

**FINAL**

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

**July 7, 2006**

The July meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:00 AM on July 7, 2006 at the Lake County Board of County Commissioners' Chambers, 315 West Main Street, Tavares, Florida.

**Members Present**

**Members Absent**

Skip Goerner, Chairman  
Hugh (Dave) Davis II, Vice Chairman  
Rick Powers, P.G., Secretary  
Keith Farner  
Robert Kaiser, P.E.  
Don Nicholson  
Richard Royal  
Edward M. Schlein, M.D.  
Ted Woodrell

**1. CALL TO ORDER**

Chairman Skip Goerner called the meeting to order at 9:05 AM.

**2. INVOCATION AND PLEDGE OF ALLEGIANCE**

The Invocation was given by Councilman Bob Kaiser, followed by the Pledge of Allegiance.

**3. ROLL CALL**

Chairman Goerner called roll. All Council members were present.

**4. APPROVAL OF MINUTES**

A call was made for discussion of the minutes from the May 5, 2006 meeting. Councilman Richard Royal suggested a minor edit on Page 11 of those minutes. A vote to approve the May meeting minutes with the suggested edit passed unanimously.

## **5. DISCUSSION ITEMS**

### Continuing Services Contract for Recording Secretary

Gene Caputo of the St. Johns River Water Management District (SJRWMD) presented the Scope of Services submitted by Hunter Environmental Consulting, Inc. (HEC) to perform duties as Recording Secretary to the Council for the period of July 1 through November 30, 2006. Mr. Caputo said that the contract had been finalized by the SJRWMD and includes completion of the 2006 Report to the Legislature. He further explained that the total of the contract includes the costs of two (2) additional meetings if requested by the Council and this was done to avoid modifying the contract in the future.

Mr. Caputo went on to say that the bid solicitation for Recording Secretary Services is scheduled to be published later in July and the SJRWMD will be reviewing proposals as they are received. Chairman Goerner asked when the bid process would be complete. Mr. Caputo said that he may be able to submit bids to the Council during the August meeting and possibly finalize the process by the September meeting. He added that the Council will be active in the selection process.

Councilman Kaiser made a motion to accept the HEC contract for Recording Secretary services. The motion was seconded and approved by unanimous vote. Patrick Hunter of HEC thanked the Council for their support.

### Harvester Purchase

Chairman Goerner notified the Council that he had located a mechanical harvester for purchase. He explained the used harvester is diesel powered, hydraulically operated, constructed of stainless steel, and will cost \$20,000. Chairman Goerner said the trailer that comes with the harvester is configured with a conveyor system so the harvested material can be loaded directly onto the trailer.

Chairman Goerner said that the funds will need to be transferred from the SJRWMD to the Lake County Water Authority (LCWA) in order to complete the purchase. Mike Perry (LCWA) said that they are prepared to move forward with the purchase on behalf of the Council prior to the funds being transferred from the SJRWMD. Chairman Goerner said the Council should complete the purchase in the near future, before the owners of the harvester offer it for public sale.

Councilman Keith Farner asked who was going to own and operate the harvester. Chairman Goerner said that the harvester would be transferred to the Florida LakeWatch organization and they would own and operate it. Additionally, he said that the City of Leesburg has offered to allow the harvester to be stored at one of their Parks & Recreation facilities.

Councilman Kaiser made a motion that the Council move forward with the purchase of the harvester utilizing Council funds. The motion was seconded.

Mr. Perry said that he would take this matter before the LCWA Board of Trustees (Board) at their July meeting.

Councilman Kaiser then modified his motion to include up to a \$5,000 retainer to hold the harvester prior to completing the purchase, if necessary. The modified motion was seconded.

Councilman Don Nicholson requested that the Chairman Goerner operate the harvester prior to completing the purchase to ensure that it is mechanically sound. Chairman Goerner said that he would operate it prior to making the purchase and that it would possibly need some minor maintenance like converting the petroleum-based oil to a vegetable-based oil and possible replacement of some of the hydraulic hoses. He added that the harvester had 1,400 hours of operation and that it is very good condition.

Dr. Dan Canfield of the University of Florida (UF) and member of the Technical Advisory Group (TAG) to the Council said that Aquarius Systems recommended this particular harvester for the Council. He explained that the Mission Inn located in Howey In The Hills, is the current owner and they will include the spare parts they have accumulated for the harvester. Dr. Canfield is of the same opinion that any repairs required would be minor. With respect to Councilman Farner's concerns, Dr. Canfield said that LakeWatch personnel would operate the harvester where ever they are directed to do so by the Council.

Vice (V.) Chairman Davis asked if the Council was purchasing the harvester. Chairman Goerner said that the LCWA was purchasing the harvester on behalf of the Council.

