

# **Minutes from the 115<sup>th</sup> meeting of the South Carolina Aquatic Plant Management Council**

## **1. Call to Order**

Chairman Chris Page called the 115<sup>th</sup> meeting of the South Carolina Aquatic Plant Management Council to order on February 4, 2014 at 10:09 a.m. The meeting was held in room 335 of the Dennis building at 1000 Assembly Street, Columbia, S.C. This meeting was open to the public and ample notice had been provided according to Section 30-4-80 of the Freedom of Information Act.

### **Attendance:**

Council members in attendance were Chairman Chris Page with the South Carolina Department of Natural Resources: Land, Water and Conservation Division; Bob Perry with the South Carolina Department of Natural Resource: Wildlife and Freshwater Fisheries Division; Larry McCord with Santee Cooper Public Service Authority; Mark Cribb with the South Carolina Department of Natural Resources: Land, Water and Conservation Division; Jeannie Eidson with the South Carolina Department of Health and Environmental Control; Tammy Lognion with Clemson Department of Pesticide Regulation; and David Wannamaker with the South Carolina Department of Agriculture.

Guests in attendance were Marline Guillarerek with the Goat Island Boat Club (GIBC), Charlie Pickeer with the GIBC; Betty Cozart with the GIBC; Dale Cozart with SCR Boat Club; Carl Cagle with the GIBC; Carolyn Cagle with the GIBC; Kris Blesie with the GIBC; Cathy White with the GIBC; Walt White with the GIBC; Eddie Gleaton with the GIBC; Debra Gleaton with the GIBC; Harold Wordon with the GIBC; Brian Chermol Lake Marion Homeowner/ hunter/ fisherman;

Jerry Hatcher with the GIBC; John Mathis with the GIBC; Mark Munkittrick with the GIBC; Joe Campbell with GIBC; Sandy Holland with GIBC; Chip Davis with Santee Cooper Public Service Authority; Casey Moorer with South Carolina Aquatic Plant Management Society; John Morrison with Santee Cooper Public Service Authority; Breck Carmichael with the South Carolina Department of Natural Resources; Michael Hook with the South Carolina Department of Natural Resources: Land, Water and Conservation Division; and Daniel Hood with the South Carolina Department of Natural Resources: Land, Water and Conservation Division.

## **2. Review of the 114<sup>th</sup> Meeting Minutes**

Chairman Page placed the minutes from the 114<sup>th</sup> meeting of the South Carolina Aquatic Plant Management Council under review and time was given for the council members to review the minutes. Mr. Cribb moved to accept the 114<sup>th</sup> minutes as written. Mr. Wannamaker seconded the motion. The motion carried by unanimous vote.

## **3. 2014 Preliminary Plan Review**

### **A. Prestwood Lake, Hartsville, S.C.**

Chairman Page overviewed the addition of Prestwood Lake, located in Hartsville, S.C., to the 2014 Plan with the council. In 2013 Prestwood Lake was added to the list of S.C.D.N.R. Aquatic Nuisance Species Program's list of treatment sites. Prestwood Lake was Renovate OTF for its water lily, spatterdock, and water shield infestation. The upper end was also treated with a combination of Renovate and Clipper for the ~1 acre of water hyacinth that was present. In addition to herbicide application, Prestwood Lake also received a stock of 2000 sterile grass carp to deal with water milfoil issues. Mr. Page indicated that numbers of Grass Carp needed for Prestwood were based 10fish/vegetated acre or 20fish/surface acre. The total number of carp needed based on either calculation was nearly equal.

**B. Lake Murray, S.C.**

Chairman Page opened the discussion on Lake Murray by reviewing previous treatments and management activities. Lake Murray was stocked in 2003 with 64,000 sterile grass carp in order to remove the infestation of hydrilla. The lake was then drawn down for approximately two years and the model by which DNR planned its stocking efforts succeeded in removing all problematic areas of hydrilla. While surveys of Lake Murray have shown some rebounding of native species such as naiad and pondweed, no hydrilla has been found during either SCDNR's or SCE&G's surveys since 2005. Models for sterile grass carp stocking were based upon Virginia and Santee Cooper studies and averages between the studies were used to account for the differences in piedmont and coastal plain systems. An average annual mortality of ~23% was decided upon by SCDNR, and a goal of 1 carp/ 8 surface acres was set for a maintenance level of carp stocking. Based on the model, Lake Murray carp stocks will drop below the goal of 4,800 fish this year. SCDNR proposed a stocking of 1,100 carp in 2014 in order to maintain a population at or slightly above 4,800 carp. Mr. Page also noted the importance of regular maintenance level stocking of carp to account for the possibility of catastrophic fish events, which will usually affect specific year classes of carp. Mr. Wannamaker asked about the feasibility of complete eradication of hydrilla in a system such as Lake Murray. Mr. Page responded by stating that hydrilla may most certainly be eradicated in small closed systems through a combination of carp, herbicides, and dredging however; the effort and costs associated with dredging systems like Murray and Santee Cooper would never be consider feasible.

