FINAL

MINUTES OF THE MEETING
of the
HARRIS CHAIN OF LAKES RESTORATION COUNCIL
October 3, 2014

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:06 a.m. on October 3, 2014, at the Lake County Board of County Commissioner Chambers, 315 West Main Street, Tavares, Florida.

Members Present	**Members Absent**
Skip Goerner, Chairman	Hugh (Dave) Davis II
Robert (Bob) Johnson, Vice Chairman	Dr. Ed Schlein
Keith Truenow, Secretary (arrived at 10 a.m.)	Don Nicholson
John Stump, ex officio member	Sid Grow

1. CALL TO ORDER

Chairman Goerner called the meeting to order at 9:06 a.m.

2. INVOCATION AND PLEDGE OF ALLEGIANCE

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

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

Chairman Goerner called the roll. Council members Davis, Schlein, Nicholson, and Grow were absent. A quorum was not present.

4. APPROVAL OF MINUTES

Vice Chairman Johnson stated that he would contact Mr. Kraig McLane, St. Johns River Water Management District (SJRWMD), with corrections to the September 5, 2014, minutes. Without quorum, no action was taken.

Mike Perry, Lake County Water Authority (LCWA), reported the death of Ann Griffin and Chairman Goerner's remarks at the memorial service.

5. PUBLIC COMMENTS

There were no public comments.

6. PRESENTATIONS / ACTIONS

A. Bruce Jaggers, Biological Scientist, Aquatic Habitat Restoration and Enhancement Subsection, Bureau of Habitat and Species, Florida Fish and Wildlife Conservation Commission (FWC), gave an update on re-vegetation in Lake Apopka. He focused on spatterdock and stated that additional information is available.

The goal set by the Tiger Team was to reestablish 10 percent aquatic vegetation in Lake Apopka in 10 years. At that time, there was less than 1 percent aquatic vegetation in the lake. Some of the challenges were poor light penetration (secchi disk reading typically one foot or less), large deposits of flocculent mud, limited littoral areas, reservoir-like function, and extreme wind fetches.

Low water levels and many suitable substrates (firm peat deposits) provided the opportunity for FWC to establish plants in approximately 3 feet of water. They planted spatterdock (*Nuphar spp*.) and giant bulrush (*Schoenoplectus californiocus*) because they are native species that survive in deeper water. FWC decided to establish submerged aquatic vegetation (SAV) behind "wave breaks" created by initial plantings. Mr. Jaggers provided a graph of the planting scheme for spatterdock, bulrush, and SAV. Chairman Goerner asked how many acres the area covered and about the conditions of the lake bottom. Mr. Jaggers provided a slide of spatterdock planting zones with highlighted areas of firm peat deposits. Chairman Goerner asked for the size and percentage of the areas of firm peat deposits. Mr. Jaggers explained that given the conditions, FWC estimated reestablishing approximately 5 percent in aquatic vegetation. He stated that the area selected for SAV is in the Laughlin Road vicinity in the north shore area where most of the flocculent sediments are minimal – 2 inches or less. Chairman Goerner expressed concern regarding major wind events.

Mr. Jaggers explained that FWC tested methods for large-scale spatterdock plantings. They divided spatterdock nursery plants into groups of small and large rhizomes and planted them in September and October 2012, respectively. The results showed that none of the 2,500 small rhizomes survived and 50 percent of the 400 large rhizomes survived. In December 2012, FWC planted spatterdock rhizomes from the University of Florida (UF) that were grown to a larger size in a greenhouse. The results showed that 80 percent of the 30 plants survived. In October 2012, FWC targeted larger spatterdock rhizomes and "wild harvested" them from Lake Harris. They planted larger rhizomes and weighed them down with cement blocks. The results showed that 60 percent of the 630 plants survived. FWC focused on wild harvest and nursery-grown plants based on their survival, logistics, and cost. In the spring, summer, and fall of 2013, they planted 25,000 wild-harvested spatterdock, 10,000 nursery-grown spatterdock, and 500 UF greenhouse spatterdock. In the spring of 2014, they planted 50,000 wild-harvested spatterdock, 10,000 nursery-grown spatterdock, and 300 UF greenhouse grown spatterdock. The spatterdock survival estimates showed that 60 percent of the wild harvest, 75 percent of the nursery grown, and 80 percent of the UF greenhouse grown plants survived. The total number of spatterdock planted in Lake Apopka is approximately 96,000. The costs to plant spatterdock are $2.58/wild harvest plant, $6.80/nursery-grown plant, and $27.80/greenhouse grown plant. As of May 2014, the total spent for spatterdock is approximately $327,753. As of May 2014, approximately 450 acres of aquatic plants are established (about 1.5 percent coverage of Lake Apopka). Mr. Jaggers provided slides of the spatterdock wild harvest plants in the Laughlin Road area. The next step is test plots of SAV planted in protected spots behind emergent plants.