A vote to approve the motion to purchase the harvester utilizing Council funds and to provide up to a \$5,000 retainer to hold the harvester prior to completing the purchase, if necessary, passed unanimously.

#### Spillway Park Marina Seawall at Burrell Lock – Letter from SJRWMD

Councilman Kaiser said that he agreed with the findings of the SJRWMD as outlined in a letter provided in the July meeting agenda package. He said that he believes the seawall was not originally constructed with the required tiebacks that would have prevented the seawall from rotating towards the water.

Councilman Royal suggested that with the absence of Richard Howley, owner of Spillway Park, that the discussion on the matter be continued until the next Council meeting. The Council agreed. A copy of the letter presented by the SJRWMD is provided in Attachment 1 of these minutes.

## **6. PRESENTATIONS**

#### Rapid Infiltration Basins – David MacIntyre, P.B. Water

David MacIntyre of P.B Water gave a presentation on the growth and success of the Rapid Infiltration Basin (RIB) system known as Water Conserv II, in Orlando.

## Water Conserv II

- Jointly owned by the City of Orlando and Orange County
- Largest Water Reclamation Project in the world that combines Agricultural Irrigation and RIBs
- Current Capacity
  - Permitted Capacity = 51.93 million gallons per day (mgd)
  - Design Capacity = 68.30 mgd
  - Peak Flow Capacity (Maximum Daily Flow) = 81.13 mgd
- Current Project Focus
  - Primary focus is irrigation
  - RIBs are used to recharge the Floridan Aquifer with daily flows that are not needed for irrigation and manage excess wet weather flows
- Originally provided water for only citrus growers
  - Demands were seasonal (variable)
- Now has a varied customer base
  - Golf courses
  - Landfill irrigation
  - Nurseries
- Current Reuse
  - Current Annual Average Reuse Flow = 12.5 mgd
  - 42% of the Total Daily Flow Received
- Rapid Infiltration Basins
  - Used to recharge the Floridan Aquifer
  - Berms of the RIBs are protected from erosion by plastic liners
  - Current Annual Average RIB Flow = 17.6 mgd
  - 58% of the Total Daily Flow Received
  - Permeable soils are required for infiltration
  - RIB bottom maintenance to ensure percolation / infiltration is performed during Resting or Dry Cycles
- Applicability of RIBs to Other Areas
  - Competition with developers for available land
  - Local hydrogeological conditions to allow sufficient infiltration
  - Water quality issues include Dissolved and Suspended Constituents
  - Cost effectiveness

Councilman Kaiser asked if they performed soil borings prior to purchasing land for RIBs. Mr. MacIntyre said they use Ground Penetrating Radar (GPR) which is a superior method of producing subsurface characterization for permeability.

Councilman Farner asked about the quality of water discharged from the system. Mr. MacIntyre explained that the water discharged is non-potable and is not required to meet drinking water standards. He said it was secondary use water, however; the water discharged from the system meets Primary and Secondary Drinking Water Standards.

Councilman Farner also asked if there was a potential use for RIBs to manage excess runoff in the vicinity of the Harris Chain of Lakes (HCOL). Mr. MacIntyre explained that this could be a possible method to manage runoff.

Councilman Ed Schlein asked how these systems are affected by evaporation rates. Mr. MacIntyre said that the evaporation rates are extremely low as compared to the infiltration rates.

Councilman Royal asked if the water were being used for residential and golf course irrigation, wouldn't the constant need for that water allow for reduced RIB area; as opposed to the need to store treated waste water used for irrigation. Mr. MacIntyre said that is correct.

Councilman Nicholson asked if there are setbacks of RIBs to surface water. Mr. MacIntyre explained that RIBs are required to be located 200 – 500 feet from surface water bodies to minimize lateral seepage of reuse water to surface waters or wetlands. He said that the quality or nutrient concentrations can also affect the permitting of the RIB. With respect to Water Conserv II, Mr. MacIntyre explained that discharge to surface waters has been less than 1%.

Councilman Nicholson then asked whether injection into the Floridan Aquifer is a replacement technology for the RIBs. Mr. MacIntyre said that RIBs are a replacement technology to injection into the aquifer. He explained that to inject water into the aquifer it must meet Drinking Water Standards and reuse quality water does not meet those standards. Although ultra and nano filtration can achieve the water quality necessary for injection, Mr. MacIntyre said that no one has received a permit to do so, to the best of his knowledge.

