

**LAKE COUNTY WATER AUTHORITY  
REGULAR MEETING ANNOUNCEMENT AND SUMMARY AGENDA**

**January 27, 2010 – 3:30 p.m.**

**Lake County Administration Building**

**2<sup>nd</sup> Floor - County Commission Chambers**

**315 West Main Street, Tavares, FL 32778**

- 1. Call to Order / Pledge of Allegiance**
- 2. Approval of Minutes – Regular Board Meeting of December 16, 2009**
- 3. Executive Director Report**
- 4. Discussion Items**

**a. Flow Rates and Alum Use of NuRF**

**Presenter**

**Lance Lumbard**

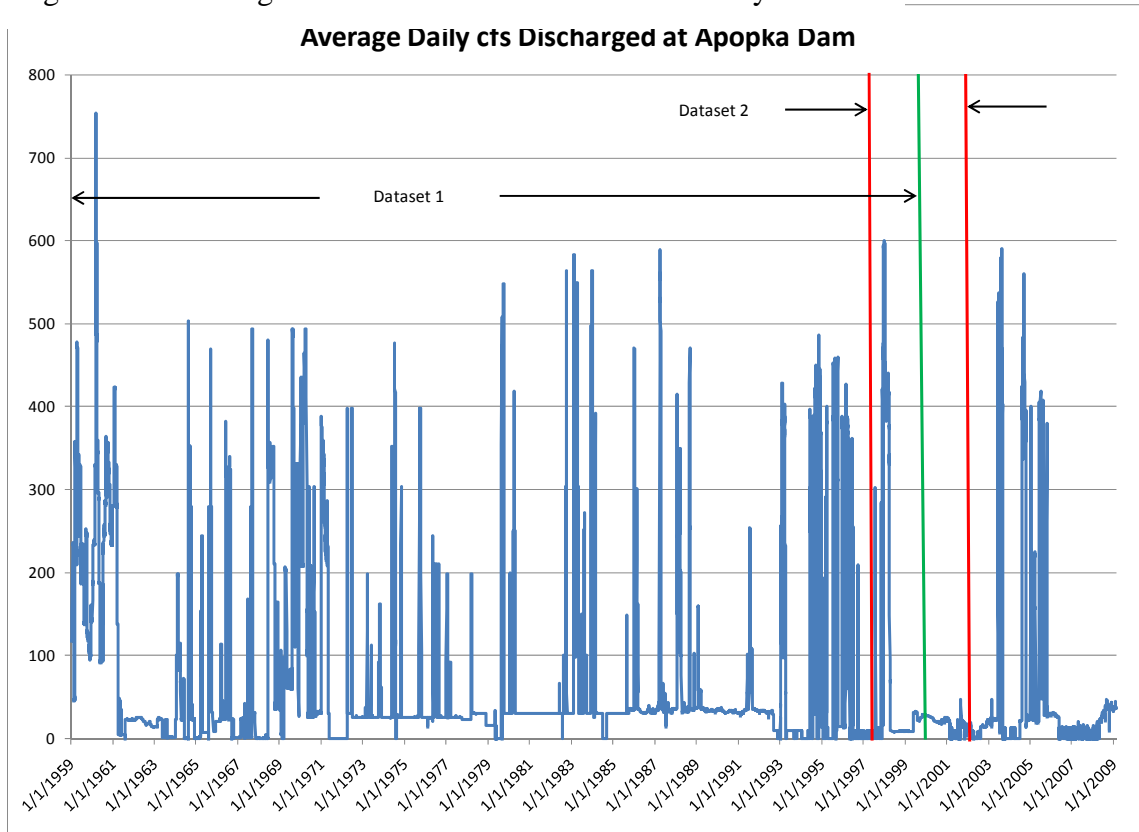
At the December 2009 Board meeting, Trustee Clark requested that staff prepare an analysis of historic Lake Apopka flow data and an overview of the expected versus actual NuRF treatment volume and alum use. This memo contains the requested information along with an explanation of the rationale used in developing the preliminary operating criteria for the NuRF. The Board may wish to refine or modify the current operating criteria at its discretion.

