

SEDIMENTS

Newsletter of the North Carolina Sedimentation Control Commission

Citizen Complaints for Sedimentation Problems Lead to the Implementation of Muddy Water Watch Citizen Patrols

By Dean Naujoks, Upper Neuse Riverkeeper
Neuse River Foundation, Raleigh, NC

On November 13 2007, an orientation workshop was held for a new project called Muddy Water Watch (MWW) Citizen Patrols at the Brier Creek Community Center in Raleigh NC. Community members showed up to learn more about how citizens could help stem the tide of sediment pollution that is affecting North Carolina rivers, streams and drinking water supplies. An unprecedented construction boom across the state has contributed to erosion and sediment runoff from construction sites. According to EPA region IV and the NC Department of Environment and Natural Resources, they receive more complaints about sediment than any other environmental concern. However, citizens are often uninformed when it comes to properly identifying problem sites and how to report potential sedimentation violations.

MWW is a state-wide initiative that involves all seven North Carolina Riverkeepers: the Upper and Lower Neuse Riverkeepers, the French Broad Riverkeeper, the New Riverkeeper, the Cape Fear Riverkeeper, the Pamlico-Tar Riverkeeper, and the Catawba Riverkeeper. The project is aimed at training citizens to properly identify erosion and sedimentation violations and poorly maintained Best Management Practices (BMP's) on construction sites to improve compliance with the North Carolina Sedimentation Pollution Control Act of 1973 and the Federal Clean Water Act. MWW has been modeled after a previous program called Get-the-Dirt-Out, which was started by the Upper Chattahoochee Riverkeeper in Atlanta, Georgia. MWW

has been expanded by providing on-going trainings to a core group of volunteers who are dedicated to thoroughly learning state regulations and how to effectively monitor active construction sites. The Neuse River Foundation (NRF) and Upper Neuse Riverkeeper, Dean Naujoks, are organizing this project, which will involve the Southern Environmental Law Center, Conservation Council of NC, NC Riverkeepers and more than 200 citizen volunteers across the state over the next two years.



photo by Skip Metheny

The Neuse River Foundation has been working on implementing the MWW project for the last two years. After receiving countless calls from citizens reporting muddy streams (often days after problems occurred), the NRF realized a statewide effort involving well trained citizens was needed to improve maintenance and overall compliance on NC construction sites. The lack of Erosion and Sediment Control inspectors in North Carolina is taking its toll on how construction sites are being maintained. Sediment is the # 1 water pollution problem in the state.

Educating and training volunteers will help to alleviate some of the burden placed on inspectors by properly identifying problem sites and reporting the information in a timely manner to the appropriate regulatory agency. Citizens trained under the MWW program will also insure credible violations are being reported to local inspectors. The ultimate goal of the project is to encourage routine maintenance to keep

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

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



photo by Jerry Markatos

“When things get so far wrong as to attract their notice, the citizens, when well informed, can be relied upon to set them right.”

Thomas Jefferson



sediment out of NC waterways. A Muddy Water Watch website (www.muddywaterwatch.org) has been created so that citizens outside the scope of the project can use the training materials and information provided on the website.

When the other NC Riverkeepers responded enthusiastically for supporting the project and agreed that keeping sediment out of the rivers in their river basins was an issue that has made little headway, Muddy Water Watch began to blossom. Amy Pickle, staff attorney from Southern Environmental Law Center, volunteered her services by putting together two crucial parts of the MWW training manual pertaining to permitting and enforcement. These sections will be the guidelines that citizens will use to understand regulatory requirements for controlling construction stormwater runoff. As part of the MWW project, Robin Smith, with the Conservation Council of NC, will be contacting locally delegated erosion and sedimentation control programs to participate in a statewide survey. The goals of the survey are to raise awareness of local program needs and facilitate an information exchange between local programs across the state to identify training and staffing needs. This information, as well as information collected from citizens (see “Evaluating a Site” on the website), will be used in a final report to the NC Department of Environment and Natural Resources.

