

2023

**LAKE BURKETT
LAKE MANAGEMENT PLAN**

Annual Meeting

- Agenda

Lake Management Plan

- General Provisions
- Community-Based Activities & Events
- County Services
 - Lake Management & Supplemental Programs
- 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:	Thursday, January 26, 2023 /10:15 am - 11:00 am/ ZOOM - Virtual
Community Liaisons:	David Diggs, Lou Garcia, Todd Husty, Byron Lawson, Tony Hoffmeier, Ken Iovino
Liaisons Present:	David Diggs, Lou Garcia
Seminole County:	Thomas Calhoun, Tony Cintron, Daniel Barber, Chad Day, Michael Eason, Tameka Morton, Michelle Rosa-Munger, Lynda Reaves

General Topics & Updates

Lake Management Program

- Welcome
- Shoreline Protection Ordinance Status
 - Seminole County Shoreline Ordinance adopted in April 2021. Lakes in between 2 - 160 acres need SC permit to use chemicals or to remove plants within access corridor of 50 feet or 50% of shoreline, whichever is less.
 - Orange County currently has shoreline ordinance in place for shorelines within their jurisdiction.
- Lake Status Nutrients/Habitat Scores [Bioassessment Indices - Refer to Exhibit C]
 - Lake in Healthy category
 - TSI scored 44 in the Good category
 - LVI increased and remains in the Healthy Category
- 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]
 - All Seminole County access corridors are being maintained
 - Monitor hydrilla and treat as necessary (early detection and rapid response)
 - Spot treatments may increase if hydrilla is observed more frequently
 - Evaluate grass carp fish effects and adjust stocking rate as necessary
 - Orange County stocked 160 carp in April 2022
 - David wants access corridors to be assessed
- General Recommendations for Lake Community Consideration [Refer to Lake Management Plan]
 - Increase native aquatic plantings in areas devoid of vegetation
 - Educate community on the Shoreline Protection Ordinance – we are willing and able to conduct an annual meeting for Seminole County side of the lake to educate residents
 - Promote “welcome packages” to new lakefront homeowners
 - Lakewatch samples - still no volunteer
- 2023 Shoreline Planting Event- dates available
 - To be coordinated via Tony Cintron
 - Plants funded by MSBU funds – cost of plants to come out of MSBU contingency funds
- Other
 - Email addresses for routine communications and important announcements
 - Nutrient study
 - Final study available, posted to Watershed Atlas
https://www.seminole.wateratlas.usf.edu/upload/documents/Lake_Burkett_Final%20Report_20191231_w_Appendix.pdf

MSBU Program & Resource Management Department

- Financial Summary [Refer to Exhibit B]

LAKE BURKETT

LAKE MANAGEMENT PLAN

GENERAL PROVISIONS

Scope of Lake Management Services

The scope of public lake management 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 Triploid Grass Carp Permit

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

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

Targeted Invasive/Exotic Aquatic Vegetation

- Hydrilla, fragrant water lily, spatterdock, torpedo grass, algae, cattail, Salvinia, duckweed, and tussocks.

Frequency of Aquatic Vegetation Management Treatment (herbicides)

Treatment 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.

Seminole County Employees

Information for contacting the employees of Lake Management and the MSBU program:

Lake Management – Thomas Calhoun (tcalhoun@seminolecountyfl.gov), Tony Cintron (acintron@seminolecountyfl.gov), Daniel Barber (dbarber02@seminolecountyfl.gov), Chad Day (cday02@seminolecountyfl.gov)

MSBU – Michael Eason (meason@seminolecountyfl.gov), Tameka Morton (tmorton@seminolecountyfl.gov), Michelle Rosa-Munger (mrosamunger@seminolecountyfl.gov)