The NuRF was designed in accordance with the Board's direction to operate within a range of flow conditions up to 300 cubic feet (2,244 gallons) per second. Flows above 300 cubic feet per second (cfs) are assumed to be diverted through the original dam without treatment (e.g., at a flow of 350 cfs, 300 are treated by the NuRF and 50 are diverted). Although the facility is capable of treating up to 300 cfs, the average annual flow rate is expected to be much less. Forecasting average treatment volume based on historic flow rate is the key to developing an effective operating budget for the NuRF.

Selection of the appropriate historic flow data was a topic of significant discussion during the design phase. Two distinct Lake Apopka discharge datasets were identified and reviewed by multiple agencies including period of record data (1959-2000) and recent history data (1996-2001) (Figure 1). Period of record data from 1959 to 2000 provides the most complete statistical information while recent history data from 1996 to 2001 may be more indicative of current water management practices since the cessation of agricultural activity within the North Shore. Using means from both datasets provides a normal operating range between 46 cfs (dataset 2) and 67 cfs (dataset 1). This range of flow rates is then used to calculate a normal range of total annual volumes.

Daily means or portions of daily means less than 300 cfs were used to determine a treatable annual volume range between 26,000 and 48,000 acre-feet (1 ac-ft = 43,560 cubic feet or 325,829 gallons). Depending on the dataset, 79% to 89% of the total discharge from Lake Apopka is within the treatable range of 0 cfs to 300 cfs. Once the average volume range has been determined, the average range of alum use and cost can be calculated at a specific alum application rate. Alum application rates may occasionally need to be adjusted up or down depending on incoming or outgoing water quality.

Figure 1. Date ranges and flow data for each dataset analyzed.



Based on jar tests, ERD determined that the optimal alum dose rate for total phosphorus reduction was 10 milligrams per liter (mg/L) as aluminum or one gallon of liquid alum per 5,610 gallons of water (58.08 gallons of alum per ac-ft). Figure 2 illustrates the relationship between alum dose and treatment volume by the NuRF on an annual basis. The average amount of alum used to treat the expected range of volume is between 1.51 and 2.79 million gallons per year. At a cost of \$0.72 per gallon the total average annual cost is between \$1.1 million to \$2.0 million. Figure 3 illustrates the relationship between annual cost and treated volume. For both figures, points on the diagonal blue line within the shaded area are in the average range.

Figure 3 includes intersecting blue lines indicating the 2009-2010 budget amount of \$1.5 million at a treatment volume of 35,880 ac-ft and intersecting red lines indicating a cost of \$3.6 million at a treatable volume of 86,320 ac-ft during the 2004-2005 FY. The point of intersection between the red lines represents the highest discharge volume in the past decade and is well outside of the average range. Figure 4 indicates average annual flow rates from Lake Apopka for the period of record. The Board may wish to determine how to address NuRF operation during these high flow periods as seen in 2004-2005.

