

**FINAL**

**MINUTES OF THE MEETING  
of the  
HARRIS CHAIN OF LAKES RESTORATION COUNCIL  
November 6, 2015**

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:05 a.m. on November 6, 2015 at the Lake County Board of County Commissioner Chambers, 315 West Main Street, Tavares, Florida.

**Members Present**

Skip Goerner, Chairman  
Don Nicholson  
Sid Grow  
Robert Johnson  
Stephanie Bishop  
Keith Truenow, Secretary

**Members Absent**

Hugh (Dave) Davis II  
Dr. Ed Schlein

John Stump, ex officio member

**1. CALL TO ORDER**

Chairman Goerner called the meeting to order at 9:05 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. Mark Hoyer and Stephen Tonjes (DOT) of the Technical Advisory Group (TAG) were absent.

**4. APPROVAL OF MINUTES**

Discussion and approval of the October 2015 minutes, as revised. Minutes were approved.

**5. PUBLIC COMMENTS**

There were no public comments.

**6. PRESENTATIONS / ACTION ITEMS**

**Acceptance - of 2015 Calendar, Meetings Schedule—Susan Davis, St Johns River Water Management District (SJRWMD)**

Susan Davis, SJRWMD, presented the Harris Chains of Lakes Restoration Council 2015/2016 calendar and schedule of meetings. Calendar was approved.

**Annual report editing and acceptance—Denis Frazel, Harris Council Administrative Support**

Councilman Johnson initiated discussion of a letter from SJRWMD outlining management of the North Shore Restoration Area (NSRA) at Lake Apopka. The Harris Council requested the response in October for review at the November Council meeting. Discussion of the letter is presented under the Section Head “Council Member Comments”, below.

Denis Frazel, Harris Council Administrative Support, presented the revised 2015 draft Annual Report. Mr. Frazel noted the Executive Summary was not discussed last month, suggesting that review of the summary should take place after the full report has been reviewed. Mr. Frazel noted the draft report included strikethrough/underline changes based on comments received after the last meeting. The Council concurred.

Chairman Goerner began in-depth discussions of the report beginning with Section 3.0. Substantive changes discussed by the Council are listed below by report section. A number of typographical and minor grammatical changes recommended by the Council and Mr. Frazel were made throughout the report, but are not individually described in the minutes, as they are reflected in the final Annual Report.

### Section 3.1 Lake Level Management

Chairman Goerner recommended adding the following to paragraph 1. "Prior to that time authorized discharges of 23 cubic feet per second (cfs) occurred from 1/10/12 thru 4/26/12 as recommended by the U.S. Army Corps of Engineers (USACE) Four Rivers Control Manual. Council noted that the recommendations from the USACE prior to 2012 were for discharges of 23 cfs at the Apopka-Beauclair Lock and Dam (Beauclair), 28 cfs at the Burrell Lock and Dam (Burrell), and 30 cfs at the Moss Bluff Lock and Dam (Moss Bluff)". Council concurred.

Mike Perry, Lake County Water Authority recommended the following change to paragraph 3. "The discharges were continuing at the request of the Lake County Water Authority (LCWA) for operation of the nutrient reduction facility (NuRF). SJRWMD evaluates the lake level on a monthly basis to determine whether such discharges will continue in the future". Council concurred.

Dr. Fulton recommended the following change on page 10, "The current water levels were below average although rainfall in recent years has been close to average. However, lake levels have closely paralleled changes in Floridan aquifer levels in recent years". Council concurred.

Chairman Goerner added text at the end of Section 3.1 as follows' "The Council believes lower water levels in Lake Apopka are caused by the dikes along the NSRA preventing the natural flow of rainfall (billions of gallons) into Lake Apopka. In addition, leakage through the dikes from the lake into the NSRA contributes to the lower lake levels. This is an important consideration for correct water budgeting in the MFL process". Council concurred.

Councilwoman Bishop initiated extensive discussion of the Council recommendation for Section 3.1. The final recommendation approved by Council is as follows, "The Council recommends maintaining the highest water levels possible during the dry period of the year and that fisheries benefit by higher water levels during the spawning season.

