**Spring Lake (Lake Spring) MSBU**
**Report for Fiscal Year (FY) 2011-2012October 1, 2011 through September 30, 2012**
**Lake Review Meeting Held July 11, 2012**

County Staff: Gloria Eby, Thomas Calhoun, Carol Watral

Community Liaisons: John Bandy, Bill and Bobbi Vogel, Dan Copeland

Purpose: To review status of waterbody management and to discuss with the liaison group the recommendations and plans for the next fiscal year.

**Routine updates of inspections/results are provided to the community liaison members via email. To be included in these updates, please notify Gloria Eby, Lake Management Program (LMP) Manager, at geby@seminolecountyfl.gov.**

**Annual Meeting Synopsis**

Best management lake practices were reviewed as well as noting that treatment limitations may be imposed by regulations and/or permits (i.e., FWC [Florida Fish and Wildlife Conservation Commission]), as well as funding availability.

Routine herbicide treatments will continue to be provided by the current vendor for the upcoming new FY.

Liaisons requested consideration of treatment of the outflow canal and questioned who would be the responsible party for its maintenance. Liaisons will forward communication to LMP with contact information for HOA representative. LMP will request quote from current vendor for canal treatment. LMP advised that a restoration event is feasible for the canal and plants may be installed along the sides.

LMP discussed the current on-going (one-year duration) nutrient study for Spring Lake. This study is at no cost to the Spring Lake waterfront properties. Funding for the nutrient study is being provided by Seminole County Public Works. Liaisons were requested to provide communication to the community to: 1) share the importance of this study and 2) avoid vandalism with the study monitoring equipment.

To decrease nutrient loading, LMP discussed benefits of installing leaf baskets at the inlets for Spring Lake at an estimated cost of $1,200 each with ongoing cleaning/maintenance services also required. Liaisons were in favor of the baskets if funding is adequate through the MSBU Program. County funding is not available at this time.

Liaisons expressed appreciation to LMP for creating/maintaining the navigational loop (which is free of eelgrass) around the lake, in addition to other boat corridors that have been successfully treated.

Budgeting and level of non-ad valorem assessments were also discussed. Assessments will remain at the current level of $385.00 annually to provide for an adequate reserve fund for future lake treatment needs, as well as addressing increasing eelgrass control. Liaisons request that contingency reserve be an agenda item at the next MSBU review meeting.

**County Funding:**

While the MSBU assessment includes a nominal charge for administering the MSBU, the amount charged does not cover all the expenses incurred by the County on behalf of the waterfront property owners. Spring Lake is monitored by LMP to assess the aquatic plant growth. LMP provides continued evaluation of the aquatic plant species, such as hydrilla, and provides community updates on the status of all treatments and waterbody assessments. In addition, LMP offers free aquatic plant material (as available) for sponsored restoration events and local community volunteers coordinated through the county's Seminole Education and Restoration Volunteer (SERV) Program. Many of the services provided by the LMP are made available to support community riparian stewardship without additional charges being assigned to the MSBU budget.

**2011-2012 Lake Management Activities:**

***Important to Note****:*

**Important to Note:** *When herbicides are applied along the shoreline to invasive plants (such as torpedo grass), overspray onto adjacent desirable vegetation may occur. In order to avoid damage to desired vegetation, manual (by hand) removal (by property owner) of the undesirable species from among the desirable species is advised. If the invasive plants are removed by this method, spraying the area can be eliminated, thereby offering greater, protection to the desirable species. The physical removal of /dead/decaying aquatic plant material will reduce the volume of decomposing vegetation on the lake bottom (muck layer) and will increase the success of the efforts to limit the re-growth of the invasive plants.*

The cove portion of Spring Lake continues to be reviewed for necessity of herbicide treatments and will be included in possible sites for assistance from community volunteers during any upcoming shoreline workshop events. No restoration/workshop events were held this fiscal year.