In the wake of an unprecedented construction boom, controlling polluted runoff is absolutely critical to protecting the long term health of North Carolina’s water resources. As with most issues, direct citizen involvement and education often play a crucial role in working towards a collective paradigm change. We hope Muddy Water Watch Citizen Patrols will be a catalyst for that change. For more information please go to www.muddywaterwatch.org.

Do You Prepare Erosion and Sediment Control Plans?

Tell Us About Your Experiences

If you prepare and submit erosion and sediment control plans in North Carolina, please help us with a survey designed to gather feedback on the review and approval process as you have experienced it. The Land Quality Section is working with PENC, ACEC, and other groups to improve the quality of permit application packages and to expedite the review and approval of plans. As a first step, we are asking for your perspective on the overall process.

This is your chance to weigh in on problems or issues that you have had with designing and submitting plans to NC DENR or local erosion and sediment control programs. There are only 9 questions to our survey, including areas for you to write comments directly to us. Please take the time to fill out the survey so that we can have as much feedback as possible as we move forward to improve the process for everyone. The survey may be found at:

http://www.surveymonkey.com/s.aspx?sm=iUfMHMPKHScb7GNXfp2V6g_3d_3d

Personnel Changes

- Aaron Brown is a new Environmental Specialist in the Mooresville Regional Office.
- Gregory Ditzler is a new Environmental Specialist in the Mooresville Regional Office.
- Eric Matuszewski is a new Environmental Specialist in the Fayetteville Regional Office.
- Laura Herbert has been promoted to the Environmental Engineer II (express permitting) position in the Asheville Regional Office.



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 Ashley Rodgers, NCDENR-Land Quality, 1612 Mail Service Center, Raleigh, NC 27699-1612. Email: Ashley.Rodgers@ncmail.net. Send change of address and subscription information to NCSU Water Quality Group, NCSU Box 7637, Raleigh, NC 27695-7637; (919) 515-3723; cathy_smith@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:

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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:

Kyle Sonnenburg
Fayetteville
NC League of Municipalities

Vice 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

John William Miller, Jr.
Burnsville
NC Mining Commission

Joseph H. Kleiss
Raleigh
NC State University, Dept. of Soil Science

Grover McPherson
Winston-Salem
NC Soil and Water Conservation Commission

David H. Moreau
Raleigh
Water Resources Research Institute of
The University of North Carolina

Joseph Rudek
Raleigh
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

Wake Forest Local Program Workshop

Holly Spring, Town of Wake Forest

The Town of Wake Forest erosion and sediment control program has put a great deal of emphasis on education – for engineers, developers, contractors, and the public – as part of a proactive effort to prevent the damage that can occur from accelerated erosion on construction sites. Most recently, on August 31, the Town of Wake Forest held a full day erosion and sediment control workshop at the Ledford Center on the South Eastern Baptist Theological Campus where a new building, Patterson Hall, is under construction. The purpose of this workshop was to update the building community about the new local erosion and sediment control program that started in 2006. This was the second local workshop held by Wake Forest and had approximately 70 designers, contractors, developers and regulators in attendance.

The town received delegation as a local erosion and sediment control program from NCDENR Division of Land Resources in July 2006. Previously, the Town of Wake Forest had been under the jurisdiction of Wake County's local program. The Town Ordinance is stricter than that of the County, lowering the land disturbing permit requirement from 1.0 acre to 0.50 acre. Provisions for single family lot regulations with silt fence on the low side(s), a construction entrance on every lot, and a mud tracking policy are also included in the ordinance.

Prior to delegation, the entire engineering staff attended erosion and sedimentation control workshops, NCDOT erosion training, and other local program events to get ahead on the learning curve and hit the ground running. Before that time the construction inspectors had been dealing with



One of the basins on the site of construction for Patterson Hall at the South Eastern Baptist Theological Campus in Wake Forest, NC.

water and sewer inspections that had recently merged with Raleigh. Wake Forest staff are also in the process of obtaining CPESC (Certified Professional in Erosion and Sediment Control) certifications.

