

FINAL

**MINUTES OF THE MEETING
of the
HARRIS CHAIN OF LAKES RESTORATION COUNCIL
August 3, 2018**

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:01 a.m. on August 3, 2018 at the Lake County Board of County Commissioner Chambers, 315 West Main Street, Tavares, Florida.

- **CALL TO ORDER**

Chairman Grow called the meeting to order at 9:01 a.m.

- **INVOCATION AND PLEDGE OF ALLEGIANCE**

Chairman Grow called for a moment of silence. The Pledge of Allegiance followed.

- **COUNCIL ROLL CALL; REMINDER FOR OTHERS TO SIGN IN**

Chairman Grow called the roll.

Council Members Present

Sid Grow, Chairman

Keith Truenow, Vice-Chairman

Don Nicholson, Secretary arrived at 9:12 a.m.

Stephanie Bishop

Skip Goerner

Robert Johnson

John Stump

Council Members Absent

Vacant, Attorney

Vacant, Physician

- **APPROVAL OF MINUTES**

June 2018 and July 2018 minutes were unanimously approved by members present.

- **PRESENTATION**

Harris Chain of Lakes Restoration Council Discussion, Ann B. Shortelle, Ph.D., Executive Director, SJRWMD

Dr. Ann Shortelle, Executive Director, SJRWMD, responded to Council on two questions previously posed to her by Council. Dr. Shortelle recited the first question regarding north shore reconnection as follows: "Council requests SJRWMD and pertinent Council technical advisory group agencies (FWC, FDEP, LCWA) to provide current scientific data in a presentation to the Council that allows the Lake Apopka North Shore (LANS) to either be connected or not connected to Lake Apopka. Council was informed several times during the 2017 Council meetings that the District will not look at reconnecting the LANS until 2021. The Council requests the District analyze or hire a firm to analyze the reconnection prior to 2021. If reconnection is an option, the presentation should include required

steps, cost, and timeline". Dr. Shortelle noted a managed reconnection of the LANS would protect water quality by reducing nutrients, improve the lake fishery, and provide water storage and flood protection. Dr. Shortelle reviewed the restoration process which started in 1996. At that time 86% of the phosphorus (P) load to the lake was from agriculture, abundant algae reduced light penetration and the concomitant loss of grassbeds and sportfish. Through a managed north shore nutrients and total suspended solids (TSS) can be controlled, and water movement through the Apopka-Beauclair Canal can be regulated. Lake Apopka is being treated twice. Once by SJRWMD through the flowway and secondarily through the LCWA Nutrient Reduction Facility (NuRF).

Dr. Shortelle noted that since historic north shore muck farming practices resulted in five feet of subsidence, direct reconnection to the lake without the ability to control water movement, would create open water habitat rather than marsh area for treatment. Dr. Shortelle discussed the changes in the north shore that occurred because of Hurricane Irma that allowed SRJWMD to revise the north shore status prior to the planned 2021 review date. Dr. Shortelle noted that pre-Irma there was 5 billion gallons of water storage in Phase 1, Phase 2, and the Duda Ranch properties in the NSRA. Post-Irma all the remaining NSRA phases were inadvertently flooded by unprecedented storm rainfall and levee overtopping, creating another 4.4 billion gallons of storage.

SJRWMD collected fish samples from the newly flooded areas and conducted subsequent analyses. SJRWMD presented these results to the United States Fish and Wildlife Service (USFWS) in a biological assessment. USFWS concurred with SJRWMD's assessment that pesticide concentrations in forage fish were below ecological thresholds, allowing SJRWMD to begin implementing broader management actions in the NSRA to benefit the lake.

Dr. Shortelle discussed post-Irma north shore levee repairs in which 2-3 million dollars has been spent on levee repairs. Dr. Shortelle noted water levels continue to be high which has somewhat delayed the repairs, however they should be completed in the next month or so.

Dr. Shortelle noted the expanded storage capacity in the LANS is helpful, as the stored water can be used for lake level augmentation, wetland restoration and aquifer recharge. The various inlet structures in the LANS allow SJRWMD to now provide emergency floodwater storage. However, discharge capacity through Apopka-Beauclair (AB) and Dora canals is still limiting during floods.

In concluding remarks about the LANS, Dr. Shortelle highlighted the multiple benefits from the unintended experiment on the LANS. SJRWMD can now control water in and out of the LANS and provide water quality and habitat benefits. Any new LANS work will require design, permitting and construction of upgrades to the perimeter at a cost of perhaps 10-15 million dollars. Ultimate construction completion will depend on weather patterns and will not happen in one year.

Councilman Goerner questioned whether the areas released are for restoration so animal life can get reconnected. Dr. Shortelle noted if reconnection means taking down farm levees, that is not a conversation to date. A functionally managed reconnection does exist, using pumps and gates to allow water in and out. There is a need however for more connections to places that flooded. Councilman Goerner agreed that current restoration of the marsh at this point will never approach historic restoration.

