

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

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:03 a.m. on November 2, 2018 at the Lake County Board of County Commissioner Chambers, 315 West Main Street, Tavares, Florida.

**1. CALL TO ORDER**

Chairman Grow called the meeting to order at 9:03 a.m.

**2. INVOCATION AND PLEDGE OF ALLEGIANCE**

Secretary Nicholson gave the invocation. The Pledge of Allegiance followed.

**3. COUNCIL ROLL CALL**

Chairman Grow called the roll.

**Council members present**

Sid Grow, Chairman  
Keith Truenow, Vice-Chairman  
Skip Goerner  
Robert Johnson  
Joe Dunn  
Don Nicholson  
Stephanie Bishop  
John Stump

**Council members absent**

Wade Boyette

**TAG Member present**

Ryan Hamm (Dan Nelson substitute), FWC

**TAG Members absent**

Mark Hoyer, UF  
Kevin Coyne, FDEP  
Rolland Fulton, SJRWMD  
Mike Perry, LCWA  
FDOT  
ACOE

Chairman Grow requested Harris Council Administrative Support to list the agency representation for listed TAG members on both Council minutes and agendas.

Chairman Grow queried SJRWMD as to whether Dr. Rolland Fulton would continue as the SJRWMD TAG representative, as he had only attended one meeting the past year. Susan Davis,

SJRWMD, reported Dr. Fulton is part of the TAG and when there are specific questions or agenda items for him, he will address them. Chairman Grow indicated the Florida statutes require TAG members be present for Council meetings. Lisa Kelley, Assistant Executive Director, SJRWMD, noted TAG participation was discussed at the special meeting called by the SJRWMD Governing Board Chairman. At that meeting it was noted the role of TAG members was to provide technical assistance to the Council, though they were not required to be present at Council meetings. Council member Goerner indicated that was not the interpretation of the Council.

Ms. Kelley officially informed Council that when SJRWMD determines an item in which Dr. Fulton is the appropriate person to address that item, Dr. Fulton will be at the meeting. Otherwise, SJRWMD will select the most appropriate staff member to address the issue. If Council assigns something to the TAG, Dr. Fulton will work with the TAG and together they will bring their findings back to Council. SJRWMD will not be providing staff on hand to answer questions at random for which they were not prepared. SJRWMD will provide TAG participation, but it is SJRWMD's recommendation that Council pass an item then task the TAG, not an individual to bring back the information.

Chairman Grow read portions of Chapter 373.467(1)(b), Florida Statutes, which states "There shall be an advisory group to the council which shall consist of one representative each from the St. Johns River Water Management District, the Department of Environmental Protection, the Department of Transportation, the Fish and Wildlife Conservation Commission, the Lake County Water Authority, the United States Army Corps of Engineers, and the University of Florida, each of whom shall be appointed by his or her respective agency, and each of whom, with the exception of the representatives from the Lake County Water Authority and the University of Florida, shall have had training in biology or another scientific discipline" into the record. Ms. Kelley noted the statute does not require that TAG members be present at Council meetings.

Council member Goerner requested an SJRWMD attorney attend the Council meeting in January or February to address the TAG attendance question. Council member Goerner made a motion, seconded by Council member Johnson, to have TAG members available to Council at every meeting. Ms. Kelley reiterated the position of SJRWMD, to have Council approve items for the agenda and task the entire TAG to provide information back to Council.

Chairman Grow reiterated his request to have a scientific member available to answer scientific questions. Ms. Kelley indicated the Council did not have the legal ability to require TAG member attendance. After further Council discussion, the motion was approved by a vote of 6-2. Council members Joe Dunn and Stephanie Bishop were opposed.

**3. APPROVAL OF MINUTES**

September 14, 2018 were unanimously approved. October 4 meeting minutes approved by a vote of 7 to 1.

