

January 23, 2014

**SPRING LAKE
LAKE MANAGEMENT PLAN**

Annual Meeting – 2014

- Agenda

Lake Management Plan

- General Provisions & Scope of Services
- Community-Based Activities & Events
- Current Fiscal Year: Planned Treatments, Funding & Recommendations
- Next Fiscal Year: Projected Treatments & Funding
- Exhibits – Notes, Budget & Financial Summary, Historic Reports/Data

SPRING LAKE ANNUAL MEETING

Date, Time & Location	:	January 23, 2014, 2:30 p.m., 200 W. County Home Rd – LMP Office
Community Liaisons	:	John Bandy, Dan Copeland, Jay and Rhonda Fraxedas, Bill and Bobbi Vogel
Liaisons Present	:	John Bandy, Bill and Bobbi Vogel
Seminole County	:	Thomas Calhoun and Carol Watral
Guests	:	Shirley Bandy

Topics carried forward from prior fiscal year activity

- Contracted aquatic plant control services are scheduled monthly.
- Treatments specific for eelgrass are authorized as needed for control and per State regulations.
- Eelgrass treatments will target keeping the recreational corridor open and in good condition.
- Species permitted for aquatic plant control treatment are: cattails, pennywort, wild taro, filamentous algae, eelgrass, primrose willow, torpedo grass, and hydrilla.
- The lake will be closely monitored by the County for evidence of increasing hydrilla growth.
- As torpedo grass is treated and dies, properties are encouraged to remove the vegetation.
- County recommends continuing to increase native aquatic plantings along shoreline (such as pickerelweed, duck potato and canna).

General Topics & Updates

- Nutrient Study
- Community meeting for Study Presentation
- New pricing available via state contract established with herbicide service provider
- Plans for current fiscal year
- Projections for next fiscal year
- General recommendations for community consideration

Meeting Notes:

- Sharon Rogers has moved and is no longer a liaison.
- Liaisons are pleased with the condition of the eelgrass corridors.
- Liaisons report sightings of large triploid grass carp and forwarded pictures.
- The LMP funded nutrient study is expect to conclude this year with a presentation on the results provided to the community. Liaisons were informed that a suitable location for hosting and advertising the meeting will be greatly appreciated.
- Liaisons asked about possible donations from vendors to encourage attendance at community presentation. Thomas Calhoun volunteered to provide a list to the liaisons.
- Dependent upon result of nutrient study, there is potential for alum treatment. Liaisons requested completion of alum treatment at earliest possible opportunity.
- Although no County initiated shoreline restoration events are scheduled this year, opportunity exists for individual properties to participate in restoration efforts. Lake Management Program can consult individually with properties or assist with plant procurement (community funded).

SPRING LAKE LAKE MANAGEMENT PLAN

GENERAL PROVISIONS

Scope of Public Aquatic Weed/Plant Control [AWC] Services

The scope of public aquatic weed control [AWC] services funded by non-ad-valorem assessment includes those services associated with managing aquatic plant communities as deemed beneficial and/or critical to restoring, developing and/or maintaining conditions that enhance the water quality and over-all health of the waterbody; with emphasis on providing public services for public purposes which by definition of public are limited to the waterbody and respective shoreline when/where noxious and/or invasive exotic vegetation could/would threaten or impede the waterbody.

Governing documents

- Seminole County Ordinance 07-9
- Interlocal Agreement with Altamonte Springs – Authorizing Assessment Levy [01-27-2007]
- FWC Permit

Methods for Aquatic Weed Control as authorized via County Ordinance

- Chemical (herbicides)
- Biological (sterile triploid grass carp fish [TGC])
- Mechanical (harvesting, cutting, etc.)

Targeted Invasive/Exotic Aquatic Vegetation

- Cattails, pennywort, wild taro, filamentous algae, eelgrass, primrose willow, torpedo grass, and hydrilla

Frequency of AWC Treatment

AWC services are performed at the direction of the Seminole County LMP as per the Spring Lake Management Plan reviewed at the annual planning session with the expectation that the Seminole County LMP may alter anticipated treatments as merited per changing/evolving conditions noted during site inspections. Eelgrass corridor treatments are scheduled for the spring and fall of each year and are based upon merited conditions and favorable water elevation conditions.

Herbicide Treatments - Service Provider

- As determined by Seminole County

Funding

Assessment rate may vary annually based on financial demands of changing conditions, such as cost of herbicide treatments, frequency of treatments, and other factors impacting assessment calculations. The governing ordinance does not include assessment restrictions specific to annual adjustment amounts and/or assessment cap.