Torpedo grass continues to be treated by the MSBU funded contractor to the point that only small amounts exists along the shorelines. Most shorelines have a healthy amount of native vegetation which is very important to the health of the lake

Eelgrass continues to be the dominant aquatic plant from shallow water to a depth of nine (9) feet with strands coming to the surface. In December of 2010, an informational letter was distributed to residents entitled, *Coping with Eelgrass…The Ups and Downs of Lakeside Living with this Aquatic Plant.* A copy of this letter was included with the 2010-2011 Spring Lake Inspection Reports and enclosed with the FY2010-2011 Report. If you would like a copy of this letter, please request it from the MSBU Program (407-665-7178).

On May 26, 2011, with approval from the lake liaisons, the herbicide contractor was instructed to treat additional areas of eelgrass to open another access corridor for boat traffic. This additional corridor completed a "loop" around the lake for enhanced recreational activity. The "loop" continues to be both welcomed and successful. Other boat corridors have been successfully treated.

While conducting a monthly assessment in May 2012, two new navigational buoys were re-deployed as previous markers were vandalized from the south corridor. The area between the two buoys was treated for eelgrass, as well as the slalom course along the north side. These treated areas will create a navigational loop around the lake free of eelgrass. Additionally, routine maintenance of the existing boat access corridors continues.

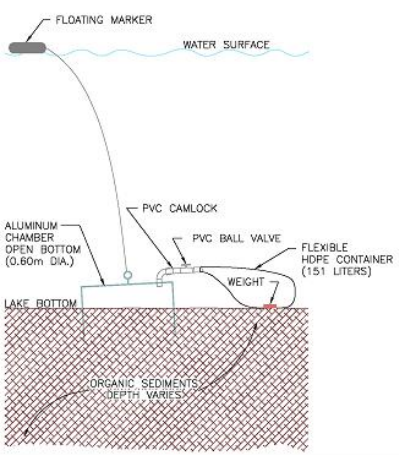
An educational campaign continues for Spring Lake in an effort to improve shoreline alterations and water quality. In the previous fiscal year, this included a letter campaign (by the various government agencies) to

bring homeowner parcels into compliance for FDEP and FWC regulations prior to any non-compliance violations. Several homeowners participated in the restoration workshops working towards creating a more beneficial and functional shoreline. **Please note there continues to be an increasing trend in total phosphorous (TP) levels for Spring Lake.

**Spring Lake Study:** Environmental Research & Design, Inc. (ERD) is currently conducting a study to develop a water and nutrient budget for Spring Lake. This study, funded by Seminole County, includes a 12 month field monitoring program to assist in quantifying water and nutrient inputs to the lake. One of the inputs under evaluation by ERD is groundwater seepage, which consists of shallow subsurface inflow around the perimeter of the lake. Groundwater seepage has been shown to be a significant input to many lakes in the Central Florida area. This input is evaluated using an aluminum underwater chamber which is placed on the bottom of the lake. A schematic of a typical chamber is shown below. Water, which seeps into the lake from groundwater, is collected in a plastic bag that is attached to the seepage meter. The bag is retrieved by a diver, and the volume of water is measured and a sample is collected for lab analyses. This information is used to estimate the volume and quality of groundwater seepage entering the lake.

A total of 15 seepage meters are currently installed in Spring Lake by ERD. These meters will remain in the lake for the 12 month field monitoring period. ERD personnel will collect samples from the meters on a monthly basis. The locations of the seepage meters are indicated by orange or white floats connected to the meter by a steel cable.

**Schematic and photo example of seepage meter:**




**Please do not disturb this equipment**. Valuable data for the lake will be lost in the event of vandalism. If you notice a meter which has been damaged, please call ERD at **407-855-9465**.

In efforts to reduce transportation of exotics in/out of your lake, SCLMP will be installing an educational campaign signs at the 3 HOA boat ramps within the lake. These signs are designed to educate boaters on the potential of transporting nuisance species that can be costly to manage. Image of sign is below.