Topics discussed at the August workshop included the basics of the erosion process, local regulations, updates to state regulations, seeding/types of ground cover, proper installation of erosion control measures, NOV's and inspections, NPDES general stormwater permits, job phasing and the many pictures taken from the first year of regulation. Jay Wilson, from the City of Charlotte's erosion and sediment control program, spoke about designing erosion controls for a project on a case by case basis, identifying critical areas, and basin design/layout. Jan Patterson of NCSU's Biological and Agricultural Engineering Department was also on hand to talk about specific erosion control measures, hardware cloth outlets, silt fence installation, inlet protection, check dams, seeding, maintenance, and construction entrances. Both Jay and Jan did an outstanding job and showed great pictures explaining how to increase the effectiveness of erosion control plans and measures. Several suppliers from Ikex, Ferguson, ACF, Erosion Supply, and Kelly's Erosion had booths set up during the workshop to talk about products and new measures that can be used for erosion and sediment control.

In the afternoon, participants took a field tour of the Patterson Hall construction site. Kristi Anspach with Eco Turf led the site tour and a discussion of the basins onsite, silt fence locations, NPDES requirements and inspections, and the large construction entrance. This was a great opportunity for everyone to see an active jobsite and ask questions in an informal setting.

In addition to this workshop, the Town of Wake Forest also has held single family lot workshops and recently led a field tour to help train North Carolina Riverkeepers for their new Muddy Water Watch citizen inspection program. The Town will be holding education on the new Phase II regulations in the future and also hosting a best management practice (BMP) inspector training workshop on December 10th through NCSU's Biological and Agricultural Engineering Department.

For more information on the Town of Wake Forest's erosion and sediment control program, please visit:

http://www.ci.wake-forest.nc.us/residents/engineering_erosionandsedimentcontrol.aspx

You can also view a video segment from the local TV channel 10 called "Focus on Wake Forest" that includes some video from the workshop. It's the second session of this segment which is directed to the general community.

http://www.wakeforestnc.gov/focuson-wakeforest_october2007.aspx



Notice to All Current Owners of the North Carolina Erosion and Sediment Control Field Manual

Revisions are currently underway for the Field Manual, a companion resource to the larger Planning and Design Manual. These updates are intended to reflect the latest standards and specifications incorporated into the Planning and Design Manual in June of 2006. All current owners of the Field Manual will receive a revision packet at no charge. However, to ensure that you receive your revisions in a timely manner, please send the following information to Ashley.Rodgers@ncmail.net:

- Name
- Current address
- Number of manuals owned
- Manual number(s), located on the title page

If you have any questions, please call our office at (919) 733-4574.

In Memoriam: Herbert Rooney Malcom, Jr., Ph.D.

Herbert Rooney Malcom, Jr., who was one of the pioneers for erosion and sedimentation control and stormwater management engineering instruction at North Carolina State University (NCSU), passed away on September 1, 2007. Dr. Malcom's knowledge and practical approaches to his subject matter made him a greatly respected member of both the academic and engineering communities. His passion for teaching and his caring nature made him well loved by his students, many of whom went on to specialize in those fields.

Dr. Malcom was born in Greensboro, NC to Edna Alligood and Herbert Rooney Malcom on January 24, 1936. He graduated from North Carolina State College with his bachelor's degree in Civil Engineering in 1963. After also receiving a master's degree, Malcom was awarded his PhD from N.C. State in 1973. He retired from teaching as Professor Emeritus in 2004, after touching the lives of over 9,000 students during his 31 years as a faculty member at North Carolina State University.

Dr. Malcom was among the first to teach urban hydrology and incorporate it into university curriculums, bringing the approach to a civil engineering program rather than an agricultural program. He was also one of the first to approach sedimentation basin design scientifically, developing an efficiency-based design for basins. During the infancy and early development of North Carolina's Erosion and Sedimentation Control Program, Dr. Malcom was the "go-to" guy and elevated the standards for design with his scientific approach to problems in the field. His work helped to lay the foundation for the direction in which the program has developed over the past decades.

