

SEDIMENTS

Newsletter of the North Carolina Sedimentation Control Commission

New Hanover County and Guilford County Win Award for Excellence in Erosion and Sediment Control

By Gowon L. Goode, Land Quality Section, Raleigh, NC

The annual Local Programs Workshop and Awards Banquet was held at the Mid-Pines Inn and Conference Center in Southern Pines, NC, on January 27 and 28, 2009. This annual workshop brings together delegates from each of the 52 local programs throughout the state and specializes in training and discussion of erosion and sediment control issues in North Carolina.

Local erosion and sediment control programs have the ability to exercise greater control over erosion and sediment control in their respective jurisdictions and may often inspect sites more frequently than the state erosion and sediment control program. Furthermore, local erosion and sediment

control program ordinances may be more restrictive than state law, giving additional control over the development occurring within their respective jurisdictions. The North Carolina Sedimentation Control Commission recognizes the importance and the value of local erosion and sediment control programs in controlling pollution by sedimentation to the waters of North Carolina. In addition to training, the workshop seeks to recognize outstanding local programs. Each year awards of excellence are presented to programs in two categories:

- Small Program—program providing 0-3 man-years or full-time equivalents supporting erosion and sediment control
- Large Program—program providing 3+ man-years or full-time equivalents supporting erosion and sediment control

This year, **New Hanover County** received the Local Program Award of Excellence for a small program. This local program is located within the New Hanover County Engineering Department. Beth Easley Wetherill, Soil Erosion Specialist, oversees the program. In 1994, Beth Easley Wetherill was hired to administer New Hanover County's local program and for over 10 years worked alone and with temporary workers to sustain the program. In 2007, Rob Pearsall joined Beth Easley Wetherill as a full-time inspector. This addition is yet another commitment to the program and will help to ensure its continued success

and growth. As one of North Carolina's 20 coastal counties, New Hanover County has a coastal stormwater program. Sediment basins are converted to permanent stormwater basins at the completion of construction. Soils range from dry sands to hydric organic and clay soils, making site development and stabilization a challenge. Beth has helped plan field tours for WRRI's spring erosion and sedimentation control planning and design workshops several times. The workshop in Spring 2008 featured redevelopment of the Cape Fear Riverfront in downtown Wilmington.

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State of North Carolina,
Department of Environment & Natural Resources
William G. Ross, Jr., Secretary

Land Quality Section
Division of Land Resources
James D. Simons, Director and State Geologist



From left to right: Robin K. Smith, NC Sedimentation Control Commission Member and Enforcement Coordinator, Conservation Council of NC; Beth Easley Wetherill, Erosion Control Engineer; Rob Pearsall, Erosion Control Inspector; Elaine Chiosso, NC Sedimentation Control Commission Member and Executive Director, Haw River Assembly

(Award for Excellence, cont'd from p. 1)

The New Hanover County Local Program currently has 2.5 full-time equivalents devoted to erosion and sediment control—soil erosion specialist, inspector, and a processing assistant.

Guilford County received the Local Programs Award of Excellence for a large program. This program is located under the Inspections Division of the Planning and Development Department. Earl E. Davis, II oversees the program. He has worked for Guilford County for 14 years in the Erosion Control Section. He became Chief of the Erosion Control Section in 1997. Earl, along with Michael Carter and Theron Jackson make up the section and enforce regulations in Jamestown, Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, Summerfield, Whitsett and unincorporated Guilford County. The local program performs erosion control plan reviews on all projects exceeding one acre and also reviews projects under an acre containing erosion and sediment control devices.

In looking forward, Guilford County is dedicated to being a goal-oriented program and is taking steps to ensure that the program is protecting our natural resources and educating the next generation. Guilford County is proactive in communicating to the development community. Letters are sent in the early fall and spring advising of the season to plant and establish the cool season grasses typical of the piedmont. Also the Guilford County local program is in the process of planning and designing a curriculum that



From left to right: Robin K. Smith, NC Sedimentation Control Commission Member and Enforcement Coordinator, Conservation Council of NC; Michael Carter, Soil Technician; Earl E. Davis, II, Chief, Soil Erosion Control Section; Theron Jackson, Soil Technician; Elaine Chiosso, NC Sedimentation Control Commission Member and Executive Director, Haw River Assembly

will be educational and bring awareness to the damages caused by sedimentation. Guilford County's Erosion Control Section is committed to increasing the quality of grading sites and practices, educating the general public of environmental concerns regarding erosion and sediment control, and setting the standard for other local programs to benchmark.

