Greetings Lake Mills Residents!

Please find the bioassessment reports for your lake (from December 2012 through May 2013) below. Our next lake inspection is scheduled for July 9th; weather permitting. Key highlights of this update will include:

- Hydrilla update- significant reduction in remaining biomass
- Native Submersed Aquatic Vegetation (SAV) found along perimeter of lake
- November 3rd Shoreline Restoration Event update
- Lake access issues
- Recommendations for you and your lake

On December 11th, 2012, Seminole County Lake Management Program staff Thomas Calhoun and Michelle Shelton surveyed the aquatic plants in Lake Mills.

Hydrilla was present in areas along the north shore of Lake Mills to a depth of 3 feet intermixed sporadically with the native SAVs. This is a reduction in hydrilla biomass since the previous inspection (September, 2012). Decrease in hydrilla biomass can be attributed to both grass carp fish (486 fish stocked on July 13th, 2012) and reduction of sunlight needed for the plant to survive. Reduced sunlight needed for plant growth can be caused by a rise in water elevation affecting water clarity to where the lake bottom plants no longer receives sufficient sunlight for growth. These areas will be heavily monitored during the next several months to determine if additional actions will be required.

The native SAV found during our inspection included; lemon bacopa to a depth of 4 feet, coontail to 6 feet, road grass to 6 feet, eelgrass to 2 feet, and baby tears to a depth of 3 feet. These native SAVs were found expanding around the entire perimeter of the lake.

Photo: Hydrilla found during inspection.

Photo: Baby tears found during inspection.
No hydrilla was found within the canals however the floating exotic water fern (*Salvinia*) was present and subsequently treated by the MSBU funded herbicide contractor.

**Photos: Salvinia in canal (left) and subsequently treated (right).**

Pickerelweed, duck potato, canna, and fire flag planted during the **November 3rd, 2012** Shoreline Restoration Event are establishing well around the lake. Approximately 80 volunteers spent their Saturday morning working at 8 site locations (4 sites in the park). A total of 2,600 native aquatic plants were installed (500 canna lily, 1,000 duck potato, 1,000 pickerelweed, and 100 thalia). Additionally, the exotic air potato plant (that can grow 8 inches in a day) was targeted for removal. Collected vines and potatoes totaled over 150 bags of material. Kudos to those who participated!

**Photo: Volunteers planting aquatic plants at Lake Mills Park.**
The secchi reading (measurement for water clarity) was 6.3 feet. Both grass carp barriers were inspected and found free of debris and operational. The water elevation at the time of inspection was 40.67 feet above sea level.

**Photo: Carp barrier at Lake Mills Park.**

On January 22nd, 2013, Seminole County Lake Management Program staff (Gloria Eby and Thomas Calhoun) and FWC regional biologist CJ Greene surveyed the aquatic plants in Lake Mills. Hydrilla was present in areas along the north shore of Lake Mills but only a few small sprigs were found. These plants were re-growing from a turion. A turion, as well as tubers, are deposited by the plant into the sediment and are used to perennialize the plant as a way of propagation (re-growth). Tubers and turions can remain viable for up to four years. Since the lake was previously infested with hydrilla, an abundant amount of tubers/turions (which can sprout new growth at any time) were deposited in the lake bed; one square meter of hydrilla can
produce 5,000 tubers. We will continue to monitor the inshore areas of the lake to enable rapid response to new hydrilla growth as result of these tubers/turions.

**Photos: Example of hydrilla tubers (left) and turions (right).**

![Photo: Example of hydrilla tubers (left) and turions (right).](image)

**Photo: Hydrilla found growing from turion during inspection.**

![Photo: Hydrilla found growing from turion during inspection.](image)

The native SAV found during this inspection included; lemon bacopa to a depth of 3 feet, coontail to 5 feet, road grass to 6 feet, eelgrass to 2 feet, and baby tears to 3 feet. Coontail is expanding throughout the lake as the dominant SAV.

**Photo: Eelgrass found during inspection.**

![Photo: Eelgrass found during inspection.](image)
Photo: Lemon bacopa found during inspection.

Photo: Pickerelweed and duck potato expanding from the November 3rd Shoreline Restoration Event.
The Secchi reading (measurement for water clarity) was 6.2 feet. The grass carp barrier was inspected and found free from debris and operational. The water elevation at the time of inspection was 40.58 feet above sea level.

For the month of April 2013, our routine access location was inaccessible due to entry code changes. During this time the MSBU funded herbicide contractor, water quality sampling events, as well as our routine inspections were delayed until access was regained.

On May 14th, 2013, Seminole County Lake Management Program Staff Gloria Eby and Thomas Calhoun surveyed the aquatic plants in Lake Mills.

