

119th Meeting of the South Carolina Aquatic Plant Management Council

Attendance:

Council Members: Chris Page, Marc Cribb, Jeanie Eidson, Tammy Lognion, Dave Wannamaker, Bob Perry, Larry McCord, Stan Hutto,

Guests: Daniel Hood, Michael Hook, Ken Rentiers, Emily Cope, Representative Phillip Lowe, Clark McCrary, Johnny Staples, Chip Davis, Casey Moorner, John Morison, John Grant, Tom Kierspe, Will Kalhtz, Scott Lamprecht, Buddy Jennings, Buford Mabry, Miles Altman, Mary Shriner, Alfred H. Kelly Sr., Ann Kelly, Jennifer Miller, Sally McCown, Carolyn Cagle, Carl Cagle

Location: SCDNR Rembert C. Dennis Building

Call to Order: 10:03 4/22/15

Minutes:

Chairman Chris Page called to order the 119th Meeting of the South Carolina Aquatic Plant Management Council (APMC). The council members were given time to review the minutes. A mistake on page 10 was brought to the attention of the council members and stated that Mr. Hutto be change to Mr. Wannamaker. Mr. Perry moved that the 118th minutes be accepted as written with one change, Mr. Cribb seconded, Chairman Page called for any discussion and the motion passed unanimously.

Chairman Page allowed the second part of the agenda to be opened for public comments. Mr. Cagle, represented by the Goat Island Boat Club, started the opening remarks about surviving through the times of the infestation of Hydrilla in Santee Cooper in 1975 and beginning stages of Crescent Floating Heart (CFH) around Nelson Cut and his dock. Mr. Cagle commented on supporting the plan and thanked the council for doing a great job. Alfred Kelly, a property owner and real estate agent for the area around Santee Cooper, stated he was in favor of the plan and the promise set by Santee Cooper. Buford Mabry, a representative of the Pintail Partners, gave his thanks to the council and requested that the areas around the Santee Cooper Lakes be opened up for more waterfowl hunting opportunities. He also expressed reservations about additional grass carp stocking at this time citing concerns about lack of native vegetation in the system. Clark McCrary expressed his concern for lack of native vegetation around Lake Marion, mainly the southeast portion, and stated that native vegetation was present from 2009-2012. Mr. McCrary stated that from 2012 to the present era he hasn't seen any existent of native vegetation and places concern for traditional fishing and waterfowl areas around South Carolina. Mr. McCrary stated that he would like to make it clear that he supported the active management of vegetation in populated areas of the lake, but that

he wanted to see more native vegetation in uninhabited areas for the benefit of aquatic and waterfowl species. Miles Altman, a concerned sportsman and boater, expressed his concern and requested a more balanced approach between water usage for the benefit of fish and wildlife and human usage. Mr. Altman stated, "Since there is no Hydrilla for carp to feed on they are now moving to native vegetation." Mary Shriner, a representative from the Santee Cooper Promotion Commission, reminded the council of her involvement during the Hydrilla infestation in previous years. She stated hydrilla was the cause of declining numbers for tourist during that time. Mrs. Shriner expressed the need for native vegetation and habitat enhancement. Mrs. Shriner explained some habitat enhancement projects which the Santee Cooper staff and SCDNR have been doing to compensate for lack of native vegetation.

Representative Lowe stated that he and his family have owned property on the Lake since his childhood. He stated that he grew up fishing on the lake, and remembers the time when the Hydrilla population was "way out of hand". Mr. Lowes stated that you (Santee Cooper) proved they could control Hydrilla with grass carp, but that the "roots" (tubers) would continue to grow each year. He stated that he understands grass carp will continue to eat new growth of Hydrilla, but that they will also eat other desirable vegetation. Mr. Lowe voiced his remarks and concerns for the favoritism and non-favoritism of aquatic vegetation among the grass carp population. Mr. Lowe stated that as a waterfowl hunter, his feelings are hurt when he is hunting the lake and unable to see beneficial plants such as Hydrilla. Mr. Lowe made a correlation between terrestrial ecosystems and aquatic ecosystem, along with the procedures used to control invasive, nuisance species. He stated that whether the problem is coyotes, hogs, or armadillos, we will never be able to completely kill them to extinction. He stated that, likewise, we will never be able to completely eradicate Hydrilla. Mr. Lowe stated that he believes that we should manage Hydrilla on the Santee Cooper lakes to a specific percentage of coverage. He stated he believes that we should capitalize on some of the beneficial aspects of Hydrilla. Mr. Lowe stated that he believes that Santee Cooper has over stocked grass carp over the past few years and that all the submersed aquatic vegetation is gone from the Lakes. He stated his belief that only a couple hundred acres of Hydrilla remain in Lake Systems across South Carolina and that they majority of it is "land locked". Mr. Lowe stated that he believes the viewpoint toward Hydrilla should be changed to include Hydrilla as a part of the Lake system, and to manage it for its beneficial aspects. Mr. Lowe stated that he would like to see more management efforts placed towards control of species such as Crested Floating Heart (CFH) and alligatorweed, and that Santee Cooper should allow some amount of Hydrilla to flourish. Mr. Lowes stated that efforts towards eradication of Hydrilla should be forgotten as we will never get rid of the root (tuber) system with grass carp. Mr. Lowe drew a correlation between the recent reduction in the yearly limit of Eastern Wild Turkey in South Carolina due to coyote predation and Hydrilla. Mr. Lowe stated that hydroelectric generation should remain a consideration

