

**January 17, 2017**

**LAKE MILLS**

**ANNUAL MEETING & LAKE MANAGEMENT PLAN**

Annual Meeting – 2017

- Agenda

Lake Management Plan

- General Provisions & Scope of Services
- Community-Based Activities & Events
- Current Fiscal Year
  - Planned Treatments & Funding
- Next Fiscal Year
  - Projected Treatments & Funding
- Exhibits
  - Agenda & Notes (Prior Year)
  - Budget & Financial Summary
  - Historic Reports/Data
  - Roles & Responsibilities

# LAKE MILLS

## ANNUAL MEETING

|                       |   |  |
|-----------------------|---|--|
| Date, Time & Location | : | January 17, 2016, 10:00 a.m., 200 W. County Home Rd – LMP office |
| Community Liaisons    | : | Dave Axel, Connie Gatlin and Bill Merckel                        |
| Liaisons Present      | : | Dave Axel via Teleconference                                     |
| Seminole County       | : | Thomas Calhoun, Joey Cordell, Gloria Eby, and Joe Saucer         |

### **Topics carried forward from prior fiscal year activity** [\[Meeting Notes\]](#)

- Fertilizer Ordinance & Shoreline Protection Ordinance
  - Both ordinances contain commitments and directives that will contribute to environmental improvement and protection long-term for lakes and other waterbodies. The Fertilizer Ordinance focuses primarily on fertilizer selection (phosphate free, slow release nitrogen) and application (location, volume, timing). The Shoreline Protection Ordinance mirrors the State’s guidelines for shoreline vegetation and development as historically communicated by the LMP and demonstrated by the best lake management practices followed by MSBU funded services. The Fertilizer Ordinance is tentatively scheduled for BCC review/approval consideration on February 28; while the Shoreline Protection Ordinance development continues with final presentation anticipated later in 2017. [Note: The Shoreline Protection Ordinance approval process involves several levels of approval as the directives need to be included in the County’s Land Development Code.] Educational materials are readily available to further promote awareness, understanding and compliance.
  - FWC is proposing a change to their permitting responsibilities respective to aquatic plant management. The proposed (and likely to be adopted rule changes) will have impact on the permits associated with lakes less than 160 acres in size. The importance of Seminole County enacting the Shoreline Protection Ordinance is heightened by this change. In association with the ordinance, the County will be confirming delegated enforcement authority from FWC to provide ongoing compliance efforts respective to adopted protective measures. When presentation dates are confirmed, LMP will provide email updates so interested property owners and residents are aware of these activities. Supportive participation is encouraged.

### **General Topics & Updates** [\[Meeting Notes\]](#)

- 2017 Shoreline Planting Event- dates available
  - To be coordinated via Thomas Calhoun; Connie to provide sites if owner interest is identified
- Nutrients/Habitat Scores: Improvements in bioassessment indices
  - Refer to Exhibit C – scores rating healthy
  - 1 cent sales tax funding
- Plans for current fiscal year
  - Refer to Page 6
  - Grass carp fish barrier activity for hurricane preparedness
  - Hurricane effects (baby’s tear) – not hydrilla
  - Spot treatments with innovative product mix provided additional hydrilla control time

- Projections for next fiscal year
  - Refer to Page 6
  - Potential whole lake treatment after FY19-20 (planned in budget) with anticipation that spot treatments will be adequate in interim
  
- Budget – Prior, Current & Proposed
  - Refer to Exhibit B; propose minor assessment rate reduction from \$875.00 to \$850.00
    - i) Dave Axel requested holding assessment at current rate as to provide stronger contingency for optional treatments, such as alum cycle treatment
  
- General recommendations for community consideration
  - Refer to Page 5; Increase native aquatic plants in areas that are devoid of vegetation

# LAKE MILLS

## 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 06-06
- FWC permit
- Cost Share Arrangement with Leisure Services Department (Informal)

#### **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, water hyacinth, torpedo grass, primrose willow, wild taro, cattail, and salvinia.

#### **Frequency of AWC Treatment**

AWC services are performed at the direction of the Seminole County LMP as per the Lake Mills 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 limits assessment increases 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 Mills are: Dave Axel ([daveaxel@axelrealestate.com](mailto:daveaxel@axelrealestate.com)), Connie Gatlin ([connie.gatlin@gmail.com](mailto:connie.gatlin@gmail.com)), and Bill Merckel ([billmerckel@prodigy.net](mailto:billmerckel@prodigy.net)).

## **COMMUNITY-BASED ACTIVITIES & EVENTS**

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Lake Mills. 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 Mills 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 formal Lake Association holding at least one annual meeting with topics relevant to Lake Mills,
- 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 LMP, 665-2439, for more information and assistance,
- 4) Provide content for the Seminole County Water Atlas Lake Management Webpage for Lake Mills (such as newsletters and photos).
- 5) Share what YOU know with your neighbors! Encourage fellow residents to keep a functional shoreline with beneficial native aquatic plants, and to keep grass clippings out of the storm drains that lead to the lake. All of these activities aid in protecting your waterbody!