Chairman Goerner asked whether there are injection wells in Orange County. Mr. MacIntyre explained there are approximately 400 – 450 stormwater drain wells in use throughout Orange County however, they were permitted in the 1940s through the 1960s. He said that approximately 50 mgd of stormwater on an annual basis flow to the aquifer via these wells. Mr. MacIntyre further explained that additional wells could not be permitted today due to government regulations and the poor quality of urban stormwater runoff, even though there does not appear to be any negative impacts due to those activities. He went on to say that scientists are recognizing that the Floridan Aquifer is a very active biological

system that is evidenced by the occurrence of crustaceans; primarily shrimp and crayfish, present in the Floridan wells. Mr. MacIntyre said that in order for these creatures to exist there must be a sufficient oxygen supply and food source. He also said it is believed that nutrients are carried down into the aquifer and biological processes are occurring which support active communities that are endemic to the aquifer. Mr. MacIntyre went on to say that Orange County and the United States Geological Survey (USGS) have co-funded a study of the denitrification rates in the aquifer to better understand these processes.

Chairman Goerner asked if similar activities are taking place in the lower Floridan Aquifer, where injection wells have been proposed. Mr. MacIntyre said yes and it is especially true in central Florida where there are many connections between the upper and lower aquifers.

Bill Johnson of the Florida Fish and Wildlife Conservation Commission (FWCC) asked how deep the drainage wells were into the Floridan Aquifer and whether there was any measurement of contaminants at that depth. Mr. MacIntyre explained that these wells are typically in the top 700 feet of the upper aquifer although some are in the lower aquifer. With respect to water quality testing, he said there has been sampling conducted at various distances from the aquifer injection wells that demonstrate decreasing levels of nutrients and bacteria, which indicates there is cleansing of the water occurring within the aquifer.

Chairman Goerner asked what an average flow rate is through the aquifer. Mr. MacIntyre explained that there are great variations of flow rate through the aquifer because of varying porosity and solution conduits. He said the range of flow rates would be from a few feet to hundreds of feet per year, although accurate characterization of flow is very difficult.

Councilman Nicholson asked if RIBs near the coast could help alleviate saltwater intrusion into the aquifer, which could increase with rising sea levels. Mr. MacIntyre said that they could depending on the local hydrogeology and whether there is sufficient porous material above the water table. He explained that the stored water in the RIB could create enough head [pressure] to drive the saltwater wedge back towards the ocean.

Mr. MacIntyre asked if the Council had any additional questions. None were asked. Chairman Goerner thanked Mr. MacIntyre for his presentation.

#### Water Supply Planning – Withdraw of Surface Waters

Ray Sharpe of the City of Leesburg Environmental Services Division and the Lake County Water Supply Alliance made a presentation to the Council.

#### Summary – 2003 Water Supply Assessment and 2005 District Water Supply Plan

- Water Supply Alliance
  - Membership includes representatives from 13 cities within Lake County
  - Formed by interlocal agreements to address regional water supply issues and local water use needs

- Leesburg is the administrative home of the Alliance
- Reviewed potential withdraw from Lake Monroe and the lower Ocklawaha River, downstream of Silver Run
- Exploring sources of reuse water including stormwater and brackish water withdraw for irrigation and non-potable uses
- Received \$350,000 from the SJRWMD to study regional water supply issues

Chairman Goerner asked what the impacts of surface water withdraw and pumping from the aquifer would be on the HCOL. Mr. Sharpe explained that the City of Leesburg is making \$17 million in modifications to the Canal Street Waste Water Treatment Plant (WWTP) and when operated in conjunction with their Turnpike facility to produce reclaimed water, they will be able to offset 1 mgd of withdraw that is currently pumped from surface waters and the Floridan Aquifer. He added that it is important to work with developers to require they include systems that will utilize reuse water for irrigation, which is approximately 60% of all water used by Lake County.

Chairman Goerner asked what the demand is versus the permitted cap for withdraw from the Floridan Aquifer. Mr. Sharpe said that currently there is just under a 6 mgd demand and the permitted cap is 9.31 mgd. He added that a 16.4 mgd permit application has been submitted to provide for future growth.

Councilman Kaiser pointed out that Mr. Sharpe had been instrumental in upgrading the City of Leesburg WWTPs to eliminate discharges and runoff, which was an original duty required by the Legislature in formation of the Council. He thanked Mr. Sharpe for his presentation.

Barbara Vergara, P.G. (SJRWMD) gave a presentation on the SJRWMD Water Supply Planning.