**Lake Management Recommendations:**

Lake Management Program recommendations for the upcoming fiscal year (FY1213) are:

1) **Continued monitoring of hydrilla (re-growth from tuber production),**
2) **Conduct spot treatments of hydrilla if required,**
3) **Continued treatment of other invasive aquatic plants – herbicides,**
4) **Future grass carp stockings as needed,**
5) **Continue to increase shoreline re-vegetation with beneficial native aquatic plants such as duck potato and pickerelweed; hand removal of torpedo grass from around native plants,**
6) **Consider increasing street sweeping services during times of peak leaf fall to ensure this debris does not wind up in your waterways. Leaf debris contains phosphorous and nitrogen that can impact your lakes,**
7) **Establishing a Lake Association and having at least one annual meeting with topics relevant to Spring Wood Lake and watershed,**
8) **Implement educational outreach programs i.e. Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN) presentations, Lake Management Video mail-outs, and reduction of residential pollution by using low fertilizer use; phosphorous free fertilizers; keeping a functional shoreline with beneficial native aquatic plants; keeping grass clippings out of your storm drains leading to the lake. All these activities aid in protecting your lake! Contact Gloria Eby (407) 665-2439 or Marie Lackey (407) 665-2424 for more information and assistance, and**
9) **Provide content for the Seminole County Water Atlas Lake Management webpage for Spring Lake (such as newsletters and community updates).**

LMP will continue to closely monitor and gauge hydrilla in Spring Lake. This invasive exotic's re-growth is sparsely present in both shallow and deep water, mostly on the western side of the lake. Even though this re-growth is minimal, it is LMP's objective to keep the re-growth in check.

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Spring Lake. The intention of such an event is to plant beneficial native aquatic plants to key areas in need along the bank. Residents should organize planting days creating a beneficial shoreline. It is especially important that as the aquatic invasive plants (such as torpedo grass) are being treated, native aquatic plants should be established within these areas. The presence of the recommended native plant species along the shoreline provides habitat for fish and wildlife, helps impede invasive exotics from re-establishing and reduces erosion of the shoreline. All of these best management practices are essential to providing the conditions that promote an environmentally stable habitat to be enjoyed by generations to come. The key to success is dependent on strong participation of the Spring Lake community.

**Cost of Aquatic Weed Control**

The financial management goal of administering the Lake Mills Aquatic Weed Control MSBU is to assess property at a funding level that provides reasonable control for hydrilla and other aquatic weeds in a manner that minimizes significant fluctuations in the assessment amount. Having reserves in place for years that require more extensive treatments (such as the whole-lake treatment required at this time) assists in avoiding wide swings in rates and/or potential delays in essential treatment.

The financial performance for FY2011-2012 was as follows:

**October 2011 – September 2012**

*Revenue*:

1) $ 28,289 Assessment Revenue [per early payment discount] + Interest
2) $ 42,612 Reserve and Contingency (beginning fund balance)
3) $ 70,901 Total Revenue

*Expenditures:*

1) $ 4,740 Contracted Services
2) $ 2,200 Eelgrass Treatments (Dec, Feb, and May)
3) $ 1,075 County Administrative Fee
4) $ 62,886 Contingency Reserve (carried forward to next year if not required)

$ 70,901 Total Expenditures

The budget projected for FY2012-2013 is as follows:

**October 2012 – September 2013**

*Budgeted Revenue*:

1) $28,100 Assessment Revenue [per early payment discount]
2) $62,886 Reserve and Contingency (beginning fund balance)
3) $90,986 Total Revenue

*Budgeted Expenditures:*

1) $ 4,740 Contracted Services
2) $25,000 Eelgrass Treatment
3) $ 2,000 Triploid Grass Carp (~220 fish)
4) $ 5,200 Spot Hydrilla Treatment
5) $ 550 Additional Labor
6) $ 1,075 County Administrative Fee
7) $52,421 Contingency Reserve (carried forward to next year if not required)

$90,986 Total Expenditures

Notes:

**1.** Any financial activity from prior years is available upon request.

**MSBU Background**

At the request of the community of Spring Lake, the Spring Lake Aquatic Weed Control MSBU was created by Ordinance 07-9 on January 23, 2007 to provide aquatic weed control for Spring Lake.

