

**Report to the Environmental Review Commission  
On the Implementation of the  
Sedimentation Pollution Control Act  
By the Department of Environment and Natural Resources  
Division of Land Resources, Land Quality Section**

**October 1, 2010**

*§ 113A-67. Annual report. The Department shall report to the Environmental Review Commission on the implementation of this Article on or before 1 October of each year. The Department shall include in the report an analysis of how the implementation of the Sedimentation Pollution Control Act of 1973 is affecting activities that contribute to the sedimentation of streams, rivers, lakes, and other waters of the State. The report shall also include a review of the effectiveness of local erosion and sedimentation control programs.*

The following information is submitted to fulfill this reporting requirement.

### **Executive Summary**

The most significant impact to the State Sedimentation Program this year was the loss of nine positions. Fee receipts fund approximately seventy-five percent of the sedimentation control program. As a result of the severe economic downturn and the sharp reduction in receipts, in 2009 the program was forced to eliminate four positions and leave four additional positions vacant. In 2010, nine additional positions in the regional offices were eliminated in a reduction-in-force action. The number of new projects approved this past fiscal year continued to decline, drying up fees necessary to sustain the program. However, the total number of projects still active and requiring inspections did not similarly decline because construction projects are proceeding at a slower pace or being abandoned before final stabilization. As development continues, it will move into areas that are more prone to erosion such as steep slopes and areas in which the state waters are more sensitive to the effects of sedimentation. Adequate funding of the program sufficient to serve the public and protect natural resources is desperately needed.

Other notable developments and issues that arose during the year included:

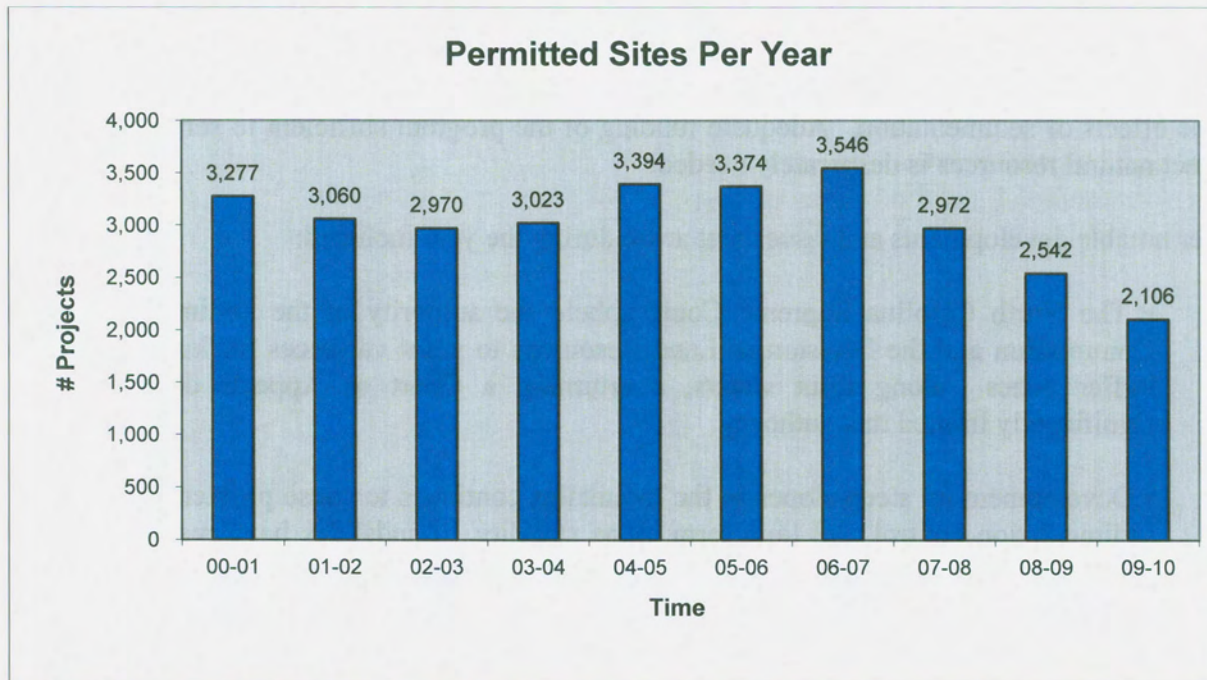
- The North Carolina Supreme Court upheld the authority of the Sedimentation Control Commission and the Division of Land Resources to grant variances for land-disturbance in buffer zones along trout waters, overturning a Court of Appeals decision that had significantly limited that authority.
  