Figure 2. Gallons of alum used to treat annual discharge volume

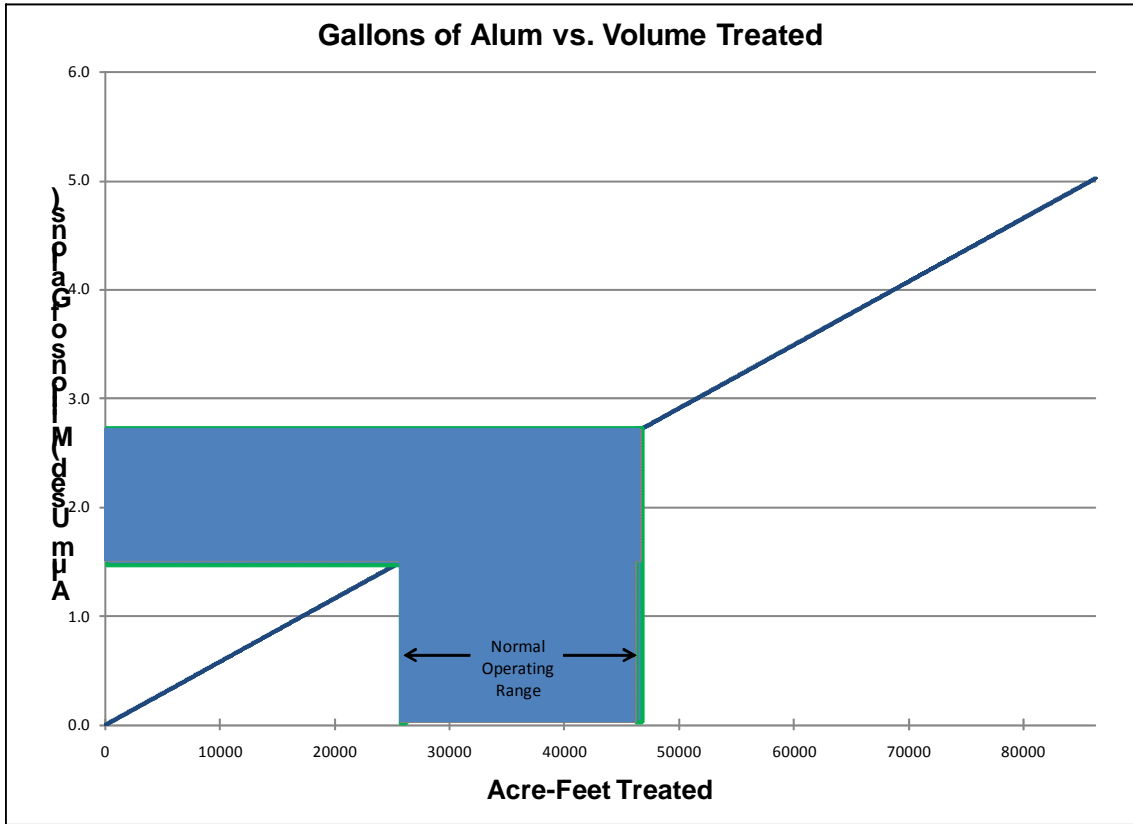


Figure 3. Cost of alum to treat annual discharge volume

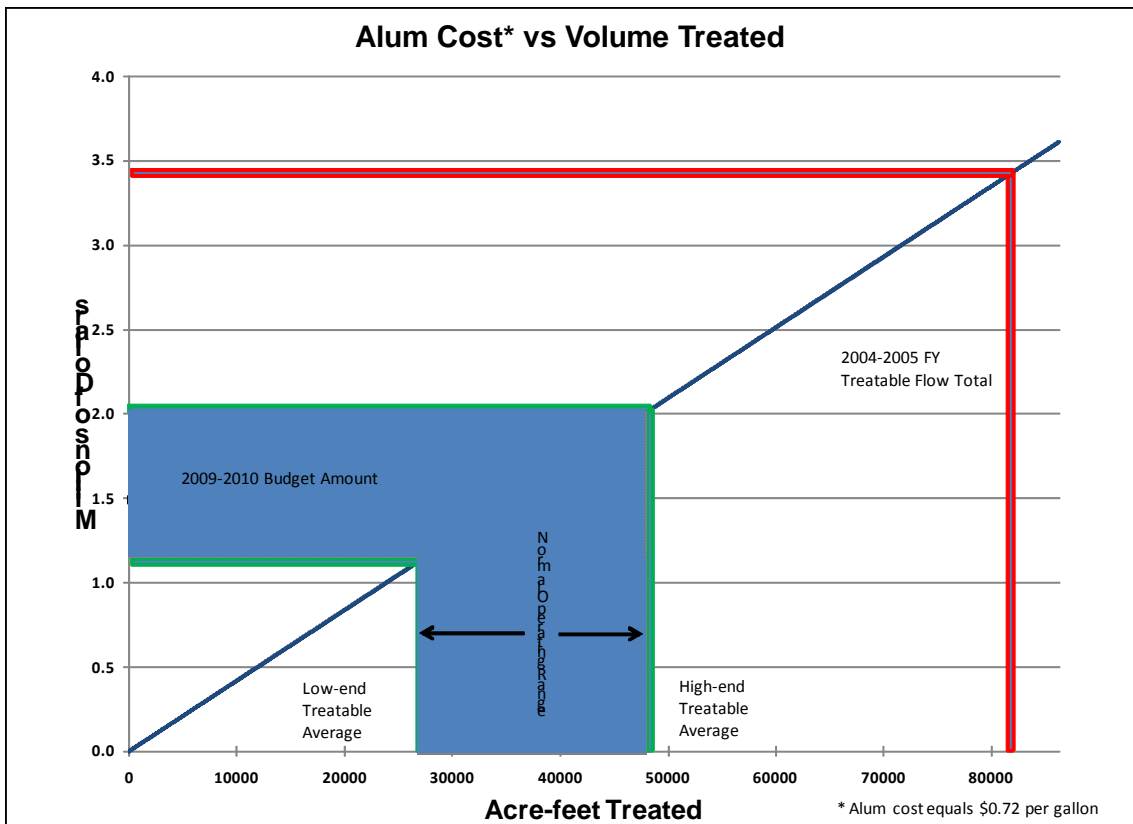
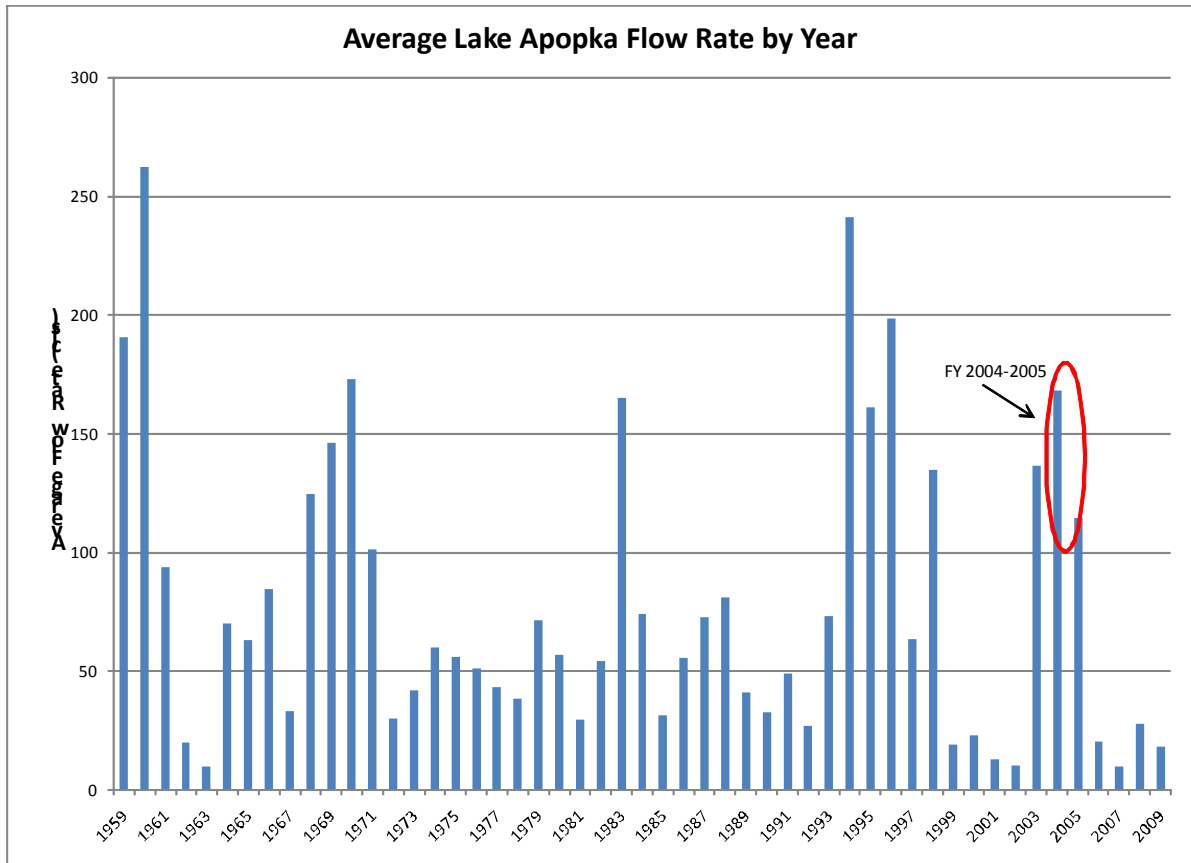


Figure 4. Average annual flow rate from Lake Apopka by year



There are several methods available for dealing with years when the treatable flow is higher than the budget forecast developed the previous year. As discussed during the design process, the Board has the opportunity to cease facility operation once it has reached its budget limit. During this scenario, the impacts of the NuRF could be diminished depending on the balance of volume that goes untreated. In this scenario, the NuRF settling ponds may still have some ability to retain sediments migrating from Lake Apopka without the use of alum.