- History of Water Supply Planning
  - SJRWMD began involvement with water supply planning in 1990
  - Initially assessed water supply needs and sources
  - Developed a Water Supply Plan through 2025
- Review of Water Uses (in millions of gallons)

Category	Actual		Projected
	1995	2000*	2025
Public Supply	453.26	563.45	835.56
Domestic and Other Small Public Supply	71.09	64.50	100.68
Agricultural Irrigation	584.31	601.59	522.11
Recreational Irrigation	99.13	104.60	156.44
Commercial/Industrial/Institutional	133.68	122.36	129.30
Thermoelectric Power Generation	22.18	29.77	41.86
Total	1,363.65	1,486.27	1,785.95

(Table courtesy of the SJRWMD)

- Projected 2025 Needs
  - Tools utilized include Water Use Data, Groundwater Flow Models, water resource constraints which is Geographic Information Service (GIS) based
  - Developed regional groundwater model boundaries
  - Projected changes in the Potentiometric Surface of the Floridan Aquifer 1995 through 2025 (The preferred source of public water supply is the Floridan Aquifer)
  - Projected changes in surficial aquifer water levels 1995 through 2025
  
- Water Resource Constraints
  - Identified limits of water level change at which unacceptable impacts are likely to occur
  - Reviewed impacts to natural systems including native wetland vegetation, lakes, springs, and minimum flows and levels
  - Reviewed groundwater quality including salt water intrusion
  - Based on current projections some small, isolated lakes may be impacted by aquifer withdraws
  - Minimum Flow Levels of springs have been calculated and a decrease of 15% from the historical flow would be considered unacceptable

Chairman Goerner asked what the permitted withdraw from the aquifer is projected to be. Ms. Vergara said the City of Leesburg is permitted for 28 mgd of withdraw by 2025 and currently there are five (5) additional permits pending in the area.

Councilman Nicholson asked if Gourneck Springs could be impacted by unacceptable flow based on these withdraws. Ms. Vergara said that it could.

Chairman Goerner asked if the Council could be provided the historic spring flow data. Ms. Vergara said she would provide the information to Mr. Caputo. She then continued with her presentation:

- Priority Water Resource Caution Areas (PWRCAs) were developed in 2003
  - Includes approximately 39% of the area within the SJRWMD
  
- 2005 District Water Supply Plan (DWSP)
  - Focus: Identify water supply development projects, water resource development projects, and other strategies that if implemented would solve or avoid problems in identified PWRCAs
  - Components of the Plan include:



- Minimum flows and water levels
- Water supply development
- Water resource development
- Water Supply Development Projects
  - Definition: Projects that include planning, design, construction, operation, and maintenance of public or private facilities for water collection, production, treatment, transmission, or distribution for sale, resale or end use.
  - 60 alternative water supply development projects identified in the 2005 DWSP
  - Eligible for Water Protection and Sustainability Program funding
- 60 projects currently in the 2005 DWSP include:
  - 6 surface water projects
  - 6 brackish water projects
  - 3 seawater projects
  - 38 reuse of reclaimed water projects
  - 5 reuse augmentation projects
  - 2 agricultural irrigation projects
- Water Resource Development Projects (WRDPs)
  - Definition: A project that contributes to the formation and implementation of regional water resources management strategies.
  - 16 WRD projects identified in the 2005 DWSP
    - None in northeast Florida
- Major conclusions in the 2005 DWSP
  - Water use is projected to increase by approximately 20% to 1,774 mgd from the years 2000 to 2025
  - Public supply accounts for approximately 90% of the increase
  - The Floridan Aquifer is the source of choice and cannot supply all of the increased demand without unacceptable environmental impacts
  - Approximately 200 mgd in new alternative water supplies in east-central Florida will be needed by 2025; the majority are required in the “near” future
  - Alternative water sources are available

Chairman Goerner asked if the Projected Use figures being presented are based on the volume of water currently being used or on the volume of withdraw which is permitted. Ms. Vergara explained that the projected figures are based on 2000 water use data of water actually being used.

Councilman Farner asked if the Projected Use figures include the water conservation efforts currently being implemented and what some of those efforts are. Ms. Vergara

explained that current conservation efforts are included and she hopes that these efforts will increase over time. She went on to explain that every Consumptive Use Permit includes conservation measures that must be implemented, such as identifying and correcting losses within water transmission lines, and water conservation rate structures where higher water usage results in higher rates / costs for the water.

Councilman Schlein asked if there is a State mandate to reduce losses in public supply lines. Ms. Vergara said that the State may require these efforts but reiterated that the SJRWMD requires it with every Consumptive Use Permit.

Chairman Goerner requested the data for Lake County of permitted versus actual usage. Ms. Vergara said that she would provide that information to Mr. Caputo, then continued with her presentation:

- Status of 2003 Water Supply Assessment (WSA) and 2005 DWSP
  - Approved by the SJRWMD Governing Board on February 7, 2006
  - Final documents are available on the SJRWMD website
  - Implementation is underway
  
- Current Priorities
  - Complete the 2008 WSA
  - Implement the Water Supply Development Projects (WSDPs)
    - St. Johns River / Taylor Creek Reservoir Project
  - Implement WRDPs
    - Upper St. Johns River Basin Project
  - Gain sponsors for specific WSDPs
    - County level planning efforts
  - Review problems at model boundaries
    - The Villages area

Councilman Nicholson asked if there have been studies on replenishing the Floridan Aquifer via natural sources such as closing off springs that discharge to salt water off the coast. Ms. Vergara explained that the majority of the springs off the coast discharge saline water, not fresh water and that blocking off any spring would cause increased flows in other springs, possibly increasing leakage between the upper and lower Floridan Aquifer. She said that the USGS would have information on this issue and Charles Tibbles has authored documents that provide a resource of information on groundwater and hydrogeologic issues in east-central Florida.