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 (tmhusty@himexperts.com), Byron Lawson (lawsonb@trinityprep.org), Lou Garcia (garcial@trinityprep.org), Tony Hoffmeier (fhoffmeier@cfl.rr.com), and Ken Iovino (Keniovino@gmail.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) Plant a healthy shoreline with native emergent plants;
- 2) Establishing a formal Lake Association holding at least one annual meeting with topics relevant to your lake;
- 3) Establish a backyard berm and swale system where applicable;
- 4) 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 such as grass clippings, Contact us at 407-665-5542 for assistance;
- 5) Fertilize wisely by using phosphorous free and slow-release nitrogen based fertilizers only. Visit www.seminolecountyfl.gov/fertilizer for more information; and
- 6) Provide content for the Seminole County Water Atlas Lake Management Webpage for your lake (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:	Tuesday, March 1 st , 2022 /10:15 am - 10:30 am/ ZOOM - Virtual
Community Liaisons:	David Diggs, Lou Garcia, Todd Husty, Byron Lawson
Liaisons Present:	Lou Garcia
Seminole County:	Daniel Barber, Thomas Calhoun, Tony Cintron, Michael Eason, Tameka Morton, and Lynda Reaves

General Topics & Updates

Lake Management Program

- Welcome
- Shoreline Protection Ordinance Status
 - Seminole County Shoreline Ordinance adopted in April 2021. Lakes in between 2 - 160 acres need SC permit to use chemicals or to remove plants within access corridor of 50 feet or 50% of shoreline, whichever is less.
 - Orange County currently has shoreline ordinance in place for shorelines within their jurisdiction.
- Lake Status Nutrients/Habitat Scores [Bioassessment Indices - Refer to Exhibit C]
 - Lake in Healthy category: score 59 up from 53 for LVI, and the TSI is 34 and trending down, which is good
 - Lake is abundant in healthy native vegetation, water clarity is good, overall the lake is really stable right now
- LVI/BioBase Data on Watershed Atlas Website: Expansion of Myriophyllum Out of Lake Martha
<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 and rapid response) - minimal presence
 - Spot treatments may increase if hydrilla is observed more frequently
 - Evaluate grass carp fish effects and adjust stocking rate as necessary
 - 220 grass carp stocked – Orange County to stock 160 carp into lake this year
 - All access corridors opened and being maintained
- General Recommendations for Lake Community Consideration [Refer to Lake Management Plan]
 - Increase native aquatic plantings in areas devoid of vegetation
 - Educate community on the Shoreline Protection Ordinance – we are willing and able to conduct an annual meeting for Seminole County side of the lake to educate residents
 - Promote “welcome packages” to new lakefront homeowners
 - Lakewatch samples - still no volunteer; Robert was supposed to be trained but he did not have boat, need to be able to get to the middle of the lake to take samples
- 2022 Shoreline Planting Event- dates available
 - To be coordinated via Tony Cintron – Tony to send follow-up email with dates to Lou
 - Transportation restrictions
 - Plants funded by MSBU funds – cost of plants to come out of MSBU contingency funds
- Other
 - Email addresses for routine communications and important announcements
 - Nutrient study - potential use for contingency funds (discussed alum as a possibility in 2020)
 - Final study available, posted to Watershed Atlas
https://www.seminole.wateratlas.usf.edu/upload/documents/Lake_Burkett_Final%20Report_20191231_w_Appendix.pdf

MSBU Program & Resource Management Department

- Financial Summary [Refer to Exhibit B]
- BCC Resolution - MSBU Program Administrative Fee – 7% of Budgeted Assessment Revenue

Exhibit B - Financial Summary

MSBU FUND: BURKETT (LAKE)