Alternatively, the Board can choose to fund the purchase of additional alum during the higher flow years. This can be accomplished either by setting aside a reserve fund or by drawing from other areas of the budget. The reserve fund option may make more sense statistically because money not spent in years with lower flow could be saved to spend during years with higher flow.

Actual chemical use during the 2008-2009 FY was about half of the expected average while the cost per gallon was 18% more than budgeted. During the 2008-2009 FY, the NuRF operated for seven months and used \$482,347 (80.4%) of its \$600,000 alum budget (factored at \$0.50). Average flow for this period was 20 cfs. For the 2009-2010 FY, the NuRF has operated for three months and has used \$243,000 (16.2%) of its \$1.5 million budget. Average flow for the current fiscal year is 23 cfs. At the average expected flow of 52 cfs, the NuRF would have used 25% or \$375,000 of its budget.

Alum cost for the 2009-2010 FY is slightly higher than expected because alum doses up to 13 mg/L as aluminum were tested for several months to determine impacts to water clarity and microfloc formation. Staff has since returned the alum concentration to its normal 10 mg/L. Higher alum doses did result in increased water clarity with less turbidity, however staff is attempting to achieve the same results by improving alum mixing with minimal cost.

**Executive Director Recommendation:**

For discussion purposes only. No action necessary.

**b. Link on the Water Atlas for Reporting Algae Blooms Michael Perry**

Trustee Bystrak has become concerned about algae blooms in Lake Yale. The following is information from an email message Trustee Bystrak sent to staff. "...As you know I was counting birds for the annual Audubon Christmas bird survey by kayak on that lake when I noticed I was in the midst of an algal bloom (initially thought it was pollen). The extent of the bloom was especially noticeable when I was paddling across the middle of the lake and there was still algae. I also encountered a dying muskrat in the middle of the lake, apparently poisoned by the toxin. There were also no cormorants, osprey or fish eating shorebirds, a first in the 5 years that I have been doing that count. The temp that day was 84 degrees and there was heavy fog until 10:30AM. When I realized the seriousness of the situation, I paddled back to my launch site and quit early. But not before collecting a sample of the water, which I took to the SJRWMD office at Sunnyhill. They ID the algae as Mycrocystis. One of the employees told me they had a similar bloom there in July 2007. A local resident told me they have had numerous such blooms on Yale in 2009."

Ms. Bystrak has communicated with FWC staff in St. Pete to arrange for their trained staff in their Eustis lab to ID algal blooms in Lake Co. According to Trustee Bystrak, it could be accomplished by putting a "report algal blooms" link on the LCWA website and the Lake Co Water Atlas that will go to the Eustis lab. There is already in place an Aquatic Toxic Hotline (1-888-232-8635) and other State agencies have personnel identified to be the point of contact for reporting algal blooms

As such, Trustee Bystrak is requesting that the Board add a link to the Lake Co. Water Atlas for reporting algae blooms.

**Executive Director Recommendation:**

Direct staff to add a link to the Lake County Water Atlas for reporting algae blooms.

**c. Approval to Award Naturalist Contractor Patricia Burgos**

Staff first presented the concept of hiring an LCWA Naturalist at the June 26, 2009 Special Board Meeting. For the past few years, staff has noticed an increase in requests from the public for more programming on the LCWA Preserves and properties, more appearances at events, and to provide talks in front of community groups. Two years ago, staff had the assistance of the Trout Lake Nature Center Naturalist to supplement public programming on the LCWA Preserves and events, but due to the increased workload at the Nature Center, the Naturalist was unable to continue to provide public tours on the Preserves.

The Board has included \$15,000 in its FY 2009-10 budget for staff to contract with an individual to provide Naturalist-type services. The Board gave permission to the staff to advertise for the contracted Naturalist. Staff received resumes and selected three individuals to interview on January 5<sup>th</sup> and January 7<sup>th</sup>. Based on the interviews and the submitted resumes, staff would recommend awarding the Naturalist contract to Mr. Marc Crail. Mr. Crail's strengths include previous experience as a 4<sup>th</sup> grade teacher, 17 years as a superintendent of schools, and his current work leading diverse groups at Disney's Animal Kingdom. It is staff's opinion that his experience also coordinating projects and consensus building in the community are needed qualities for the Naturalist position.