Dr. Shortelle further discussed the issue of pesticides in fish, noting there are two different targets when addressing fish consumption. The first is an ecological target in which forage fish like

mosquitofish were tested and found to be not as contaminated as expected for 2021, meaning these forage fish are safe for consumption by top predators like birds. The second target is for human consumption which is regulated by the Department of Health (DOH), which utilize fillets from gamefish to assess human consumption risk. Since there have been few gamefish in the north shore marsh area, fillets have not been available to assess risk. Gamefish from Lake Apopka have been assessed and are safe for human consumption.

Councilman Goerner questioned whether the prohibition on fish consumption in the LANS was impeding direct reconnection. Dr. Shortelle noted a completely articulated system such as Councilman Goerner suggested would provide no water quality treatment, no storage possibility, and the exchange of fish with Lake Apopka could result in a loss of fish consumption benefit for the entire lake.

Councilman Goerner suggested there needs to be some solution to conveyance other than the AB Canal and all options should be studied. Councilwoman Bishop queried whether the levee breach area had been raised. Dr. Shortelle noted the levee had been slightly raised without the need for an additional permit. Council discussed various options for conveyance, including a trench or culvert to bypass the Dora Canal. Councilman Nicholson expressed amazement at the amount of storage resulting from the drop in elevation.

Dr. Shortelle recited the second question posed to her by Council as follows: “Dr. Mike Allen proved that the harvest of gizzard shad is not effective, in the manner that it is being done, in significantly reducing phosphorus in Lake Apopka. Why is money being wasted on continuing the harvest?” In response, Dr. Shortelle acknowledged the Council’s longstanding questions and concerns about harvesting gizzard shad. Dr. Shortelle reviewed the concept of bioturbation in relation to gizzard shad noting large numbers of these fish impede water quality and habitat goals. Dr. Shortelle discussed the results of studies on gizzard shad in Lake Dora by Michael Allen and Thomas Frazer. The study was commissioned by SJRWMD in 2007 and concluded that the whole lake experiment did not result in reduction on chlorophyll or water clarity. Part of the problem was that if harvest was to be effective, a small net mesh size would have been needed, which would adversely affect gamefish catches. Dr. Shortelle noted SJRWMD concurred with the results, but most importantly noted cost-effectiveness was not part of the study scope. SJRWMD data does demonstrate the cost-effectiveness of shad removal as a nutrient reduction tool in both Lake Apopka and Lake George.

Dr. Shortelle reported on the demonstrated success of shad harvest with benefits including reduced total suspended solids and chlorophyll concentrations. It is a cost-effective means of removing P from Lake Apopka, with nearly 100,000 lbs. of P remove between 2007 and 2017. The average cost of this removal was \$57 per pound. Dr. Shortelle noted gizzard shad removal is not a panacea but a balancing act. The long-term goal is for the Florida Game and Freshwater Fish Commission (FWC) to introduce enough bass back into the system consuming enough young gizzard shad to act as a form of biological control.

Chairman Grow noted about 1 million pounds of gizzard shad per year are removed and queried how many total shad are in the Lake Apopka. Mr. Dennis Renfro, FWC, reported estimates can be shown through catch effort.

Dr. Shortelle concluded her remarks reporting extensive coverage of submerged aquatic vegetation in Lake Apopka. Mr. Renfro noted Black Bass and Sunshine Bass will influence shad populations as their numbers expand into the vegetated areas of Lake Apopka.

- **PRESENTATION**

Harris Chain of Lakes Restoration Council Annual Report Schedule, Denis Frazel, Harris Council Administrative Support

Denis Frazel, Harris Council Administrative Support, presented the 2018 annual report development schedule and review dates to Council, noting the report would include Council activities from November 2017 through October 2018. Mr. Frazel requested input from Council on cover art for the report. Mr. Frazel noted the first draft of the report would be presented at the September 14th Council meeting. Any comments or edits received by Mr. Frazel by the 11th of September would be included as tracked changes in the document to be discussed on September 14th.

- **AGENCY UPDATES**

Mr. Ron Hart, Lake County Water Authority (LCWA), reported the LCWA incorporated funding in the upcoming budget of about one million dollars to FWC to supplement funds for hydrilla control on Lake Harris. Mr. Hart noted no proposal had yet been developed, just that the request to incorporate funds in the budget had been made.

Councilman Goerner expressed concern over the potential for overspraying, and the negative impacts it had on Lake Griffin. Councilman Goerner was not in favor of aerial spraying. Mr. Hart noted the goal is to control hydrilla while maintaining native vegetation.