Each year at the annual lake meeting lake conditions are reviewed. Working together, the community liaison members representing Spring Lake and county staff from both Lake Management [LM] Program and MSBU Program select several essential aquatic weed control activities for consideration during the forthcoming year. At this year's meeting, the following activities were identified and prioritized:

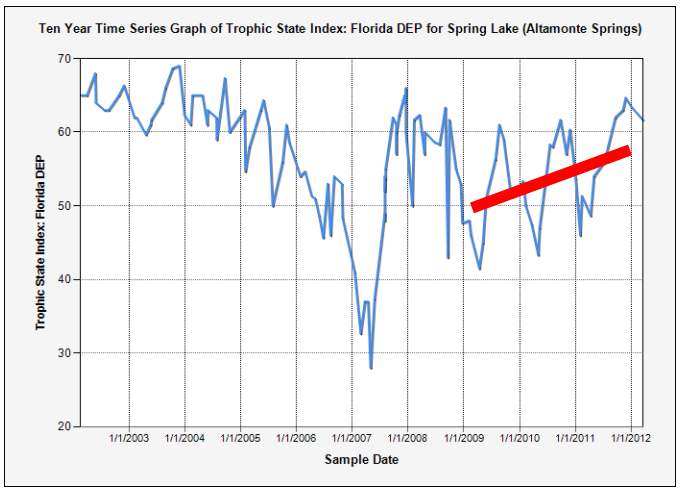
1) Continuing treatment for eelgrass control as allowed by FWC permit,
2) Increase FWC permitted amount of eelgrass for treatment,

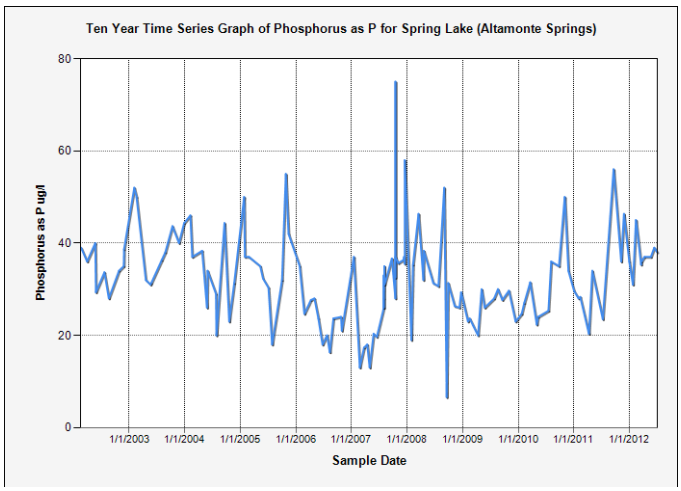
3) Increase FWC permitted amount of triploid grass carp, and
4) Ongoing monitoring of newly created recreational "loop" around the lake.

## Spring Lake 2012 Water Quality Report: How Does My Lake Rank? 62 FAIR

The Trophic State Index (TSI) is a classification system designed to "rate" individual lakes, ponds, and reservoirs based on the amount of biological productivity occurring in the water. Using the index, one can gain a quick idea about how productive a lake is by its assigned TSI number. A "Good" quality lake is one that meets all lake use criteria (swimmable, fishable, and supports healthy habitat).

The two graphs below indicates nutrient levels (measured by TSI and/or Total Phosphorous [TP]) for your lake. A TSI score of 60 or above is considered an impaired (or polluted) lake. For Spring Lake, an increase in TSI and TP values has been recently documented. Continued reduction of TP sources (such as personal pollution inputs, run-off, landscaping practices, and shoreline erosion) can help reduce phosphorous in your lake that is abundantly available, potentially creating algae blooms, and negatively affecting TSI scores.




