Hello North Horseshoe Lake Residents!

Below, please find the latest bioassessments for your lake (May-July 2013). The next lake inspection is scheduled for August 15th, 2013 (weather permitting). Key highlights of this assessment will include:

- Submersed aquatic vegetation (SAV) updates
- Emergent invasive exotic and native vegetation present in your lake
- Water quality data now available on the Seminole County Watershed Atlas
- Recommendations for you and your lake

On **May 16th, 2013**, Seminole County Lake Management Program (SCLMP) staff Thomas Calhoun (Lake Management Coordinator) and Watershed Management staff Michelle Shelton surveyed the aquatic plants in North Horseshoe Lake. Also present for the lake inspection were North Horseshoe Lake Advisory Board members Leza Harrison and David Kuketz.

The observed SAV included road grass (*Eleocharis baldwinii*) to a depth of 4 ft, stonewort to a depth of 4 ft, and baby’s tears (*Micranthemum umbrosum*) to a depth of 1 ft.

**Photo: Submersed vegetation (baby’s tears and road grass) mixed with emergent vegetation (torpedo grass).**

Invasive emergent aquatic plants observed included: torpedo grass, alligator weed, dog fennel, and water hyacinth. These species were all found to be expanding since the previous inspection and bi-monthly treatment (April 2013) due to springtime growth. Other invasive species observed during this inspection included: elephant ear, primrose willow, bur-head sedge, water sprite, and salvinia. The 8th Street canal contained invasive species; the contractor was asked to specifically target this canal, which is already included under the routine services agreement. The canal was subsequently treated in May. The next scheduled bi-monthly treatment for the lake/canal will be the third week in June.
Secchi reading (measurement for water clarity) was 3.3 ft at time of inspection. The lake elevation was 36.9 ft above sea level, which was higher than the level in the previous inspection (36.54 ft).

6-10-2013

On June 10th, 2013, SCLMP personnel Thomas Calhoun (Lake Management Coordinator) and Joey Cordell (Watershed Management intern) surveyed the aquatic plants in North Horseshoe Lake. Also present for the lake inspection were North Horseshoe Lake Advisory Board members Patty Searcy, Leza Harrison joining by boat and David Kuketz joined dockside. The focus of this survey was to inspect potential restoration sites.

The SAV observed during this inspection included road grass (*Eleocharis baldwinii*) to a depth of 4 ft and baby’s tears (*Micranthemum umbrosum*) to a depth of 1 ft.

Invasive plants found during this inspection included: alligator weed, elephant ear, water hyacinth, bur-head sedge, and torpedo grass. Aside from elephant ear, all observed invasive species were reduced lakewide compared to the previous inspection (May 2013). Native vegetation found during the inspection included: button bush, sawgrass, flat sedge, pickerelweed, and maidencane.
Secchi reading (measurement for water clarity) was not taken at the time of inspection due to an approaching storm. The lake elevation was 37.51 feet above sea level at time of inspection, an increase from 36.94 feet during the last inspection.

7-12-2013

On July 12th, 2013, SCLMP personnel Gloria Eby (Lake Management Program Manager) and Thomas Calhoun (Lake Management Coordinator), joined with Beth Stephens (SERV Coordinator) and Joey Cordell (Watershed Management intern), surveyed the aquatic plants in North Horseshoe Lake. Also present for the lake inspection was North Horseshoe Lake Advisory Board member, Patty Searcy.

The observed submersed aquatic vegetation (SAV) included road grass (*Eleocharis baldwinii*) to a depth of 5 ft and baby’s tears (*Micranthemum umbrosum*) to a depth of 1 ft.

Invasive plants found during this inspection included: alligator weed, elephant ear, water hyacinth, bur-head sedge, and torpedo grass. Elephant ear and water hyacinth have expanded since the previous inspection. These species and others will continue to be targeted during the next herbicide treatment scheduled for the third week in August.
Photo: Water hyacinth and elephant ear found along shoreline
Native vegetation found during the inspection included: button bush, sawgrass, flat sedge, pickerelweed, southern water grass, lizard’s tail, and maidencane.

