

January 14, 2015

LAKE MILLS

ANNUAL MEETING & LAKE MANAGEMENT PLAN

Annual Meeting – 2015

- 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 – Agenda & Notes from Prior Year, Budget & Financial Summary, Historic Reports/Data

LAKE MILLS

ANNUAL MEETING

Date, Time & Location	:	January 14, 2015, 2:30 p.m., 200 W. County Home Rd – LMP office
Community Liaisons	:	Dave Axel, Connie Gatlin, and Bill Merckel
Liaisons Present	:	Dave Axel
Seminole County	:	Gloria Eby and Carol Watral

Topics carried forward from prior fiscal year activity

- County encourages additional shoreline restoration events. Beneficial native vegetation is continuing to expand along many of the shorelines
- Scheduled aquatic plant control bi-monthly treatments continue along shoreline areas as determined by County staff.
- North canal is again increasing in parrot feather, which will be targeted for treatment. Bladderwort has been successfully treated.
- August 15, 2014, hydrilla was found along the north shore and at the Mills Creek cove. December 9, 2014, hydrilla treatment executed along perimeter of lake and cove areas. 243 grass carp fish stocked on December 4, 2014.
- The potential of increasing hydrilla growth due to re-growth of tubers exists. Large-scale herbicide treatments for hydrilla may be required every two to three years. Product rotation is required to reduce potential for resistant hydrilla.
- Recommended removing invasive Brazilian pepper trees when found due to their aggressive growth pattern.
- Property owners should be encouraged to communicate comments/concerns through the liaison group, who will provide consolidated request/comments to the MSBU Project Manager (Carol Watral).

General Topics & Updates

- Hydrilla management and costs
- Canals - maintenance and status
- Continue pricing available via state contract established with herbicide service provider
- Potential planting events
- Plans for current fiscal year
- Projections for next fiscal year
- General recommendations for community consideration

Meeting Notes:

- Results of previous hydrilla treatment were discussed
- A planting event will be scheduled for 2016
- We have a new FWC representative: Kris Campbell at 6830 Shadowridge Dr., Suite 201, Orlando, FL 32812 407-858-6170
- A new barrier will be installed over the inlets near Mills Park
- The gauge at Millshores will be removed
- Grass carp stocking will be an ongoing procedure into the future due to predation lake was stocked 1 fish per acre in November 2014
- Liaison concurred with assessment rate of \$875.00 for FY1516
- Progress of County fertilizer ordinance was discussed

LAKE MILLS

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 06-06
- FWC permit
- Cost Share Arrangement with Leisure Services Department (Informal)

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

- Chemical (herbicides)
- Biological (sterile triploid grass carp fish [TGC])

Targeted Invasive/Exotic Aquatic Vegetation

- Hydrilla, water hyacinth, torpedo grass, primrose willow, wild taro, cattail, and salvinia.

Frequency of AWC Treatment

AWC services are performed at the direction of the Seminole County LMP as per the Lake Mills 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.

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 limits assessment increases to no more than 20% above prior year assessment; the ordinance does not include provisions for an 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 Lake Mills are: Dave Axel (daveaxel@axelrealestate.com), Connie Gatlin (connie.gatlin@gmail.com), and Bill Merckel (billmerckel@prodigy.net).

LAKE MILLS

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Lake Mills. 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 Mills 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 Mills,
- 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 (use phosphorous free and slow-release nitrogen based fertilizers only). Contact Seminole County LMP, 665-2439, for more information and assistance,
- 4) Provide content for the Seminole County Water Atlas Lake Management Webpage for Lake Mills (such as newsletters and photos).
- 5) Share what YOU know with your neighbors! Encourage fellow residents to keep a functional shoreline with beneficial native aquatic plants, and to keep grass clippings out of the storm drains that lead to the lake. All of these activities aid in protecting your waterbody!

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 reduced, 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.

LAKE MILLS

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 Mills 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 Lake Mills has the 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 fiscal year. The anticipation of spot treatments for the current fiscal year takes into consideration the historic trend of hydrilla management required at Lake Mills, as well as current conditions observed at the lake. 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 – 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 bimonthly aquatic herbicide maintenance for non-native vegetation, canal maintenance, and hydrilla treatments (as needed),
- 2) Future grass carp stockings if deemed necessary, pending permit amendment,
- 3) Continued monitoring of hydrilla, coontail, other submersed aquatic plants, and grass carp fish,
- 4) Continued grass carp barrier debris and maintenance services for each location.