Chairman Goerner thanked Ms. Vergara for her presentation.

Phosphorus Removal – Mike Coveney, SJRWMD

Mike Coveney (SJRWMD) provided a presentation on various elements of phosphorus removal.

- Lake Apopka Marsh Flow-way (LAMF) Phase I
  - 4 treatment areas / cells
  - Phosphorus removal by settling of sediments and recycling of soluble reactive phosphorus (SRP) or ortho-phosphorus (PO<sub>4</sub>)
  - Total Phosphorus (TP) = Particulate Phosphorus + Dissolved Organic Phosphorus + PO<sub>4</sub>
    - All phosphorus is bio-available in the water column
  - All phosphorus is estimated to be recycled in Lake Apopka in approximately three (3) days
  - Linear relationship between chlorophyll (algal mass) and particulate phosphorus
    - No relationship between chlorophyll and PO<sub>4</sub> or dissolved phosphorus

Chairman Goerner asked about the Lake Beauclair Nutrient Reduction Facility (NuRF) and the ability of alum to remove dissolved phosphorus. Mr. Perry explained that jar testing conducted at the site in February 2006 was approximately 95% effective for removing both dissolved and particulate phosphorus.

Mr. Coveney continued with his presentation:

- Cumulative removal at the LAMF from November 2003 through May 2006
  - 125% of Lake Apopka's volume has been treated
  - Phosphorus removed = 5.6 metric tonnes (6.2 tons)
  - Nitrogen removed = 267 metric tonnes (294 tons)
  - Solids removed = 9,718 metric tonnes (10,690 tons)
- Treatment cell B-1 (southwest corner of the LAMF) is the most efficient for reasons unknown
- Lake Apopka North Shore Restoration Area (NSRA)
  - Convert farmlands to wetlands to reduce phosphorus inputs to Lake Apopka and to restore habitat
    - West Marsh, LAMF and Duda Farms to be reflooded
    - Unit 1 and Unit 2 to be kept dry

Chairman Goerner asked if alum treated water discharged from the NSRA into Lake Apopka is adding to phosphorus to the lake. Mr. Coveney said there is some phosphorus released to the lake but the majority of phosphorus is adsorbed by the alum floc. He added that the basin where the floc is stored after treatment is not effectively holding the material and additional maintenance is required in that retention basin.

Councilman Royal asked if the United States (U.S.) Fish and Wildlife Service (FWS) is opposed to creating additional reservoirs within the NSRA to store water instead of releasing it. Mr. Coveney explained that the FWS is not necessarily opposed to the construction of additional reservoirs but they are required to approve any reservoir construction. He said that the SJRWMD is currently studying the science involved in moving forward with additional water storage within the NSRA.

Mr. Coveney continued with his presentation:

- Lake Apopka phosphorous loading [Concentrations]
  - Phosphorus loading ranged from 120 metric tonnes per year (mt/yr) in 1989 (132 tons) to approximately 30 mt/yr (33 tons) in 2002
  - Total phosphorus concentrations ranged from 0.25 milligrams per liter (mg/L) in 1988 to approximately 0.12 mg/L in 2002
  - The Total maximum Daily Load (TMDL) Phosphorus Loading target is 15.9 mt/yr
  - TMDL Total Phosphorus Target Concentration is 0.055 mg/L
  
- Lake Apopka Chlorophyll and Secchi Depth
  - Chlorophyll ranged from a high of 120 micrograms per liter ( $\mu\text{g/L}$ ) in 1994 to approximately 20  $\mu\text{g/L}$  in 2005
  - Secchi Depth ranged from a low of 20 centimeters (cm) in 1994 (7.9 inches) to approximately 40 cm (15.7 inches) in 2005
  
- TMDL Baseline Changes
  - Phosphorus concentrations have been reduced by 56%
  - Chlorophyll concentrations have been reduced by 46%
  - Secchi Depths have increased by 60%

Dr. Battoe briefly explained how he arrived at the cost of \$35/pound for phosphorus removal at LAMF using the figures presented by Mr. Coveney. He said that the 56 metric tonnes (62 tons) of phosphorus removed was divided by the operating costs, primarily electricity, for running the flow-way.

Dr. Canfield noted from Mr. Coveney's presentation that approximately 2.2 mt/yr of phosphorus have been removed by the LAMF however, natural phosphorus loading to Lake Apopka is approximately 12 mt/yr and approximately 7 mt/yr of phosphorus were released from the NSRA. He said that in order to meet the TMDL goals, an additional 4 – 5 mt/yr would need to be removed and asked how the SJRWMD is going to accomplish this goal.

