

January 8, 2014

**LAKE AMORY
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

LAKE AMORY

ANNUAL MEETING

Date, Time & Location	:	January 8, 2014, 2:30 p.m., 200 W. County Home Rd – LMP office
Community Liaisons	:	Steve Barnes, Dan Folendore, Dan Harger, Philip Lee, and Tim Lockhart
Liaisons Present	:	Steve Barnes, Dan Harger, Philip Lee, and Tim Lockhart
Seminole County	:	Thomas Calhoun, Gloria Eby, Kathy Moore and Carol Watral
Guest	:	Vicki Barnes

Topics carried forward from prior fiscal year activity

- Negotiations with the herbicide contractor included withholding aquatic plant control services for October, January, and February. March was withheld due to low water level and healthy conditions.
- Low water level in May 2013 resulted in backpacking for some areas and other areas had level sufficiently low to preclude treatment. Increased water elevation in June allowed for treatment of entire lake.
- On May 21, 2013 the service provider notified the County that access at the normal location was not available due to debris deposited on the property. Upon County notice to the community liaisons, the debris was removed and access was again open to the service provider.

General Topics & Updates

- Maintaining current lake access open
- Potential planting events
- Nutrient study update
- 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:

- The nutrient study is in review process; preliminarily it is showing balanced nutrient loadings into the Chain of Lakes. It should be available by June 2014 or sooner. A community meeting will be scheduled when completed.
- Liaisons questioned numbers of remaining triploid grass carp; Lake Management indicated that the apparent existing population is sufficient for short term control.
- LMP mentioned that the golf course had cleared their berm. Thomas Calhoun will be following up with the City on this activity. There is a new contact for the golf course - Lisa Jones, City of Sanford Recreation Manager, 407-688-5120 (lisa.jones@sanfordfl.gov); alternate contact is Mike Kirby, Recreation Director, 407-688-5120 (mike.kirby@sanfordfl.gov).
- Fluctuating lake elevations and methods of treatment (i.e., backpacking) were discussed.
- Tim Lockhart question the contingency reserve as it is increasing and wanted to ensure assessment relief is evaluated. MSBU Program confirmed that assessments are reviewed annually with long and short term needs, as well as impact to parcel owner in mind. LMP added it took since inception of MSBU for the contingency reserve to reach its current level and that although hydrilla is now largely controlled; it could re-establish within the lake very quickly due to viable tubers in the sediment, and a single whole lake hydrilla treatment could quickly exhaust the current reserve balance.
- Steve Barnes questioned elevated TSI/TP data points located on the charts on last page of the Lake Management Plan; Gloria Eby indicated it could be due to rainfall, but will follow-up with answer.

LAKE AMORY

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 06-27

Methods for Aquatic Weed Control as authorized via County Ordinance/Resolution

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

Targeted Invasive/Exotic Aquatic Vegetation

- Hydrilla, torpedo grass, primrose willow, alligator weed, wild taro, water sprite, coontail, lily pads, salvinia, barnyard grass, and dog fennel

Frequency of AWC Treatment

AWC services are performed at the direction of the Seminole County LMP as per the Lake Amory Management Plan reviewed at the annual planning session with the expectation that the Seminole County LMP may alter anticipated treatments on an as merited basis per changing/evolving conditions noted during site inspections.

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 annual assessment is capped at \$300.00.

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 Lake Amory are: Steve Barnes (stevebarnesfl@gmail.com), Dan Folendore (dfolendore@bellsouth.net), Dan Harger (dgharger@genevaschool.org), Philip Lee (philwriter@gmail.com), and Tim Lockhart (tim4fsu@cfl.rr.com).

LAKE AMORY

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Lake Amory. 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 Lake Amory community.

