

**FINAL**

**MINUTES OF THE MEETING  
of the  
HARRIS CHAIN OF LAKES RESTORATION COUNCIL**

**August 1, 2014**

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:07 a.m. on August 1, 2014 at the City of Tavares Council Chambers, 201 East Main Street, Tavares, Florida.

**Members Present**

Skip Goerner, Chairman  
Robert (Bob) Johnson, Vice Chairman  
Lloyd Woosley  
Don Nicholson  
Sid Grow  
Keith Truenow, Secretary

**Members Absent**

Hugh (Dave) Davis II  
Dr. Ed Schlein

**1. CALL TO ORDER**

Chairman Goerner called the meeting to order at 9:07 a.m.

**2. INVOCATION AND PLEDGE OF ALLEGIANCE**

Councilman Nicholson gave the invocation. The Pledge of Allegiance followed.

**3. COUNCIL ROLL CALL; REMINDER FOR OTHERS TO SIGN IN**

Chairman Goerner called the roll. Council members Davis and Schlein were absent.

**4. APPROVAL OF MINUTES**

The June 6, 2014 meeting minutes were approved by unanimous vote.

**5. PUBLIC COMMENTS**

Linda Bystrak shared with the Council that she is a proponent of reclassifying water lettuce as a native rather than exotic species and recommends it for phytoremediation. She provided a brief presentation on the benefits of various aquatic plants, alleopathy, and biocontrol of harmful bluegreen algae. She noted that research shows that water lettuce has a high nutrient absorption rate, and is a manatee food source. Council member Woosley stated that water lettuce can become a downstream navigation nuisance but believes there may be an opportunity for its use in research for biocontrol. Vice Chairman Johnson agrees to further discussion and noted large amounts of water lettuce in Lake Apopka during the 1920s and 1930s. Chairman Goerner wants Florida Fish and Wildlife Conservation Commission's (FWC) recommendation on water lettuce given the negative effect on navigation and submerged aquatic vegetation (SAV). The Council recommends adding this topic to the minutes of the Technical Advisory Group (TAG) meeting.

Robert Hendrick asked that St. Johns River Water Management District (SJRWMD) provide the Council with a copy of the proposals for the Lake Apopka restoration requests for qualifications (RFQ).

## **6. PRESENTATIONS / ACTIONS**

- A. Tom Champeau, Division Director of Freshwater Fisheries Management, FWC summarized funding of Lake Apopka. FWC became more involved in 2010 when Senator Hays spearheaded a public workshop about the history and status of the lake. The senator formed a task force composed of representatives of FWC, SJRWMD, Florida Department of Environmental Protection (DEP), Lake County Water Authority (LCWA), and University of Florida (UF) through the Institute of Food and Agricultural Sciences to come up with innovative solutions to improve fishing and increase public use. The task force met several times and recommended numerous projects. Subsequently, the legislature appropriated \$4.8 million in 2012, \$2 million in 2013, and \$2 million in general revenue in 2014. In addition, FWC will earmark \$2 million of legislative funding for lake restoration for Lake Apopka. Funding totals \$10.8 million (*editorial note – FWC reported after the meeting that the earmark should read \$1 million and the total should read \$9.8 million*).

The overall goal recommended by the task force was to improve the lake by increasing the amount of desirable habitat for fish and wildlife, particularly fisheries, because, historically, the lake was world-famous as a fishery in the 1950s. Low levels of aquatic vegetation, high levels of algal populations and accumulations of organic sediments on the lake bottom are habitat limitations. Restoration of Lake Apopka is more challenging and expensive because of its size.

Accomplishments include the acquisition of the land around the lake, taking it out of agricultural production, and reduced a significant source of nutrients. Having at least ten percent of the lake composed of desirable vegetation (minimum of 3,000 acres) was another goal of the task force. Currently, less than two percent of the lake is composed of emergent and SAV. Increasing the quality and abundance of sport fish and improving access were other goals of the task force. To date, FWC planted native plants and stocked sunshine bass that reportedly provide a fishery. Chairman Goerner questioned the success of the bass stocking. Mr. Champeau stated that the stocking program was a success, referenced the fish attractors, and reported low numbers due to the habitat.

