

FINAL

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

April 2, 2004

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:00 AM on April 2, 2004 at the Lake County Board of County Commissioners' Chambers, 315 West Main Street, Tavares, Florida.

Members Present

Hugh (Dave) Davis II, Chairman
Skip Goerner, Vice Chairman
Charles C. Clark
Thomas A. Cook, MD, Secretary
Keith Farner
Robert Kaiser
Don Nicholson
Rick Powers

Members Absent

W. Thomas Brooks

1. CALL TO ORDER

Chairman Dave Davis called the meeting to order at 9:04 AM.

2. INVOCATION AND PLEDGE OF ALLEGIANCE

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

3. ROLL CALL

Chairman Davis called roll. All members were present except for Tom Brooks, due to the passing of his father. Chairman Dave Davis suggested that it may be appropriate for a card be sent to his family from the Council.

4. WELCOME AND OPENING REMARKS

Chairman Davis thanked Councilman Charles Clark for his letter to the editor concerning the pollution of Lake Griffin.

5. APPROVAL OF MINUTES

After a couple of comments by Councilman Clark, the draft minutes for the January 9, 2004 and February 6, 2004 meetings were approved. After a few brief comments, the draft site visit summary from the March 5, 2004 tour of the Lake Apopka Marsh Flow-way was approved.

6. DISCUSSION ITEMS

Gene Caputo of the St. Johns River Water Management District (SJRWMD) made the suggestion that the Council may consider beginning solicitation for funding from various agencies. He reminded the Council that their current funding expires in October of this year and the only funding approved for the 2004 – 2005 fiscal year is the \$10,000 from the SJRWMD. Chairman Davis suggested that Vice (V.) Chairman Skip Goerner handles this issue as he had done in the past. Councilman Rick Powers further suggested that Chairman Davis write a letter to the agencies involved notifying them that V. Chairman Goerner will be the Council representative for the funding requests. Mr. Caputo then requested that the Council submit any special projects or funding needs to him for the May meeting, so he may present them to the SJRWMD Governing Board. He also reminded the Council that last year the entire \$40,000 approved budget was not spent and that \$26,000 was returned to the Lake County Water Authority (LCWA).

Chairman Davis discussed the current legislative funding being requested by the Council. Chairman Powers asked if all of the requests had been formally voted on by the Council. After some discussion it was determined that they had not. Of particular concern to Councilman Clark was the Council's perceived agreement of a funding request for \$500,000 for the Restoration of the economic vitality of Lake Griffin's Largemouth Bass Fishery (Tracking #: 1480). Councilman Clark explained that although the Council had general agreement on some of the requests, there were no official votes were taken for all of the requests. A motion to approve was made and passed for a \$50,000 request for Cypress Plantings in the Harris Chain of Lakes (Tracking #: 1465). An additional motion to approve was made and passed for a \$100,000 request for the Revegetation of the Harris Chain of Lakes (Tracking #: 1469).

Councilman Clark went on to discuss the project proposal submitted by Dr. Dan Canfield, a Technical Advisory Group (TAG) member to the Council representing the University of Florida (UF). He cited several elements in Dr. Canfield's proposal, the 2003 – 2004 Report to the Florida Legislature, and other information regarding bass population improvement in Lake Griffin, that he felt were contradictory to the mission of the Council. He then explained that the duties of the Council provided by the Legislature do not include the efforts intended to produce economic gain for the Harris Chain of Lakes. Councilman Clark also provided several references that describe the duties of the Council and felt that the fish restocking efforts do not fall under their charge. He notified the Council that he would not vote to approve those efforts. Chairman Davis expressed his opinion that the Council is to be involved in creating improved fisheries in the lakes in an effort to improve

water quality. He supported bass restocking as a method to improve water quality. Councilman Powers asked if the funding request had not been voted on by the Council, then why was it included in the funding request package to the Legislature? V. Chairman Goerner explained that he put forward the funding request with the belief that it had been voted on and approved by the Council. He went on to make a motion to accept the Community Budget Request that was submitted to the Legislature be approved by the Council, with respect to the funding request of \$500,000 for the Restoration of the economic vitality of Lake Griffin's Largemouth Bass Fishery, as discussed previously. The motion was seconded. Chairman Davis opened the floor for discussion.