The Council is concerned that the MFL modeling currently underway does not include consideration of the impact of a hydraulic reconnection of northshore basins to the larger Lake Apopka basin are not complete, as they do not take into consideration any future restoration of the NSRA. The Council wants to ensure the MFL models are complete and that they contain all relevant information for sufficient surface and ground water supplies in the Harris Chain of Lakes region. The Council requests SJRWMD undertake an additional model iteration considering hydraulic reconnection of the northshore basins to the larger Lake Apopka basin before October 2016".

### Section 3.2. Lake Apopka Restoration

Councilman Johnson discussed several changes regarding bird mortality on page 12. The Council approved the following text, “The Council stated, by that rationale, toxaphene should not be toxic to birds and Exponent did not know what caused the bird mortality perhaps they were not given adequate time to determine the cause. Exponent gave six reasons pesticides did not kill the birds. Audubon’s summer bird counts did not indicate there were any bird deaths. The Council believed there may be more bird deaths at Lake Apopka in the future due to Newcastle disease, Salmonella, and/or Botulism, referencing a publication by USGS indicating from 2002 and 2003 the death of nearly 10,000 pelicans across the United States by disease”.

Councilwoman Bishop discussed the 2015 Council recommendation for Section 3.2, suggesting modifications to the recommendation clarify the desires of the Council. Council approved the the following recommendation, “The Council supports the long-term goal of reconnecting the marshlands within the NSRA to Lake Apopka. The Council recommends development of a near-term goal (within five years) of identifying and reconnecting those portions of the north shore that exhibit the least concern for pesticide residuals, and provide the most desirable habitat value, while creating minimum impact to Lake Apopka. In addition, the Council recommends that restoration activities include the increased use of sawgrass, other drought tolerant plants, and a low evapotranspiration planting regime.

Based on presentations to Council on the bird mortality event, Council requests documentation from USFWS on their plan of action should another bird kill occur. The Council made a similar request in 2014”.

### Section 3.3 Dredging Projects and Related Activities

Dr. Fulton provided updated information regarding Apopka-Beauclair Canal dredging. As follows, “In October 2015, Dr. Fulton noted that the permit application for the dredging project had not yet been submitted, but was expected to be submitted in 2 months, so dredging would not be expected to begin until sometime in 2016”. Council concurred.

Council discussed minor changes to the Section 3.3 recommendations, agreeing to the following, “The Council supports and recommends a demonstration test piggybacking from an existing dredge line from the lake so dredge water can be run through a parabolic wedge wire screen system as part of Lake Apopka dredging projects to determine if this equipment can provide rapid dewatering of sediment.

The Council requests results in 2016 from the pilot study”.

### Section 3.4.2 Fish Attractor Program

Council discussed text regarding the fish attractor program. Recommending changes to include all volunteer organizations participating in the fish attractor installation program. Separately, Mr. Renfro recommended clarification on the fish attractor marker dimensions, to which Council concurred.

### Section 3.4.3 Fishery Access

Mr. Frazel noted this was the point at which review of the document had ended during the previous Council meeting. Council reviewed and discussed the Section 3.4.2 recommendations, agreeing to the following, “The Council supports continued efforts to improve public access to Lake Apopka.

The Council is especially concerned about the delay in the efforts by SJRWMD to connect the NSRA to Lake Apopka. The Council has requested since 2011 that SJRWMD develop a plan to reconnect the NSRA to Lake Apopka”.

#### Section 3.4.4 Fisheries Research

Councilman Johnson recommended omitting several paragraphs of text related to a bass presentation by Dr. Mike Allen. Council discussed the merits of the text and decided to retain the text in question.

#### Section 3.5 Water Quality

Council discussed the Council recommendation on water quality, agreeing to the following text, “The Council recommends and supports the continued collection of water quality samples by the University of Florida LAKEWATCH from the HCOL and encourages SJRWMD to evaluate the resulting water quality data in relation to lake levels as it develops MFLs for waterbodies in the area. The Council recommends LAKEWATCH expand water quality sampling into Lake Apopka”.

#### Section 3.6 Aquatic Plant Management

Mr. Frazel recommended deletion of this section as there were no presentations to the Council on aquatic plant management. Council concurred.