As a professor, Dr. Malcom was always approachable. Students and professionals alike flocked to his courses and workshops because he was a great teacher. According to Jim Simons, Director of the Division of Land Resources of DENR, if you were to go down a roster of the students taught by Dr. Malcom over his career, there would be many names that you would recognize – including heads of firms and individuals high in the ranks of government agencies. Mr. Simons summed it up best when he declared that Dr. Malcom was a "student's professor, and because of that, he helped launch many careers of people who have made significant contributions to the fields of stormwater and sediment control."

Dr. Malcom once said, "My purpose has always been to serve; to prepare engineers for the first four years of practice and to serve the stormwater management needs of the people." With his dedication to teaching and research, H. Rooney Malcom, Jr. has served his students well, and an entire state has benefited from his caring and passion for stormwater management. He will be greatly missed by all of us fortunate enough to have known him.



News from the Land Quality Section

Upcoming Workshops

Each year, the Sedimentation Control Commission, in conjunction with the Land Quality Section and the Water Resources Research Institute, sponsors a series of workshops for design professionals. These workshops are intended to provide updates to the Sedimentation Pollution Control Act, current design guidelines, and new technologies for controlling erosion and sedimentation. The fall workshops for design professionals were very successful and well attended. A total of approximately 275 individuals were in attendance at two workshops held in Greenville and Hickory, NC.

If you missed out on the fall workshops, two workshops for the spring have also been scheduled:

March 11-12, 2008
Hilton Wilmington Riverside
Wilmington, NC

April 9-10, 2008
Holiday Inn Select, Hickory, NC

Professional engineers and land surveyors may earn 12 PDHs and landscape architects may receive 10 continuing education credits for completion of both days.

Agendas and registration information may be found online at:

<http://www.ncsu.edu/wrri/erosionworkshops.html>

Contractor Training Materials

A set of presentation materials designed to train contractors in erosion and sediment control, has been completed. Topics of the training include an introduction to the Sedimentation Pollution Control Act, overviews of basic erosion and sediment control best management practices, working around a stream, NPDES requirements, and many more! To speak with someone about using these materials for a training session, please contact the Central Office at (919) 733-4574.

To report possible violations of the NC Sedimentation Pollution Control Act, call

1-866-STOPMUD
786-7683

NC Sedimentation Control Commission: November Actions

At its meeting on November 15, 2007, the NC Sedimentation Control Commission (SCC) took the following actions:

- Approved the continued delegation of local program authority for the Town of Lake Lure.
- Approved the continued delegation of local program authority for Cabarrus County, conditioned upon the recommendations to: ensure practices are designed to the revised standards in the Erosion and Sediment Control Planning and Design Manual, improve the inspection report, and increase inspection of all sites.
- Approved the continued delegation of local program authority for the Town of Cary.
- Approved the continued delegation of local program authority for the City of Newton.
- Placed Rowan County on six months of probationary status and requested a follow-up review in 6 months. Rowan County was asked to address and improve the reporting of water quality violations and the enforcement of Sedimentation Pollution Control Act. Also, requested that the assessments of civil penalties should be placed under a non-political body (e.g., County staff).
- Approved the proposal recommended by Sedimentation Education Committee (SEC) to support the continuing research on “Field Evaluation of Mulches for Establishing Vegetation on Steep Slopes” by Dr. Richard A. McLaughlin (\$7,156).
- Set the 2008 Sedimentation Control Commission meeting dates:
 - Wednesday, February 20
 - Wednesday, May 28
 - Thursday, August 21
 - Thursday, November 20 (field tour on November 19)
- Requested the Technical Advisory Committee (TAC) re-evaluate the proposed Draft Rule regarding self-inspection requirements and submit their recommendations at the February '08 SCC meeting.

