

Monitoring Data Record

Project Title: U-3462 Smith Ave. Ext. COE Action ID: 19982173

Stream Name: Charles Branch and UT to Charles Branch DWQ Number: 20081177

City, County and other Location Information: Shallotte, NC (Intersection of US 17 Business. (Main St.) and Smith Ave.

Date Construction Completed: Streambank Reforestation completed January 2012

Monitoring Year: ( 1 ) of 5

Ecoregion: \_\_\_\_\_ 8 digit HUC unit 03040207

USGS Quad Name and Coordinates: Shallotte N 33.97948 W 78.37703

**Rosgen Classification:** \_\_\_\_\_

Length of Project: Enhancement 630 ft. and Restoration 95 ft. Urban or Rural: Urban

Watershed Size: \_\_\_\_\_

Monitoring DATA collected by: M. Green and J. Young Date: 7/31/12

**Applicant Information:**

Name: NCDOT Roadside Environmental Unit

Address: 1425 Rock Quarry Rd, Raleigh, NC 27610

Telephone Number: (919) 861-3772 Email address: [mlgreen@ncdot.gov](mailto:mlgreen@ncdot.gov)

**Consultant Information:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Email address: \_\_\_\_\_

**Project Status:** \_\_\_\_\_

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**Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.):** Level 1

The NCDOT plans to enhance approximately 630 feet and restore approximately 95 feet of stream as part of this project. Monitoring of the stream enhancement and restoration areas shall consist of Level 1 monitoring requirements. Monitoring shall be performed twice annually (summer and winter) for each year of a five year period following completion of the work. Monitoring activities shall consist of reference photos, plant survival determination, and visual inspection of stream stability. The sites shall be monitored for five years, provided at least two bankfull events have occurred during this monitoring period. If two bankfull events have not occurred by the end of the five year monitoring period, the NCDOT may, at DWQ's discretion, cease further monitoring of the site. The two bankfull events should occur within different monitoring years.

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Section 1. PHOTO REFERENCE SITES

*(Monitoring at all levels must complete this section)*

**Total number of reference photo locations at this site:** 5 photos were taken from 4 photo point locations

**Dates reference photos have been taken at this site:** 1/26/12, 7/31/12

**Individual from whom additional photos can be obtained (name, address, phone):** \_\_\_\_\_

Other Information relative to site photo reference: \_\_\_\_\_

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

**Section 2. PLANT SURVIVAL**

**Attach plan sheet indicating reference photos.**

Identify specific problem areas (missing, stressed, damaged or dead plantings):

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Estimated causes, and proposed/required remedial action: \_\_\_\_\_

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**ADDITIONAL COMMENTS:** Streambank reforestation was completed in January 2012. Black willow and silky dogwood live stakes were planted along the streambank and green ash, sycamore, and tulip poplar bareroot seedlings were planted in the buffer. Planted vegetation is surviving. NCDOT will continue to monitor plant survival.

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If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

**Section 3. CHANNEL STABILITY**

**Visual Inspection:** The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

Charles Branch and the UT to Charles Branch are stable for Year 1 Summer evaluation, except for, the lower log sill on the UT to Charles Branch. Water was piping under the lower log sill and a slight headcut had developed. This area is highly vegetated as seen in Photo Point #2 Downstream. NCDOT will see if any remedial action is warranted at this time. NCDOT will continue to monitor channel stability.

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Date Inspected	Station Number	Station Number	Station Number	Station Number	Station Number
7-31-12	33+50-L- RT.				
Structure Type	log sill				
Is water piping through or around structure?	water piping under log sill				
Head cut or down cut present?	slight headcut				
Bank or scour erosion present?					
Other problems noted?					

**Section 4. DEBIT LEDGER**

The entire Charles Branch stream mitigation site was used for the U-3462 project to compensate for unavoidable stream impacts.

# Charles Branch Stream Mitigation Site



Photo Point #1 (Upstream) – Charles Branch



Photo Point #2 (Upstream) – UT to Charles Branch



Photo Point #2 (Downstream) – UT to Charles Branch



Photo Point #3 (Downstream) – Charles Branch



Photo Point #4 (Upstream) – Charles Branch

Year 1 Summer – July 2012

# Charles Branch Stream Mitigation Site



Overview photo of buffer



Additional photo of water piping under log sill

Year 1 Summer – July 2012

# CHARLES BRANCH PHOTO POINT LOCATIONS