**4. PRESENTATION**

Update on the Harris Chain of Lakes Recreational Fishery, Ryan Hamm, FWC

Mr. Hamm reported FWC currently has numerous projects on the Harris Chain of Lakes including management of fisheries, habitat enhancements, aquatic plant control/management,

and research. The goal of his presentation was to give a few highlights of fisheries trends and agency activities at Lake Griffin, Emerald Marsh, Lake Harris, Lake Dora and Lake Apopka. Mr. Hamm reported since the early 2000s, water quality has improved in part due to management actions by state and local agencies from sources such as nutrient reductions, connection of marshes, water fluctuations, plantings. In the past 10 years, FWC has observed water clarity (based on secchi depth) increase at most lakes on the chain. Mr. Hamm noted this increased clarity has allowed native vegetation to expand along with *Hydrilla*. In particular, submersed vegetation (e.g., eelgrass, southern naiad, Illinois pondweed, bladderwort, and *Hydrilla*) provides critical rearing cover for young fish to survive and this has resulted in a drastic increase in fish populations such as bass at many lakes.

Mr. Hamm noted the habitat and fishing overall continues to improve at the Harris Chain which is attracting recreational anglers and tournaments for bass and crappie alike. In addition, data collected by FWC fisheries monitoring collaborates what many anglers are saying; that the Harris Chain is quickly becoming one of the premier bass fishing destinations in Florida. During this past year, three major bass fishing tournaments were held at the Harris Chain (FWC Walmart Tour, B.A.S.S Southern Open and Bass Pro big fish tournament). According to Mr. Hamm, Lake County Visitors and Tourism Bureau indicated that the tournaments provided \$1.5 and \$1.3 million dollars respectively in economic value to the area.

On Lake Griffin, improved water quality from reduced nutrient loading and reconnection of marshes has improved clarity of the water and submersed vegetation has expanded. Vegetation on Lake Griffin increased from 4% in 2006 to over 30% in 2018. Mr. Hamm reported studies have shown that hydrilla can significantly improve the bass population where submersed vegetation is lacking. However, Lake Griffin is an example of a lake that has dramatically improved primarily from native submersed vegetation.

Mr. Hamm discussed the Lake Griffin bass population and angler effort, reporting that in 2013, bass catch rates were among the highest on the Harris Chain of Lakes. Current estimated catch rates of 0.8 bass per hour for the past 3 years indicates a highly productive bass fishery, and information from electrofishing, creel surveys, trophy catch, and tournaments have prompted FWC to place Lake Griffin as a top spot for bass in Florida.

In addition to bass, Lake Griffin has long been recognized as a top “speck” fishery. Current monitoring includes carcass collections for age and growth, creel studies to assess angler effort, catch rates, and satisfaction, and otter trawl to provide fisheries independent data. Despite regulations that set size and bag limits on crappie, the yield of crappie per angler hour has met or exceeded pre-regulation levels. While anglers are harvesting a lower number of crappie, they are obtaining a higher poundage in fillets.

Mr. Hamm discussed fish attractor research at Lake Griffin where FWC found that plastic attractors concentrate bass in similar number compared to brush and therefore, managers are utilizing them more around the state. Besides research, recreational anglers, tournament anglers, and guides are utilizing the attractors for bass and crappie.

Council member Nicholson inquired as to whether the attractors were randomly placed. Mr. Hamm reported most attractors are placed in deep water for boat clearance, as well as to provide

deep water structure. Mr. Hamm further noted there was not much control in their placement, though they were generally placed linearly so as not to fall on top of each other as they were dropped.

Regarding Lake Harris, Mr. Hamm noted that since 2015 the water clarity in Lake Harris has increased from less than a meter to almost 2 meters in 2018. Electrofishing catch rates of adult and age-1 bass were the highest on the chain in 2018, and creel survey results indicate Lake Harris is a premier bass fishery with over 70,000 angler hours and 0.55 bass per hour

The Lake Harris fishery has benefited from the expansion of *Hydrilla* and native submersed plants. However, hydrilla is the dominate submersed here. Mr. Hamm reported a future project on Lake Harris is Hickory Point underwater LED lighting project, a collaborative project in which lights have been purchased by LCWA. Council member Nicholson suggested the light program will be positively received by the public, noting many people have not seen fish at night.

