

**Land, Water & Conservation Division  
Advisory Committee Minutes  
Dennis Building, Room 335  
Columbia, South Carolina  
Thursday, July 16, 2009**

<b><i>Present</i></b>	Lynn Youmans	Bill Simpson
	Frank Murray	Marvin Davant
	Webb Smathers	Dean Moss
	James McLeod	Larry Nates
	Steve Kinard	Nadim Aziz
	Oscar Stevens	Charles Broadwell

<b><i>Staff:</i></b>	Ken Rentiers	Steve de Kozlowski
	Barry Beasley	Marc Cribb
	Hope Mizzell	Bud Badr
	Jim Scurry	Dorothy Phillips

***Call to Order/Welcome:*** The July 16, 2009, meeting was called to order by Chairman William Simpson at 1:05 p.m. In compliance with the provisions of Section 30-4-80(e) (Freedom of Information Act), notification of this meeting was given to all persons, organizations, local news media, and other news media that requested such notification. Chairman Simpson reported that Ms. Hartung was absent due to out-of-town commitments.

***Approval of April 9, 2009 Minutes:*** Motion was made by Mr. Steve Kinard to approve the April 9, 2009 minutes and seconded by Mr. Dean Moss. The motion passed.

***Drought/Hurricane Update:*** Hope Mizzell, State Climate Office, informed the committee that the drought was officially declared over on June 10, with normal conditions statewide. During the 30 days after the drought declaration, the upstate and the Savannah River Basin received rain; but other areas returned to a below normal rainfall pattern. She reviewed some of the drought indicators, specifically the US Drought Monitor. Hope also reviewed stream flows and lake levels. She presented the 10-week projection of lake levels for Lake Hartwell and Thurmond. Hope informed the committee that the weather was being affected by the El Nino event. She explained that El Nino in the summer months can reduce rainfall totals, but typically brings normal to above normal rain during the winter months. The El Nino is also contributing to the quiet tropical season by increasing wind shear that inhibits storm formation.

***South Carolina State LiDAR Project:*** Dr. Jim Scurry, Technology Development, provided the committee with an update on the State's LiDAR Project. He explained the technical

components of LiDAR, how it is used by a variety of organizations, and how this project is critical to this division because of the flood insurance program's need for accurate topographic maps. The Flood Program and the Technology Development Program have agreed to be cooperative partners with FEMA to update all the flood insurance maps across the state. The use of LiDAR facilitates flood mapping by providing highly accurate (15 centimeter) topographic information that is used in the hydrologic models that produce the flood zone maps. Older flood maps had to rely on 5 and 10 foot contour maps for the topographic surface definition. Use of the LiDAR derived topographic maps provide more accurate vertical elevations and provide the capability to better identify small streams and drainage features previously excluded from the topographic maps using traditional contour maps.

Three years ago the SC LiDAR Consortium was started to coordinate state, federal and local governments in the acquisition and processing of LiDAR statewide. Coordination of statewide efforts provides a standard product that benefits all partners while also supporting a wide variety of applications. Jim informed the group as to the status of the project. Currently, approximately 50% of the state has LiDAR data and associated data including hydrologic breaklines, intensity images and terrain surfaces. Plans for 2010 and 2011 are being developed that will provide essential coverage of portions of the midlands and Savannah River basin. The goal is to have all of the state covered by 2013; however, recent economic conditions have and will continue to affect agency contributions. Dr. Scurry pointed out the many uses of LiDAR among the cooperating agencies including hydrology, flood map modernization, construction site planning, telecommunications, urban planning, forestry and habitat analysis, and transportation and utility planning. He also reviewed several new programs that are being enhanced by use of LiDAR; such as a model developed by the U.S. Fish and Wildlife, "SLAMM" Sea Level Affecting Marshes Model. This program will be used with LiDAR and soils data to better predict what sea level rises will take place in South Carolina.