Susan Davis, SJRWMD, provided a brief update on SJRWMD activities. Ms. Davis reported Harris Council-related expenses for the previous month, including Florida Administrative Register notification and administrative support expenses. Ms. Davis noted the agenda and meeting documents are online, and the Harris Council website received 550 page views in the previous month. The page listing Council vacancies received 33 page views. Ms. Davis reported the next SJRWMD Governing Board meeting was scheduled for August 14, and 3 news releases related to the Harris Chain of Lakes were provided to Council. The SJRWMD agency report was provided by Ms. Davis and is attached to these minutes.

Bob Naleway, SJRWMD, provided an update on the Lake Apopka Newton Park dredging project. Mr. Naleway noted the project had previously been updated in October 2017 and described an aerial view of Newton Park and boat ramp in Winter Garden. Mr. Naleway discussed the 2013 conceptual footprint and how the boundary was modified near shore to avoid impacts to submerged and emergent aquatic vegetation. The conceptual design was completed in February 2018, with final design, permitting and construction currently on hold, until funding had dried up. Grow expressed concern about flocculent (floc) movement into the channel. Mr. Naleway indicated maintenance dredging would probably be needed at some point. Councilman Goerner discussed using bubblers to restrict floc movement. Mr. Naleway noted SJRWMD staff had discussed bubblers but had not brought any information to the Governing Board. Mr. Naleway indicated such a proposal could be considered if funding was available.

Mr. Naleway also provided an update on the Lake Apopka targeted lake wide restoration-dredging. Mr. Naleway reported SJRWMD had completed an archeological study that identified high probability and avoidance zone areas, had completed remote sensing in potential dredge areas, and received approval from State Division of Historic Resources to proceed. In addition, SJRWMD had completed a hydrodynamic study in which current velocities at the lake bottom (ability for material to be picked up and moved by currents) had been calculated. Ongoing permitting work included a

strategic planning meeting with permitting agencies that was held in April 2018. The potential permits include a U.S. Army Corps of Engineers (USACE) programmatic permit (10-year permit), and Florida Department of Environmental Protection and Orange County master permits (20-year permit). Mr. Naleway noted permitting with USACE is generally a 3 year process. Councilman Goerner suggested in the in event a USACE permit is needed to add a conveyance option for Lake Apopka.

Chairman Grow noted the project was listed as funded in the 2017 Annual Report. Mr. Naleway noted some funds had been spent for the development plan, but the \$500,000 budget did not include actual dredging activity. Additional funding would be needed in the future to complete the project.

Ms. Lindsey Porter, SJRWMD, provided an update on the Apopka Flowway-10 pack rehabilitation project. The 10-pack refers to the series of 10 structures (vertical culverts) along the inflow canal to the Lake Apopka Marsh Flow-Way (MFW) that are responsible for regulating flow and water levels in the MFW inflow canal. The goal of the project is to rehabilitate structures as both the culverts and gates were decaying. The repair was required for operation of MFW. Ms. Porter noted construction started in December 2017 and will be completed by the end of August 2018.

Councilwoman Bishop queried whether ultraviolet (UV) light exposure would affect the life expectancy of the high-density polyethylene (HDPE) replacement pipes. Ms. Porter noted the pipes would not be exposed to UV in the new configuration. The corrugated steel culverts were 30 years old, with the new HDPE pipes expected to have a service life of 50 years.

Mr. Dennis Renfro, FWC, reported on a partnership with LCWA to light up the dock at Lake Harris. The underwater green lights attract fish, enhance that area at night, and create a dockfishing opportunity for anglers. Mr. Renfro also noted FWC, LCWA and SJRWMD met with stakeholders at the Leesburg College to discuss hydrilla. The members will be following up to create a working group to provide more information about vegetation management.

Mr. Renfro reported FWC had put together an Annual Report for the Harris Chain and Lake Griffin. The report notes that Lake Griffin has a nearly one fish per hour catch rate, which shows how well that lake is doing. MR. Renfro noted signs at the boat ramp in Lake Dora identify fish attractor locations. Mr. Renfro observed that sunshine bass are being caught on the fish attractors in Lake Harris even during the summer.

Finally, Mr. Renfro announced he was retiring from FWC after 37 years of service and was planning to fish around the world. Mr. Ryan Hamm will be the point of contact for future Harris Council meetings.

- **PUBLIC COMMENTS (fill out speaker card and hand to a staff member prior to public comment period)**

Mr. Peter Tuite, private citizen, discussed excessive hydrilla growth on Little Lake Harris. Mr. Tuite noted boaters are unable to get through the lake because of the vegetation. Mr. Tuite noted it appeared the hydrilla had been sprayed with herbicide, but only the upper parts of the plants seem to have died. Mr. Tuite suggested considering solutions like grass carp or a mechanical harvester.

Chairman Grow requested that Natalie Visscher from FWC be invited to the October Council meeting to discuss vegetation management.

