

FINAL

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

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:04 a.m. on March 6, 2015 at the Lake County Board of County Commissioner Chambers, 315 West Main Street, Tavares, Florida.

Members Present

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

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 9:04 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. Christianne Ferraro (DEP), Stephen Tonjes (DOT) and Mike Allen (UF) of the Technical Advisory Group (TAG) were absent.

4. APPROVAL OF MINUTES

The Council unanimously approved the meeting minutes from October 30, 2014, and January 9, 2015. Vice Chairman Johnson requested date and spelling changes to page 3 of the February 6, 2015 meeting minutes. Vice Chairman Johnson made a motion to approve, as revised, the February 6, 2015 minutes. Councilman Grow seconded the motion and the motion passed with a unanimous vote.

5. PUBLIC COMMENTS

Robert Hendrick addressed the Council and stated that he would e-mail a list of questions to the St. Johns River Water Management District (SJRWMD) staff. Mr. Hendrick requested approval to provide a presentation to the Council at the next meeting and expressed concern regarding one of SJRWMD's dredging projects.

6. PRESENTATIONS / ACTIONS

- A. Chairman Goerner commended Jay Brawley (SJRWMD) for close observation of water levels and for keeping them at or above the regulation schedule. Mr. Brawley credited District staff and rainfall for the situation. Mr. Brawley provided an update on current conditions and water levels. He provided graphs of the Upper Ocklawaha River Basin (UORB) water levels, regulation schedules, maximum and minimum desirable elevations, and rainfall amounts. Mr. Brawley noted that the water level in Lake Apopka was above minimum desirable level, but below the regulation schedule, and the structure was closed. The water level in the Super Pond (lakes Eustis, Harris and Dora) has been above minimum desirable level and occasionally above the regulation schedule. Therefore, there have been some flood releases. The water level in Lake Griffin has been above the regulation schedule for the past couple of months. Therefore, some flood releases have occurred when water levels were trending upward towards the maximum desirable elevation.

Secretary Truenow asked for an update on the dredging project at Lake Apopka and the City of Apopka's wastewater facility. Mr. Brawley indicated that SJRWMD has received confirmation from the Florida Fish and Wildlife Conservation Commission (FWC) and the Florida Department of Environmental Protection (FDEP) that these agencies agree with the dredging project's initial scopes of work. The plan is to begin dredging the delta at the mouth of the AB Canal in late September 2015. The dredging will also provide for improved access. Mr. Brawley indicated that the City is behind schedule, but that the wastewater facility near Lust Road is nearing completion. This facility will allow the City to augment wastewater for reuse. Mr. Brawley noted that SJRWMD is applying for a grant with the FWC for boat ramp and facilities improvements at McDonald Canal. Chairman Goerner inquired about the volume of water that would pump from Lake Apopka during the dredging process. Mr. Brawley noted that the maximum pumping rate was approximately 3,000 gallons per minute and that pumping would yield a total volume of approximately 500,000 cubic yards, based on the available funding. Chairman Goerner discussed the amount of solids being dredge relative to the total amount of cubic yards. Mr. Brawley further explained the dredging project and noted that it is anticipated to contain 15% percent solids, out of total amount of cubic yards. Chairman Goerner reiterated his concern about water being taken out of Lake Apopka during the dredging project and discussed this issue with Mike Perry, Lake County Water Authority (LCWA). Mr. Perry discussed how to calculate the amount of water removed during dredging. Mr. Stump asked to visit the project site during operation and the Council discussed consideration of a site visit.

Mike Cullum, SJRWMD, discussed minimum flows and levels (MFLs). He noted the addition of Lake Yale to the ongoing MFL process and corresponding peer review of the initial model calibration for the lakes. Mr. Cullum noted that the plan was to finish the model calibration, run numerous MFLs scenarios, and then schedule public meetings. Mr. Cullum indicated the he anticipates receipt of the final report on the modeling during Summer 2015. Chairman Goerner stated that he wants to be certain that all of the relevant information is included in the MFL models because the impact of MFLs can be severe, and the results will impact future surface and ground water withdrawals. Chairman Goerner indicated that if SJRWMD cannot answer questions, or has difficulty answering questions, then this would indicate that information is not readily available and, therefore, not included in the MFL models. Chairman Goerner discussed SJRWMD's response to his previous questions concerning the amount of water being pumped from the aquifer, including consumptive use permits (CUPs) and domestic self-supply wells, for the area subject to MFLs. Chairman Goerner indicated that he has questions about the domestic self-supply estimate of 8.85 million gallons per day (mgd) in 1995 and 8.90 mgd in 2010. Mr. Cullum noted that there has been