Upon approval by the Board to award the contract to Mr. Crail, staff will be conducting a planning meeting with him in early February to prepare to bring a schedule of events and a Lake Tours outline for Board review at the February 24<sup>th</sup> meeting. Staff and Mr. Crail will be working with an amended Scope of Services that will cover February 1<sup>st</sup> until September 30, 2010. The focus at this point is to schedule public tours on the Preserves, schedule NuRF tours, and to commence working with the School Board to accomplish the Lake Tours program.

#### **Executive Director's Recommendation**

Approval to Award the Naturalist Contract to Marc Crail.

#### **d. Approval to Accept Gopher Tortoise Grant**

**Patricia Burgos**

Staff received permission at the October 28, 2009 Board meeting to apply for the Florida Fish and Wildlife Conservation Commission's (FWC) Gopher Tortoise Habitat Management Assistance Grant. Staff submitted the first application to FWC requesting \$4,812.50 for Sabal Bluff Preserve to conduct invasive exotic control work over 38.5 acres. The second application to FWC requested \$5,165.12 for Flowing Waters Preserve to conduct invasive exotic control, pay for garbage tipping fees, install/maintain firelines, rollerchop one management unit, and conduct a prescribed burn over 63.9 acres. The grant period is for a three month period between February 1 – May 24, 2010.

Staff was notified during the Christmas holidays that the Sabal Bluff Preserve grant was approved for funding, but there were concerns regarding Flowing Waters Preserve.

Sabal Bluff Preserve was donated to the Water Authority by the Bourlay Trust to be managed as a park in perpetuity; however, although Flowing Waters was purchased in 1995 & 1996 for water resource protection, FWC was unsure of the protection level for Flowing Waters due to our special district status. FWC was very interested in the Flowing Waters project to restore the property, and the agency does want to help with habitat management. To calm any concerns, it was proposed that the Water Authority give the FWC a conservation easement of ten (10) years on Flowing Waters Preserve only. The Board has allowed conservation easements before. For example, the Florida Department of Environmental Protection has a perpetual conservation easement on Tanner Preserve for the NuRF property and the U.S. Fish and Wildlife Service has one on Sawgrass Island Preserve for 10 years in return for awarding their restoration grant. With the conservation easement on Flowing Waters Preserve we can potentially request and apply for more grant money from FWC in the future.

**Executive Director Recommendation:**

1. Approval to accept the Florida Fish & Wildlife Conservation Commission Habitat Management Assistance Grant for Sabal Bluff Preserve.
2. Approval to accept the Florida Fish & Wildlife Conservation Commission Habitat Management Assistance Grant for Flowing Waters Preserve and to grant a conservation easement to FWC for 10 years.

**e. City of Leesburg Request Near Flat Island Preserve Patricia Burgos**

The LCWA Board conveyed 19± acres to the City of Leesburg at the September 2009 Board Meeting. As part of the 2,300-acre Flat Island Preserve, the railroad corridor donation was approved based upon the corridor not being part of the current LCWA Board focus, the ability for the City to care for an urban trail corridor, and directing limited staff resources towards care of the larger Preserve. The Board stipulated that the donation of the 19± acres would be for public recreation use as part of the City's multi-use trail network.

The City of Leesburg is now requesting that the LCWA Board accept a modification to the conditions of the deed to allow the RR corridor to be used "for underground utilities, especially but not exclusively for a water main extension," furthermore according to the City Attorney this request, "is consistent with the City's use of its existing rail corridors which in the deal with CSX and the Trust for Public Land can be used for trail and underground utilities concurrently."

Staff concerns extended to any construction work impacting the adjacent wetlands, which are still owned by the LCWA. Mr. Ray Sharp responded with an email, attached for Board review, which provides a brief overview of the necessity to request a deed modification and restrictions that the City needs to abide by.

**Executive Director Recommendation:**

Approve the City of Leesburg's request to modify the conditions of the deed conveying 19± acres to allow underground utilities within the RR corridor.

**f. Approval of MOU w/Lake County for Use of Canoes/Kayaks Patricia Burgos**

Water Authority staff approached staff from Lake County Parks and Trails to gauge their interest in jointly hosting paddling trips in Lake County during 2010. The Parks and Trails Department has canoes, kayaks and a canoe-carrying trailer that could be used as part of this joint venture. The paddling trips lead by Water Authority staff are very popular with the public, but the trips are limited by the amount of vessels available and staff to oversee the paddlers.