- Development on steep slopes in the mountains continues to cause problems in erosion and sedimentation control and long term slope stability. Landslides have resulted in perilous debris flows; obstructed access to property; and choked sensitive trout streams and public water supplies with mud and debris.

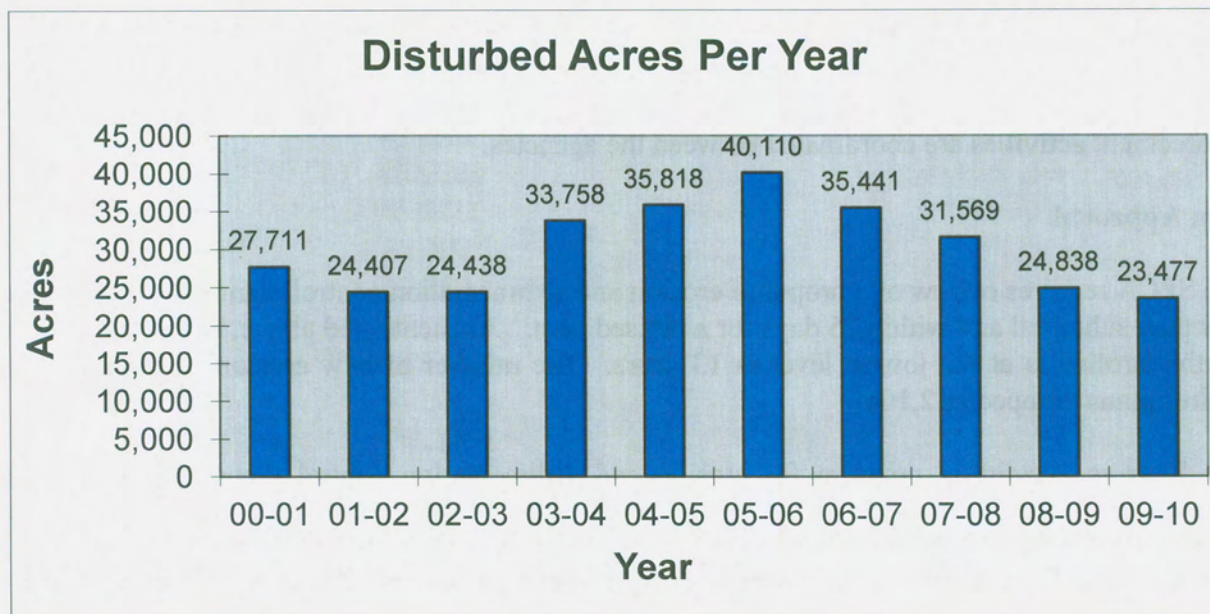
- Continued bankruptcies and foreclosures prevent timely stabilization of bare, eroding projects that have been abandoned. Performance bonds for large land-disturbing activities are needed to ensure protection of adjacent property and streams and lakes. Bonding requirements by some local programs and the mining program can serve as a model for amending the Sedimentation Pollution Control Act (SPCA) to authorize performance bonds.
- The authority of local programs to establish appellate procedures and issue stop work orders should be clarified in the SPCA.

## Background

“The sedimentation of streams, lakes and other waters of this State constitute a major pollution problem. Sedimentation occurs from the erosion or depositing of soil and other materials into the waters, principally from construction sites and road maintenance. The continued development of this State will result in an intensification of pollution through sedimentation unless timely and appropriate action is taken. Control of erosion and sedimentation is deemed vital to the public interest and necessary to the public health and welfare, and expenditures of funds for erosion and sedimentation control programs shall be deemed for a public purpose”. –Preamble to the Sedimentation Pollution Control Act of 1973

The number of new projects under State jurisdiction was at its lowest level since record keeping began in 1993. New projects have steadily declined from 3,546 in the 2006-07 fiscal year to 2,106 in the 2009-10 fiscal year. The actual area of land-disturbance covered by erosion and sedimentation control plans approved in 2009-2010 decreased to 23,477 acres -- the lowest level in 13 years. These totals do not include erosion and sedimentation control plans approved by local government sedimentation programs or land disturbed by the Department of Transportation.