***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 reduces 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**

Lake Mills 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. 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. 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 Mills 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 Mills, 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.

Primary expectations are as follows:

- 1) Bimonthly aquatic herbicide maintenance for non-native vegetation, canal maintenance, and hydrilla treatments (as needed)
- 2) Grass carp stockings if deemed necessary, pending permit amendment
- 3) Monitoring of hydrilla, coontail, other submersed aquatic plants, and grass carp fish
- 4) Continued grass carp barrier debris and maintenance services for each location

### **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 bimonthly aquatic herbicide maintenance for non-native vegetation, canal maintenance, and hydrilla treatments (as needed)
- 2) Future grass carp stockings if deemed necessary, pending permit amendment
- 3) Continued monitoring of hydrilla, coontail, other submersed aquatic plants, and grass carp fish
- 4) Continued grass carp barrier debris and maintenance services for each location

### **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

**C** – Roles & Responsibilities

## Exhibit A – Agenda & Notes from Prior Year Planning Session

### ANNUAL MEETING

|                       |   |  |
|-----------------------|---|--|
| Date, Time & Location | : | January 21, 2016, 10:30 a.m., 200 W. County Home Rd – LMP office |
| Community Liaisons    | : | Dave Axel, Connie Gatlin and Bill Merckel                        |
| Liaisons Present      | : | Dave Axel  |
| Seminole County       | : | Thomas Calhoun, Joey Cordell, Gloria Eby and Kathy Moore         |

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

- Results of hydrilla treatments
  - Refer to current year notes
- New barrier installed over the inlets near Mills Park
- The gauge at Millshores was removed
  - Gauge relocated to Lake Mills Park
- Progress of County ordinances - Fertilizer & Shoreline Protection
  - Documents developed and undergoing preliminary review and consideration prior to presentation to Board of County Commissioners. Targeting to present to BCC within next several months.

#### **General Topics & Updates** [Meeting Notes]

- 2016 Shoreline Planting Event- dates available in Spring
  - To be coordinated via Thomas Calhoun; Dave to provide sites if owner interest is identified
- Nutrients/Habitat Scores: Improvements in bioassessment indices
  - Refer to Exhibit C – scores good; rating healthy
  - Millshore Pond drainage study proposed for 1 cent sales tax funding
- Plans for current fiscal year
  - Refer to Page 5
  - Optimistic that spot treatments with special product mix will keep hydrilla managed for additional time frame
  - Refer to Exhibit B – Assessment rate to be held constant at \$875.00
- Projections for next fiscal year
  - Refer to Page 5
  - Refer to Exhibit B – potential lake treatment budget after FY19-20 per anticipation that spot treatments will be adequate in interim
- General recommendations for community consideration
  - Refer to Page 4



