

**APPENDIX H**

**Summary of Public Comments, Responses, and Plan Modifications to the Draft South Carolina Aquatic Plant Management Plan**

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South Carolina Aquatic Plant Management Plan**

**Santee Cooper Lakes**

227 comments, 71 opposed, 156 supported

**Comments:**

**Opposed:**

I would like to commend the South Carolina Department of Natural Resources and Santee Cooper on their efforts of transplanting Vallisneria on Lake Marion. Their actions are crucial in revamping wildlife habitat in this area. With this being said, I do not find the increase of White Amur beneficial or relevant to this plan. I fear that an increase of this magnitude will jeopardize the vulnerable Vallisneria beds after the Hydrilla is under control. It is doubtful that such a large increase in this population was from natural causes, in other words, if Hydrilla would not have been introduced as a management tool, I do not believe that we would have seen such a great increase in the White Amur population last year. I am writing in hopes that you will take in consideration returning the White Amur population to 12,000 rather than increasing it over 18,000 fish by this year. I realize that once the Hydrilla population is decreased the White Amur will be left to eat less desirable plants such as Coontail and Vallisneria; however, I know them to adapt to this new diet once Hydrilla is no longer present. The reduction of White Amur will be multi-beneficial for the majority of wildlife that yearly inhabits this area. I hope that this benefit of wildlife is taken into account when drafting the plan. We have two wonderful lakes- both of which are more than capable of hosting the most diverse inland ecosystem in the state. This capability should be capitalized upon for the benefit of wildlife and South Carolinians alike. (Clossman, A.)

I am writing in regards to the 2011 Aquatic Plant Mgmt Plan. First I would like to commend SCDNR and Santee Cooper for their efforts in transplanting Vallisneria on Marion. This program is crucial in rebounding wildlife habitat. I am pleased at last year's efforts and look forward to helping this spring and summer. I would also like to express my displeasure with the increase in white amur. I believe the increase was due to hydrilla propoganda rather than sound biology, and had hydrilla never been brought up as a management tool, the responses last year would've never reached the number it did. I request a return to the sustained 12k fish, rather than an increase to 20k, plus an additional 10k this year. I fear that an increase of that magnitude may jeopardize the vulnerable vallisneria beds once the hydrilla has been controlled. I realize plants such as coontail and vallisneria are not preferred by amur, but I also have seen them eat less than desirable plants when hydrilla was not present. I hope that the benefit of wildlife is taken into account when drafting the plan. We have two wonderful lakes, capable of hosting the most diverse inland ecosystem in the state, and I think we should capitalize on it for the benefit of all South Carolinians!(Brammer, A.; Stone, A.; Saxon, B.; Towell, B.; Bonge, B.; Montgomery, C.; Billings, C.; Eddy, C.; Bartley, C.; Hawkins, C.; Hutto, D.; Felkel,

D.; Davis, B.; Clark, D.; Fasano, D.; Finkbeiner, E.; Allred, G.; Hansen, H.; Higgins, J.; Abell, J.; Tant, J.; Williams, J.; jkraskojr; Smith, J. Brewer, K.; Godbolt, K.; Huggins, K.; Tiller, L.; Reich, M.; Motes, M.; Coulter, M.; Altman, M.; Joyner, M.; Polk, N.; Mirmow, N.; Watson, P.; Nguyen, P.; Rodelsperger, R.; Boyken, R.; Reynolds, R.; Tiller, S.; Gibson, S.; Suggs, H.; Finkbeiner, T.; Sumter, T.; McCaskill, T.; Whitney, T.; Siwarski, T.; Rogers, T.; Boyd, W.; Murphy, W.; Hyleman, Z.; Thomas, Z.)

Now that the lake is starting to make a comeback, do not kill it by adding 16,400 grass carp in 2011. I realize that there are some plants that are starting to take over some areas, but the grass carp are not the answer for controlling those species. Another problem that I have is that SCDNR is going to spend \$825,000 on attempting to control unwanted species in our lake by releasing grass carp. (Baker, B.)

I for one am completely against an increase and in fact would like to see this number decreased instead of increasing. The lake is finally beginning to rebound from the disaster that was caused by the total eradication of both native and non native grasses during the late 1990's (Johnston, T. III)

As the return of SAV on our lake systems is helping the Wildlife tremendously, the natural species are only growing in small portions on the lake systems. Once the hydrilla is under control the carp are going to move on to other species to feed on such as vallisneria. (Stone, C.)