### Implementation

The Division of Land Resources, Land Quality Section, in the Department of Environment and Natural Resources administers the SPCA. The Sedimentation Control Commission has also delegated administration of the SPCA to 52 county or municipal governments. These local program delegations do not regulate land-disturbing activities conducted by local, State or United States government or persons with the power of eminent domain (e.g. public utilities), which remain under jurisdiction of the Land Quality Section.

Last year, the Land Quality Section had 61 full time equivalent positions (FTE) to handle the administration, plan review, inspection and enforcement of the sedimentation program. Four positions were eliminated last year to meet budget reductions. Fifty-five of the positions were located in the Department's seven regional offices, to conduct inspections and review erosion and sedimentation control plans. This year, nine more positions were eliminated in the regional offices through a reduction-in-force action. The Land Quality Section now has 52 full time equivalent positions, with 46 located in the regional offices.

Regional activities for the 2009-2010 Fiscal Year include:

- 2,059 new erosion and sedimentation control plan reviews,
- 1,213 revised erosion and sedimentation control plan reviews,
- 24,745 sedimentation site inspections,
- 560 notices of violation, and
- 69 enforcement case referrals.

The Land Quality Section Program collaborates closely with the Division of Water Quality's stormwater management program in permitting, inspection and enforcement activities. The Land Quality Section encloses a copy of the general stormwater permit for construction activities with each erosion and sedimentation control plan approval, and provides the Division of Water Quality

with a copy of the financial responsibility/ownership form that accompanies each plan submittal. When sedimentation inspection reports document potential violations of the general stormwater permit for construction activities, a copy is furnished to the Division of Water Quality. Any enforcement activities are coordinated between the agencies.

