

# Roadside Environmental

David B Harris, PE  
State Roadside Environmental  
Unit



## Roadside Environmental Unit

- Erosion and Sedimentation Control Program
- Stormwater Update
- The Future

**“...LEARNING HOW TO MAKE  
BOURBON THE RIGHT WAY—  
FROM THE INSIDE OUT AND  
EVERYTHING IN BETWEEN.  
NO JOB TOO SMALL, NO TASK  
TOO TEDIOUS.”**

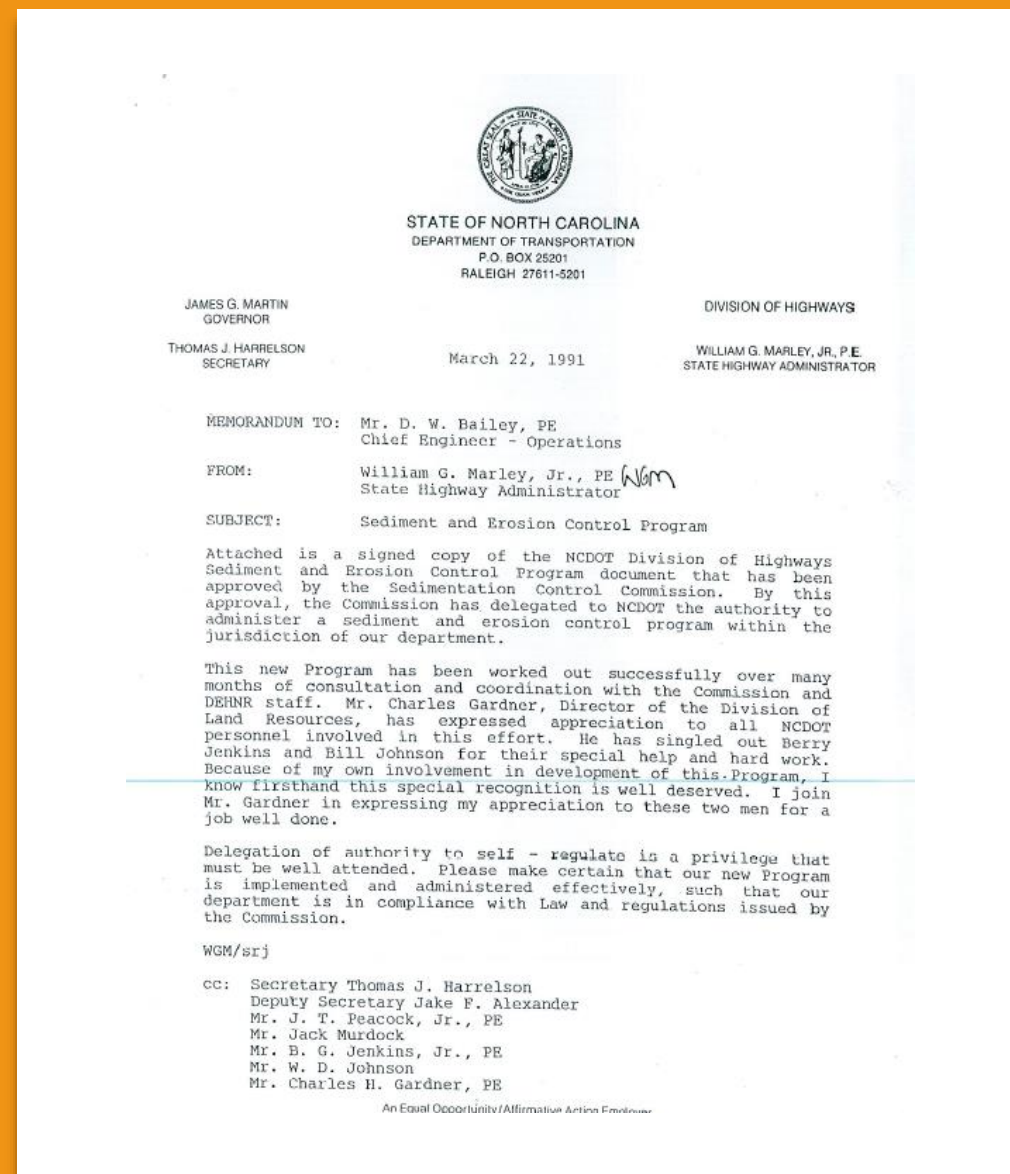
James C. “Jimmy” Russell

# Erosion and Sedimentation Control Program

- **1973 Sedimentation Pollution Control Act**
  - NCDOT Delegated Authority for Erosion and Sediment Control Program
- **1991 NCDOT Revised Delegated Authority**
  - NCDOT Revised Delegated Authority for Erosion and Sediment Control Program