when planning the management of the Santee Cooper Lakes. Mr. Lowe stated that the economy driven by the sporting nature of the Lakes should be a large consideration towards lake management. Mr. Lowe stated that he wrote a letter in 2007 begging the council and Santee Cooper not to stock grass carp until re-growth of Hydrilla was surveyed. Mr. Lowe stated that he never saw a recurrence of Hydrilla, but that 100,000 grass carp were stocked two years in a row. Mr. Lowe asked Mr. McCord if his statement concerning the amount of fish stocked was correct. Mr. McCord confirmed that his statement pertaining to the number of fish stocked was correct. Mr. Lowe asked Mr. McCord if the goal was to stock 20,000 grass carp. Mr. McCord stated that the 200,000 grass carp were stocked in order to control over 7,000 acres of Hydrilla that were surveyed and documented. Mr. Lowe asked if the 7,000 acres of Hydrilla were “land locked”. Mr. McCord responded that the Hydrilla was land locked in the sense that it was contained within the Santee Cooper System, which is land locked. Mr. Lowe stated that he was referring to “hatcheries” when he inquired as to the Hydrilla being land locked. Mr. McCord stated that none of the 7,000 acres of Hydrilla was accounted for by Hydrilla in hatcheries. He said that it was all in the open lake system. Mr. Lowe stated that he would like to clarify that he was not present “dominate” as a representative, but rather to voice his opinion as a concerned lake user. Mr. Lowe stated that the state was initially promised 19,000 acres of aquatic vegetation coverage and that the number has now been cut back to about 16,000 acres. Mr. Lowe stated that his understanding of Mr. McCord’s reports indicated that there was not nearly 16,000 acres of aquatic vegetation in the Santee Cooper Lakes, and that Hydrilla should be allowed to be managed as a part of the proposed 16,000 acres. Mr. Lowe closed by stating that he would like to see all usage groups; hydroelectric, hunting, fishing, and others alike with equal consideration.

The council members then went into the 2015 plan portion of the meeting. Mr. Perry asked Chairman Page if he would motion to split and accept all parts of the plan minus the parts for Santee Cooper Lakes. Chairman Page brings the discussion to the floor and Mrs. Loginon second the motion of the plan. Chairman Page then opens the floor back up for discussion. Mr. McCord wanted to know why the plan is needed for two parts when in previous meetings the council has presented the plan differently. Chairman Page responded to the discussion question by stating “the rest of the plan doesn’t need any discussion” and that the Santee Cooper part of the plan needs to be brought to the table for “time saving measure”. Chairman Page moved the motion to a vote. The council voted unanimously in favor of splitting the two parts of the plan up. Mr. Perry requested to Chairman Page to motion the approval of majority of the plan with exception of the Santee Cooper Lakes portion, Mrs. Eidson second, and then Chairman Page called a vote on the rest of the plan. The council then voted unanimously in favor of the majority of the plan being approved without the Santee Cooper Lake portion.

At the beginning of the Santee Cooper Portion of the 2015 plan, Chairman Page presented a minor change with the help of Mr. Perry on page 4 and pulled out the word “cost share” because the budget of \$900,000 was a little conservative and Chairman Page gave a more reasonable number of \$1.5 million dollars and put 100% of the funding of the plan towards the SCPSA. Mr. McCord asked Chairman Page to change the verbiage concerning potential Hydrilla treatment control, mainly under the section on page 2 under the section called “For Areas to which control is to be applied” and “approximately 100 acres of Hydrilla in priority areas” be changed to “treatments will be applied as necessary depending on the re-growth of Hydrilla.” He clarified by stating “Given that 100 acres was recorded as a minimal number from the data recorded from our Aquatic Plant Surveys and not (as Mr. McCord previously stated in the last meeting) “an all-inclusive number of Hydrilla that may or may not be present in the lake system.” Mr. McCord stated that surveys of Hydrilla likely underestimate the total acreage due to deep water and certain other water conditions. Next, Mr. McCord was given time to present a PowerPoint presentation of Aquatic Vegetation Survey with the focus on Eelgrass, Hydrilla, CFH, Hyacinth, and water quality data. Mr. McCord began by explaining the difficulty in surveying a system as large as the Santee Cooper lakes, especially considering the varying degrees of water quality parameters in which he and his staff encounter. He briefly discussed methods of surveying to include aerial, hyper-spectral photography, boat surveys, sonar, ground truthing, and Lake Bottom rake surveys. Mr. McCord made a metaphor of the simplicity of identifying weeds in your backyard to identifying weeds if the backyard was covered with 2-15ft of water. He explains that the surveys conducted using hyper-spectral aerial photography could identify 27 species of aquatic vegetation, including natives and non-natives. Mr. McCord pointed out that in 2014 19,000 acres of total vegetation were accounted for by surveys. He stated that although species such as Hydrilla, eel grass, Hyacinth, and Crested Floating Heart are the main species that are discussed due to their fiscal importance, they are certainly not the only species that Santee Cooper surveys and acknowledges. Mr. McCord then turned to address the issue of turbidity in the Lakes and Lake Levels in relation to light penetration to the Lake Bottom. Mr. McCord stated that light penetration to the Lake Bottom is what determines which plants, if any, will be able to grow. Mr. McCord turned the council’s attention to a figure of USGS Lake Levels for the Santee Cooper Lakes over the last four years. He stated that the figure showed an elevated lake level over the mean level, during the growing season over the last four years. He stated that this elevated mean lake level condition is a contributing factor to light penetration to the hydro-soil. Mr. McCord stated that environmental conditions such as elevated lake levels contribute to grass carp and other factors to result in the decline of vegetation. Mr. McCord then directed the council’s attention to a map of monitoring stations on Lakes Marion and Moultrie which are used to log water conditions including turbidity and water clarity. Mr. McCord briefly discussed methods used to determine water clarity including; secchi disk, 1% light