You turned the white bass into perch. You turned the ducks into cormorants. You turned the stripers into garfish. Is your master plan to turn the catfish into carp? You suck. (Dalton, G., Godbolt, K.)

I am writing to let you know that I oppose the increase in carp for the purpose of controlling invasive weeds. I fear that a large increase will be detrimental to the native plants on the lake. Once the carp get finished eating what little hydrilla is on the lake, they will take to whatever other plants they can find to survive.

Dont get me wrong, I think you all have done a fine job with our lake system, but once again I feel like your losing sight. I believe that "control" needs to be taken out of the plan and "suppress" be the answer. There are thresholds that need to be set here and not at the current 0%. (Parrott, M.)

Please do not put the extra grass carp in the lake. (Lowe, P.)

While I understand the need to control the hydrilla within the lake system, having the lake as bare as a desert is not conducive to wildlife and fish. I would strongly recommend not increasing the number of grass carp within the Santee Cooper lake system. (Nalley, R.)

I would like to see a cut back on the weed and native grass control in our lakes. With more native grasses growing in bodies of water in SC, the better off our wildlife will be. (Sharpe, C.)

I am writing to express my concern over your release of additional carp into the lakes known as Marion and Moultrie. Those non native fish have done as much damage to the lake system as the weed they are to eat. Somewhere there should be a compromise instead of just releasing more fish. (Watson, P.)

**Supported:**

The Santee National Wildlife Refuge (NWR) would like to express support for the 2011 South Carolina Aquatic Plant Management Plan developed by the SC Aquatic Plant Management Council and SCDNR. The plan is consistent with U. S. Fish and Wildlife Service (Service) policy on *control* and removal of exotic invasive organisms that have harmful impacts on aquatic natural resources and on the human use of these resources. Additionally, the plan is consistent with the Santee NWR Comprehensive Conservation Plan goals and objectives. The occurrence and spread of exotic, invasive, and nuisance plant and animal species has been identified by Service staff and intergovernmental partners as one of the priority management issues facing SanteeNWR. (Epstein, M. USFWS)

The Berkeley Chamber supports the S.C. Aquatic Plant Management Plan. We feel that to have the balance in the lakes that we need to maintain the aquatic vegetation. The Santee Cooper lakes are an economic engine for our region and one with great potential for future development. We appreciate DNR and Santee Cooper's commitment in keeping our lakes healthy. (Morgan, E.)

The Santee Cooper Striped Bass Coalition wishes to voice its support of the 2010 South Carolina Aquatic Plant Management Plan. The controlled stocking of Sterile Grass Carp has been the primary resource of managing the Hydrilla and allowing native aquatic vegetation to flourish which is Santee Cooper's and SCDNR's main objective. Our group will continue to support the 2010 SC Aquatic Plant Management Plan as long as the efforts are intended to control the Hydrilla while enhancing native aquatic plant populations. We strongly feel that it is an important factor that we place our trust with the professionals at Santee Cooper, the SCDNR and other associated agencies which are the most qualified in making the responsible decisions based from decades of data collection. (Riley, E. Santee Cooper Striped Bass Coalition)

That being said we want to thank DNR and Santee Cooper for the excellent job they have done in the past to control the non-native plants that exist in our lake system so we can accomplish our goals. We remember all too well the negative impact hydrilla had on our lakeside businesses, homes, boating and fishing and the huge negative impact it had on tourism in our region. The vegetation was so thick that many areas of the lakes were inaccessible. Marina operators worried that they may go out of business due to the lack of fishermen coming to their properties and lakefront homeowners worried about how this infestation would affect their property value. This commission is committed to supporting all efforts that prevent this from ever happening again. (Shriner, M. Santee Cooper Country)

The South Carolina Aquatic Plant Management Plan is a reasonable proposal to control non-native, invasive plants from detracting from the recreational uses of Santee Cooper Lakes. Good fishing, boating, skiing, and swimming conditions are important features in maintaining a desirability quality of life in area around the lakes. In closing, the Orangeburg County Chamber of Commerce believes that the South Carolina Aquatic Plant Management Plan is a responsible approach to protect the

ecological and recreational character of the Santee Lakes.(Coleman, D Orangeburg County Chamber of Commerce)

