

**2019**

**LAKE BURKETT  
LAKE MANAGEMENT PLAN**

Annual Meeting

- 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
  - Financial Summary
  - Historic Reports/Data
  - Roles & Responsibilities

# LAKE BURKETT ANNUAL MEETING

Date/Time/Location	:	February 13, 2019 11:00am 200 W. County Home Rd – LMP office
Community Liaisons	:	David Diggs, Byron Lawson, Todd Husty, Lou Garcia
Liaisons Present	:	Lou Garcia
Seminole County	:	Thomas Calhoun, Joey Cordell, Gloria Eby, Kim Ornberg, Kathy Moore and Joe Saucer

## General Topics & Updates

### Lake Management Program

- Welcome
- Fertilizer Ordinance- Passed on February 27, 2017 [www.seminolecountyfl.gov/fertilizer](http://www.seminolecountyfl.gov/fertilizer)
  - Restricted Months: no fertilizing June 1<sup>st</sup>- September 30<sup>th</sup>
  - Slow Release Nitrogen: at least 50%
  - Know How Much: [www.seminolecountyfl.gov/calculator](http://www.seminolecountyfl.gov/calculator)
  - Buffer Zone: 15 feet from all waterbodies
- Shoreline Protection Ordinance Status
  - FWC Rule change removes permit requirements on lakes smaller than 160 acres
    - Clarified statewide
  - Currently drafting County Shoreline Ordinance
    - Provided Orange County partner currently has ordinance in place
- Lake Status Nutrients/Habitat Scores [Bioassessment Indices - Refer to Exhibit C]
  - Lake in Healthy category- Post Hurricane Effects
  - LVI/BioBase data on Watershed Atlas website:  
<http://www.seminole.wateratlas.usf.edu/shared/ecology.asp?wbodyid=7521&wbodyatlas=lake>

### Treatment Plans - Current & Proposed [Refer to Lake Management Plan]

- Monitor hydrilla and treat as necessary (early detection-rapid response)- minimal presence
- Evaluate grass carp fish effects and adjust stocking rate as necessary
- Bladderwort is a native seasonal plant
- 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 2013
- 2019 Shoreline Planting Event- dates available
  - To be coordinated via Thomas Calhoun
    - Liaison requested we send email with dates
- Other
  - Email Addresses for routine communications and important announcements
    - Will prompt within same above email for new updated email addresses
  - Nutrient Study- update and potential use for contingency funds (discussed alum as a possibility)
  - OC to pay for next planting restoration event
  - LMP recommendation to maintain current assessment rate at \$400

### MSBU Program

- Financial Summary [Refer to Exhibit B]

# 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**

Financial management of the MSBU fund is provided by the Seminole County MSBU Program. Financial plans developed by the MSBU Program include eligible expense funding requests submitted by the Lake Management Program and other cost and revenue components typical to MSBU funds. Financial information inclusive of prior year actual outcome, current year working budget and next year budget proposal data is reported annually. Assessment levy is subject to Board approval and the standard procedures associated with non-ad valorem assessment. The financial plans may be adjusted by the County as merited per changing/evolving essential services as directed by the County and per financial planning considerations. 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](mailto:ddiggs1043@aol.com)), Todd Husty ([tmhusty@himexperts.com](mailto:tmhusty@himexperts.com)), Byron Lawson ([lawsonb@trinityprep.org](mailto:lawsonb@trinityprep.org)), Lou Garcia ([garcial@trinityprep.org](mailto:garcial@trinityprep.org)) and Lisa Wilks ([trinitybayhoa@yahoo.com](mailto:trinitybayhoa@yahoo.com)).

