

Sedimentation Control Commission visits Winston-Salem Region

On May 16 and 17, the North Carolina Sedimentation Control Commission (SCC) inspected the N.C. Department of Transportation's Highway 421 construction project at Deep Gap in Watauga County and four construction projects in Winston-Salem during its annual field trip.

The annual field trip gives Commissioners an opportunity to evaluate the effectiveness of the erosion and sedimentation control program and learn about problems and difficulties facing field personnel. This year's field trip also served as an orientation for new commissioners. It was hosted by Winston-Salem Regional Engineer Matthew Gantt and Assistant Regional Engineer Lindy Leonard.

DOT's Division 11 resident engineer Frank Gioscio was guide for the tour of the Highway 421 project. This eight-mile section of highway near Boone will tie into a new Blue Ridge Parkway interchange being constructed by the National Park Service. Highway construction in this mountainous area is particularly difficult because it requires huge amounts of cut and fill in watersheds that usually drain to sensitive trout waters.

Actions of the commission

At its regular meeting on the evening of May 16, the SCC heard reports on Land
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Forsyth County/ Winston-Salem Local Program mulls problem of single-family development

Jeff Kopf (right), head of the Forsyth County/Winston-Salem local erosion and sedimentation control program told the N.C. Sedimentation Control

Commission during its May visit that the major problem the program faces currently is single-family residential development. Because most single-family lots do not exceed 20,000 square feet in disturbed area, they do not have to have approved erosion and sedimentation control plans under the local ordinance.

Currently, the program responds to sedimentation problems from single-family development when there are complaints. However, Kopf said,



consideration is being given to automatic permitting with minimum erosion control measures required for single-family development.

Forsyth/Winston-Salem field inspectors are Fred Bowen (left) and Myra Stafford (center).

Single-family development is a problem for local programs in many fast-growing North Carolina towns and cities. See Tom Horstman's article about how the Town of Cary is handling the problem on page 4.

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Quality staff review of local programs. Local programs reviewed during the period February 10 to May 2 and deemed to be fully in compliance with the Sedimentation Pollution Control Act requirements are City of Greenville, City of Jacksonville, Pitt County, Guilford County, and Forsyth County/Winston-Salem. Programs found to have resource deficits or other problems were New Hanover County, City of Asheville, Watauga County, and City of Henderson. Land Quality has made recommendations to these programs to help resolve their problems, and the programs will be reviewed again to determine if problems have been solved.

In other action, the SCC approved re-activating the Commission's Technical

Advisory Committee (TAC) to reconsider a request from the N.C. Environmental Management Commission to consider tighter standards for erosion and sedimentation control in Nutrient Sensitive Waters watersheds. The TAC may also study the state's turbidity standard as it relates to erosion and sedimentation control at the same time.

The SCC also approved several education projects, including continuation of the *Sediments* newsletter, the "Muddy Water" Essay Contest, and Land Quality internships. The Commission also approved supporting local programs workshops and awards and four seminars for erosion and sediment control design professionals.

Governor appoints new members and chairman of Sedimentation Control Commission



Newly appointed commissioners Phillip Gibson (left), and Kyle Sonnenberg (right) and newly appointed chairman Kenneth H. Reckhow (center) got an up-close look at erosion and sedimentation control on construction projects in the Winston-Salem Region during the commission's annual field trip in May.

Governor James B. Hunt, Jr. has named four individuals to positions on the N.C. Sedimentation Control Commission (SCC).

Kenneth H. Reckhow has been named chairman of the SCC, replacing John Bratton, who remains on the Commission as representative of the N.C. Mining Commission. Reckhow is a professor in the Duke University

Nicholas School of the Environment and director of The UNC Water Resources Research Institute (WRI). The Sedimentation Pollution Control Act mandates that the director of WRI serve on the SCC, but the governor chooses the chairman.

Phillip Gibson of Cullowhee has been named to fill one of two seats on the commission reserved for a "nongovernmental conservationist." Gibson is natural resources program manager for Western North Carolina Tomorrow, a nonprofit organization headquartered at Western Carolina University.

Ralph Stout of Greensboro has been named to the commission as representative of the Carolinas Associated General Contractors (AGC). Stout is president of Southern Seeding Service, Inc.

Kyle Sonnenberg has been named to the commission as a representative of local government. Sonnenberg is town manager of Southern Pines.



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Send comments to Caroline Medlin, NCDENR-Land Quality, 1612 Mail Service Center, Raleigh, NC 27699-1612. Send change of address to WRI, Box 7912, North Carolina State University, Raleigh, NC 27695-7912 (919/515-2815). Fifty-six hundred copies of this newsletter were printed at a cost of \$716.76 or 13 cents per copy.