#### Executive Summary

Mr. Frazel directed Council to review recommended changes to the Executive Summary, beginning with updates to the minimum flows and levels text and schedule provided by Dr. Fulton.

Councilman Johnson had a number of changes to the summary on Lake Apopka Restoration remarking on the importance of the information to the public. Councilman Grow suggested the information would more appropriately be located in the body of the report. Councilwoman Bishop suggested a summary table rather than text.

Upon extensive discussion, Council decided to develop a one-page set of bulleted recommendations for the Executive Summary, followed by a more detailed summary of presentations. The bulleted recommendations were derived from the Council recommendations set forth in the body of the Annual Report. The summary of presentations included the revised text on bird mortality presented by Councilman Johnson.

Mr. Frazel showed the draft cover of the Report, with pictures recommended by Council. Council approved the cover.

Councilman Goerner noted that the final report was due on November 25, and asked for a vote on the report as described. Mr. Frazel suggested delegating a Council member to review final changes. Council voted to delegate Chairman Goerner to provide final approval.

Chairman Goerner noted to Mr. Frazel that the legislative delegation meeting is on December 9, and that he had registered to speak at the delegation meeting. Chairman Goerner intended to present copies of the report to the delegation. Chairman Goerner asked for copies of the report by the 12<sup>th</sup> of November. He requested that they be sent directly to the delegation. Mr. Frazel remarked that the report was due to the legislature by November 25<sup>th</sup>. Mr. Frazel remarked that his schedule was to have the revised document to SJRWMD for review by Monday, November 9<sup>th</sup>.

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

No comments

**8. COUNCIL MEMBER COMMENTS**

A. Councilman Johnson initiated discussion of a letter from the St. Johns River Water Management District (SJRWMD) outlining management of the North Shore Restoration Area at Lake Apopka. Councilman Johnson showed a map from 1981 by Brooks indicating high phosphate soils in the NSRA, in response to SJRWMD concerns about high phosphate and nitrate levels in the NSRA. Councilman Johnsons disputed SRJWMD assertions that the NSRA could not be re-connected because of phosphate in the marsh. Councilman Johnson suggested taking samples from the NSRA to evaluate phosphate levels. Councilman Johnson further noted that with regard to pesticide levels, there have been no reports of dead fish or dead birds, with no proof of high pesticide levels in the NSRA. Councilman Johnson noted that perhaps SJRWMD had changed direction as to how they intended to restore the lake. If so, Councilman Johnson would like to hear the proposal. Chairman Goerner noted that he had requested, and the Council had received from Dr. Rolly Fulton, SJRWMD, information about the plan for the NSRA.

Chairman Goerner remarked that the response was somewhat vague, but clearly that there was no current plan for re-connection of the NSRA to Lake Apopka. Chairman Goerner noted that the next management update was scheduled for 2022, seven years from the present. Chairman Goerner added that there was no hunting or fishing allowed in the NSRA yet there seemed to be no data that fish have higher pesticides in the NSRA. Dr. Fulton reported that SJRWMD had sampled fish in the NSRA for pesticides and that the data could be made available. Dr. Fulton noted that the sampling was o an ongoing process and SJRWMD had just recently taken samples for more analysis. Councilman Johnson noted that the reason for purchasing the NSRA was to re-flood that area. Chairman Goerner added that the reason was to re-connect the area to Lake Apopka because the water is needed for the entire Ocklawaha system. Lake Apopka is the headwaters of the Harris Chain of Lakes. According to Chairman Goerner's calculations, Lake Apopka is losing 60 billion gallons of water per year that is trapped in the NSRA.

