

# 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

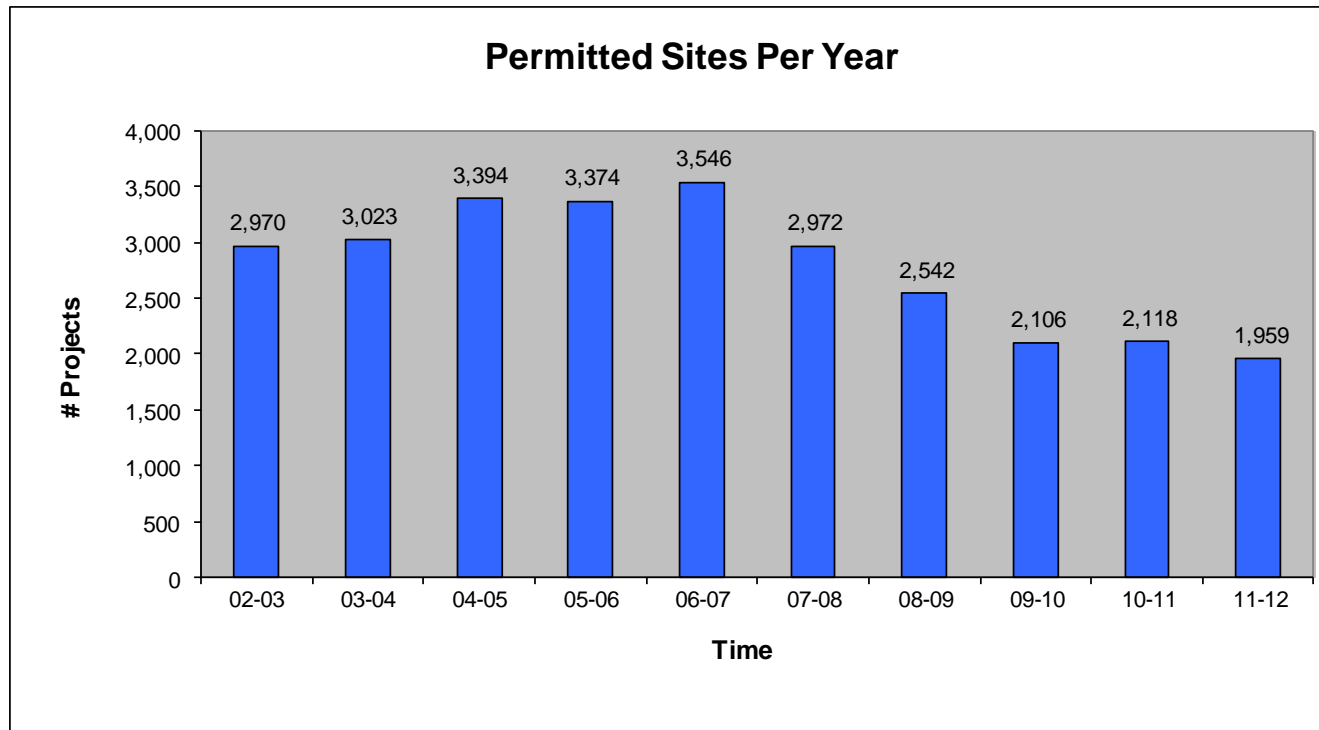
- At the end of FY 2011-2012, the Sediment Program had 40.12 full time equivalent positions (FTE) to handle the administration, plan review, inspection and enforcement of the sedimentation program
  - 5.0 in Raleigh Central Office
  - 35.12 located in Regional Offices