Councilman Powers said that he supports the restocking efforts as a research/demonstration project, but did not feel that it will improve the water quality in the lake. He believed that may be accomplished with improved habitat. He also suggested that if \$135,000 had already been approved by the LCWA for the project, perhaps they should modify the request to reflect that amount. V. Chairman Goerner explained that it was too late to modify the request. Councilman Kaiser gave his opinion of the issue saying that he felt that Councilman Clark's reasons for opposing the funding were all debatable. He went on to say that he too supports the request as a research/demonstration project that may benefit the lakes in the future. He asked Dr. Canfield why the proposed restocking efforts would be conducted every three years and why the fish wouldn't reproduce on their own. Dr. Canfield explained that the previous discussions were geared towards mitigation efforts to improve the [short term] economic benefits from the lake. Long term fisheries improvement would be coupled with improved habitat. The mitigation efforts were suggested for the period while canal dredging, lake level fluctuations and other restoration measures were being conducted.

Councilman Don Nicholson gave his opinion of the issue saying that he felt that there would be great economic benefits to the community as a result of the restocking efforts. Councilman Keith Farner said that he is in favor of restocking but felt with the improvement in bass populations recently seen in Lake Griffin, that it might not be the best lake in the chain to perform restocking. He also felt the Council could modify the funding request and could propose stocking in the entire Chain of Lakes. Chairman Davis discussed his feelings on the issue saying he felt that possibly with the submission of the request to the Legislature, that it may have been erroneous to convey that it had been voted on and approved when the Council had not specifically voted on the funding request.

Councilman Powers explained that the time to modify the request had passed and no further modifications could be made. He went on to suggest that a sub-committee be formed to handle the funding requests in the future. Councilman Farner said that he could not vote in favor of it because of the wording limiting the restocking to Lake Griffin. Chairman Davis suggested the funding request is part of the 2003 Legislative Report and that any additional funding requests will be submitted in their 2004 report to the Legislature. He also felt that it might send the wrong message to the Legislature if the Council were to change their position at this point. Councilman Clark asked Bill Johnson of the Florida Fish and Wildlife Conservation Commission (FWCC) why the project was

titled a “Research / Demonstration” project? Mr. Johnson explained that although they didn’t name the project, there was an agreement that it is a demonstration project to see if stocking would improve long-term bass populations. He briefly described three previous restocking efforts that he had knowledge of; one involving 4,000 bass being relocated to that is known as Area 7, another being the stocking of an abandoned phosphate pit in Polk County, and the third involved Dr. Canfield stocking 1,000 bass in Noonan Lake. When Mr. Johnson asked Dr. Canfield to describe the effort that he had been involved in, Dr. Canfield declined to respond to the question until the Public Comment portion of the meeting, citing his right to do so under Robert’s Rules of Order. He explained that there were several public employees waiting to give a presentation to the Council.

Based on Mr. Johnson’s explanation of the restocking efforts and other discussions, Councilman Clark withdrew his objection to the funding request. Chairman Davis restated the motion to approve the \$500,000 funding request for the Restoration of the economic vitality of Lake Griffin’s Largemouth Bass Fisheries (Tracking #: 1480). The motion to approve passed unanimously.

Councilman Powers suggested that the Council discuss forming a subcommittee to oversee the funding requests in the future. Chairman Davis asked Mr. Caputo to include that discussion in the May agenda. Councilman Farner then reminded the Council that during their initial meeting they voted not to adopt Robert’s Rules of Order. He felt that the Council might want to discuss that decision again, Chairman Davis asked Mr. Caputo to also include that discussion in the May agenda. Mr. Caputo agreed.

7. PRESENTATIONS

Aquatic Weed Control and Spraying

Members of various agencies involved in aquatic weed control were assembled including Dr. Larry Battoe (SJRWMD), Wayne Corbin (Invasive Plant Management - SJRWMD), Dr. Dan Canfield (UF), David Douglas (FWCC), Eric Costenmoyer (Director of Aquatic Plant Management - Lake County), and Mr. Bill Johnson (FWCC).

Mr. Corbin started out by saying that since the early 1980s the SJRWMD has contracted with the UF-Institute of Food and Agricultural Sciences (IFAS) to evaluate the environmental impacts of the spraying activities. He also gave a summary of the aquatic weed programs and explained which projects he was involved in with respect to the Harris Chain of Lakes. He said that in Lake County he is involved with management of water hyacinths, water lettuce, and hydrilla in three areas including the Harris Bayou, Emeraldal Marsh, and the flow-ways such as the Lake Apopka Marsh Flow-way. He said he is also involved with some management of cattails where they interfere with navigation.

Dr. Canfield discussed his role with the UF-IFAS Center for Aquatic Plants and Invasive Species and aquatic plant management. His involvement with the Center is in overseeing the environmental impacts to other plants, fish and water quality, as a result of applying herbicides for plant management.