Mr. Hamm reported Lake Dora catch rates of adult bass similar to Lakes Harris and Griffin, though Lake Dora has highest catch rates of bass >16" on the chain. Fish attractors have been a major project in Lake Dora with plastic fish attractors placed at 10 sites with either 50 or 100 units per site for a total of 750 plastic units. The project completed in spring 2018, is a unique project using anglers to help FWC collect information on how effective using 100 or 50 units is and how effective they are for crappie. Anglers have been catching high numbers of bass and crappie thus far on the attractors with one bass being submitted to TrophyCatch at 8.6 pounds.

On Lake Apopka, aquatic vegetation is low, although eel grass has expanded in some areas. Mr. Hamm reported FWC planted bulrush and spatterdock to increase habitat from 2012-2014 and pads have filled in nicely. As expected, the catch rates of bass at Lake Apopka are by far the lowest in the chain. However, about a third of the sites that FWC samples, primarily on the south and southwest side, have suitable habitat and good populations of bass. Mr. Hamm noted each year, in the spring, FWC has encountered some of the largest bass in the Harris Chain at Lake Apopka.

Council member Goerner inquired about natural recruitment in Lake Apopka. Mr. Hamm suggested natural recruitment is low but not zero. In terms of reproduction, Mr. Hamm noted bass are adaptive to their breeding strategies. They will spawn in muck areas or spatterdock roots.

FWC undertook a major bass re-stocking effort on Lake Apopka, with stocking over a 1 million Largemouth Bass stocked into Lake Apopka in 2016 and 2017. Mr. Hamm reported initial stocking mortality was estimated low due to 0% mortality of 104 fish stocked into 6 containment cages. During the Spring 2018 sample periods, 109 Largemouth Bass ranging from 126 to 384 mm were fin clipped for genetic analysis, however results were not yet available.

Mr. Hamm discussed Florida angling in general, citing angler expenditures in the State are \$4.4 billion annually. Anglers averaged 17.2 days per year fishing in Florida, for a total of 46.3 million days of quality outdoor recreation. Of those, 24.4 million days were spent in fresh water by 1.4 million anglers and, 23.1 million days were spent in saltwater by 2.0 million anglers. Mr. Hamm noted there may be fewer freshwater anglers in Florida but they fish often. Council

member Goerner noted when Council was first created there were no fishing tournaments, though after Council started tournaments increased. Mr. Hamm reported a total of 339 tournament days took place on the Harris Chain of Lakes, with 11,268 participating anglers in 2017-18.

Mr. Hamm reported on several special projects, including the stocking of sunshine bass into Lake Harris. Results of a sunshine bass survey show that anglers like to catch sunshine bass though they rarely target them. Anglers also prefer FWC continue to stock them, though some anglers are concerned on their impact to native fish. FWC is providing more education on stocking programs, techniques to catch them, though general awareness is needed to grow the fishery.

Mr. Hamm noted FWC is working to increase communication with stakeholders by gathering input on invasive plant management, communicate about timing of treatments and how input was used. FWC also holds regular Open House and Stakeholder Meeting, is building and email distribution list and expanding regular communication. In closing, Mr. Hamm acknowledged Mr. Brandon Thompson with Fish and Wildlife Research Institute who is the project leader for the Harris Chain of Lakes Monitoring and Research.

Council member Goerner commented on his interest in the sunshine bass fishery. Mr. Hamm reported they are edible and a fine food fish, with 200,000 stocked each year in Lake Harris and about 100,000 stocked in Lake Eustis. Sunshine bass do not live much beyond 4 years with the average fish weighing 1.5-2 lbs.

