

**Myrtle Lake MSBU
Report for Fiscal Year (FY) 2011-2012
October 1, 2011 through September 30, 2012
Lake Review Meeting Held: July 13, 2012**

County Staff: Gloria Eby, Thomas Calhoun, Carol Watral

Community Liaisons: Gretchen Hobkirk, Steve Mikesell, Dave Crowder

Purpose: To review status of waterbody management and to discuss with the liaison group the recommendations and plans for the next fiscal year.

Routine updates of inspections/results are provided to the community liaison members via email. To be included in these updates, please notify Gloria Eby, Lake Management Program (LMP) Manager, at geby@seminolecountyfl.gov.

Annual Meeting Synopsis

Current level of non-ad valorem assessment does not provide funding for submersed vegetation treatments. The fluctuating lake level continues to present treatment challenges and the low level prohibits airboat access in certain areas for herbicide application.

As a result of the treatment challenges associated with this lake, the contracted application expense has increased. A \$10.00 increase in the non-ad valorem assessment for FY 2012-2013 (from \$235.00 to \$245.00 per parcel) is necessary to cover a portion of the increased cost of herbicide application.

Discussion was held regarding the timing of the aquatic weed control treatments. LMP responded that treatments will be scheduled by LMP based on their routine inspections, confirmed status of the lake needs, and be review with the liaison(s).

The liaisons also asked about treatment of the barnyard grass that has been growing in large areas. LMP advised the grass will die when the water level rises. LMP continues to encourage mowing of areas where low level of the water presents the opportunity (such as dry lake bed).

Liaisons Dave Crowder reports continuing to privately fund services, which are not funded through the MSBU, to the canal near his property on Canal Point Road.

Liaisons raised the subject of removal of muck from within the canal. LMP replied that such removal is very expensive due to high expenditures associated with hauling the muck from the site to a certified disposal site. LMP advised permit from the regulatory agencies should be determined if needed or not and contact information was provided.

County Funding:

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 Myrtle Southern Cove 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 Myrtle Lake Report FY2011 – 2012

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.

2011-2012 Lake Management Activities:

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.*

Maintenance treatments for FY 2011-2012 were performed on an as-needed basis with LMP determining, in conjunction with liaison input, when the treatment would provide the best response to the fluctuating lake conditions. Vegetation targeted includes primrose, torpedo grass, barnyard grass, dog fennel and various terrestrial grasses. The wildlife islands are also included in treatments.

In the south lobe, the Seminole County MSBU funded herbicide contractor resumed services at the end of April. Lilly pads were successfully treated in the south pool.

Lake Management Recommendations

Lake Management Program recommendations for the upcoming fiscal year [FY2012-2013] are:

- 1) Continued herbicide treatments for torpedo grass, primrose, and other invasive emergent aquatic plants,**
- 2) Stocking of triploid grass carp as needed,**
- 3) Continue to remove the invasive island apple snail egg clusters where noticed,**
- 4) Residents should mow, or have their maintenance services mow, vegetation where/when the lake is experiencing unwanted invasive vegetation due to drought/draw-down conditions,**
- 5) Increase Native Aquatic Shoreline Plants -continue to monitor lake levels and move aquatic plants accordingly with the overall objective of increasing the vegetation to increase nutrient assimilation (uptake), provide habitat, prevent erosion and help reduce exotic plants, especially torpedo grass; consider future volunteer dates to include movement of emergent plants within lake,**
- 6) 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,**
- 7) Establishing a Lake Association and having at least one annual meeting with topics relevant to Myrtle Lake and watershed, and**
- 8) Provide content for the Seminole County Water Atlas Lake Management Webpage for Myrtle Lake (newsletters, community activities, etc.).**

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of the Lake Myrtle Southern Cove. 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 Myrtle Southern Cove community.

Cost of Aquatic Weed Control

The financial management goal of administering the Myrtle Lake Aquatic Weed Control MSBU is to assess property at a funding level that provides reasonable control for aquatic weeds in a manner that minimizes significant fluctuations in the assessment amount. Having reserves in place for years that require more extensive treatments assists in avoiding wide swings in rates and/or potential delays in essential treatment.

