

Minutes of the South Carolina Aquatic Plant Management Council

1. Call to Order

Steve de Kozlowski called the 98th meeting of the South Carolina Aquatic Plant Management Council to order at 10:07 am on November 19, 2008. The chairman offered appreciation to supporting staff and also to Mr. Bob Perry who chaired the last meeting in the chairman's absence. The meeting was held in the Rembert C. Dennis Building, in the offices of the S.C. Department of Natural Resources, Room 149, in 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 Mr. John Inabinet, S.C. Public Service Authority; Mr. Bob Perry, S.C. Department of Natural Resources, Wildlife and Freshwater Fisheries; Ms. Jeannie Eidson, S.C. Department of Health and Environmental Control; Cam Lay, Clemson University, Department of Pesticide Regulation; Mr. Stan Hutto, Department of Parks Recreation and Tourism; Mr. Marc Cribb, S.C. Department of Natural Resources, Land, Water, and Conservation Division; and Mr. Steven de Kozlowski, S.C. Department of Natural Resources, Land, Water, and Conservation Division.

Visitors in attendance were Chris Page, Michael Hook, Walter Meitzen; S.C. Department of Natural Resources, Land, Water, and Conservation Division; Mr. Chip Davis and Mr. Larry McCord, S.C. Public Service Authority; and Mr. Scott Lamprect, S.C. Department of Natural Resources, Wildlife and Freshwater Fisheries.

2. Minutes of the March 13, 2008 Council Meeting

The minutes were reviewed and corrections were offered as follows; in Sec.4 Review of Lake Wylie Status; de Kozlowski changing 'Duke Power' to 'Duke Energy', Lay; changing 'crass carp' to 'grass carp', de Kozlowski; changing 'their lake' to 'the lake',

clarifying that 'the hydrilla in Lake Wylie is about a half of a mile from two public water intakes' and not that 'Lake Wylie is about a half of a mile from two public water intakes', decapitalizing the "c" in council, and changing 'Inabinet agress' to 'Inabinet agreed'. In Sec. 5 Other Business; de Kozlowski; adding 'Management' before 'Plan' in 'Aquatic Invasive Species Management Plan', and Perry; changing 'water fowl' to 'waterfowl' and changing 'fly away' to 'flyway'. A motion to accept the minutes as amended was made by Perry and seconded by Lay. The motion carried unanimously.

Inabinet proposed a change to the agenda, recommending swapping items 3 and 4. No objections were heard.

3. Summary of SCDNR Control Operations

Hook opened with the re-introduction of the program's new technician, Walt Meitzen, and then proceeded with the presentation of treatment year 2008 control operations summary. The presentation focused on trends of control efforts in locations that are visited annually and on new tools and new control operations that arose in 2008. Page provided a spreadsheet with control effort totals to the attendees. Treatment acreage declined in 2008 from 2007 levels in several locations including Black River, Black Mingo Creek and Goose Creek Reservoir (for water primrose, water lettuce, and water hyacinth). Hook attributed these reductions on Goose Creek to scheduling treatments at three week intervals and to using better herbicides. Page added that a new penoxsulam formulation named Galleon was added in canals as a water column treatment at 0.75 pints per acre and it was effective in controlling floating plants such as water hyacinth, water lettuce, duckweed, and salvinia. This proactive approach shows promise for controlling nursery areas in isolated locations. However, submersed vegetation dominated by hydrilla with cabomba and coontail mixed has increased to an estimated 140 acres. Page provided maps of hydrilla infestation in Goose Creek Reservoir to the attendees, and added that a maintenance stocking of 85 carp was carried out this year in response to recent explosive growth of hydrilla. Inabinet agreed that recently ground has been lost in the control efforts. de Kozlowski reminded the council that images of the reservoir in the past showed near complete coverage and stated that we do not want to return to that

situation.

In Lake Greenwood, sixty acres were treated on Rabon Creek which is fairly consistent with the past two years. Page provided a map of possible hydrilla infestation expansion based on current levels. Infestations were indicated on Reedy River, Lick Creek, near the toe of the dam, and in the state park where acreage had increased nearly threefold this year. Hook described control efforts in the state park area. Inabinet informed the attendees that the S.C. Public Service Authority had recently taken over operation of the hydro plant, but in accordance with the agreement with Greenwood County had not taken over any of the lake management duties. Hook's presentation indicated that both hydrilla and Niad treatment acreage increased over last year's totals.

Hook showed that on the Pee Dee River, water hyacinth treatment acreage decreased from 13 acres to 3. In the Waccamaw River, treatment acreage increased from 44 to 77.75 acres. Hook pointed out that this increase is due in part to a cooperative Waccamaw River water hyacinth treatment agreement that the Department of Natural Resources' Aquatic Nuisance Species Program (DNR ANSP) entered into with The Nature Conservancy, The United States Fish and Wildlife Service (US FWS), and private land owners. Page added that 80 acres were treated on Samworth Wildlife Management Area in a cost share agreement with the US FWS.

