



STATE OF NORTH CAROLINA, DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
Bill Holman, Secretary

Land Quality Section  
Division of Land Resources  
Charles H. Gardner, Director

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## NPDES Storm Water Phase II and the N.C. Erosion and Sediment Control Program: What's the relationship?

Phase II of the NPDES stormwater program requires NPDES permits for construction activities disturbing 1 or more acres of land area.

Phase II also requires regulated small local governments, called municipal separate storm sewer systems or MS4s, to be permitted and to implement a comprehensive stormwater management program. One component of this program is to control stormwater runoff from construction activities disturbing one or more acres of land.

There may be confusion about the interaction between the NPDES Storm Water Program for Construction Activity and the construction runoff control program to be implemented by NPDES-regulated MS4s. These are separate and distinct program requirements under the Phase II regulations. As the NPDES permitting authority in North Carolina, the N.C. Division of Water Quality will issue permits to construction site operators for construction activities statewide, while NPDES-regulated local governments will be responsible for establishing construction site runoff controls within their jurisdictions. If a construction site is located within the boundaries of a local government regulated under the NPDES stormwater program, that site may be subject to both programs.

Both programs are required under the Clean Water Act's National Pollutant

Discharge Elimination System (NPDES) program. Under the programs, affected municipalities and all construction activities disturbing more than one acre must apply for permit coverage by March 2003.

To compound the confusion, the N.C. Division of Water Quality may reference a "qualifying local program," for Phase II permit compliance. The N.C. Erosion and Sediment Control Program and any delegated local programs are potential "qualifying local programs." To be considered a qualifying local program for purposes of the Construction General Permit, the program must require construction site operations to:

- implement appropriate erosion and sediment control BMPs;
- control construction waste, chemicals, litter and sanitary waste at the site;
- submit a site plan for review that incorporates consideration of potential water quality impacts; and

- develop and implement a stormwater pollution prevention plan.

According to EPA guidance, if a state or local program contains some but not all of these elements, the State can still reference the qualifying program in the permit provided it also lists the missing elements as additional permit conditions.

To be considered a qualifying local program for purposes of the Small MS4 Permit, the program must do the following:

- apply an ordinance or other regulation requiring the operator of the construction site to put into place proper erosion and sediment controls and controls for various kinds of construction waste;
- apply procedures for review of site plans that consider potential water quality impacts;

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- apply procedures for site inspection and enforcement of control measures;
- state sanctions that will be applied to ensure compliance;
- establish procedures whereby the public may provide information to be considered in implementing/enforcing the permit;
- include a description of appropriate best management practices and state “measurable goals” by which permit compliance and program effectiveness will be gauged.

According to EPA guidance, the provision allowing permitting authorities to reference other programs has “no impact on or direct relation to the small MS4 operator’s responsibilities under the construction site runoff control minimum measure.” Even if a “qualifying local program” is referenced in the MS4 permit, the municipality remains responsible for implementing the Phase II requirements through compliance with the qualifying local program.

In October, the N.C. Division of Water Quality held a workshop to discuss Phase II construction site runoff requirements and the many related issues that the state and local governments will face in implementing the Phase II NPDES program. Following are some of the issues and questions raised during that workshop. These and many other issues will continue to be discussed as DWQ develops the NPDES Phase II implementation policy.

- Can the N.C. Erosion and Sediment Control Program and delegated local programs be considered “qualifying programs” under Phase II? If not, should the state model ordinance and local ordinances be revised to include all phase II requirements?
- Can Small MS4 municipalities meet the Phase II construction site minimum measure simply by passing ordinances requiring compliance with the State program within their jurisdictions and relying on the State

to implement and enforce construction site runoff controls?

- If a local government relies on the State Erosion and Sedimentation Control Program to enforce Phase II construction site runoff requirements within its jurisdiction and ineffective enforcement leads to a Clean Water Act citizen suit, who is responsible? The municipality, not the State Erosion and Sediment Control Program, will be the NPDES permittee. Only NPDES permittees can be held responsible for permit enforcement.
- Under Phase II, affected municipalities must report on progress toward measurable goals under the construction site runoff control program. If the State is implementing the program, how can municipalities comply with this reporting requirement?