- Requested the Technical Advisory Committee (TAC) evaluate the progress towards meeting the recommendations of the Work Groups that were established by the SCC in 1997. Although a large portion of the recommendations have been accomplished, the TAC was also asked to offer suggestions to help enhance the SCC's ability to further meet these recommendations.

Supporting documents for these actions may be found online at <http://dlr.enr.state.nc.us/scc.html>.

Muddy Water Blues Memphis TN 2007

Melanie Markusic, NC State University

From September 25th thru 27th, 2007 I had the privilege of attending Tennessee's annual Muddy Water Blues conference which was held in Memphis, TN. It was hosted by a myriad of organizations including the South East Chapter of the International Erosion Control Association (IECA). The goal of the meeting was to provide classroom training and a hands-on field day to those who attended. The event was packed full of information regarding the latest Tennessee regulatory updates as well as technical sessions introducing us to new technologies and strategies for storm water management.

Tuesday September 25th I was able to become certified by Tennessee's Department of Environment and Conservation (TDEC) for their Level I certification program. This was entitled “Fundamentals of Erosion Prevention and Sediment Control for Construction Sites”.

This course is required by the TN Construction General Permit (CGP), which is the permit regulating construction sites disturbing 1 acre or more. The CGP requires that qualified personnel inspect all construction sites and defines qualified personnel as those who have successfully completed the Level I course.

TDEC also provides training for designers through the TDEC Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites. This is a two-day, voluntary training course. Designers do not have to be certified through this

course in order to design erosion and sediment control plans in TN.

Wednesday September 26th consisted of two separate technical sessions; the Stormwater track and the Erosion and Sediment Control track. The event was packed full of information regarding the latest Tennessee regulatory updates as well as technical sessions introducing us to new technologies and strategies for storm water management. North Carolina State University's very own Dr. Rich McLaughlin was in attendance and gave a talk on polyacrylamides and their use in sediment and erosion control in North Carolina.

Thursday September 27th was a very informal and informative morning full of vendor displays and installation techniques including every opportunity to see, touch, and feel many of the available erosion and sediment control products.

What a great time to talk to other professionals in the industry including those from other regions of the state and other states all together.

Field Day Demonstrations



A demonstration of hydroseeding as an application of mulch used for ground cover.



Turf reinforcement matting displayed here along with different types of diversions, including triangular silt dikes, straw wattles, and coir wattles.



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

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Calendar of Events

12/11/07	Erosion and Sedimentation Control Plans – Preparation and Submittal , Raleigh, NC http://www.penc.org/getdoc/6c4be4d3-47ca-4b6a-9bac-7698a4df147f/Professional-Development.aspx	2/20/08	Level III-A: Design of Erosion & Sediment Control Plans , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/
12/11/07	Polymer Enhancement of Erosion & Turbidity Control on Construction Sites , Raleigh, NC http://www.soil.ncsu.edu/swetc/sediment2/2007/poly2/poly.htm	2/21/08	Level III-B: Design of Erosion & Sediment Control for Reclamation Plans , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/
1/16/08	Level III-A: Design of Erosion & Sediment Control Plans , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/	3/11-12/08	WRI Erosion and Sedimentation Control Workshop , Wilmington, NC http://www.ncsu.edu/wri/erosionworkshops.html
1/17/08	Level III-B: Design of Erosion & Sediment Control for Reclamation Plans , Raleigh, NC http://www.bae.ncsu.edu/workshops/dot/	4/2/08	Sediment and Erosion Control Workshop , NC http://www.soil.ncsu.edu/swetc/sediment2/2007/main2.htm
1/29-30/08	Local Programs Erosion and Sediment Control Workshop , Southern Pines, NC	4/9-10/08	WRI Erosion and Sedimentation Control Workshop , Hickory, NC http://www.ncsu.edu/wri/erosionworkshops.html
2/18-21/08	EC08 - IECA's Environmental Connection Coronado Springs Resort, Orlando, FL http://www.ieca.org/applications/calendar.asp?eventID=301		