

January 20, 2016

**LAKE BURKETT
ANNUAL MEETING & LAKE MANAGEMENT PLAN**

Annual Meeting – 2016

- 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 Prior Year
 - Budget & Financial Summary
 - Historic Reports/Data
 - Roles & Responsibilities

LAKE BURKETT

ANNUAL MEETING

Date, Time & Location	:	January 20, 2016, 10:30 a.m., 200 W. County Home Rd – LMP office
Community Liaisons	:	David Diggs, Craig Maughan, Todd Husky and Lisa Wilks
Liaisons Present	:	David Diggs, Craig Maughan, and Todd Husky
Seminole County	:	Thomas Calhoun, Joey Cordell, Gloria Eby, and Kathy Moore

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

- Continued pricing available via state contract established with herbicide service provider
 - Prices for 2017 pending status of contract
- Liaisons' consensus was to maintain non-ad valorem assessment with the \$675.00 level
 - Continue at current assessment while developing contingency funds for future cost share for other projects such as Alum treatment [aluminum sulfate] and/or a nutrient study
- Seminole County Fertilizer Ordinance and Shoreline Protection Ordinance
 - Pro-active initiative – no permit fee

General Topics & Updates [Meeting Notes]

- 2016 Shoreline Planting Event- dates available
 - Interest and dates to be coordinated via Thomas
- Nutrients/Habitat Scores: Minimal changes in bioassessment indices
 - Refer to Exhibit C
- Plans for current fiscal year
 - Refer to Page 5
- Projections for fiscal year
 - Refer to Page 5
- Budget – Prior, Current & Proposed
 - Refer to Exhibit B
 - Hold assessment at current level for FY16-17; re-evaluate assessment for potential reduction in subsequent FY (Tax year 2017)
- General recommendations for community consideration
 - Refer to Page 4
 - SC Liaisons to solicit involvement of Orange County lakefront property owners to generate whole-lake participation relative to lake projects & plans

LAKE BURKETT

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 (Seminole County) and/or ad valorem (Orange County) 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 2011-21
- Interlocal Agreement [IA] with Orange County March 2013
- FWC Permit

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, fragrant water lily, spatterdock, torpedo grass, algae, cattail, salvinia, duckweed, and tussocks.

Frequency of AWC Treatment

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

Herbicide Treatments - Service Provider

- As determined by Seminole County within Seminole County jurisdiction.

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 increased 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 Burkett are David Diggs (ddiggs1043@aol.com), Todd Husty, Byron Lawson* (lawsonb@trinityprep.org) and Lisa Wilks (trinitybayhoa@yahoo.com). [*Spring 2016]

LAKE BURKETT

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP continues to recommend/encourage homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Lake Burkett. The intention of such an event is to plant beneficial native aquatic plants to key areas in need along the bank. 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 Burkett 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 Lake Association holding at least one annual meeting with topics relevant to Lakes Burkett and Martha,
- 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 Lake Management Program, 665-2439, for more information and assistance, and
- 4) Provide content for the Seminole County Water Atlas Lake Management Webpage for Lake Burkett (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 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.

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 Burkett and Martha 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 BURKETT

Current Fiscal Year – Planned Treatment & Funding

Primary Aquatic Plant Management Expectations

Hydrilla growth in Lakes Burkett and Martha 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 Burkett, 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.

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 along with hydrilla treatment (as needed) within Seminole County jurisdiction,
- 2) Future grass carp stockings if deemed necessary, pending permit amendment,
- 3) Continued monitoring of hydrilla, other submersed aquatic plants, and grass carp fish effects,
- 4) Stabilize 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 – Agenda & Notes from Prior Year Planning Session

B - Budget/Financial Summaries

C - Historic Reports/Data

D – Roles & Responsibilities

Exhibit A – Agenda & Notes from Prior Year Planning Session

ANNUAL MEETING

Date, Time & Location	:	January 21, 2015, 2:30 p.m., 200 W. County Home Rd – LMP office
Community Liaisons	:	David Diggs, Todd Husty, Craig Maughan and Lisa Wilks
Liaisons Present	:	David Diggs and Craig Maughan
Seminole County	:	Thomas Calhoun, Gloria Eby, and Carol Watral

Topics carried forward from prior fiscal year activity

- Scheduled aquatic plant control monthly treatments as authorized by County staff continue along unincorporated Seminole County shoreline areas of Lake Burkett; such activities are based upon available funding.
- County encourages additional shoreline restoration events. Plantings from the previous event are expanding well.
- The potential of increasing hydrilla growth due to re-growth of tubers exists. Larger-scale herbicide treatments for hydrilla may be required every two to three years. Product rotation is required to reduce potential for resistant hydrilla.
- Hydrilla cost share for whole lake treatment with Orange County was not required for FY1314; thereby, increasing contingency reserves carried forward into FY1415.
- An increase in tuber generated hydrilla was noted in December 2013. As of September 2014, minimal sprigs of hydrilla were found in both Lake Burkett and Martha. Each lake was individually treated by the respective County within their respective jurisdiction.
- Beneficial native submersed vegetation (SAV) has increased in both lakes.
- Seminole County established a baseline SAV map to monitor/compare future changes.
- 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

- Potential planting events
- Nutrients
- Continued 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:

- LMP encouraged scheduling a 2016 planting restoration event; liaisons will advise LMP of community consensus regarding holding an event.
- LMP advised a map was created showing SAV vegetation and water bottom depth in Lake Burkett; this will be the basis for future SAV map comparisons.
- LMP advised that water clarity has improved.
- We have a new FWC regional biologist: Kris Campbell, at 6830 Shadowridge Dr., Suite 201, Orlando, FL 32812 407-858-6170.
- Progress of County fertilizer ordinance was discussed.
- Liaisons questioned timing of shoreline treatments and were told that Orange County does not target shoreline areas in their treatments.
- Liaisons' consensus was to maintain non-ad valorem assessment with the \$675.00 level.