Only one sprig of hydrilla was found during the inspection! This sprig was found at a depth of 5 feet. No hydrilla was found within the canals. The invasive species parrot feather previously found and treated in the northern section of the canal will be scheduled for retreatment upon next herbicide service date.

The native SAV found during inspection included; lemon bacopa to a depth of 5 feet, coontail to 5 feet, road grass to 5 feet, eelgrass to 2 feet, stonewort to 6 feet, bladderwort to 3 feet, and baby’s tears to a depth of 3 feet. Again coontail continues to be the dominant SAV throughout the lake.

Photo: Parrot’s feather found within the canal (impacted from prior treatment).

Photo: Road grass found during inspection.
Emergent vegetation around Lake Mills continues to be treated by the MSBU funded herbicide contractor. Presently, native vegetation (such as maidencane, pickerelweed, and duck potato) is the dominant species along many of the shorelines. The invasive exotic torpedo grass has been reduced lake wide as result of the MSBU funded herbicide contractor.

**Photo:** Pickerelweed stand providing good benefits to the lake.

**Photo:** Carp barrier at Lake Mills Rd. with gap (left) and recently repaired (right).
The secchi reading (measurement for water clarity) was 8.2 feet compared to the previous inspection reading of 6.2 feet. The grass carp barrier located by Lake Mills Park was inspected and found free from debris and operational. The grass carp barrier on Mills Creek at Lake Mills Rd. was inspected and found to contain gaps due to erosion of the stone gravel that is lining the bed of the creek. This was repaired by the MSBU funded contractor. The water elevation at the time of inspection was 40.58 feet above sea level.

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

2. Lake Mills is in need of a LAKEWATCH volunteer which provides valuable water quality data for your lake. Contact the Seminole County Lake Management Program at (407) 665-2439 to become a LAKEWATCH volunteer.

4. 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 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 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.
Greetings Lake Mills Residents!

Please find the bioassessment report for your lake below. Our next lake inspection is scheduled for **August 13th**; weather permitting. Key highlights of this update will include:

- Hydrilla update- sparse plants observed *only* in canal
- Native Submersed Aquatic Vegetation (SAV) found within lake
- November 2012 Shoreline Restoration Event update- plants established
- Recommendations for you and your lake

On **July 9th, 2013**, Seminole County Lake Management Program staff (Gloria Eby, Thomas Calhoun, and Joey Cordell) surveyed the aquatic plants in **Lake Mills**.

Only one sprig of hydrilla was found during the inspection. This sprig was found within the western canal. The invasive species parrot’s feather, previously treated in the northern section of the canal in May, was successfully reduced.

Native SAVs found during inspection included: lemon bacopa to a depth of 3 feet, coontail to 8 feet, road grass to 6 feet, eelgrass to 2 feet, stonewort to 6 feet, bladderwort to 3 feet, and baby’s tear to a depth of 3 feet. Coontail continues to be the dominant SAV throughout the lake.

**Photos: Parrot’s feather in canal impacted from May 2013 treatment (left) to current canal conditions (right).**

**Photo: Native eelgrass found during inspection to 2 feet.**
Emergent invasive vegetation around Lake Mills continues to be treated in key areas by the MSBU funded herbicide contractor. The invasive exotic torpedo grass has been reduced lake wide as result of the MSBU funded herbicide contractor. Also targeted is water hyacinth which has not been observed for several inspections now. Presently, native emergent vegetation (such as maidencane, pickerelweed, and duck potato) is the dominant species along many of the shorelines.

Pickerelweed, duck potato, canna, and fire flag planted during the November 2012 Shoreline Restoration Event have established well in most locations. Approximately 80 volunteers spent their Saturday morning working at 8 site locations (4 sites in the park). A total of 2,600 native aquatic plants were installed (500 canna lily, 1,000 duck potato, 1,000 pickerelweed, and 100 thalia).

Photos: Pickerelweed (left) and duck potato (right) planted during the 2012 Restoration Event. Plants are established and providing good benefits to the lake.
The secchi reading (measurement for water clarity) was 6.0 feet compared to the previous inspection reading of 8.2 feet. The grass carp barrier located by Lake Mills Park was inspected and found free from debris and operational. The grass carp barrier on Mills Creek at Lake Mills Rd. was inspected and found to contain minor debris collected. The water elevation at the time of inspection was 41.2 feet above sea level; an increase from prior survey of 40.58 feet.

**Photo: Carp barrier at Lake Mills Rd.**

**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 our findings from this and other surveys.
2 Lake Mills is in need of a LAKEWATCH volunteer which provides valuable water quality data for your lake. Contact the Seminole County Lake Management Program at (407) 665-2439 to become a LAKEWATCH volunteer.

3 Continue to establish a beneficial native shoreline for Lake Mills especially in locations that are devoid of emergent aquatic plants.

4 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.

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