

# ROADSIDE ENVIRONMENTAL FIELD OPERATIONS



# TOPICS

- **Goals**
- **NPDES Documentation**
- **Reclamation Plan Procedures**
- **Permanent Vegetation Establishment**
- **Resurfacing Erosion Control**
- **Design Build Erosion Control**
- **ERCON scores for 2013**

# Environmental Goal

- **Keep sediment on site!**
- **Follow approved EC plan and maintain appropriate record keeping**
- **Evaluate grading efforts at end of day and ensure runoff is routed to appropriate perimeter measures**
- **Ensure devices are constructed correctly**
- **Establish permanent stabilization**

# National Pollutant Discharge Elimination System



## Federal Permit generated from Clean Water Act

- **post-construction runoff**
- **illicit connections and illegal dumping**
- **Industrial facility storm water runoff**
- **construction site runoff (NCG01)**

# Construction Site runoff (NCG01)

- Site inspection every 7 days or within 24 hours of a rainfall of 0.5 inch or greater per 24 hour period
  - (303(d) streams: Inspect 2 times every 7 days )
- Record daily rainfall
- Keep NPDES records on site
- Maintain As Built EC plans
- Monitor until  $\geq 80\%$  permanent vegetation establishment
- NPDES documentation must be retained for 3 years



**INSPECTION RECORD FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000  
 SELF-INSPECTION RECORD FOR LAND DISTURBING ACTIVITIES PER § 113A-54.1  
 RESPONSE FOR EROSION CONTROL FORM 1675**

**Record daily  
rain fall**

PROJECT LOCATION \_\_\_\_\_  
 LEVEL II SUPERVISOR \_\_\_\_\_  
 CONTRACTOR \_\_\_\_\_

TIP # \_\_\_\_\_  
 COUNTY \_\_\_\_\_

All erosion and sedimentation control measures and stormwater discharge outfalls must be inspected at least once (twice, if on 303(d) listed stream impaired by turbidity, see [http://portal.ncdenv.org/oc/document\\_library/get\\_file?uid=d8cf0cc2-6d8d-47e8-96e6-f769fa0ccad&groupId=38364](http://portal.ncdenv.org/oc/document_library/get_file?uid=d8cf0cc2-6d8d-47e8-96e6-f769fa0ccad&groupId=38364)) per seven calendar days and within 24 hours of a rainfall of 0.5 inch per 24 hour period. Permittee must keep a record of inspections. Attach Multi Precipitation Estimator (MPE) rainfall data for weekly period. If using on site rain gage, complete daily rainfall measurement.

Day	Date	Rain Amt (in)	Notes
M			
T			
W			
Th			
F			
Sat			
Sun			

**Changes as  
project progress**

+ Phase of Grading  
 (Place a check in the box of the current project phase)

Installation of perimeter erosion and sediment control measures	
Clearing and grubbing of existing ground cover	
Completion of any phase of grading of slopes or fills	
Installation of storm drainage facilities	
Completion of construction or development	
Establishment of permanent ground cover sufficient to restrain erosion	

Has all land disturbing activity been completed? (Y/N) \_\_\_\_\_

Has the final permanent ground cover been completed and established? (Y/N) \_\_\_\_\_

By this signature, I certify (in accordance with Part II Section B, 10 of the NCG010000 permit) that this report is accurate and complete to the best of my knowledge:

_____	_____
Cert. Level II Supervisor	Cert. #
_____	_____
NCDOT Cert. Level II Representative	Cert. #

**Should be  
signed by  
Contractor  
and DOT**







# Reclamation Plan



- Required if:

Land disturbing activity associated with the project exceeds the project limits

- Examples:

- Borrow/Waste/Staging Area/Stockpile location is outside project limits
- Office trailer
- Employee/Equipment Parking
- Borrow/Waste Pit
- Temporary stockpile

# Reclamation Plan

## Includes:

- Environmental Assessment
- Erosion Control Plan
- Narrative
- Signed Property Owner Statement



# Reclamation Plan

Important to remember:

- 1 year Post-Final Compliance Review
  - Stage seeding, repair seeding, topdressing
  - Repair washes
  - Removing temporary erosion control
- DEMLR –Land Quality will release site when permanently stabilized



# Permanent Vegetation Establishment

- Contracts include an ICT for *permanent* vegetation establishment
- DOT completes NPDES documentation during ICT (Let after October 2013)
- Contractor will respond at unit prices for Response for EC and Seeding/Mulching
- Contractor will remove EC measures upon 80% permanent vegetation establishment (*DWQ permit requires removal within 2 months after Field Ops releases the project.*)