NC Sedimentation Control Commission: February Actions

At its meeting on February 18, 2009, the NC Sedimentation Control Commission (SCC) took the following actions:

Local Program Contract Funds:

- The Town of Columbus (\$12,405), Village of Whispering Pines (\$25,668), and City of Newton (\$1,664) were approved for Local Program Contract Funds. However, the state budget may not include these funds due to proposed budget cuts and therefore these Local Program Contract Funds may not be awarded. The Town of Columbus is a new, currently approved but unfunded Local Program that will start when the State finalizes their contract. The Village of Whispering Pines has recently started their Local Program without State funding; their construction moratorium expires April 2009. The discussion on Local Program Contract Funds noted the value of funding these local programs.
- The decision regarding Wake County's request (\$33,000) was delayed. The SCC asked the Land Quality staff to work with Wake County to revise its budget to reflect a 60% local match on the equipment requests. The SCC noted the value of Wake County's request to initiate a new water quality program to assess the effectiveness of the County's Erosion and Sedimentation Control program, as well as other watershed management initiatives.

Local Delegated Programs:

- Guilford County: Motion to continue delegation was approved.

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SEDIMENTS is published quarterly by the NC Sedimentation Control Commission to provide information and assistance to the regulated community and to facilitate communication among personnel of state and local erosion and sedimentation control programs.

Send comments to Gray Hauser, NCDENR-Land Quality, 1612 Mail Service Center, Raleigh, NC 27699-1612. Email: Gray.Hauser@ncdenr.gov. Send change of address and subscription information to NCSU Water Quality Group, NCSU Box 7637, Raleigh, NC 27695-7637; (919) 515-3723; bonnie_kurth@ncsu.edu. To receive *Sediments* electronically, please subscribe at: <http://www.dlr.enr.state.nc.us/pages/sedimentationnewsletters.html>. Five thousand copies of this newsletter were printed at a cost of \$1,490 or 30 cents per copy.

Personnel of the Land Quality Section of the NC Department of Environment and Natural Resources provide information and assistance for implementation of the NC Erosion and Sedimentation Control Program. For assistance, please contact the Regional Engineer or the Raleigh headquarters listed below:

Janet Boyer, PE
2090 US Hwy 70

Swannanoa, NC 28778
(828)296-4500

Steve Cook, CPESC
225 Green Street, Suite 714
Fayetteville, NC 28301
(910)433-3300

Zahid Khan
610 East Center Ave., Suite 301
Mooresville, NC 28115
(704)663-1699

John Holley, PE
3800 Barrett Drive, Suite 101
Raleigh, NC 27609
(919)791-4200

Pat McClain, PE
943 Washington Sq. Mall
Washington, NC 27889
(252)946-6481

Dan Sams, PE
127 Cardinal Dr. Ext.
Wilmington, NC 28405-3845
(910)796-7215

Matt Gantt, PE
585 Woughtown St.
Winston-Salem, NC 27107
(336)771-5000

Gray Hauser, PE
Raleigh Central Office
512 N. Salisbury St., 1612 MSC
Raleigh, NC 27699-1612
(919)733-4574

The North Carolina Sedimentation Control Commission

The Sedimentation Control Commission (SCC) was created to administer the Sedimentation Control Program pursuant to the NC Sedimentation Pollution Control Act of 1973 (SPCA). It is charged with adopting rules, setting standards, and providing guidance for implementation of the Act. The composition of the Commission is set by statute to encompass a broad range of perspectives and expertise in areas related to construction, industry, government, and natural resource conservation and quality. All members are appointed by the Governor and serve three-year terms, except for the Director of the Water Resources Research Institute of the University of North Carolina, who serves as long as he remains Director. The chairman of the SCC is named by the Governor. The following is a list of current members with the organizations they represent:

Chairman:

Donnie W. Brewer
Greenville

NC Environmental Management Commission

Commissioners:

W.T. "Buzz" Bryson
Raleigh

NC Public Utilities

Elaine C. Chiosso
Bynum

Non-governmental Conservation

Thommy Esqueda
Wake County

NC Association of County Commissioners

Joseph H. Kleiss
Raleigh

NC State University, Dept. of Soil Science

Grover McPherson
Winston-Salem

NC Soil and Water Conservation Commission

John William Miller, Jr.
Burnsville

NC Mining Commission

Director WRRI (currently vacant)
Raleigh

Water Resources Research Institute of
The University of North Carolina

Robin Smith
Burnsville

Non-governmental Conservation

Mark A. Taylor
Greensboro

Professional Engineers of NC

Richard Vick
Wilson

Carolinas Associated General Contractors

Rob Weintraub
Wake Forest

NC Home Builders Association

LQ Personnel Changes

Amy Mullikin is a new Environmental Specialist in the Mooresville Regional Office

Andrew Schneider is a new Assistant Regional Engineer in the Mooresville Regional Office

Jennifer Jones is a new Environmental Specialist in the Mooresville Regional Office

Shawna Riddle has been promoted to the Environmental Senior Specialist (mining focus) position in the Asheville Regional Office.

Gary Novak has been promoted to the Environmental Senior Specialist (mining focus) position in the Washington

(Actions of the SCC continued from page 3)

- New Hanover County (including Wilmington): Motion to continue delegation was approved.
- Town of Apex: Motion to continue delegation was approved with two recommendations: 1) improve their construction sequence and measures at stream crossings and 2) provide written inspection reports when sites that were previously issued a notice of violation were brought back into compliance.
- Rowan County: Motion to end the program probation was approved, as well as continuing delegation to the County with two conditions: 1) The plan approvals should include "Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city and county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval." 2) Notice of Violations should incorporate the inspection report by reference and clearly state a deadline for compliance. Rowan County has increased its staff and concurrently its County coverage. In addition, it has amended its ordinance to allow sediment and erosion professional staff to determine the amount of civil penalty assessments.
- Lincoln County: Motion to continue delegation was approved. It was noted

that the County has placed priority on sites greater than 1 acre and increased their inspection frequency.

- Caldwell County update (no SCC action): Caldwell County has rescinded its Local Program.
- Town of Columbus Ordinance: The SCC asked the Land Quality staff to ask the Town if they would modify the proposed ordinance to allow acceptance of existing sites that are in compliance. Continued discussion on this item will occur at the May SCC meeting.

Election of Vice-Chair:

- Dr. Joseph Kleiss was elected as Vice-Chair of the SCC.

2009 SCC Meetings:

- The November meeting was changed to November 12 due to a conflict with the Environmental Management Commission (EMC) meeting. The remaining 2009 SCC meetings are:
 - Thursday, May 21, 2009
 - Thursday, August 20, 2009
 - Thursday, November 12, 2009

Turbidity Controls:

- The SCC asked the LQS to ask the EMC if it would agree to convene a joint subcommittee to discuss turbidity control options.



SCC Member Spotlight Joseph H. Kleiss

Dr. Kleiss has been involved with the activities of the SCC since about 1976. He has served on various committees (Technical Advisory, Education etc.) over the years and chaired the Education Committee for many years. He was recently elected to Vice-Chair of the SCC. Dr. Kleiss is serving his second term as a member of the Commission. He fills the member position representing the Soil Science Department at NCSU. When he previously rotated off, he was followed by Dr. Wendel Gilliam. When Dr. Gilliam retired and came off the Commission, Dr. Kleiss was reappointed in 2004. The other representative from the Soil Science Department was Dr. Joe Phillips who was on the original first commission and long time stalwart of the program until he passed away. Dr. Kleiss says he is "pleased to serve in this role."

New Revisions to the Design Manual

By Gray Hauser, Land Quality Section, Raleigh, NC

The Sedimentation Control Commission approved revisions to the Erosion and Sedimentation Planning and Design Manual in August, 2008. The revisions have been published as PDF files, and are available for download at:

www.dlr.enr.state.nc.us/pages/publications.html

Revisions include sections on vegetative stabilization, skimmer dewatering, streambank stabilization and estimating runoff.