Exhibit B - Budget/Financial Overview

MSBU: Lakes Burkett/Martha

Date: January 1, 2016

Tax Year	2013	2014	2015	2016
Assessment	\$825.00	\$825.00	\$675.00	\$600.00
Fiscal Year	FY13-14	FY14-15	FY15-16	FY16-17
REVENUE	Actual	Actual	Working Budget	Proposed Budget
Beginning Fund Balance	\$ 13,991	\$ 24,221	\$ 33,053	\$ 40,328
Assessments	\$ 11,932	\$ 13,771	\$ 10,360	\$ 9,210
Other	\$ 52	\$ 94	\$ 25	\$ 25
MSBU Program Fund Advance	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 25,975	\$ 38,086	\$ 43,438	\$ 49,563
Cost Sharing	\$ -	\$ -	\$ -	\$ -
Lake Management Program	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 25,975	\$ 38,086	\$ 43,438	\$ 49,563
EXPENDITURE	Actual	Actual	Working Budget	Proposed Budget
County Administrative Fee	\$ 1,075	\$ 1,200	\$ 1,200	\$ 1,200
Fund Advance Repayment	\$ 90	\$ 3,090	\$ -	\$ -
Contracted Services	\$ 589	\$ 743	\$ 3,000	\$ 4,300
<i>Routine Services</i>	\$ 589	\$ 743	\$ 1,000	\$ 1,600
<i>Supplemental Services</i>	\$ -	\$ -	\$ -	\$ -
<i>Hydrilla</i>	\$ -	\$ -	\$ 2,000	\$ 2,000
<i>Cost Share - Carp</i>	\$ -	\$ -	\$ -	\$ 700
Contingency Reserve	\$ 13,991	\$ 33,053	\$ 39,238	\$ 44,063*
TOTAL	\$ 15,745	\$ 38,086	\$ 43,438	\$ 49,563
Cost Sharing	\$ -	\$ -	\$ -	\$ -
Lake Management Program	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 15,745	\$ 38,086	\$ 43,438	\$ 49,563
*Maintaining minimum contingency at \$15K for cost share of potential whole lake treatment and subsequent stability; developing reserve for future project considerations requiring cost share contribution [such as alum treatment and/or Nutrient Study @\$130K]				
Fund Advance BB	\$ -	\$ 3,000	\$ -	\$ -
Payment	\$ -	\$ 3,000	\$ -	\$ -
Fund Advance EB	\$ -	\$ -	\$ -	\$ -

Exhibit C - Historic Reports/Data

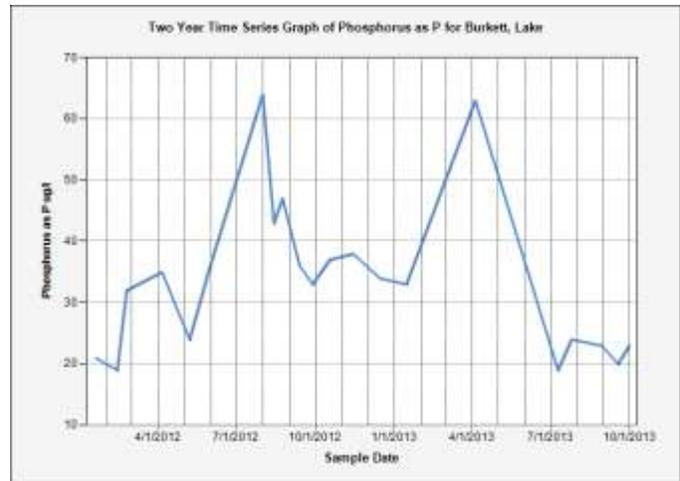
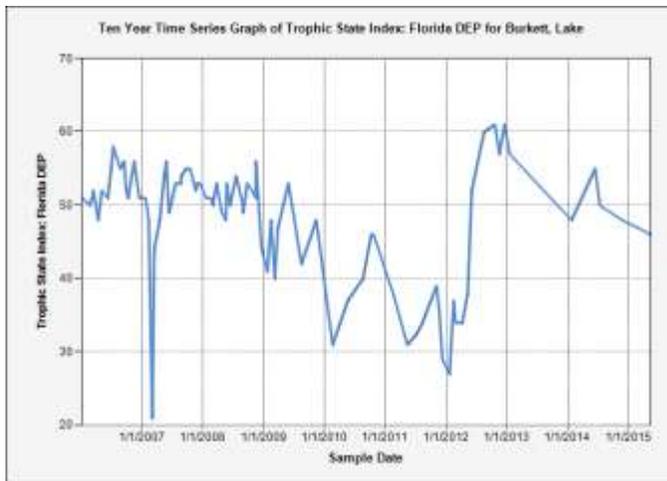
Additional information for Lake Burkett can be found on the Seminole County Water Atlas website at:

<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7521&wbodyatlas=lake>
<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7521>

Lake Burkett 2015 Water Quality Report: How Does My Lake Rank? TSI SCORE: 46 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? 51 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 Burkett (sampled on August 25, 2015) scored a **51** 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.

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