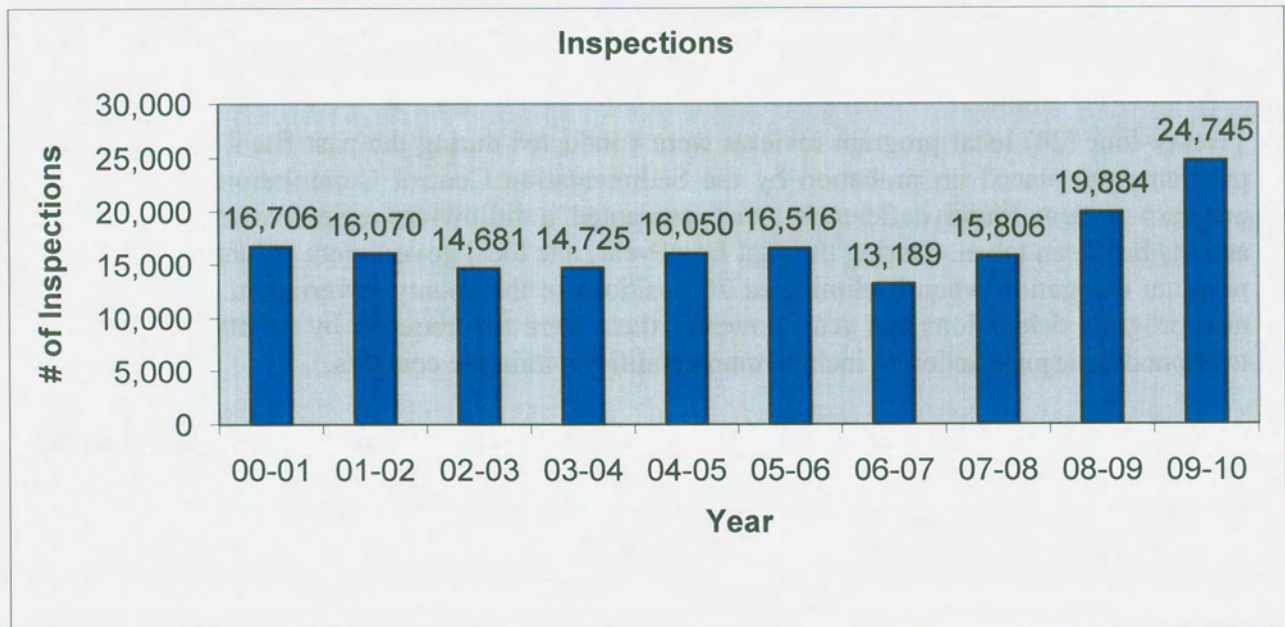
### **Plan Approval**

The SPCA requires review of a proposed erosion and sedimentation control plan within 30 days for a new plan submittal and within 15 days for a revised plan. As mentioned above, disturbed acreage in North Carolina is at the lowest level in 13 years. The number of new erosion and sedimentation control plans dropped to 2,106.

The Express Permitting program for erosion and sedimentation control plans provides for plan review within three to five days. During the 2009-2010 Fiscal Year, 437 Express Permit reviews were conducted; this represented a slight increase over the 434 express reviews done in the previous year. Fayetteville and Wilmington Regions had the most express reviews, reflecting the numerous Department of Defense projects submitted for Express Review in those regions. During the past year, four Express Review projects from each regional office were evaluated for plan adequacy and plan implementation. Recommendations were made to the regional offices to improve statewide consistency in plan requirements and review procedures.

### **Inspection**

Inspectors from the seven regional offices inspect land-disturbing activities and complete sedimentation inspection reports. The reports document field observations and compliance or non-compliance with the SPCA. The infrequency of inspections remains a chronic problem that limits the effectiveness of the sedimentation program. Regional staff conducted 24,475 inspections last year, a dramatic increase over the past year. The increased number of inspections reflects a stable work force with few vacancies and fully trained field personnel. Also, fewer plan reviews have freed plan review staff to do more field work. This increase in productivity will be short lived, as the loss of plan review fees has necessitated a 10 percent reduction in field staff.



### **Enforcement**

The Division of Land Resources documents compliance or non-compliance with the SPCA through sedimentation inspection reports. Most violations are resolved by providing an inspection report to the responsible party and requesting correction of the deficiencies. Of the 24,745 inspections conducted during the 2009-2010 Fiscal Year, 560 (2.3%) resulted in a Notice of Violation. The Notices of Violation led to 69 requests from the regional offices for additional enforcement action (12% of NOV's issued). Forty-one civil penalties were assessed, including 15 initial penalties of \$5,000 or less. These enforcement numbers are very similar to the previous fiscal year.

Abandoned subdivisions continue to be a compliance nightmare. Assessment of a civil penalty is ineffective when the property is in foreclosure or the responsible party is in bankruptcy.. Injunctive relief is a lengthy process and may still be ineffective if the federal bankruptcy court does not release funds for corrective work.

### **Local Programs**

The Sedimentation Control Commission encourages local governments to administer a delegated erosion and sedimentation control program by providing a model ordinance and technical assistance. Once a program is delegated to a local government, the Land Quality Section provides periodic oversight to ensure that the local programs are meeting the standards for the State program. State personnel informally assist and advise the local staff on problematic sites. A review of each local program is scheduled at least every two years. Land Quality and the Attorney General's Office review the city or county ordinance to ensure that it is as stringent as State law and rules. The Land Quality Regional Engineer and Sediment Specialist and/or their assistants meet with the local program staff during the review. A detailed report is provided back to the local government, noting strengths, deficiencies and corrective actions. A summary report is presented to the Sedimentation Control Commission at its quarterly meetings. The Commission then takes action to continue the

delegation, place the program on probation, or give 30 days notice that the Commission will assume administration and enforcement of the program.

Twenty-four (24) local program reviews were conducted during the past fiscal year. One local program was placed on probation by the Sedimentation Control Commission. Another local program review found deficiencies that warranted a follow-up review to ensure corrective actions had been taken. During the past fiscal year, one local government voluntarily gave up its program delegation when it eliminated 76 positions in the county government. There were no new program delegations this year; however, there were two requests by county local programs to expand their jurisdiction to include municipalities within the counties.

As a result of the economic downturn, local programs continue to face an increase in bankrupt developments and foreclosed properties. Local governments also face budget constraints similar to those being experienced by the state program. An increasing number of local programs have eliminated staff positions because of a decrease in funding, shifting responsibilities onto remaining staff.