Continued recommendations for community initiatives are as follows:

- 1) Shoreline re-vegetation with native emergent plants (by the lakefront community and potentially volunteers),
- 2) Establishing a formal Lake Association holding at least one annual meeting with topics relevant to Lake Amory,
- 3) Continue to increase educational outreach programs i.e. Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of residential pollution. Contact Seminole County LMP, 665-2439, for more information and assistance,
- 4) Community to consider independently funding (in lieu of increasing annual assessment) supplemental treatment for submersed aquatic vegetation (such as hydrilla) as such vegetation treatments are not fully funded by assessment. LMP is available to provide technical guidance related to these activities,
- 5) Provide content for the Seminole County Water Atlas Lake Management Webpage for Lake Amory (such as newsletters and photos).

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.

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. Lake Amory 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.

LAKE AMORY

Current Fiscal Year – Planned Treatment & Funding

Primary Aquatic Plant Management Expectations

Hydrilla/coontail growth in Lake Amory 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 herbicide and continuous biological control pressures from the triploid grass carp fish will be sufficient to manage hydrilla/coontail re-growth during the current fiscal year. The anticipation of spot treatments for the current fiscal year takes into consideration the historic trend of hydrilla management required at Lake Amory, as well as current conditions observed at lake. As with any lake with a history of hydrilla infestation, long-term planning to include financial preparation for whole lake treatment is advised. For emergent invasive plants, lower water levels result in backpacking for some areas of Lake Amory as defined by essential services.

Funding Expectations

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

Next Fiscal Year – 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 aquatic herbicide maintenance for non-native vegetation, access corridor maintenance, and coordinate hydrilla/coontail treatments (as needed),
- 2) Continue with the decreased monthly maintenance (from twelve to eight months) in order to afford supplemental submersed treatments (up to three surface acres) once annually,
- 3) Future grass carp stockings if deemed necessary, pending permit amendment,
- 4) Continued monitoring of hydrilla, coontail, other submersed aquatic plants, and grass carp fish, and
- 5) Increase contingency reserve funds for extended herbicide management of hydrilla and/or other issues that may develop and require immediate treatment.

Funding Expectations

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

Exhibits

A - Notes from Prior Year Planning Session

B - Budget/Financial Summaries

C - Historic Reports/Data

Exhibit A - Notes from Prior Year Planning Session

Summary from January 30, 2013 Annual Meeting

County Staff Present: Thomas Calhoun, Gloria Eby, Kathy Moore, and Carol Watral

Liaisons Present: Steve Barnes, Dan Harger, Philip Lee, and Tim Lockhart

Liaison Members: Steve Barnes, Dan Folendore, Dan Harger, Philip Lee, and Tim Lockhart

- Aquatic plant control services will be withheld for October, January, February and September.
- Species treated included: hydrilla, torpedo grass, primrose willow, alligator weed, wild taro, water sprite, coontail, lily pads, salvinia, barnyard grass, and dog fennel.
- LMP recommends liaisons/owners select locations to serve as shoreline demonstration sites. The goal is for the lake community to have reference locations showing the benefits of a planted shoreline. Native aquatic plants can inhibit establishment of exotic/invasive species and may reduce herbicide demands providing a cost savings. Liaisons expressed concern for performing ongoing maintenance of plantings. Suggested timeline for planting events is after the 2013 holiday season. A suggested location is along the golf course to assist in nutrient filtering.
- Large-scale submersed aquatic vegetation is not fully funded by assessment. Supplemental (privately funded) treatment for submersed vegetation is recommended to address this category of vegetation. LMP is available to provide technical guidance.
- Property owners are encouraged to communicate comments/concerns through the liaison group, who provide consolidated request/comments to the MSBU Project Manager (Carol Watral).