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

Richard Phillips, P.E.
Interchange Bldg, 59 Woodfin Place
Asheville, NC 28801 (828) 251-6208

William (Toby) Vinson, P.E.
225 Green Street, Suite 714
Fayetteville, NC 28301 (910) 486-1541

Doug Miller, P.E.
919 N. Main Street
 Mooresville, NC 27115 (704) 663-1699

John Holley, P.E.
3800 Barrett Drive, Suite 101
Raleigh, NC 27609 (919) 571-4700

Floyd Williams, P.G.
943 Washington Sq. Mall
Washington, NC 27889 (252) 946-6481

Dan Sams, P.E.
127 Cardinal Dr, Ext
Wilmington, NC 28405-3845 (910) 395-3900

Matt Gantt, P.E.
585 Waughtown St.
Winston-Salem, NC 27107 (336) 771-4600

Mell Nevils, P.E.
Raleigh Headquarters
512 N. Salisbury St., 1612 Mail Service Center
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 N.C. 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.

Chairman:
Kenneth H. Reckhow
Durham

Director of Water Resources Research Institute

Commissioners:

Daniel V. Besse
Winston-Salem
Rep. N.C. Environmental Management
Commission

John R. Bratton
Knightdale
Rep. N.C. Mining Commission

Donnie W. Brewer
Greenville
Rep. Professional Engineers of N.C.

James Ferguson
Clyde
Rep. N.C. Soil and Water Conservation
Commission

Phillip Ray Gibson
Cullowhee
Non-governmental conservation representative

J. Wendell Gilliam
Raleigh
Rep. NCSU Dept. of Soil Science

Ray B. Killough
Matthews
Rep. N.C. public utilities

Kyle Sonnenberg
Southern Pines
Rep. Association of County Commissioners/
N.C. League of Municipalities

Ralph Stout
Greensboro
Rep. Carolinas Associated General Contractors

F. Roger Watson
Asheville
Rep. N.C. Home Builders Association

Muddy Water Essay
Contest Winner

Kathleen Haver (left), a student at Southwest Guilford High School, is the state winner of the 2000 Muddy Water Essay Contest. With Kathleen is her teacher, Flo Gullickson. Kathleen, her teacher, and Southwest Guilford High School each received \$1000 as a result of her winning essay.

The second place winner, Carmen Deese of Purnell Swett High School in Pembroke, her teacher, and school received \$500 each. Third place winner, Rachel Douglass of Wake Forest-Rolesville High School in Wake County, her teacher, and school received \$250 each.

Students in any charter, public, or private high school or equivalent program in North Carolina are eligible to submit an essay to the Muddy Water Essay Contest. Materials for the 2001 contest will be distributed this winter. For information contact Caroline Medlin, Sedimentation Education Specialist, with the N.C. Land Quality Section at (919) 733-4574.



Check for changes to
water quality certifications

Section 401 of the Clean Water Act delegates authority to the states to issue a 401 Water Quality Certification for all projects that require a Federal Permit (such as a Section 404 Permit). The "401" is essentially a verification by the state that a given project will not degrade Waters of the State or otherwise violate water quality standards.

Anyone who plans construction activities that may affect streams or wetlands should be aware that the N.C. Division of Water Quality's Wetlands/401 Certification Unit has revised or is in the process of revising many Water Quality General Certifications required under Section 401 of the Clean Water Act.

- New conditions have been added to all General Certifications which require written notification of completion of projects.
- New conditions have been added for development in the Neuse and Tar-Pamlico River basins.
- New certifications have been issued for stream restoration, streambank

stabilization and wetland restoration that, in general, require only written notification and compliance with conditions—no fee or written concurrence from DWQ.

- New conditions have been added, or have been proposed, to General Certifications for many Corps of Engineers' Nationwide Permits and new and/or revised General Certifications have been issued or proposed in response to COE's new and revised Nationwide Permits.
- General Certification for the Wilmington District's new Regional General Permit for publicly funded transportation improvements has also been issued.

For details on requirements for all 401 Water Quality Certifications, or information on the status of General Certification revisions, visit the Wetlands/401 Certification Unit website at: <http://h2o.enr.state.nc.us/NDbranch/wetland/regcert.html> or call 401 Program Coordinator Cyndi Bell at (919) 733-9721.