Mr. Coveney explained that the NSRA is a work in progress and if they are able to flood an additional 9,000 acres of the former farms, they should be able to reach their goal of 1 kilogram (kg) per hectare per year. He said that through remediation of the farms and alum treatment, and if they meet this goal then Lake Apopka should reach the TMDL Target Concentration of 55 µg/L.

Councilman Royal asked how much of the 14,000 acres of the old Zellwood Drainage District [NSRA] is considered to be a problem by the FWS. Mr. Coveney explained that after the bird mortality issues of 1998-99 [due to pesticide contamination], the SJRWMD agreed in a Memorandum of Understanding with the U.S. Department of Justice (DOJ) and the FWS that all of the property in question is considered to be a problem. He said that the SJRWMD is working with the DOJ and FWS in strict consultation on approving certain portions of the property for reflooding. Mr. Coveney believes that approximately 1,000 additional acres will be approved by the end of the year, while other areas will require remediation before approval.

Chairman Goerner expressed his concern that Lake Apopka will not meet its TMDL goals and asked Mr. Coveney how the lake will meet the goals when phosphorus is continually being discharged [from the NSRA]. Mr. Coveney assured the Council that they are making good progress and he is confident Lake Apopka will meet those goals.

Councilman Royal pointed out that although there has been significant reduction in phosphorus from 1998 to present, the majority of phosphorus loading reduction to Lake Apopka occurred prior to 1998 when the SJRWMD purchased the farms in the NSRA and closed them down.

Councilman Farner expressed his appreciation of the efforts by the SJRWMD in the restoration of Lake Apopka.

#### Agency Updates

Mr. Perry provided updates on the following updates to the Council:

- LCWA / Council Budget for Fiscal Year 2006-2007  
The LCWA Board is in the process of reviewing the \$40,000 per year that they provide to the Council and on the average, the Council utilizes approximately \$20,000 of those funds. He said the Board is considering whether \$40,000 is the proper amount to budget for the Council, although the \$40,000 is currently in their proposed budget.
- Projects Under Consideration  
The LCWA Board had moved additional funding for the NuRF project to make it more readily available to be spent on the project. Mr. Perry said that this could be an indication to the Council they the project is more likely to move forward and perhaps they could consider including funding for the project in the Council's Legislative Request.

- Lake Griffin Access Canal Dredging

The LCWA Board approved a no-cost extension to complete the dredging due to the issues of sand and harder materials that have been encountered. Additionally, the Board approved dredging of the additional canal near the southwest portion of the lake, if the Council is able to provide the funding. Mr. Perry reminded the Council that they had offered to provide the approximate \$110,000 to dredge this area.

Chairman Goerner explained that the Council had already passed a motion to assist with the funding to dredge additional canals. He also said that the Legislature had recently approved \$850,000 of the \$2.1 million in the Council's Funding Initiative Request. Chairman Goerner said that a portion of that money could be used to support the additional dredging.

Councilman Farner said that he thought the Council had approved a motion to seek funding for additional canal dredging [through a new funding request]. Councilman Schlein said that he recalled the motion was to use funding already requested, if received, to assist with the additional canals.

After an extended discussion it was determined that the Council could use a portion of the \$850,000 to fund additional canal dredging and the balance would be used to fund other elements of the Council's Funding Initiative including bass restocking, aquatic vegetation enhancements and cypress tree plantings.

Bill Johnson (FWCC) provided an update to the Council on recent peak fish counts on the lakes. He said that black crappie counts in Lake Eustis during the November-April timeframe had increased from 9,000 last year to 29,000 this year. Likewise, the counts in Lake Dora had increased from 22,000 last year to 29,000 this year. Mr. Johnson noted that in this year's count approximately one-half of the fish were caught by commercial fishermen and one-half by anglers where last year commercial fishermen caught less than one-third of the crappie caught by anglers. He also said that the ratio of gizzard shad caught in the gill nets had gone down from 88% last year to 80% this year, indicating a reduction in their population. In Lake Dora it was estimated that there were 550,000 pounds of shad last year and Mr. Johnson believed they had removed approximately 290,000 pounds this year.

Dr. Dan Canfield provided updates to the Council on the following issues:

- Mission Inn property to provide access to their lakes for bass to be used in restocking efforts next year.
- City of Orlando continues to allow the harvesting of bass for restocking from their lakes.