# EC for Resurfacing Projects

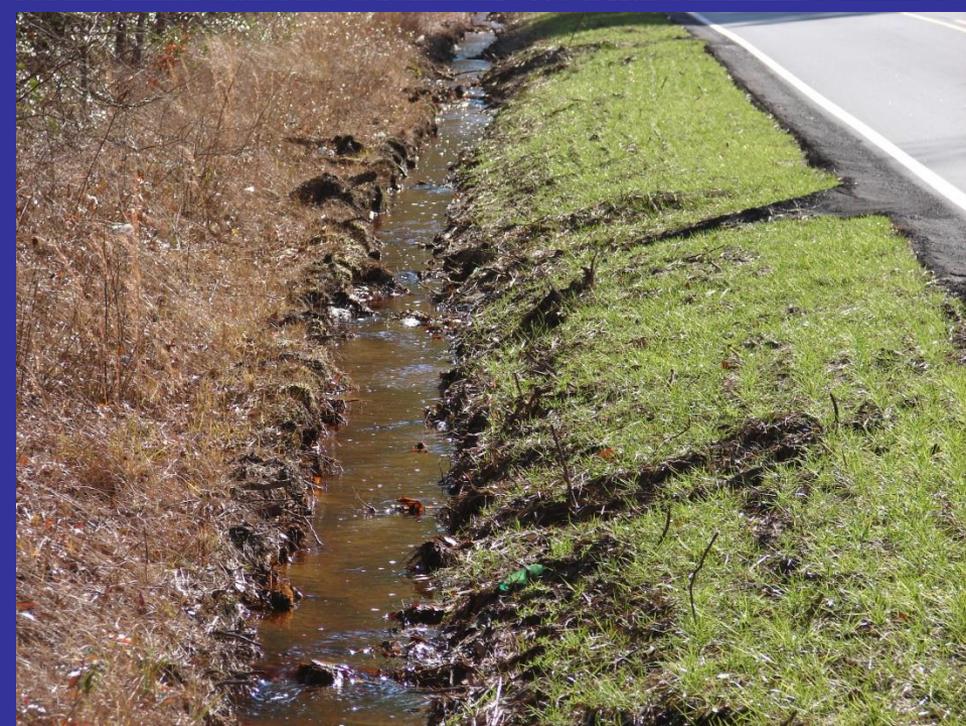


If...

- Shoulder work includes disturbance **beyond shoulder point** (grading to the toe, relocating ditch line or disturbing back slope and/or removing vegetation from the conveyance)

Then...

- Inspect and monitor (NPDES log) every 14 calendar days or within 24 hours of a rainfall of 0.5 inch or greater per 24 hour period
- Install erosion control measures where vegetated buffer between the disturbed area and surface waters (streams, wetlands, or open waters) is less than 5'-10' wide.



## If...

- Shoulder work includes rebuilding shoulders to safe up the edge of pavement resulting in a **narrow ribbon of disturbance** (2'-5' wide)

## Then...

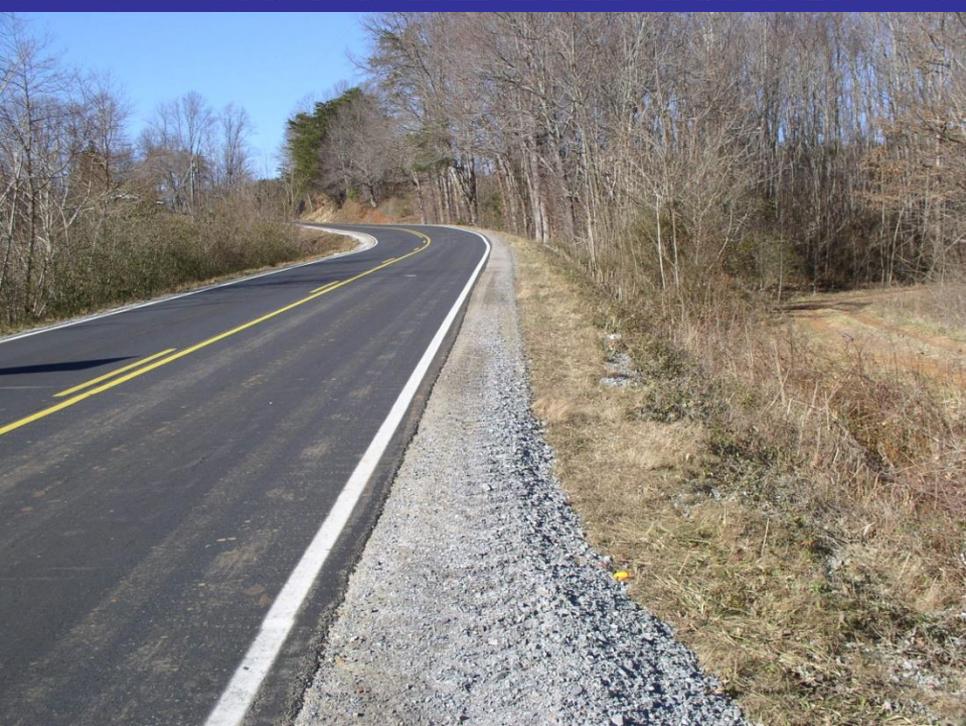
- No inspection or monitoring required.

