

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

May 26, 2010 – 3:30 p.m.

Lake County Administration Building

2nd 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 April 28, 2010**
- 3. Executive Director Report**
- 4. Discussion Items**

**Presenter
Michael Perry**

- a. Review of SJRWMD Harris Bayou Structure Operation

The St. Johns River Water Management District (District) has constructed and operates the Harris Bayou Structure adjacent to Lake Harris to reduce flooding on both Haynes Creek and the upstream lakes and play an integral role in the proposed enhanced regulation schedule. The District proposes to divert up to 1,000 cfs through Harris Bayou and then through a connecting channel to Lake Griffin so that the maximum design discharge through Burrell Lock & Dam can be reduced from 1,700 cfs to 1,200 cfs.

Historically, Harris Bayou was a part of Lake Harris before being diked off for a muck farm. It is separated from Lake Griffin by only 3,000 ft of property. The new combined design discharge would be 2,200 cfs or 500 cfs more than with the existing capacity. The new diversion consists of an outlet structure from Lake Harris into the Bayou and an open channel connection with box culvert and weir between the Bayou and Lake Griffin. The 500 cfs increase in discharge into Lake Griffin would require a compensating increase in discharge in Moss Bluff Lock and Dam.

The Sunnyhill Farms wetland restoration project will handle 400 cfs of this amount, and the resulting higher tailwaters downstream of Moss Bluff will allow an additional release through the Moss Bluff structure of 460 to 650 cfs above the existing maximum discharge of 2,050 to 2,200 cfs.

Table 2 shows the future changes to the operation of discharges at the two locks and dams. The new maximum combined release through Burrell and the Bayou will be 2,200 cfs of which 1,200 cfs is through Burrell and 1,000 cfs is through the Bayou.

The District would begin diversions through the Bayou when Burrell discharges exceeded 700 cfs with 2/3rds of the discharge over 700 cfs going through the Bayou, up to 1,000 cfs, at which time both would reach their maximum. These maximums at the lock and dams can be exceeded if it will result in overall lower flood damages. The following table illustrates the 1/3 - 2/3 process developed in the model.

Proposed Operation with Harris Bayou Diversion Added		
Structure	Maximum Discharge(cfs)	Return Interval (yrs)
Burrell Lock & Dam	1,200	7.5
+ Harris Bayou Diversion	1,000	7.5
Moss Bluff Lock & Dam	2,250	10
+Sunnyhill Farms Diversion	400	

Discharge Distributions		
Superpond Flows Desired, c.f.s.	Burrell Dam, c.f.s.	Harris Bayou, c.f.s.
< 700	All Flow	0
800	733	67
900	767	133
1000	800	200
1100	833	267
1200	867	333
1300	900	400
1400	933	467
1500	967	533
1600	1000	600
1700	1033	667
1800	1067	733
1900	1100	800
2000	1133	867
2100	1167	933
2200	1200	1000

The District has only operated the Harris Bayou Structure twice since construction. It was operated in February 2010 as a test and then again in March 2010 in response to the heavy rains experienced at that time. During these periods the District was concerned about the quality of the water leaving Harris Bayou and entering into Lake Griffin. As such, the structure has not been operated and the District is evaluating this issue.

The Lake County Water Authority Board has requested a representative of the District to discuss this issue with the Board. Dave Walker, the District Basin Program Manager will be present to discuss the operation and water quality issues related to the operation of the Harris Bayou Structure.

Executive Director Recommendation:

For information purposes only. No action required.

b. Approval to Release Bid for Beauclair Restoration Project

Lance Lumbard

BCI has completed the attached draft bid package including 100% design plans and draft bid specifications for the Lake Beauclair Restoration Project. Although the Environmental Resource Permits have not yet been issued for this project, the various permitting agencies involved have deemed the applications complete and are in the process of taking final agency action.

Timing of the bid release is reaching a critical point because of the September 1 – June 15 dredge disposal window dictated by the St. Johns River Water Management District (District) in the Intergovernmental Agreement and pending Lease Agreement. Staff has worked with the District to have the earliest start date for the dredging portion of the project moved up to September 1 because of permit restrictions pertaining to potential bald eagle nest interference along the shoreline of Lake Beauclair. This means that the LCWA will have eighteen weeks from the May board meeting to release the bid, receive permits, award the bid, and get the contractor mobilized and dredging.