The financial performance for FY2011-2012 is as follows:

October 2011 – September 2012

Revenue

1)	\$ 5,916	Assessment Revenue (per early payment discounts) + Interest
2)	\$ 1,500	MSBU Fund Advance
3)	\$ <u>262</u>	Reserve and Contingency (beginning fund balance)
	\$ <u>7,678</u>	Total Revenue

Expenditures

1)	\$ 3,120	Contracted Services
2)	\$ 875	County Administrative Fee
3)	\$ 150	Application Fee Credit
4)	\$ 3,533	Contingency reserve (carried forward to next year)
	\$ <u>7,678</u>	Total Expenditures

The budget projected for FY2012-2013 is as follows:

October 2012 – September 2013

Budgeted Revenue:

1)	\$ 6,100	Assessment Revenue (per early payment discounts)
2)	\$ <u>3,533</u>	Reserve and Contingency (beginning fund balance)
	\$ <u>9,633</u>	Total Revenue

Budgeted Expenditures:

1)	\$ 4,680	Contracted Services
2)	\$ 560	Payment on MSBU Fund Advance (Balance Remaining \$1,000.00)
3)	\$ 875	County Administrative Fee
5)	\$ <u>3,518</u>	Contingency reserve (carried forward to next year if not required)
	\$ <u>9,633</u>	Total Expenditures

Note: Any financial activity from prior years, if applicable, is available upon request.

MSBU Background

At the request of the community of Myrtle Lake (Friends of Myrtle Lake), the Myrtle Lake Aquatic Weed Control MSBU was created by Ordinance 2010-18 on September 15, 2010, to provide assessment funding for lake management and aquatic weed control for Myrtle Lake. At that time, several essential activities were identified with the community liaison members representing Myrtle Lake and County staff from both Lake Management [LM] Program and MSBU Program. This identified and prioritized several essential activities for the Myrtle Lake Aquatic Weed Control MSBU, which are as follows:

- 1) Treatment/control of emergent permitted vegetation,
- 2) Algae treatment as budget allows,
- 3) Expand/preserve native aquatic plant shoreline.

Myrtle Lake Inspections FY 2011-2012

Summary of the August 21, 2012 inspection/report: On August 21, 2012, Seminole County Lake Management Program staff, Thomas Calhoun, surveyed Lake Myrtle's south pool and the Canal Point Road waterway. Due to low water conditions, the south pool of Myrtle Lake was inspected by foot. The south pool contained no submersed aquatic vegetation (SAV) that could be seen from the shoreline. Emergent grasses are now covering many areas of the exposed lake bottom. If possible, we encourage homeowners to mow this vegetation (when accessible) to prevent from over growing especially during dry conditions.

It will take multiple treatments for the MSBU funded herbicide contractor to treat all of the barnyard grass and primrose that has established during the drought. Contractor is working their way further in upon each treatment and will continue to do so as long as the lake elevation remains stable. Barnyard grass and primrose will be targeted for 2 more treatments through the end of September; weather and water elevation permitting. The wildlife spoil islands will be treated by back pack and the shoreline will be treated as usual. On September 4th, 2012, LMP staff, Gloria Eby, met with herbicide contractor to discuss recent water elevation rise (due to TS Isaac's effects) and best treatment options remaining on this year's contract. It is anticipated to see a greater impact on barnyard and primrose especially on the very south portion of the lake, again as long as the elevation remains as inspected on September 4th. Water is finally beginning to return to the Canal Point Road Waterway area. Invasives found in this area included; dog fennel, primrose willow, torpedo grass, and rattle box in the canal along Highland Rd. Rising water elevations will naturally control some of these species.

Secchi reading was not taken during this inspection due to low water elevation. The lake elevation during the inspection was 43.17 ft which is higher than the previous inspections reading of 42.84 ft. No triploid grass carp were seen during this inspection.

Summary of the July 16, 2012 inspection/report: On July 16th, 2012, Seminole County Lake Management Program staff, Thomas Calhoun and Stan McCreary, surveyed Lake Myrtle's south pool and the Canal Point Road waterway.