### **Training**

The Division of Land Resources held three two-day workshops this past year for design professionals, with a total attendance of 256. Fifty local governments participated in the annual workshop for local government erosion and sedimentation control personnel with a total attendance of 100. The N. C. State University Soil Science Department offered additional workshops on treatment of construction stormwater for turbidity. The N. C. State University Department of Biological and Agricultural Engineering offers an erosion control and construction stormwater certification for N. C. Department of Transportation employees and contractors.

### **Statutory Amendments**

Session Law 2010-177 extended by one year the expiration of erosion and sedimentation control plans. Last year, S.L. 2009-406 extended the expiration date of approved erosion and sedimentation control plans. Normally, an approved plan will expire in three years if the project is never started. As a result of S.L. 2009-406, the running of this three year period was suspended until after December 31, 2010. S.L. 2010-177 extended this suspension until December 31, 2011. S.L. 2010-180 made a minor revision to the composition of the Sedimentation Control Commission. The representative of a North Carolina public utility no longer has to be the president, vice-president or general counsel.

## **Regulatory Issues**

### Land-disturbance within Buffer Zone of Trout Waters

On August 27, 2010, the North Carolina Supreme Court ruled that the Sedimentation Control Commission and the Division of Land Resources had correctly issued written approval for a development to disturb area within the buffer zone of a trout stream in Yancey County. Requests for written approval to disturb areas within the minimum buffer required in the SPCA and rules promulgated by the Sedimentation Control Commission are being again being reviewed and processed. Approval is granted when the proposed disturbance has adequate erosion and sedimentation controls; disturbance within the buffer has been temporary and minimized; no adverse water temperature fluctuations are anticipated; and vegetation replanted within the buffer is native riparian vegetation.

### Local Program Authority

The SPCA should be amended to clarify the authorization of local governments to continue to use their existing appeals procedures for civil penalty assessments. Current legal opinion is that the SPCA requires that all appeals must be handled by the Office of Administrative Hearings. However, N. C. General Statute 150B-2 (1a) states that "A local unit of government is not an agency," as defined in the Administrative Procedures Act. In 2008, House Bill 2506 sought to clarify the appeals procedures for local sedimentation programs, but did not advance. Reintroduction and adoption of a bill to clarify the appeals procedure for local governments is recommended.

### Performance Bonds

Nine local governments have erosion and sedimentation control ordinances that require the posting of a bond for land-disturbing activity. Local governments with bond requirements for development have been able to stabilize abandoned developments. Forfeited reclamation bonds and securities have allowed them to establish adequate groundcover on abandoned developments. It is recommended that the Sedimentation Control Commission should be given statutory authority to adopt rules for bonding of land-disturbing activity. Initially, a bond should be required on projects involving 20 acres or more of land-disturbing activity. The potential environmental damage from an abandoned site increases with the size of the area left bare and eroding. The bonding would target larger projects that have the most potential for sediment loss and not place a financial burden on small projects. The amount of the bond should be based on the disturbed acreage and the cost of stabilizing the site with permanent ground cover. The authority for the Commission to require a bond on smaller projects in sensitive watersheds, where sediment could substantially damage the water resource should also be considered. Currently mining activities are bonded in North Carolina. Reclamation costs for abandoned development are comparable to those for a soil mine, which requires a bond of \$2,000 per acre for grading and establishment of permanent ground cover.