The Florida Department of Environmental Protection (FDEP) expects to issue a Notice of Intent (NOI) with a draft permit by June 22, but has offered to attempt to provide the Special Conditions portion of the permit to staff by June 1. This will provide some assurance that the bid specifications will contain all of the necessary elements required in the final permit. Staff will need to advertise the NOI and wait 14 days for public comment. Staff is recommending a July 16, 2010 bid deadline which would provide time to release an addendum with the permits and any changes that could result from undisclosed bid requirements.

Discussions with FDEP permit review staff indicate that the special permit conditions will be very similar to those specified for the Lake Griffin dredging project. BCI prepared the bid specifications for the Lake Griffin dredging project and is very familiar with the process.

The bid documents require the bidder to provide separate lump sum amounts for dredging and disposal of sediment from each individual canal and for the Lake Beauclair dredging and disposal portion of the project. This will allow the Board to take whatever action it deems appropriate upon bid review. The residential canals that are adjacent to the Apopka Beauclair Canal are included in the project only because of their unique location upstream of the proposed sediment removal footprint and the potential for contributing future sediment load

into the proposed sediment removal footprint diminishing the long term benefit of the dredging. At present, staff has received releases from 67 of the 93 affected canal and lakefront property owners. Owners have until May 31 to return their releases and staff has increased efforts to receive those that are still outstanding.

Per Board direction, the Lake Beauclair Dredging Project bid package contains allowance for alternative bids. Alternative bidders must adhere to the dredging portion of the design and must provide lump sums for all bid items but they may offer a different disposal option subject to engineering, permit, and board review.

Although staff does not expect any permit denials, there are still opportunities for delays and additional requirements that could potentially change the project timing and could necessitate postponement of any bid award. Staff believes the current approach will provide the best chance for the project to move ahead within the specified time constraints if permitting continues unimpeded.

Important Milestones:

May ----- bid release and bid management authorization

June ----- release bid / advise Board on status of canal owner releases / receive draft permits

July ----- bids due / receive final permits / contracts potentially awarded / construction management authorization / execute lease agreement with St. Johns

August ----- execute contract with contractor / begin mobilization

September -- begin dredging

Executive Director Recommendation:

Authorize the Executive Director to release the Lake Beauclair Dredging Bid including the residential canals that are adjacent to the Apopka Beauclair Canals only because of their unique location upstream of the proposed sediment removal footprint and the potential for contributing future sediment load from those residential canals into the proposed sediment removal footprint diminishing the long term benefit of the dredging.

c. Approval of Bid Review Assistance Agreement with BCI for the Beauclair Restoration Project

Lance Lumbard

BCI Engineers and Scientists, Inc. is one of the Country's most qualified dredging and environmental restoration consulting firms with involvement in at least thirty-three dredge design and construction projects. For this reason, BCI was selected as a Continuing Services Consultant for the LCWA and has played a critical role in successful design, permitting, and completion of the LCWA's major dredge projects including Lake Griffin Canal Dredging and Lake Beauclair Restoration. BCI has been a part of the Lake Beauclair project since its inception, knows the key agency personnel, and has been responsible for implementing the numerous project design and management changes over the past eight years.

Bid management will be especially important during the Lake Beauclair Restoration Project bid process because of the significant potential for alternative bids and potential for very low bids submitted by unqualified contractors. BCI's industry knowledge will assist in determining the responsibility of the low bidders and BCI can provide engineering review of alternatives if necessary (although not part of the current bid review proposal).

BCI's proposal for bid review is attached along with other tasks that have been prepared for budgeting purposes and upcoming construction management. Staff is only recommending approval of Task 1 at this point but has provided the additional information for the Board's evaluation prior to bid review. It is staff's intention to provide options for these remaining tasks at the July board meeting along with bid review.

Bid and Construction Management was not specifically included in the 2009-2010 budget because staff did not know when the project would be ready for bidding. The funding is available, however, under the Lake Beauclair Dredging line item.

Executive Director Recommendation:

Authorize the Executive Director to transfer \$28,069 from 700-340 (Other Contractual Services) to 700-310 (Professional Services) and execute a Task Order with BCI for Task 1, Contractor Bid Management.

d. Review of Polymer Used at NuRF

Lance Lumbard

Polymers are large covalently bound molecules consisting of repeating chemical components. Some polymers are natural (DNA) and many are man-made. Plastics represent one of the largest categories of man-made polymers but there are many other polymers including the polyacrylamide polymer presently used for floc dewatering at the NuRF. Polyacrylamide is composed of repeating acrylamide compounds containing carbon, nitrogen, oxygen and hydrogen.

