Greetings Lake Tuskawilla residents!

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

- Lake Vegetation Index (LVI) conducted
- Results of April 25th restoration event
- Status of Submersed Aquatic Vegetation (SAV) observed
- Status of shoreline emergent vegetation observed
- Recommendations for you and your lake

LVI & Bioassessment:
On **August 6th, 2015** Seminole County Lake Management Program staff (Gloria Eby, Thomas Calhoun, Joey Cordell, Beth Stephens, and Sophia Pengra) along with lake resident Cindy Susi, 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. Results of the LVI will be provided soon.

Four species of beneficial native SAV (submersed aquatic vegetation) were observed during the inspection. These included: roadgrass to 1 foot, baby's tears to a depth of 2 feet, eelgrass to 2 feet, and stonewort to 7 feet. This is a continued increase in native SAV biomass since previous inspection (April 2015). Stonewort, a highly beneficial SAV, has expanded throughout most of the lake. Though the lake greatly benefits from the increase in native SAV, it is also an indication that conditions are better for hydrilla to appear due to less grass carp fish consuming SAVs. If you see hydrilla within the lake, please report these observations to one of the lake liaisons or to Seminole County's Lake Management Program.

Photo: Stonewort (native).

Invasive emergent vegetation included: alligatorweed, wild taro, and torpedo grass. Torpedo grass has increased since the previous inspection.

Photo: Torpedo grass (invasive).

Native emergent vegetation seen during the inspection included: smooth water hyssop, canna, buttonbush, sawgrass, flatsedge, slender spikerush, rush fuirena, pennywort, soft rush, hempvine, fragrant water lily, yellow cow lily, banana lily, maidencane, pickerelweed, beakrush, duck potato, cattail, and fire flag.

Photo: Shoreline with native vegetation

The secchi reading (measurement for water clarity) was 7.2 feet in a depth of 12.1 feet. The lake gauge was 53.68 feet above sea level. No triploid (sterile) grass carp fish were observed during the inspection. 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

On **April 25th, 2015** Seminole County Lake Management Program (SCLMP) staff (Thomas Calhoun and Joey Cordell) surveyed the aquatic plants in **Lake Tuskawilla**.

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 water body, providing habitat for aquatic wildlife and competing for space with the exotic invasive hydrilla. A total of 3 species of native SAV were observed. These species included: roadgrass to 6 feet, baby tears, and stonewort to 6 feet. Hydrilla was not observed during the survey.

Photo: Roadgrass and Stonewort.

Emergent vegetation species included: bur marigold, canna, buttonbush, saw-grass, sedge, pennywort, primrose willow, hempvine, yellow cow lily, yellow water lily, fragrant water lily, maidencane, water paspalum, pickerelweed, duck potato, Carolina willow, cord grass, fire flag, and cattail.

Photo: Well planted shoreline!

Invasive species of emergent vegetation included: wild taro and torpedo grass. Torpedo grass has expanded and in some areas has mixed in with restoration plantings. In these instances, torpedo grass should be hand removed to give the native species the best opportunity to establish and grow.

Photo: Torpedo grass.

The secchi reading (measurement for water clarity) was 5.4 feet in a depth of 15 feet. The lake gauge was 54.21 feet above sea level.

Restoration Event:
On **April 25th, 2015,** volunteers committed their Saturday morning to restoring beneficial native vegetation on Lake Tuskawilla! 2,820 native plants (golden canna, duck potato, pickerelweed, soft rush and fire flag) were planted at 5 different sites. Plants from previous restoration events are healthy and expanding around the lake. Thank you all who supported and assisted in this event!

Shoreline Stewardship:
As a reminder, 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 Kristine Campbell at Kristine.Campbell@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, Brad Whidden at (407) 897-4315 or Brad.Whidden@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

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 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.