Given forecasts for inclement weather and other factors, the first Shoreline Restoration event for North Horseshoe Lake was cancelled. In making lemonade with lemons, the plant order was still delivered on Friday, July 12th and 900 native aquatic plants were planted by a group of dedicated lake residents! On this day, Seminole County staff provided hands-on demonstrations to the residents about how and where to plant the various species. Kudos to those that participated with us, including Kevin Bortz, Patty and Steve Searcy (with their visiting friends), Leza Harrison, and recruits from Kevin Bortz, Jake Garris and Michael Marion (the power house planting team)!!!
Photos: The power house planting team, Jake Garris and Michael Marion, on left and plants they installed on right. WAY TO GO!

Native vegetation introduced by residents included fire flag, duck potato, canna, and bulrush. Pickerelweed and maidencane were also planted for the restoration effort. To ensure success, it is important to replant any “pop-up” plants that become dislodged due to wind and wave action. Some residents have already been quite diligent in tracking down pop-ups! More kudos!

Photo: Native vegetation being delivered to planting sites.
Photo: Planting fire flag and other species along the Searcy’s shoreline.

Photo: Thomas Calhoun and Dean Barber giving instructions on how to plant to Jake Garris and Michael Marion.

Photos: Seminole County staff installing plants as a reference for lake residents.

Secchi (measurement for water clarity) was 3.3 ft on June 20\textsuperscript{th}, 2013. The lake elevation was 37.11 ft above sea level at time of inspection reduced from 37.51 ft from prior inspection.

Water quality data for North Horseshoe Lake is now available on the Seminole County Watershed Atlas website and more data will be posted soon. Please find this data and much more at:
http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wboid=7576&wboidatlas=lake
Recommendations for your lake:

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 findings from this and other surveys.

2 Continue to establish a beneficial native shoreline for North Horseshoe Lake, especially in locations that are devoid of emergent aquatic plants.

3 Utilize the valuable educational outreach programs that are available, i.e. Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN) interactive presentations, and Lake Management Video mail-outs. Implement a media campaign within the community to reduce personal pollution by: decreasing fertilizer usage, using only phosphorous-free and slow-release nitrogen fertilizers, keeping a functional shoreline with beneficial native aquatic plants, and keeping grass clippings out of your lake and the storm drains that lead to the lakes. 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.

4 Help spread the word! Obtain email addresses from neighbors not currently on the distribution list. Valuable information is contained within these assessments.
Below, please find the latest bioassessment report for your lake. Our next lake inspection is scheduled for May 16th, 2013, (weather permitting). Key highlights of this bioassessment will include:

- Submersed aquatic vegetation (SAV) updates
- Emergent invasive, exotic, and native vegetation found in your lake
- Lake restoration event information
- Water quality data now found on the Seminole County Watershed Atlas!!
- Recommendations for you and your lake

On April 3rd, 2013, Seminole County Lake Management Program (SCLMP) personnel, Thomas Calhoun (Lake Management Coordinator) and Water Quality Intern Devin Whitney, surveyed the aquatic plants in North Horseshoe Lake.

The observed submersed aquatic vegetation (SAV) included road grass (*Eleocharis baldwinii*) to a depth of 3 ft, and baby’s tears (*Micranthemum umbrosum*) to a depth of 1 ft.

**Photo: Example of baby’s tears.**

Exotic and invasive emergent plants found during the inspection included: alligator weed (*Alternanthera philoxeroides*), Cuban bur-head sedge (*Scirpus cubensis*), wild taro (*Colocasia esculenta*), and torpedo grass (*Panicum repens*). Alligator weed and torpedo grass has expanded in many areas since the previous inspection. In addition, water hyacinth was found in small clusters in more locations around the lake than in previous inspection. Alligator weed, torpedo...
grass, Cuban bur-head sedge, and water hyacinth will be targeted during the herbicide treatment scheduled for this week. This treatment will also include the canal along 8th street.

Photo: Water Hyacinth.