***Conservation Education Programs:*** Marc Cribb, Conservation Program Manager, gave the committee an update on education programs that the local conservation districts and the DNR conservation staff are involved in. Marc pointed out the diversity of the conservation district programs and projects. Marc updated the committee on the statewide Envirothon competition among 23 school teams. Spartanburg High School won the local competition and went on to represent SC in the nationwide competition in Asheville, NC in August. He also reviewed the conservation districts' information web links that are attached to the DNR web page. Marc informed the committee about the SC Institute for Natural Resource Conservation held at Lander University. Coordinated by DNR staff, it was a twenty-two student statewide workshop sponsored by the local conservation districts. The institute is a partnership between Lander University, DNR and the Conservation Districts Foundation. Marc reviewed some of the workshops that were presented; boater safety, in-water rescue, careers, environmental sciences, soil and water, river conservation, and water quality. At the end of the program the students were given an examine that could earn them a one hour college credit, with the top scores receiving scholarship money and the highest scoring student being offered a full scholarship from Lander University to study in their environmental science program. Marc also informed the committee about the upcoming Carolina Coastal Adventure in October. This 3 day workshop for 9th and 10<sup>th</sup> graders is sponsored by the local conservation district in collaboration with DNR, Berkeley Conservation District, and Santee Cooper. Marc ended the presentation with a variety of

pictures from various educational outings that the conservation districts and DNR support. He also informed the committee that by the end of the fiscal year the educational programs had over 22,000 contacts from students, teachers and other individuals.

***Savannah River Basin Water Use Optimization:*** Dr. Nadim Aziz, Clemson University, gave a presentation on his current research to help improve operation of the Savannah River lakes. The availability of water in the Savannah River Basin reservoirs has been a subject of discussion for many years, and the recent drought and the low water levels in the lakes has raised concerns about water availability and management practices. The purpose of this study is to evaluate the management of these reservoirs and to develop a model to determine how best to meet the water resource use objectives of the Basin. Evaluation of lake levels indicate that since 2000 Lake Hartwell levels were below normal stage more than 50% of the time. Further, data shows that on a monthly basis, the system of reservoirs met the “contract” power amounts at most 60% of the time in spring months and less than 30% of the time during the summer months. Research so far has analyzed the historical data and using a generic algorithm model, it was possible to evaluate the entire reservoir system for several objectives and determine the best way to operate the reservoirs. Preliminary results indicate that it is possible to operate the reservoir system to meet the various demands. The model will next be used to develop a procedure that can use long term the river forecast data to help make decisions on reservoir operations. Finally, the analysis indicated that Lake Hartwell is perhaps the most important element of the system due to its size and its location at the upstream end.

***Deputy Director’s Report:*** Ken Rentiers informed the committee about the recently completed Economic Impact Study by the University of South Carolina, Moore School of Business. It will be used to help inform the public and legislators about the economic importance of our natural resources which are too often taken for granted. Staff are working with the Town of Bluffton to develop a new study to better understand the surface and groundwater hydrology of the area. Ken updated the committee on the current status of the division’s budget and anticipated budget cuts.

***Committee Comments:*** The committee had further discussions on the surface water withdrawal permitting bill. Larry Nates passed out registration forms for the 2009 Southeast NACD Meeting in August, inviting the committee members to attend. Mr. McLeod commended and thanked Jackie Heuermann for her work on the Wateree River bridge trestle removal project in Kershaw County. He also expressed concern about the lack of funding to support the Scenic Rivers Program and a feasibility study on the Wateree River in particular.

***Executive Session:*** At 3:25 p.m., Mr. Davant motioned to go into executive session for the purpose of discussing personnel issues with second by Mr. Stevens. All were in favor.

At 3:35 p.m., motion to return to open session, seconded and all were in favor.

Mr. Youmans motioned that re-appointments be approved and seconded by Mr. Davant, all were in favor. The Conservation District Commissioner re-appointments were approved and are as follows: Mr. Thomas Garrison, Anderson; Mr. Mickey Bailey, Cherokee; Mr. Jefferson Wilson, Chester; Mr. Theron DeWitt, Darlington; Mr. James McLeod, Kershaw; Mr. Joseph Stogsdill, Kershaw; Mr. Joe Ghent, Lancaster; Mr. Robert Boyce, Lee; Mr. Dwight Davis, Lexington; Mr. James Huggins, Marion; Mr. Lawrence Dyck, Pickens; Mr. Norris Fowler, Union.

*Next Meeting Date:* October 2009.

*Adjournment:* Motion to adjourn was made by Mr. Youmans and seconded by Mr. Davant. All were in favor to adjourn. The meeting was adjourned at 3:40 p.m.

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Dorothy Phillips  
Recording Secretary