Polyacrylamide has many applications and can be transformed for different purposes by adding various chemical components to adjust its ionic (positive/negative charge) and molecular weight (size) properties. These other ingredients and processes are generally carefully protected trade secrets. Information about some of these ingredients must be listed on the Material Safety Data Sheets (MSDS) supplied with the chemical.

Staff spent months with numerous polymer manufacturers determining the appropriate polymer for the NuRF dewatering process. NALCO's Shell-Core 71321 was selected as the most cost-effective polymer to-date.

While there are valuable data provided in the MSDS sheets, it is important to note that the information applies primarily to exposure to the concentrated product. The MSDS sheets do, however, indicate that the product will not bioaccumulate. Additionally, staff has obtained information from the manufacturer indicating that the polymer binds irreversibly to the floc.

The St. Johns River Water Management District has previously studied alum residual toxicity using the Lake Washington alum residual. The Lake Washington plant used a similar process where polymer was injected into the alum floc prior to being dewatered in a belt press. After substantial effort, the District and the Florida Department of Environmental Protection concluded that there was no significant toxicity from the alum residual. The toxicity report is attached.

Executive Director Recommendation:

For discussion purposes only. No action required.

e. NuRF pH Inflow and alarm Upgrades

Lance Lumbard

Technical Solutions, Inc. performed the installation of all of the alum and water-related monitoring components and process controls at the NuRF. They possess exclusive knowledge of the facility as it pertains to the logic programming and they developed the computer interface staff uses to communicate on-site and remotely with the alum building.

Staff has budgeted for and is proposing to utilize Technical Solutions, Inc. to install a second continuous pH monitoring system at the NuRF inflow to immediately alert staff in the event of a pH drop upstream. Currently, staff may not be aware of a problematic pH drop upstream until the water has already been treated with alum and passes out of the NuRF settling ponds. Water with incoming pH less than 6 would likely cause adverse reactions after alum injection and could result in large-scale fish kills, system shutdowns, and expensive lime applications to correct the pH problem within the ponds.

Technical Solutions, Inc. would provide a pH monitoring system identical to the existing pH monitoring system located at the NuRF outflow. The system would be linked wirelessly to the alum building and the computer interface would be reprogrammed to display pH at both the inflow and outflow. In addition, the computer monitoring program will be upgraded with an alarm texting feature that will alert staff in the event of a system problem.

Executive Director Recommendation:

Authorize Executive Director to instruct Technical Solutions, Inc. to install a pH inflow monitoring system and implement monitoring system upgrades for an amount not to exceed \$10,000.

f. Renewal of Soccer Lease Agreement

Michael Perry

The Lake County Water Authority and The Lake County Soccer League entered into an agreement relating to the use of real property for recreational programs originally dated May 1994, then amended and restated in September 2000. In the agreement, the Water Authority agreed to lease a portion of Hickory Point Recreational Facility for the construction and operation of the soccer complex for a period of ten years, beginning October 1, 2000 and ending September 30, 2010. As part of the agreement, the Water Authority would provide payment to the Lake County Soccer League to cover a portion of the annual maintenance expenses for the leased area, as follows: \$18,000 per fiscal year for years 2001 through 2005, and \$22,000 per year for years 2006 through 2010. At the termination of the Lease and any extensions or renewals, the soccer fields and all permanent fixtures remain the sole property of the Lake County Water Authority.

The agreement was amended a third time in 2007 to reflect the Attorney General's opinion that the Water Authority could not provide funding to the Lake County Soccer League and removed any reference to providing funds to the Lake County Soccer League.

Because the lease agreement expires in September, 2010 the Board should begin determining the future relationship between the Water Authority and of the Soccer League, now known as the Lake County Soccer Club. The Water Authority is not obligated to continue leasing its property to the Soccer Club; however over the past ten years there has been a positive evolution in the relationship between the Soccer Club and the Water Authority. In staff's opinion there are three potential options available to the Board:

1. Do not enter into a new agreement with the Lake County Soccer Club.

If the lease is not renewed, the Water Authority will take possession of the fields and the permanent structures and can determine the future use of the area. At this time, staff has no recommendations for the area currently leased to the Lake County Soccer Club. Any maintenance would be accomplished by Water Authority staff and a schedule to be determined by the Water Authority.

2. Enter into a new agreement with the Lake County Soccer Club.

The operation and maintenance of the fields would remain *status quo*. The Water Authority Board may want to evaluate options related to the long term use and maintenance of the well and the associated Consumptive Use Permit.

