

February 22, 2018

**MYRTLE LAKE
LAKE MANAGEMENT PLAN**

Annual Meeting – 2018

- Agenda

Lake Management Plan

- General Provisions & Scope of Services
- Community-Based Activities & Events
- Current Fiscal Year
 - Planned Treatments & Funding
- Next Fiscal Year
 - Projected Treatments & Funding
- Exhibits
 - Agenda & Notes (Prior Year)
 - Budget & Financial Summary
 - Historic Reports/Data
 - Roles & Responsibilities

MYRTLE LAKE ANNUAL MEETING

Date, Time & Location	:	February 22, 2018 3:00 p.m., 200 W. County Home Rd – LMP Office
Community Liaisons	:	Dave Crowder, Lindy Freeman, Gretchen Hobkirk, and Gabriela Murza
Liaisons Present	:	Lindy Freeman, Gretchen Hobkirk, and Gabriela Murza
Seminole County	:	Thomas Calhoun, Joey Cordell, Gloria Eby, and Joe Saucer

General Topics & Updates [Meeting Notes]

Lake Management Program

- Welcome
- Fertilizer Ordinance- Passed on February 27, 2017. www.seminolecountyfl.gov/fertilizer.
 - Fertilizer containing nitrogen or phosphorous cannot be applied to turf during the restricted season from June 1st – September 30th. Fertilizers containing Iron, Manganese and other "micronutrients" also referred to as "summer blends" can be applied during the restricted.
 - Fertilizer containing nitrogen that is used during the **non**-restricted season (October 1st – May 31st) must contain *at least* 50% or more slow release nitrogen. This slow release nitrogen content will increase to 65%, three (3) years after adoption of the Fertilizer Ordinance, to allow time for educational outreach to residents and retailers.
 - Fertilizer containing phosphorus cannot be applied to turf or plants unless a state certified soil or tissue test verifies that there is a phosphorus deficiency.
 - Use of deflector shields is required when applying fertilizer with a broadcast or rotary spreader.
 - No fertilizer may be applied within fifteen (15) feet of any pond, lake, stream, canal, or other waterbody, including wetlands.
- Shoreline Protection Ordinance Status
 - Awaiting FWC Rule changes
- Lake Status Nutrients/Habitat Scores [Refer to Exhibit C: Bioassessment Indices]
 - Lake remains in Healthy category
- Treatment Plans - Current & Proposed [Refer to Lake Management Plan]
 - Monitor wildlife islands and access corridors in NE exiting portion of lake
- General recommendations for lake-community consideration [Refer to Lake Management Plan]
 - Increase native aquatic plantings in areas devoid of vegetation
 - Promote "welcome packages" to new lakefront homeowners
 - Lakewatch samples - no data since 2006
- 2018 Shoreline Planting Event- dates available
 - To be coordinated via Thomas Calhoun
- Other
 - Email Address for routine communications and important announcements

MSBU Program

- Budgets – Prior, Current, Proposed and Projected
 - Refer to Exhibit B; Assessment Update – May 2018 – due to SAV treatments the \$290 assessment for 2018 will be split: estimating split at \$140 Routine Services and \$150 SAV Management
 - Anticipating Administrative Fee increase FY19-20; tax year 2019
- Tentative date for next annual meeting: January 31, 2019 3:00PM

MYRTLE 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 10-18
- FWC permit

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, southern naiad, water hyacinth, torpedo grass, primrose willow, water lily, wild taro, cattail, barnyard grass, and salvinia.

Frequency of AWC Treatment

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

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. Per the governing ordinance, the annual assessment is capped at \$375.00, and the annual increase in any given year is limited to a maximum of \$25.00.

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 Myrtle Lake are: Dave Crowder (Dave@DCrowder.com), Lindy Freeman (lindyf@msn.com), Gretchen Hobkirk (ghobkirk@cfl.rr.com) and Gabriela Murza (gmurza@yahoo.com).

