

Final

**MINUTES OF THE MEETING
of the
HARRIS CHAIN OF LAKES RESTORATION COUNCIL
February 5, 2015**

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 8:30 a.m. on February 5, 2016 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 arrived after the election of officers.

Members Absent

Hugh Davis
Dr. Ed Schlein

John Stump, ex officio member

1. CALL TO ORDER

Chairman Goerner called the meeting to order at 8:30 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. Stephen Tonjes (DOT) of the Technical Advisory Group (TAG) was absent.

Chairman Goerner noted the state water bill was approved by the Legislature and signed by the Governor. The bill will take effect in July, at which time Council members not regularly attending meetings may be replaced.

4. APPROVAL OF MINUTES

Discussion and approval of the November 2015 minutes. Minutes were approved.

5. PUBLIC COMMENTS

There were no public comments.

6. PRESENTATIONS / ACTION ITEMS

Election of Officers

Chairman Goerner opened the nominations for Council Chairman. Bob Johnson was nominated by Don Nicholson. The nomination was unanimously approved. Chairman Goerner passed the gavel to Chairman-elect Johnson. Chairman Johnson opened nominations for Vice-chair. Chairman Johnson nominated Skip Goerner. The nomination was unanimously approved. Chairman Johnson opened the

nominations for Secretary. Skip Goerner nominated Don Nicholson. The nomination was unanimously approved.

Update on McDonald Canal Improvements – Bob Naleway, St Johns River Water Management District (SJRWMD)

Councilman Goerner introduced Bob Naleway, an engineer with SJRWMD. Mr. Naleway introduced the McDonald Canal Recreation Area showing a site location map. He noted the existing canal extended ½ mile north of Lake Apopka. The canal connects to Lake Apopka through the Apopka-Beauclair canal.

Councilman Goerner noted he was not familiar with the canal. Mr. Naleway described more specifically the canal location and site and locally identified it as the shad ramp site. Mr. Naleway proceeded to describe preconstruction aspects of the project noting SJRWMD decided to make it a public site to improve public access along the north shore of Lake Apopka. Mr. Naleway described the site plan, including 20 boat trailer spaces, public parking, handicapped parking, a pavilion, and paving of the roadway from the bridge to the turnaround.

Councilman Goerner inquired about the drainage into the canal. Mr. Naleway noted the drainage to the canal was from farmland to the north with no direct connection to the North Shore Restoration Area (NSRA). Councilman Goerner inquired whether the farms were flooded to the north by canal waters. Mr. Naleway noted the canal was not currently used to flood fields, although historically the canal would have been flooded in this manner. Mr. Naleway reported the canal did not connect to Lake Gem and at high water was about 3-4 feet deep. During low water, navigating the canal could be a problem; therefore dredging the canal was part of the overall project. Mechanical dredging had been completed with the hydraulic dredging, a six-month process, currently in the bid process. Mr. Naleway noted the Apopka-Beauclair Canal was deeper, though there was a shoal at the entrance to Lake Apopka with a channel through the shoaled area.

Mr. Naleway showed slides of the site grade and fill work, the stormwater retention area, the paved parking area and road, and the picnic pavilion. Mr. Naleway also showed pictures of the gate and information kiosk installed by project partner, Lake County. Mr. Naleway noted the County agreed to provide maintenance on the facility for the next 10 years.

The remaining tasks to complete the project included upgrade of the existing water well, installation of water fountains, installation of a larger replacement dock, and construction of a waterless restroom facility.

Councilman Goerner inquired as to when the McDonald canal was taken off-line from the North Shore Restoration Area. Mr. Naleway advised the McDonald Canal never had a direct connection, only levees to let water in, and SJRWMD had never used those levees. Councilman Grow inquired about Lake Apopka depth at the access point to the lake, noting muck islands existed in middle of the lake but deep areas existed along the west shore. Dr. Rolly Fulton, SJRWMD, reported there was a deep trench along the west shore and bathymetric maps could be provided. Dennis Renfro, FWC, noted there were also deep areas in the southwest area of the lake. Mr. Renfro recommended adding Navionics as an app to a smart phone to provide very detailed bathymetric (and other) information on Lake Apopka. Mr. Renfro reported FWC maintained a seaweb site containing downloadable bathymetric maps of the Harris Chain of Lakes.

