

Greetings Horseshoe Lake Residents,

Please find the latest bioassessment report for your lake below. Key highlights of this update include:

- 2016 Lake Restoration Event
- Hydrilla update
- Water hyacinth update
- Invasive vegetation observations
- Herbicide treatment status
- Native submersed aquatic vegetation (SAV) observations
- Native emergent vegetation observations
- Recommendations for you and your lake



Join the **N. Horseshoe Lake Shoreline Restoration!**

Seminole County Watershed Management & the SERV Program invite you to help us plant shoreline vegetation to improve ecosystem function, habitat, and water quality!

Saturday, June 4th, 2016, 9 am - 12 pm

2146 Sterling Creek Pkwy, Oviedo, FL 32765



3 fun ways to participate:

- *Sign up as a site host (free plants!)*
- *Help with event logistical support*
- *Assist in shoreline planting during event*

For more information: 407-665-2457 serv@seminolecountyfl.gov

On **March 17th, 2016** Seminole County Lake Management Program (SCLMP) personnel, Joey Cordell and Dean Barber, joined by lake residents Leza Harrison and Patty Searcy, surveyed the aquatic plants in **Horseshoe Lake North**.

The eastern canal had a substantial amount of plant growth since the previous inspection. Observed species included: barnyard grass, torpedograss, pennywort, red ludwigia, alligator weed and hydrilla. Water hyacinth was found in multiple small patches around the lake. No hydrilla was found in the lake.

Photo: Red ludwigia found in the eastern canal.



Invasive emergent species included: alligator weed, wild taro, primrose willow, torpedograss, salvinia, bur-head sedge, and two patches of water hyacinth. Alligator weed, water hyacinth and torpedograss will be targeted during the next herbicide treatment.

Photo: Water hyacinth.



Native SAV observed in the lake included road grass, smooth water hyssop and baby's tears. All of these species were found in low quantities at a depth of 2 feet.

Native emergent vegetation included: bur-marigold, buttonbush, sawgrass, pennywort, maidencane, hempvine, yellow cow lily, pickerelweed, smartweed, duck potato, lizard's tail, bulrush, fire flag, and climbing aster.

Photo: Example of climbing aster.



The Secchi measurement (for water clarity) was not taken during this inspection. The lake elevation was 36.85 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.

April 16th, 2016

On **April 16th, 2016** Seminole County Lake Management Program (SCLMP) personnel, Thomas Calhoun and Joey Cordell, surveyed the aquatic plants in **Horseshoe Lake North**.

The eastern canal had a substantial amount of plant growth since the previous inspection. The species included: barnyard grass, torpedograss, pennywort, alligator weed and hydrilla. Water hyacinth was found in only a few patches around the lake and showed signs of the previous herbicide treatment. No hydrilla was found in the lake. The canal as well as Alligator weed and torpedograss will be targeted during the next herbicide treatment.

Photo: Eastern canal.



Invasive emergent species in the lake included: alligator weed, wild taro, primrose willow, torpedograss, salvinia, bur-head sedge, and a few patches of water hyacinth.

Photo: Elephant ear (invasive).



Photo: Treated water hyacinth.



Observed native SAV in the lake included road grass and baby's tears. Both of these species were found in low quantities at a depth of 2 feet.

Photos: Example of baby's tears.



Observed native emergent vegetation in the lake included: bur-marigold, buttonbush, sawgrass, pennywort, maidencane, hempvine, yellow cow lily, pickerelweed, smartweed, duck potato, lizard's tail, bulrush, fire flag, and climbing aster. Pickerel weed, maidencane, duck potato and fire flag were showing spring growth and looked very healthy.

Photo: fire flag showing spring growth.



The Secchi measurement (for water clarity) was 3.0 feet in a total depth of 8.3 feet. The lake elevation was 36.87 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. Consider becoming a LAKEWATCH volunteer! LAKEWATCH volunteers have the opportunity to provide valuable water quality data for your lake by collecting monthly samples. Back-up volunteers should be established 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.
5. 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.
6. 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.
7. 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.