In the near future, FWC plans to begin experimental establishment of selected SAV (*Valisinaria* in coir mats, chara, nitella, southern naiad, and Illinois pondweed). There are no plans, at this point, for the spring and summer of 2015. Except that southern naiad is a native plant, Chairman Goerner stated that southern naiad and hydrilla are similar and asked what is the difference in the use of it versus hydrilla. Mr. Jaggers stated that southern naiad could be problematic in smaller ponds but not in large lakes. He discussed and provided slides of the various methods. The wild harvest method involved the use of large rhizomes (8 to 12 inches) tied to cement blocks and thrown over

the side of boats. This was efficient because it did not require contractors to get in the water to plant them. FWC modified the nursery method pond grown plants due to vendor capabilities; vendors grew the rhizomes to a larger size in burlap bags rather than a greenhouse. The nursery method greenhouse plants involved the use of rhizomes that were grown in greenhouses at UF. Mr. Jaggers stated greater survival of rhizomes using the nursery methods rather than the wild harvest method because they remain in planting substrate and do not dry out. He identified keys and constraints to successful plantings, including larger rhizomes (wild harvest plants or plants grown out in nursery), current low water levels (below regulation schedule), sites with suitable substrates, and nutrients available for good plant growth. Constraints are deep water (even at low water levels below regulation schedule), poor light penetration, wind and wave energy generated on large lake (initial plantings that have survived winter storms so far), and availability of plant material to transplant. The following wild cards were identified: water levels and water storage (water levels in planting zones six feet at upper end of regulation schedule), wind and wave energy generated on a 30,000 acre water body (initial plantings have survived winter and summer storms so far), tropical storms after the 1970s effort, and toxicity of some sediments. He displayed a slide of damaged leaves and stated concern regarding high sediment sulfide concentrations. Chairman Goerner thanked Mr. Jaggers and stated that he wanted periodic updates.

B. Dan Canfield, UF, stated with more than 35 years involvement working with the state on lake issues, "I can definitively say based on my experience, this project about rapid dewatering dredged sediments within a small treatment footprint, is the definitive project from hell." He shared that the project began in 2010 and is ongoing. To put things into context, he shared that he became very sick in 1996, spent a year in a bed, another year in a wheelchair, and a year in a cart. Returning to work in 2000, he credits his recovery to the support of his family and close friend, Senator George Kirkpatrick. Mr. Canfield believes he is on the downward part of his life expectancy curve and that time is very important. He shared slides of Bear Bryant's quotes, a cartoon on meetings, and the pros and cons of groupthink. In regards to an excerpt from the Council's 2009 Annual Report to the Florida Legislature, he asked if their recommendations for funding "to conduct research on dredging projects" and "for a viable test" have similar or different meanings. The contract for rapid dewatering was a demonstration and evaluation project. A group demonstrated the project, Mr. Canfield evaluated it, but according to the contract, he was not supposed to conduct research. UF contracted with Clean To Green, Inc. (CTG) for a project at Magnolia Park. Mr. Canfield shared that the CTG Magnolia Park Treatment Train Project is a complete failure as a demonstration project, but successful as a research project. Dredging was difficult in Magnolia Park. The company only dredged 53 total days (3 hours per day 70 percent of time). Low water levels (long-term drought), strong winds, and limited access caused problems. He provided slides and commented on bottom sediments, conditions at Magnolia Park in 2002, Lake Apopka water quality, proposed dredging, the dredge channel, and use of a sediment silt curtain.

Mr. Canfield stated that the Genesis Rapid Dewatering System did not remove unionized ammonia and CTG determined the Total Clean TCS-1500 System to be inappropriate so they put a custom-built system on site. He discussed the CTG treatment train, the Dino Six (hydraulic) dredge delivery system, problematic pumping of fluid mud, wet peat from the RT-700 Trommel, aesthetic issues, use of the "Ferrator," ferrate treated Apopka dredge water quality, and CTG return water quality. Proper disposal of fine sediments is a problem for all dredging operations and CTG made mistakes at Magnolia Park. They moved sediment to a retention pond designed for rainwater and it did not dry-out fast enough. They built a confined disposal pond but the pond retained the water because the iron treated sediments essentially formed steel walls. They pumped water and