The current draft NPDES Storm Water Phase I General Permit for Construction Activities disturbing 5 or more acres is posted on the DWQ website at: [http://h2o.enr.state.nc.us/su/NPDES\\_GP\\_Construction.htm](http://h2o.enr.state.nc.us/su/NPDES_GP_Construction.htm). The Phase II General Permit for Construction Activities will likely be a revision of this Phase I permit. To provide input on the draft General Permit or participate in the DWQ NPDES Phase II implementation policy workshops, contact the N.C. Division of Water Quality’s Stormwater and General Permits Unit at (919) 733-5083 or e-mail [stormwater@ncmail.net](mailto:stormwater@ncmail.net). Information on Phase II stormwater programs can be accessed at the DWQ web site shown above.

As the MS4 program is developed, the N.C. League of Municipalities will be developing an interactive CD program to help Small MS4s complete Phase II permit applications. Three half-day on-site training programs will be provided with the CD-based program when it becomes available. An introductory CD is available now. Contact Paula Thomas at (919) 715-4000.



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Send comments to Caroline Medlin, NCDENR-Land Quality, 1612 Mail Service Center, Raleigh, NC 27699-1612. Email: [Caroline.Medlin@ncmail.net](mailto:Caroline.Medlin@ncmail.net). Send change of address to WRRI, 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 \$915.84 or 16 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

Bill Noyes, 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.

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Director of Water Resources Research Institute

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

## Reports in on risk assessment pilot program

At the November meeting of the SCC, Land Quality staff reported on a pilot program to test a method for assessing how likely it is that off-site sedimentation or other resource damage may occur at a particular construction site.

The Erosion and Sedimentation Risk Assessment Method was developed by a technical work group chaired by Russell Briggs as part of the SCC's Plan of Action for strengthening the Erosion and Sedimentation Control Program. It was conceived as a planning tool to help developers make decisions up front about whether or not to develop particular sites in particular ways. It is a process in which the developer (1) rates the vulnerability of a site to erosion using a rating sheet, (2) rates the effectiveness of conservation measures planned for the site using a rating sheet, and (3) combines the two ratings to arrive at a risk factor. A "high" risk factor should signal to a developer that putting a particular development on a particular site will require a larger investment in erosion, sedimentation and storm water controls in order to avoid violations of regulations and natural resource damages.

The method is also viewed by Land Quality as a way whereby plan reviewers can gauge risk and prioritize sites for inspection.

The method was evaluated by Richard Phillips, P.E., Regional Engineer in Asheville; John Holley, P.E., Regional Engineer in Raleigh; and Pat McClain, P.E., Assistant Regional Engineer in Washington. Beginning in July 1999, they selected projects from various counties within their regions. For each project, they estimated the risk as high, medium or low based on their overall judgment. Then they used the Risk Assessment form to assign numerical values to each vulnerability factor and

each conservation factor and to calculate a weighted risk factor.

Each of the engineers found that the vulnerability part of the form predicted about the same risk they estimated using best professional judgment.

However, the engineers found that the method gives too much weight to conservation factors and that the vast majority of weighted risk factors arrived at by using the form were too low. From the standpoint of plan review engineers, use of the method does not enhance professional judgment.

The reviewing engineers made the following comments and suggestions:

- Using the method to calculate risk before an erosion and sedimentation control plan for a project has been approved is meaningless since conservation factors are actually unknown.
- The effectiveness of conservation factors depends upon maintenance, which is not a factor in the method.
- The size of the site should be weighted more heavily.
- Distance from the regional office to the site should be a vulnerability factor since the further away the site is, the less frequently it will be inspected.

Staff of Land Quality recommended and the SCC approved asking the group that developed the method to further evaluate it and modify the rating scheme taking into account comments provided by field staff. Commissioner Roger Watson asked that contractors be given an opportunity to review the form and provide input for modification.

