

January 15, 2014

**LAKE OF THE WOODS
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 OF THE WOODS ANNUAL MEETING

Date, Time & Location	:	January 15, 2014, 9:00 a.m., 200 W. County Home Rd – LMP Office
Community Liaisons	:	Tim Hayes and Randy Lee (President-Lake of the Woods Homeowners Assn., Inc.)
Liaisons Present	:	Tim Hayes and Randy Lee
Seminole County Present:	:	Thomas Calhoun, Gloria Eby, Kathy Moore, and Carol Watral
Guests	:	Glenn Macdonald (Lake of the Woods Homeowners Assn., Inc.)

Topics carried forward from prior fiscal year activity

- County will continue with education regarding living with and addressing eelgrass.
- County encourages waterfront properties to consider hosting educational community events.
- Continuing to be observed **on a routine basis**, grass clippings are being blown **directly** into the lake. Properties are urged to ask their contractors to blow clippings away from the lake.
- In response to unknown person(s) planting an invasive water lily at the shoreline of the Lake of the Woods Homeowners Association (HOA) property, a letter was forwarded to the HOA from the County on July 10, 2013, inviting removal of the plant before being treated during the next scheduled treatment.
- Minor repairs were made to the triploid grass carp barrier due to damage from debris.
- Hydrilla will be closely monitored, watching for tuber re-growth. 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.
- Contracted aquatic plant control services will be skipped January, February and September.

General Topics & Updates

- Potential community meeting
- 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:

- Opportunity for educational community events was discussed; Randy and Glenn said a group within their HOA (Social Sunshine Committee) does many events and may want to sponsor an aquatic educational event.
- Liaisons asked about lead time for any future hydrilla treatment notification due to potential irrigation precautions. County explained that as much lead time as possible is always given to the community (both reverse 911 and written notice routinely provided to affected properties).
- Potential for another large lake hydrilla was discussed and the necessity of maintaining adequate funding reserve for such treatment was emphasized.
- County reports having seen triploid grass carp in the lake at every inspection/bioassessment.
- Liaisons asked about controlling eelgrass; it was explained by County that eelgrass is beneficial, crowding out hydrilla and absorbing nutrients that aids in improving the health of the lake.
- Nicole Murphy was announced as a new liaison for the lake.
- Liaisons reported a significant increase in waterfowl and predatory birds now inhabiting the lake.

LAKE OF THE WOODS

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 09-14
- Agreement with Lake of the Woods Homeowners Association, Inc.
- 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, water hyacinth, torpedo grass, paragrass, cattail, primrose willow, alligator weed, Cuban bulrush, exotic water lily, wild taro, water fern, algae, spatterdock, southern naiad, coontail, and willow

Frequency of AWC Treatment

AWC services are performed at the direction of the Seminole County LMP as per the Lake of the Woods 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. The governing ordinance does not include assessment restrictions specific to annual adjustment amounts and/or 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 current liaisons for Lake of the Woods are: Tim Hayes (thavesiv@aol.com); Nicole Murphy (nmurphy0315@earthlink.net), and Randy Lee (rlee@jetlift.com).

LAKE OF THE WOODS

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP continues to recommend/encourage future resident-based volunteers involving native plantings along the shoreline. The intention of such an event is to plant beneficial native aquatic plants in key areas along the shoreline. Residents should organize planting days coordinated with LMP aiding the residents in creating a beneficial shoreline for Lake of the Woods. It is especially important that as aquatic invasive plants (such as torpedo grass) are being treated, native aquatic plants should be established within these areas. This also provides habitat for fish and wildlife, helps impede invasive exotics from re-establishing and reduces sedimentation into the lake due to erosion of the shoreline. All of these best lake management practices are essential to providing a more environmentally stable lake for generations to come. The key to success in lake management projects is dependent on strong participation of the Lake of the Woods community.

Continued recommendations for community initiatives are as follows:

- 1) Continue with review of street sweeping program,
- 2) Implement educational outreach programs i.e. Shoreline Restoration Workshops (planting days), Florida Yards and Neighborhoods (FYN) presentations, Lake Management Video mail-outs, and reduction of residential pollution by using low fertilizer use; phosphorous free fertilizers; keeping a functional shoreline with beneficial native aquatic plants; keeping grass clippings out of your storm drains leading to the lake. All these activities aid in protecting your lake! Contact Gloria Eby (407) 665-2439 or Marie Lackey (407) 665-2424 for more information and assistance, and
- 3) Provide content for the Seminole County Water Atlas Lake Management webpage for Lake of the Woods (such as newsletters, photos, and community updates).
- 4) Individual property owners interested in establishing a recreational access corridor can apply for an aquatic plant removal permit (free) through the Florida Fish and Wildlife Conservation Commission (FWC) at <http://www.myfwc.com/license/aquatic-plants>. Additional information specific to managing eelgrass, a native aquatic plant is available via your FWC regional biologist, Alicia Knecht, at Alicia.Knecht@myfwc.com or 321-246-0682 to obtain a free permit.