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Myrtle 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 Myrtle Lake community. Continued recommendations for community initiatives are as follows:

- 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/lake management recommendations. Continue to increase native aquatic plantings along shoreline (such as pickerelweed, duck potato, and canna).
- 2) Increase educational outreach programs i.e. Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of personal pollution by decreasing fertilizer usage; using only phosphorous free and slow release nitrogen based fertilizers; keeping a functional shoreline with beneficial native aquatic plants; keeping grass clippings out of your lake and storm drains leading to the lake. All these activities aid in protecting your waterbody! Contact Seminole County Lake Management Program (407) 665-2439 for free educational programs available.
- 3) Recommend removing Island apple snail egg clusters and adults from the waterbody when possible.
- 4) 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! Please share newsletter with any new residents or those not currently on our email list.

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 along the shoreline 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. The presence of submerged aquatic vegetation (“SAV” such as hydrilla) should be communicated to your lake liaison for their reporting to the County so appropriate treatment of SAV can be provided.

COUNTY SERVICES – Lake Management & Supplemental Programs

Myrtle 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 treatments and waterbody bioassessments. 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. 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. 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

Fluctuating lake levels continue to present treatment challenges for invasive emergent aquatic plants during low level conditions which prohibit airboat access in certain areas for herbicide application. LMP schedules treatments based on their routine inspections, confirmed status of the lake needs, and best professional lake management practices. LMP continues to encourage mowing of areas where low level of water presents the opportunity to do so (such as dry lake bed). This assists in minimizing excessive invasive plant material growth and reduces treatment dependency/costs for when the lake level normalizes. The current level of non-ad valorem assessment does not provide funding for large scale submersed vegetation treatments. Consider supplemental funding to address these needs.

Primary expectations for year are as follows:

- 1) Aquatic herbicide maintenance for non-native vegetation and conducting supplemental treatments (as needed and budgeted)
- 2) Reduce biomass of lilies to increase water circulation and flow in stagnant areas
- 3) Continued monitoring of hydrilla, other submersed aquatic plants, and grass carp fish needs

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 and conducting supplemental treatments (as needed and budgeted)
- 2) Reduce biomass of lilies to increase water circulation and flow in stagnant areas
- 3) Continued maintenance of access corridors in the north east section (the exiting the south lobe to rest of Myrtle Lake) as water levels allow
- 4) Continued monitoring of hydrilla, other submersed aquatic plants, and grass carp fish needs
- 5) Future grass carp stockings if deemed necessary, pending permit amendment

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

D – Roles & Responsibilities

Exhibit A – Agenda & Notes (Prior Year Planning Session)

Date, Time & Location	: January 25, 2017 3:30 p.m., 200 W. County Home Rd – LMP Office
Community Liaisons	: Dave Crowder, Lindy Freeman, Gretchen Hobkirk, and Gabriela Murza
Liaisons Present	: Lindy Freeman and Gretchen Hobkirk
Seminole County	: Thomas Calhoun, Joey Cordell, Gloria Eby, and Joe Saucer

Topics carried forward from prior fiscal year activity [Meeting Notes]

- Fertilizer Ordinance & Shoreline Protection Ordinance
- Both ordinances contain commitments and directives that will contribute to environmental improvement and protection long-term for lakes and other waterbodies. The Fertilizer Ordinance focuses primarily on fertilizer selection (phosphate free, slow release nitrogen) and application (location, volume, and timing). The Shoreline Protection Ordinance mirrors the State’s guidelines for shoreline vegetation and development as historically communicated by the LMP and demonstrated by the best lake management practices followed by MSBU funded services. The Fertilizer Ordinance is tentatively scheduled for BCC review/approval consideration on February 28; while the Shoreline Protection Ordinance development continues with final presentation anticipated later in 2017. [Note: The Shoreline Protection Ordinance approval process involves several levels of approval as the directives need to be included in the County’s Land Development Code.] Educational materials are readily available to further promote awareness, understanding and compliance.
- FWC is proposing a change to their permitting responsibilities respective to aquatic plant management. The proposed (and likely to be adopted rule changes) will have impact on the permits associated with lakes less than 160 acres in size. The importance of Seminole County enacting the Shoreline Protection Ordinance is heightened by this change. In association with the ordinance, the County will be confirming delegated enforcement authority from FWC to provide ongoing compliance efforts respective to adopted protective measures. When presentation dates are confirmed, LMP will provide email updates so interested property owners and residents are aware of these activities. Supportive participation is encouraged.