Funding Expectations

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

Exhibits

A – Agenda & Notes from Prior Year Planning Session

B - Budget/Financial Summaries

C - Historic Reports/Data

Exhibit A – Agenda & Notes from Prior Year Planning Session

ANNUAL MEETING

Date, Time & Location	: January 15, 2014, 2:30 p.m., 200 W. County Home Rd – LMP Office
Community Liaisons	: Dave Axel, Connie Gatlin, and Bill Merckel
Liaisons Present	: Dave Axel and Connie Gatlin
Seminole County Present:	Thomas Calhoun, Gloria Eby, Carol Watral and Grant Wenrick

Topics carried forward from prior fiscal year activity

- County encourages additional shoreline restoration events.
- Scheduled aquatic plant control bi-monthly treatments continue along shoreline areas.
- Canal maintenance may require mechanical intervention with presence of bladderwort (currently not funded).
- The potential of increasing hydrilla growth due to re-growth of tubers exists. Large-scale herbicide treatments for hydrilla may be required every two to three years. Product rotation required to reduce potential for resistant hydrilla.
- Triploid grass carp (360) stocked in 2012, continue as a crucial component of the hydrilla management plan.
- As of Oct 2013, hydrilla was found sparsely in lake, and treated. December 2013 showed increase in tuber-generated hydrilla.
- Property owners should be encouraged to communicate comments/concerns through the liaison group, who will provide consolidated request/comments to the MSBU Project Manager (Carol Watral).

General Topics & Updates

- Hydrilla management and costs
- Canal maintenance
- New pricing available via state contract established with herbicide service provider
- Potential planting events
- Plans for current fiscal year
- Projections for next fiscal year
- General recommendations for community consideration

Meeting Notes:

- Although no County initiated shoreline restoration events are scheduled for 2014, opportunity exists for individual properties to participate in restoration efforts. Lake Management Program can consult individually with properties.
- Hydrilla progression is monitored through regular inspections/bioassessments; a regional biologist will be consulted if conditions so require.
- If additional triploid grass carp are necessary a permit amendment will be required. Liaisons reported otter activity (a source of triploid grass carp predation).
- Bladderwort is increasing in northern canal; it may require mechanical harvesting for control as it does not respond well to herbicides. Quotes for this activity will be obtained.
- With the input from the liaisons, a 10% increase was determined necessary to build reserve funds for future whole lake hydrilla treatments.
- Liaisons were asked to remind properties to remove exotic Brazilian pepper vegetation from the shorelines.

Exhibit B - Budget/Financial Overview

MSBU:

LAKE MILLS (Aquatic Weed Control)

Date:

January 14, 2015

Tax Year	2012	2013	2014	2015
Assessment	\$650.00	\$700.00	\$775.00	\$875.00
Fiscal Year	FY1213	FY1314	FY1415	FY1516
REVENUE	Actual	Actual	Working Budget	Projected Budget
Beginning Fund Balance	\$ 40,488	\$ 68,868	\$ 113,580	\$ 135,600
Assessments	\$ 47,095	\$ 50,740	\$ 55,800	\$ 63,000
Other	\$ 221	\$ 230	\$ -	
MSBU Program Fund Advance	\$ 13,584	\$ -	\$ -	
TOTAL	\$ 101,388	\$ 119,838	\$ 169,380	\$ 198,600
Cost Sharing - Leisure Services*	\$ 3,784	\$ 5,841	\$ -	\$ 15,974
TOTAL	\$ 105,172	\$ 125,679	\$ 169,380	\$ 214,573
Lake Management Program	\$ -	\$ 25,000	\$ 25,000	\$ 25,000
TOTAL	\$ 105,172	\$ 150,679	\$ 194,380	\$ 239,573
EXPENDITURE	Actual	Actual	Working Budget	Projected Budget
County Administrative Fee	\$ 1,075	\$ 1,075	\$ 1,200	\$ 1,200
Fund Advance Repayment	\$ 16,885	\$ -	\$ -	\$ -
Contracted Services	\$ 14,560	\$ 5,183	\$ 32,580	\$ 144,248
<i>Routine Services</i>	\$ 1,493	\$ 2,870	\$ 3,600	\$ 2,282
<i>Barrier Repair/Maint</i>	\$ 842	\$ 1,020	\$ 1,350	\$ 1,350
<i>Carp</i>	\$ -	\$ -	\$ 4,374	\$ 4,860
<i>LM Park Barrier</i>	\$ -	\$ 840	\$ 756	\$ 756
<i>Spot Treatments</i>	\$ -	\$ 453	\$ 22,500	\$ 135,000
<i>Canal</i>	\$ 12,226	\$ -	\$ -	\$ -
Contingency Reserve	\$ 68,868	\$ 113,580	\$ 135,600	\$ 53,638
TOTAL	\$ 101,388	\$ 119,838	\$ 169,380	\$ 199,086
Cost Sharing Leisure Services*	\$ 3,784	\$ 5,841	\$ -	\$ 15,974
TOTAL	\$ 105,172	\$ 125,679	\$ 169,380	\$ 215,059
Lake Management Program	\$ -	\$ 25,000	\$ 25,000	\$ 25,000
TOTAL	\$ 105,172	\$ 150,679	\$ 194,380	\$ 240,059
Fund Advance BB Payment	\$ 16,393	\$ -	\$ -	\$ -
Fund Advance EB	\$ -	\$ -	\$ -	\$ -
Total AWC-Based Cost	\$ 18,344	\$ 11,024	\$ 32,580	\$ 160,221

*May include True-Up Adjust to Maintain 10%

Exhibit C - Historic Reports/Data

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

<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7613>

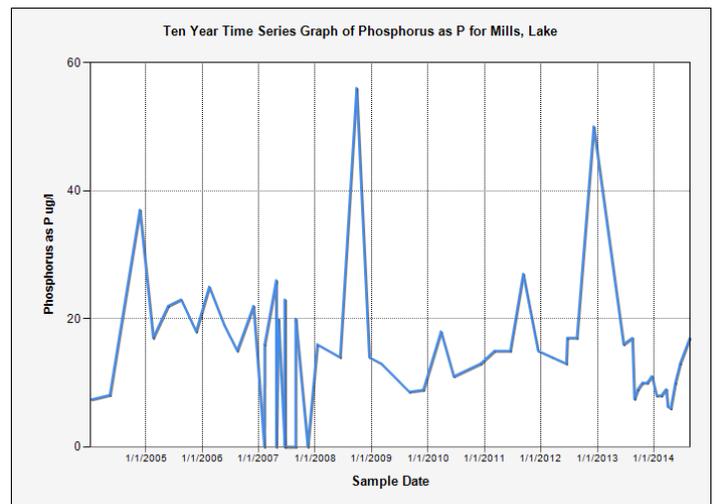
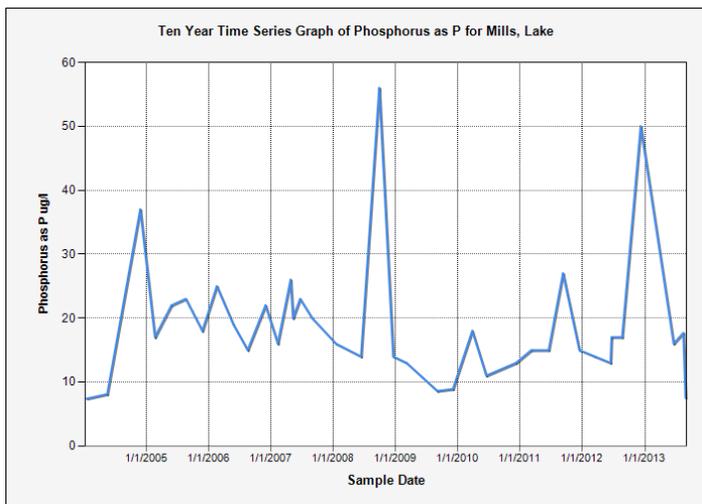
<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7613&wbodyatlas=lake>

Lake Mills 2014 Water Quality Report: How Does My Lake Rank?

TSI SCORE: 30 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 indicates 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?

58 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 Mills (sampled on August 27, 2014) scored a **58** 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"	43-77	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"	0-42	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.