Mr. Douglas explained that his involvement with the Harris Chain of Lakes is with Aquatic Plant Management for the FWCC which includes shoreline lake enhancements through promoting more desirable species. This involves the control of the more invasive plants through the use of chemical spraying and occasionally the use of mechanical means (i.e. harvesting). They are also involved in the planting of desirable species and will be planting over 300,000 aquatic plants in the Harris Chain over the next few months. Mr. Douglas explained that these efforts are being done in conjunction with the lake level fluctuations to maximize the benefits from their efforts.

Mr. Costenmoyer discussed the objectives of the work that he does for Lake County. They are involved in the management of the three major invasive species for the majority of the water bodies in Lake County. They have maintained the philosophy to manage the invasive species at a “maintenance level” by reducing the number of plants, not trying to eliminate them completely. He said that this is the most productive method and produces the least impact on the environment.

Chairman Davis asked if there is any interagency coordination to ensure that there are not multiple treatments of the same area. Mr. Corbin explained that all treatments are permitted which helps to avoid that situation. He also said that the agencies have very specific areas which they spray. Mr. Douglas added that they may overlap at times on the same water body, but they would be for management of different species. Councilman Farner asked if there were any synergistic effects with spraying multiple chemicals in the same area. Mr. Costenmoyer explained that the chemicals they use breakdown considerably in about three weeks which makes it unlikely that they could combine with other chemicals.

Dr. Canfield discussed the uses of 2,4-D and said it is sometimes thought of similarly to 2,4,5-T, commonly known as Agent Orange, a defoliant. He said that 2,4-D has been studied extensively and has been found to be safe if used properly and added that it is very effective in the control of water hyacinths. Dr. Canfield also discussed other chemicals that have been used for weed control including Diquat, Fluromil and others saying that they have high breakdown rates.

V. Chairman Goerner expressed his concerns of the synergistic effect of the chemicals and the residual chemicals already in the water from the runoff of muck farms. He asked if the Microcystis and Cylindrospermopsis blooms that Lake Griffin had seen could be caused by synergism. Mr. Johnson said he did not believe so and attributed the algal blooms to the increased nitrogen and phosphorus in the lakes.

Councilman Farner expressed his concerns with the number of licensed people who are applying chemicals and not using proper doses of the chemicals. He was particularly concerned with the lakefront homeowners who improperly apply large doses of the chemicals that runoff into or are applied in the lakes.

Mr. Costenmoyer explained that there are really no additional ways to regulate everyone, especially homeowners who spray in the lakes. He said that all applicators are supposed to be licensed by the Florida Department of Environmental Protection (FDEP) and are knowledgeable in the proper use of the chemicals. Mr. Costenmoyer felt that the homeowners contribute only a very small amount of chemicals to the lakes and those contributions could be considered insignificant, especially when it comes to Lake Griffin.

Councilman Kaiser asked what the process is for obtaining a spraying permit. Mr. Douglas explained that all permit applications are reviewed and recommendations are made which include revegetation efforts. He stressed that permits are not issued without review. Mr. Costenmoyer went on to say that the majority of the chemicals they use can be purchased over the counter, in a less concentrated form.

V. Chairman Goerner asked about dioxins that have been found in the lakes. Dr. Canfield explained that any dioxins that may be released during weed control is a result of the plastic container / sprayers the chemicals are stored in, due to a chemical reaction with the plastic.

Mr. Caputo expressed his opinion on improving communications through a Public Education Program and suggested that the Council might consider developing a Public Education Program to teach the lakefront homeowners about the use of chemicals. He mentioned that the Council may want to consider adding those efforts to their 2004 – 2005 list of projects. Mr. Caputo felt that this is something that they could do at the local level as opposed to going to the State Legislature to request changes in the permitting process.

Mr. Corbin summarized the District's stand on aquatic weed control saying that whenever they have the opportunity, they use either mechanical harvesting or other biological controls. Some of the biological controls they use include moths which help in controlling water lilies, a fly that helps control melaluca, and another insect which feeds on alligator weed.

Councilman Nicholson offered his support of the plant management efforts and asked if it would be better to remove the dead plants that fall to the bottom after being sprayed. He also asked if it was even possible to remove these dead plants. Mr. Corbin explained that with the current technology, it is not possible to economically remove dead plants from the bottom of the lakes. He agreed with Councilman Farner that it would be better for the lakes if they could remove the plants after being sprayed.

Councilman Nicholson also asked if it would be better to use more mechanical harvesting in order to minimize the amount of biomass which is accumulating on the bottom of the lakes. It was explained that it would be better but the mechanical harvesting is not always available. Mr. Corbin said that the amount of material that sloughs off the plants naturally is much greater than the amount of plant material on the bottom, as a result of spraying. Mr. Douglas added that one of the best ways to control the numbers of plants is to reduce the amount of nutrients in the water and he said that those efforts are being done. He also

said that the majority of the plant material on the bottom is algae, as opposed to macrophytic plants like water hyacinths.