# Erosion and Sedimentation Control Program

- 1991 Revised Delegation Agreement
  - Wayne Bailey, PE  
Chief Engineer
  - New Commitment
  - Increased Responsibility



# The Basic Objectives

- 1) Identification of Critical Areas
- 2) Limited Time of Exposure
- 3) Limit Exposed Area
- 4) Control Surface Water
- 5) Control Sedimentation
- 6) Manage Storm Water Runoff

# Erosion and Sedimentation Control Program

- 1991 Revised Delegation Agreement
  - Review and approve erosion control plans
  - Monitor and inspect land disturbing activities that are associated with the construction and maintenance of highway facilities.
  - Immediate Corrective Action (ICA) Procedures Developed

## Erosion and Sedimentation Control Program

- NCDOT must maintain Operational Control
  - Secretary
  - Chief Engineer
  - Division Engineer
  - Maintenance Engineer
  - CME
  - Project Staff



Elmer T Lee - Master Distiller

# The Heritage and Craft of Bourbon

- 1) Bourbon must be made in the United States.
- 2) Bourbon must be made using at least 51% corn.
- 3) Bourbon must be aged in new, charred oak containers (barrels).
- 4) Bourbon must not be distilled higher than 160 proof.
- 5) Bourbon must not be put into a barrel higher than 125 proof.
- 6) Bourbon must be bottled at 80 proof or higher.
- 7) Bourbon must not contain any flavorings or colorings.



# Bourbon

## Mash Bill

- Corn
- Rye
- Barley



# Bourbon

- Endless options of what can be accomplished.



# 2021 Annual Delegation Review

- Annual Review of the Departments delegated program for Erosion and Sediment Control
  - 15 Construction Projects randomly selected
  - 1 Maintenance Project randomly selected



# Issues Identified

- Minor Sediment Loss
- Sediment tracking onto road
- Concrete Washout Structures
- Notification to DEMLR





# NPDES Stormwater Permit

# NPDES Stormwater Permit

- Issued in 1998
- Renewed every 5 years
- Permit authorizes NCDOT to discharge stormwater from our roadways, rail, and non-roadway facilities
- New projects receive automatic permit coverage
- Compliance managed by Hydraulics and REU

# NPDES Stormwater Permit

- So why is this important
- NCDOT does NOT have to:
  - Apply for local government stormwater permits
  - Apply for state stormwater permits
  - Pay municipal stormwater utility fees