By cooperating with Lake County through a Memorandum of Understanding (MOU), the Water Authority can receive the following benefits:

- Having access to more vessels without expending funds to buy more canoes and/or kayaks;
- Providing paddling opportunities to more people by using the media network established by the County's Communications Department;
- Working with County Parks & Trails staff to provide more "trip leaders" during the paddling adventures; and

- Having access to the County's canoe-carrying trailer without having to buy one for the Water Authority.

The MOU will terminate on December 31, 2010. At that time the LCWA Board, the BCC, and staff can evaluate the success of the program and decide whether to renew the MOU.

Proposed trips for February – December 2010:

February 27<sup>th</sup> **Crooked River Preserve & Palatlahaha Park**; March 27<sup>th</sup> **Lake George**;  
April 17<sup>th</sup> **Lake Jem Park**; May 28<sup>th</sup> **Lake Norris Conservation Area/Blackwater Creek**;  
October 22<sup>nd</sup> **Double Run Preserve**; November- **Lake Apopka**

**Executive Director Recommendation:**

Approve a Memorandum of Understanding (MOU) with Lake County for the use of canoes and kayaks.

**g. Status of New Office Building Location**

**Ron Hart**

At the December 2009 meeting, the Board directed that staff mark the location of the new office building at Hickory Point and place the item on the agenda for the January meeting for continued discussion. Staff marked the corners of the proposed office building and has maintained the markers so that the Board can review the proposed location at its leisure. Two diagrams have been attached to show the current proposed location as marked on site.

The attached site plans utilize the existing access point to Hickory Point from Highway 19. Staff proposes the building be situated to face the highway frontage. Parking for the public will be on the east side near Hwy 19. Signs will be utilized to direct the public to the front entrance of the building. The existing entrance for late pickup at the soccer fields would be modified to also serve as an additional entrance for the new office. Signs at the intersections will once again direct the public to the right location.

Several board members expressed a preference for moving the office further away from the highway. The present location along the highway was selected because it provided high public exposure and did not affect other facilities or uses at the park. Moving the office back into the parking area could affect parking during major events and increase the cost of construction.

Staff also spoke to KZF concerning the changes to the building's exterior. It is KZF's recommendation that the building be bid out with the stone as an option. This would allow the Board to determine the actual cost to apply the stone. If the cost is deemed to be excessive, the Board can elect not to choose that option. KZF also reaffirmed that the energy efficiency for the single hung window is the same as the six over six windows.

**Executive Director's Recommendation:**

Authorize staff to finalize the site plan with the changes as directed by the Board and submit the revised site plan and supporting documents to the County for review.

**h. Approval to Distribute Beauclair Liability Waiver Releases Lance Lumbard**

During the Lake Griffin canal dredging project, the LCWA determined that it was necessary to obtain releases from all property owners adjoining the affected canals regardless of whether the canal bottoms were actually owned by the residents. Similar to the Lake Griffin dredging project, staff is anticipating the need to obtain releases from residents affected by the Lake Beauclair Restoration Project and has included a revised canal dredging release and authorization with a draft cover letter for Board review.

The release is an agreement between the property owner and the LCWA designed to authorize a one-time dredging and notify the owner that the LCWA will not be liable for damages or other potential hazards associated with the proposed dredging activity. Measures are taken in the specifications to avoid getting too close to these areas so that most problems will be avoided. However, there is always the potential that immediate or future damage may occur to structures in the area.

The Board previously implemented the attached Policy 004 for the Lake Griffin project removing the contractor from liability release and allowing provisions for property owners to seek relief for damages relating to contractor errors. The Board may desire to revise this policy and apply it to the Lake Beauclair dredging project as well.

There are a total of 89 property owners along the four canals currently proposed for dredging. The attached maps indicate the affected parcels for which releases would be obtained. Prior to mailing the Lake Griffin releases, the previous Board indicated that they would not dredge a canal for which all releases were not obtained. Unless directed otherwise, staff will proceed with this position as described in the cover letter and when discussing releases with the affected residents.

**Executive Director Recommendation:**

Authorize Executive Director to proceed with mailing of release authorizations for the properties adjacent to the four canals currently included in the plans for the Lake Beauclair Restoration Project.