Councilman Kaiser made a motion to approve the funding request of \$150,000 for Lake County Mosquito and Aquatic Plant Management (Tracking #: 1467). The motion passed unanimously.

Chairman Davis called for a brief recess at 11:30 AM.

Chairman Davis called the meeting to order at 11:40 AM.

Agency Updates

Barbara Bess of the FDEP provided a brief update on the status of the Total Maximum Daily Loads (TMDLs) program and the efforts of FDEP. She said that they have met with city and local officials in Lake County several times over the past few months and they have all be very supportive of the program. Ms. Bess also said that the FDEP has hired a consulting firm to help them develop a Basin Management Action Plan for TMDL implementation. She added that the Chairman and V. Chairman had been added to the FDEP mailing lists for notification of meetings they schedule with local governments, in the event that they or other members of the Council would like to attend. Mr. Caputo added to Ms. Bess' comments saying that the SJRWMD is working with local governments in the integration of the TMDL Program with local growth management plans. He said this process is still in the development stages but it will become an important tool in the success of the program.

Lance Lombard of the Lake County Water Authority (LCWA), attending in the absence of Mike Perry (LCWA), provided updates of the projects that they are working on including their nutrient reduction facility, the Lake Beauclair Aquatic Enhancement Project and several stormwater projects. Councilman Clark asked Mr. Lombard if he would be willing to give a presentation to the Council on the Apopka-Beauclair Nutrient Reduction Project. Mr. Lombard agreed and it was scheduled for the May meeting.

Dr. Battoe gave an update of the most recent water quality data for Lake Griffin. He said that Chlorophyll A in the lake was 7 parts per billion (ppb) as of two weeks previous to the meeting; which he said is very low. He also said that previous to that sample, they had seen samples as low a 3 ppb and reminded the Council that they have been as high as 100-300 ppb in the past. He said that the average Total Phosphorus (TP) at three sites on the lake was 30 ppb and also reminded the Council that the Pollutant Load Reduction Goal (PLRG) for Lake Griffin is 31 ppb. He also said that the Chlorophyll A in Lake Apopka was at 30 ppb and that the TP was 60 ppb, where it had been for several months. He reminded the Council that the TP levels in Lake Apopka had also been as high as 300 ppb in the past. Dr. Battoe also said that the data he had seen for the other lakes in the chain were also very good.

Dr. Battoe also gave an update on shad harvests saying that in their recent efforts they had removed 350,000 – 400,000 pounds of gizzard shad from Lake Griffin and prior to that they had removed approximately 710,000 pounds from Lake Apopka. In connection with the harvests he also provided the Council with a graph showing the TP concentrations in Lake Griffin vs Lake Dora. He said in the late 1990s Lake Griffin generally had higher TP concentrations than Lake Dora, but since the shad harvests the TP concentrations in Lake Griffin have been generally lower than Lake Dora. Dr. Battoe felt that some of this decrease may be a result of the harvests.

Dr. Battoe also mentioned a recent incident with one of their nets that had apparently been left in the water after a harvesting event and that it had become caught in the propeller of a private boat. He said that they were investigating the incident. Dr. Battoe then provided an update on vegetation mapping and surveying, including a copy of their latest survey conducted on 3/11/04.

Finally, Dr. Battoe provided an update on the operation of the Lake Apopka Marsh Flow-way. The most recent data indicated that they had removed approximately 40% of the 1,100 pounds (500 kilograms) of phosphorus that had been discharged from the flow-way at the start of operations. Additionally, the project continued to remove the nitrogen and Total Suspended Solids (TSS) with very high efficiencies. He also provided the latest data for Dissolved Oxygen (D.O.) from the flow-way which indicated a general trend of the D.O. to be slightly increased after being discharged from the flow-way. Dr. Battoe also said that there is an approximate 0.25 mile section of the Apopka-Beauclair Canal, from the mouth at Lake Apopka to the McDonald Canal, where the D.O. remains low. He explained that D.O. is temperature dependent; the warmer the water the lower the D.O. He said that there have not been any fish kills reported in the area. Dr. Battoe also said that engineers are working on a design for the reaeration of the water from the flow-way prior to discharge into the Apopka-Beauclair Canal.

V. Chairman Goerner asked about the regulatory issues of D.O. in the discharge from the flow-way. Ms. Bess explained that the FDEP has five classifications of surface water in the state and all of the surface waters in Lake County are Class III, which are for recreational uses. She said that they also understand that marshes, swamps, blackwater creeks, etc. are all naturally low in D.O. She went on to say that the FDEP is contemplating the possibility of adding more classifications to the state system, but said that would not happen for the next two or more years, if they decide to do that.