Addressing single-family home sedimentation problems

by Tom Horstman, Erosion Control Supervisor, Town of Cary

Local sedimentation programs are charged with controlling accelerated erosion from construction sites in their jurisdictions. Most local sedimentation programs have responsibilities other than controlling accelerated erosion. One of the biggest challenges is the impact that single family home construction has on existing citizens. Mud on the street and sediment damage to adjacent property is a constant battle. In some local programs, 40% of the Notice of Violations related to sedimentation are a result of single-family home construction. To compound matters, many single-family home sites are well below the disturbed area that would require erosion control review and permitting. In many municipalities, the single-family home construction is one item that has fallen through the cracks of the Erosion & Sediment Control Programs. For many years the Town of Cary was faced with the same problem and addressed these citizen complaints as they were received.

The Town of Cary strives for quality customer service, and our primary customers are the Town of Cary citizens. In an effort to be proactive and better serve its citizens, the Town of Cary has implemented a process to address single-family homes from an erosion and sediment control standpoint. The solution to our problem was a cumulative effort by a Focus Group consisting of the Town of Cary, the Raleigh/Wake County Home Builders Association, one large tract builder, and an assortment of individual single-family home builders.

One of the first points agreed upon by the Focus Group was that sediment escaping single-family home sites created a problem for everyone. Another point was that the solution, whatever it would be, would add more to the cost of a new home. Everyone agreed that this was a cost that needed to be added. After some discussion, it was evident that the

solution to this problem was to simply install silt fencing sufficient to keep sediment on the site, and to add a construction entrance to help keep sediment from being tracked off the lot. Many builders were taking the responsibility for erecting silt fencing to keep sediment on their site, but many others would ignore the situation until they were notified of the problem.

The first item to address in implementing requirements for single-family home construction was an education program to alert builders to the new requirements and inform them about proper installation of the BMPs. To address the need for education, the Cary Sedimentation/Erosion Control Program handed out information relative to these changes for the month preceding kickoff of this program. This information consisted of details showing placement of silt fencing, placement of construction entrances, and proper installation of silt fencing on particular lots based on topography. The Raleigh/Wake County Home Builders Association did its part by educating members at functions it held. Through this combined effort, the builders in the Town of Cary were made aware of the new requirements.

The Sedimentation/Erosion Control section works closely with the Inspections & Permits Division when issuing building permits for single-family homes. The simple solution was to add an erosion control slot to the building inspection card. In this manner, the Erosion Control Officer can check the site before the footing inspection is performed. The builder is required to contact the Town of Cary to schedule an erosion control inspection before any of the trade inspections are performed. In this manner the site starts out well protected. Initially this inspection consumes a lot of time of the Erosion Control Officers, but in the long run, it



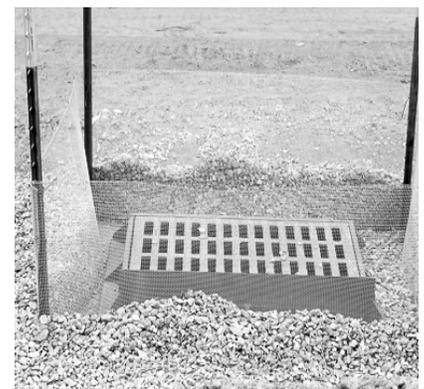
saves time by addressing potential complaints before they occur.

In conclusion, this new initiative was

definitely a team effort to solve a problem that had plagued all parties involved. Did we eliminate all complaints relative to off-site sediment problems on single-family homes? Absolutely not! We still receive inquiries about certain situations. However, the number of these inquiries has slowed significantly, and the education process has made builders more aware of their responsibilities. Single-family home construction, and the complaints that are generated by this construction, can totally occupy a local sedimentation program. Through cooperation with local builders and the Home Builders Association, this problem can be brought to a more manageable level. I would urge all local programs to consider a similar process to help solve this problem.

If you have questions, please contact Tom Horstman, Erosion Control Supervisor, Town of Cary, 919-469-4347.

Technology Tip



The North Carolina Department of Transportation's Roadside Environmental Unit discovered that the conventional inlet protector BMP can be improved by replacing the silt fence perimeter guard with a wire cage. The wire cage is sturdy and rigid and doesn't get weighed down by runoff and sediment like silt fence can.

Factors to consider before buying mountain property

Breathtaking views and peace and quiet lure many people into buying property in Western North Carolina. However, if property buyers don't take the time to examine the environmental considerations when buying or building a home on rugged mountain terrain, they may end up spending thousands of dollars and suffer many hardships.

For instance, according to Phillip Gibson, natural resources program manager for Western North Carolina Tomorrow "Most homeowners or landowners are not aware, that by law, they are responsible for keeping soil from eroding off of their land."

To help potential buyers with some of the complications that may arise when buying mountain property, Western North Carolina Tomorrow, a nonprofit citizen leadership organization that addresses regional issues, has published a booklet, titled *A Mountain Home Guide: Buying Mountain Property, Building a Mountain Home, Nine Factors to Consider*.