### Plan Review Fee

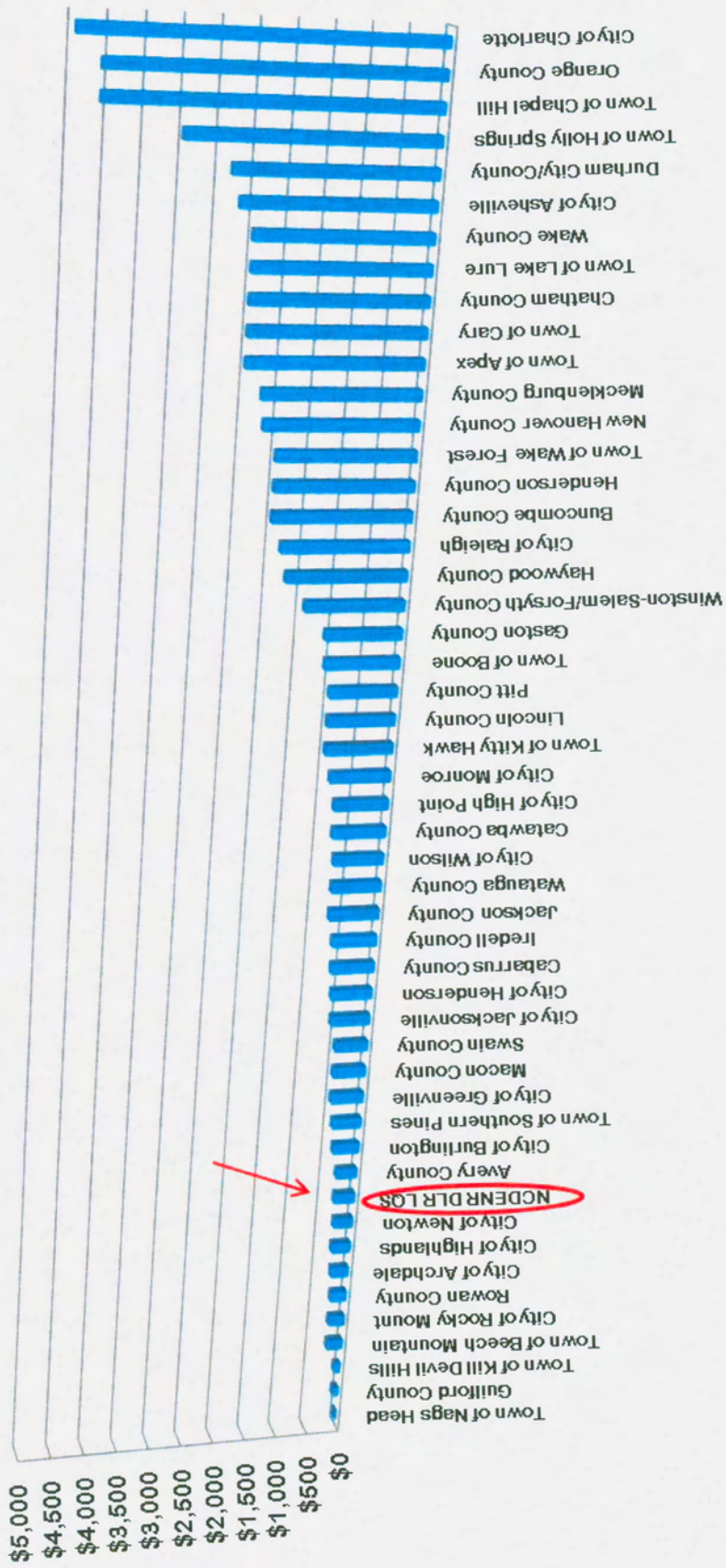
Funding to implement the SPCA once came entirely from appropriated funds. After plan review fees were authorized, the fees were used to hire additional personnel to review plans and conduct compliance activities. During years with high levels of land development activity, fees were adequate to support authorized staff levels. Over time, the program shifted funding of positions from appropriations to fee receipts to reduce the appropriated budget and meet other funding demands. Land development is at the lowest level in 13 years and fee receipts are now inadequate to support the program.

The Land Quality Section has never been able to adequately inspect construction sites and the recent 10% reduction in field staff has further reduced the program's capabilities. There are many projects in poor condition that need inspection and follow-up to gain compliance. The fee for erosion and sediment control plan review is \$65.00 per acre. The median fee across the 52 local sedimentation programs in the state is \$170.00 per acre. (To compare the rates of various local programs and the State, a table was developed for the fees associated with a five-acre land-disturbing activity. Using a five-acre site allowed comparison of programs that charge a flat rate, a rate per acre or a combination of both. The resulting values were divided by five to get the per acre rates presented below.) Twenty-one programs charge \$1,000 or more for a five acre site, compared to the Land Quality review fee of \$325 for a five acre site.