## **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, 407-665-2439, 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 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**

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 treatments and waterbody bioassessment. 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 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 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,

### **Funding Expectations**

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

**Exhibits**

**A** – Agenda & Notes from Prior Year Meeting

**B** - Financial Summary

**C** - Historic Reports/Data

**D** – Roles & Responsibilities

## Exhibit A – Agenda & Notes from Prior Year Meeting

Date, Time & Location	:	February 21, 2018, 11:00 a.m., 200 W. County Home Rd – LMP office
Community Liaisons	:	David Diggs, Byron Lawson, and Todd Husty
Liaisons Present	:	David Diggs, Byron Lawson, and Lou Garcia
Seminole County	:	Thomas Calhoun, Joey Cordell, Gloria Eby, Kathy Moore and Joe Saucer

### General Topics & Updates [Meeting Notes provided by respective County Programs]

#### Lake Management Program

- Welcome
- Fertilizer Ordinance- Passed on February 27, 2017. [www.seminolecountyfl.gov/fertilizer](http://www.seminolecountyfl.gov/fertilizer).
  - Fertilizer containing nitrogen or phosphorous cannot be applied to turf during the restricted season from June 1<sup>st</sup> – September 30<sup>th</sup>. 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 1<sup>st</sup> – May 31<sup>st</sup>) 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 [Bioassessment Indices] [Refer to Exhibit C]
  - Lake in Healthy category- no change in LVI- 10 pt decrease in TSI
  - LVI/BioBase data on Watershed Atlas website:  
<http://www.seminole.wateratlas.usf.edu/shared/ecology.asp?wbodyid=7521&wbodyatlas=lake> Treatment Plans - Current & Proposed [Refer to Lake Management Plan]
- Monitor hydrilla and treat as necessary (early detection-rapid response)- minimal presence
- Evaluate grass carp fish effects and adjust stocking rate as necessary
- Bladderwort is a native seasonal plant
- 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 2013
- 2018 Shoreline Planting Event- dates available
  - To be coordinated via Thomas Calhoun
- Other
  - Email Address for routine communications and important announcements
  - Nutrient Study- update and potential use for contingency funds
  - Email list to be sent for verification
  - Discussed planting event to be paid for by OC in 2018
  - Discussed the success of the 2017 planting event
  - Trinity prep discussed constructing a dock for educational use/outdoor classroom & water safety program
  - Trinity prep discussed having Seminole County/SERV do in class presentations

#### MSBU Program

- Financial Summary - Refer to Exhibit B; Assessment Update
  - Opportunity to reduce assessment; LM Program & Liaisons requested no rate reduction
  - Anticipating Administrative Fee increase FY19-20; tax year 2019
- Tentative date for next annual meeting: January 30, 2019 11:00AM

**Exhibit B - Financial Summary**

January 2019

Tax Year	2017	2018	2019
Assessment	\$ 400.00	\$ 400.00	\$ 300.00
Fiscal Year	FY17-18	FY18-19	FY19-20
<b>REVENUE</b>	<b>Actual</b>	<b>Working Budget</b>	<b>Proposed Budget</b>
Beginning Fund Balance	\$ 49,878	\$ 57,518	\$ 55,178
Assessments	\$ 6,177	\$ 6,140	\$ 4,600
Other	\$ 816	\$ 200	\$ 200
MSBU Program Fund Advance	\$ -	\$ -	\$ -
<b>TOTAL</b>	<b>\$ 56,871</b>	<b>\$ 63,858</b>	<b>\$ 59,978</b>
Cost Sharing	\$ -	\$ -	\$ -
Lake Management Program	\$ -	\$ -	\$ -
<b>TOTAL</b>	<b>\$ 56,871</b>	<b>\$ 63,858</b>	<b>\$ 59,978</b>
<b>EXPENDITURE</b>	<b>Actual</b>	<b>Working Budget</b>	<b>Proposed Budget</b>
County Administrative Fee	\$ 1,200	\$ 1,380	\$ 1,380
Fund Advance Repayment	\$ -	\$ -	\$ -
Contracted Services	\$ 553	\$ 7,300	\$ 1,200
<i>Routine Services</i>	\$ 553	\$ 1,600	\$ 1,200
<i>Hydrilla (Cost Share)</i>	\$ -	\$ 5,000	\$ -
<i>Carp (Cost Share)</i>	\$ -	\$ 700	\$ -
<i>Fish Barrier Service - NA</i>	\$ -	\$ -	\$ -
<i>Fish Barrier Replacement - NA</i>	\$ -	\$ -	\$ -
<i>Nutrient Abatement (NAV)</i>	\$ -	\$ -	\$ -
<i>Harvesting</i>	\$ -	\$ -	\$ -
<i>Other (Cost Share)</i>	\$ -	\$ -	\$ -
Reserve/Contingency	\$ 57,518	\$ 55,178	\$ 57,398
<i>Operating Contingency</i>	\$ 57,518	\$ 4,178	\$ 6,398
<i>Reserve: Hydrilla (Whole Lake)</i>	\$ -	\$ 9,000	\$ 9,000
<i>Reserve: Barrier Replace/Repair</i>	\$ -	\$ -	\$ -
<i>Reserve: Admin Code &amp; Ord Amnd</i>	\$ -	\$ 42,000	\$ 42,000
<b>TOTAL</b>	<b>\$ 59,271</b>	<b>\$ 63,858</b>	<b>\$ 59,978</b>
Cost Sharing	\$ -	\$ -	\$ -
Lake Management Program	\$ -	\$ -	\$ -
<b>TOTAL</b>	<b>\$ 59,271</b>	<b>\$ 63,858</b>	<b>\$ 59,978</b>
Fund Advance BB Payment (Principal)		\$ -	\$ -
Fund Advance EB	\$ -	\$ -	\$ -
MSBU Program Administration Cost	\$ 1,111	\$ 16,111	
LM Program Administration Cost	\$ 11,000		
Restoration Event Cost	\$ 4,000		