a general flattening of total water use per capita over the past ten years, and that this has been attributed to water conservation and the use of variable rate scales by utilities. The general flattening has occurred despite an increase in population. Mr. Cullum discussed the uses of the best information from all available sources for existing water use and how this has allowed for more precise calibration of the model over the past ten years. He also explained that the MFL process would include opportunities for obtaining comments from the Harris Council, public, and utilities. Chairman Goerner noted that he wants to be certain that the correct information is being used in the models because future surface and ground water usage will depend on the MFLs. Chairman Goerner noted that he thinks SJRWMD's domestic self-supply estimates are incorrect and that he has additional concerns about surface water withdrawals, including those from lakefront homeowners for irrigation. Mr. Cullum confirmed that domestic self-supply is not included in surface water withdrawal numbers and provided a graph of groundwater withdrawals as of February 2015. Secretary Truenow discussed the use of captured water, tail water recovery, and groundwater supply. Chairman Goerner stated that he wants to ensure that the MFL models are complete and that they contain all relevant information for sufficient surface and ground water supplies. Chairman Goerner indicated that he is concerned about lawsuits due to inaccurate groundwater models and noted that he is not satisfied with the surface water component.

Chairman Goerner noted that unregulated pumping of surface water by lakefront homeowners results in a significant amount of withdrawals. He noted that he is not satisfied with SJRWMD's explanation of self-supply estimates. Mr. Cullum further discussed the withdrawal amounts and how they can be considered de minimis. Mr. Stump discussed his previous involvement in performing surface water impact analyses. He explained how the input parameters used in a model take into account all uses observed in the impact analysis reconnaissance. Mr. Stump noted that the amount of water that a 2-inch well pumps from a lake was de minimis compared to the consumptive uses already being implemented on a lake. Mr. Stump noted that the measurement of this de minimis impact would likely be measured in microns, and would not make a difference in the surface water elevation. He further explained that the density of the homes around a lake, and the corresponding number of withdrawal points, do not account for enough water use to create a need to calculate a difference in lake elevation.

Councilman Nicholson inquired about impacts related to salt-water intrusion. Mr. Cullum noted that there is some significant salt-water intrusion in the southeast part of the state (Palm Beach, Broward, Monroe, and Miami-Dade counties), but not in the area around the Harris Chain of Lakes. Vice Chairman Johnson discussed saltwater previously being found in the sand farm during farming. Mr. Cullum noted that he attributed this to connate or historic pockets of salt water located within inland areas. He noted that salt-water intrusion does not appear to have an effect on the respective MFLs for the area.

Chairman Goerner discussed the previous pumping of rainfall runoff from farm fields into Lake Apopka, and whether billions of gallons of rainfall are not recharging Lake Apopka. Mr. Cullum discussed Lake Apopka watershed and explained how the watershed was relatively small. Chairman Goerner inquired as to why SJRWMD is not designing a nutrient reduction facility to filter runoff from the North Shore. Chairman Goerner discussed rainfall on the north shore of Lake Apopka, how it is not going into Lake Apopka and affects the entire system, and why this should be included in the MFLs. Mr. Cullum and Mr. Stump discussed the Floridan aquifer's discharge and recharge areas, and leakage from Lake Apopka into the north shore area. Chairman Goerner stated that there were previous records provided by farmers that show that leakage from Lake

Apopka to the North Shore has been 13 to 14 billion gallons per year. Mr. Cullum explained that a licensed professional geotechnical engineer previously calculated the leakage at approximately 1,500 acre-feet per year.

Councilman Grow discussed the number of groundwater CUPs for Niagara Bottling. Mr. Cullum discussed diffusive flow and the use of computer models to document this for calibrating surface water flows. He noted that SJRWMD is developing a circulation and sediment transport model for Lake Apopka. Vice Chairman Johnson discussed viewing aerial photographs which showed there was flushing of peat and muck by Gourd Neck Spring in the western part of Lake Apopka until the installation of the dike. Mr. Stump inquired about a graphic that showed the potentiometric surfaces in the region near Lake Apopka. Mr. Cullum noted that such a graphic was part of a presentation to the Council in May 2014.

