

Greetings Lake Mills residents,

Please find the latest bioassessment for your lake below. Our next lake inspection is scheduled for **December 8th, 2014**; weather permitting. Key highlights of this update include:

- Hydrilla treatment- **Scheduled for December 9th**
- Grass Carp- Additional fish have been ordered
- Native Submersed Aquatic Vegetation (SAV)- observed to be expanding
- Native emergent vegetation present
- Canal SAV status
- Recommendations for you and your lake

On **November 12th**, Seminole County Lake Management Program staff (Gloria Eby, Thomas Calhoun, Joey Cordell, and Sophia Pengra) surveyed the aquatic plants in **Lake Mills**.

Hydrilla, an invasive SAV, has greatly expanded since the last inspection. Patches of hydrilla were found along the perimeter of the lake. Most of the hydrilla was concentrated within the northern coves and southeast cove. The deepest hydrilla found was in 10 feet of water. **A large scale hydrilla treatment is scheduled for December 9th, 2014. Please assistance us this morning by refraining from boating on the lake during am hours so we can achieve the best treatment possible.** In addition to herbicide treatments, a shipment of sterile grass carp fish will be delivered to Lake Mills for an early December stocking. Grass carp fish are herbivores (they only eat plants) and have a high preference for hydrilla, as well as other harmful invasive plants. Grass carp fish are a type of long-term biological control used in an integrated lake management plan for hydrilla.

Photo: Hydrilla treatment areas.



Photo: Hydrilla biomass found in Lake Mills.



Ten species of native SAV were observed during the inspection. These species included: lemon bacopa to a depth of 9 feet, coontail to 5.5 feet, eelgrass to 5 feet, road grass to 10 feet, baby's tears to 7.5 feet, water milfoil to 7.7 feet, southern naiad to 9 feet, stonewort to 10 feet, and two species of bladderwort to 5.5 feet.

Photo: Baby's tears (a beneficial native SAV) which closely resembles hydrilla.



Native emergent vegetation observed during inspection included: bur-marigold, sawgrass, swamp lily, rush fuirena, pennywort, soft rush, climbing aster, yellowed-eye-grass, yellow cow lily, fragrant water lily, maidencane, pickerelweed, duck potato, and fire flag. Invasive emergent vegetation seen during the inspection included: alligatorweed, wild taro, primrose willow, torpedo grass, salvinia, Chinese tallow, Brazilian pepper, cattail, and creeping oxeye. Several native species (such as maidencane grass and rush furinea) have been impacted by recent cold weather.

Photo: Rush fuirena affected by cold weather.



The northwest canal has seen an increase in parrot feather, an invasive SAV, since the last inspection. Navigation of the canal is being impacted so treatment of the canal has been scheduled for mid-December.

Photo: Invasive vegetation impacting navigation within the northwest canal.



The Secchi (water clarity) value was 8.1 feet out of a total depth of 16 feet. The grass carp barrier was operational and free from debris. No grass carp fish were observed during the inspection. The water elevation at the time of inspection was 40.95 feet above sea level.

Recommendations for you and 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 and lake management recommendations.

2 Native and non-native invasive species sometimes grow very close together, making the non-native species difficult to treat. Non-native species can be hand-pulled from patches of native plants, or a directed herbicide treatment can be used to target the non-native species. Although directed treatments may impact adjacent native species, such herbicides may be necessary to prevent expansion of the non-native species. For overall success in lake management, everyone must become stewards of the lake. Residents should assist whenever possible in the removal of non-native plants in close proximity to native vegetation, and replant the area with beneficial native plants.

3 Utilize 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. 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 storm drains 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.

4 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 bioassessments.