## Exhibit C - Historic Reports/Data

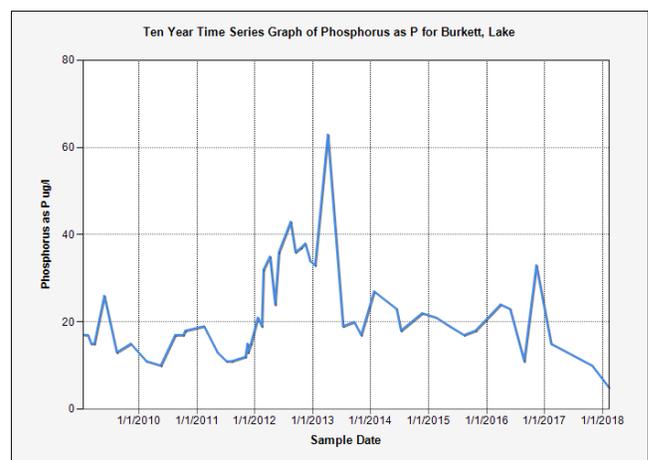
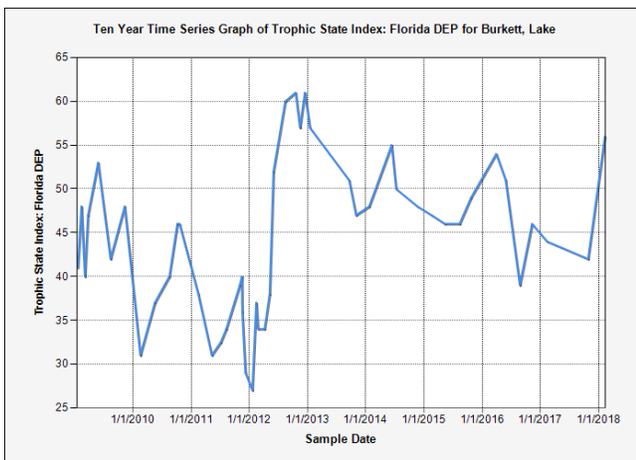
Additional information for Lake Burkett can be found on the Seminole County Water Atlas website at:

<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 Water Quality Report: How Does My Lake Rank? **TSI SCORE: 56 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 Burkett (sampled on October 22, 2018) scored a **58** which is in the **Healthy** category. This is a slight increase from the previous score of 56.

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 and assessment levy
- ✓ 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 public services 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