Tax Year	2021	2022	2023
	Assessment	\$ 300	\$ 300
Fiscal Year	FY21-22	FY22-23	FY23-24
Revenue			
	Actual	Working Budget	Proposed Budget
Beginning Fund Balance	\$ 68,062	\$ 70,329	\$ 71,307
Assessment Revenue	\$ 4,612	\$ 4,600	\$ 4,600
Other (Interest)	\$ 449	\$ 200	\$ 250
Other - Per Ordinance Cost Share			
Other - Per Interlocal Agreement			
Other			
MSBU Program Fund Advance			
TOTAL Revenue	\$ 73,123	\$ 75,129	\$ 76,157
Expenditure & Reserves			
	Actual	Working Budget	Proposed Budget
MSBU Program Administrative Fee [7% Rev FY21-22]	\$ 322	\$ 322	\$ 320
Other County Services (Service Entity)	\$ -	\$ -	\$ -
Fund Advance Repayment			
Contracted Services	\$ 2,472	\$ 3,000	\$ 3,000
<i>AWC Services (via AAM)</i>	\$ 2,472	\$ 3,500	\$ 3,000
<i>Chemicals (Non-AAM)</i>	\$ -	\$ -	\$ -
<i>FAS/GEN Testing</i>	\$ -	\$ -	\$ -
<i>Shipping (Test Samples)</i>	\$ -	\$ -	\$ -
<i>TGC Fish</i>	\$ -	\$ -	\$ -
<i>Fish Barrier Inspection/Minor Repair</i>	\$ -	\$ -	\$ -
<i>Fish Barrier Replace/Major Repair</i>	\$ -	\$ -	\$ -
<i>Nutrient Abatement (Product) - pending BCC approval</i>	\$ -	\$ -	\$ -
<i>Nutrient Abatement (Prof. Services) - pending BCC approval</i>	\$ -	\$ -	\$ -
<i>Harvesting (and/or Cattails/Eelgrass)</i>	\$ -	\$ -	\$ -
<i>Other Lake Maintenance</i>	\$ -	\$ -	\$ -
<i>Other</i>	\$ -	\$ -	\$ -
Total Expenditures & Reserves	\$ 2,794	\$ 3,822	\$ 3,320
Reserves/Contingency¹	\$ 70,329	\$ 71,307	\$ 72,837

1 Note: These funds are secured (1) for maintaining rate stability as annual cost are known to fluctuate, (2) in preparation of planned or anticipated future expenses, (3) to provide response to emergency and/or urgent needs for which planning was not feasible. These funds are not intended for discretionary use or for expenditures that could be planned and included in annual budget planning processes.

LM Program Enhanced Services Cost *Pending development & confirmation*

Reserve/Contingency Funds

The financial summary [Exhibit B] of the Annual Report was updated in 2019 to include additional information about contingency fund status. The MSBU Program has provided this additional information to improve transparency respective to the reason and intended purpose for these funds.

The primary purpose for establishing operating contingency funding is twofold – (1) To have funding on hand to accommodate unexpected essential aquatic weed control emergencies that cannot be reasonably foreseen, planned or identified in routine budget planning & forecasting and (2) To provide rate stability as costs for ongoing services often vary from year to year. By establishing contingency and reserve funds, such funding may be allocated temporarily from these funds to operating expenditures to avoid periodic spikes in assessment.

Contingency funds are developed by financial management planning decisions and by default when actual expenditures are less than budgeted expenses. Although reserve/contingency funds are not expected to be expended in any given year, these values are included under expenditures because they are “on hold” for future needs and are classified by accounting practices as expenditures.

In the financial summary (Exhibit B) the total dollars in reserve/contingency are identified in the expenditure section on a single line (darker shading). The total dollars in contingency are calculated by subtracting the other expenditures (typically “contracted services” and “administrative fee”) from the total revenue. Contingency funds may be used as deemed essential to meeting emergency needs of the waterbody; however, the overall intention of use is as per the noted sub-categories.

When a negative value is displayed in the sub-category labeled “operating contingency”, it is an indication that the other subcategories reflect targeted sub-category values that have not been fully developed. For the other sub-categories to be fully developed, the “operating contingency” sub-category must be zero or a positive value.

The sub-category labeled “Reserve: Other” is included for improved transparency as use of these funds is on hold for purposes that are subject to Board confirmation and subsequent evaluation of ordinance provisions (potentially ordinance amendment) before these funds can be budgeted and utilized for the proposed purposes.

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: 44 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).

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? **59 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 4, 2020) scored a **59** which is in the **Healthy** category. This is an increase from the previous score of **53 Healthy**.

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.