Putting Down Roots

Chapter 3 was revised to include many native plant species. Options for native warm and cool season grasses and legumes are now offered. A brief narrative description of each species is provided. Much of the information was obtained from the USDA/NRCS Plants Database at:

<http://plants.usda.gov/>

Practice Standard and Specification 6.05, Tree Protection, was revised to encompass material recently published in the North Carolina Cooperative Extension Service Bulletin AG-685, "Construction and Tree Protection." More than just placing orange fence around trees, it steps the designer through selecting which trees to preserve and minimizing impacts. Perhaps the most significant revision is to Practice Standard and Specification 6.11, Permanent Seeding. A series of species tables are provided, allowing the designer to create a seed mix appropriate to each region and the site characteristics of shade and soil moisture. Native species are emphasized, providing much needed information for stabilization of riparian areas and wetlands. New sections will assist designers in developing a bid list for vegetative stabilization and a landscape management plan. Designers seeking up to date information on traditional turf grasses should consult the N. C. Cooperative Extension Service Bulletin AG-69, "Carolina Lawns," available at:

<http://www.turffiles.ncsu.edu/>

Finally, Appendix 8.02, Vegetation Tables, has been completely revised. Native grasses new to Practice Standard and Specification 6.11, Permanent Seeding have been added to Table 8.02a. The status of plants as native, non-native or invasive is listed. Shrubs and

trees listed in the North Carolina Ecosystem Enhancement Program "Guidelines for Riparian Buffer Restoration" are included in Table 8.02b.

Skimmer Basin Dewatering

The formula for calculating the dewatering rate for floating skimmers of various sizes and orifice diameters was improved by Dr. Al Jarrett while he was at N. C. State University, during his sabbatical leave from Penn State. The head on the orifice of various sizes of Faircloth skimmers was measured, and provided in a table. This method of calculating dewatering rates is taught in the NC DOT Erosion and Sedimentation Control and Stormwater Management Level III certification class. Practice Standard and Specification 6.64, Skimmer Sediment Basin has been revised to use this method of calculating dewatering. A companion Excel spreadsheet "Sediment Control Measures with Skimmer Dewatering Calculation - 20081125 (MS Excel)" is available at:

[//www.dlr.enr.state.nc.us/pages/links.htm](http://www.dlr.enr.state.nc.us/pages/links.htm)

Streambank Stabilization

Practice Standard and Specification 6.72, Vegetative Streambank Stabilization has been completely revised based on the new NRCS publication, National Engineering Handbook, Part 654, Technical Supplement 14I, Streambank Soil Bioengineering. Techniques for live staking through coir matting and bundling live cuttings into fascines or mattresses are described. A table of permissible shear stresses for various

bioengineering techniques is included.

Practice Standard and Specification 6.73, Structural Streambank Stabilization has been completely revised based on the new NRCS publication, National Engineering Handbook, Part 654, Technical Supplement 14K, Streambank Armor Protection with Stone Structures. Riprap and gabion slope protection are described, as well as modified designs that include stone and bioengineering techniques.

The entire NRCS National Engineering Handbook, Part 654, Stream Restoration Design, can be ordered on CD at:

<http://landcare.nrcs.usda.gov/product.aspx?id=751>

Estimating Runoff

Appendix 8.03, Estimating Runoff, was revised in August, 2006, including a change in the method for calculating the time of concentration for the Rational Method. The latest revisions include corrections to the formula for calculating the time of concentration, an improved example problem, and a "check" or "shortcut" to see if the time of concentration can be assumed to be 5 minutes. A companion Excel spreadsheet "Rational Method with Kinematic Wave Tc - 20081125 (MS Excel)" is available at:

[//www.dlr.enr.state.nc.us/pages/links.htm](http://www.dlr.enr.state.nc.us/pages/links.htm)

Printed revision packets and new manuals incorporating the revised chapters are planned when funding is available. Currently the revisions are available only as PDF files.



Fines Creek, Haywood County, NC

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e-mail to bonnie_kurth@ncsu.edu



International Erosion Control Association

International Erosion Control Association (IECA) Call for Presentations

Environmental Connection EC10, IECA's Annual Conference and EXPO is scheduled for February 14-18, 2010 in Dallas at the Hilton Anatole Hotel. The theme of the conference is Discover New Frontiers.

Education is the primary reason attendees register for Environmental Connection with over 100 educational sessions which include full and half day courses and multiple technical paper presentations. Attendees could earn over 28 professional development hours (PDH) during the 4 days of the conference.

<http://www.ieca.org>

2009 IECA Southeast Chapter Muddy Water Blues

Providing Innovative Solutions to Complex Regulations

May 11-13, 2009

Asheville, North Carolina

Water Quality requirements got you scratching your head?
Join industry experts to find solutions for your muddiest problems.