Hook went on to show that on Santee Coastal Reserve, phragmites treatment acreage has consistently decreased over the past years going from 1,340 acres in 2006, to 714 acres in 2007, and to 400 acres in 2008. This resembles the trend for total phragmites treatment acres which went from 1,950 acres in 2006, to 1,737.5 acres in 2007, and to 748.25 acres in 2008. Treatment numbers include operations in the Georgetown County Parks, the Belle Baruch Institute, Samworth WMA, the ACE Basin, and a 15 acre treatment on Cape Island, which was in cooperation with the US FWS. No treatment was done on United States Army Corps of Engineers (USACE) dredge spoil sites along the Atlantic Intracoastal Waterway (AIWW). Page added that future control arrangements may be made with USACE. Perry inquired to the status of the Cape Romain National Wildlife

Refuge with regards to known phragmites infestations and current treatments there. Page explained that there were few known infestations, but there were infestations of Chinese tallow tree, 160 acres of which were treated in the Bull’s Bay area. McCord informed the attendees that 400 acres of phragmites were treated this year at the Windy Generating Station by S.C. Public Service Authority. Hook pointed to the 75 acres treated at the Naval Weapons Station.

Hook continued by moving on to new control sites. An initial treatment was made on Lake Cunningham of 32 acres of elodea and 3 acres of lily. Page informed the attendees about future plans to introduce carp to the system. Hook moved on to Boyd Pond where 12 acres of water milfoil and 0.5 acres of water primrose were treated. In Hopelands Gardens, DNR ANSP was able to quickly respond to and treat a 2 acre infestation of microcystis, a toxic blue green algae.

Hook proceeded to the newly encountered island apple snail infestation in Horry County where over 200 water bodies have been surveyed and 39 were found to be infested, this includes a portion of the AIWW. DNR ANSP spent a total of \$3,670.50 on island apple snail control in 2008. Hook provided a map to the attendees which indicated surveyed and infested water bodies. A conversation of island apple snail control ensued with attention paid to past and future cooperative efforts including the possibility of the cooperation of DHEC’s Biomonitoring Section, watershed managers, and district offices as well as DNR’s Conservation Districts staff. Hook concluded with a summary of the program’s control effort totals that are indicated in the following table.

	DNR ANSP		Santee Cooper		SC PRT	
	Acres	Cost	Acres	Cost	Acres	Cost
2008	2,378.24	\$338,665.23	920.40	\$295,431.06	36.75	\$7,704.76
2007	3,298.38	\$539,770.48	860.25	\$223,666.19	49.50	\$9,826.53
Difference	-920.14	-\$201,115.25	+60.15	+\$71,764.87	-12.75	-\$2,121.77

Hook focused on SC PRT totals pointing out that acreages and monies decreased even

though the number of water bodies increased. The chairman thanked Hook for his presentation.

4. Summary of Santee-Cooper Control Operations

McCord began his presentation by offering attendees a handout with a spreadsheet detailing 2008 control statistics and objectives. He indicated that 920.4 acres were treated on both lakes and all impoundments, which came in at a cost of \$295,431.06. On Lake Marion, 274 acres were treated, 42 total acres were treated on Lake Moultrie and 604 acres in all impoundments. Most of the impoundment work focused on hydrilla.

McCord continued with a closer look at control efforts in various impoundments. On Taw Caw impoundment 165 acres of hydrilla were treated. McCord explained that as lake levels dropped, water remained in the impoundments allowing hydrilla to persist. In the Potato Creek WMA waterfowl management area 120 acres of hydrilla were treated and in Dean Swamp impoundment 112 acres were treated. McCord continued reporting that on Fountain Lake impoundment two acres of water primrose and alligatorweed and three acres of fragrant water lily were treated. In Church Branch impoundment 70 acres of pondweed and 23 acres of slender niad were treated. McCord reported on control operations including helicopter work done on the Bluff and Pine Island units of the US FWS Santee National Refuge intended to provide habitat enhancement through cat tail and cutgrass reduction. He then continued, reporting on Stoney Bay impoundment where experimental treatments in dewatered areas were implemented but not seen to completion due to rising water levels.

McCord indicated that on upper Marion, hydrilla was documented in areas above the Interstate 95 Bridge. Much of this area was treated prior to the fall of lake levels. Treatments and low water levels led to reductions in infestations through much of the upper end of the lake, although in other areas, such as Jack's Creek Impoundment, hydrilla infestations increased. Ground truthing expeditions in connection with another project uncovered pockets of hydrilla in areas where none were known previously. They

also revealed that an infestation in a canal adjacent to the Stoney Bay Impoundment at Sandy Beach was expanding. Subsequent surveys had revealed more infestations throughout the lake system. McCord reports that *Valisneria* populations were healthy overall after the period of low lake levels, and new infestations of crested floating heart continue to be found. New infestations were found at the Santee WMA and the US FWS refuge as well as Potato Creek and Taw Caw Impoundments, in addition to the boat landing at Russellville. McCord offered attendees opportunity for question and comment. The chairman thanked Mr. McCord for his presentation.