General Topics & Updates [Meeting Notes]

- 2017 Shoreline Planting Event- To be held on 10/7/17; Gretchen Hobkirk and Lindy Freeman will communicate with Thomas Calhoun about planting site and species preferred.
- Nutrients/Habitat Scores: Improvements in bioassessment indices ; Refer to Exhibit C; Lake remains in Healthy category
- Lindy Freeman expressed concerns that the applicator may be generally broadcasting herbicide spray and killing all vegetation instead of specifically invasives; date(s) of applications in question not provided. Gloria Eby communicated that there are some chemicals that are broadcast and are selective as to what they target, situation will be monitored moving forward Thomas Calhoun will ride with applicator during next scheduled treatment (April).
- Plans for current fiscal year - Refer to Page 6; 8 treatments (Oct-Nov & April-May-Jun-Jul-Aug-Sept); Gretchen Hobkirk requested notification of treatment dates moving forward; Application to be consistently at the end of each month with exception of April, early in the month. Updates on other areas as MSBUs (Crowder canal) – Project not moving forward
- Projections for next fiscal year - Refer to Page 6
- Financial Status & Budget – Prior, Current and Proposed - Refer to Exhibit B; assessment to remain at \$290.00 as prior year
- Questions were raised about the adequacy of the contingency should there be a need for treating SAV in the lake. This MSBU was created with authority to levy separate assessment as required to treat SAV. If SAV is identified as a developing concern with eminent treatment, a separate levy could be considered to prepare for the necessary treatment. Otherwise, assessment would be levied when immediate needs arises.
- The lake restoration MSBU is in the final year of installment payment. The BCC approved a one-time reduction [\$230] in the total financing cost which yields a final installment of \$250 rather than the planned \$480. This was in recognition of the ongoing management of the lake via separate assessment. The adjustment does not change the original assessment – it only reduces the total financing cost for those owners that opted to pay the assessment in installments.
- General recommendations for community consideration - Refer to Page 5; Increase native aquatic plantings in areas devoid of vegetation

Exhibit B - Budget/Financial Overview

MSBU: LAKE MYRTLE

Date: January 1, 2018

Tax Year Assessment	2016 \$ 290.00	2017 \$ 290.00	2018 \$ 290.00
Fiscal Year	FY16-17	FY17-18	FY18-19
REVENUE			
	Actual	Working Budget	Projected Budget
Beginning Fund Balance	\$ 3,417	\$ 5,960	\$ 5,935
Assessment – Routine Serv	\$ 7,252	\$ 7,240	\$ 3,494
Assessment - SAV			\$ 3,744
Other	\$ 61	\$ 50	\$ 50
MSBU Program Fund Advance	\$ -	\$ -	\$ -
TOTAL	\$ 10,730	\$ 13,250	\$ 13,224
Cost Sharing Lake Management Program			
TOTAL	\$ 10,730	\$ 13,250	\$ 13,224
EXPENDITURE			
	Actual	Working Budget	Projected Budget
County Administrative Fee	\$ 1,075	\$ 1,075	\$ 1,075
Fund Advance Repayment	\$ -	\$ -	\$ -
Contracted Services	\$ 3,695	\$ 6,240	\$ 6,000
<i>Routine Services</i>	\$ 3,695	\$ 5,640	\$ 4,000
<i>Hydrilla</i>	\$ -	\$ 600	\$?
<i>Carp</i>	\$ -	\$ -	\$ -
<i>Barrier Maintenance -NA</i>	\$ -	\$ -	\$ -
<i>Barrier Replacement - NA</i>	\$ -	\$ -	\$ -
<i>Nutrient Abatement (Alum)</i>	\$ -	\$ -	\$ -
<i>Harvesting</i>	\$ -	\$ -	\$ -
<i>Other - hand crew services</i>	\$ -	\$ -	\$ 2,000
<i>Submersed</i>	\$ -	\$ -	\$ -
Contingency Reserve	\$ 5,960	\$ 5,935	\$ 6,149
TOTAL	\$ 10,730	\$ 13,250	\$ 13,224
Cost Sharing Lake Management Program			
TOTAL	\$ 10,730	\$ 13,250	\$ 13,224
Fund Advance BB	\$ -	\$ -	\$ -
Payment (Principal)	\$ -	\$ -	\$ -
Fund Advance EB	\$ -	\$ -	\$ -

