

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

**June 1, 2012**

The regular meeting of the Harris Chain of Lakes Restoration Council was held at 9:00am on June 1, 2012 at the Lake County Board of County Commissioner Chambers, 315 West Main Street, Tavares, Florida

**Members Present**

Hugh (Dave) Davis II, Chairman  
Skip Goerner, Vice Chairman  
Sid Grow  
Robert (Bob) Johnson  
Don Nicholson

**Members Absent**

Richard Powers, Secretary  
Edward Schlein, M.D  
Keith Truenow  
Lloyd Woosley

**1. CALL TO ORDER**

Chairman Davis called the meeting to order at 9:06am.

**2. INVOCATION AND PLEDGE OF ALLEGIANCE**

Chairman Davis gave an invocation. The Pledge of Allegiance followed.

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

Chairman Davis called the roll. Councilman Powers, Councilman Schlein, Councilman Keith and Councilman Woosley were absent.

**4. APPROVAL OF MINUTES**

May 4, 2012 meeting minutes were approved by unanimous vote.

**5. PRESENTATIONS / ACTION ITEMS**

Chairman Davis called for a presentation by Mike Cullum, PE, St. Johns River Water Management District (SJRWMD)

- Mike Cullum, PE, SJRWMD, provided information on the Upper Ocklawaha River Basin Interim Lake Level Analysis. His presentation slides are viewable on the website at <http://harrischainoflakescouncil.com>. The presentation and discussion by the Council and Mr. Cullum included: 1) changes in historic water levels for Lake Apopka and the Harris Chain of Lakes; 2) Upper Ocklawaha Lake Levels 1996 – 2012; 3) Rainfall Comparisons, 5-1-11 thru 5-29-12; 4) Lake Apopka and Apopka Beauclair Spillway; 5) Apopka Spillway and/or LCWA NuRF; 6) Lakes Eustis, Harris and Dora & Burrell Spillway; 7) Burrell Spillway & Harris Bayou; 8) Lake Griffin & Moss Bluff Spillway; 9) Moss Bluff Spillway; 10) January, 2012 Projects and Land Committee Meeting – Mission Inn; 11) Approach for implementing Interim Lake Levels in the Harris Chain of Lakes & Lake Apopka; 12) Approach & Scenario proposals for implementing Interim Lake Levels in the Harris Chain of Lakes & Lake Apopka; 13) Recharge and discharge between surface water & ground water. Mr. Cullum reviewed the presentation that was given at the Public meeting on May 31, 2012 at Lake Sumter Community College. He stated that the District is proposing two scenarios for the operating schedule in the Harris Chain of Lakes and Lake Apopka. Scenario A is raise “recession” portion in spring. Scenario A1 is raise “recession” portion in spring, and floor in summer. Mr. Cullum stated that the District’s approach for implementing interim lake levels in the Harris Chain of Lakes & Lake Apopka were based on a lot of models and research. The public requested the District to review rates and levels

associated with the operating schedules during recession period in spring and rising limb in fall. The District recommended an Interim Operating Schedule. Mr. Cullum stated that with the added flexibility to manage Burrell sub-basin lakes currently is due to the completion of the Harris Bayou project that was implemented in 2008. He continued and added that next year the water stored in the Lake Apopka North Shore Restoration Area (NSRA) MFL Program will establish higher average levels and a more consistent flow of water. The District feels this will resolve contamination issues and partial re-flood NSRA by 2013.

The District used current Watershed Models from Water Supply Impact Study (WSIS). These models included Hydrologic Simulation Program – Fortran (HSPF); 90 models / 11 in-house modelers; external peer review and National Academy of Sciences – National Research Council review. The schedule for modeling started January, 2012 and finished with Calibration/Baseline Scenario (1995-2006) and Modeling Scenarios for Interim Plan. The results were brought to a public meeting on May 31, 2012 and plan to be voted on by the St. Johns River Water Management Governing Board on June 12, 2012. The model improvements include Harris Bayou; two way flow in Dead River; Groundwater component; and 12 years of simulation that included the extent of groundwater data, historic drought (1991, 2000, 2001), wet seasons flood (2004, 2005), dry season El Nino Floods (95-96, 97-98). The baseline used was the current operating schedules. Mr. Cullum stated that the flood protection was top priority in the scenarios along with maximum discharges.