- Florida LakeWatch is working with the FWCC to assemble creel counts for the whole year, not just counts during the peak season.
- Toxic algae sampling is being conducted on the HCOL through a cooperative effort between the LakeWatch and Florida Department of Health (FDOH). Dr. Canfield also said that the U.S. Environmental Protection Agency (EPA) is funding a toxic algae survey in lakes around the State. He asked if there are any reports of algae blooms on area lakes, that he be notified so the blooms can be sampled.
- The UF is still interested in stocking bass in Lake Dora however, they do not want to interfere with the shad study being conducted on the lake by the FWCC.

Chairman Goerner asked for a report from Dr. Canfield on lakes Dora and Beauclair so the Council can discuss the inclusion of funding in their Legislative Request for restocking. Mr. Johnson told the Council that the shad study in those lakes will continue through next year and any restocking should be conducted the following year [2008].

Dr. Battoe then provided a brief update to the Council using graphs he provided at the meeting. Copies of those graphs are presented in Attachment 2.

- Mean Monthly Total Phosphorus (TP) for Ocklawaha Lakes
  - Currently TP for all lakes is below 0.050 mg/L except for lakes Apopka and Beauclair
- Mean Monthly Chlorophyll-a (Chl-a) for Ocklawaha Lakes
  - Lake Dora has the highest Chl-a concentration at approximately 125 milligrams per cubic meter ( $\text{mg}/\text{m}^3$ )
  - Lake Yale has the lowest Chl-a concentration at approximately  $10 \text{ mg}/\text{m}^3$
- Mean Monthly Secchi [Depth] for Ocklawaha Lakes
  - Lake Yale has the best transparency at just over 1.4 meters (4.6 feet)
  - Lake Beauclair has the least transparency at approximately 0.3 meters (1.2 feet)

Chairman Goerner asked about the status of Legislative funding the Council received from last year's request. Dave Walker said the SJRWMD is working on amendments to the agreements with the LCWA to fund the projects supported by the Council.

A brief discussion was held on the motion previously passed by the Council on seeking additional funding to assist with the dredging of canals in Lake Griffin, which have been added to the current project. Chairman Goerner asked when the additional canal at the southwest portion of the lake would be dredged. Mr. Perry said that it would probably be dredged early in the next calendar year.

Councilman Schlein put forth a motion that the Council provide funding for the dredging of additional canals in Lake Griffin from the \$850,000 recently approved by the Legislature. The motion passed with Councilman Farner casting a dissenting vote.

## **7. COUNCIL MEMBER COMMENTS**

### Council Member Comments

No Council member comments were made.

### Discussion of August 4, 2006 Meeting

Mr. Caputo reminded the Council that the September meeting is scheduled for the second Friday of the month, due to the Labor Day holiday and that a location for the meeting has not been determined. He then provided a brief summary of the agenda items for the August meeting:

- Continuation of Burrell Spillway discussion
- Update on the harvester purchase
- Status update on the Recording Secretary Request for Proposal (RFP)
- Discussion of the Council's Legislative Funding Initiative
- Discussion of the SJRWMD's Legislative Funding Initiative

## **8. PUBLIC COMMENTS**

No public comments were made.

## **9. ADJOURNMENT**

The meeting was adjourned at 1:40 PM.

Respectfully submitted by:

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Chairman Skip Goerner

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Secretary Rick Powers, P.G.



**Attachment 1**

**St. Johns River Water Management District**

**Spillway Park Marina Seawall Opinion**

**May 10, 2006**



# St. Johns River Water Management District

Kirby B. Green III, Executive Director • David W. Fisk, Assistant Executive Director

*Gene Caputo  
JEJ*

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500  
On the Internet at [www.sjrwmd.com](http://www.sjrwmd.com).

May 10, 2006

Mr. Skip Goerner, Chairman  
Harris Chain of Lakes Council  
05101-60 Eagles Nest Road  
Fruitland Park, FL 34731

Re: Spillway Park Marina Seawall

Dear Chairman Goerner:

At their April 7, 2006 meeting, the Council requested the SJRWMD evaluate the structural problems associated with the seawall at the Spillway Park Marina owned by Mr. Richard Howley.

District staff have made several visits to the marina to inspect the seawall and surrounding area both above and below the waterline. They found no evidence of scour or undermining near the seawall that would indicate impacts due to discharge from the Burrell spillway. Staff have also interviewed Mr. Howley regarding the seawall. We learned the current seawall is approximately 22 years old, built during the 1984 Lake Griffin drawdown. It was made from concrete blocks anchored 8-inches below a hardpan bottom, with steel reinforcing rods and concrete fill in the block cells. Earthen fill was placed behind the seawall to create the grade for the concrete walkway. The seawall was likely not constructed with tiebacks or weep holes. On March 3, 2006, the Council meeting included a field trip to the marina, where John Richmond, a professional engineer on my staff, gave a presentation of his findings that included the information mentioned above.