## However...

- If any area where the vegetated buffer is **less than 5'-10'** wide between the disturbed area and **surface waters**

## Then...

- Install erosion control devices
- Spot check once every 14 calendar days for maint/repair (No NPDES log)

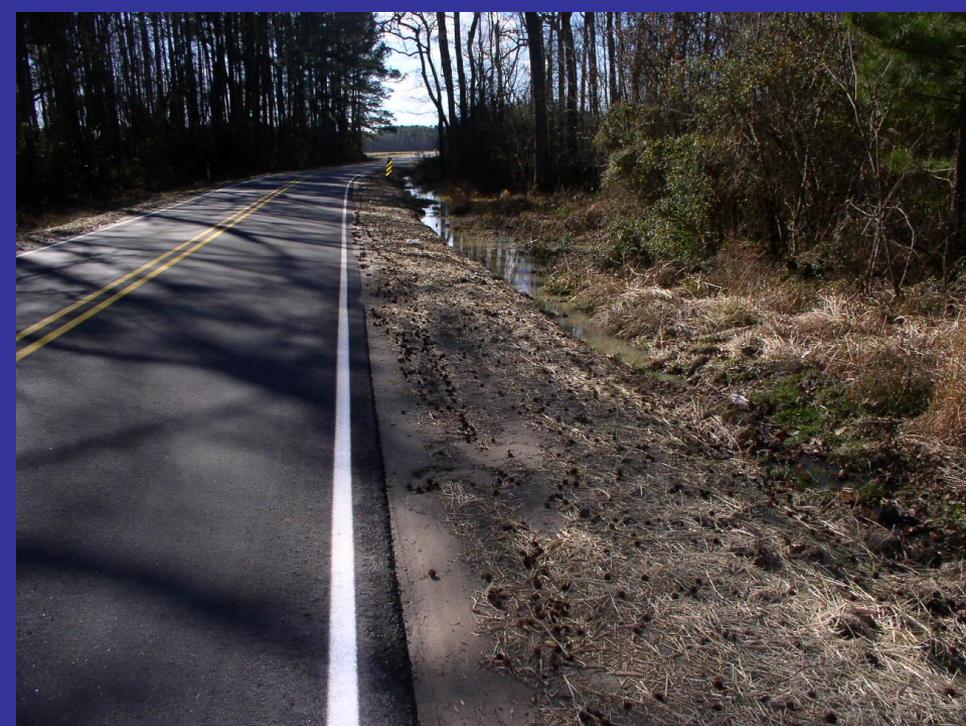
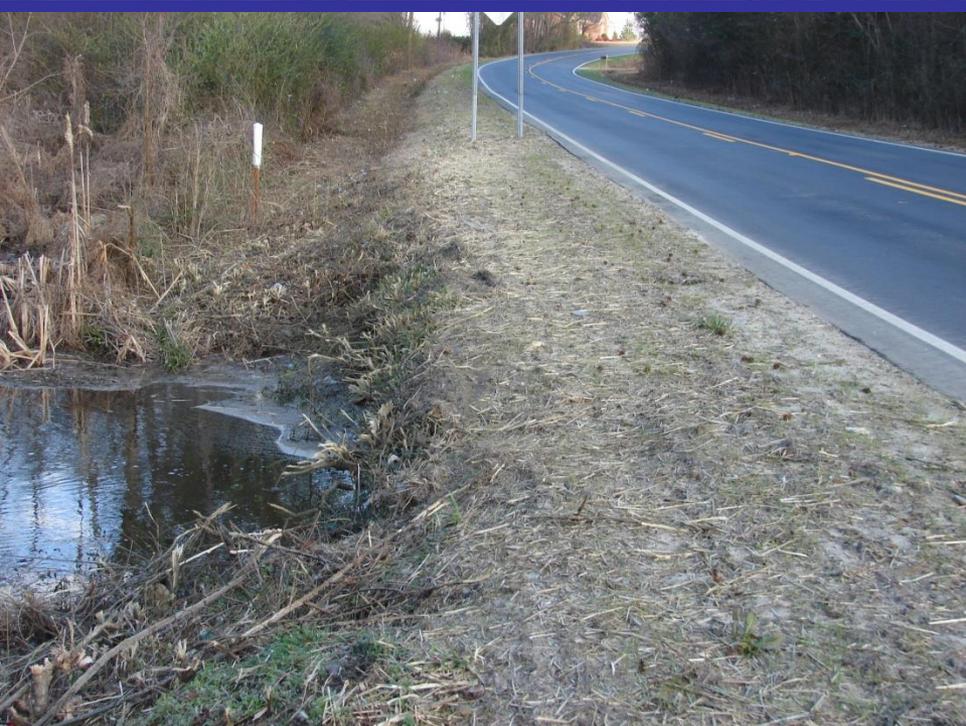


If...