# New Sites Permitted by LQS

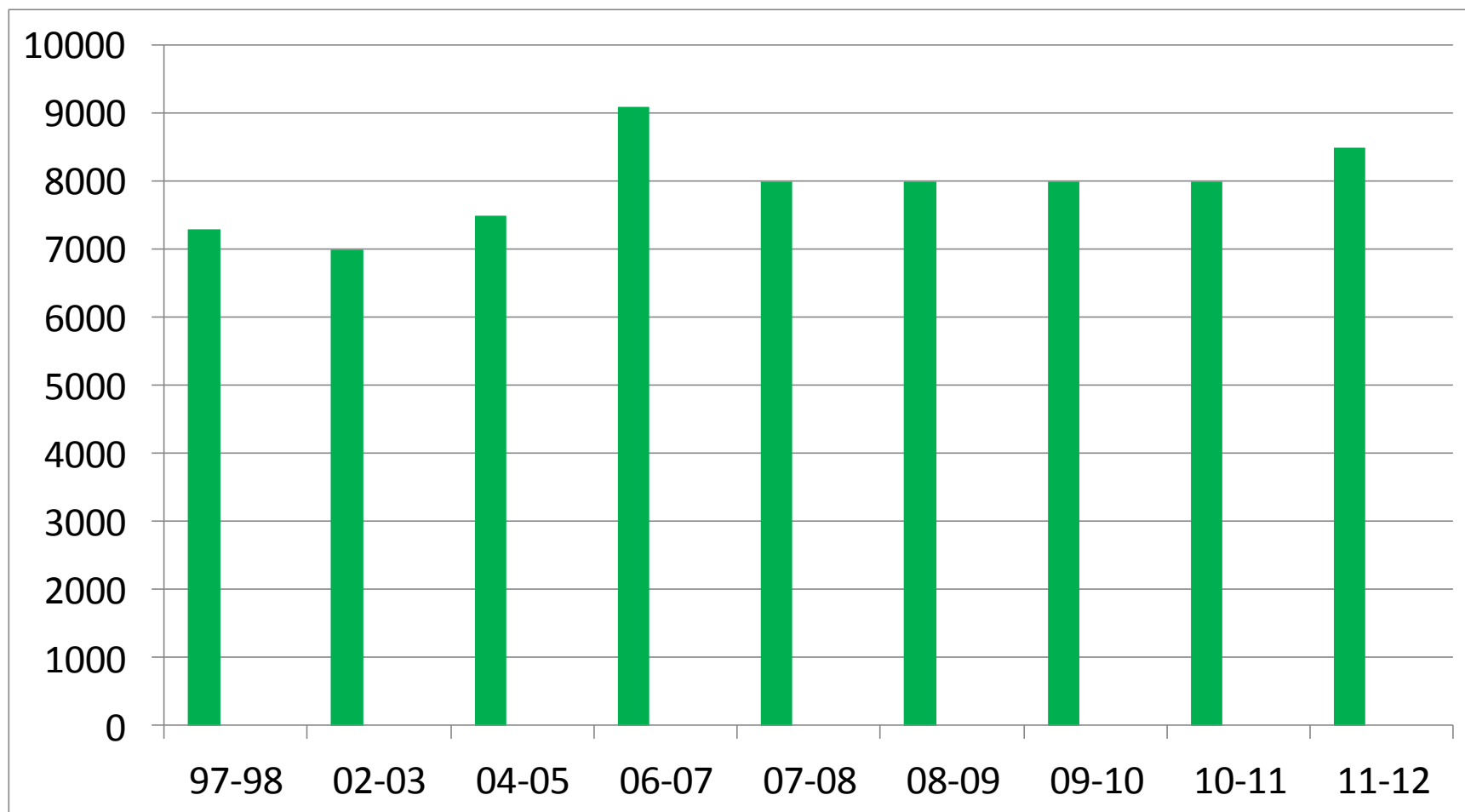
(does not include projects approved by DOT or Local Programs)

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 NOV's 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