Councilman Clark asked why the shad harvests were recently conducted in Lake Griffin, even though the SJRWMD stated they would only conduct those activities if the water quality was bad enough that there would be a benefit to the lake from the harvest. Dr. Battoe explained that even though the water quality in Lake Griffin has greatly improved, he said that this is only a recent change in quality. He felt that the harvests should continue until the improved water quality can be identified as long-term trend for the lake.

Councilman Clark also asked Dr. Battoe about a statement made during the February meeting (and recorded in the minutes) where he said by the end of March the flow-way will have removed the entire amount of phosphorus that was initially discharged at start-up. Dr. Battoe said that they had anticipated the continued improvement in the rate of removal they were seeing initially, but that had since leveled out. Therefore the estimated removal rate may have been somewhat ambitious, he said.

Dr. Canfield expressed his opinion on the D.O. levels discharged from the Lake Apopka flow-way saying that it is a man-made system and would be required to meet State and Federal water quality standards. He said that the water being discharged is below state standard of 5.0 milligrams per liter (mg/L) and the SJRWMD may potentially face liability issues in the future. He suggested that the Council may consider investigating this issue further. Dr. Battoe said that they can provide aeration which will improve the D.O. of the water discharged from the flow-way. He went on to explain that the water coming into the flow-way has a large volume of suspended solids and organic materials, of which the flow-way is removing 99% of those solids. When the solids settle out they absorb oxygen, hence the lower D.O. in the water that is being discharged. He further explained that the quantity of oxygen absorption is known as a Bio Oxygen Demand (BOD) and that the BOD is being greatly reduced prior to discharge from the flow-way.

Mr. Johnson gave a brief update on the efforts of the FWCC with the lakes. He said that the SJRWMD had stopped harvesting shad in Lake Griffin on 3/31/04 and moved the harvesting back to Lake Apopka. Mr. Johnson also said that they were completing the creel fishing efforts on lakes Griffin and Harris in the next couple of weeks, in addition to the electro-fishing of bass in all of the lakes. He will provide that data to the Council when it becomes available.

At 12:25 PM the audio recorder stopped recording for an unknown reason and could not be restarted.

Chairman Davis provided a brief update of the May meeting agenda. He then introduced Harry Crook of Gold Coast Recyclers who gave a brief description of a new water cleaning system that could improve the D.O. in lake water. He provided a brochure with a DVD on the system. Mr. Crook invited the Council to visit one of the lake improvement projects they are working on.

8. COUNCIL MEMBER COMMENTS

No additional Council member comments were made.

9. PUBLIC COMMENTS

Dr. Canfield expressed his extreme displeasure for the comments made by Councilman Clark earlier in the meeting. He felt that Councilman Clark unfairly implied that he was requesting money for a project that had already received funding from other sources and

that perhaps some of that money was going to be used to pay for graduate students who work for him. Dr. Canfield explained that this was not the case and that all monies received would go directly to the efforts being expended on those projects.

Councilman Nicholson asked if the Council would like to have Dr. Canfield give a presentation on D.O. to which the Council agreed.

Phil Kelly, a realtor and fishing guide who is heavily involved in sport fishing, expressed his feelings on the changes that have occurred over the past 10 – 15 years within the lakes. He said that he recalls the clarity of the lakes back in the 1970s, and then by 1990 he couldn't see his lure in 3 inches of water. He appreciated the efforts of the Council and others because the lakes once again very clear. With the increased visibility in the water he has been able to see abundant quantities of hydrilla in lakes Harris, Eustis and Griffin. Mr. Kelly said that this is contrary to the plant mapping efforts which are only addressing plants near or at the surface, while the hydrilla that he has seen is located 300 yards offshore in approximately 15 feet of water. He suggested that the Council develop a Hydrilla Management Plan because although the hydrilla on the surface has been greatly reduced through management efforts, there a lot of it on the bottom of the lakes. Mr. Kelly cautioned the Council that they would not want to have a chemical application to the lakes like occurred in the late 1980s which sterilized the lake. He also said that he understands that BASS Masters is in the process of negotiating for two additional years of hosting their tournaments on the Harris Chain of Lakes.

10. ADJOURNMENT

Chairman Davis called for meeting adjournment. A motion to adjourn was made, seconded, and passed. The meeting was adjourned at 12:50 PM.

Respectfully submitted by:

Hugh "Dave" Davis II, Chairman

Dr. Thomas Cook, Secretary