meter, and bottle samples for particulates. Mr. McCord stated that the data over the last few years has shown an increase in turbidity and decrease in water clarity across all three sampling techniques. Mr. McCord stated that although grass carp stocking numbers in the past three years were much larger than in previous years, they cannot be the variable considered when determining the cause of the decrease in submersed aquatic vegetation (SAV). Mr. McCord stated that in his opinion, the rapid decline of SAV was indicative of a decline caused by a combination of water quality characteristics as well as grass carp feeding. Mr. McCord stated that monitoring stations across both Santee Cooper lakes showed the same trends of significantly increased turbidity and decreased water clarity during 2013-2014. Mr. Perry asked if any statistical analysis was used to quantify Mr. McCord's statement of "significant trend upward" regarding turbidity. Mr. McCord responded that statistical analysis was not performed to determine a confidence interval or standard deviation value for the difference noted between previous data and that of 2013-2014. Mr. McCord stated that a difference of 1 unit in turbidity levels is "very significant". Chairman Page questioned whether a motion should be on the table in order to carry out the discussion at hand. Mr. Perry stated that he did not believe any motion was necessary until a vote was to be called. Mr. McCord then moved to his next slide containing a graphical representation of estimated grass carp population and estimated SAV acreage (including invasive species). Mr. McCord stated that during the 2007-2008 years the Santee Cooper (S.C.) system was experiencing a historic drought with lake levels at ten feet below full pool. He stated that during this time eel grass began to flourish in shallow water areas which would normally be over ten feet deep. He stated that during this time turbidity levels were extremely low due to low inflows. Mr. McCord stated that the high water clarity and low lake levels created a situation in which both native and invasive species of SAV were able to increase cover acreage rapidly. Mr. McCord stated that many of the areas in which the eel grass and other native species were growing were not areas in which native vegetation would typically grow due to average water depth. He stated that the native vegetation was able to establish and remain in those areas, regardless of the grass carp population and rising water levels, until the point which turbidity levels began to increase and water clarity decreased. Mr. McCord stated that during the original large stocking of grass carp in the S.C. lakes a decreased of vegetation was not apparent for at least three years. He then stated that in 2012-2013 vegetation coverage was significantly decreased within the first year after elevated stocking. Mr. McCord stated that the rapid decrease in SAV, specifically Hydrilla, was due to a combination of water quality conditions as well as increased carp stocking. Mr. McCord moved on to the next slide containing information concerning the S.C. budget for aquatic plant control. Mr. McCord stated that he would like to briefly discuss the slide in relation to public comments made concerning the management of traditional areas for fishing and waterfowl hunting. Mr. McCord stated that in 2012 over 85% of the plant control budget was used to control invasive species such as water hyacinth,

Hydrilla, and crested floating heart. He stated that the vast majority of the acreage of those invasive species treated was in the swamp area above I-95, which is known for being a traditional waterfowl and fishing specific part of the lake. He stated that in 2013-2014 invasive species including crested floating heart accounted for over 95% of the acreage treated, and that the majority of the acreage was in the area of Lake Marion above I-95. Mr. McCord stated that these areas were targeted specifically to open access for hunters and fishermen. He stated that S.C. plans to continue opening areas above I-95 for hunter and fisherman access, and pointed out the tremendous amount of money that is required in order to treat these invasive species on a yearly basis. Mr. McCord acknowledged the need to treatment of other species such as giant cutgrass, and continued by stating that it is hard to find the resources to treat non-invasive species when S.C. is spending an average of over 1 million dollars a year on invasive species treatment and 1.2 million dollars on grass carp. Mr. McCord stated that S.C. is trying to avoid a situation in which the return of hydrilla could result in the need for large scale stocking. Mr. McCord stated that with the amount of money currently being spent of new invasive species, it would be exceptionally difficult to budget for the recurrence of hydrilla. Mr. Page stated that last year S.C. spent 1.8 million dollars on aquatic weed control measures and that all of those funds were provided by Santee Cooper. Mr. Page stated that S.C.D.N.R. does not cost share with Santee Cooper for weed control on Lakes Marion and Moultrie. Mr. Page stated that S.C.D.N.R. provides work for the Wildlife Management Areas (WMA's) around the S.C. lakes, but that the amount of money required for those areas is "a drop in the bucket" when compared with Santee Cooper's budget. Mr. McCord stated that S.C.D.N.R.'s work on the WMA's helps S.C. primary with time constraints as S.C.'s aquatic weed control staff is relatively small. Mr. McCord stated that with the budget constraints of both S.C. and the S.C.D.N.R. it is imperative that aquatic plant management control be performed using the most modern, efficient, and cost effective measures available. Mr. Page pointed out that the recent reduction of hyacinth treatment acreage was due to the expansion of the plant into Sparkleberry swamp, where tree canopy prevents effective aerial treatment and narrow passage prevents airboat access. Mr. McCord stated that Sparkleberry swamp is of great importance to the S.C. Lake System due to its expanse of waterfowl, fish, invertebrate, and other wildlife habitat. Mr. McCord stated that S.C. cannot allow the recurrence of hydrilla to take resources away from efforts to treat the Sparkleberry Swamp areas for invasive species such as hyacinth and crested floating heart.

Mr. Page acknowledged that Representative Lowe had emailed him and requested a chance to speak for the public comment section. Mr. Page stated that Representative Lowe was not present for the public comment portion of the meeting but that he would like to open the floor for his comments. Representative Lowe's comments are recorded above in the public comment section of the minutes.

Mr. Perry asked for Chairman Page to call for any additional information on the condition of the SC Lakes from SCDNR staff scientists to be brought before the council. Chairman Page called Scott Lamprecht to speak before the council. Mr. Lamprecht began by thanking Mr. McCord for his presentation. He stated that he was in agreement with most of the points that Mr. McCord presented. He then turned to address point of turbidity mentioned in the presentation. Mr. Lamprecht stated that he agreed with Mr. McCord's statement that turbidity was responsible for some amount of plant growth suppression, but that there is no objective way to measure what percentage of the suppression was due to increases in turbidity. Mr. Lamprecht stated that the turbidity conditions could be used to support conclusions in a undue fashion based on its limited objectivity.

Mr. Lamprecht stated that over a short period in December he collected a sample of 25 grass carp from Lake Marion by electro-fishing. Mr. Lamprecht stated that electro-fishing had been dismissed in the past as a viable means of collecting grass carp, but that he was able to collect 25 fish in only 3 sampling hours. Mr. Lamprecht stated that he believes that the "unheard of" collection rate was due to the large population of grass carp in Lake Marion. Mr. Lamprecht stated that the condition of the collected fish was very poor. He explained that carnivorous fish tend to gain weight in the winter months, while herbivorous fish tend to slow their metabolism and possibly lose weight in the winter months. Mr. Lamprecht stated that the collected fish were in his opinion in a "no growth state" in which they would be able to eat enough to maintain their body weight but unable to gain weight. Mr. Lamprecht stated that in March another sample collection of grass carp from Lake Marion was made. He stated that catch rates were very high for this collection as well. He stated that the March sample collection contained fish of a better distribution of sizes. Mr. Lamprecht stated that the condition of the March sample of grass carp was low, and not indicative of fish that would be able to gain weight. Mr. Lamprecht stated that he and his team intend to continue the study throughout the seasons. He stated that he suspects the catch rates will remain unusually high unless there is an unknown temperature factor at play.