Mr. Champeau reported on dredging at the Winter Garden boat ramp to improve access and at the Magnolia boat ramp to evaluate rapid dewatering. An engineering study by SJRWMD at the Winter Garden site showed that the deposit there was more extensive, deeper, and unconsolidated than originally thought. Massive amounts of organics were also found at the Magnolia site during the rapid dewater project by UF and FWC. Chairman Goerner questioned FWC's plan for wind abatement and the use of geotubes. Mr. Champeau confirmed that the use of geotubes for wind abatement and as a barrier for sediments is an option depending on cost, ease of use, and stability. He noted the success of major lake restoration in the Kissimmee Chain of Lakes, Lake Istokpoga, and Lake Okeechobee via draw down and the exposure of lake bottoms followed by scraping of mud. The Council is aware that this approach is not appropriate for Lake Apopka. The lake is a coalescence of sinkholes; deep areas of muck and organics preclude the use of heavy equipment. Chairman Goerner stated that SAV in Lake Apopka ends up as sediment if you have a major storm or hurricane and that the Council supports the use of sumps as a catchall for fluid muck followed by dredging.

Mr. Champeau reported on the scoring of respondents to the RFQ for Lake Apopka dredging and innovative water quality treatment; they will partner with SJRWMD and DEP and will enter the negotiation phase within two weeks. The scope provides for testing of the use of “sumps” (deeper areas in the lake that would trap sediments) with the goal of keeping sediments out of the area along the northern end of the lake. FWC plans to review of the use of “sumps” and SJRWMD’s sediment transport study to determine the most cost-effective way to re-establish vegetation. The budget for dredging and innovative water quality treatment is \$3.88 million; this is part of the \$6.8 million. SJRWMD offered the use of cells F and G as disposal sites for dredged material. The work has two phases. It includes dredging and the treatment of the effluent to remove organic matter, total suspended solids, and phosphorus. During the second phase, FWC is interested in the use of three different technologies similar to ones used in advanced wastewater treatment. Council member Nicholson mentioned the use of peat mining to offset project costs. Council member Woosley recommended proactive dialogue with U.S. Environmental Protection Agency (EPA) for federal (Section 319 grant) funding. Council member Grow questioned installation of a ramp in the Gourd Neck area and Mr. Champeau confirmed plans for a new or upgraded ramp on the west side of Lake Apopka at Montverde but not in the Gourd Neck Springs area. Chairman Goerner thanked Mr. Champeau. Council member Woosley and Chairman Goerner reiterated the Council’s proposal, long-term discussion, and support of the use of “sumps” as an alternative for sediment control and removal. They want this noted in the minutes and included in the annual report.

- B.** Dale Smith, PE, Section Chief, SJRWMD approached the podium and Chairman Goerner asked what effect drainage wells (storm water wells) have on the aquifer. Mr. Smith stated a positive effect on quantity and a negative effect on quality. DEP issues few permits for storm water wells but there are many active ones; they also monitor the water quality of the wells. Chairman Goerner commented on unexplained increases in nitrogen levels in the springshed with no change in phosphorus. Council member Woosley explained a lack of federal leadership and that it will take local initiative with the help of the state to address drainage wells. Chairman Goerner noted that these wells are affecting our springshed, which feeds our lakes. Council member Woosley explained that drainage wells were a water management, not water quality solution and encouraged the Council to look at septic tank management programs and drainage wells within springsheds. Chairman Goerner asked the Council to concentrate their efforts on the Harris Chain of Lakes (HCOL) and the springshed that feeds the HCOL.