In response to questioning about ramp use by Councilman Nicholson, Mr. Naleway reported the purpose of the park was to provide deep-water access to the lake at low water. Mr. Naleway noted there was about 1500 ft of the canal to negotiate to get past the humps (shoaled areas) to get into the lake. Some high spots would still remain but boats should be able to get through if up on plane. Mr. Naleway again noted the opening in the weir of about 25' width to allow access.

Mr. Renfro reported FWC applied for a federal grant for a wider boat ramp but the request was not granted. Mr. Renfro also noted the Lake County tourism guide included the new access area, which provides northwest access to the lake. Mr. Renfro further noted that access is a key issue, as current access points are limited to Magnolia Park and Winter Garden.

7. COUNCIL & AGENCY QUESTIONS & ANSWERS

Councilman Goerner reported on an article in the Orlando Sentinel from December 2015 in which he was interviewed. He noted a response to his interview in the article by Ed Garland from SJRWMD. Susan Davis, SJRWMD, provided the article to Councilman Goerner who proceeded to read the article to the Council and into the Council record. Councilman Goerner noted a loss of wetlands from farming.

Councilman Goerner reiterated his remarks because Council had expressed numerous times the importance of reconnection of the marsh to provide billions of gallons of water to Lake Apopka. Councilman Goerner remarked the marsh was an important component that was purchased to restore Lake Apopka. Importance of the marsh was not just water quality but to provide the billions of gallons lost on the north shore. Councilman Goerner noted a similar situation on Lake Griffin where most marshes there are now reconnected.

Councilwoman Bishop inquired about the success of Lake Griffin restoration, noting that 2016 is a new year, so how can the Council get a new result on Lake Apopka. It was the Councilwoman's understanding SJRWMD reported a high pesticide concentration in the soil to prevent reconnection at this time. Councilman Goerner responded that Lake Griffin restoration was successful because of much publicity, and the Council needed to do something about getting public support for the restoration process for Lake Apopka. Councilman Goerner noted goals were met in the beginning for Lake Griffin, but not on Lake Apopka because agencies were prevented from working on the lake. Restoration had been successful on the upper lakes but not Lake Apopka. Councilman Goerner noted there had been some success; however, momentum had been slowed due to lack of restoration of flow from NSRA. Lack of press coverage was also noted.

Councilwoman Bishop did not think the entire Council as a whole agreed with the notion of reconnection. Councilwoman Bishop noted she has not seen any presentations in support of restoration. Councilman Goerner remarked that he could bring in speakers in support of restoration. Councilman Goerner remarked the scientific community did support reconnection. Councilwoman Bishop noted the SJRWMD report said it was a long-term process to reconnect the marsh. Councilwoman Bishop inquired as to how to engage the public on reconnection of the NSRA to the lake. Councilman Goerner advised to show the public the tremendous improvement in other lakes noting Lake Griffin was now a showplace.

John Stump advised that he did not believe there would be an overall increase in lake level and assumed such a study would have been done by SJRWMD. In resolving the issue, Mr. Stump identified three key questions to be answered: (1) What would be the hydrologic impacts to Lake

Apopka from reconnecting the marsh; (2) How would lake levels and canal levels be affected; and (3) What are the hydrologic cycle impacts.

Councilman Goerner noted SJRMWD developed a regulation schedule for the lake, but the schedule was not met because water levels continue to fall. Councilman Goerner acknowledged the minimum desirable levels were met for a short period this year. Dr. Fulton reported the current water levels were above minimal regulation schedule; however, discharges were stopped due to not meeting regulation schedule. Dr. Fulton noted recent rainfall may have brought water levels above regulation schedule. Mr. Mike Perry, Lake County Water Authority (LCWA), showed a graph of the rainfall and regulation schedule from September 2015 to present. The graph showed high rainfall in December related to an El Nino event. Mr. Perry noted minimum discharges for several months. Mr. Stump observed that the graph clearly showed lake level related to rainfall. Councilman Truenow noted there were discharge points from NSRA that contributed to the lake. Dr. Fulton noted there was discharge over culverts during high water storm events, and pumps are currently moving water. Mr. Naleway noted the sand farm had a 100-acre treatment area with an overflow structure and pump for stormwater flows.