Lake Liaisons

Designated property owners (or their designated representatives) provide community representation at annual planning sessions with the County and serve voluntarily as the key point of contact for community inquiries and concerns. The liaisons for Spring Lake are: John Bandy (jibir@cfl.rr.com), Dan Copeland (dcopeland@ribelin.com), Jay and Rhonda Fraxedas (jifraxedas@gmail.com), and Bill and Bobbi Vogel (b2vogel@gmail.com).

SPRING LAKE

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP continues to recommend/encourage future resident-based volunteers involving native plantings along the shoreline. The intention of such an event is to transplant existing in-lake plants to various key areas in need along the shoreline. Residents should organize planting days coordinated with LMP aiding the residents in creating a beneficial shoreline for Spring Lake. It is especially important that as aquatic invasive plants (such as torpedo grass) are being treated, native aquatic plants should be established within these areas. This also provides habitat for fish and wildlife, helps impede invasive exotics from re-establishing and reduces sedimentation into the lake due to erosion of the shoreline. All of these best lake management practices are essential to providing a more environmentally stable lake for generations to come. The key to success in lake management projects is dependent on strong participation of the Spring Lake community. Continued recommendations for community initiatives are as follows:

- 1) 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,
- 2) 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,
- 3) Establishing a Lake Association and having at least one annual meeting with topics relevant to Spring Lake and watershed,
- 4) 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
- 5) Provide content for the Seminole County Water Atlas Lake Management webpage for Spring Lake (such as newsletters and community updates).

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.

SPRING LAKE

COUNTY SERVICES – Lake Management & Supplemental Programs

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.

Current Fiscal Year – Planned Treatment & Funding

Primary Aquatic Plant Management Expectations

Hydrilla growth in Spring Lake has likelihood to continue, however, the timing and extent of hydrilla re-growth is affected by multiple natural and environmental factors that cannot be controlled or predicted with certainty. While extensive growth of hydrilla is possible at any point in time; it is anticipated that routine spot treatments of hydrilla with herbicides and continuous biological control pressures from the triploid grass carp fish will be sufficient to manage hydrilla re-growth during the current FY. The anticipation of spot treatments for the current fiscal year takes into consideration the historic trend of hydrilla management required at Spring Lake, as well as current conditions observed at lake and dominant presence of eelgrass providing competition. As with any lake with a history of hydrilla infestation, long-term planning to include financial preparation for whole lake treatment is advised.

Funding Expectations

Refer to current fiscal year budget data provided in Exhibit B.

Next Fiscal Year [FY14/15] – Projected Treatment & Funding

Primary Aquatic Plant Management Expectations

The projected treatment plans for the next fiscal year remain consistent with the plans and expectations noted for the current fiscal year. Primary expectations are as follows:

- 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, and
- 4) Future grass carp stockings as needed.

*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.

Funding Expectations

Refer to next fiscal year budget data provided in Exhibit B

Exhibits

A - Notes from Prior Year Planning Session

B - Budget/Financial Overview

C - Historic Reports/Data

Exhibit A - Notes from Prior Year Planning Session

Summary from February 5, 2013 Annual Meeting

County Staff Present: Thomas Calhoun, Gloria Eby, Kathy Moore, and Carol Watral
Liaisons Present: Dan Copeland, Bill and Bobbi Vogel
Liaison Members: John Bandy, Dan Copeland, Jay and Rhonda Fraxedas, Bill and Bobbi Vogel

- Eelgrass was discussed and reminder was made by County that individual properties may request permit for eelgrass at their respective shoreline. Also discussed was level of contingency reserve, hydrilla growth potential, recreational corridor, and 12-month monitoring study.
- Species permitted for aquatic plant control treatment are: cattails, pennywort, wild taro, filamentous algae, eelgrass, primrose willow, torpedo grass, and hydrilla.
- Contracted aquatic plant control services were scheduled monthly. Treatments specific for eelgrass were authorized as needed and per State regulations; the need for eelgrass treatment decreased this year.
- Eelgrass recreational corridor remained open and in good condition throughout the fiscal year.
- Hydrilla remained under control with small fragments found during several of the County inspections.
- A study funded by Seminole County was underway this fiscal year with a 12 month field monitoring program to assist in quantifying water and nutrient inputs into the lake.