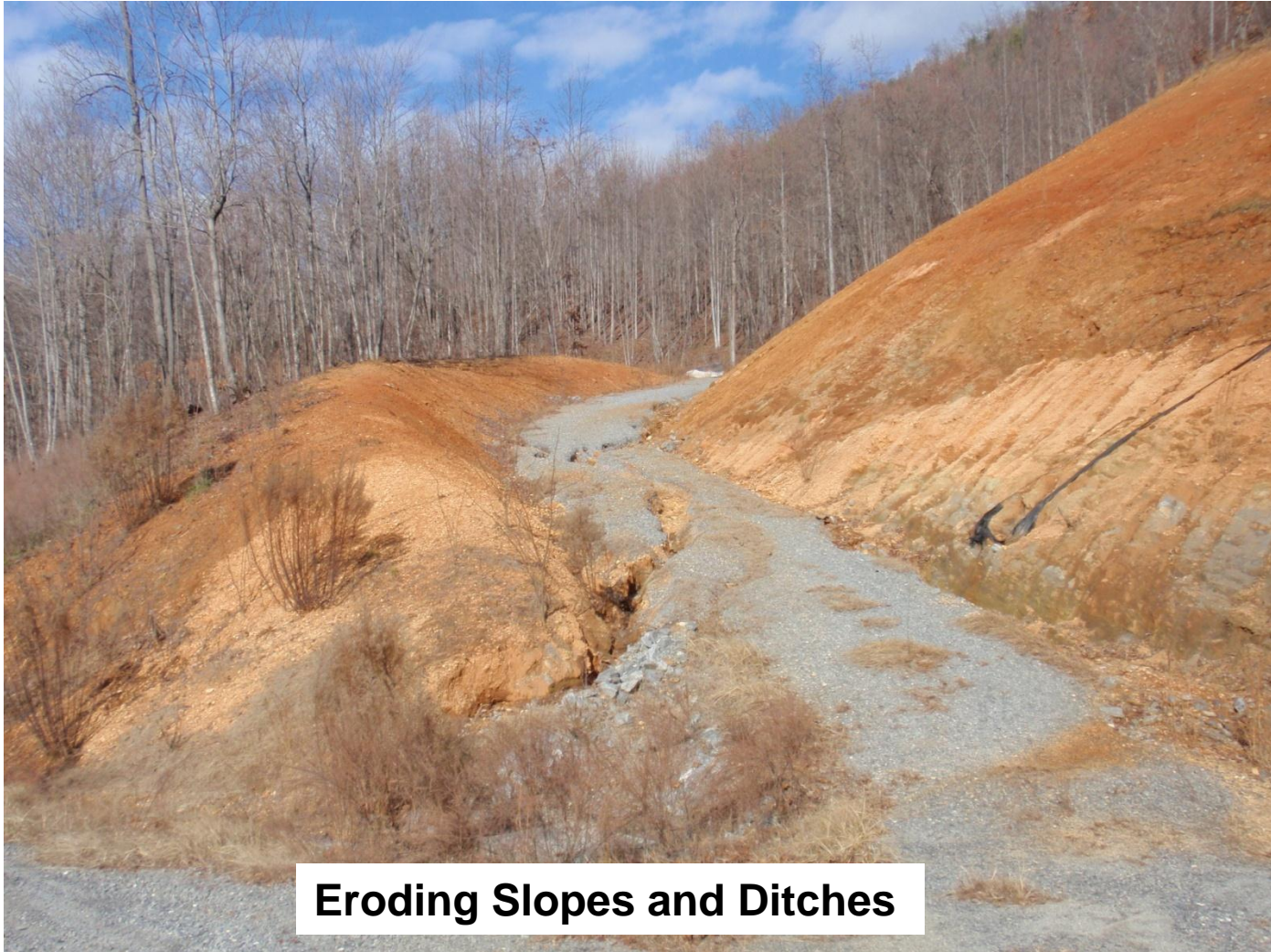
# Abandoned Sites



**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





# 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



2007/07/13



2008/02/26



# 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  $\frac{1}{2}$  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

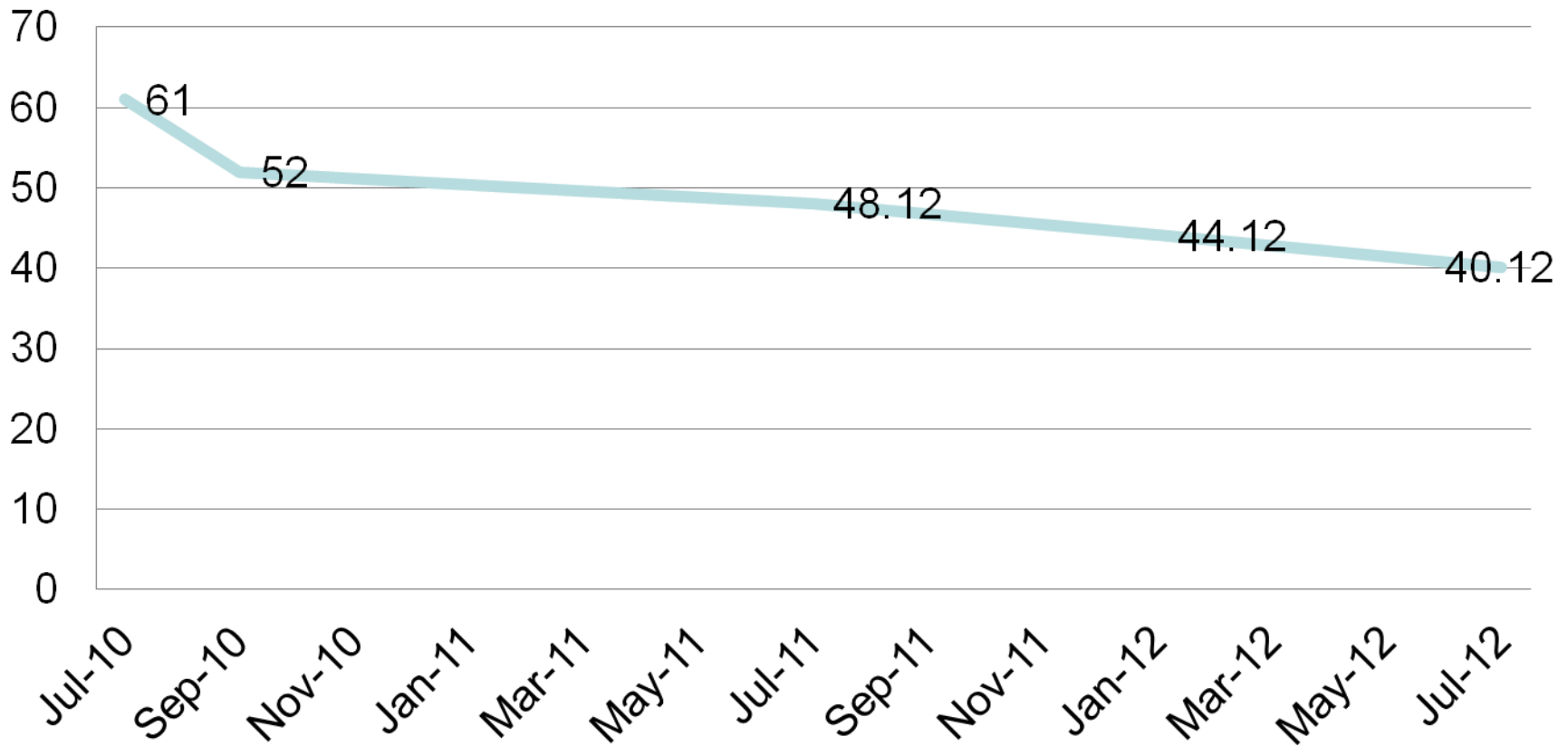
- Nine positions Reduced in Force in 9/2010 due to insufficient sediment fees/receipts
- Three positions Reduced in Force 7/2011 due to insufficient sediment receipts
- Two appropriated sediment positions abolished by General Assembly in 7/2011