Councilman Truenow inquired if water discharged from the NSRA was tested for water quality. Dr. Fulton noted water that moved through pump #1 was tested upon discharge. Dr. Fulton reported 1:09 phosphate concentrations were 330 $\mu\text{g/l}$ at the discharge point while lake levels were about 80 $\mu\text{g/l}$. Mr. Stump observed discharge locations lead to downgrading water levels in Lake Apopka. Councilman Truenow inquired if Lake County tested the phosphorus concentrations of the water coming into the NuRF system. Mr. Perry noted typical ranges of 90-100 ppb coming into system. Water leaves the systems at 32 ppb.

Councilman Truenow inquired about nutrient levels in Lake Beauclair. Dr. Fulton reported current averages of 64 ppb of phosphate, with 70 ppb in 2014, and 84 ppb in 2013. Councilman Goerner commented about higher residence times with no discharge. Dr. Fulton agreed that residence time might increase, but there was also no new external loading. Councilman Goerner remarked residence time was not friendly to restoration efforts. Dr. Fulton noted residence was not the only issue to cause degradation of water quality.

Video 2

Councilwoman Bishop inquired about the SJRWMD 2022 plan. Dr. Fulton reiterated his statement from November that SJRWMD will reassess the management of the NSRA in 2022. Councilman Nicholson inquired if dissolved oxygen (DO) in the NSRA was higher than in the lake. Dr. Fulton noted low DO in the NSRA because of the predominance of emergent vegetation. There was little submerged aquatic vegetation (SAV) because of the light attenuation from the emergent vegetation. Councilman Nicholson inquired whether shallower water would increase SAV. Dr. Fulton agreed shallow water could lead to increased SAV if there was no emergent vegetation. Councilman Goerner noted prior to development of the NSRA there was abundant sawgrass that scavenged phosphate with little evapotranspiration. Dr. Fulton noted conditions were different then. Sawgrass thrives in low nutrient areas, but cattails take over in high nutrient areas. SJRWMD experimented with sawgrass growth, and found that because sawgrass grows slowly, other plants outcompete it for space. Councilman Truenow noted phosphate concentrations need to be reduced from NSRA water before discharge to the lake.

Councilman Goerner inquired why Lake Griffin was able to be reconnected to the marshes. Dr. Fulton reported some differences, noting the Emeralda marsh was not reconnected until nutrient and pesticides were no longer a problem. Dr. Fulton observed the greatest nutrient reductions were from

shad harvesting and Emeraldal marsh improvements, and SAV in Lake Griffin was not impacted by reconnection. Councilman Goerner requested Gene Caputo to talk to the Council, if Chairman approves.

Councilwoman Bishop noted the Council did not have a plan to move the issue of reconnection. Councilman Goerner agreed reconnection was not an option now, but partial re-connection should be possible before 2020. Councilman Goerner remarked it should be the Council's goal this year to make a plan to reconnect the marsh. Councilman Grow requested a presentation in April about positive and negative aspects of reconnecting the marsh. Susan Davis noted the chair would not be available for the April meeting. Mr. Stump provided the list of questions to be addressed in such a presentation. These included the projected scientific benefits of reconnection, the negative aspects of reconnection, the feasibility of reconnection, what is the cost, funding source(s), and economic advantages/disadvantages of reconnection. Dr. Fulton agreed to discuss the proposed presentation with SJRWMD staff and get back to Council.

Susan Davis inquired about a previous request for a presentation on willow and sawgrass, and evapotranspiration and nutrients. Dr. Fulton acknowledged SJRWMD staff could make a presentation.

Councilman Truenow inquired about the Allied Group USA project on Lake Apopka. Mr. Renfro noted that it was a legislatively funded project, and that Jay Barfield from Allied Group USA would be making a presentation on the project at the March Council meeting.

In further updates, Mr. Renfro reported the contract for reconnection of Emeraldal Marsh to Lake Griffin had been finalized with plans to start the project in the next several months. Mr. Renfro noted the Allied Group Cleanflow project would be presented at the March Council meeting. Councilman Goerner inquired about the extensive SAV in Lake Griffin noting possible hydrilla from Bird Island to Haines Creek. Mr. Renfro noted issues with hydrilla throughout the chain with hydrilla growing in as deep as 13 ft of water. FWC will map with sonar then treat. Mr. Renfro noted it is hard to control because it grows so fast.