Annual Assessment: \$375.00 (Tax Year 2013)

Exhibit B - Budget/Financial Overview

MSBU:

SPRING LAKE (Aquatic Weed Control)

Date:

January 23, 2014

Tax Year	2012	2013	2014
Assessment	\$385.00	\$375.00	\$375.00
Fiscal Year	FY1213	FY1314	FY1415
REVENUE	Actual	Working Budget	Projected Budget
Beginning Fund Balance	\$ 62,931	\$ 84,703	\$ 88,488
Assessment	\$ 28,295	\$ 27,360	\$ 27,360
Other	\$ 259	\$ 150	
MSBU Program Fund Advance	\$ -	\$ -	\$ -
TOTAL	\$ 91,485	\$ 112,213	\$ 115,848
Cost Sharing			
TOTAL	\$ 91,485	\$ 112,213	\$ 115,848
Lake Management Program			
TOTAL	\$ 91,485	\$ 112,213	\$ 115,848
EXPENDITURE	Actual	Working Budget	Projected Budget
County Administrative Fee	\$ 1,075	\$ 1,075	\$ 1,500
Fund Advance Repayment	\$ -	\$ -	\$ -
Contracted Services	\$ 5,707	\$ 22,500	\$ 57,500
<i>Routine Services</i>	\$ 4,740	\$ 5,000	\$ 5,000
<i>Carp</i>	\$ -	\$ -	\$ -
<i>Cattails</i>	\$ -	\$ -	\$ -
<i>Eelgrass</i>	\$ 967	\$ 15,000	\$ 15,000
<i>Excavation</i>	\$ -	\$ -	\$ -
<i>Hydrilla</i>	\$ -	\$ 2,000	\$ 2,000
<i>Labor</i>	\$ -	\$ 500	\$ 500
<i>Large Lake Tx (Alum)</i>	\$ -	\$ -	\$ 35,000
<i>Other</i>	\$ -	\$ -	\$ -
Contingency Reserve	\$ 84,703	\$ 88,488	\$ 56,848
TOTAL	\$ 91,485	\$ 112,063	\$ 115,848
Cost Sharing	\$ -	\$ -	\$ -
TOTAL	\$ 91,485	\$ 112,063	\$ 115,848
Lake Management Program	\$ -	\$ -	\$ -
TOTAL	\$ 91,485	\$ 112,063	\$ 115,848

Fund Advance BB Payment	\$ -	\$ -	\$ -
Fund Advance EB	\$ -	\$ -	\$ -

Exhibit C - Historic Reports/Data

Additional information for Spring Lake can be found on the County's Water Atlas website at:

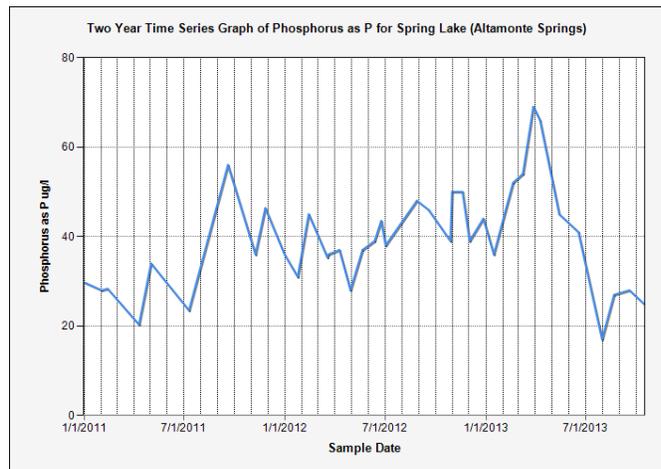
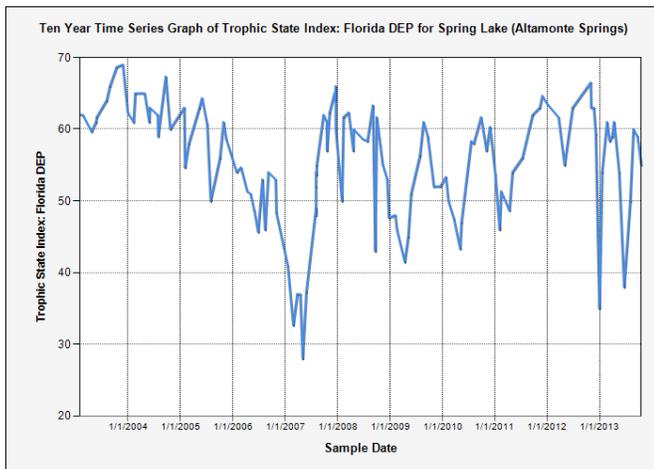
<http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7659>

<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7659>

Spring Lake 2013 Water Quality Report: How Does My Lake Rank? **TSI SCORE: 55 GOOD**

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 indicate nutrient levels (measured by TSI and/or Total Phosphorous [TP]) for your lake. A TSI score of 60 or above is considered impaired (or polluted) lake. Continued reduction of TP sources (personal pollution, run-off, landscaping practices, shoreline erosion) can help reduce phosphorous in your lake that is abundantly available, potentially creating algae blooms.



Lake Vegetation Index Bioassessment (LVI): How Does My Lake Rank? **53 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 August 6, 2013) scored a **53 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 than 10% of the taxa are sensitive and C of C values of most taxa are <4.