Mr. Smith provided a presentation titled “Lake Apopka / Harris Chain of Lakes Minimum Flows and Levels (MFL) and Lake Level Management”. The South West Florida Water Management District previously managed the HCOL and SJRWMD began managing them in 1978. He reviewed slides of a map of the HCOL, the legal definition of an MFL (Florida Statutes, Chapter 373.042), and the general MFL process. The MFL process consists of data collection, development of science-based environmental water resource values, predictive hydrologic models for statistical analysis, technical drafts of MFLs and modeling, independent peer review, rule development, public workshops, and public rule hearing and adoption. The technical concept is that watershed ecology defines the minimum hydrologic regime in terms of a magnitude, duration, and frequency so there is no significant harm to the water resources or ecology. Hydrologic models produce the long-term data for use in hydrologic statistics to determine if the MFL is achieved. SJRWMD uses five MFLs regimes within the water management district that range from an infrequent high to an infrequent low. Multiple MFLs protect high, intermediate, and low hydrologic conditions. Mr. Smith discussed the MFLs proposed for Lake Apopka, Lake Dora, Lake Eustis and Lake Griffin. Intera Inc. is

performing a peer review of engineering's proposed MFL modeling; peer review of the scientific portion has not started.

Mr. Smith stated that lake level management portion of this work is the regulation schedule change. A regulation schedule is the "line" that the water control operator uses to make a decision. Water is discharged if the level is above it but no discharge is required if it is below it. The operator determines the amount or duration of discharge to prevent flooding; this information is not in a water manual. SJRWMD will test different regulation schedules to develop an operational plan that meets the MFLs and then rank them to find environmental water level targets other than those established by law in the MFLs. The targets are different from MFLs and better for the environment. SJRWMD will review flood control, water supply, and navigation with regard to the regulation schedules. Mr. Smith presented a graph of Lake Griffin to illustrate the difference between a MFL and a target level. With regard to flood control, he discussed areas of concern around Lake Griffin and presented a graph to show the residential structures around Lake Griffin with finished floor elevations close to the Federal Emergency and Management Agency (FEMA) 100 year flood elevation. He explained the comparison of two modeling scenarios and testing of different regulation schedules against the MFL to find a real world solution. Council member Woosley questioned SJRWMD's historical endorsement of use of the north shore (Lake Apopka) and marshlands for storage and inclusion of available storage within the system to reduce "peak" during lake level fluctuation. Mr. Smith explained that the north shore is a restoration project and not useful for flood control because water goes in five to eight times faster than you can pump it out. Councilman Woosley asked about the prospect of storing water for the extreme lows and for post peak releases. Mr. Smith shared that SJRWMD would investigate this as the review additional regulation scenarios.

Council member Woosley commented on insufficient surface area and depth in the Harris Bayou, in case of peak fluctuation. Mr. Smith stated that the Harris Bayou discharges up to 1000 cubic feet per second (cfs). Current modeling is for 700 cfs from the "Super Pond" through the Burrell structure and then the Harris Bayou for a two for one cfs. This was constructed due to flooding issues downstream of the Burrell structure in Haines Creek. SJRWMD will present the scenarios to the Council upon completion. Councilman Nicholson referred to hurricane Donna in 1960 and asked if data from that hurricane was available. Mr. Smith confirmed the use of well data from 1964 based on the connection of lakes to the potentiometric surface and insufficient data prior to this. Chairman Goerner noted the potential for significant economic impacts on development and insurance if you anticipate a major event; changes to the flood zone can lead to increased insurance rates for construction in the respective area. Mr. Smith stated that FEMA rules require a participating partner to use their data if that data says the FEMA elevation is low but an elevation cannot be lowered without going through a map amendment. Mr. Smith stated that the system was set up to provide minimum discharges from Apopka, Burrell and Moss Bluff. He confirmed no discharge of water from Lake Apopka into the north shore over the past two years. Chairman Goerner questioned leakage of the dikes. Mr. Smith explained that the north shore is not stealing water from Lake Apopka. According to geotechnical studies, 1,500 acres/year of water leaks into the north shore due to the dikes. He presented a plot of well levels and Lake Apopka and Griffin water levels, sharing that Griffin water levels followed the adjacent well level, which are relatively stable. He added that Lake Apopka levels follow downstream well levels, which appear to be declining and that this could possibly explain why Lake Apopka recovery does not match Lake Griffin and further investigation will be needed. Councilman Nicholson questioned water withdrawal by private and commercial wells in the Montverde and Gourd Neck area of Lake Apopka. Mr. Smith explained that the model

accounts for this, implicitly, by virtue of how the potentiometric surface reacts. Chairman Goerner asked how consumptive use permits figure into the MFLs and thanked Mr. Smith for his informative presentation. Mr. Smith shared how MFL freeboard was determined and that a consumptive use permit could be attained as long as the draw down of the potentiometric surface did not go beyond the freeboard limit.