Everyone from USEPA down to local government is increasing their scrutiny on stormwater as a major source of pollution. This regional conference will focus on the new requirements and new options for reaching them, particularly for construction sites. Improved erosion, sediment, and turbidity control systems will be the focus, as well as regulatory and policy approaches to achieving reductions in non-point source pollution. The agenda:

May 11

10:00am - 6:00pm: Concurrent Preconference Workshops

- How to Control Turbidity on Construction Sites, Richard McLaughlin, PhD, NCSU
- CPESC Exam Review, Ted Sherrod, NCDOT

May 12

8:30-12:00: Regional and National Speakers

- Beth Chesson, CPESC, CPSWQ, President, Southeast Chapter – International Erosion Control Association and Water Resources Practice Lead for Civil & Environmental Consultants, Inc.
- Terry M. Bellamy, Asheville Mayor
- Russ Adsit, FASLA, Executive Director, International Erosion Control Association
- Jay Lawrimore, NOAA's National Climatic Data Center
- Jesse Pritts, PE, Office of Water, US Environmental Protection Agency

1:00-5:00 Concurrent Sessions: Case Studies, Research, Programs, Outreach

Session 1: Erosion control, including Steep Terrain

Session 2: Vegetation and Stabilization Around Water

Session 1b: Policy/Regulatory Approaches

Session 2b: Advanced BMPs for Turbidity

6-8:00 pm Reception w/ vendors, raffle, heavy hors d'oeuvres

May 13

8:00 -12:00 Concurrent Sessions

CPESC Exam

Session 3: Stabilizing Slopes

Session 4: Stream and Wetland Ecology

Session 3b: Erosion and Sediment Control Case Studies

Session 4b: Stream Design

12:00 – 4:00: Box lunch and field trips to demonstration sites.

Erosion and Sediment Control Demonstrations

The North Carolina Arboretum & Mountain Stream Restoration Project

For more information and to register online, please visit:

<http://www.soil.ncsu.edu/training/training.php>



Newsletter of the North Carolina
Sedimentation Control Commission
c/o NCSU Water Quality Group
Campus Box 7637
Raleigh, NC 27695-7619

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5/6/09	Level II: Erosion & Sediment Control/Stormwater Site Management , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/	7/21/09	Level I: Erosion & Sediment Control/Stormwater Certification , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/
5/11-13/09	SE Regional IECA Erosion & Sediment Control Conference , Asheville, NC http://www.soil.ncsu.edu/training/training.php	7/22/09	Level II: Erosion & Sediment Control/Stormwater Site Management , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/
6/24/09	Level II: Erosion & Sediment Control/Stormwater Site Management , Hickory, NC http://www.bae.ncsu.edu/workshops/dot/	7/23/09	Level II: E&SC Recertification/Stormwater Site Management , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot
7/7/09	Level III-A: Design of Erosion & Sediment Control Plans , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot	8/18/09	Level I: Erosion & Sediment Control/Stormwater Certification , Hickory, NC http://www.bae.ncsu.edu/workshops/dot/
7/8/09	Level III-B: Design of Erosion & Sediment Control for Reclamation Plans , Hickory, NC http://www.bae.ncsu.edu/workshops/dot	8/19/09	Level II: Erosion & Sediment Control/Stormwater Site Management , Hickory, NC http://www.bae.ncsu.edu/workshops/dot/
7/11-15/09	Soil & Water Conservation Annual Conference , Dearborn, MI http://www.swcs.org/	8/20/09	Level II: E&SC Recertification/Stormwater Site Management , Hickory, NC http://www.bae.ncsu.edu/workshops/dot
7/16-17/09	Stormwater BMP Inspection & Maintenance Certification , Raleigh, NC http://www.bae.ncsu.edu/stormwater/	9/14-16/09	From Dust Bowl to Mud Bowl , Kansas City, MO http://www.swcs.org/en/conferences/sedimentation
7/17/09	Stormwater BMP Inspection & Maintenance UPDATE (certificate renewal) , Raleigh, NC http://www.bae.ncsu.edu/stormwater/	2/14-18/09	International Erosion Control Association (IECA) Environmental Connection , Dassel, TX. Abstracts Due May 15, 2009. http://www.ieca.org