Dr. Fulton provided specific data on the drainage area of the NSRA as follows. The portion of the NSRA east of the Apopka-Beauclair Canal including the Zellwood, Duda, and Sand Farm drainage area is 14,400 acres. An additional 3,300 acres drain to that part of the NSRA. The area of marsh flowway west of the Beauclair Canal is 5,500 acres with an additional 1100 acres that drain to that property. The total drainage area of the NSRA, including areas that drain into the NSRA, is 24,400 acres. The total Lake Apopka watershed is 85,000 acres. That makes the NSRA about 29% or 1/3 of the total area. Chairman Goerner reiterated that in excess of 60 billion gallons per year could be added to Lake Apopka, though Dr. Fulton could not confirm that number. In response to a query from Chairman Goerner, Dr. Fulton reported that 17 cubic feet per second (cfs) were still being discharged from Lake Apopka at the request of the Lake County Water Authority to continue to operate the Nutrient Reclamation Facility (NuRF). The continuation of discharges was because the lake level was above the minimum desirable regulation schedule and an expectation of a wetter than normal winter season. Dr. Fulton, noted that the current discharge rate would lower lake levels by about 0.4 inches per month.

Councilman Johnson inquired again, as to whether SJRWMD was going to re-connect the NSRA to Lake Apopka. Chairman Goerner noted that Dr. Coveney has reported earlier that re-connection of the NSRA might be possible within the next five years. Chairman Goerner inquired about the

McDonald canal boat ramp and access to the NSRA. Dennis Renfro, Florida Fish and Wildlife Conservation Commission (FWC) reported that the McDonald canal is connected to the Apopka-Beauclair, with no connection to the NSRA. It is located on the NSRA property, but there is no aquatic connection.

Councilwoman Bishop read the opening statement of the letter to the Council regarding lake level re-connection, inquiring how is it going to affect lake level fluctuation. Dr. Fulton noted that SJRWMD considered the NSRA for storage of excess water that could then be put back in the lake during dry periods. Modeling of the proposal showed it not to be feasible. Councilwoman Bishop summarized the letter, that whatever SJRWMD is doing now will continue until 2022. Dr. Fulton concurred. Chairman Goerner discussed the problem that water has not been flowing from the lake for several years, increasing residency time. This is an important issue with water quality as the longer water resides in the lake, more nutrients are retained. Dr. Fulton estimated a residence time of 3 years or so for Lake Apopka. This time would be longer during drought conditions, and water quality drops during dry periods. Dr. Fulton noted with more flushing (less residence time) there will be less nutrients in the lake, but at the same time there is more external loading to the lake. Using flushing to reduce algae is not feasible because of the short re-generation time (days) of algal cells. Chairman Goerner inquired as to the volume off Lake Apopka. This volume, based on 120,000 acre-feet is more than 39 billion gallons. Dr. Fulton noted that a large percentage of the rainfall is lost to evaporation. Chairman Goerner noted that less evaporation would occur if sawgrass was grown in the NSRA. Dr. Fulton reported SJRWMD studied evaporation with willows, and was working with the United States Geological Survey (USGS) comparing willow evaporation to other habitats. The annual evaporation rates of sawgrass was 92% of willow, and 90% open water habitat. Councilman Johnson remarked that the Florida Department of Environmental Protection may have data on willows. Dr. Fulton offered to present information on the evaporation study later. Councilwoman Bishop suggested the appropriate information could be provided in January. Chairman Goerner concurred that it is essential to get better usage of the NSRA. Chairman Goerner noted the Council made a recommendation last year for the plan from SJRWMD, and the Council had just now received the reply.

Councilman Grow requested a presentation for 2016 from Eric Endicott of the Allied Group on Lake Apopka restoration technologies. Chairman Goerner noted that there have been presentations every few years on these types of technologies that cannot successfully transition to full lake restoration. Councilman Grow noted that FWC was funding the project. Dennis Renfro reported that it is the Clean-Flo aeration/inversion project, and the project manager has already agreed to give a presentation to the Council. Mr. Renfro also noted that a hydro-flow project had also been initiated. Dr. Fulton noted that many such alternative technologies cannot be scaled to Lake Apopka.

- B. The Next Scheduled Meeting is tentatively scheduled for January 8, 2015. Susan Davis, SJRWMD, commented that perhaps a workshop could be scheduled for February. Chairman Goerner briefly discussed Sunshine Law and the need for a presentation on the Sunshine Law to any new Council members. Susan Davis commented that she would investigate communications protocols with the Sunshine Law.

9. **ADJOURNMENT**

The meeting adjourned at 12:20 p.m.