Mr. Lamprecht stated that the bass survey in 2015 spring has been very successful, especially looking at young of the year fish. He stated that more young of the year fish were collected than he has seen collected in any year during his entire career with the SCDNR. Mr. Lamprecht stated that bass recruitment tends to be viewed in conjunction with vegetation levels. He said that managers expect to see expected levels of recruitment during times of average amounts of vegetation and inconsistent levels of recruitment during times of reduced vegetation. Mr. Lamprecht stated that he attributes the increase in bass recruitment to the increase in acreage of CFH, which he does not advocate as a preferred species for habitat.

Mr. Lamprecht stated that in light of the current estimated grass carp population, he believes that no amount of water clarity will allow for native vegetation growth. Mr. Lamprecht stated that in his opinion there is a lot of unquantifiable herbivory taking place, and that the current estimated population of grass carp will not allow any native vegetation growth to take place. Mr. Lamprecht stated that he does not believe that native vegetation will begin growing until the population of grass carp is reduced to a maintenance level through a couple years of mortality. Mr. Lamprecht stated that he believes a maintenance level of grass carp will have to be kept in the SC system in order to control Hydrilla. He stated that he believes we will never eradicate Hydrilla from the Santee Cooper Lakes. He stated that he believes the council would be “jumping the gun” by stocking grass carp in the SC Lakes this year.

Mr. McCord requested that he be allowed to ask a couple of questions of Mr. Lamprecht and he was granted permission by Chairman Page. Mr. McCord stated that he respects Mr. Lamprecht’s opinion but would like to ask a couple of questions relating to his methods of collecting grass carp. Mr. McCord asked Mr. Lamprecht’s opinion of the timing of the collections as they pertain to expected health condition of grass carp in winter months. Mr. McCord stated that he would like to inquire, in addition, to the opinion of Mr. Lamprecht pertaining to the unexpectedly high catch rate of grass carp while electro-fishing and how that may relate to the fishes’ state of poor condition. Mr. McCord stated that if unexpectedly high catch rates were indeed due to the poor condition of the carp sampled, that the sample population would be scientifically biased as a representative of the population as a whole. Mr. Lamprecht stated that his reason for collecting during the month of December was a reaction resulting from Mr. McCord’s request for data concerning the condition of the grass carp in the SC Lakes. Mr. Lamprecht stated that he strived for objectivity while creating his sampling techniques and that he believes the data should be “taken with a grain of salt”. Mr. Lamprecht stated that his collection in March exhibited basically the same results, although carp should be more actively feeding during that time of year. Mr. Lamprecht addressed Mr. McCord’s question of sampling objectivity/validity by stating that the carp were collected “where they were concentrated, in the only vegetation available in the system”. Mr. Lamprecht indicated that the carp that were sampled were cornered in patches of primrose where they were unable to escape or detect the boat approaching. Mr. Lamprecht stated he believes that the catch rate is so high due to the fish being concentrated in the only available habitat that exists. He drew the conclusion of the fish being concentrated back to a lack of available palatable vegetation as indicated by the carps’ condition factor. Mr. Lamprecht stated that his scientists were currently analyzing otoliths from grass carp to determine an age/growth regression. He stated he believes the data will indicate a below average growth rate of the current cohort of grass carp. Mr. Lamprecht stated that the current cohort is not growing nearly as fast, assuming that the collection retrieved is indeed random. Mr. Lamprecht informed the council that a selection of individuals have

been chosen to collect grass carp in the same manner in which the Army Corps have collected fish in past Summer months. Mr. Lamprecht stated that the current priority for his team is to begin developing an age/growth regression by analyzing otoliths from collected carp. Mr. Lamprecht stated that based on the current collections of two year old fish ranging from four to ten pounds, he believes the growth rate of this cohort is extremely slow. Mr. Lamprecht stated that the slow growth being observed indicates a lack of food sources in the Lakes. Mr. McCord stated that Mr. Lamprecht's conclusions are based on data from carp collected during months in which they do not typically grow. He stated that these results are then being compared to historic data collected during warm, growing months, and this is affecting both DNR and the public opinion. Mr. Lamprecht stated that he agreed that carp during the winter months should show some degree of weight loss, but that the degree being noted is indicative of starvation. Mr. McCord stated that Mr. Lamprecht's methods were not scientific. He said that historic collections were taken during growing months, were designed to target carp that were actively feeding, and were taken during a time when there was very little vegetation in the system. Mr. Lamprecht stated that he disagrees with Mr. McCord's statement that his methods were not scientific. Mr. Lamprecht stated that he believes his collection data can be compared to historic data with the caveat that some parameters were different. Mr. Lamprecht stated that his selection of collection sites, particularly in March, were random. Mr. McCord stated that he had not been able to review any of the data collected in March so he was unable to comment. Mr. McCord stated that the data collected in the first sample was collected from "one isolated area of a 160,000 acre reservoir. Mr. Lamprecht stated that the sample site was located in the middle of the reservoir. Mr. McCord asked Mr. Lamprecht how many acres were cover during the first sample set. Mr. Lamprecht responded that the first sample was collected in approximately thirty to forty acres. Mr. Lamprecht stated that he was surprised to have been able to collect that many carp during a time when they are thought to not be feeding. Mr. McCord stated that he appreciates Mr. Lamprecht's efforts to collect information, but that he wants it to remain clear that he feels Mr. Lamprecht's data should not be used to replace the historic data set compiled by Phil Kirk over a fifteen year period. Mr. McCord stated that Dr. Kirk's data does not indicate a low growth condition in carp measured over that past fifteen years. Mr. McCord stated that the most recent set of data (2013) analyzed by Dr. Kirk indicated one of the four highest growth rates since 1994. Mr. Lamprecht asked Mr. McCord to clarify if by growth rate he was speaking of condition factor. Mr. McCord confirmed that he was speaking of condition factor of fish during the growing season. Mr. McCord likened Mr. Lamprecht's collection data to surveying aquatic vegetation during the winter. He stated that if he wanted to show a lack of SAV in the Lakes, then he would conduct his survey during the winter when the vegetation is senesced and dormant. Mr. Lamprecht stated that during the summer months there will be a lot more algae for the carp to eat off of the rip rap. Mr. McCord stated that there is no data to

support that carp eat algae off rip rap. Mr. Lamprecht indicated that he has seen carp on multiple occasions “tailing” while feeding off of rip rap. Mr. Lamprecht stated that there was very little vegetation in the system and that with the current population level of carp, no vegetation will be able to grow. Chairman Page thanked Mr. Lamprecht for reviewing his data for the council. Mr. Page stated that he looks forward to seeing the age class and growth regression data. Mr. Page indicated that he feels the presence of many age classes of carp is important for the population to overcome weather and disease events without being totally eliminated.