Due to low water conditions, the south pool of Myrtle Lake was inspected by foot. The south pool contained no submersed aquatic vegetation (SAV) that could be seen from the shoreline. Hopefully the previous SAV will reestablish as water levels increase for the wet season. Emergent grasses (such as barnyard grass) are now covering many areas of the exposed lake bottom. If possible we encourage homeowners to mow this vegetation to prevent from over growing.

Due to the overwhelming growth throughout the lake, the MSBU funded herbicide contractor will be treating 3 times between August and the end of September. The contractor will target the barnyard grass and primrose growing within the lake. It will take multiple treatments to treat all of the barnyard grass as the contractor works their way further in upon each treatment. The wildlife spoil islands will be treated by back pack and the shoreline will be treated as usual.

In the Canal Point Road Waterway area water lilies are expanding due to the low water elevation. Many of the beneficial native plants that were planted during previous restoration events have not survived the low water conditions. The southern canal portion of this area is now completely dry and has been mowed.

Secchi reading was not taken during this inspection due to low water elevation. The lake elevation during the inspection was 42.84 ft which is higher than the previous inspections reading of 41.78 ft. No triploid grass carp were seen during this inspection.

Summary of the June 11, 2012 inspection/report: On June 11, 2012, Seminole County Lake Management Program staff, Thomas Calhoun and Stan McCreary, surveyed the south pool of Myrtle Lake and the Canal Point Road waterway.

Due to low water conditions, the south pool of Myrtle Lake was inspected by foot. The south pool contained no submersed aquatic vegetation (SAV) that could be seen from the shoreline. Hopefully the previous SAV will reestablish as water levels increase for the wet season. Emergent grasses are now covering much of the exposed lake bottom. SCLMP encourages homeowners to mow this vegetation to prevent from over growing.

The wildlife islands have been recently treated for exotic species such as; barnyard grass, dog fennel, and other terrestrial weeds. These plants are now showing impact from the treatment. The native vegetation including; bulrush, pickerel weed, duck potato, bur marigold, and canna are still surviving in areas around the lake even with the current water elevation.

In the Canal Point Road Waterway area, water lilies are expanding due to the low water elevation. Many of the beneficial native plants that were planted during previous restoration events have not survived the low water conditions. The southern canal portion of this area is now completely dry and has been mowed.

Secchi reading was not taken during this inspection due to low water elevation. The lake elevation during the inspection was 41.78 ft which is higher than the previous inspections reading of 41.58 ft. No triploid grass carp were seen during this inspection.

Summary of the May 23, 2012 inspection/report: Seminole County Lake Management Program staff (Thomas Calhoun and Stan McCreary) surveyed Lake Myrtle's south pool and the Canal Point Road waterway on May 23, 2012.

Due to low water conditions, the south pool of Myrtle Lake was inspected by foot. The south pool contained no submersed aquatic vegetation (SAV) that could be seen from the shoreline. Detritus (non-living particulate organic material) covered the visible bottom of the lake from the shore. Hopefully the previous SAV will reestablish as water levels increase for the wet season.

The wildlife islands have been recently treated for exotic species such as barnyard grass, dog fennel, and other terrestrial weeds. These plants are now showing impact from the treatment. The native vegetation (including bulrush, pickerel weed, duck potato, bur marigold, and canna) are still surviving in areas around the lake even with the current water elevation. With the low water elevation in the lake, it is still a great time to target and remove the dead torpedo grass, dog fennel, and primrose willow. Also, this is a good time to mow the dry areas around the lake to help prevent barnyard grass from overgrowing.

In the Canal Point Road Waterway, only road grass was found. Water lilies are expanding due to the low water elevation. The southern canal of this area is now completely dry. No hydrilla was present during this inspection.

Secchi reading was not taken during this inspection due to low water elevation. The lake elevation during the inspection was 41.58 ft which is lower than the previous inspections reading of 41.78 ft. No triploid grass carp were seen during this inspection.

Summary of the April 17, 2012 inspection/report: On April 17th, 2012, Seminole County Lake Management Program staff (Thomas Calhoun, Stan McCreary, and Devin Whitney) surveyed **Myrtle Lake's** south pool and the Canal Point Road waterway.