**C. Lake Wateree, S.C.**

Chairman Page brought Lake Wateree to the attention of the council. In the last year Lake Wateree homeowners have contacted SCDNR's Aquatic Nuisance Species program with

many complaints concerning water willow and pond weed around docks and in shallow coves. The two native species have created some issues with swimming access as well as boating access to some degree. Mr. Page explained that these species are native and can be beneficial as game and fish habitat enhancers. Mr. Page went on to explain that homeowner interest and game/fish habitat enhancement must be weighed against each other on a case by case basis. A brief discussion concerning homeowners hiring category 5 license holders to conduct aquatic plant removal on public water bodies was conducted with regards to SCDNR, SCE&G, Duke Power, and Santee Cooper's ability to maintain controlled management plans for those respective water bodies. Mrs. Lognion informed the council of Clemson's responsibility to monitor category 5 applicator treatments. Mrs. Eidson inquired as to whether SCE&G provides assistance with funding grass carp stocking efforts conducted by SCDNR. Mr. Page confirmed that a trust exists for such funding assistance on all of SCE&G's impoundments. Mr. Page went on to discuss the need for Duke Power to assist with treatment of problem aquatic vegetation on Lake Wateree. Mr. McCord and Chairman Page briefly discussed the upcoming renewal of FERC licenses for the power companies involving their responsibilities for aquatic vegetation maintenance.

**D. Santee Cooper Lakes (Lake Marion and Lake Moultrie)**

Chairman Page opened the discussion on the Santee Cooper Lakes by stating the large decrease in vegetation that has been quantified by recent surveys and the possible causes of the noted decrease. Grass carp herbivory, high turbidity, and high flows were all attributed to the marked decrease in vegetation in the Santee Cooper Lakes during 2013. Mr. Page was quick to point out that while survey numbers showed a marked decrease in vegetation, there is reason to believe that survey figures could have been skewed by turbidity levels. The turbid conditions of 2013 and currently in 2014 could easily have obstructed the

infrared signatures of SAV and skewed the data for the surveys negatively. Mr. Page discussed the difficulty faced by the SCDNR in developing an action plan for 2014 on the Santee Cooper Lakes due to the uncertainty of the survey data. SCDNR suggested that the plan for 2014 should be to suspend grass carp stocking in the Santee Cooper Lakes until accurate surveys of SAV can be collected. SCDNR also recommended that if high flow, turbid conditions continue an adaptive stocking plan should be implemented.

Mr. McCord discussed details of the 2013 Santee Cooper system in order to justify SCDNR's proposal for an adaptive stocking plan. Mr. McCord discussed the reduction from 7200 acres of hydrilla in 2012 to 1100 acres in 2013, as well as a decrease in the abundance of native species. Mr. McCord reviewed statistics showing that based on 2013 surveys, the Santee Cooper system has crested the carp to hydrilla regression curve into a carp heavy system. Mr. McCord stressed the importance of understanding that the survey numbers could be skewed due to environmental conditions, and the importance of maintaining the grass carp population should clear growing conditions return. Mr. McCord stated that Santee Cooper staff will continue to monitor the growth of SAV and water quality condition throughout the growing season on 2014 and use the 2013 model to stock carp in late fall if the surveys should indicate that it is necessary. Mr. McCord stated that if survey figures continue to show low acreages of hydrilla, carp mortality will bring the population down to a manageable level within a few years.

Mr. Perry requested to change the final sentence in the Santee Cooper 2014 plan to include "and if council determines stocking to be necessary later in 2014". Mr. McCord agreed that flexibility based on the council's assessment will be the best course of action for 2014. Mr. McCord requested that the term "carp predation" be changed to "carp herbivory" in the plan, so that it is clear that the carp are feeding on hydrilla and other SAV.

Mr. McCord also suggested that the statement “high flows” be changed to “turbidity and water level increase”. Mr. Perry moved that the suggested changes be included in the 2014 draft plan, Mrs. Eidson seconded the motion. There was no discussion of the motion to include the proposed changes in the 2014 draft plan and it carried by unanimous vote. Mr. Page reminded the council that at this time the plan is still in draft form until the required time for public review has expired.

Mr. McCord mentioned that while a reduction in hydrilla and other native SAV in the Santee Cooper system occurred during 2013, a note worthy reduction in crested floating heart (CFH) was also documented. The significance of the decrease in CFH would not be quantified until surveys are conducted in 2014. Mr. McCord also mentioned that NC State has been working on herbicide application experiments with CFH. Mr. Page discussed the rapid turnover rate and rapid flows in the Santee Cooper system, and the problems that these conditions pose for herbicide treatment of SAV. Mr. Page mentioned SCDNR’s assistance with the Santee Cooper WMA’s.

#### **4. Call for Other Business**

Chairman Page opened the floor for other business, and began by mentioning the Augusta Canal on the border of South Carolina and Georgia. The managers of the Augusta Canal made plans to stock the canal, which has gates that are inoperable and in the open position connecting to the Savannah River, with grass carp. Not contact was made concerning the stocking with SCDNR or GADNR. SCDNR and GADNR have now been made aware of the stocking and will place input regarding the probable effectiveness of stocking the canal to treat hydrilla.