In addition to the sediment issue, Gibson says the 26-page booklet outlines nine important factors homebuyers or developers need to consider:

- **Site stability** – the ability of the land to adequately support a house.
- **Sewage disposal** – the proper and safe disposal of household sewage.
- **Drinking water** – sufficient quantity and high quality drinking water for your home.
- **Slope** – shallow bedrock and high erosion rates that commonly exist on steeply sloping land complicate building-site preparation.
- **Access** – legal access in and out of your property to a state-maintained road; a properly planned and constructed access road.
- **Flood plains** – whether or not the property is subject to flooding.
- **Stewardship of the land** – how you

maintain your land can benefit you in the future; a well-landscaped homesite is attractive and prevents erosion.

- **Solar energy potential** – the orientation and exposure of a house to the sun partially determines ease and expense of heating.
- **Mineral rights** – who owns the mineral rights to the property?

Funding for the development of the Mountain Home Guide was provided by Z. Smith Reynolds Foundation, Inc.

Copies of the booklet are available at Western North Carolina Tomorrow's website, <http://www.wnct.org>.

The booklet is also available by contacting WNCT at P.O. Box 222, Cullowhee, NC, 28723, or by calling Phillip Gibson or Betty Dishman at 828-227-7492 or 1-800-621-0008. A donation of \$2.00 is suggested to cover the cost of the booklet.

Land Quality personnel changes

Ahmad Al-Sharawneh has been promoted from Environmental Technician to Assistant Regional Engineer in the Raleigh Region.

Jason Watkins has joined the Winston-Salem Region as Environmental Technician.

Al Scoggins is the new Environmental Technician in the Fayetteville Region.

Ryan Nesbitt and **Jim Propst** are new Environmental Technicians in the Mooresville Region.

Richard Peed has been promoted from Environmental Technician to Assistant Regional Engineer in the Washington Region.

Kris Riddle and **Allison Davidson** are new Environmental Technicians in the Asheville Region.

Environmental technology evaluation center established

The Civil Engineering Research Foundation has established the Environmental Technology Evaluation Center (EvTEC) to accelerate the adoption of environmental technologies into practice. EvTEC was initiated through a cooperative agreement with the U.S. Environmental Protection Agency (EPA).

A technology developer or owner may go directly to EvTEC and request an evaluation. A government agency may refer an applicant to EvTEC to gain additional information required for a purchase or regulatory decision. A government agency may seek help from EvTEC in identifying technologies that solve a specific problem.

In the erosion and sedimentation control area, EvTEC is currently evaluating the Tommy Silt Fence Machine.

The Tommy Silt Fence Machine, in use in 25 states, slices through soil while simultaneously inserting silt fence, without displacing the soil. By only slightly disrupting the soil during fence installation, the Tommy creates optimal soil conditions for compaction without losing moisture. Compacting the soil prevents runoff water from saturating the soil next to the fabric, thus eliminating washouts under the fence, one of the major problems with traditional silt fence installation.

An evaluation plan for this product has been finalized. The evaluation will compare and document the efficacy of trenching and slicing methods of installing a silt fence. The evaluation consultant is Sprague & Sprague Consulting Engineers, and EvTEC is actively seeking cost proposals from testing organizations.

For more information on EvTEC and the Tommy Silt Fence Machine evaluation visit website: <http://www.cerf.org/evtec/index.htm>.

**Erosion and Sedimentation
Control Resources
available from
the N.C. Land Quality Section**

■ **North Carolina Erosion and Sediment Control Planning and Design Manual.** A complete design manual which will enhance your productivity and allow you to comply easily with the regulations established by the N.C. Sedimentation Control Commission. \$65 in-state/ \$75 out-of-state

■ **North Carolina Erosion and Sediment Control Field Manual.** A complement to the larger design manual intended as a field reference in the construction process. \$20.

To order send letter and check or money order payable to N.C. Department of Environment and Natural Resources
Land Quality Section
1612 Mail Service Center
Raleigh, NC 27699-1612

**N.C. Sedimentation Control Commission
Fall 2000
Erosion and Sedimentation
Control Design Seminars**

**September 14-15, 2000
Holiday Inn Select, Hickory**

**October 24-25, 2000
Sheraton, New Bern**

Registration fee: \$100

These workshops are presented to familiarize design professionals with N.C. erosion and sediment control requirements, recent changes to the Sedimentation Pollution Control Act and administrative rules, design applications, and case studies. PDH's will be available to licensed professionals.

Put these workshops on your calendar and look for brochure to be mailed about one month prior to the workshop dates.

SEDIMENTS

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c/o Water Resources Research Institute
of The University of North Carolina
Box 7912, North Carolina State University
Raleigh, NC 27695-7912

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