

January 9, 2014

**LAKE BURKETT
ANNUAL MEETING & 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 BURKETT

ANNUAL MEETING

Date, Time & Location	:	January 9, 2014, 2:30, 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 Present	:	Thomas Calhoun, Gloria Eby, Kathy Moore and Carol Watral

Topics carried forward from prior fiscal year activity

- Scheduled aquatic plant control bi-monthly treatments continue along unincorporated Seminole County shoreline areas of Lake Burkett; such activities are based upon available funding.
- County encourages additional shoreline restoration events.
- 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.
- 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).
- Whole lake hydrilla cost share with Orange County was not required for FY1213; thereby, increasing contingency reserves carrying forward into FY1314.
- As of July 2013, hydrilla was found sparsely in Lakes Burkett and Martha, and individually treated by the respective County within their respective jurisdiction. An increase in tuber generated hydrilla was noted in December 2013.

General Topics & Updates

- Potential planting events
- Nutrients
- 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:

- Per OC request from January 7 joint OC/SC planning meeting, Trinity Prep was advised of hydrilla presence in eastern retention pond. Trinity Prep agreed to address this pond.
- Trinity Prep advised courtesy notice of hydrilla treatments in advance of application is appreciated and SC will advise OC of such request.
- SC noted difficulty with access via Trinity Prep property for the most recent routine treatment. Trinity Prep advised only a small portion of the staff was on site during the holidays and provided alternate staff contact information for when the school is closed.
- The liaisons/community will review the potential of coordinating a shoreline restoration event in 2015 at the direction of and availability from the County.
- David Diggs had several questions stemming from his community related to hydrilla biology, grass carp management, future assessment rates, and asked if hydrilla would ever “go away”. LMP advised that hydrilla management is a part of the lake management indefinitely once hydrilla becomes established in a lake. Trinity Prep provided historical information about hydrilla infestation in the lakes in the late 1970s, with which the associated intervention yielded an overstocking of grass carp fish.

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 bimonthly 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, Craig Maughan (maughanc@trinityprep.org) and Lisa Wilks (trinitybayhoa@yahoo.com).

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. 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 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. 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 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 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) 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 24, 2013 Annual Meeting

County Staff Present: Thomas Calhoun, Gloria Eby, Kathy Moore, and Carol Watral
Liaisons Present: Craig Maughan
Liaison Members: David Diggs and Dr. Todd Husty (Informal: Craig Maughan and Lisa Wilk)

- Scheduled aquatic plant control bi-monthly treatments began October 12, 2012 along unincorporated shoreline areas of Lake Burkett; such activities are based upon available funding.
- Reviewed the upcoming January 2013 educational community meeting at the MSBU review meeting. (The meeting was held at Trinity Preparatory School January 31 with Seminole County and Orange County staffs attending. Advance meeting notice was provided by the Counties to their respective communities.)
- During the MSBU review meeting, logistics for the March 16, 2013 shoreline restoration event were discussed. (Outcome: 83 volunteers installed 3,030 native plants at 6 sites; 20 cubic yards of torpedo grass and cattails were removed, 44 storm drains marked, and 239 educational door hangers were distributed. Appreciation is extended to Trinity Preparatory School for providing kick-off location, student volunteers, and food.)
- Potential of increasing hydrilla growth was explored at review meeting as well as herbicide resistance and product rotation needs. This rotation requires the use of more costly herbicides therefore annual assessment is subject to increase per cost of required herbicides.
- Triploid grass carp (360) stocked in 2012, are a crucial component of the hydrilla management plan.