**Exhibit B - Budget/Financial Overview**

**MSBU: Mills**

**Date: January 2017**

| <b>Tax Year</b>  | <b>2014</b>       | <b>2015</b>       | <b>2016</b>           | <b>2017</b>            |
|--|-------------------|-------------------|-----------------------|------------------------|
| <b>Assessment</b>  | \$ 775.00         | \$ 875.00         | \$ 875.00             | \$ 875.00              |
| <b>Fiscal Year</b>                                       | <b>FY14-15</b>    | <b>FY15-16</b>    | <b>FY16-17</b>        | <b>FY17-18</b>         |
| <b>REVENUE</b>   | <b>Actual</b>     | <b>Actual</b>     | <b>Working Budget</b> | <b>Proposed Budget</b> |
| Beginning Fund Balance                                   | \$ 116,301        | \$ 154,776        | \$ 206,290            | \$ 237,965             |
| Assessments  | \$ 56,192         | \$ 64,471         | \$ 63,000             | \$ 63,000              |
| Other  | \$ 446            | \$ 545            | \$ 500                | \$ 500                 |
| MSBU Program Fund Advance                                | \$ -              | \$ -              | \$ -                  | \$ -                   |
| <b>TOTAL</b>   | <b>\$ 172,939</b> | <b>\$ 219,792</b> | <b>\$ 269,790</b>     | <b>\$ 301,465</b>      |
| Cost Sharing - Leisure Services*                         | \$ 840            | \$ 7,548          | \$ -                  | \$ 1,889               |
| Lake Management Program                                  | \$ 6,128          | \$ 4,290          | \$ -                  | \$ -                   |
| <b>TOTAL</b>   | <b>\$ 179,907</b> | <b>\$ 231,630</b> | <b>\$ 269,790</b>     | <b>\$ 303,354</b>      |
| <b>EXPENDITURE</b>                                       | <b>Actual</b>     | <b>Actual</b>     | <b>Working Budget</b> | <b>Proposed Budget</b> |
| County Administrative Fee                                | \$ 1,200          | \$ 1,200          | \$ 1,200              | \$ 1,200               |
| Fund Advance Repayment                                   | \$ -              | \$ -              | \$ -                  | \$ -                   |
| Contracted Services (excludes LS & LMP)                  | \$ 16,963         | \$ 12,303         | \$ 30,625             | \$ 32,711              |
| <i>Routine Services</i>                                  | \$ 2,829          | \$ 2,368          | \$ 3,000              | \$ 3,000               |
| <i>Repair &amp; Maint Barriers</i>                       | \$ 1,140          | \$ 1,772          | \$ 1,800              | \$ 1,800               |
| <i>Hydrilla &amp; Other SAV</i>                          | .                 | \$ 8,163          | \$ 25,825             | \$ 23,111              |
| <i>Carp</i>  | \$ 1,989          | \$ -              | \$ -                  | \$ 4,800               |
| <i>Other (Applicable FY0607 - FY1415)</i>                | \$ 11,005         | \$ -              | \$ -                  | \$ -                   |
| Contingency Reserve                                      | \$ 154,776        | \$ 206,289        | \$ 237,965            | \$ 267,554             |
| <b>TOTAL</b>   | <b>\$ 172,939</b> | <b>\$ 219,792</b> | <b>\$ 269,790</b>     | <b>\$ 301,465</b>      |
| Cost Sharing Leisure Services*                           | \$ 840            | \$ 7,548          | \$ -                  | \$ 1,889               |
| Lake Management Program                                  | \$ 6,128          | \$ 4,290          | \$ -                  | \$ -                   |
| <b>TOTAL</b>   | <b>\$ 179,907</b> | <b>\$ 231,630</b> | <b>\$ 269,790</b>     | <b>\$ 303,354</b>      |
| *May include True-Up Adjustment [+/-] to Maintain LS 10% |                   |                   |                       |                        |
| Fund Advance BB Payment                                  | \$ -              | \$ -              | \$ -                  | \$ -                   |
| Fund Advance EB  | \$ -              | \$ -              | \$ -                  | \$ -                   |

## Exhibit C - Historic Reports/Data

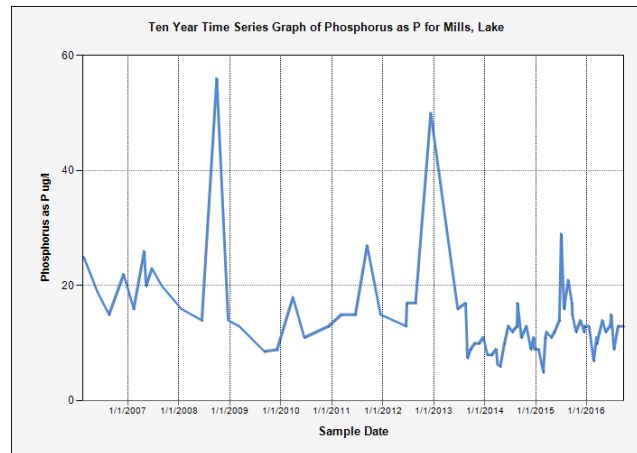
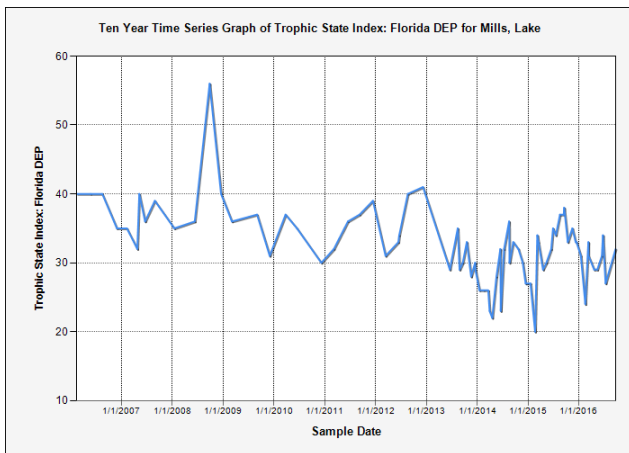
Additional information for Lake Mills can be found on the Seminole County Water Atlas website at:

<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7613>  
<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7613&wbodyatlas=lake>

### **Lake Mills Water Quality Report: How Does My Lake Rank? TSI SCORE: 32 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? 62 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 Mills (sampled on September 14, 2016) scored a **62** which is in the **Healthy** category; prior year was **63**.

| Aquatic life use category   | LVI Range | Description  |
|-----------------------------|-----------|--|
| Category 1<br>"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<br>"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<br>"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.                      |

## Exhibit D – Roles & Responsibilities

### 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