Santee Cooper wishes to voice its support of the 2011 South Carolina Aquatic Plant Management Plan. In particular, we strongly support that portion of the plan concerning higher maintenance stocking rates of sterile grass carp to control increasing growths of the submersed noxious plant hydrilla. Detrimental impacts included degradation of water quality and associated large-scale fish kills, displacement of desirable native aquatic plant species, interference with boating, swimming, fishing and other recreational activities, disruption of hydroelectric power generation and suppression of local area economies. Santee Cooper, along with the South Carolina Department of Natural Resources and the United States Army Corps of Engineers, expended some \$20 million to bring this plant under control, something that did not happen until the lakes were stocked with sterile Chinese Grass Carp, under a plan approved by the Aquatic Plant Management Council. Today, despite recent grass carp maintenance stocking efforts, our staff is observing a rapid increase in the level of hydrilla in the lakes. This increased infestation is already having a negative impact on the growths of native vegetation that have become established throughout the system.(Singletary, R. Santee Cooper)

I would like to state my support for the 2011 SC Aquatic Plant Management Plan developed by the SC Aquatic Plant Management Council and SCDNR. (Raymond, D.; Lane, L.; Baker, D.; Olive, T.; Denning, R.; O'Connor, J.; McIntosh, N.; Stokes Jr., R.; Lyons, B.; VanderBand, R.; Herrington, J.; Hacker, B.; Bodenheimer, J.; Brunson, J.; Weber, B.; Outen, P.; Outen, P.; Gude, M.; Gude, P.; Gude, A.; Hutcheson, C.; Hutcheson, T.; Sheehan, M.; Sheehan, V.; Printzlou, J.; Kinsley, E.; Shirley, C.; Mackenzie, R.; Koppelkam, S.; Harrington, L.; Floyd, K.; Miller, J.; Kelley, A.; Kelley, A.; Cagle, C.; Gleaton Jr. E.; Newman, E.; Christian, M.; Newman, J.; Christian, C.; Cozart, D.; Cozart, B.; Palladino, J.; Palladino, M.; Peters, E.; Davis, C.; Gleaton, D.; Thrasher, K.; LeBlane, N.; Paranet, H.; Shontere, L.; Shontere, B.; Bourne, P.; Ziegler, M.; Renrig, H.; Rowe, W.; Taylor, J.; Turner, J.; Turner, L.; McCarthy, J.; Wing, P.; Wing, J.; McCarthy,; Von Linsowe, D.; Truesdale, W.; Casanta, R.; Ard, D.; Beaty, C.; Gesepa, G.; McClain, K.; McClain, O.; Moore, P.; Dana, M.; Tanner, D.; Dorn, J.; Ritterman, D.; Atkin, M.; Moore, T.; Hatcher, K.; Hatcher, J.; Dill, A.; Shaling, S.; Raymond, D.; Raymond, J.; Potter, H.; Rodriguez, N.; Rodriguez, G.; Pack, C.; Ridgeway, B.; Andrews, V.; Hoyt, K.; Shelton, B.; Shelton, B.; Shelton, H.; White, R.; Moore, T.; Cox, L.; Welch, K.; Cox, P.; Soles, T.; Soles, M.; Bodenheimer, G.; Lynch, L.; Scott, J.; Straus, R.; Gousen, E.; Londeree, J.; Carroll, B.)

The purpose of this letter is to express my support for your Draft 2011 Aquatic Plant Management Plan. I believe that your current plan is geared to minimizing the impact the weed control will have on fishing while insuring that recreational activities on the lake will not be impacted by hydrilla.(Durbis, J.; Robins, R.; Drastura, L.; Lyman, J.; Holliday, J.; White, H.; Harrelson, A.; Hall, J.; James, D.; Nabholz, J.; Gottleb, J.; Campbell, G.)

**Response:**

SCDNR and Santee Cooper continue to agree that we need aquatic vegetation in the Santee Cooper Lakes to have a great natural resource. We also agree that vegetation absolutely needs to be of the native variety and not hydrilla. Eradication of established hydrilla utilizing current technology is virtually impossible. The goal of aquatic plant management on the Santee Cooper Lakes is to reduce hydrilla acreage while promoting a diverse natural habitat for fisheries, waterfowl and other animals. That goal is set forth in a Memorandum of Understanding between Santee Cooper and the SCDNR. The MOU provides for a minimum of 10% of the surface area of the lakes to be maintained with a diverse assemblage of native aquatic plants which includes a combination of submersed , floating leaf, and emergent plant species that provide habitat and food for game and non-game fish and wildlife species. According to last year's survey almost 17% of the Santee Cooper system has aquatic vegetation. This is well above the 10% minimum. Hydrilla, at its peak coverage, never covered more than 25% of the total surface area of the Santee Cooper lakes. At this level, the plant had a devastating effect on all lake uses and users.