Dr. Fulton provided responses to questions asked previously by the Council. The Council inquired about the cost of the Matanzas Marsh. Dr. Fulton reported the Matanzas Marsh was 8500 acres and contained the two largest wood stork colonies. The acquisition cost was \$40 million with \$10 million provided by SJRWMD.

In September, the Council inquired on the quantity of water contribution to Lake Apopka. Dr. Fulton noted:

- NSRA discharges Jan-Late July 2015 – 1,134 acre-feet – enough to raise lake water level 0.4 inches, but Apopka went down 5.6 inches during this period
- NSRA discharges late July-late Sep 2015 – 3,686 acre-feet – enough to raise lake water level 1.4 inches, but Apopka went up 12 inches during this period, so discharges could account for only about 12% of the increase
- NSRA discharges from 2011-2014 were:
 - 2011 1,439 acre-feet
 - 2012 0
 - 2013 0
 - 2014 625 acre-feet

Dr. Fulton reported SJRWMD held a workshop on hydrologic modeling for minimum flows and levels (MFLs) in Maitland. The report from the workshop was to be posted on the SJRWMD website. Comments have already been posted on the draft report and draft model. Dr. Fulton also reported the Emerald Marsh wildlife drive would be closed during 2016 for construction. Finally, Dr. Fulton reported that Birdapalooza was scheduled for the February 6th weekend at Magnolia Park.

Mr. Perry, LCWA, attended the MFL meeting, and wanted to ensure Council was aware that baseline conditions for the model are 1995 land use, and water level data was from 1995-2006. Mr. Perry noted issues with the model related to trying to use it in a predictive model. There was concern about using the model to predict 50 years in the future. Intent was that under baseline conditions there was an effect with groundwater.

Mr. Perry discussed a graph of nonexceedance ranges from 61-67 ft for Lake Apopka. Mr. Perry also showed a graph where Lake Apopka model and actual data were close not similar. Mr. Perry noted discussion about how accurate it needs to be at the MFL meeting. There was much discussion about more detailed water budgets, particularly the groundwater component. The MFL proposal is to manage the NSRA as a shallow marsh. He noted the current schedule is to complete the revised model by mid-august 2016, followed by another review meeting in September, then another comment review period in October 2016. A summary report is tentatively due December 2016. At that time actual MFL development would begin. Mr. Perry estimated it would be middle of 2017 before MFLs would be available for review. Mr. Perry noted there could be changes in lake level operational schedule, as a result of total maximum daily load (TMDLs) limits.

Mr. Perry reported efforts to restart flow to the NuRF facility as the lake was close to regulation schedule. Mr. Perry noted the Ferthaul project was on the north shore using ponds with dredging, parabolic screen and an aeration process. Mr. Perry recommended the Council examine the efficiency of the process.

Council requested a possible update by Ferthaul in March. Mr. Perry noted NuRF phosphate removal costs hundreds of dollars/lb. Councilman Goerner inquired as to the cost/lb for dredging and removal. Mr. Perry did not know the cost.

Mark Hoyer, University of Florida reported there were no volunteers as yet to acquire and process water quality samples on Lake Apopka.

Kevin Coyne, Department of Environmental Protection (DEP), the new technical advisory group representative from DEP, gave a brief introduction about his background and previous work history. Councilman Goerner requested Mr. Coyne to stay up-to-date on MFL developments.

8. COUNCIL MEMBER COMMENTS

A. Councilman Grow inquired about the progress of cleaning lakes, and discussed parabolic screens. Mr. Perry showed video of the Ferthaul site, with parabolic screen in action. Councilman Goerner commented on how fast slurry comes out, and the dryness of the material.

Councilman Grow reported that he would not be present for the March meeting.

Susan Davis noted there were numerous action items, with many documents to send out to the Council.

B. The Next Scheduled Meeting is tentatively scheduled for March 4, 2016.

9. ADJOURNMENT

The meeting adjourned at 11:12 a.m.