Mr. Page opened the floor to anyone else who would like to provide information pertinent to the Santee Cooper Lakes portion of the Aquatic Plant Management Plan. Mr. Page stated that while there are varying points of view on the topic of the Santee Cooper Lakes, the council tries to take all points of view into account to form a “big picture” approach. Mr. Perry moved that all portions of the Santee Cooper Lakes portion of the Aquatic Plant Management Plan be approved with the exception of the portion pertaining to the release of sterile grass carp. Mrs. Eidson seconded Mr. Perry’s motion. Mr. Page opened the table to discussion. Mr. Perry stated that we have heard the best available science available to date and that the data indicates that there should be no additional grass carp stocked this year. Mr. Perry stated that he appreciates Mr. McCord’s water quality data. Mr. Perry stated that since Mr. McCord’s data was not statistically analyzed we should not draw conclusions as a result. Mr. Perry likened Mr. McCord’s data to that of Mr. Lamprecht in terms of a lack of rigorous statistical analysis. Mr. Perry stated that he would like to see more statistically analyzed data in the future. Mr. Perry indicated that SCDNR’s Wildlife and Freshwater Fisheries department has plans to continue sampling grass carp in the SC Lakes in order to develop a more robust data set. Mr. Perry stated that personnel from three different divisions of SCDNR are prepared to assist Santee Cooper staff with sampling of grass carp on the SC Lakes in order to determine a more accurate estimate of the current grass carp population. Mr. Perry stated that SCDNR staff members from Wildlife Freshwater Fisheries, Land Water, and Conservation, and Law Enforcement have been granted permission to assist sampling of grass carp and nuisance vegetation on the Santee Cooper Lakes. Mr. Perry stated that SCDNR staff will be trained on sampling techniques, which will be developed with Santee Cooper staff. Mr. Perry stated that with the help of all trained staff a better understanding of the location of nuisance aquatic vegetation, specifically Hydrilla, can be developed. Mr. Perry stated that if the new data from SCDNR staff and Santee Cooper staff indicate the problem of Hydrilla beyond “any kind of a low threshold” that he will recommend a late season stocking of grass carp. Mrs. Eidson questioned if carp would be available during that time of year. Mr. Perry stated that they would be available, since they have been stocked in the late season in the past. Mr. McCord stated that there is no guarantee that carp would be available at that time. Mr. McCord stated that he would like to respond to Mr. Perry’s proposed plan. Mr. McCord stated that he would like to

address Mr. Perry's statement that his water quality data was comparable Mr. Lamprecht's data in terms of statistical analysis. Mr. McCord stated that Santee Cooper's water quality data set has been collected under strict guidelines in conjunction with SCDHEC and review multiple times by members of both programs. Mr. McCord stated that the data Mr. Lamprecht presented had not been confirmed scientifically. Mr. Perry stated that he was only speaking to the statistical analysis of both Mr. McCord's and Mr. Lamprecht's data sets. Mr. McCord revisited his points of why he believes Mr. Lamprecht's data is scientifically flawed. Mr. McCord stated that he does not believe in changing the aquatic vegetation control methods and survey methods on the Santee Cooper Lakes based solely on data collected by Mr. Lamprecht. Mr. McCord stated that he appreciates SCDNR's offer to assist with sampling. Mr. McCord stated that he believes staff efforts should be focused on their current areas of expertise, and that their time would be best spent conducting the job duties which they were hired to conduct. Mr. McCord reviewed the original plan to include the stocking of 6400 grass carp in the SC Lakes. He stated that he does not believe stocking 6400 grass carp will have any negative effect on native vegetation. Mr. McCord stated that the management goal for the SC Lakes is to maintain a population of grass carp that will be sufficient to stifle re-growth of Hydrilla. Mr. McCord stated that the SC Lakes are not at a point in which they can transition to a maintain stocking of one fish per eight acres. Mr. McCord stated that he believes the council needs to vote based on current information. He stated his support for additional future sampling to better assess the Lake system.

Chairman Page called for any additional discussion and none was brought before the council. Mr. Page called for the motion to be re-read. Mr. Perry stated that the motion was to approve all parts of the Santee Cooper Section of the Aquatic Plant Management Plan with the exception of the Stocking of grass carp to include that no grass carp shall be stocked in 2015. Chairman Page called for a vote. The vote tallied 3 "aye" and 4 "nay". The motion did not carry.

Mr. McCord moved that the council accept the 2015 Aquatic Plant Management Plan as written. Mrs. Lognion seconded Mr. McCord's motion. Mr. Page called for any discussion. No discussion was brought before the council. Mr. Page called for a show of hands. The vote tallied 4 "aye" and 2 "nay". Mr. Page stated that although the motion passed by majority, it did not pass by a 2/3 majority of those members present. Mr. Page stated that since the motion did not pass by a 2/3 majority the decision is deferred to the SCDNR. Mr. McCord asked if Chairman Page voted. Mr. Page stated that he did not vote. He stated that he does not normally vote except to break a tie, and that his vote would not have changed the decision. Mr. McCord stated that he believed that Mr. Page's vote would have made a difference. Mr. Page clarified that his vote, whether "aye" or "nay" would not have determined a 2/3 majority of the quorum. Chairman Page offered to read the laws of the council. Mr. McCord stated that he did not believe reading

the law would be necessary. Mrs. Eidson questioned whether if she had abstained, if the vote would have been deferred back to the decision of the council.