The Division of Land Resources strongly recommends increasing the plan review fee to the state median of \$170 per acre. The median is a good barometer of a reasonable fee since half the jurisdictions in the state charge more than the median. In recent years, the program has received only 25% of its operating funds from appropriations; the increased fee – in combination with a continuing appropriation -- would come closer to covering the actual costs of the program.



# Erosion and Sediment Control Plan Review/Permit Fees based on a 5 acre Project



## Design Criteria Consistent with NPDES Construction Stormwater Permit

New **Construction and Development Effluent Guidelines** (ELG's) were issued by the U. S. Environmental Protection Agency in December, 2009. The N. C. Division of Water Quality is drafting a new NPDES General Permit No. NCG010000 (Construction Stormwater) that is scheduled for issuance in August 2011. The new stormwater permit must comply with the federal ELG's. The guidelines from 40 Code of Federal Register, Part 450.21 are as follows:

### Erosion and Sediment Controls

Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

- (1) Control stormwater volume and velocity within the site to minimize soil erosion;
- (2) Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
- (3) Minimize the amount of soil exposed during construction activity;
- (4) Minimize the disturbance of steep slopes;
- (5) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
- (6) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and
- (7) Minimize soil compaction and, unless infeasible, preserve topsoil.

### Soil Stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of time determined by the permitting authority. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permitting authority.

The federal guidelines have provisions that are not required by the SPCA and rules promulgated by the Sedimentation Control Commission. Most notable is the 14-day time limit for provision of ground cover. Other new requirements include the control of stormwater peak flow rates and total stormwater volume. Currently, the general stormwater permit authorizes the discharge of stormwater which has been adequately treated and managed in accordance with an approved Erosion and Sedimentation Control Plan issued by the North Carolina Division of Land Resources, Land Quality Section, or a delegated local program. Whenever an erosion and

sedimentation control plan is approved, a developer is given coverage under the stormwater permit.

To prevent approval of erosion and sedimentation control plans that will not meet the standards of 40 CFR Part 450.21 or NPDES General Permit No. NCG010000, amendments to the SCPA are necessary. The Sedimentation Control Commission should be given the authority to disapprove an erosion and sedimentation control plan if implementation of the plan would result in a violation of NPDES General Permit No. NCG010000. This could be done by revising N. C. General Statute 113A-54.1 (c) as follows: "The Commission shall disapprove an erosion and sedimentation control plan if implementation of the plan would result in a violation of NPDES General Permit No. NCG010000 or rules adopted by the Environmental Management Commission to protect riparian buffers along surface waters."

Time limits for provision and establishment of temporary and permanent ground cover must be revised in N. C. General Statutes 113A-57.1 (2) and (3) so that the requirements of the SPCA and NPDES General Permit No. NCG010000 are consistent.

#### Safe Artificial Slopes

Numerous landslides occurred in western North Carolina during the past year as the result of poorly constructed graded slopes and fills. Improper soil compaction, inadequate management of surface and subsurface water, and inadequate retaining walls resulted in slope failures, notably in Haywood, Jackson and Macon Counties. Sites included a residential driveway, residential subdivision roads, and commercial sites.

The slide at the Water Dance Subdivision in Jackson County highlights several problems. The road was constructed in 2005, and failed in 2010. It was not the result of an active land-disturbance. The retaining wall failed, and the wall and road fill went into the Tuckaseegee River. The homeowners association is faced with financing repairs to the road in order to access individual home sites. The original developer is out of business.

Slides also occur when slopes are cut. A major slide occurred in Macon County at a commercial site. The slide removed the lateral support to a residence above the slide, cracking the foundation. The residence was condemned as unsafe for occupancy.

The SPCA does not require preparation of plans by a licensed engineer. Poorly designed and poorly constructed graded slopes and fills continue to put human life in peril. Mountain landowners find themselves unable to access homes or home sites when artificial slopes fail. Comprehensive legislation to establish standards for the design and construction of graded slopes and fills is strongly recommended. Construction of artificial slopes should be designed by a licensed engineer.



*Water Dance Subdivision, Jackson County*



*Slide path into Tuckseigee River*



*Macon County slide.  
Trees standing in center of slide actually slid 30-50 feet down slope from original location.*



*Failing Cut and Fill Slopes at Chocolate Drop Mountain, Polk County*