Last year the Santee Cooper Lakes were at 20,000 fish system-wide. That is 1 fish for every 8 surface acres, which is considered maintenance mode. We saw increases in both native vegetation and hydrilla. Acreage for submersed vegetation alone is around 10%, with total vegetative coverage in the 17% range.

The hydrilla increase is what is so problematic. The hydrilla acreage doubled from 400 acres to 800 acres on the main lake system. It actually replaced some of the native eel grass (*Vallisneria*) in some coves in lower Marion and upper Moultrie. This year's stocking rate targets 6400 fish to replenish the existing numbers and keep them at the 20,000 required for maintenance mode and an additional 10,000 to specifically target the increase in hydrilla, about 400 acres more, or about 25 fish per vegetated acre for the new hydrilla. If left unchecked we will begin the transition to a hydrilla dominated system as the hydrilla has already started to outcompete and replace the native species such as eel grass and bacopa. The total stocking number for this year is 16,400. The vegetative coverage will be closely monitored for any changes.

In order to enhance native plant growth and habitat, innovative management techniques shall be utilized. These techniques will include introducing desirable native plant species, enhancing wildlife and waterfowl management areas and implementing strategic lake level management measures. Those efforts to establish additional native vegetation such as eel grass is already underway. Santee Cooper and SCDNR staff spent numerous hours on the lakes in an effort to harvest seed for additional plantings in the spring and summer. Techniques are currently being developed for more efficient and effective planting techniques

Also included in the MOU is annual monitoring of the vegetative community and a cooperative effort to monitor the health of the fishery and waterfowl populations. The data derived from annual surveys will be utilized in an annual meeting between SCDNR and Santee Cooper to review the

results of monitoring and treatment programs and to determine the effectiveness of the programs and to develop annual work plans.

In the 15 years that hydrilla has been under control in the Santee Cooper system, the system has not experienced one single fish kill resulting from dissolved oxygen depletion; we do not have vast areas of our lake becoming “dead zones’ in the late summer due to anoxic conditions; there have been no commercial boat landings going out of business as a result of restricted access; no farmers have had to fight to keep their crops alive due to clogged irrigation intakes; no industries have had to curtail or cease operations because of hydrilla clogging water intakes; mosquito populations are a fraction of what they were during the peak of hydrilla infestation, one reason that we still have not documented a single human case of West Nile virus or any other arbovirus illness in the area; we have seen a significant expanse of native submersed vegetation under the current stocking plan/rate; bass fishing organizations have set all-time national records for daily and tournament catch rates; and we are no longer deluged with angry letters and telephone calls from area residents, lake users (including fishermen and hunters), businesses and politicians due to the problems caused by the uncontrolled growth of the plant.

Aquatic plant coverage of the Santee Cooper lakes will continue to be monitored and will be determined annually through the use of an independent, third-party contractor utilizing aerial infrared and multi-spectral photography, followed by intense ground truthing verification. This effort, conducted since the mid-1980’s, represents the state-of-the-art in aquatic plant monitoring.” According to surveys done in that period of time (1999-2007) the lowest amount of vegetation was about 9600 acres in 2003, with only 1200 acres of submersed vegetation. From 2003 forward submersed vegetation increased yearly with 1700 acres in 2004 up to 12,244 acres in 2010 system wide. While only 2008 showed a decrease to 6360 acres of submersed vegetation attributed to the lack of water in a severely drought impacted system. Sterile grass carp are utilized so that we may control their numbers in the lakes and eliminate an overabundance. Current research shows that the carp have an approximate mortality rate of 32% per year. Grass carp have been in the system throughout the entire recent period of vegetation expansion. Some \$400,000 was expended to determine the impacts of stocking grass carp in the Santee Cooper lakes, including impacts to fisheries, water quality, and vegetative coverage. Additionally, the U.S. Army Corps of Engineers developed and published a detailed Environmental Assessment for the use of grass carp to control hydrilla in South Carolina in both the late 1980’s and again in 2005. The EA considered impacts to native fish populations, water quality, aquatic plant populations, as well as tourism and recreation (fishing, hunting and boating). Among other positive findings, the EA states that “sterile grass carp provide a safe, cost effective means of controlling nuisance aquatic vegetation in South Carolina. DNR and Santee Cooper are committed to protecting and enhancing the native vegetation community. We plan to continue to monitor their status and take corrective action if unnecessary impacts occur.

Plan Modifications:

No changes necessary