Mrs. Eidson discussed that she did not believe it should be the responsibility of the SCDNR to make the final decision on the Plan. She stated that if the council cannot reach a 2/3 majority decision, then the decision defers to SCDNR defeating the purpose of the council altogether. Mrs. Eidson stated that while she agrees with Mr. Perry's proposal, she feels that the council does not have a voice in either direction. Mrs. Eidson stated that although her vote was not in the majority, she believes that the majority vote is not being voiced due to the 2/3 majority law required by council law. Chairman Page clarified that whether Mrs. Eidson were to abstain or not, there would still not be a 2/3 majority vote. Mr. Page stated that the 2/3 must be based on members present, not voting members.

Mr. McCord stated that he would like to bring up another issue pertaining to the current discussion at hand. Mr. McCord stated that he does not feel that the members of the council are equally represented among agencies. Mr. McCord stated that there is unequal representation comprised of members of the agency for which a vote is deferred in the case of a less than 2/3 majority vote. Mr. McCord voiced his concern that this situation could be used to take advantage of the council by said agency. Mr. McCord stated that he does not believe that this unequal representation meets with the original purpose of the council.

Mr. Page stated that when the original law comprising the council was written, the separate divisions of the SCDNR were separate Agencies. Mrs. Lognion asked for Mr. Page to read the law so that questions of the 2/3 majority present could be further clarified. Mr. Perry asked Mr. Page if both motions have failed. Mr. Page confirmed that both motions have failed. Mrs. Eidson apologized to the members of the public present for the lengthy discussion at hand. Mrs. Eidson expressed her frustration that in the over 20 years which she has served on the council, she has never seen a vote deferred to SCDNR decision. Mr. Perry stated that he appreciates gravity of the discussion at hand, but that the consensus of the general assembly should be honored until a multi-agency decision could be made to propose a change of the make-up of the council or a change to any by-laws. Mr. Perry stated that the current meeting was not the correct platform from which to propose a change without consulting all agencies involved.

Mr. Page stated that the law reads "The council shall review and approve all plans and amendments. Approval shall consist of a 2/3 vote of all members present. The department shall have finally authority over those sections which do not receive 2/3 approval of the council". Mrs. Eidson called on Mrs. Moorer for a question. Mrs. Moorer asked Mr. Page what the law states pertaining to his vote. Mr. Page stated that the law says that "he may vote". Mr. Page stated that he is a voting member. Mr. Page

stated that in this situation his vote would not create a 2/3 majority, so he abstained from voting. Mr. Page stated that he has never voted in the past other than to break a tie vote. Mr. Page stated that he does not vote because he believes it creates a more balanced council. Mr. McCord stated that in a situation such as this, Mr. Page's decision to abstain could make a difference between whether the council makes the final decision or it is deferred to SCDNR. Mr. Page stated that while his vote could make a difference, it would not have in this instance. Mr. McCord stated that since Mr. Page's status is that of a voting member, then he probably should cast a vote. Mr. Page stated that the law indicates that SCDNR staff will make a final decision. Mr. McCord inquired as to the "extra step" needed to make a decision if the members of the SCDNR staff present will make the final decision in the case of a less than 2/3 majority vote. Mr. Perry stated that the SCDNR director would also be involved in the final decision. Mr. Perry indicated that he believes deferral to SCDNR represents a significant shift in policy. Mr. McCord agreed that he believes it would be extremely significant. Mr. Perry stated that SCDNR staff would report to their board before making a final decision on the matter. Mr. Hutto asked if SCDNR would still be willing to continue sampling for grass carp condition if SCDNR confer on a "no stocking in 2015" decision. Mr. Perry stated that SCDNR staff would continue sampling no matter the final decision. Mrs. Lognion voiced her concerns with Mr. Lamprecht's sampling protocol. Mrs. Lognion stated that sampling protocol cannot be changed from historic sampling protocol if data from both collections are to be compared. Mrs. Lognion stated that she believes if SCDNR are collect accurate data, that sampling protocol should remain consistent with those of historic samples. Mrs. Lognion stated that if SCDNR wishes to change sampling protocol to include electro-fishing, then this new data set should be built upon until it is of adequate sample size to be analyzed at a later date. Mrs. Lognion stated that while the proposed stocking of 6,400 carp is insignificant in terms of the entire system, the increase in pesticide use required to make up for a lack of carp for vegetation control would be highly significant. Mrs. Lognion stated that the issue of pesticide application in order to account for a lack of grass carp has not been fully explored by the council. Mrs. Lognion discussed the current issue of CFH on the SC Lakes in terms of increased pesticide application. Mrs. Lognion stated that she strongly suggests that the council consider the implications of an increased need for pesticide application and arrive at another motion.

Mr. Perry stated that he would like to make an analogy regarding the so called "insignificant" number of grass carp proposed. Mr. Perry told a story of water transfer between basins within North and South Carolina. Mr. Perry stated that a decision was made that due to drought conditions no amount of water transfer was acceptable. He stated that he believes the grass carp proposal should be viewed in the same light due to the current conditions of the system. Mr. Perry stated that when the original plan was discussed to perform large scale stocking on the SC Lakes, the decision was made to take corrective action if at any time the council decided that too many fish were in the system.