Exhibit C - Historic Reports/Data

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

<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7624&wbodyatlas=lake>

<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7624>

Myrtle Lake Water Quality Report: How Does My Lake Rank?

TSI SCORE: 51 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.

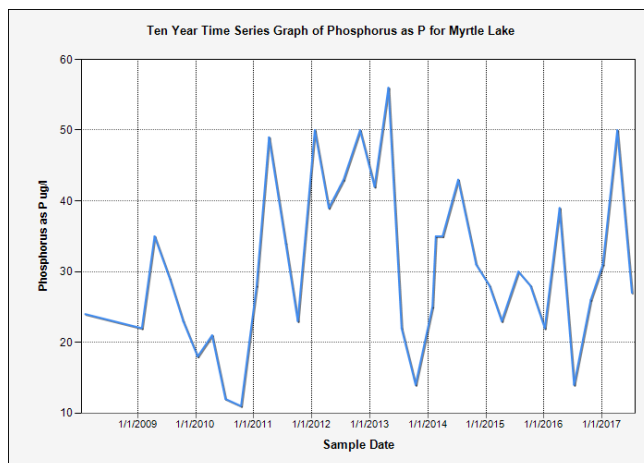
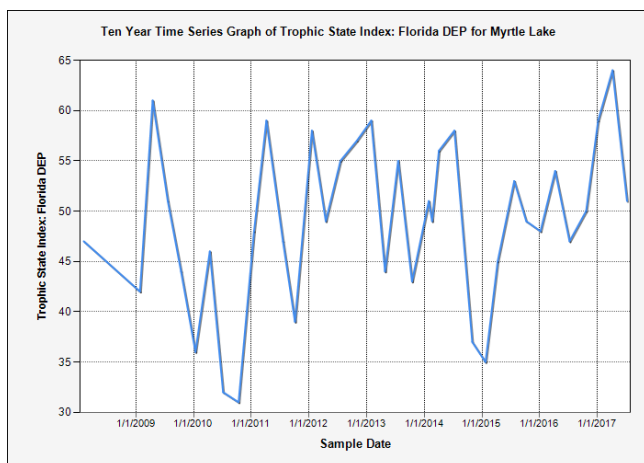


Exhibit D – Roles & Responsibilities

ROLES & RESPONSIBILITY

General Outline

COUNTY

Seminole County will

- ✓ Govern the MSBU
- ✓ Provide financial management of MSBU fund
- ✓ Ensure activities conducted with assessment funding align with the scope of services documented in the governing ordinance
- ✓ Ensure the lake is monitored and services are appropriately rendered
- ✓ Maintain decision-making authority relative to lake management activities and aquatic vegetation management and will defer to best lake management practices when making such decisions
- ✓ Provide an ongoing lake management plan based on the defined service scope, permitting, conditions at the lake, funding parameters, and best lake management practices. The Lake Management Plan will be developed and maintained by the Lake Management Program with liaison participation
- ✓ Initiate and manage service contracts, monitor results, and communicate updates on a routine basis
- ✓ Conduct annual meetings that offer opportunity for liaison discussion as to prior, current, and future action plans
- ✓ Encourage liaisons and assist with educational outreach efforts to protect the health and water quality of the waterbody

LIAISONS

Liaisons will

- ✓ Encourage communitywide awareness and participation relative to environmental stewardship recommendations and opportunities
- ✓ Provide communitywide communication and assist the County in the distribution of relevant lake information
- ✓ Attend annual lake management and budget planning sessions conducted by the County
- ✓ Serve as representatives of the community on lake issues; representing the respective lake community as a whole
- ✓ Monitor lake conditions and provide feedback to the County as to observations