# Reduction in Staff since 2010

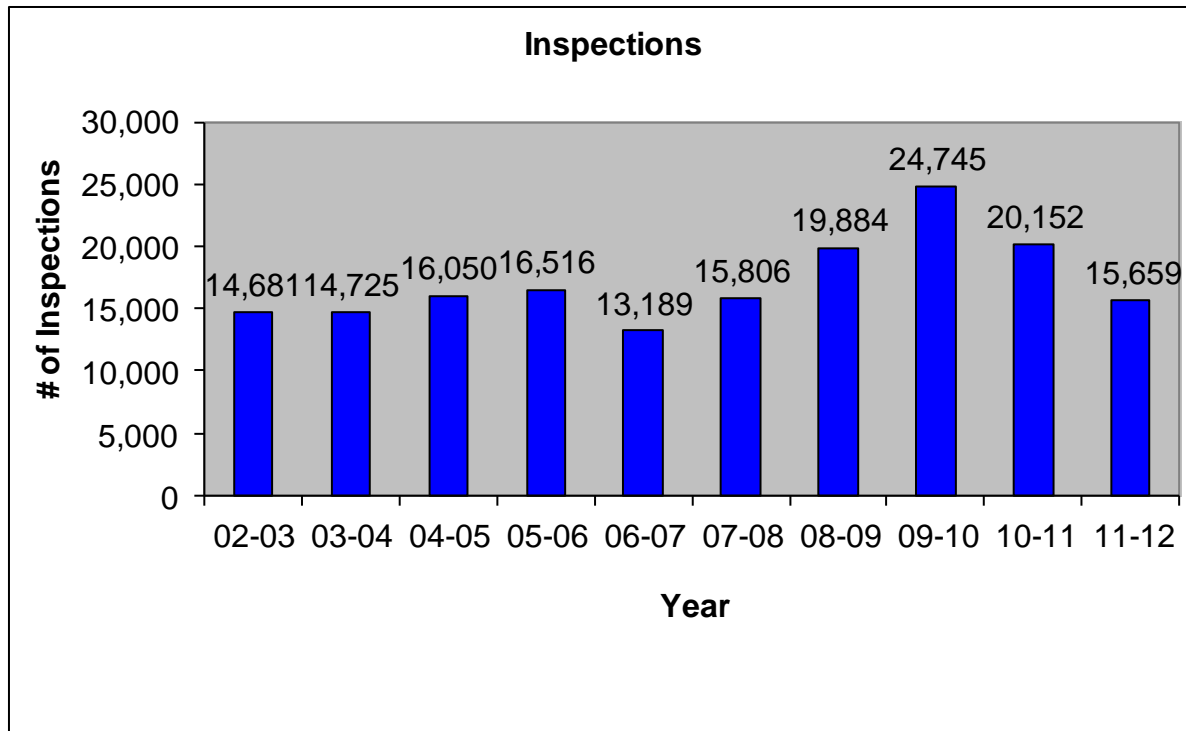
- Four vacant positions eliminated due to lack of sediment receipts in 1/2012
- Four appropriated sediment positions abolished by General Assembly in 7/2012