C. Steve Fitzgibbons, SJRWMD presented the 2014 Annual Report development schedule as follows:

- Discuss draft report at September (9/05/14), October (10/03/14) and November (11/07/14) Council meetings.
- Draft report to Council members 10 days before each monthly meeting on (8/26/14, 9/23/14 and 10/28/14).
- Council members provide written edits to staff 2 days before each meeting (9/03/14, 10/01/14 and 11/05/14).
- Approve final draft report at November meeting (11/07/14).
- Provide approved report to Florida legislative leaders, Lake County legislative delegation, and SJRWMD Governing Board members and Council members. Post approved report on Council's web site.
- The report will include Council activities from November 2013 – October 2014, a format similar to the 2013 annual report and meeting materials as appendices.

Councilman Woolsey and Chairman Goerner propose a more aggressive outreach given electronic distribution of the annual report. Mr. Kraig McLane, SJRWMD confirmed submission of the annual report to LCWA and Lake County Commissioners in years past.

## **7. COUNCIL & AGENCY QUESTIONS & ANSWERS**

Mike Perry, LCWA reviewed minutes of the TAG meeting on (7-24-14). Councilman Woosley urged TAG members not to limit their discussion to the objectives outlined in the framework and encouraged discussion of other objectives, research, and pilot projects. Vice Chairman Johnson wants the discussion of water lettuce as a potential method for establishing vegetation, in lieu of hydrilla, added to the TAG meeting minutes. Chairman Goerner believes the most effective TAG discussion occurs during Council meetings when the Council is present. Councilman Woosley challenged TAG members to lead, rather than follow the Council and to consider additional topics and new ideas. He advised the TAG to consider other topics for discussion. Dennis Renfro, FWC will follow up Nathalie Visscher, FWC invasive plant management biologist for a presentation in September. Councilman Woosley recommended that TAG members be prepared to discuss their agency's role and position regarding water lettuce. Vice Chairman Johnson recommended contacting Bill Haller for advice. Chairman Goerner wants the Council to make a recommendation in September for inclusion in the annual report. He reiterated the need for further examination of the Harris Bayou and asked for the current nutrient levels. Rolly Fulton, SJRWMD asked for a correction on the third page of the TAG meeting minutes; he specified that the determination that the soils were not suitable was not in the geotechnical report and that the geotechnical report primarily addressed the design. Mr. Fulton reported a decrease in the average concentration of total phosphorus at Harris Bayou from 320 mg/liter in 2012 to 250 mg/liter in 2013 to 140 mg/liter in 2014. Vice Chairman Johnson referenced phosphorus measurements by LakeWatch and posting of measurements on the LakeWatch website. He noted decreased phosphorus levels in Lake Beauclair. Councilman Woosley complimented the TAG on the establishment of a timeline for reconnection of

the North Shore. Chairman Goerner confirmed that the Council wants the TAG meeting minutes reviewed for inclusion in first draft of the annual report.

Mike Perry reported that the current water level at Lake Apopka is 64.4 feet, the regulatory schedule is 65.64 feet, and the minimum desirable is 65.4 feet. The current water level at the Super Pond is 61.5 feet, the regulatory schedule is 62 feet, and the minimum desirable is 61 feet. The current water level at Lake Griffin is 57.2 feet, the regulatory schedule is 57.73 feet, and the minimum desirable is 57 feet. LCWA is developing its budget with \$5k for support of Council activities. Mr. Perry stated that the MFLs could result in no discharge through the lakes, and no discharge between the lakes would “neuter” the Nutrient Reduction Facility Project. He stated concern for the boating community’s ongoing desire for high water levels. In regards to the MFLs, Chairman Goerner commented on the Council’s concern for desired navigation, access, and the establishment of a trophy lake. The MFLs are the most important issue at this time. Mr. Perry stated that Dan Canfield, UF said he cannot accept funds from FWC and uncertain if he wants to assist the Council.