Results of the two scenarios:

A: raise “recession” portion in spring

- 8 of 12 years raised average levels

A1: raise “recession” and floor in summer

- 8 of 12 years raised average levels
  - Greater duration of higher levels during 8 years
  - Slight chance of increased levels above Max
- Vice Chairman Goerner questioned the terminology of flooding. He wanted to know if the level of fluctuation schedule included level of flooding that includes washing out of roads and infrastructure and causing septic system leakages. The high flow is the cause of the District trying to control flooding in Apopka. What levels of phosphorus are in Harris Bayou? Vice Chairman Goerner shared concerns about high phosphorus water being discharged through the Harris Bayou and stated there needs to be a plan for limited discharges via the Harris Bayou. What are the gains of using groundwater pumping? Vice Chairman Goerner stated that the Harris Council has to protect the NuRF project and the gains that the Council has made and the only way to do this is to maintain Lake Apopka at a manageable level. He stated that Lake Apopka’s flow amounts are critical and flooding must be maintained at levels safely.
  - Chairman Davis clarified that the graph was being used to formulate when to let water out or hold water back, not to formulate water usage. He asked if there would be operational guidelines that the Board will adopt at the June 12 meeting. He requested to get a copy of the guidelines once the SJRWMD Board approves the operational schedule.
  - Councilman Johnson spoke of an executive summary written by Charles Tibbles when he worked with the USGS Orlando District Region that addressed water levels and possible causes of flows reduced in Haines Creek. He stated that the executive summary stated that since the early 1960’s there has been approximately a 50% decline in aggregate surface outflow from the Ocklawaha Chain of Lakes from

Haines Creek through Moss Bluff. Councilman Johnson added that he has read many articles about the Harris Chain soil types and their high phosphorus levels (Boyd, 1981 and other reports). He further added, the farmers have contributed, but the soils have always had this high amount of phosphorous since surveys have been done. Also, phosphorous came from many years of discharge from the City of Winter Garden and the Plymouth citrus plant, but the farmer is the last one standing and they are blamed. Councilman Johnson stated that there is a relatively new technique of introducing vegetation into lakes by using mats into which vegetation is transplanted, allowed to grow and multiply, and then anchored to the lake bottom.

- Councilman Nicholson asked what the definition of flood and the standard of flood based on 50 and 100 years? He continued and thanked Mr. Cullum for his presentation and dedication to explaining the models and graphs.
- Councilman Grow the water flow out of Moss Bluff is zero, what is the dissolved oxygen level & how at what level does it need to be before there is fish kill? He continued and asked if Scenario A1 would maintain the 0-0-0 outflows all summer?
- Walt Godwin, SJRWMD, answering Councilman Grow's question, the District is monitoring the dissolved oxygen levels downstream of Moss Bluff and on down the Ocklawaha Prairie. He stated that it has not dropped below normal.
- David Douglas, Florida Fish and Wildlife Conservation Commission (FWC), water temperature and stagnate water can contribute to fish kills.
- Dan Canfield, University of Florida (UF), shared an overlay plot showing yearly averages of AMO (Atlantic Multidecadal Oscillation) and cumulative deviation of Rainfall. The plot shows very wet and very dry periods in the state of Florida.
- Mike Perry, LCWA, stated that Lake Apopka is at 62.9 ft, regulatory schedule is 65.6 which are 2.7 feet below regulation schedule and minimum desirable is 65.4. The Superpond is at 59.9 ft, regulatory schedule is at 61.5 ft which is 1.6 ft below regulatory schedule and minimum desirable is 61. Lake Griffin is at 55.6 ft, regulatory schedule is at 57.5 which is 1.9 ft below regulation schedule and minimum desirable is 57.
- Vice Chairman Goerner recommended Scenario A1: raise "recession" and floor in summer; 8 of 12 years raised average levels; and greater duration of higher levels during 8 years with the slight chance of increased levels above maximum with the caveat of good guidelines of a flowchart as to keeping the dynamic lake levels as high as possible and show when the locks will be opened due to fluctuating levels. Additionally and raised earlier in the meeting, Vice Chairman Goerner shared concerns about high phosphorus water being discard through the Harris Bayou and stated there needs to be a plan for limited discharges via the Harris Bayou, monitoring the NuRF project, and maintaining Lake Apopka at a manageable level. He stated that Lake Apopka's flow amounts are critical and flooding must be maintained at safe levels. Councilman Nicholson seconded the motion. Motion carried unanimously.