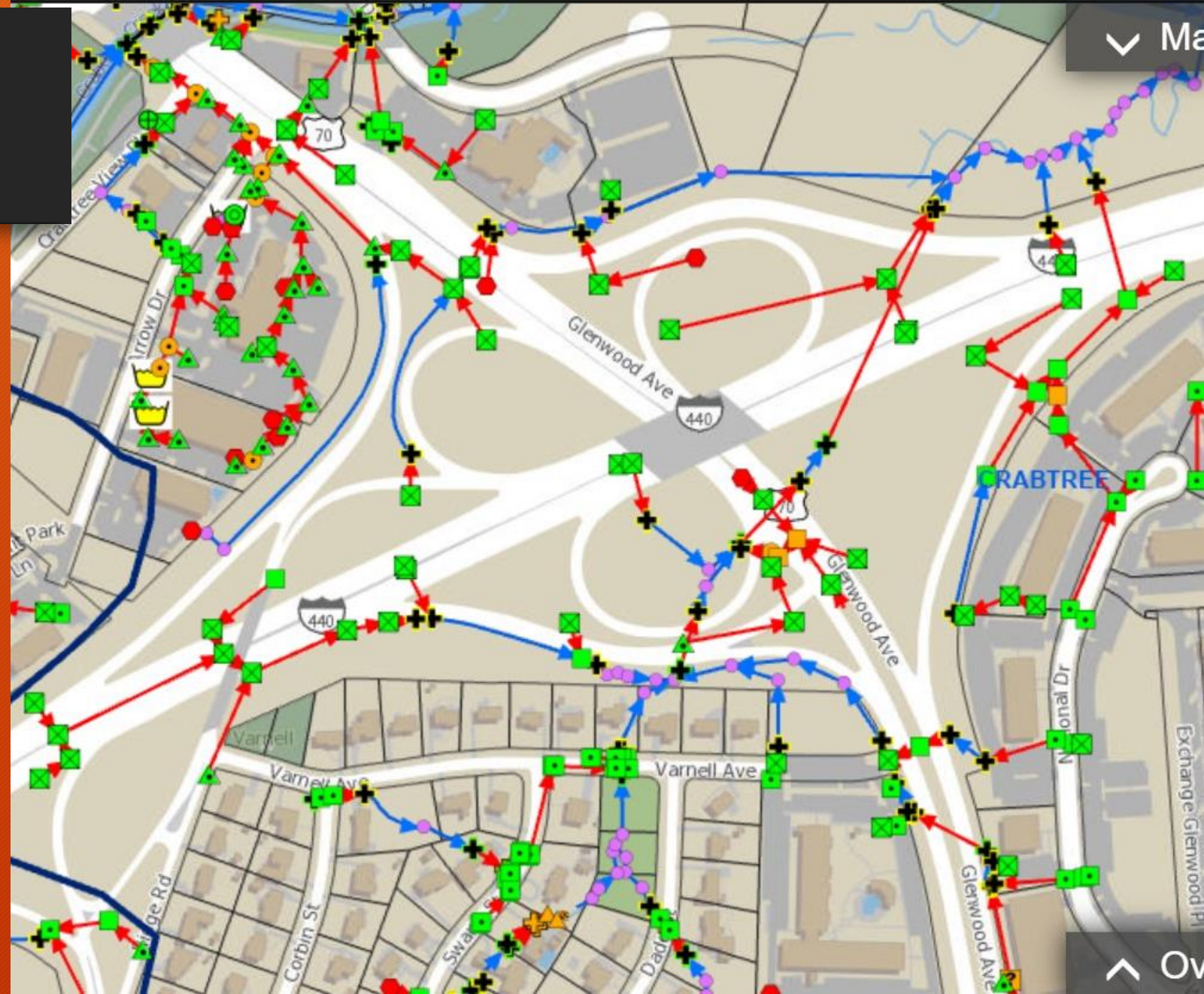
# NPDES Stormwater Permit

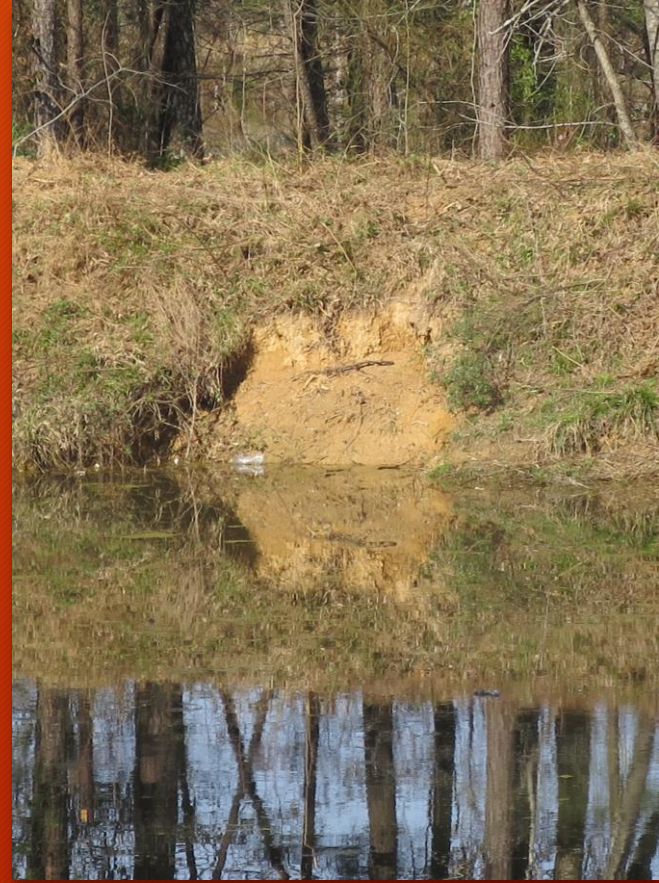
- Permit Renewal - 2022
  - Evaluate/address stormwater pollution potential to prevent sediment, particulates, litter, and debris from being discharged into surface waters, by:
    - Perform inspection at each major outfall
    - Perform inspections concurrent with bridge inspections
    - Assign stormwater pollution prevention Tiers I-III for outfalls
    - Implement BMPs at Tier 1 outfalls to prevent discharge of pollutants
      - Include: capture technologies, improved inlet grate designs, street sweeping, litter/debris removal, scheduled inlet/CB inspections/cleaning



# NPDES Stormwater Permit

- Permit Renewal
  - Mapping the Stormwater System





# NPDES Stormwater Permit

Inspection and Maintenance

# NPDES Stormwater Permit

## Inspection & Maintenance

- Failed SCM outlet structures
- SCMs not properly converted to permanent SCMs post construction
- Ineffective SCMs from design or installation issues



# Illicit Discharges/ Illegal Dumping

- NCDOT must report illicit discharges/illegal dumping

The screenshot shows the North Carolina Department of Transportation website. The main heading is "Stormwater Management Program". Below it, there is a section titled "Prevention & Reporting".