Based upon my staff's observations and information provided by Mr. Howley, I believe discharges from the Burrell structure have not impacted the seawall. It is likely suffering from deterioration due to its age. Also, the seawall may have been constructed without some key elements that would help overcome forces from the backfill and groundwater trying to tip it over.

This is a privately owned structure. It would not be appropriate to use public funds to repair it, especially since the problems with the structure appear to be due to its design and construction. The owner of this structure is responsible for this structure.

Sincerely,

Jeffrey G. Elledge, P.E., Director  
Department of Water Resources

JE/drw

C: Mr. Richard Howley  
Kirby B. Green III

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**Attachment 2**

**Ocklawaha Lake Water Quality Update**

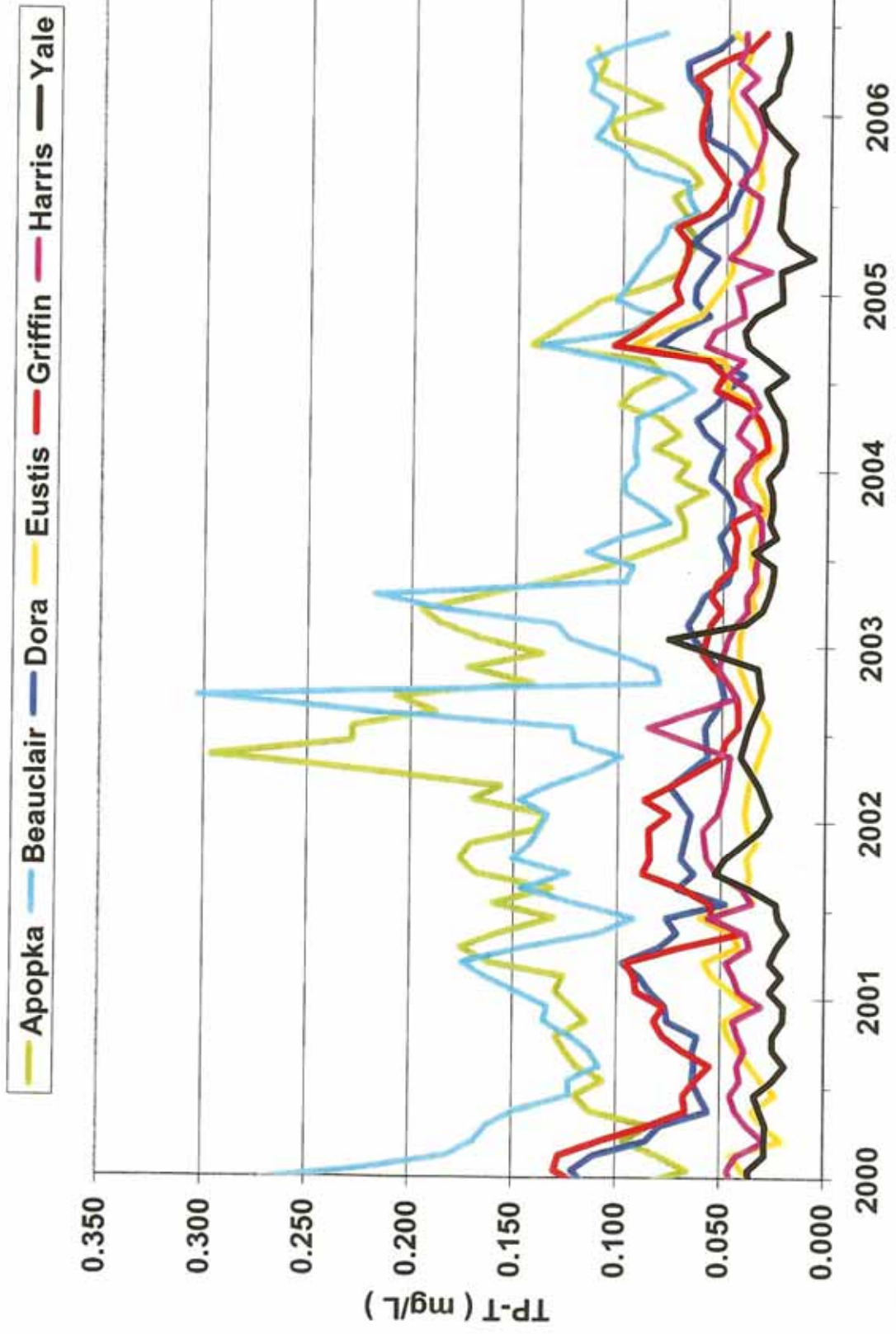
**Provided by**

**Dr. Larry Battoe**

**St. Johns River Water Management District**

**July 2006**

Mean Monthly TP-T for Ocklawaha Lakes



Mean Monthly Chl-a\_Corr for Ocklawaha Lakes

— Apopka — Beauclair — Dora — Eustis — Griffin — Harris — Yale