Mr. Perry stated that this decision included the possibility of active removal of fish if deemed necessary. Mr. Perry stated that there were currently too many fish in the system, so one additional fish added is too many. Mrs. Lognion asked Mr. Perry what data he is basing his claim of too many fish. Mrs. Lognion called for scientific information that would show her that there are too many fish currently in the system. Mr. McCord stated that there was no scientific data indicating too many grass carp, and that the information available was collected purely to be reported before the council. Mr. McCord stated that the data collected by Mr. Lamprecht is not scientifically valid. Mr. Perry stated that the recommendation has been one fish per eight acres. Mr. McCord stated that that rate is a maintenance stocking rate and that the SC Lakes are not currently at a confirmed maintenance state. He stated that Hydrilla is not under control to the point at which maintenance stocking can be initiated. Mr. Perry stated that the current acreage of Hydrilla in the SC Lakes is less than 100 acres. Mr. McCord stated that the acreage of Hydrilla has been around 100 before and that it returned to over 7,000 acres in period of three years. Mr. Perry stated that the stocking rates should be based on Hydrilla acreage present and adjusted accordingly. Mr. McCord stated that that is what protocol dictated in the past and it resulted in the stocking of 109,000 fish the first year and 114,000 fish the second year. Mr. McCord stated that the need for stocking 6400 fish is to maintain control of Hydrilla and avoid a situation in which Hydrilla gets back out of control and large numbers of fish must be stocked. Mr. McCord stated that he agrees that stocking large numbers of carp can be damaging to native vegetation but that it is not the sole reason that native vegetation populations have decreased. Mr. McCord stated that we do not have scientific evidence to say that we have too many carp in the system other than data that claims they have eaten all of the vegetation. Mr. McCord stated that he would gladly conduct a field trip to show the members of the council the areas of the Lakes with actively growing native vegetation. Mr. Clark McCrary questioned whether the vegetation which Mr. McCord speaks of is submersed vegetation. Mr. McCord replied that he could show them submersed, floating leave, and emergent vegetation as his presentation indicates.

Mrs. Eidson discussed that she always strives to base her decisions on scientific data. She stated that she agrees with Mr. Perry in that while the water quality data shows obvious trends, it does not state whether the trends are statistically significant. Mrs. Eidson stated that she would like to see some statistical analysis of both Mr. McCord's data as well as Mr. Lamprecht's data. Mrs. Eidson stated that during the large scale stocking of 2007 and 2008 the lake levels were low, the water was clear and the vegetation was actively multiplying its acreage. Mrs. Eidson stated that because there are so many unknown variables effecting the vegetation of the SC Lakes, she has always based her opinion to err on the side of caution with regards to stocking grass carp. Mrs. Eidson asked Mr. Page how many voting members are present. Mr. Page stated that including himself as a voting member there are eight voting members present. Mr. Page

informed Mrs. Eidson that in order to fulfill a 2/3 majority vote of the members present a vote of 6 vs 2 or better must occur. Mr. McCord stated that he did not place a value of the effect of water quality, but that he believes it must be considered. Mrs. Eidson stated that she believed a yearly age class of carp was necessary, but recently the discussions of the council have led her to believe differently. Mr. Page stated that the age class discussion resulted from a study showing that the optimal class of fish for vegetation control is between 5-9 years of age. Mr. Page stated that a 12 inch stocking size fish is already 1.5 to 2 years old, and this is why managers suggest expectation of vegetation control beginning 3 years after the initial stocking of carp.

Mrs. Eidson moved that the motion presented by Mr. McCord be reconsidered. Mr. McCord seconded Mrs. Eidson's motion for reconsideration. Mr. Page called for any discussion. No discussion was brought before the council. Mr. Page called for a vote. The motion passed 6 "ayes" to 1 "nay". Mr. McCord moved that the Santee Cooper Portion of the South Carolina Aquatic Plant Management Plan be approved as amended to include the stocking of 6,400 grass carp in the Santee Cooper Lakes. Mrs. Lognion seconded Mr. McCord's motion. Mr. Page called for any discussion. No discussion was brought before the council. Mr. Page called for a vote by show of hands. The motion passed by a 5 "aye" to 1 "nay" majority with 2 abstains. The vote which did not satisfy the 2/3 majority required by law. Mr. McCord asked Chairman Page if he would vote. Mr. Page stated that he would prefer not to vote. Mr. McCord, Mr. Page, and Mr. Perry discussed the terminology of the motion "passing" or "failing" based on the situation in which it did not pass by a 2/3 majority vote.

Mr. Page called for Mrs. Cope to have the floor to voice her comments. Mrs. Cope introduced herself as the Deputy Director of the Wildlife & Freshwater Fisheries Division of the SCDNR. She stated that Mr. Perry serves as her proxy, and that Mr. Lamprecht is one of her Fishery Biologists. Mrs. Cope stated that she sympathizes with the "conundrum" at hand. She stated that she would like to make it clear that SCDNR staffs are committed to obtaining the information needed to make a more informed scientific decision. Mrs. Cope suggested considering the possibility of meeting again to discuss the issue of stocking after further data has been obtained. Mrs. Cope assured the council that SCDNR would continue to collect scientific data on grass carp condition, regardless of the decision made at the current meeting. Mrs. Cope stated that SCDNR will take all data into account before making its final decision. Mrs. Cope encouraged the council to place the issue of stocking carp in the SC Lakes on hold for 4-6 months while growing season data can be collected on grass carp. Mrs. Cope stated that she would like to suggest that the council move to reconsider Mr. McCord's motion in 6 months. Mrs. Cope stated that the Hydrilla re-growth in the past was due to a ten year period in which no carp were stocked. Mrs. Cope stated that SCDNR has no intentions of waiting that long again to stock carp.

Mr. McCord responded to Mrs. Cope by stating that in his opinion 6 months can make a tremendous difference in a system like that of the Santee Cooper Lakes. Mr. McCord continued by stating that he doesn't not recall the council requesting a need for data on the condition of grass carp in the Santee Cooper Lakes. Mr. McCord stated that the interest in better information regarding the population was one created by SCDNR. Mr. McCord stated that Santee Cooper has used a model for estimated grass carp population for over 25 years. He stated that those models have been accepted without dispute. Mrs. Cope stated that she would like to clarify that she was referring to the issues of Mr. Lamprecht's collection methods. Mrs. Cope stated that SCDNR would continue to support the improvement and continuation of Mr. Lamprecht's data collection. Mr. McCord stated that SCDNR has been supporting grass carp data collection in the past by supporting Dr. Kirk's data collection methods for approximately 10 years. Mr. McCord stated that he does not understand SCDNR's sudden interest in collecting all of this additional information. Mrs. Eidson stated that she would like to take a vote on whether to stock Santee Cooper at a later date. Mr. Page, Mrs. Eidson, and Mr. McCord discussed the issued that two of the seats on the council have not been present at meeting in the past years. Mr. McCord stated that he believes the members who do not show up to represent other agencies cause the board to be more biased toward the one agency whose representation is unbalanced. Mr. Page agreed with Mr. McCord's statement. Mrs. Eidson stated that she believes that the council is in need of redistribution. Mr. McCord stated that the original intent of the council was to have one representative from each of the agencies involved, and that due to government reorganization the agencies are no unequally represented. Mr. McCord stated that his agency is responsible for all of the issues being discussed in the current meeting and yet his agency only has one representative while others have up to three. Mr. McCord voiced his concern that while all of the public comments and aspects discussed in the meeting related directly to fish and wildlife habitat concerns he and his agency have to consider all water usage aspects of the Santee Cooper Lakes. He stated that the discussion leads him to believe the decisions are based on the SC Lakes management as if they were a Wildlife Management Area. He stated that decisions made by the council directly affect the management practices Santee Cooper are able to use. Mr. McCord stated he wants the council to consider all usage needs for the Santee Cooper Lakes before making decisions which can affect Santee Cooper's management protocol.