# Sediment Program Positions (34% reduction in last 3 years)

**\*Responsible for 8,000 open sediment projects**



# Inspections by LQS



# 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

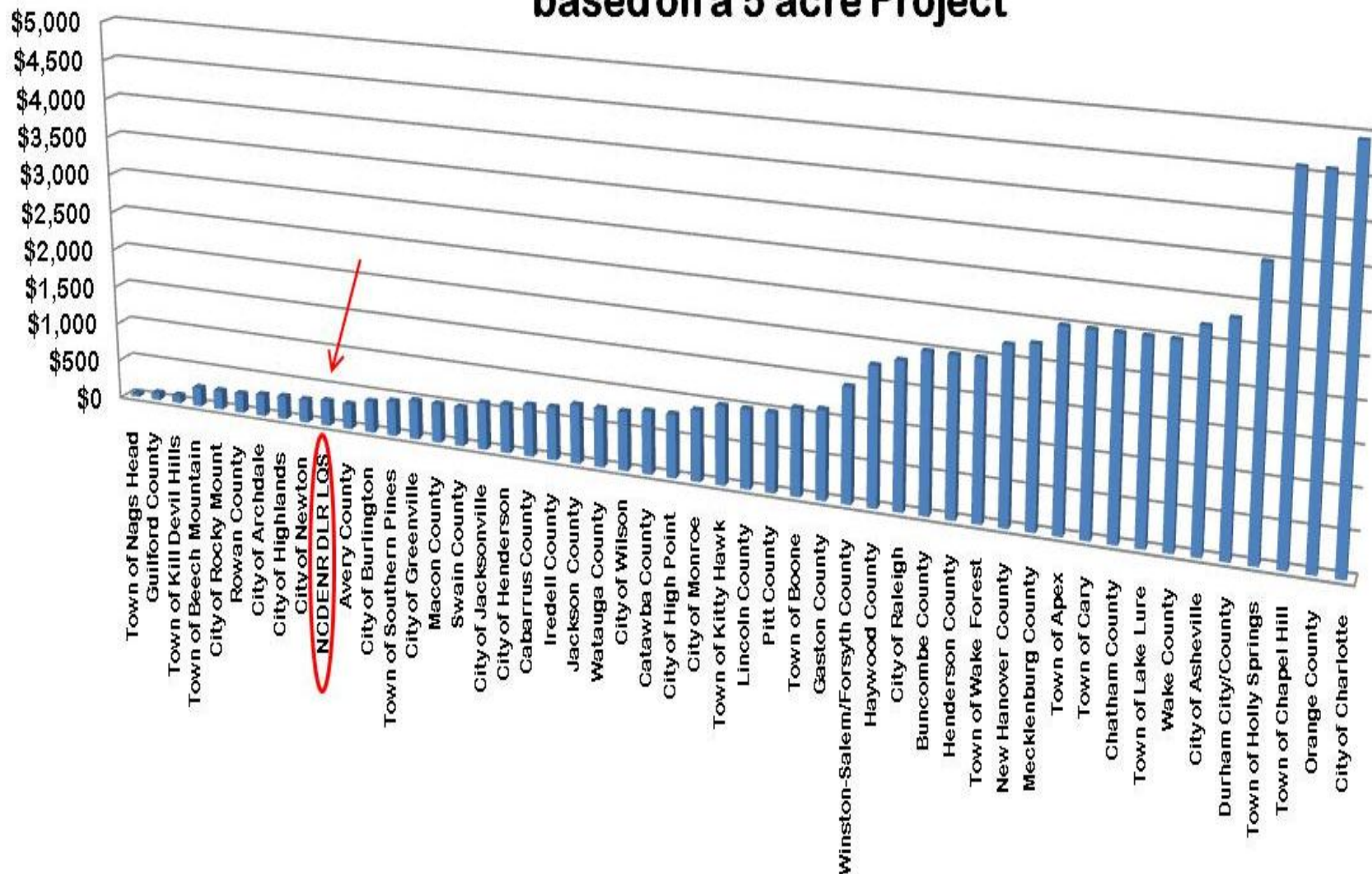
- The review fee for erosion and sedimentation control plans is set in the SPCA at \$65/acre
- By comparison, the fees charged by delegated local programs to cover their costs have a median of \$174/acre and an average of \$274/acre

# 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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