2012 Annual Erosion and Sedimentation Control Report to ERC
Division of Energy, Mineral, and Land Resources
Presentation Overview

• Sediment Program Overview
• Staffing
• Statistics
  – Permitting
  – Inspection
  – Enforcement
Presentation Overview

• Challenges
  – Abandoned sites
  – Slope failures
  – Sedimentation to water bodies

• Staffing Issues

• Budget Issues

• Recommendations
Program Overview

- Sedimentation Pollution Control Act of 1973 and Associated Rules
- Located within Land Quality Section
- Mission: Allow development within the State while preventing pollution by sedimentation
Program Overview

• Activities:
  – Plan review (regular and express)
  – Compliance
  – Technical assistance/outreach (design manual, workshops, pre-construction meetings)
Program Overview

• Cooperative agreement between Land Quality and the Division of Water Quality for federal stormwater regulation at construction sites
  – Sediment plan approval automatically generates stormwater permit approval
  – LQS and DWQ coordinate compliance activities and eliminate duplication of effort
  – LQS provides 28 of 34 positions for federal construction stormwater permitting and enforcement
Local Programs

52 delegated local programs

Local programs are encouraged and supported by technical assistance and training from State
State Sediment Program Personnel

• At the end of FY 2011-2012, the Sediment Program had 40.12 full time equivalent positions (FTE) to handle the administration, plan review, inspection and enforcement of the sedimentation program
  – 5.0 in Raleigh Central Office
  – 35.12 located in Regional Offices
New Sites Permitted by LQS
(does not include projects approved by DOT or Local Programs)

Number of new sites decreasing, but total number of sites relatively same (8,000)
“Open” LQS Sediment Projects
(active/inactive projects that have not been completed/closed)
Plan Reviews for FY 2011-2012

• 2,832 erosion and sedimentation control plan reviews for new and revised plans (decreased from 3,121 reviews in FY 2010-11)
  – Regular new plans reviewed within 30 days
  – Regular revised plans reviewed within 15 days

• 527 Express Permit reviews (increased from 475 reviews in FY 2010-11)
  – Both new and revised express plans reviewed within 3 working days
Compliance/Enforcement

- 15,659 sediment inspections led to 247 NOV’s (1.6% non compliance rate)
- 52 of the NOV’s were issued to repeat violators (21%)
- 18 referrals for further enforcement (7.3% were not compliant with NOVs issued)
Compliance/Enforcement

• 13 civil penalties issued out of 18 referrals (remainder were injunctions, stop work orders, restoration orders)

• Percentage of active projects that receive enforcement is .23% (18 out of 8,000)

• Primary violations: offsite sedimentation and threats to public safety
Abandoned Sites

Eroding Roadways
Abandoned Sites

Eroding Slopes and Ditches
Abandoned Sites

Failure of Measures
Abandoned Sites

Uncompacted fill slopes
Serenity Forest II – Buncombe County
Slope Failures

Approx. scarp locations
7_23_10
Magnolia Place – Gaston County
Exposed Slope/Failing Retaining Wall
Seven Falls Golf and River Club – Henderson County

Photo taken from Asheville Citizens Times Article – Photo taken in May 2011 by Henderson County
Brown’s Cove on Lake Wylie
Mecklenburg County
Effects of Sedimentation from Construction
Brown’s Cove Sediment Accumulation Report

• Charlotte Mecklenburg Storm Water Services initiated study in response to citizen complaints
  – Failure or lack of maintenance of measures during upstream development silting in Cove

• Area of upper portion of Cove reduced from 23.2 acres in 2003 to 22.7 acres in 2012 (reduced by ½ acre by sediment)
Brown’s Cove

- Watershed draining to the Cove = 3,241 acres
- Study looked at:
  - Background sedimentation rates
  - Sources of sedimentation from development in the watershed
Brown’s Cove

