato, lizard's-tail, bulrush, fire flag, climbing aster, and bur-marigold.

Photo: Maidencane.



The canal was also inspected and found in good condition. A small amount of alligator weed and torpedo grass was found at the mouth of the canal. One sprig of hydrilla was found next to the culvert at the end of the canal.

Photo: Canal.



The Secchi measurement (water clarity) was 3.1 feet in a total depth of 7.0 feet. The lake elevation was 36.76 feet above sea level at the time of inspection. The grass carp barrier was inspected and found to be clear of debris and in good condition. No grass carp were observed during the inspection.

Recommendations for you and your lake:

- 1 LAKEWATCH volunteers provide valuable water quality data for your lake. Obtain monthly samples and establish a back-up volunteer for consistent data collection.
- 2 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 and lake management recommendations. SCLMP staff would be glad to present our findings from this and other surveys.
- 3 Continue to establish a beneficial native shoreline for Horseshoe Lake North, especially in locations that are devoid of emergent aquatic plants. Given that some plants are stressed, or did

not survive from the previous planting session, the planting of native species should continue until successful establishment is achieved. SCLMP recommends planting in new locations that are shallower and have more sunlight.

4 Native and non-native invasive species sometimes grow very close together, making the non-native species difficult to treat. Non-native species can be hand-pulled from patches of native plants, or a directed herbicide treatment can be used to target the non-native species. Although directed treatments may impact adjacent native species, such herbicides may be necessary to prevent expansion of the non-native species.

For overall success in lake management, everyone must become stewards of the lake. Residents should assist whenever possible in the removal of non-native plants in close proximity to native vegetation, and replant the area with beneficial native plants.

5 Utilize the valuable educational outreach programs that are available to you: Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN) interactive presentations, and Lake Management Video mail-outs. Implement a media campaign within the community to promote the reduction of personal pollution; encourage residents to decrease their overall fertilizer usage, use only phosphorous-free and slow-release nitrogen fertilizers, keep a functional shoreline with beneficial native aquatic plants, and keep grass clippings out of your lake and the 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 for more information regarding the free educational programs available.

6 Help spread the word! Obtain email addresses from neighbors not currently on the distribution list in order to share these reports. Valuable information is contained within these assessments.