7. COUNCIL AND AGENCY QUESTIONS AND ANSWERS

Mike Perry, LCWA, discussed the regulation schedule, seasonal rainfall, and different changes in Lake Apopka and the Harris Chain of Lakes. Mr. Perry verified that any discharge from Lake Apopka would flow through the nutrient reduction facility (NuRF). He reported that Senator Alan Hayes previously noted to LCWA that he does not support funding a boat ramp at the McDonald Canal until the lake recovers. Mr. Perry also noted that Senator Hayes mentioned a cavitation process that provides drinking water quality and residuals for use as soil amendment. Mr. Brawley reported that Nick Szabo, Ferthaul Company, conducted a pilot project on Clay Island involving a suction pump and a proprietary cavitation generator. The project was a very small. Mr. Brawley indicated that he does not have a final project report from Mr. Szabo. Chairman Goerner requested a short presentation at the next council meeting on the cavitation process. Mike Perry also discussed LCWA's budget process, office groundbreaking at Hickory Point Park, and a citizen's Lake Academy. Dennis Renfro, FWC, stated that Nick Wiley (FWC Executive Director) is preparing an executive report on the community partnership to construct and install artificial fish attractors. He discussed installation of fish attractors on the western side of the lake, at Hickory Point Park and the Stick Marsh. He noted that more than 3,000 people reportedly attended the Lake Apopka Wildlife Festival and Birdapalooza. FWC is having an open house at the Tavares Pavilion on March 19, 2015. There is no change in the Montverde Project or available funding. He noted that the Oakley Bass Tournament was a success and was well attended with approximately 500 participants.

8. COUNCIL MEMBER COMMENTS

A. Comments

Vice Chairman Johnson discussed whether there was a legend for the 2007-2008 soil sample map used in last month's council presentation. Mr. Brawley explained that abbreviations TOC and OCP stand for total organic carbon and organochlorine pesticide, respectively. Vice Chairman Johnson discussed toxaphene, re-flooding the north shore area, and questioned the use of the term "safe" regarding release of water from the north shore area into the lake. Vice Chairman Johnson indicated that he recommended a thorough review and literature search to define what "safe" is in terms of measurable criteria. Mr. Brawley discussed water moving from the north shore area into Lake Apopka last month (approximately 50 cubic feet per second) to draw down some areas due to rain. Mr. Brawley noted that this water was treated with alum, as needed, before pumping into the lake. He discussed phosphorus levels in the water column and the total maximum daily load (TMDL) for the lake (35,000 lbs/year). Vice Chairman Johnson discussed whether SJRWMD was analyzing the bioaccumulation of pesticides in fish. Mr. Brawley noted that he understood that

there was periodic fish sampling. Rolland Fulton, SJRWMD, indicated that SJRWMD wants to ensure that the fish are safe for human health consumption, but that the state health department makes that determination. This level is much lower than what is acceptable for ecological health within the North Shore, and this is a much lower concentration than what is presently in the fish in the North Shore.

Chairman Goerner and Mr. Brawley discussed groundwater models and the CUPs for groundwater and surface water withdrawals. Chairman Goerner noted that recharge to the lakes is of more interest to him than groundwater withdrawals. Mr. Cullum noted that some of this information was addresses in his water budget presentation provided to the Council in May 2014. The information in that presentation showed the relative magnitude of the contributions to the water budget, and wet year and dry year comparisons. Chairman Goerner discussed the use of the Four Rivers Water Control Manual of 1993. Mr. Cullum noted that he would provide a summary of groundwater and surface water withdrawal figures for the UORB watershed, including the volume of CUPs permitted.

Councilman Nicholson discussed whether seeing the formulas that hold the components for determining the MFLs would provide for a better understanding. Mr. Brawley explained that it is very complex, and might not be possible to show as a formula, given the spatial interactions of groundwater and surface water, potentiometric surface shifts, and long-term (50-year) averages. Chairman Goerner indicated that he is concerned that rainfall on the North Shore does not go to Lake Apopka. He asked if SJRWMD considers this in the MFL model. Mr. Cullum noted that with MFLs, SJRWMD uses a period of record of at least 30 years and a frequency analysis. He discussed critical environmental concerns (wetland levels) and prevention and recovery for MFLs. Vice Chairman Johnson indicated he would ask Dr. Larry Beasley for a presentation on leakage through the dikes. SJRWMD staff will request LakeWatch to provide a presentation at the next council meeting that summaries past and continuing efforts.

The Council discussed the importance of TAG members' attendance. Chairman Goerner noted that TAG members are required by statute to attend Council meetings. Councilman Nicholson proposed grading TAG members' attendance and including this in the annual report. Councilwoman Bishop stated that the same standard should be applied to the council members, and that there should be some allowance relative to having 100% attendance. The Council directed SJRWMD staff to draft a letter (for the chairman' signature) to TAG agencies that indicates that they are required to attend all council meetings.

B. Discussion of Next Scheduled Meeting:

Chairman Goerner approved of a presentation by Robert Hendrick at the next council meeting. In addition, the Council requested presentations by Ferthaul and LakeWatch at the next meeting.

9. ADJOURNMENT

The meeting adjourned at 12:28 p.m.