transported it by tanker truck, but this is expensive and expands the footprint. CTG used a geotube, without a polymer additive, and it took almost a month for the sediments to dry out before moving. They brought a mobile filter and dewatering boxes on site, but the mobile system was labor intensive and the dewatering boxes did not dewater fast enough. The primary limitation is sediment wetness and the need to use cationic polymer because of the charge of the sediments. Mr. Canfield discussed a dewatering tower, parabolic screen, proposed geotube study, CTG Apopka-Beauclair Proposal, dry hydrant system, the Fox Waterway Agency, and geotubes. He recommended parabolic screening and a dewatering tower, cationic polymer additive, ferrator, nutrient reduction facility (LCWA), general permit exemption, maintenance dredging of canals and boat ramps, and the concept of *de minimus* impact (a level of risk that is too small to be concerned with; a "virtually safe" level). Chairman Goerner thanked Mr. Canfield for his presentation and he wants more information on geotubes.

C. Steve Fitzgibbons, AICP, SJRWMD, presented the draft 2014 Annual Report. Chairman Goerner is satisfied with the wording and recommendation in Section 1.0, Statutory Authority, regarding Council composition and member requirements. In regards to member resignation, Vice Chairman Johnson commented on adding specific language regarding the number of absences that constitute automatic resignation. Chairman Goerner stated that he is discussing this with Representative Larry Metz and wants more picture choices for the cover page of the 2014 Annual Report. Chairman Goerner and Vice Chairman Johnson approve of enhancements to the map (Figure 1). They want more information on minimum flows and levels for a recommendation in 2015. Chairman Goerner wants the recommendations of the technical advisory group added to the report. With regard to the death of the pelicans, Vice Chairman Johnson wants the report to cite the source of the study (Exponent) and reference the Council's discussion of the fact that farmers flooded the fields at Zellwood for many years with no bird kill incidents. Mr. McLane reminded the Council that documents had been provided via email to the Council, in addition to monthly updates, and agreed to provide Council members with the revised Annual Report Draft and information on the Lake Apopka dredging proposals and associated request for proposal, as soon as possible. Chairman Goerner stated that he is a proponent of fish stocking in Lake Apopka and does not agree to a comparison of Lake Talquin to Lake Apopka. Mike Allen, UF, agreed that Lake Talquin and Lake Apopka are different systems and agreed to provide information on the benefit of stocking small and large bass in lieu of a comparison of fish stocking in the lakes. Marty Hale, FWC, stated plans for placement of additional fish attractors in Lake Harris by the end of 2014. Chairman Goerner asked for a comprehensive update on the fish attractor program. The Council will continue to monitor the progress of Montverde's deep-water access and widening of the boat ramp. Chairman Goerner questioned the accuracy of Mr. Fulton's statement that total TP contributions to the lake (i.e., Lake Griffin) since the Harris Bayou structure has been in place have been below the total maximum daily loads. Mr. Fulton explained that this refers to the total load to Lake Griffin from all sources. Chairman Goerner is concerned, nonetheless, that phosphorus discharges from the Harris Bayou are excessive and recommends that actions be taken to reduce them or that Harris Bayou not be used for conveying flood discharges from Lake Harris.

7. COUNCIL & AGENCY QUESTIONS & ANSWERS

Chris Ferraro, Florida Department of Environmental Protection, reported the U.S. Environmental Protection Agency's (EPA) final withdrawal of the federal numeric nutrient standards. EPA's withdrawal of federal criteria allows the state of Florida's numeric nutrient criteria to become

effective as the only rules covering Florida water bodies. Ms. Ferraro confirmed that the presentation by Mary Paulic is not scheduled for the Council's meeting in November 2014.

Mike Perry, LCWA, reported water levels. He stated that Apopka is 1.21 feet below the regulatory level, and 0.7 feet below the minimum desirable level. The Super Pond is 0.14 feet below the lower end of the regulatory schedule, and Lake Griffin is 0.44 feet below the regulatory schedule.

8. COUNCIL MEMBER COMMENTS

A. Comments

B. Discussion of Next Scheduled Meeting:

Mr. McLane stated that the next meeting of the Council is scheduled for November 7, 2014. Chairman Goerner stated that the Legislature, by statute, has to receive the annual report by November 25, 2014, so Council members should make themselves available for a meeting later this month. Mr. McLane agreed to work with members to schedule a meeting on October 29 or 30, 2014. The Council plans to review and complete the draft annual report at the next meeting. Mr. McLane shared that he will work toward advertising the engineer and environmental engineer vacancies. He further added that he would provide the annual report cover letter and the Council's 2015 calendar at the next meeting.

9. ADJOURNMENT

The meeting adjourned at 11:58 a.m.