**i. Approval to Use MACTEC for NuRF Monitoring Lance Lumbard**

The LCWA is required to implement a 12-month post-construction monitoring program to determine the performance of the NuRF as part of the funding agreement between the FDEP and the LCWA. The monitoring program requires a formal Quality Assurance Project Plan (QAPP) outlining all of the equipment used, analyses to be conducted and all of the methods and Standard Operating Procedures required to collect, analyze and report the necessary data. The 175-page first draft QAPP has been completed but still requires FDEP approval prior to implementation of any LCWA-approved monitoring program.

The LCWA has obtained highly valuable baseline and NuRF performance data during the past several years with its own continuous water sampling program. However, additional effort will be necessary during the twelve-month monitoring period as required by the QAPP. Outsourcing the weekly water sample collection and analyses will provide the consistency and quality control

necessary to fulfill the LCWA's contractual obligations with the FDEP. LCWA will still conduct daily monitoring and will perform the data analysis to prepare the final report to FDEP.

Staff is proposing to work with MACTEC, one of our five continuing services consultants, to implement the sampling and analysis components of the QAPP. The proposed scope is attached. Samples would be collected at the inflow and outflow of the NuRF and would be analyzed for total phosphorus, dissolved phosphorus, total nitrogen, ammonia, total aluminum, chlorophyll-a, and color.

MACTEC's rate of \$32,630 for the program is reimbursable up to 50% by the FDEP. The LCWA has \$20,000 in the 2009-2010 budget for water quality sampling which would be enough to cover the program through the end of the fiscal year assuming the monitoring program begins in March. The remaining \$12,630 could be budgeted for 2010-2011.

**Executive Director Recommendation:**

Authorize Executive Director to execute a MACTEC task order up to \$32,630 for a 12-month sampling program at the NuRF.

**j. Draft Extended Leave Policy**

**Michael Perry**

At the December 2009 Board meeting staff detailed the issues and concerns regarding an extended leave policy and the references to the Family Medical Leave Act. The Water Authority does not employ enough people to be required to follow the FMLA law. Since the law constantly changes and there can be serious repercussions should the Water Authority not act in strict compliance to the law, the Labor Attorney has recommended that we remove any referenced of the FMLA law in the personnel policies.

Staff's recommendation was to immediately remove Section 28 - Family/Medical Leave Policy and direct staff to develop a replacement extended leave policy to be approved by the Board at a future meeting. The Board was concerned that without a policy, Water Authority employees would not have any extended leave policy in place and essentially removing a benefit the employees have had.

The Board directed staff bring back a revised extended leave policy at the January meeting for the Board's review. The draft policy is attached. As of the date of this memo, the policy is still being reviewed by a Labor Attorney and some revisions may be made. Staff will identify any revisions made to the attached draft policy at the meeting.

**Executive Director Recommendation:**

Approve the revised Policy 28 and include it in the Lake County Water Authority Policies and Practices Employee Manual.

**5. Public Comment (5 p.m. or as soon thereafter as possible)**

**6. Legal Staff Report**

**7. Action Items**

**a. Budget Transfer to Provide Funds to Trout Lake Nature Center Linda Marino**

The LCWA Board had provided \$5,000 in the FY 2009-2010 Budget for the Trout Lake Nature Center. The Board had decided to provide the money as a show of support for the important environmental work done at the Nature Center in Eustis. In previous years, funds were provided as part of a contract for Naturalist services to benefit public tours on LCWA Preserves. However, work at the Nature Center has increased over the years and the Naturalist was unable to continue to provide public tours on the Preserves.

Staff is requesting authorization to transfer the \$5,000 encumbered for Trout Lake Nature Center from Account 500-340 Contractual Services to Account 500-820 Aids to Private Entities. Finance has directed staff to make this request based upon the funds no longer paying for services, rather the funds are now considered a grant to the Nature Center, similar to the mini-grant program.

**Executive Director Recommendation:**

Authorize staff to move \$5,000 from Account 500-340 Contractual Services to Account 500-820 Aids to Private Entities to allow payment to Trout Lake Nature Center.

8. **Board Member Comments**
9. **Board Member Items for Future Agenda**
10. **Information Items**
  - a. **Staff Report**
  - b. **Monthly Financial Reports – December 2009**
11. **Announcement of Upcoming Meetings and Events**