Due to low water conditions, the south pool of Myrtle Lake was inspected by foot. The south pool contained no submersed aquatic vegetation (SAV) that could be seen from the shoreline. Detritus (non-living particulate organic material) covered the visible bottom of the lake from the shore. Hopefully the previous SAV will reestablish as water levels increase for the wet season.

In the Canal Point Road Waterway area only road grass was found. The southern canal portion of this area is now completely dry and hydrilla was not present during this inspection.

The wildlife islands have recently had a large expansion of exotic species such as barnyard grass, dog fennel, and other terrestrial weeds. These areas were treated on April 30. Native vegetation has expanded around the lake as well. This vegetation includes bulrush, pickerel weed, duck potato, bur marigold, and canna. With the low water elevation in the lake, it is still a great time to target and remove the dead torpedo grass, dog fennel and primrose willow. Also this is a good time to mow the dry areas around the lake to help prevent barnyard grass from overgrowing.

Secchi reading was not taken during this inspection due to low water elevation. The lake elevation during the inspection was 41.78 ft which is lower than the previous inspections reading of 42.57 ft. No triploid grass carp were seen during this inspection.

Summary of the March 20, 2012 inspection/report: On March 20, 2012, Seminole County Lake Management Program staff, Thomas Calhoun and Devin Whitney, surveyed Myrtle Lake's south pool and the Canal Point Road waterway by foot.

The south pool contained no SAV that could be seen from the shoreline. Detritus (non-living particulate organic material) covered the visible bottom of the lake from the shore. Hopefully the previous SAV will reestablish. It is expected that the amount of grass carp fish stocked is having an effect on the amount of SAV being found in the southern pool as well as low water conditions. In the Canal Point Road waterway area, only road grass was found. The southern canal portion of this area is now completely dry and hydrilla was not present during this inspection.

In the south pool, the Seminole County MSBU funded herbicide contractor will be resuming services scheduled for end April. The planted native vegetation has begun to expand around the entire lake as well as in the wildlife spoil islands. With the low water elevation in the lake, it is a great time to target and remove the dead torpedo grass, dog fennel, and primrose willow. This would encourage the expansion of the planted native vegetation. Additionally, this is a good time to mow the dry areas around the lake.

The lake elevation during the inspection was 42.57 ft. Two triploid grass carp were seen during this inspection.

Summary of the February 6, 2012 inspection/report: On February 6th, 2012 Seminole County Lake Management Program staff: Thomas Calhoun and Dean Barber surveyed Myrtle Lake's south pool and the Canal Point Road waterway

The south pool and Canal Point Road Waterway areas of Myrtle Lake were inspected by foot and contained only one species of SAV, which was road grass and was only found along the shoreline of the lake. Detritus (non-living particulate organic material) covered the visible bottom of the lake from the shore. Hopefully the previous SAV will reestablish in the future. Two large triploid (sterile) grass carp fish were seen during the inspection. It is expected that the fluctuating water levels and amount of fish stocked is having an effect on the amount of SAV being found in the southern pool. In the Canal Point Road Waterway, only road grass was found. The southern canal portion of this area was almost completely dry and hydrilla was not present during this inspection.

In the south pool, the Seminole County herbicide contractor has continued to treat invasive plants and the lily pads in isolated areas, as permitted by FWC, that are creating a nuisance. This coupled with some winter die back has the shoreline and emergent vegetation looking very brown. This vegetation will come back with the return of spring. , Now would be a great time to target and remove the dead torpedo grass, dog fennel and primrose willow given current the low water elevation in the lake. This would encourage the expansion of the planted native vegetation in the spring time. This is also a good time to mow the dry areas around the lake.

The secchi reading (measurement for water clarity) for the last inspection (December 15th, 2011) was 2.8 feet in 4.2 feet of water. Secchi reading was not taken during this inspection due to the low water elevation. The lake elevation during the inspection was 43.27 feet. Two triploid grass carp was seen during this inspection.