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

- Dennis Renfro, FWC, updated the Council on: 1) discussions have been made with planting eel grass in the areas, 2) working with the Lake Apopka Restoration team on surveying and evaluating to draft

plans for the restoration, 3) current stocking of sunshine bass was 304,000 on Lake Apopka and 97,000 stocked in Lake Harris.

- Walt Godwin, SJRWMD, updated the Council on: 1) average flow into the marsh flow-way at Lake Apopka for the period was 73 cfs and the total phosphorus concentration from the center of the lake was 134ppb, 2) District has completed much of the work on the hydrologic interconnect that finalized the infrastructure needed to manage water in the NSRA, Duda, and Sand Farm, and 3) District recently received concurrence from the U.S. Fish and Wildlife Service to re-flood the remaining dry acres in the NSRA.
- Mike Perry, LCWA, updated the Council on: 1) discussed lake levels, 2) dredging was for navigation, 3) dredging is 61% complete in the lake, but summer will stop it until August 15, 4) working on budget for the LCWA, and 5) working with the county to hire a company to clean the Dora Canal bottom.
- Dan Canfield, UF, gave his updates to the Council on: 1) US Environmental Protection Agency (USEPA) data in 2007 probabilistic study of lakes of the total phosphorus and total nitrogen concentrations had changed from earlier times. These studies showed natural lakes as a group we found no statistically significant changes between the concentrations of phosphorus and total nitrogen from presettlement times to 2007. The sediment core data also showed no statistically significant change over time in the Lake Diatom Condition Index as developed by the USEPA for this study. Mr. Canfield stated that the data indicates that while cultural eutrophication with nutrients is well documented for many individual lakes, as a whole most natural lakes in the US have not undergone significant changes in trophic state.

## **7. PUBLIC COMMENTS**

- Diane Heitman, ACBS, Homeowners, Superpond Businesses, stated that the presentation did not base the information on the 2012 water lows. She continued and stated that the regulation schedule should be predicted based on the upcoming season, referring to look at the dynamic versus the static. She requested that the Superpond be used as storage of water. She requested that Lake Apopka should be maintained a little lower and the Superpond be maintained as high as possible.
- Linda Bystrak, Citizen, wanted to know if the data is still being collected and is the model using the particular data up to 2006? She has concern of using weather for data collection due to the extreme weather that had occurred during the time. She stated that well data (2006 – current) should be used for the data modeling. Ms. Bystrak recommended that the presentation should use the term seepage instead of recharge. She feels that the citizens could understand that better. Ms. Bystrak prefers the A1 scenario.

## **8. COUNCIL MEMBER COMMENTS**

### **A. Comments**

### **B. Discussion of Next Scheduled Meeting: July 11, 2012**

- Kraig McLane, SJRWMD, will arrange to have a biologist to present at the July or August meeting, as well as starting review of the annual report processing. The Council asked to see when the Lake County Board Room would be available on the second Wednesday of each month starting July 11, 2012. Mr. McLane told the Council that he would bring the annual report for review in August.

- Vice Chairman Goerner discussed the possibility to change the Council meeting to accommodate Dr. Schlein's schedule.

9. **ADJOURNMENT**

The meeting was adjourned at 12:08 pm.