By going to the following link, you can find all of this information and much more:

http://www.seminole.wateratlas.usf.edu/lake/hydrology.asp?wbodyid=7659&wbodyatlas=lake

## Lake Vegetation Index Bioassessment (LVI): How Does My Lake Rank? 59 Healthy

The Lake Vegetation Index is a rapid bioassessment tool created by the Florida Department of Environmental Protection (FDEP) to assess the biological condition of aquatic plant communities in Florida lakes. The recent assessment for Spring Lake (sampled on April 12, 2012) scored a **59 Category 2- Healthy,** which is a significant **increase** from **32 Category 3- Impaired** since inception of our lake management efforts in 2007.

| Aquatic life use category | LVI Range | Description |
|---|---|---|
| Category 1 "exceptional" | 78–100 | Nearly every macrophyte present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance and most taxa have C of C values >5. |
| Category 2 "healthy" | 38–77 | About 85% of macrophyte taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15% and C of C values average about 5. |
| Category 3 "impaired" | 0–37 | About 70% of macrophyte taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less that 10% of the taxa are sensitive and C of C values of most taxa are <4. |

# Spring Lake Inspections FY 2011-2012

**Summary of the September 4, 2012 inspection/report**: On September 4, 2012, Seminole County Lake Management Program (SCLMP) staff Thomas Calhoun, Marie Lackey and FWC regional biologist, C.J. Greene, surveyed the aquatic plants of Spring Lake. No hydrilla was found during this inspection. This is the sixth month in a row that the plant was not observed. Three native submersed aquatic plants were found during the inspection which included eelgrass to a depth of 6 feet, southern naiad to a depth of 6 feet, and baby's tears to a depth of 1 foot. Eelgrass continues to be the dominant SAV with blades reaching the surface from a depth of 5 feet. The eelgrass corridors were found open during this inspection.

The Seminole County herbicide applicator continues to treat the torpedo grass around the lake as well as cattails, pennywort, and primrose willow. Additionally, the outfall canal was treated for invasives. On the next scheduled treatment (September), the cove will be targeted for torpedo grass, salvinia, and water lilies.

The water elevation during the time of the inspection was 63.09 feet above sea level an increase from the previous months reading of 63.00. The secchi reading (measurement for water clarity) was 1.9 feet in a depth of 8.2 feet. No grass carp fish were seen during this inspection.

**Summary of the August 7, 2012 inspection/report**: On August 7th, 2012, Seminole County Lake Management Program (SCLMP) staff, Thomas Calhoun and Marie Lackey, surveyed the aquatic plants of Spring Lake. No hydrilla was found during this inspection. This is the fifth month in a row that the plant was not observed. Three native submersed aquatic plants were found during the inspection which included eelgrass to a depth of 6 feet, southern naiad to a depth of 6 feet, and baby's tears to a depth of 1 foot. Eelgrass continues to be the dominant SAV with blades reaching the surface from a depth of 5 feet. The eelgrass corridors were open during this inspection.

The MSBU funded herbicide applicator continues to treat the torpedo grass around the lake as well as cattails, pennywort, and primrose willow. It is encouraged to remove the torpedo grass once the contractor has treated it, allowing for natives to expand.

The water elevation during the time of the inspection was 63.00 feet above sea level an increase from the previous months reading of 62.67 feet. The secchi reading (measurement for water clarity) was 3.5 feet in a depth of 9.8 feet. No grass carp fish were observed during this inspection.

**Summary of the July 3, 2012 inspection/report:** On July 3rd, 2012, Seminole County Lake Management Program (SCLMP) staff Thomas Calhoun, Marie Lackey, and FWC regional biologist C.J. Greene surveyed the aquatic plants of Spring Lake. No hydrilla was found during this inspection. This is the fourth month in a row that the plant was not observed. Three native submersed aquatic plants were found during the inspection which included eelgrass to a depth of 7 feet, southern naiad to a depth of 6 feet, and baby's tears to a depth of 1 foot. Eelgrass continues to be the dominant SAV with blades reaching the surface from a depth of 5 feet. The eelgrass corridor treatments have been conducted around the lake including the slalom course. Most corridors were open during the inspection. Others that were not open will be re-treated until complete. Torpedo grass continues to be treated by the MSBU funded herbicide contractor to the point that reduced amounts exists on many shorelines. It is encouraged to remove the torpedo grass once the contractor has treated it. The water elevation during the time of the inspection was 62.67 feet above sea level. The secchi reading (measurement for water clarity) was 3.2 feet in a depth of 6.4 feet. No grass carp fish were seen during this inspection.

