

Greetings Lake Tuskawilla residents!

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

- Status of Submersed Aquatic Vegetation (SAV)
- Results of March 29<sup>th</sup> restoration event
- LVI Results
- Status of shoreline emergent vegetation and protection
- Recommendations for you and your lake

On **April 9<sup>th</sup>, 2014**, Seminole County Lake Management Program staff (Gloria Eby and Thomas Calhoun), along with lake residents (Cindy Susi and Virginia Lebioda), surveyed the aquatic plants in Lake Tuskawilla.

A total of 7 species of native submersed aquatic vegetation (SAV) were observed. These species included: baby tears to 3 feet, road grass to 3 feet, smooth water hyssop to 1 foot, southern naiad to 3 feet, stonewort to 3 feet, water thread pondweed to 7 feet, and eelgrass to 7 feet. The invasive exotic hydrilla was not observed during this survey.

**Photo: Baby's tears found along the bottom of Lake Tuskawilla.**



**Photo: Road grass growing along the shoreline.**



To help protect your lake and keep you in compliance with state agency regulations, please know that the removal of aquatic plants requires a *FREE* permit from the Florida Fish & Wildlife Conservation Commission (FWC)- Invasive Plant Management Section if you remove more than 50 feet or 50% (whichever is less) of your shoreline by physical or mechanical means OR if you use *any* aquatic herbicides along your lakefront. Additionally, companies that use a jet-pump for mechanical removal **MUST** use a turbidity curtain to keep the sediments/turbidity on site. Native plants play a **vital** role in keeping your lake clean and healthy. Please contact your regional biologist Alicia Knecht at [Alicia.Knecht@MyFWC.com](mailto:Alicia.Knecht@MyFWC.com) or (321) 246-0682 if you are in need or think you may need an Aquatic Plant Management permit. She will consult with you for free as part of the permitting process which provides education on which plants are good for removal and suggest native plants that are aesthetically pleasing.

Additionally, the importation of sand to create a “beach” is a direct source for nutrient rich run-off to enter your lake if it is not contained. We are seeing an increase of “beaches” within our monitored lakes and again this is a **big** lake polluter. Importation of sand can be a dredge and fill violation from the Florida Department of Environmental Protection (FDEP), St. Johns River Water Management District (SJRWMD), and Seminole County agencies. Since processing applications for these activities are more in-depth, there is a cost associated with this type of permitting (called ERPs). ERP violations can carry a hefty fine/remedial action. Please contact the following if you need or think you may need an ERP permit:

- FDEP, ERP environmental specialist, Aaron Watkins at (407) 897-2967 or [Aaron.Watkins@dep.state.fl.us](mailto:Aaron.Watkins@dep.state.fl.us)
- SJRWMD main switchboard at (407) 659-4800
- Seminole County Economic and Community Development Services- Planning Division at (407) 665-7445 or [devrevdesk@seminolecountyfl.gov](mailto:devrevdesk@seminolecountyfl.gov)

On March 29<sup>th</sup>, 2014, **94** volunteers committed their Saturday to restore beneficial native vegetation on Lake Tuskawilla! 4,190 native plants (550 golden canna, 1,900 duck potato, 1,500 pickerelweed, 120 soft rush and 120 thalia) were planted at 12 different sites. At the time of inspection, many of the plants from the March 2014 volunteer event were observed to be establishing well. **Kudos to all Lake Tuskawilla residents who supported this event!**

A wave action barrier was temporarily constructed using hay bales during this event to assist with reducing wave action while the plants root and stabilize. Wave action has contributed to the loss of plants in the past.

**Photo: Duck potato planted behind wave action barriers.**



Invasive species of emergent vegetation included: alligatorweed, wild taro, and torpedo grass.

**Photo: Wild taro growing in cypress knees.**



The secchi reading (measurement for water clarity) was 4.9 feet in a depth of 12.2 feet. The lake gauge was 53.43 feet above sea level. These measurements and additional information about Lake Tuskawilla are available on the Seminole County Wateratlas at:

<http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7672>

## 9-14-2014

On **September 16<sup>th</sup>, 2014** Seminole County Lake Management Program staff (Gloria Eby and Thomas Calhoun), along with lake residents (Cindy Susi, Steve Reich and Virginia Lebioda), surveyed the aquatic plants in Lake Tuskawilla and conducted a Lake Vegetation Index (LVI) bioassessment.

The LVI was created by the Florida Department of Environmental Protection as a rapid screening tool (bioassessment) for ecological condition; it determines how closely a lake's flora (aquatic plants) resembles that of an undisturbed lake.

Lake Tuskawilla is 92 surface acres located in the Little Lake Howell watershed. Scores for Lake Tuskawilla have historically ranged from 38 to 61. LVI score for 2014 was 61 in the healthy range. The high score for this year is attributed to presence of the native SAV stonewort in all 4 of the sections surveyed! It was the dominant species in two of the 4 sections with yellow cow lily and cypress tree being dominant in the other two sections.

LVI Range	Description
78-100	Exceptional
43-77	Healthy
0-42	Impaired

There was an overall increase in the amount of SAV found since the previous inspection. SAV plays an important role in Lake Tuskawilla by reducing nutrients within the waterbody, providing habitat for aquatic species, and competing for space with the exotic invasive hydrilla. A total of 7 species of native submersed aquatic vegetation (SAV) were observed. These species included: baby tears to 2 feet, road grass to 5 feet, smooth water hyssop to 1 foot, southern naiad to 7 feet, stonewort to 7 feet, water thread pondweed to 7 feet, and eelgrass to 2 feet. The invasive exotic hydrilla was not observed during this survey.

**Photo: Stonewort found to a depth of 7 feet.**



Invasive species of emergent vegetation included: alligatorweed, wild taro, creeping oxeye, and torpedo grass.

Several restoration event locations continue to expand nicely. The wave barrier provided some protection but months after installation, the grass carp fish began to eat the hay which caused it to dislodge. Other residents reported grass carp fish feeding on the new plantings which also lead to plant reduction as result.

**Photo: Barrier compromised.**



**Photo: Planted canna.**



The secchi reading (measurement for water clarity) was 7.2 feet in a depth of 9.5 feet. The lake gauge was 54.24 feet above sea level. These measurements and additional information about Lake Tuskawilla are available on the Seminole County Wateratlas at:

<http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7672>

### **Recommendations for you and your lake:**

- 1 Continue the excellent job of communicating 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.
- 2 Continue to establish a beneficial native shoreline for your lake, 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.
- 3 These recommendations could be managed by Seminole County by establishing an MSBU, Municipal Service Benefit Unit, for aquatic weed control/enhancement. For additional information contact Carol Watral at (407) 665-7164 or [cwatral@seminolecountyfl.gov](mailto:cwatral@seminolecountyfl.gov) or <http://www.seminolecountyfl.gov/fs/msbu/>.
- 4 Be sure to take advantage of 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 are all great options. 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 stormdrains 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.
- 5 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.