Annual Assessment: \$300.00 (Tax Year 2013)

Exhibit B - Budget/Financial Overview

MSBU:

LAKE AMORY (Aquatic Weed Control)

Date:

January 8, 2014

Tax Year	2012	2013	2014
Assessment	\$300.00	\$300.00	\$300.00
Fiscal Year	FY1213	FY1314	FY1415
REVENUE	Actual	Working Budget	Projected Budget
Beginning Fund Balance	\$ 4,877	\$ 7,476	\$ 8,821
Assessment	\$ 6,672	\$ 6,625	\$ 6,624
Other	\$ 27	\$ -	\$ -
MSBU Program Fund Advance	\$ -	\$ -	\$ -
TOTAL	\$ 11,576	\$ 14,101	\$ 15,445
Cost Sharing			
TOTAL	\$ 11,576	\$ 14,101	\$ 15,445
Lake Management Program			
TOTAL	\$ 11,576	\$ 14,101	\$ 15,445
EXPENDITURE	Actual	Working Budget	Projected Budget
County Administrative Fee	\$ 950	\$ 950	\$ 1,075
Fund Advance Repayment	\$ -	\$ -	\$ -
Contracted Services	\$ 3,150	\$ 4,330	\$ 6,075
<i>Routine Services</i>	\$ 3,150	\$ 4,000	\$ 4,000
<i>Hydrilla</i>	\$ -	\$ -	\$ 1,775
<i>Labor</i>	\$ -	\$ 330	\$ 300
<i>Other</i>	\$ -	\$ -	\$ -
Contingency Reserve	\$ 7,476	\$ 8,821	\$ 8,295
TOTAL	\$ 11,576	\$ 14,101	\$ 15,445
Cost Sharing	\$ -	\$ -	\$ -
TOTAL	\$ 11,576	\$ 14,101	\$ 15,445
Lake Management Program	\$ -	\$ -	\$ -
TOTAL	\$ 11,576	\$ 14,101	\$ 15,445

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

Exhibit C - Historic Reports/Data

Additional information for Lake Amory can be found on the Seminole County Water Atlas website at:

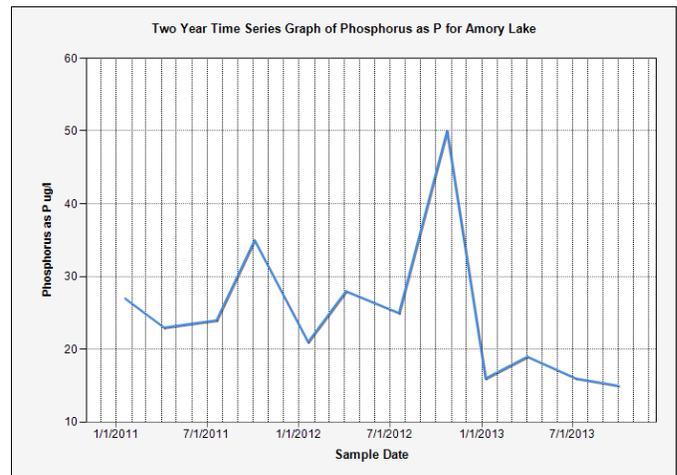
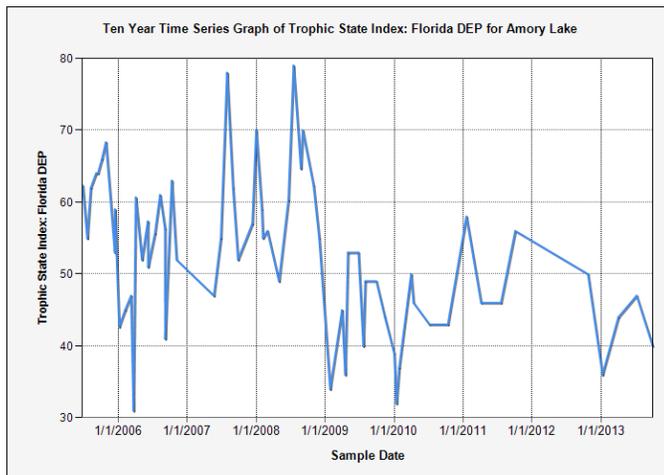
<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7503>

<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7503&wbodyatlas=lake>

Lake Amory 2013 Water Quality Report: How Does My Lake Rank? **TSI SCORE: 40 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? **47 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 most recent LVI bioassessment for Lake Amory (sampled on August 20, 2013) scored a **47** which is in the **Healthy** category.

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.