Mr. Perry called for orders of the day. Mr. Page stated that Mr. Perry's call for orders of the day brings the council to the agenda. Mr. Page brought the attention of the board to the Santee Cooper, SCDNR agreement to maintain 10% vegetated acreage on the SC Lakes. Mr. Hook stated that Mrs. Eidson had a motion on the floor to discuss restructuring the council. Mr. Perry stated that while everyone on the council is in agreement with Mrs. Eidson, the motion will not accomplish anything. Mr. Perry stated that restructuring the council will take all of the leaders of the represented agencies to

address the general assembly to accomplish a result. Mr. McCord stated that a motion would show the leaders of the represented agencies that the council as a whole supports the restructuring of the council towards equal agency representation. Mrs. Lognion seconded Mrs. Eidson's motion. Mr. Page called for discussion. Mr. Hutto suggested that the issue of suggesting a restructuring of the council be discussed at a later time. Mrs. Eidson stated that the issues at hand must be addressed today because the issue in the past was that the council would not agree with SCDNR but would be overruled. Mrs. Eidson stated that she would like to address this issue today. Mr. Perry moved to table Mrs. Eidson's motion so that each representative could speak with their leader to discuss the possibility of restructuring. Mr. Hutto seconded Mr. Perry's motion. Mr. Page called for discussion. No discussion was brought before the board. Mr. Page called for a vote. The motion to table Mrs. Eidson's vote failed by a 2 "aye" to 4 "nay" vote with 2 abstains. Mr. Page called for any further discussion on Mrs. Eidson's motion. Mr. McCord stated that he was in a similar situation as Mrs. Eidson in terms of years of service left with Santee Cooper and the Council. He stated that he did not feel like placing the vote to a later date would be profitable considering his time constraints. Mrs. Eidson asked when the next meeting would take place. Mr. Page stated that the timing of the next meeting has yet to be determined. Mr. Page suggested that the council take a vote. Mr. Perry and Mr. McCord stated that a recommendation to the general assembly could result in a situation that would be unexpected by the council. Mr. Perry suggested that the results could even go as far as to abolish the council and its decision making capabilities altogether. Mr. McCord stated the possibility of briefing the members of the General Assembly on the basic concepts of plant management before they come to a decision. Mr. Page called for a vote on Mrs. Eidson's motion to discuss the possibility of restructuring the council. Mr. Perry suggested that Mrs. Eidson withdraw her motion so that further discussions not prolong the meeting. Mrs. Eidson stated that she withdrew her original motion. Mr. Perry stated that he believes the simple path for would be to create an ad hock committee to create a proposed restructured council and present the findings to the council at its next meeting. Mr. Page asked Mrs. Eidson if she would like to chair the proposed ad hock committee. Mrs. Eidson responded that she would like to chair the committee. Mr. Page asked Mr. McCord if he would like to be included on the committee. Mr. McCord indicated that he would like to be on the committee. Mr. Page called for any additional council members who would be interested in joining the committee. Mrs. Lognion stated that she would be interested as long as she could send a proxy in the event that she could not attend. Mr. Page stated that he would support that notion. Mr. Perry briefly discussed the purpose of the committee as it pertains to reviewing the law and proposing a restructuring of the council. Mr. McCord stated his concern over creating a sub-committee of a council which is still so small. Mrs. Eidson stated that she would like to discuss, as a sub-committee, the possibility of Aquatic Plant Management Plan proposals only needing a simple majority to pass.

Mr. Page brought the Santee Cooper, SCDNR 10% vegetation agreement to the attention of the board once again. Mr. Perry stated that he would like to work Mr. McCord to review the agreement between Santee Cooper and SCDNR and bring it before the board at the next Council meeting. Mr. Perry stated that he would like to work with Mr. McCord to create a draft agreement to be shown to the Council at its next meeting. Mr. McCord asked the council if they felt comfortable with Santee Cooper and SCDNR working towards an agreement concerning how vegetation is managed on the SC Lakes. The council indicated that they agree.

Mr. Page called for any other items to be brought before the council. Mr. Page briefly discussed biological controls for water hyacinth on the Santee Cooper Lakes. Mr. McCord stated that a future discussion of the South Carolina \$1.00 fee per grass carp be had. Mr. McCord suggested that the discussion take place at another meeting, specifically how the fee gets allocated. Mr. McCord inquired as to a date at which Santee Cooper would know whether they would be able to bring grass carp into the state. Mr. McCord stated that he did not know what effect the council could have on the issue now that a vote of a majority but not 2/3 majority had taken place. Mr. Page informed Mr. McCord that according to the law, the Council is provide recommendations to the SCDNR on how to proceed in making a final decision on the issue of stocking grass carp in the SC Lakes in 2015. Mr. Page stated that he believes as a majority the council will advise the SCDNR to proceed with the stocking of 6,400 grass carp into the SC Lakes, but that the final decision will be that of the SCDNR.

Mr. Page called for any further business to be brought before the Council. No business was addressed. Mr. McCord moved that the meeting be adjourned. Mr. Cribb seconded Mr. McCord's motion. The vote to adjourn the meeting passed unanimously.

Meeting adjourned: 12:40