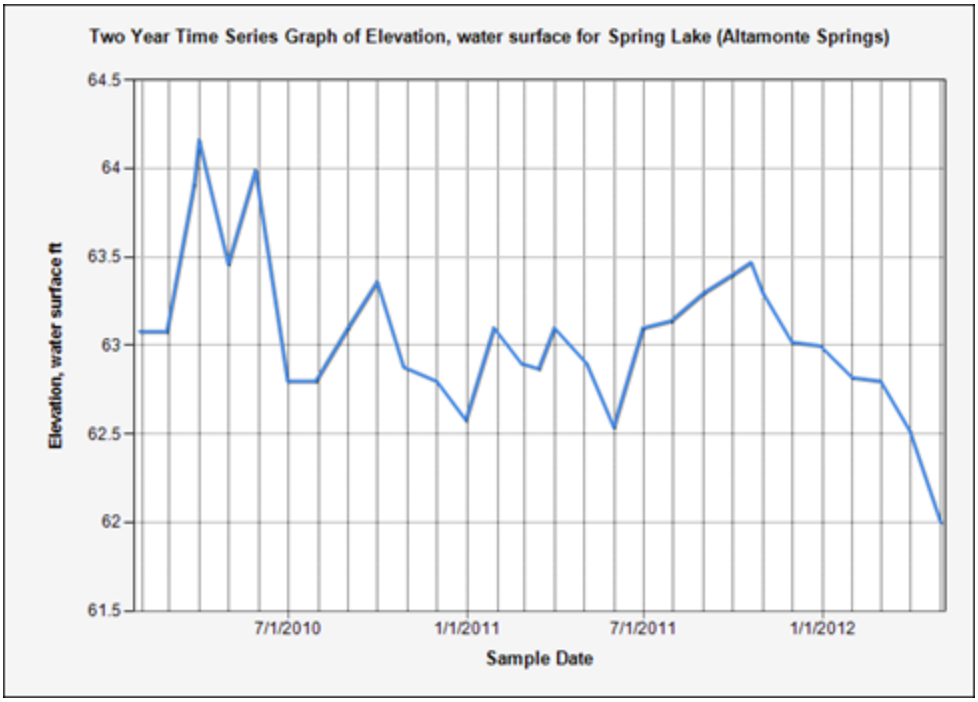
**Summary of the June 12, 2012 inspection/report:** On June 12, 2012, Seminole County Lake Management Program (SCLMP) staff, Gloria Eby and Thomas Calhoun, surveyed the aquatic plants of Spring Lake. No

hydrilla was found during this inspection. This is the third month in a row that the plant was not observed. Three submersed aquatic plants were found during inspection which included eelgrass to a depth of 6 feet, southern naiad to a depth of 6 feet, and baby's tears to a depth of 1 foot. Eelgrass continues to be the dominant SAV with blades reaching the surface from a depth of 6 feet. The quarterly eelgrass corridor treatments have been completed around the lake including the slalom course. New locations have been added in April and have just concluded a second cycle of treatment. We anticipate several more treatments will be required in these new locations. Even with lower lake levels, most of the corridors were observed as open. The cove was treated for invasive growth establishing in the vicinity of the foot bridge as result of exposed lake bed. For the next treatment, contractor will target the floating plant salvinia in the cove, canals on the northwest side of the lake, and inflow along Spring Valley Hills Road. The water elevation during the time of the inspection was 62.10 feet above sea level. The secchi reading (measurement for water clarity) was 3.2 feet in a depth of 10.7 feet which is up from last month's reading of 3.1 feet. No grass carp fish were observed during this inspection