**Prevention & Reporting**

Public involvement is critical to the success of the Highway Stormwater Program. NCDOT depends on the public to not litter on North Carolina's roadways, to be on the lookout for potential stormwater problems, and to help prevent stormwater pollution.

NCDOT has established the [Illicit Discharge Detection and Elimination Program](#), which allows NCDOT employees, contractors and the public to report any potential illicit discharge, spill or illegal dumping onto NCDOT roadways so it can be addressed or eliminated.

By helping to report potential illicit discharges (e.g., illegal pipe connections to the drainage system) or abandoned containers along North Carolina's roadways, the public is helping to protect waterways for current and future use.

	NCDOT NPDES PERMIT	HIGHWAY STORMWATER PROGRAM	DATE: _____
	<b>ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM*</b> <b>FIELD REPORT (FORMALLY ILLICIT CONNECTION &amp; ILLEGAL DISCHARGE)</b>		
<b>Instructions:</b> A DOT supervisory personnel shall investigate, fill in date above, complete information below, and forward it to Roadside Environmental Unit – Environmental Operations Section. Telephone Number: (919) 707-2920; Mailing Address: NCDOT Roadside Environmental Unit, 1557 Mail Service Center, Raleigh, NC 27699-1557; Fax: (919) 715-2554			
<b>Pollution Source Observed By:</b> <input type="checkbox"/> NCDOT Personnel <input type="checkbox"/> NCDOT Contractor <input type="checkbox"/> Adopt-A-Highway Date Identified: _____ <input type="checkbox"/> General Public, Name & Phone: _____ Notes from Reporter: _____			
<b>Investigator</b> Name: _____ <b>Information:</b> (Last) _____ (First) _____ Phone: _____ Agency: _____ Position: _____			
<b>Location:</b> NCDOT Division: _____ County: _____ City: _____ Highway or Site: _____ Nearest Intersection or Mile Post: _____ Specific Location Info.: _____ Latitude Longitude (optional) _____			
<b>Type of Stormwater Structure with Illicit Connection or Illegal Dumping (Check One):</b> <input type="checkbox"/> Ditch (Size, Type) _____ <input type="checkbox"/> Pipe (Size, Type) _____ <input type="checkbox"/> Catch Basin <input type="checkbox"/> Manhole <input type="checkbox"/> Grated Inlet <input type="checkbox"/> Other: _____			
<b>Physical Observations:</b> <input type="checkbox"/> Dump <input type="checkbox"/> Discharge Flow: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Odor: <input type="checkbox"/> Sewage <input type="checkbox"/> Rotten Eggs <input type="checkbox"/> Fishy <input type="checkbox"/> Skunk <input type="checkbox"/> Petroleum <input type="checkbox"/> Other: _____		Vegetation Condition (If applicable): <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Excessive Growth <input type="checkbox"/> Inhibited Growth	
Color: <input type="checkbox"/> Black <input type="checkbox"/> Brown <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Gray <input type="checkbox"/> White <input type="checkbox"/> Other: _____		Land Use: <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Rural	
Appearance: <input type="checkbox"/> Oily Sheen <input type="checkbox"/> Sewage <input type="checkbox"/> Chemical <input type="checkbox"/> Detergent <input type="checkbox"/> Other: _____		Source: <input type="checkbox"/> Residential <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Spill Release <input type="checkbox"/> Commercial/Industrial <input type="checkbox"/> Other: _____	
Comments: _____			
<b>FOR ROADSIDE ENVIRONMENTAL UNIT STAFF USE ONLY</b>			
Date Received: _____		Processed By: _____ (Last) _____ (First)	
Forward Report to NCDEQ: <input type="checkbox"/> Yes; <input type="checkbox"/> No; Why Not? _____		Date: _____ Whom: _____	
Database ID Number: _____ (Division) (County) # _____		River Basin: _____ Database Entry Date: _____	
Follow Up and Remarks: _____			
* Illegal Discharges also include Illegal Dumping as defined as significant materials that are soluble or easily transported by stormwater runoff, such as used oil, chemical solvents, septic waste. Solid materials not easily transported by stormwater are addressed through other DOT programs and should not be reported on this form.			
Version 12/4/15			

# The Future

- Who will carry on for the next generation?
- Have you passed on your knowledge and experience to others?
- The success of the program depends on everyone working together to be successful.



# Questions