5. **FOR INFORMATION**

Harris Chain of Lakes Restoration Council Final Draft of 2018 Annual Report, Denis Frazel, Harris Council Administrative Support

Denis Frazel, Harris Council Administrative Support, presented the final 2017 draft Annual Report. Mr. Frazel reviewed revised sections of the final draft of the report, including all comments provided by Council on the previous draft. Council member Johnson proposed revising the Aquatic Vegetation discussion in Section 3 to include text about public input on *Hydrilla* and issues with sediment buildup in the Tammi Canal. The last two paragraphs of text and Council recommendations were revised as underlined, as follows:

Mr. Hoyer's personal recommendation was that a monitoring program should be established such that *Hydrilla* control measures can be enacted once the plants expand beyond 30% coverage in a given waterbody. Herbicides should be kept in reserve for use once the 30% threshold is breached. Monitoring is critical because *Hydrilla* can grow a foot per day in the right conditions, resulting in 30-50% plant coverage quickly. Several members of the public spoke of the *Hydrilla* problem in Harris lakes affecting lake access, fishing, and navigation.

There have been issues with sediment buildup due to high water flows, eliminating access in various canals, including the Tammi Drive canal, off the Apopka-Beauclair Canal.

**Council Recommendations 2018**

- Request dedicated legislative funding of \$10 million for *Hydrilla* management on the Harris Chain of Lakes in response to both public input and the scope of the problem.
- Increased monitoring to determine a trigger point for maintenance of *Hydrilla* in the Harris Chain of Lakes.

Council member Johnson also discussed the text under the Water Quality discussion in Section 3. Council member Johnson disputed the findings of a presentation by Dr. Havens suggesting there were inconsistencies in his conclusions.

The last paragraph in the Water Quality discussion was revised as underlined, as follows:

Dr. Havens concluded there were statistically-significant long-term declines in TP, TN and chlorophyll in the 1985-2018 dataset, and increased secchi depth. Comparing high water periods only, Dr. Havens noted improved water quality during the last three high water periods compared to an earlier high-water period. Dr. Havens reiterated his conclusions that there were statistically significant decreases in nutrients and chlorophyll and significant increases in light penetration over the long term despite short term fluctuations in lake level. Council suggested there were inconsistencies with Dr. Havens presentation based on his previously published information and requires further investigation.

Finally, Mr. Frazel presented alternate artwork for the cover of the Annual Report. Council indicated their preference for the original cover.

6. **CONSIDERATION**

Approval and Adoption of the Final Draft of the 2018 Harris Chain of Lakes Restoration Council Annual Report

Council unanimously approved the Annual Report as revised, and authorized Chairman Grow to review and approve the final report.

7. **AGENCY UPDATES**

a. St. Johns River Water Management District

Susan Davis, SJRWMD, provided a brief update on SJRWMD activities. Ms. Davis reported Harris Council-related expenses for the previous month, including Florida Administrative Register notification, website staff support, posting agenda and meeting documents, and administrative support expenses. Ms. Davis noted the agenda and meeting documents are online, and the Harris Council website received 593 page views in October. Ms. Davis noted several SJRWMD Governing Board items of interest to be discussed at the November 13 meeting. The list would also be emailed to Council members. The complete SJRWMD update is included as backup material to the minutes.

Council member Goerner requested information reported to him from LCWA about a proposed purchase of property by SJRWMD along the Apopka Beauclair Canal. Council member Truenow advised that LCWA spoke to him about using his properties, and the SJRWMD is not involved.

b. FWC

Ryan Hamm reiterated that Scott Bisping is the new FWC employee taking over for Dennis Renfro. Mr. Hamm also noted some Council members are on the FWC email list and offered to add other members upon request. Mr. Hamm discussed further treatments of hydrilla, noting treatments in Little Lake Harris cover only about 25% treated area in only higher blocks of hydrilla to avoid low oxygen levels and potential fish kills.