Photo: 8th Street canal.
The first North Horseshoe Lake Shoreline Restoration Event is scheduled for Saturday, July 14th, 2013, from 9am-1pm. On this date, the Seminole County Lake Management and SERV Programs will bring in community volunteers to plant beautiful FREE aquatic plants along designated shorelines with lake residents to help improve the habitat and water quality of your lake. We are always looking for volunteer sites, so if you are interested in becoming a designated site, please contact me for further details.

Photo: Volunteers planting native aquatic vegetation in Lake Brantley.
Water quality data for North Horseshoe Lake is now available on the Seminole County Watershed Atlas.  

Secchi (measurement for water clarity) was 2.6 feet at time of inspection. The lake elevation was 36.54 feet above sea level at time of inspection compared to 36.46 feet during the last inspection. This information and much more can be found by visiting http://www.seminole.wateratlas.usf.edu/

On January 22nd, 2013, Seminole County Lake Management Program (SCLMP) personnel, Thomas Calhoun (Lake Management Coordinator) and Gloria Eby, surveyed the aquatic plants in North Horseshoe Lake.

The observed submersed aquatic vegetation (SAV) included road grass (Eleocharis baldwinii) to a depth of 3 ft, and baby’s tears (Micranthemum umbrosum) to a depth of 1 ft. Most of the bottom of North Horseshoe Lake is covered with detritus (loose organic material). SAV plays an important role in aquatic ecosystems by maintaining water quality and providing habitat for wildlife and fish. Planting native SAV during the July 14th restoration event is a possibility.
Exotic and invasive emergent aquatic plants found during the inspection included: alligator weed (*Alternanthera philoxeroides*), wild taro (*Colocasia esculenta*), and torpedo grass (*Panicum repens*). One small cluster water hyacinth was found during the inspection. The Seminole County herbicide applicator will continue to target these plants unless otherwise notified.

**Photo:** Water Hyacinth observed during inspection.
Photo: Torpedo grass and elephant ear.
Water quality data for North Horseshoe Lake is now available on the Seminole County Watershed Atlas.

Secchi (water clarity) was 2.1 feet at time of inspection. The lake elevation was 36.46 feet above sea level at time of inspection compared to 36.72 feet during the last inspection. This information and much more can be found by visiting http://www.seminole.wateratlas.usf.edu/

**Recommendations for your 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 findings from this and other surveys. Continue to increase native aquatic plantings along shoreline (such as pickerelweed, duck potato and canna).

2. Increase educational outreach programs, such as Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN), and Lake Management Video mail-outs.
Reduce pointless personal pollution with low fertilizer use and phosphorous-free fertilizers, by keeping a functional shoreline with beneficial native aquatic plants, and by keeping grass clippings out of your storm drains leading to the lake. All these activities aid in protecting your waterbody! Contact Seminole County Lake Management Program (407) 665-2439 about free educational programs available to you.
Below, please find the latest assessments of your lake. Our next lake inspection is scheduled for January 22nd, 2013 (weather permitting). Key highlights of this assessment will include:

- Submersed aquatic vegetation (SAV) updates
- Emergent invasive exotic and native vegetation found in your lake
- Lake restoration event information
- Water Quality data now found on the Seminole County Watershed Atlas
- Recommendations for you and your lake

On December 11th, 2012 Seminole County Lake Management Program (SCLMP) personnel Thomas Calhoun (Lake Management Coordinator) and Water Quality personnel Michelle Shelton surveyed the aquatic plants in North Horseshoe Lake.

The observed submersed aquatic vegetation (SAV) included road grass (*Eleocharis baldwinii*) to a depth of 6 ft, and baby’s tears (*Micranthemum umbrosum*) to a depth of 1 ft. The coverage of SAV in North Horseshoe Lake was very small. SAV plays an important role in aquatic ecosystems by maintaining water quality and providing habitat for wildlife and fish. Planting native SAV during the July 14th restoration event is a possibility.

**Photo: Road grass.**
Exotic (not native to the place where found) invasives found during the inspection included: alligator weed (*Alternanthera philoxeroides*), wild taro (*Colocasia esculenta*), torpedo grass (*Panicum repens*), and cuban burhead sedge (*Scirpus cubensis*). One free-floating water hyacinth was found during the inspection. The Seminole County herbicide applicator will continue to target these plants unless otherwise notified. The next advised treatment will be tentatively scheduled for March.