**Summary of the <u>May 3, 2012</u> inspection/report**: On May 3, 2012, Seminole County Lake Management Program (SCLMP) staff Thomas Calhoun, Devin Whitney, and Stan McCreary surveyed the aquatic plants of Spring Lake. No hydrilla was found during this inspection. This is the second month in a row that the plant was not observed. Three submersed aquatic plants were found during the inspection. This included eelgrass, southern naiad, and stonewort. Of these three plants, only eelgrass was found in the lake where as southern naiad and stonewort were only found in the outflow canal near the Spring Valley Farm Community boat ramp. Torpedo grass continues to be treated by the MSBU funded contractor to the point that only small amounts exists along the shorelines. Most shorelines have a healthy amount of native vegetation which is very important to the health of the lake. While conducting the assessment, two new navigational buoys were re-deployed as previous markers were vandalized for the south corridor. The area between the two buoys will be treated for eelgrass as well as the slalom course along the north side. These treated areas will create a navigational loop around the lake free of eelgrass. Please use loop with caution as the water elevation is very low. Additionally, routine maintenance of the existing boat access corridors will be treated. This treatment will be this week where the applicator will be on the lake applying pellet product from airboat. Due to the personal protection necessary for the applicator, equipment such as suit and respirator mask is required for the applicator that is in direct contact with the herbicide. We have received calls upon when they treat as to who is the masked person on our lake.

As experienced last year, as the water elevation within Spring Lake decreases, more eelgrass is exposed on the surface appearing as if the plant has expanded. Recent lake elevations indicate a 0.6 foot elevation change for your lake:

| | |
|---|---|
| 3/30 | 62.52 ft |
| 4/30 | 62.00 ft |
| 5/10 | 61.92 ft |




Two triploid grass carp were observed during our inspection. The secchi reading (measurement for water clarity) was 3.1 ft in a depth of 8.4 ft which is down from last month's reading of 2.9 ft.

**Summary of the <u>April 3, 2012</u> inspection/report**: On April 3, 2012, Seminole County Lake Management Program (SCLMP) staff Gloria Eby, Thomas Calhoun, Marianne Pluchino, Devin Whitney and FWC Regional Biologist CJ Greene surveyed the aquatic plants of Spring Lake and conducted a Lake Vegetation Index (LVI) assessment. 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. Spring Lake is 84 surface acres with a mean depth of 6 ft and a maximum depth of 19 ft located in the Little Wekiva watershed. Scores for Spring Lake have ranged from 32 to 59. LVI score for 2012 was 59 in the healthy range. Eelgrass was the dominant plant found in all sampled sections of the LVI.

| **LVI Range** | **Description** |
|---|---|
| 78-100 | Exceptional |
| 38-77 | Healthy |
| 0-37 | Impaired |

Only two submersed aquatic vegetation (SAV) were found in Spring Lake during the inspection. Submersed species found during inspection included: southern naiad to 4 ft, and eelgrass to 8 ft. Hydrilla was not found during this inspection. It is expected that the triploid (sterile) grass carp fish have impacted the hydrilla to the point where it is now hard to find. Eelgrass continues to be the dominant SAV. Eelgrass corridors are scheduled to be treated next week. Invasive plants that were found during the LVI included: alligator weed, wild taro, torpedo grass, Chinese tallow, and creeping oxeye (wedelia). Torpedo grass continues to be treated by the MSBU funded herbicide contractor. Native vegetation has expanded and has become the dominant vegetation along many shorelines. Now would be a great time to target and remove the dead torpedo grass

around the lake due to low water level. This would encourage the expansion of the planted native vegetation. Two triploid grass carp fish were observed during our inspection. The secchi reading (measurement for water clarity) was 2.9 ft in a depth of 10.4 ft which is down from last month's reading of 3.3 ft.