**The North Carolina Erosion and Sediment Control Planning and Design Manual is being revised and updated. If you have suggestions for additions or revisions to the manual, please send them to Caroline Medlin by January 15. See page 2 for her address and email.**

## November action of the N.C. Sedimentation Control Commission

At its regular meeting on November 14, the N.C. Sedimentation Control Commission (SCC) took the following action (in addition to action reported elsewhere in this issue):

■ **Approved application forms and guidelines for Local Program Assistance Contracts.** The SCC had previously approved forms and guidelines for grants to local programs, but the Department of Environment and Natural Resources determined that it cannot award grants and that financial assistance to local erosion and sediment control programs must be awarded through contracts. Guidelines adopted by the SCC provide that local program assistance funds shall be used for start-up of new local erosion and sediment control programs before consideration is given to applications for program enhancement. The N.C. General Assembly provided \$151,357 per year for 1999-2001 for cost sharing with local governments for local erosion and sediment control programs. For contract applications forms and guidelines, visit the N.C. Erosion and Sediment Control Program website at <http://www.dlr.enr.state.nc.us/erolocal.html>. The deadline for applications for the second year of local program assistance is January 1, 2001.

■ **Approved a Clear Water Contractor Training Program** to be administered cooperatively by Land Quality personnel in the Asheville Region and Western North Carolina Tomorrow (WNCT) at Western Carolina University. Workshops to help contractors learn the requirements of the Sedimentation Pollution Control Act and how to properly install erosion and sediment control measures are planned for Murphy, Franklin, and Boone. For information contact Phillip Gibson at WNCT (828/227-7492 or [PGIBSON@wpoff.wcu.edu](mailto:PGIBSON@wpoff.wcu.edu)).

■ **Approved funding for the Erosion and Sediment Control Research and Education Station at N.C. State University.** This project was initiated

**Financial assistance for start-up of new local erosion and sedimentation control programs is available. See text on left.**

in 1999. A site for evaluating erosion and sediment control measures is being developed at NCSU's Lake Wheeler Road research station.

■ **Adopted a permanent rule (15A NCAC 4C .0107) establishing required content for Notice of Violation.**

■ **Appointed a committee to study and make recommendations regarding implementation of requirements under the Sedimentation Pollution Control Act (G.S. 113-A-57) and the administrative rules (15 A NCAC 4B .0025) for "buffer zones" along "watercourses."** Commissioner Phillip Gibson raised the issue at the SCC meeting in August, and a committee was appointed to take a preliminary look at the issue. Gibson and Commissioners Roger Watson

and Wendell Gilliam met with Land Quality Regional Engineers (REs) to discuss difficulties REs face in implementing the buffer zone requirement. Even though the Division of Land Resources has advised REs that they have the authority to specify the width of stream buffers, the vagueness of the law and the rules often leaves them arguing with plan designers about what can be required. In addition to how wide a buffer zone must be, it is not clear whether buffer zones are meant to be undisturbed or whether land can be cleared to streambanks as long as visible sediment is contained with the 25% of a swath of land along the stream nearest the construction activity. Moreover, whether the term "watercourse" includes wetlands is in question. The committee that will consider the buffer zone issue is composed of Commissioners Phillip Gibson, Wendell Gilliam, Roger Watson, Joe Phillips, Kyle Sonnenberg, and Ray Killough, all REs, Division of Land Resources Director Charles Gardner, Land Quality Section Chief Mell Nevils, and a member of the staff of the N.C. Division of Water Quality.

■ **Chairman Kenneth H. Reckhow announced that he will appoint technical subcommittees to examine the issues of turbidity and enhanced erosion and sediment control in Nutrient Sensitive Waters.**

**A toll-free hotline has been established statewide for concerned citizens to report possible violations of the N.C. Sedimentation Pollution Control Act. To report problems call 1-866-STOPMUD (786-7683)**

## Review shows DOT committed to erosion and sedimentation control

Staff of the Land Quality Section reported to the Sedimentation Control Commission (SCC) in November that the N.C. Department of Transportation's Division of Highways is implementing the Sedimentation Pollution Control Act (SPCA) in a manner that demonstrates commitment to erosion and sedimentation control.

The SCC has delegated authority to DOT to implement the SPCA on all highway projects. Each year Land Quality central staff evaluates the DOT program by randomly selecting projects, reviewing the erosion control plans for adequacy, inspecting the projects for compliance and examining the projects' files. In addition, this year Land Quality regional staff conducted 266 inspections of DOT projects.

According to Bill Noyes, Land Quality Sedimentation Specialist, he and David Ward, Assistant Sedimentation Specialist, conducted in-depth reviews of 18 DOT projects and found all in compliance. They found all BMPs were effective and had been maintained, and they found that all plans were available on site and were adequate.