**Photo: Treated alligator weed.**

Native beneficial emergent vegetation found during the inspection included: pickerelweed, saw grass, and maidencane. These species will be recommended for planting along with duck potato, canna and bulrush for the July 14th restoration event.

**Photo: Pickerelweed.**
The first North Horseshoe Lake Shoreline Restoration Event is scheduled for Saturday, July 14th, 2013 from 9am-1pm. On this date, the Seminole County Lake Management and SERV Programs will bring in community volunteers to plant beautiful FREE aquatic plants along designated shorelines to help improve the water quality of your lake. We are always looking for volunteer sites, so if you are interested in becoming a designated site, please contact me for further details.

Photo: Volunteers planting duck potato, Mirror Lake.
Water quality data for North Horseshoe Lake is now available on the Seminole County Watershed Atlas.

Secchi (water clarity) was 3.2 feet at time of inspection. The lake elevation was 36.72 feet above sea level at time of inspection compared to 37.31 feet during the last inspection. This information and much more can be found by visiting http://www.seminole.wateratlas.usf.edu/

**Recommendations for your 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 findings from this and other surveys. Continue to increase native aquatic plantings along shoreline (such as pickerelweed, duck potato and canna).

2. Increase educational outreach programs, such as Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYI), and Lake Management Video mail-outs.
3 Reduce pointless personal pollution with low fertilizer use and phosphorous-free fertilizers, by keeping a functional shoreline with beneficial native aquatic plants, and by keeping grass clippings out of your storm drains leading to the lake. All these activities aid in protecting your waterbody! Contact Seminole County Lake Management Program (407) 665-2439 about free educational programs available to you.
Greetings North Horseshoe Lake Residents. Please find updates for your lake below.

Below please find the latest lake assessments for your lake. Our next lake inspection is scheduled for, December 11th, 2012 (weather permitting). Key highlights of this update will include:

- Scheduled herbicide treatments
- Emergent aquatic vegetation
- Submersed aquatic vegetation (SAV) updates
- Recommendations for you and your lake

On November 14th, 2012 Seminole County Lake Management Program (SCLMP) Thomas Calhoun, Seminole County Environmental Scientist Shannon Wetzel and Lake Resident Lee Harrison surveyed the aquatic plants on North Horseshoe Lake.

Many residents have had questions as to the frequency of herbicide treatments. If you have questions please contact me directly and please try not to interrupt the herbicide contractor as they are on a tight schedule and have many lakes to visit in a given day. Currently the herbicide treatments are scheduled as bi-monthly. We are going to slightly adjust the schedule to take advantage of the colder winter temperatures and the slow growing season. We will treat in November and then skip the next three months of December, January and February. In March we will continue with bi-monthly and then treat consecutive months leading up to the restoration event scheduled for July 14th, 2012. These consecutive treatments will allow us to create room to bring in beneficial native vegetation on the day of the event.

Native emergent vegetation found during the survey included; pickerel weed, maiden cane, climbing aster, marsh beggartick and yellow cow lily. Invasive emergent plants found included; torpedo grass, alligatorweed, Cuban burhead sedge, primrose willow and wild taro. All were found impacted by herbicide treatment except for wild taro. Only one floating water hyacinth was found during the inspection.

Photo: Climbing aster.
Photo: Marsh beggartick.
The only submersed aquatic vegetation (SAV) found during the inspection was road-grass. The majority of the lake bottom consisted of detritus (decaying organic material). SAV plays an important role in nutrient reduction as well as providing habitat for many aquatic species.

Photo: Detritus.
Secchi (water clarity) was 3.6 feet in. The lake gauge was 36.81 feet above sea level.

**Recommendations for your 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 shoreline (such as pickerelweed, duck potato and canna).

2. 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 by using low fertilizer use; phosphorous free fertilizers; keeping a functional shoreline with beneficial native aquatic plants; keeping grass clippings out of your storm drains leading to the lake. All these activities aid in protecting your waterbody! Contact Seminole County Lake Management Program (407) 665-2439 for free educational programs available.

Have a happy Thanksgiving!