Summary of the December 15, 2011 inspection/report: On December 15th, 2011, Seminole County Lake Management Program staff, Gloria Eby and Thomas Calhoun, surveyed the south pool of Myrtle Lake and the Canal Point Road waterway.

The south pool of Myrtle Lake was inspected by canoe and contained only 1 species of submersed aquatic vegetation (SAV), road grass, which was found along the shoreline of the lake. Detritus (non-living particulate organic material) covered most of the bottom of the lake. Hopefully road grass and other beneficial SAV will continue to reestablish at a balanced level for the lake providing competition for hydrilla and water quality improvements.

As you well know, extended low water levels and sandy conditions have made management in an "aquatic system" very difficult. Herbicide treatments have been conducted to the extent of the financial resources available and the accessible area. The last herbicide treatment for Myrtle Lake was conducted on November 21, 2011. The treatment for torpedo grass, cattails, primrose, and dog fennel has been successfully targeted. Also lily pads have been treated successfully in the south pool. Because of the financial constraints on amount of herbicide treatments that can be conducted, services are projected to resume in April and be conducted monthly through September 2012.

Along the shoreline, native emergent vegetation such as canna and bur-marigold appears to be expanding very well.

The exotic Island Apple Snail's egg clusters were observed on the emergent plant with numerous empty adult shells exposed from low water conditions. We continue to encourage crushing these egg

clusters. Be sure they are the bright pink eggs as to not destroy the native apple snail eggs which are white.

The secchi reading (measurement for water clarity) at the time of inspection was 2.8 feet in 4.2 feet of water. The lake elevation during the inspection was 44.34 ft. One triploid grass carp was observed during this inspection.

Summary of the October 11, 2011 inspection/report: As you well know, Myrtle Lake has experienced extremely low water levels and sandy conditions during the summer months that have made management in an "aquatic system" very difficult. The Seminole County herbicide contractor has serviced the lake on a bi-monthly basis where the lake was treated as far as the airboat can reach and then followed- up on a subsequent day with a truck/spray rig to reach additional areas to the extent afforded. Several invasive species (such as dog fennel and barnyard grass) has propagated within the canal area and lake perimeter that was successfully treated. For reference, the "canal area" is the exiting portion of the southern lobe heading north.

For the past 2 months, we have had numerous meetings with your liaisons to discuss the lake's condition and management plan. The MSBU contracted services is on a bi-monthly basis, with the month of September being the last service month for the fiscal year. Continuing fluctuating lake levels present treatment challenges and prohibit airboat access in certain areas for purpose of application of the herbicide. Therefore, for FY 2011-2012, applications costs of aquatic treatments are increasing. Current level of funding for aquatic treatments will allow for a total of **five** treatments (rather than the **six** treatments completed in FY 2010-2011) and will be scheduled by LMP based on assessment of lake needs.

The most recent treatment has yielded great impact especially to the primrose that has established during the drought. With the recent rise in water elevation, one of five treatments will be executed within the next couple of weeks. We are awaiting renewal of your FWC aquatic plant permit (which is currently in progress) to execute this treatment.

Using the lake elevation at its current condition will give opportunity to be able to access a greater amount of primrose. Thereafter, the next schedule treatment would not be scheduled until April 2012 due to funding limitations. It is highly encouraged that the community organizes and conducts work parties to impact the growth that will establish during this time frame. The months of April-June-July-August are the remaining months targeted for treatments in 2012.

In September 2011, an additional herbicide treatment was performed and cordgrass was subsequently installed in the wildlife area off Twin Lakes Road in an effort to reduce ongoing costs associated with mowing this area. The cordgrass plantings were funded by the LMP.

The southwest portion of the lake was inaccessible due to the water level; much of where the barn yard grass is establishing. The City of Longwood parcel continues to be unmaintained unlike the rest of the Myrtle Lake- Southern Lobe community. Your liaisons have submitted a letter to the city requesting for services on behalf of the Friends of Myrtle Lake.

The exotic Island Apple Snail's egg clusters were observed on the emergent plant with numerous empty adult shells exposed from low water conditions. We continue to encourage crush these egg clusters. Be sure they are the bright pink eggs as to not destroy the native apple snail eggs which are white.