In their 266 inspections, Land Quality regional staff found 63.9% of

projects in compliance. They noted off-site sedimentation in 16% of all DOT inspections. By comparison, for the same period, regional staff reported 9,713 inspections for projects other than DOT, with 58.3% in compliance and 19.6% having off-site sedimentation.

DOT received only 3 Notices of Violation from the Land Quality Section last year.

The DOT evaluation report notes that DOT has made progress in obtaining sufficient right-of-way along highways to adequately install and maintain perimeter measures, but that efforts in this regard need to continue, particularly on urban projects.

Among the other recommendations were that DOT should emphasize the need to maintain adequate erosion and sediment control measures between each phase of construction, should emphasize the need to consistently install stabilized construction entrances/exits for their projects to prevent sediment from tracking on to public roads, should improve procedures to ensure that future borrow and waste areas are adequately stabilized, and should continue to implement procedures that focus on private contractor adherence to the SPCA.

The SCC agreed that delegation of SPCA implementation to DOT should continue.

## Land Quality personnel changes

- Chris Hite is the new Assistant Mining Specialist in the Raleigh Central Office.
- Russell McConnell is the new Environmental Technician in the Asheville Region.
- Charles Gerstell is the new Environmental Technician in the Mooresville Region.
- Bill Denton is the new Assistant Regional Engineer in the Raleigh Region.
- Kimberly Summers is the new Environmental Technician in the Raleigh Region.
- Kelly Spivey is the new Environmental Technician in the Washington Region.

## Killough family honored by NCSU

N.C. Sedimentation Control Commission member Ray Killough and his wife, Judy, were honored as the N.C. State University Family of the Year during Parents and Families Weekend in September. The Killoughs were nominated by their daughters, Lauren and Mary Winn—both students at NCSU. Lauren and Mary Winn wrote an essay in the form of a dialogue between them attesting to their parent's support for their education and their enthusiasm for NCSU. Chancellor

## February 1 is deadline for Muddy Water Essay Contest

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. Essays should be on the process of soil erosion and sedimentation, the biological and economic impacts of these processes, and how to prevent erosion and control sedimentation.

Land Quality Regional Offices should receive entries from schools in their regions by February 1. Materials on this contest have been widely distributed throughout North Carolina, but brochures are still available from the Land Quality Section at (919) 733-4574.

Judging is conducted by the N.C. Division of Land Resources, Land Quality Section in cooperation with the Department of Public Instruction, Science and English Sections. Regional judging will be completed by March 1. Regional winners will present their essays to a panel of judges on March 27 and state winners will be selected and announced at that time.

Each student and teacher submitting an essay will receive a certificate of appreciation. Each regional winner will receive \$100. Each state winning student, teacher, and school will receive \$250 for 3rd place; \$500 for 2nd place; and \$1,000 for 1st place.

Marye Ann Fox presented the Killoughs a commemorative plaque and gift certificate.

A 1970 engineering graduate of NCSU, Ray Killough is Senior Vice President - Operations of Piedmont Natural Gas. He represents North Carolina utilities on the SCC.

Lauren and Mary Winn's essay about their parents may be read at website: [http://www.ncsu.edu/for\\_parents/Family/killough.html](http://www.ncsu.edu/for_parents/Family/killough.html).

## ***"Unearth a World of Opportunities"***

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[http://www.ieca.org/  
index\\_conference.html](http://www.ieca.org/index_conference.html)



**International Erosion  
Control Association**

## **EROSION AND SEDIMENTATION CONTROL SEMINARS**

February 20-21, 2001 Greenville, NC, Hilton Greenville  
(Registration deadline: February 6, 2001)

March 13-14, 2001 Hickory, NC Holiday Inn Select Hickory  
(Registration deadline: February 27, 2001)

Registration fee: \$100.  
Covers materials, breaks, and two lunches.

These seminars are being held to familiarize and update design professionals with erosion and sedimentation control principles and practices. The seminar should be of interest to practicing professionals who develop erosion and sedimentation control plans, including private engineers, architects, surveyors, and others. Thirteen (13) PDHs will be available to professional engineers, land surveyors and landscape architects upon completion of one of these seminars. For additional information and a registration form go to website:

<http://www2.ncsu.edu/ncsu/CIL/WRRI/escseminars2001.html>

or call The UNC Water Resources Research Institute  
at (919) 515-2815.

## **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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