Mr. Page addressed the need for new listings of illegal plants to collect and move in SC. Mr. Page contacted Lorianne Riggan and Ross Self and requested that CFH, Phragmites, Water Lettuce, and Giant Salvinia all be included in the list of illegals. Page indicated that he was

awaiting reply. Mr. Page also mentioned recent contact with SCDNR law enforcement concerning the take of grass carp, and that the officer had made one case and was actively pursuing another. Mr. Page addressed the need for increased enforcement of laws concerning invasive species in SC, and mentioned the positive effect that strict laws had had in Midwestern US states.

Chairman Page brought the importance of educating the public on invasive species to the table. Mr. McCord introduced a program used by the University of Florida to educate school grades K-12 on invasive species and the detriment they can have on local ecosystems. Mr. McCord, Casey Moorner, and Santee Cooper are attempting to bring the Florida program to South Carolina schools. SCAPMS, Duke Energy, Santee Cooper, and others are interested in getting invasive species education introduced to SC schools and have funds available to contribute towards the effort. Mr. Page mentioned Florida's willingness to allow others to use their materials with state specific alterations as long as Florida is properly credited. Mr. McCord requested that Mrs. Lognion pass information regarding the Florida program along to Clemson University Education Outreach program. Mrs. Eidson mentioned that Riverbanks Zoo may also be interested in the educational materials. Mr. Page made a call for any further business discussion and none was brought before the council.

## **5. Public Comments**

Chairman Page opened the floor for public questions and comments. The first public question was: "will the freezing temperatures seen this winter kill the CFH?" Mr. McCord responded by stating "based on the low water levels and freezing temperatures seen in 2007 and the rebound seen in 2008, we do not expect for the cold to kill the CFH". Mr. McCord continued to state that he hopes that the high turbidity levels will have a negative effect on CFH populations.

The second public question was: “has there been any progress made towards getting CFH listed as an invasive species?” Mr. McCord stated that there has been some progress, but that the process is a slow one. Many factors influence the movement of a bill becoming a law. He went on to say that CFH being listed or not will not affect treatment on the Santee Cooper system. Mr. Page explained that SCDNR has the authority to list species, but legislature must approve the regulations effected by the listing.

The third public question was: “I understand the need for Lake Murray grass carp stocking, but why suspend stocking of carp in Lake Marion when hydrilla is present there but not in Lake Murray?” Mr. Page responded by explaining that Lake Murray and Lake Marion are two different systems in different stages of management. Murray was stocked with grass carp in 2003, and with a combination of herbicide treatments, stocking, and an extended draw down Lake Murray was restored to an amount of hydrilla which could be managed by the carp population. Based on the 2013 surveys of hydrilla in Lake Marion, we currently have many more carp per vegetated acre than the model suggests is necessary. The present carp should be sufficient to continue decreasing hydrilla populations until they are at a level to which a relatively small number of carp can manage any re-growth from tubers or root crowns. Mr. Page also mentioned that should 2014 surveys indicate that hydrilla is significantly rebounding in its former growth areas, an adaptive model will be used to implement stocking in the Santee Cooper Lakes. Mrs. Eidson clarified that the words “suspend stocking” in the 2014 plan indicated that the stocking is merely being delayed until further data can be collected. Mrs. Eidson made mention of the possibility of rewording “suspend stocking” to “temporarily suspend stocking” in the 2014 draft plan.

The fourth public comment was: “thank you for doing all that you do.”

Mr. Perry called for Chairman Page to discuss the public review of the 2014 draft plan including: the time period for public comments to be submitted; examples of useful comments; and appropriate methods for submitting comments. Mr. Page concluded that the time period of public comment is a minimum of 30 days. Comments should include whether or not the member of the public agrees or disagrees with the plan, and scientific evidence to justify disagreement of proposed management measures. Mr. Page and Mr. McCord stressed the importance of individual letters or e-mails which could be verified as a single public source. Mrs. Eidson included requests for editorial revisions to be included in public comments. Mr. Page encouraged the public to take note of all sections of the plan, as opposed to only those pertaining to their water body of interest.

The fifth and final public question was “what are the differences of SCDNR’s and Santee Cooper’s systems of record keeping?” Mr. Page explained that SCDNR keeps daily records of treatment areas in DNR’s GIS data base. Mr. McCord explained that Santee Cooper uses daily record forms to keep track of acreages, herbicides, and rates at which they were applied. Mr. McCord went on to explain that while daily record files are detailed enough to fall within NPDES permitting requirements; they are not as detailed as a GIS data base. Santee Cooper plans to move towards a comprehensive GIS data base in the near future. Mrs. Lognion mention as an aside, the legal requirement of any Category 5 applicator to inform the customer of the chemical composition of their application.

## **6. Adjournment**

Mr. McCord moved that the 115<sup>th</sup> meeting of the South Carolina Aquatic Plant Management Council be adjourned. Mrs. Eidson seconded Mr. McCord’s motion, no discussion was brought before council, and the motion was passed by unanimous vote. The 115<sup>th</sup> meeting of the South Carolina Aquatic Plant Management Council was adjourned at 12:00pm on February 4<sup>th</sup>, 2014.