3. Allow that portion of the property to be annexed or transferred to the City of Tavares

Allowing that portion of the property to be annexed into the City of Tavares may allow for the City to assist in the operation and maintenance of the Soccer Complex. The City could work with the Soccer Club to schedule other recreational opportunities for their residents. Annexing only a portion of the Hickory Point Recreational Facility may not be feasible and the Board may need to consider splitting the property and transfer the ownership to the City of Tavares. This option has not been discussed fully with Soccer Club or City of Tavares personnel.

Water Authority staff would like to begin the discussion with the Board regarding their perspectives and intentions for the soccer fields and associated permanent fixtures when the lease terminates in September 2010.

Executive Director Recommendation:

For discussion purposes only. No action required.

g. Approval of Cost/Benefit Proposal for the Hooks Street Project

Ron Hart

At the request of the Executive Director, Ron Hart has taken over project management of the Hook Street Project. Because of the many agencies and citizens involved, the project has complex issues and multiple barriers that will need to be overcome in order to increase the probability of achieving success. The City of Clermont has provided staff with a proposal to evaluate a couple of treatment technologies involving infiltration and/or a stormwater pond for the Hook Street outfall. The proposal will determine the cost versus benefit for each proposed system. The City of Clermont has negotiated the proposal with BESH for a total amount of \$7,090. Staff recommends that we agree to reimburse Clermont for 50% of the cost of the proposal not to exceed \$3,545. Staff also anticipates based on previous conversations that the County will fund the other 50% of the cost.

Staff has attached the proposal for the Board's review. Because these issues are continuing to evolve, staff will be prepared to update the Board on any recent changes at the meeting.

Executive Director's Recommendation:

Authorize the Executive Director to execute an interlocal agreement with the City of Clermont to reimburse Clermont for 50% of the cost of the proposal not to exceed \$3,545.

5. Public Comment (5:00 pm or as soon thereafter as possible)

6. Legal Staff Report

7. Action Items

a. Approval of Extension to FDEP NuRF Contract to Allow for the 12-Month Monitoring Plan

Lance Lumbard

The LCWA is responsible for conducting 12 months of post-construction monitoring at the NuRF as part of the FDEP's TMDL grant program. The Quality Assurance Project Plan has been under development and review for many months now and has recently been given provisional acceptance. The current contract expires July 25, 2010 (see attached). To accommodate the 12-month monitoring program, the current contract needs to be extended until October 24, 2011.

A draft copy of the amendment is attached. If the amendment is acceptable to the Board, FDEP will execute the amendment and forward it to LCWA for full execution.

Executive Director Recommendation:

Authorize the Executive Director to execute an amendment with FDEP for extension of the NuRF Grant Contract until October 24, 2011.

b. Status of the New Office Design

Ron Hart

The new office design at Hickory Point is nearing completion. Staff has provided the Board with a copy of the Pre-Final Documents for your review and comment. Any changes by the Board will be forwarded to KZF for implementation into the plan.

The provided plan includes a partial design for the cistern. Staff has directed KZF to remove the cistern design from the plans. This will reduce building construction cost. The cistern can always be bid out as a separate

contract after the completion of the building. Furthermore, it is staff's belief that the cistern may be less expensive if it is awarded directly to an irrigation company.

KZF provided an estimate of construction cost, including the cistern. Site construction is estimated at \$142,950 or \$24.89 /sq. ft. The building and screen wall is estimated at \$654,962 or \$114.03/sq. ft. The total probable construction cost including the cistern is \$797,912 or \$138.91/sq. ft. KZF also estimated the alternative for the cultured stone base at an additional \$20,000. Due to the struggling economy, there has recently been a substantial difference between estimates and bid results with many bids coming in well below expectations.

The remaining tasks to be performed by KZF include the stormwater design and the grading plan for the site. Upon completion of these tasks and approval of the final design, KZF will assist in the preparation of bid documents. Staff will not proceed with bidding until the Board provides authorization.

Executive Director's Recommendation:

For information purposes only. No action required.

8. Board Member Comments

9. Board Member Items for Future Agenda

10. Information Items

a. Staff Report

b. Monthly Financial Reports – April 2010

11. Announcement of Upcoming Meetings and Events

- Board Meeting – Wednesday, June 23, 2010 (3:30 p.m.) BCC Chambers/Admin Bldg.

- Budget Workshop – Wednesday, July 14, 2010 (9:00 a.m.) Location TBD

- Board Meeting – Wednesday, July 28, 2010 (3:30 pm) BCC Chambers/Admin. Bldg.

12. Adjournment