Annual Assessment: \$825.00 (Tax Year 2013)

Exhibit B - Budget/Financial Overview

MSBU:

Lakes Burkett/Martha (Aquatic Weed Control)

Date:

January 9, 2014

Tax Year		2012	2013	2014
Assessment		\$725	\$825	\$825
Fiscal Year		FY1213	FY1314	FY1415
		Actual	Working Budget	Projected Budget
REVENUE				
Beginning Fund Balance	\$	4,809	\$ 13,991	\$ 15,898
Assessment	\$	11,896	\$ 12,672	\$ 12,670
Other	\$	41	\$ -	\$ -
MSBU Program Fund Advance	\$	-	\$ -	\$ -
TOTAL	\$	16,746	\$ 26,663	\$ 28,568
Cost Sharing	\$	-	\$ -	\$ -
TOTAL	\$	16,746	\$ 26,663	\$ 28,568
Lake Management Program	\$	-	\$ -	\$ -
TOTAL	\$	16,746	\$ 26,663	\$ 28,568
EXPENDITURE				
County Administrative Fee	\$	1,075	\$ 1,075	\$ 1,200
Fund Advance Repayment	\$	90	\$ 90	\$ 3,090
Contracted Services	\$	1,590	\$ 9,600	\$ 10,300
<i>Routine Services Bi Monthly</i>	\$	1,590	\$ 1,600	\$ 1,600
<i>Supplemental Services</i>	\$	-	\$ -	\$ -
<i>Hydrilla</i>	\$	-	\$ 8,000	\$ 8,000
<i>Cost Share - Carp</i>	\$	-	\$ -	\$ 700
Contingency Reserve	\$	13,991	\$ 15,898	\$ 13,978
TOTAL	\$	16,746	\$ 26,663	\$ 28,568
Cost Sharing	\$	-	\$ -	\$ -
TOTAL	\$	16,746	\$ 26,663	\$ 28,568
Lake Management Program	\$	-	\$ -	\$ -
TOTAL	\$	16,746	\$ 26,663	\$ 28,568
Fund Advance BB	\$	3,000	\$ 3,000	\$ 3,000
Payment	\$	-	\$ -	\$ 3,000
Fund Advance EB	\$	3,000	\$ 3,000	\$ -

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>

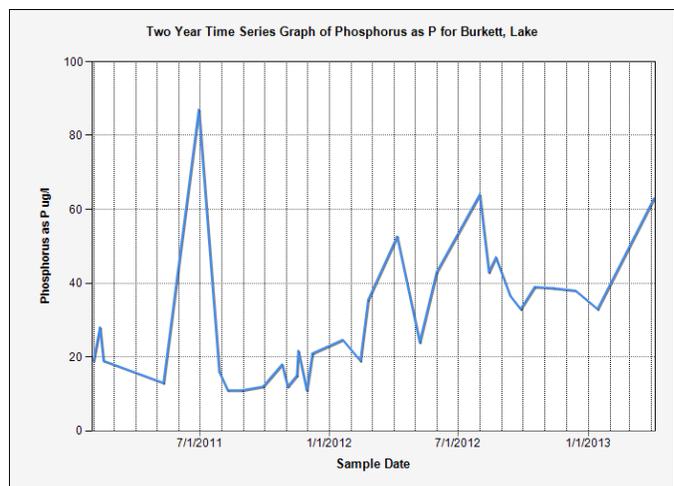
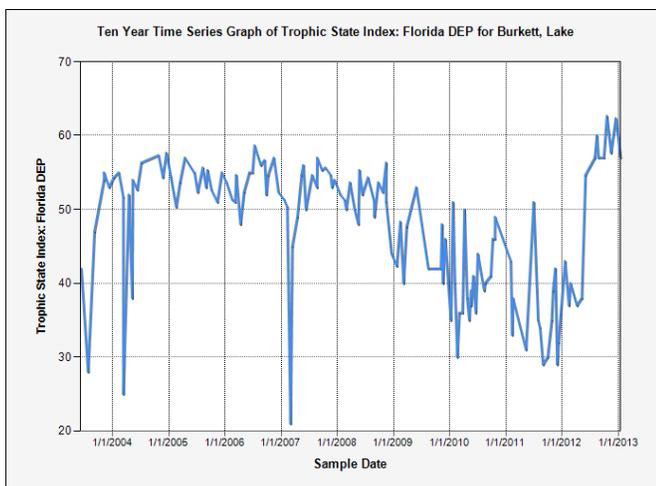
<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7521>

Lake Burkett 2013 Water Quality Report: How Does My Lake Rank?

TSI SCORE: 57 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?

54 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 13, 2013) scored a **54** 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.