• Results:
  – Quantified accumulated sediment depths and volumes from 2003 to 2012
    • Approximately 14,348 total cubic yards of sediment to be removed (not including natural accumulation)
  – Dredging plan to remove accumulated sediment from watershed development
    • Preliminary cost estimates of $387,396 - $615,000 for completion of dredging and stabilization of spoils area
Lake Rogers Water Supply Reservoir – City of Creedmoor

- Study by US Department of Agriculture in 1998
- Drainage area to lake = 17.5 square miles (11,200 acres)
- Original lake volume in 1939 = 979 acre-feet
- Lake volume in 1998 = 661 acre-feet
- Lake volume lost due to sedimentation = 318 acre-feet (1/3 of volume)
- According to USDA, 0.52 million cubic yards of sediment deposited
- Average depth of lake decreased by approx. 2 feet
- Cause: High erodibility of Triassic Basin soils coupled with inadequate erosion & sedimentation control practices on farmland and construction projects upstream in the watershed
Reduction in Staff since 2010

• Nine positions Reduced in Force in 9/2010 due to insufficient sediment fees/receipts
• Three positions Reduced in Force 7/2011 due to insufficient sediment receipts
• Two appropriated sediment positions abolished by General Assembly in 7/2011
Reduction in Staff since 2010

- Four vacant positions eliminated due to lack of sediment receipts in 1/2012
- Four appropriated sediment positions abolished by General Assembly in 7/2012
Sediment Program Positions
(34% reduction in last 3 years)

*Responsible for 8,000 open sediment projects
Inspections by LQS

![Bar chart showing the number of inspections by LQS from 2002-2012. The chart details the number of inspections each year, with the highest number in 2009-2010 at 24,745.](chart_image)
Inspection Resources

- Of current 40.12 FTEs in the Sediment Program, only 14 inspector FTEs spread across the seven regional offices are available for inspecting over 8,000 open projects at any given time
  - Over 570 open projects per inspector FTE
  - Workload includes complaint response, paperwork, data entry, onsite meetings, compliance assistance, court hearings
Inspection Frequency

• At current staffing levels, each active erosion and sedimentation control project is inspected, on average, once every 14 months
  – Three years ago, the inspection frequency was once every 5 months
  – In 1996, the Sediment Commission determined each sediment project should be inspected at least once per month
Budget Issues

• Sediment plan review receipts have been insufficient to fund positions for the past 4 years, resulting in the elimination of 16 fee based positions, including layoff of 12 regional office based employees
  – Three plan reviewers
  – Nine inspectors

• Fee collections near the end of FY 2011-2012 have exceeded salary expenditures for first time in over 4 years

• Currently, six regional office plan review/inspector sediment fee based positions are being held vacant due to the lack of receipts to fund the positions
Budget Issues

• The review fee for erosion and sedimentation control plans is set in the SPCA at $65/acre

• By comparison, the fees charged by delegated local programs to cover their costs have a median of $174/acre and an average of $274/acre
Budget Issues

• DENR and the Governor’s Office have proposed a fee increase to $170/acre in recent years without success
Comparison of Fees

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

• In 2002, DENR investigated the cost of transferring the Sediment Program to local governments
  – Cost of 46 existing local programs: $5,687,000
  – Estimated # of additional local programs: 209
  – Total statewide cost for all local programs: $28,248,000
  – State Sediment Program appropriations for FY 2011-2012: $1,738,854

• DENR can implement the Sediment Program cheaper than local governments
Budget Issues

• Most large local governments that can afford a local program already have one
• Smaller local governments would need start up funding in order to establish a local program
• Appropriations for DENR to provide such grants to new local programs were eliminated several years ago
Recommendations

• Fee increase from $65/acre to $170/acre to provide DENR resources to properly implement the Sedimentation Pollution Control Act

• Financial Assurance for construction sites that plan to disturb over 20 acres (nine delegated local programs already do this)

• Clarify civil penalty appeal process for delegated local programs
Questions?

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