- In any areas where the vegetated buffer is **less than 5'-10' wide between the disturbed area AND surface waters** classified as HQW, ORW, Critical Areas, or Unique Wetlands

Then...

- Inspect and monitor (NPDES log) every 14 calendar days or within 24 hours of a rainfall of 0.5 inch or greater per 24 hour period
- Install erosion control devices



# Design Build Erosion Control

## Erosion Control Issues

- Vegetation Management Plan
- Level II Supervisor/Foreman
- Erosion Control Phases
- Ground Cover Establishment



# Vegetation Management Plan

Design Build Team will develop a plan to address:

- Early establishment of vegetation throughout project with emphasis to ESA and other jurisdictional areas
- Schedule maintenance of vegetation (topdressing, supplemental seeding, repair seeding and mowing)
- Coordinate vegetation establishment with grading operations

# Level II Supervisor/Foreman

- Level II Supervisor to act as EC Coordinator for project.
- Level II Foreman required for individual grading/pipe/culvert/bridge/utility activities
- Level II Supervisor should **communicate** routinely with all Level II foreman and have authority to direct operations as needed
- Level II Supervisor should manage NPDES record keeping and As Built EC plans

# Erosion/Sediment Control Phasing

- Contractor (Level II) should confirm that appropriate phases of approved EC plans are installed prior to land disturbing activities
- EC designer should be engaged in project progression to ensure intent of design is being met
- Changes to EC plans should involve designer of record as sediment storage and surface area changes arise

# Ground Cover Establishment

- Level II Supervisor should ensure seeding subcontractor has adequate forces/resources to meet Vegetation Management Plan objective
- Communication with grading foreman is important to ensure compliance with groundcover requirements
- Early establishment of vegetation on spoil piles, waste/borrow sites, permanent slopes, temporary slopes, stock piles



# ERCON GRADES

	<b>Contract Construction</b>	<b>Resurfacing/ Shoulder Reconstruction</b>
<b>Division 1</b>	<b>8.80</b>	<b>8.87</b>
<b>Division 2</b>	<b>8.88</b>	<b>8.99</b>
<b>Division 3</b>	<b>8.82</b>	
<b>Division 4</b>	<b>8.56</b>	
<b>Division 6</b>	<b>8.58</b>	

# 2013

Total Number of Contract Construction Projects

594

Total Number of Contract Construction Inspections

3266

Total Number of ICA's issued to Contract  
Construction Projects

11

Total Number of Contract Construction Projects  
receiving ICA

8

# What does this mean?

- Contractors understand expectations
- Resident Engineer's taking pro active approach

The system is working

# Roadside Environmental Resources

[http://www.ncdot.gov/doh/operations/dp\\_chief\\_eng/roadside/fieldops/](http://www.ncdot.gov/doh/operations/dp_chief_eng/roadside/fieldops/)



North Carolina Department of Transportation  
**Roadside Environmental Unit**  
Field Operations

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**>> FIELD OPERATIONS**

**IMPORTANT DOWNLOADS**

**GENERAL INFORMATION**

**KNOW BEFORE YOU MOW**

**Contact Info**

- State REU Field Ops
- Divisions 1 & 2
- Divisions 3 & 6
- Divisions 4 & 5
- Divisions 7 & 8
- Divisions 9 & 10
- Divisions 11 & 12
- Divisions 13 & 14

**LINKS**

**FIELD OPERATIONS SECTION: HOME**

## Welcome to Field Operations



**Our Mission:**

"To protect our state's streams, rivers, wetlands, lakes, and other waterways from sedimentation by controlling erosion along NCDOT land disturbing projects. To promote programs that enhance our roadsides, create useful habitat for wildlife, and that preserve threatened or endangered species."

**DID YOU KNOW!**

Look under [IMPORTANT DOWNLOADS](#) for the latest info and Interactive Forms!

**NPDES Inspections**

[Inspection Form](#)

[FAQs](#)

**E&SC/Stormwater Certification Program**

To find out more [click here](#)



The North Carolina  
Department of Transportation