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.

LAKE OF THE WOODS

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. Spring 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 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.

Current Fiscal Year – Planned Treatment & Funding

Primary Aquatic Plant Management Expectations

Hydrilla growth in Lake of the Woods has 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 of the Woods, as well as current conditions observed at the lake. As with any lake with a history of hydrilla infestation, long-term planning to include financial preparation for whole lake treatment is advised. LMP will continue to closely monitor and gauge hydrilla in Lake of the Woods. Hydrilla deposits bulb like seeds (tubers) into the sediment which can remain viable for up to six years. Tubers are produced in each growing season and are used to perennialize the plant as a means of propagation (re-growth). Since Lake of the Woods was previously infested with hydrilla, many tubers were deposited in the lake bed during this time. The recommendation for the management plan in Lake of the Woods is to continue to integrate use of contact herbicides with grass carp fish to manage hydrilla re-growth from tubers.

Eelgrass Inquiries: Seminole County continues to receive inquiries regarding eelgrass impacting boating access. Eelgrass is a beneficial native aquatic plant. Property owners with recreational access issues due to eelgrass can apply for a free aquatic plant removal permit through the Florida Fish and Wildlife Conservation Commission (FWC) at <http://www.myfwc.com/license/aquatic-plants>. Some access corridors have been successfully treated by individual homeowners since their permit was issued. Additional information specific to managing eelgrass and assistance with applying for a permit is available via your local FWC regional biologist, Alicia Knecht, at Alicia.Knecht@myfwc.com or 321-246-0682. **Note:** The management of eelgrass is not financed through the MSBU assessment nor listed on the county's aquatic weed control permit for Lake of the Woods issued by FWC. Adding eelgrass management to the current MSBU would yield a significant increase in the annual MSBU assessment. Property owners interested in adding eelgrass management to the MSBU service scope are encouraged to contact their lake liaisons to discuss financial implications and the process for adding this plant to the scope of funded services.

Funding Expectations

Refer to current fiscal year budget data provided in Exhibit B.

LAKE OF THE WOODS

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 close monitoring of hydrilla (re-growth from tuber production),
- 2) Conduct spot treatments of hydrilla if required,
- 3) Continued treatment of the invasive aquatic plants – herbicides,
- 4) Monitor/control/replant managed areas,
- 5) Future grass carp stockings if required, and
- 6) Continue to increase number of shoreline re-vegetation sites (lakefront community).

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 29, 2013 Annual Meeting

County Staff Present : Thomas Calhoun, Gloria Eby, Kathy Moore, and Carol Watral
Liaisons Present : Tim Hayes and Kathy Hubbert
Liaisons : Tim Hayes and Kathy Hubbert

- Primary concern expressed at the meeting by the liaison group was if hydrilla would again result in an irrigation advisory for tax year 2013 or 2014.
- Presence of eelgrass was also discussed during the review meeting and reminder was made by County that individual properties may request permit to address eelgrass at their respective shoreline.
- Eelgrass concerns continued to be expressed throughout the fiscal year by various properties with each property provided personal response and offer of assistance with applying for permit to address eelgrass.
- Contracted aquatic plant control services were skipped for October, January, February and September.
- Species permitted for treatment are: hydrilla, water hyacinth, torpedo grass, paragrass, cattail, primrose willow, alligator weed, Cuban bulrush, exotic water lily, wild taro, water fern, algae, spatterdock, southern naiad, coontail, and willow.
- Potential of hydrilla herbicide resistance and product rotation needs was discussed. This rotation requires the use of more costly herbicides; therefore, annual assessment is subject to increase per cost of required herbicides.

Annual Assessment: \$425.00 (Tax Year 2013)

Exhibit B - Budget/Financial Overview

MSBU:

LAKE OF THE WOODS (Aquatic Weed Control)

Date:

January 15, 2014

Tax Year	2012	2013	2014
Assessment	\$380.00	\$425.00	\$425.00
Fiscal Year	FY1213	FY1314	FY1415
REVENUE	Actual	Working Budget	Projected Budget
Beginning Fund Balance	\$ 5,235	\$ 14,212	\$ 27,827
Assessments	\$ 19,779	\$ 21,620	\$ 21,624
Other	\$ 48	\$ -	\$ -
MSBU Program Fund Advance	\$ -	\$ -	\$ -
TOTAL	\$ 25,062	\$ 35,832	\$ 49,451
Cost Sharing			
TOTAL	\$ 25,062	\$ 35,832	\$ 49,451
Lake Management Program			
TOTAL	\$ 25,062	\$ 35,832	\$ 49,451
EXPENDITURE	Actual	Working Budget	Projected Budget
County Administrative Fee	\$ 1,000	\$ 875	\$ 1,075
Fund Advance Repayment	\$ -	\$ -	\$ -
Contracted Services	\$ 5,770	\$ 7,130	\$ 7,190
<i>Algae</i>	\$ -	\$ -	\$ -
<i>Hyacinths & sedge</i>	\$ -	\$ -	\$ -
<i>Hydrilla & Routine Services</i>	\$ -	\$ 3,000	\$ 3,000
<i>Naiad</i>	\$ -	\$ -	\$ -
<i>Torpedo Grass</i>	\$ 5,000	\$ 2,550	\$ 2,550
<i>Labor</i>	\$ -	\$ 440	\$ 440
<i>Carp</i>	\$ -	\$ -	\$ -
<i>Barrier Maint</i>	\$ 770	\$ 1,140	\$ 1,200
<i>Other</i>	\$ -	\$ -	\$ -
Contingency Reserve	\$ 14,212	\$ 27,827	\$ 41,186
TOTAL	\$ 20,982	\$ 35,832	\$ 49,451
Cost Sharing	\$ -	\$ -	\$ -
TOTAL	\$ 20,982	\$ 35,832	\$ 49,451
Lake Management Program	\$ -	\$ -	\$ -
TOTAL	\$ 20,982	\$ 35,832	\$ 49,451

Fund Advance BB	\$ 4,000	\$ -	\$ -
Payment	\$ 4,000		
Fund Advance EB	\$ -	\$ -	\$ -

Exhibit C - Historic Reports/Data

Additional information for Lake of the Woods can be found on the County's Water Atlas website at:

<http://www.seminole.wateratlas.usf.edu/lake/?wbodyatlas=lake&wbodyid=7686>

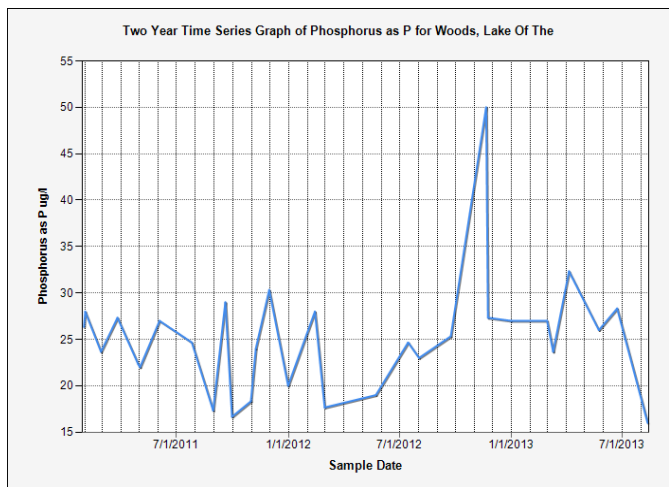
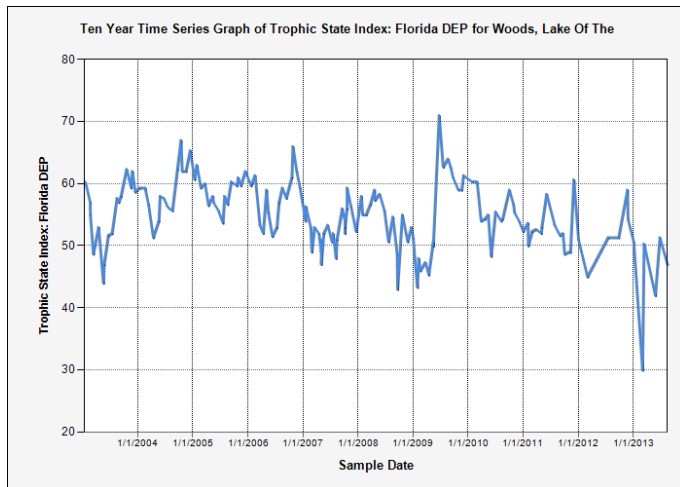
<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7686>

Lake of the Woods 2013 Water Quality Report: How Does My Lake Rank?

TSI SCORE: 47 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?

49 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 the aquatic plant communities in Florida lakes. The August 1, 2012, LVI assessment score for Lake of the Woods was **51**. Lake of the Woods LVI scores range from 31 to 53 since inception of our lake management efforts in 2009. Hydrilla dominance plays a vital role in degrading the lake's LVI score as the April 1, 2012 assessment score was greatly reduced to **25 Impaired**. This demonstrates an improvement in the LVI score by 26 points as a result of hydrilla treatment/management. The most recent LVI bioassessment for Lake of the Woods (sampled on August 6, 2013) scored a **49** 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.