Mr. Sal Gallelli, also discussed hydrilla Little Lake Harris, noting it was impossible to fish from the pier. Mr. Gallelli reported he had lived in the are for 20 years and had not seen hydrilla extending 300 feet out from the shore.

Ms. Nancy Barclay, resident on the Tammi Drive Canal, discussed the problem of floating masses of muck moving up and down the Tammi Drive Canal. Ms. Barclay noted there is so much muck buildup that boats cannot exit the canal. Ms. Barclay requested assistance in resolving the problem.

Mr. John Hecimovich, also a resident on the Tammi Drive Canal, reported members of the LCWA suggested he talk to the Harris Council. Mr. Hecimovich submitted a letter (included as a supporting document to the minutes) to Council outlining questions he had regarding muck in the Tammi Canal. Mr. Hecimovich presented a series of solutions including, stop the muck from leaving Lake Apopka straighten out the entrance to the Tammi Drive Canal, and/or install and underwater air curtain.

Ms. Linda Moss, representing the Lake Jem clean water project, discussed issues of muck transport into the Tammi Canal. Ms. Moss suggested most flocculent moved into the Apopka-Beauclair Canal, then the Tammi Canal at times when the spillway from Lake Apopka was opened. Ms. Moss showed are series of photographs showing floating material in the Tammi Canal. Ms. Moss requested assistance from the Harris Council.

Chairman Grow and Councilman Nicholson suggested Ms. Moss speak with the Lake County Commission. Councilman Nicholson suggested the residents to establish a Municipal Service Benefit Unit program to provide funding to mitigate the problem.

- **COUNCIL MEMBER COMMENTS**

Chairman Grow presented copies of the newspaper advertisements promoting the Harris Council meetings and vacancies. Chairman Grow recommend changing the ads to list the open vacancies as “qualified members”, rather than for the specific vacancies of attorney or physician. There were no other suggestions.

Chairman Grow also discussed grass carp, noting the draft Mark Hoyer paper pointed out grass carp consume large amounts of vegetation, and while they are effective for closed systems, used must be aware that massive elimination of submerged aquatic vegetation be grass carp may negatively affect water quality.

Councilwoman Bishop departed the meeting at 11:46 a.m.

Vice-chairman Truenow reflected on the history of droughts with little to no water movement from Lake Apopka has now been replaced with high flows of water. Muck that had been settled during drought periods is now moving with more water. Vice-chairman Truenow noted restoration efforts are moving in the right direction with projects such as the sump dredging in Lake Apopka. Vice-chairman Truenow also suggested the need for some kind of box culvert to bypass Dora Canal in case of emergency.

Councilman Goerner acknowledged the members of the public in attendance. Councilman Goerner noted the Council does not have any authority to resolve public issues presented. The Council can

only make recommendations. Councilman Goerner suggested the need for a plan to address the muck. If there is some question as to where material came from, then samples from inside the canals should be collected, sent to a lab and analyzed. Councilman Goerner suggested SJRWMD or LCWA may be able to make the necessary comparisons.

Councilman Goerner discussed hydrilla, noting it is not necessarily a bad thing. The plant provides cover for numerous organisms, but it needs to be controlled. Councilman Goerner indicated mechanical harvesting was not the most viable solution.

Councilman Goerner also discussed issues of limited conveyance in the Dora Canal. Councilman Goerner made a motion to investigate or study the feasibility of creating a secondary form of conveyance for water from Lake Apopka. The motioned was seconded and unanimously approved by a quorum of members present. Councilman Stump was absent for the vote.

Councilman Nicholson discussed water conveyance in other localities, and how they might be adapted for local purposes, as a possible source of tax revenue.

Councilman Johnson suggested government agencies are not making the best use of University of Florida academic resources, including hydrilla control and limnology.

Councilman Stump further discussed conveyance options or diversions as an option for Lake Apopka outflows.

Councilman Goerner acknowledged SJRWMD Governing Board Chairman John Miklos, who was present at the meeting.

- **REVIEW OF ACTION ITEMS REQUESTED DURING MEETING**

Chairman Grow requested Natalie Visscher from FWC be invited to the October Council meeting to discuss vegetation management.

Chairman Grow requested the Action Items list be updated and presented at the next meeting.

- **DISCUSSION OF NEXT SCHEDULED MEETING**

Chairman Grow noted Denis Frazel, Council Administrative Support, would review the first draft of 2018 Harris Council Annual Report.

Chairman Grow requested updates on the remaining projects from Table 5 of the 2017 Harris Council Annual Report.

Councilman Johnson suggested inviting Bill Haller from UF to discuss hydrilla control in lakes at the October meeting.

Council members- do you anticipate attending the next Harris Council meeting?

No Councilmembers present indicated they would not attend the next meeting

- **ADJOURNMENT**

The meeting adjourned at 12:11P.M.