8. **PUBLIC COMMENTS (fill out speaker card and hand to a staff member prior to public comment period)**

Ms. Linda Moss, Lake Gem, reiterated previous comments on muck buildup in the Tammi canal. Ms. Ross discussed LCWA movement of water from the NuRF into the AB Canal, and discussions within LCWA regarding the muck. Ms. Ross requested help from FDEP to examine the muck. Council member Johnson suggested contacting the County Commission.

9. **COUNCIL MEMBER COMMENTS**

Chairman Grow noted the final ad posting of the Council agenda was placed in the newspaper. Chairman Grow also displayed a photograph of a walking catfish, along Route 48 south of Lake Harris. Chairman Grow indicated that they had never before been seen in central Florida.

Vice chairman Truenow reported LCWA had approached him about material from the NuRF.

Council member Nicholson noted he was still concerned about the Tammi Canal issue.

Council member Bishop inquired about the plan for the next meeting. Council member Bishop suggested developing goals and plans for the next year, focusing on the 4 bullet items in the Annual Report as a priority. Council member Bishop noted Council has been able to really talk about progress. Chairman Grow noted planning for a workshop would be covered under agenda item 12.

Council member Joe Dunn had no comments

Council member Goerner noted Council should have a workshop to identify projects and make plans for the future. Grow suggested briefing new members on Council activities both current and historic.

Council member Johnson inquired whether any other Council members other than Council member Dunn had read Dr. Havens water quality report. Council member Johnson reviewed graphs from Dr. Havens presentation, including Secchi depth, chl, phosphate and nitrogen. Council member Johnson also showed graphs of SJRWMD data indicating some improvement in water quality but not as much as SJRWMD proposed. Council member Johnson previous comments in which he disputed statements made by Dr Havens during his September presentation, suggesting they were contrary to information previously published by Dr. Havens.

Council generally discussed management of water on the north shore, the marsh flowway, and north shore reconnection.

Council member Stump discussed Double Run Swamp, indicating Council had requested TAG or someone provide a briefing about the feasibility Double Run Swamp for conveyance. Council member Stump noted the elevation difference as a significant issue. Council member Goerner observed the elevations are historically the same, water levels have changed.

**Council member Stump made a motion to have SJRWMD (Bob Naleway) update Council on sump dredging. Council member Stump also requested an update on the targeted dredging and a follow-up on Lake Apopka unconsolidated flocc dredging.** There was no second to the motion. Chairman Grow indicated the items could be discussed under agenda item 12.

**10. REVIEW OF ACTION ITEMS REQUESTED DURING MEETING**

Chairman Grow noted the item dated July 8, 2016 requesting Dr. Shortelle address Council was complete.

- **Susan Davis agreed to determine the availability of the Blue House at Sunnyhill Restoration Area for the workshop.**

**11. DISCUSSION OF NEXT SCHEDULED MEETING.**

Chairman Grow presented a draft list of agenda topics, including an update on SJRWMD Technical Memorandum 56, previously presented in January 2017 by Dr. Fulton, an update by Kevin Coyne, FDEP, on state efforts to remediate impacts from septic tanks, a *Hydrilla* control update by Nathalie Visscher, FWC, an update on a proposed Doctors Lake water improvement project by SJRWMD, a review by SJRWMD of FY 2018/2019 projects, and an update on sump dredging.

Council member Dunn suggested a workshop to establish the agenda for the upcoming year. Council agreed on a tentative January 11, 2019 date for the workshop, to include TAG, to be held at Sunnyhill Restoration Area. **Susan Davis agreed to determine the availability of the Blue House at the Sunnyhill Restoration Area for the workshop.**

**Council members- do you anticipate attending the next Harris Council meeting?**

A meeting for December 2018 was not scheduled.

**9. ADJOURNMENT**

Meeting adjourned at 12:06 a.m.