Jay Brawley, SJRWMD reports examination of higher water levels, flat line MFLs, and consideration of ecologic concerns regarding the setting of the MFLs. He reported that lake levels, during the past 27 months have risen. Lake Apopka is up 14.25 inches but 1.33 feet below the regulation schedule. The Super Pond is up 16 inches, and 3 inches below the regulation schedule. Lake Griffin is up 16.5 inches, and 6.5 inches below regulation schedule. The recommendation to go to the negotiation phase of the RFQ goes before the SJRWMD Governing Board on August 12, 2014 after which negotiations begin on August 14, 2014. SJRWMD plans to have contracts in place by the end of this fiscal year. The transport model will be finished in approximately a year and a half. This model will examine unconsolidated and consolidated sediments in Lake Apopka. The model is for use in Lake Apopka and adaptable for use in other lakes. In regards to the RFQ, Councilman Woosley suggested land treatment as a potential treatment component. Mr. Brawley reported that the Lake County Parks Department is reviewing the design plans for boat ramps and dredging in the McDonald Canal.

Dennis Renfro, Fisheries Resource Coordinator, FWC reported that Orange County organized a Lake Apopka ecotourism board to identify partners, areas, and topics for discussion. He met with members of Lake County’s economic and tourism board; the board members met with members of the Bass Anglers Sportsman Society (B.A.S.S.) regarding submission of a bid for a major fishing tournament on the HCOL. Mr. Renfro reported that he was part of the ICAST 2014 team at the Orange County Convention Center and displayed two large mouth trophy bass in an aquarium. Sport fish restoration funding provides support for research, marine fisheries, freshwater fisheries, and law enforcement in boating and waterways. In regards to the plastic fish attractors, staff are reviewing locations on Lake Harris and preparing permits for DEP. FWC received positive feedback on the request for a boat ramp and dock at Montverde and the City of Montverde is going to purchase the property to provide 18 parking spaces.

## **8. COUNCIL MEMBER COMMENTS**

### **A. Comments**

Vice Chairman Johnson recommends bringing Carlton Layne, retired EPA enforcement to discuss the bird kills he investigated in the late 1990s, because SJRWMD has been reluctant to reflood the north shore due to pesticide situation. He recalled that the avian toxicologist questioned the effects of pesticides on the bird kill and wants Mr. Layne’s scientific opinion. Kraig McLane suggested that

Mike Coveney, SJRWMD could be available to provide an update on the bird kill. Chairman Goerner requested further investigation of phosphorus reduction projects in the Harris Bayou.

Councilman Woosley requested that the update provided via email to the Council from Christianne Ferraro, PE, DEP on July 31, 2014 be provided as part of the minutes:

After the Technical Advisory Group meeting Ms. Ferraro contacted Mary Paulic, DEP's Basin Coordinator for the Upper Ocklawaha River Basin Management Action Plan. Ms. Paulic is willing to present to the Council Phase 2 Upper Ocklawaha BMAP. It appears that September may be the only month available this year for Ms. Paulic's presentation before the annual report work begins. Ms. Ferraro reported that she was not sure if Ms. Paulic can attend the September 5 meeting, but will be happy to check. Ms. Ferraro included via her update (attachment from Kraig McLane's July 31, 2014 email to the Council) an excerpt from the BMAP that shows that the loading from the Harris Bayou is included in the TMDL for Lake Griffin, as Dr. Fulton discussed at the TAG meeting.

**B. Discussion of Next Scheduled Meeting:**

Presentations from Nathalie Visscher and other guests regarding vegetation and vegetation management, Carlton Layne regarding toxicology, and Steve Fitzgibbons regarding annual report are scheduled for the next meeting on September 5, 2014.

**9. ADJOURNMENT**

The meeting adjourned at 12:11 p.m.