**Summary of the <u>February 7, 2012</u> inspection/report**: On February 7, 2012, Seminole County Lake Management Program (SCLMP) staff Gloria Eby, Thomas Calhoun, Dean Barber, and FWC Regional Biologist CJ Greene surveyed the aquatic plants of Spring Lake. Spring Lake has a good diversity of 3 native submersed aquatic vegetation (SAV) observed. SAV species recorded are: hydrilla in depths less than 2 ft, southern naiad to 2 ft, coontail to 4 ft, and eelgrass to 5 ft. Sparse hydrilla was found in shallow water depths (less than 2 ft.). Hydrilla previously found on the deep side of the eelgrass (6-9 ft water depths) has not been seen in 2 inspections. It is expected that the triploid (sterile) grass carp fish have impacted the hydrilla. Eelgrass continues to be the dominant SAV with other natives mixed in. Eelgrass corridors will continue to be treated as needed. Torpedo grass continues to be treated by the Seminole County Lake Management herbicide contractor. Native vegetation has expanded and has become the dominant vegetation along many shorelines. Now would be a good time remove the treated torpedo grass and replant with beneficial natives for the spring. Additional water quality (chemistry) samples are now being collected in Spring Lake on a monthly basis. This sampling is being conducted to better analyze the nutrient sources within the lake and contributing sources from the watershed. No triploid grass carp were observed during our inspection. The secchi reading (measurement for water clarity) was 2.7 ft in a depth of 10.2 ft which is down from last month's reading of 2.8 ft.

**Summary of the <u>December 6, 2011</u> inspection/report:** On December 6, 2011, Seminole County Lake Management Program (SCLMP) staff Gloria Eby, Marianne Pluchino, and Michelle Shelton surveyed the aquatic plants of Spring Lake. Spring Lake has a good diversity of SAV. Submersed species found during inspection includes: hydrilla in depths less than 3 ft, southern naiad to 2 ft, coontail to 2 ft, and eelgrass to 7 ft. Sparse hydrilla was found in shallow water depths (less than 3 ft.). Hydrilla previously found on the deep side of the eelgrass (6-9 ft water depths) has shown positive impacts by the stocked grass carp fish. Additional water quality (chemistry) samples are now being collected in Spring Lake on a monthly basis. This sampling is being conducted to better analyze the nutrient sources within the lake and contributing sources from the watershed. No triploid grass carp were observed during our inspection. The secchi reading (measurement for water clarity) was 2.8 ft in a depth of 7.6 ft which is up 0.2 ft from last month.

**Summary of the <u>November 8, 2012</u> inspection/report**: On November 8, 2011, Seminole County Lake Management Program (SCLMP) staff Gloria Eby and Thomas Calhoun surveyed the aquatic plants of Spring Lake. The navigational corridor is currently open and navigable. This corridor (as indicated on map below in green and marked with buoys in lake) has been created connecting the two deeper lobes of Spring Lake. This access corridor is currently being treated for eelgrass and is located in the shallow area along the south side of the lake. In conjunction with the slalom course to the north, this should provide a navigable loop for traversing around the lake. *Please continue to use corridor and proceed in the shallow areas with caution.* Submersed species found during inspection includes: hydrilla to 9 ft, stonewort to 5 ft, and eelgrass to 8 ft. Along some shorelines in the lake, stonewort is beginning to mix in and compete for space with the eelgrass. Hydrilla was not found in the outfall canal on the NW side of the lake and only sparse in deeper water depths. In order to impact hydrilla growth in this deeper region of the lake (6-9 ft water depths) 50 triploid grass carp (sterile) were stocked on August 26 which has shown some impacts to hydrilla. Torpedo grass continues to be treated by the Seminole County Lake Management contractor. Native vegetation has expanded and has become the dominant vegetation along many shorelines. Although these plantings have been a huge success, there are several shorelines with no vegetation; a potential violation of state aquatic plant permitting regulations. Having a healthy ecosystem of shoreline plants plays a vital role in the health and quality of your lake. Lilies within the cove and several parcels are beginning to impede access. These areas will be treated upon next monthly herbicide services scheduled. No triploid grass carp was observed during our inspection. The secchi reading (measurement for water clarity) was 2.5 ft in a depth of 11.6 ft which is down 1 ft from last month.