Lake Burkett

Trend Report

2022



TSI Score: 44

(Trophic State Index)

Good

LVI Score: 59

(Lake Vegetation Index)

Healthy

FDEP Status

(Florida Dept of Environmental Protection)

Not Impaired

TMDL Status

(Total Maximum Daily Load)

No TMDL

BMAP

(Basin Management Action Plan)

Jesup

Howell Creek Watershed

76 acres

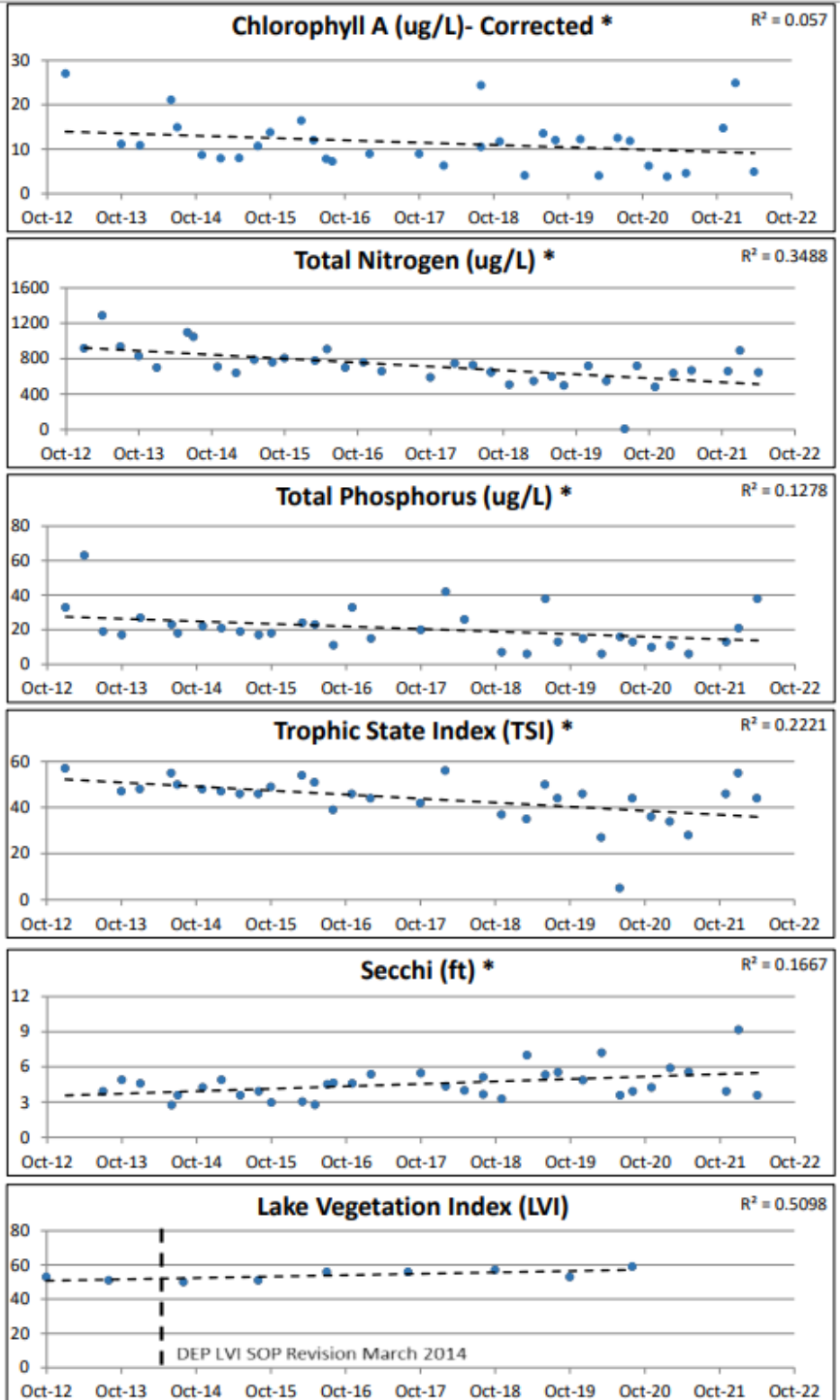
Lat 28° 36' 36.2" N

Lon 81° 16' 03.9" W

WBID 3009C

For more information please visit:

seminole.wateratlas.usf.edu/



* Sampled by Orange County Environmental Protection Division

Exhibit D

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