Greetings Prairie & Pearl Lake Residents,

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

- Submersed aquatic vegetation updates- extremely good plant diversity observed!
- Invasive/exotic plants present- Cuban burhead sedge is expanding
- Hydrilla status- minimal presence observed in both lakes
- Recommendations for you and your lake

Prairie Lake

On **April 22nd, 2014**, Seminole County Lake Management Program personnel (Thomas Calhoun and Gloria Eby) with Stephen Fussell (Seminole County's Office of Organizational Development) and Lake Liaison Bill Hemphill surveyed the aquatic plants in **Prairie Lake**.

There was extremely good plant diversity in Prairie Lake! We observed 9 species of submersed aquatic vegetation (SAV), 8 of which were native. This is a very important factor in the health and quality of your lake as these plants help to absorb excess nutrients and create vital habitat for the ecosystem.

The native SAV consisted of: coontail to a depth 2.5 feet, southern naiad to 13 feet, the macro-algae stonewort to 13 feet, pondweed to 6 feet, 3 bladderwort species (*Utricularia radiata, U. inflata,* and *U. gibba*) to 12 feet, and eelgrass to 12 feet. Hydrilla was sporadically intermixed with the eelgrass to a depth of 2 feet in only a few areas near the cove on the west shoreline. There was a decreased abundance of hydrilla compared to previous inspections.

The grass carp stocking, coupled with competition from the native SAV and active spot treatment (with herbicides), has helped reduce the amount of hydrilla present in Prairie Lake, thus keeping hydrilla management costs low. It is recommended that monocultures of hydrilla continue to be spot treated with herbicides. The addition of grass carp fish is not recommended at this time for Prairie Lake.

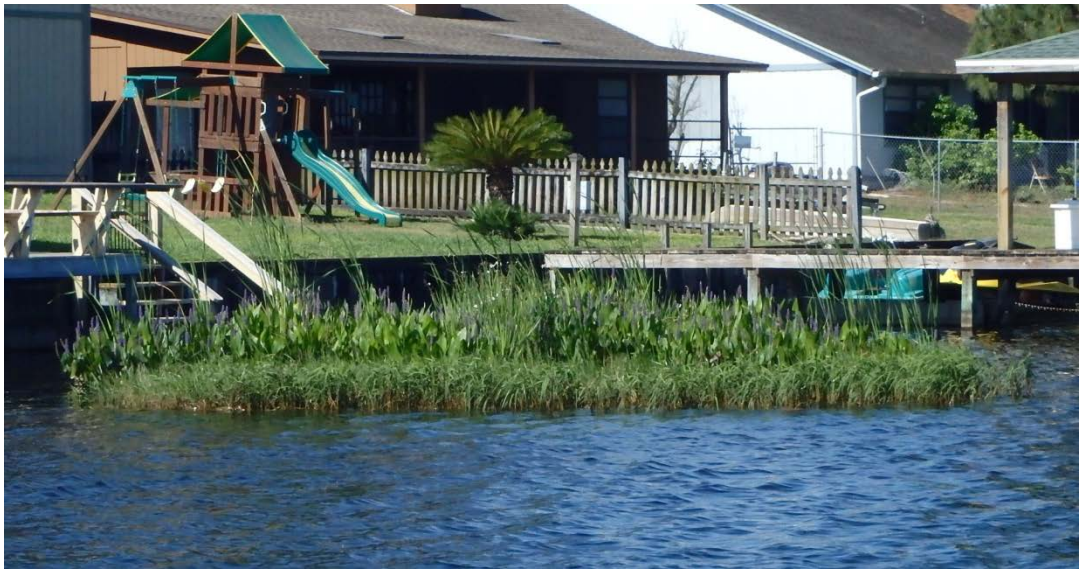
Photo: Example of many species of SAV found intermixed within the lake.

Invasive torpedo grass continues to be the dominant emergent aquatic; it was present along most shorelines. Other invasive species in Prairie Lake included: cattail, primrose, and Carolina willow. Cuban burhead sedge was also observed and is increasing along the west and east shoreline of Prairie Lake; this should be managed. Please note that management of aquatic and wetland plants requires a Florida Fish and Wildlife Conservation Commission (FWC) aquatic plant management permit (which is free). Please contact FWC regional biologist Alicia Knecht at (321) 246-0682 or Alicia.Knecht@myfwc.com to obtain this permit. For more information please visit FWC's website at: http://www.myfwc.com/license/aquatic-plants/.

Photo: Invasive Cuban burhead sedge found expanding along the west and east shoreline.

Many of the previously planted restoration sites are performing well! This can be viewed in the photo below that demonstrates a healthy vegetation zone of maidencane grass, pickerelweed, and duck potato. It is recommended to hand-pull the young cattails that have recently established within this area, as cattails are invasive and can take over the planted area.

Photo: Restoration location that is well established in Prairie Lake.



The secchi reading (measurement for water clarity) during this inspection was 10.1 feet in 23 feet of water. One grass carp fish was observed during inspection.

Pearl Lake

On **April 22nd, 2014**, Seminole County Lake Management Program personnel (Thomas Calhoun and Gloria Eby) with Stephen Fussell (Seminole County's Office of Organizational Development) and Lake Liaison Bill Hemphill surveyed the aquatic plants in **Pearl Lake**.

Six native SAV species and one invasive exotic SAV species were observed during the inspection. The native SAV observed were: southern naiad to a depth of 5 feet, coontail to 5 feet, eelgrass to 5.5 feet, and three types of bladderwort found to 13 ft. Bladderwort is currently the dominant SAV species in Pearl Lake. In the previous inspection, stonewort was the dominant species; however, it was not observed during this inspection.

All of the observed native SAV species were abundant to desirable depths, healthy, and providing good competition to hydrilla (within the depth range of hydrilla). Hydrilla was also present from shallow water to 2 feet deep, and was reduced in abundance compared to the previous inspections. The grass carp stocking, coupled with competition from the native SAV and active spot treatment (with herbicides), has helped reduce the amount of hydrilla present in Pearl Lake, thus keeping hydrilla management costs low.

Photo: Bladderwort found during inspection to a water depth of 13 feet.

Secchi reading during inspection was 11.5 feet in 16.5 feet of water. Seven grass carp fish were observed during the inspection. The addition of grass carp fish is not recommended at this time for Pearl Lake.

Lake Recommendations:

1. Continue to work together with other lakefront owners to control (and if possible, eliminate) the invasive plants observed during this survey and increase native aquatic plantings along the shoreline (such as pickerelweed and duck potato). Have at least one annual lake association meeting to discuss lake-specific issues.

2. 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 overall 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.

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. Control of aquatic and wetland plants could require a Florida Fish and Wildlife Conservation Commission (FWC) aquatic plant control permit (such as the Cuban burhead sedge). Contact Alicia Knecht at (321) 246-0682 or Alicia.knecht@myfwc.com for a free permit and recommendations.

5. Help spread the word! Obtain email addresses from neighbors not currently on the distribution list in order to share this information with others. Valuable information is contained within these reports.