5. 2008-09 triploid grass carp stocking review and discussion; Scott Lamprecht

Lamprecht began his discussion of grass carp stocking with a call to avoid ineffective action through delayed stocking. He pointed out that if carp levels are allowed to decline after some amount of control has been achieved then gains have effectively been lost in that high numbers of carp will need to be restocked to regain control. He added that future stocking on the Santee-Cooper Lakes should employ a strategic division of the entire stocking. Fish should be divided and applied as precisely as possible to individual infestations. Inabinet added to the discussion with a summary of the current stocking strategy that the council has for the Santee-Cooper lakes, referring to Phase II of the previously approved maintenance stocking strategy that would maintain a minimum number of grass carp in the lake system to try to control hydrilla without undue impact on desirable, native vegetation. de Kozlowski suggested that the next stockings on the Santee Cooper lakes should return the population to a level of 12,000 fish or more, the level estimated in 2005, the year before the most recent resurgence of hydrilla. With an estimated population of 3,793 fish in January 2009, a stocking of 8,281 fish would return the system to 2005 levels.

Page provided a handout prepared to supplement previous discussions of the council's maintenance stocking strategy in the Santee Cooper Lakes. The handout includes a project background, an overview of the two phased maintenance stocking strategy, 2006 vegetation survey data, recommendations for maintenance stocking in 2007, and carp

population projections with and without maintenance stocking. Page briefed the council with new information presented in a paper by Dr. J.P. Kirk on a possible new maintenance stocking approach based on his research. Carp populations should be monitored and maintained at levels no lower than one fish per eight acre level in perpetuity. It is assumed that this level will further the control of existing hydrilla and prevent reestablishment. Page offered attendees spreadsheets that focus on hydrilla control efforts in the Santee Cooper Lakes, Goose Creek Reservoir, Lake Murray, and Lake Greenwood. For previously stocked lakes, Page pointed out that estimated carp populations dipped below the one carp per eight surface acre density near the time that field observations revealed the reemergence of hydrilla. Page discussed how this approach would work in the Santee Cooper Lakes, Lake Murray, and Goose Creek Reservoir. A discussion ensued regarding differences between individual systems throughout South Carolina and North Carolina. Points were made regarding differing vegetation responses, differing lake level fluctuations, and the inherent uncertainty in the assumed mortality rates. Inabinet injected that the rates are probably not perfect but they are the standard currently in use, and that the population densities on the Santee Cooper Lakes are probably already below the one fish per eight acre level. Eidson suggested that the stocking level on the Santee Cooper lakes should not be as high as to harm desirable vegetation, that Lake Murray vegetation responses should be monitored to watch for hydrilla resurgence predicted by Dr. Kirk's paper, and that the one to eight acre rule may be too high. She continued stating that if all three systems respond similarly, despite their differences, then the rule will seem more appropriate. Page cautioned that we may miss an opportunity to stay ahead of a threshold level, below which we are fighting to regain control. Lay concurred, stating that the one to eight rule is preventative and will allow us to keep ahead. Eidson contended that more justification is needed before the council decides to change its stance to support this new approach. de Kozlowski reminded the participants that this is still a discussion, and that decisions will be made at a later date. Page concluded his discussion recapping the status of stocking plans. He informed attendees that there is no decision made at this time for Lake Greenwood, that plans are underway to stock Lake Cunningham, Lake Murray is under consideration, and that requests have been made to stock Lake Thickety to control a monoecious hydrilla

infestation there. He also contended that Goose Creek Reservoir should be restocked at the 15 fish per vegetated acre level and monitored and maintained per the Kirk recommendations. Page moved on to the next agenda item.

6. Draft 2009 South Carolina Aquatic Plant Management Plan

Page began with an overview of proposed changes with the removal of lakes Keowee and Wateree and the addition of Boyd Pond and Lakes Thickety and Cunningham. He added that the issue of state park lakes needs revisiting due to changes in infestations and budgets. Page stated that he plans to send the draft plan to the council for review by January 9, 2009, two weeks prior to the next council meeting. Page concluded with recognition of the need for decisions and information pertaining to Lake Greenwood and the Santee-Cooper Lakes.

7. Other Business

de Kozlowski began with a reminder of the next council meeting date, January 23, 2009, and a request for Page to email the council with meeting particulars. He continued with an update on the Aquatic Invasive Species Management Plan submission process and information on the upcoming Gulf and South Atlantic Regional Meeting, December 9th & 10th, 2008. de Kozlowski offered an overview of DNR's current budget situation and some possible ramifications. Perry informed the council about plans discussed at a recent energy meeting regarding *Arundo* and Chinese Tallow as sources for cellulosic ethanol. Lay called for pictures of applicators for the upcoming Category 5 manual and mentions the possibility of future changes in fee structure at DPR. He continued with information on the availability of information about licensed applicators; citing that concerns over privacy issues are complicating the publication of licensee records, but requests about the status of an individual's license can still be made and will be answered by the DPR. Eidson mentioned budget cuts at DHEC with possible ramifications, and Inabinet followed with Santee-Cooper budget and resource cost information.

8. Adjournment

Being no further business the Council adjourned at 12:30 p.m.