Channel Mitigation Monitoring Sheets I, II, III, AND IV

Monitoring Data Record

Project Title: B-3126 (Br. #90 over Gunpowder Creek on SR 1718
COE Action ID: 2007-1591-214 DWQ Number: 070583
Stream Name: Tributary to Gunpowder Creek
City, County and other Location Information: Caldwell County, Bridge #90 over Gunpowder Creek on SR 1718(Deal Mill Road) near Granite Falls..
Date Construction Completed: 3/11/09 Monitoring Year: (2) of 5
Ecoregion: 8 digit HUC unit 03050101
USGS Quad Name and Coordinates: Granite Falls N 35.84415, W 81.43603
Rosgen Classification: Proposed C5 Stream Type
Length of Project: 315' Urban or Rural: Rural Watershed Size:
Monitoring DATA collected by: M. Green Date: 2/25/10
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Road Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov
Consultant Information:
Name:
Address:
Telephone Number: Email address:
Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level 1 ~~2~~ ~~3~~
Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit States: ***(COE Permit Requirements):*** The permittee shall perform the following components of Level I monitoring each year for the 5-year monitoring period: Reference photos; plant survival (i.e., identify specific problem areas (missing, stressed, damaged or dead plantings), estimated causes, and proposed/required remedial action); visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. The permittee shall submit the monitoring reports to the Corps of Engineers, Raleigh Regulatory Field Office Project Manager, within sixty days after completing the monitoring. If less than two bankfull events occur during the first 5 years, the permittee shall continue monitoring until the second bankfull event is documented. The bankfull events must occur during separate monitoring years. In the event that the required bankfull events do not occur during the five-year monitoring period, the Corps of Engineers, in consultation with the resource agencies, may determine that further monitoring is not required. It is suggested that all bankfull occurrences be monitored and reported through the required monitoring period. The permittee shall perform and submit photo documentation twice each year (summer and winter) for the 5-year monitoring period, and for any subsequently required monitoring period.

(DWQ Permit Requirements): The permittee shall visually monitor the vegetative plantings to assess and ensure complete stabilization of the mitigation stream segments. The monitoring shall be conducted annually for a minimum of three (3) years after final planting. Photo documentation should be utilized to document the success of the riparian vegetation and the results submitted in a final report to DWQ within sixty (60) after completing the monitoring. After three (3) years a site visit shall be conducted by DWQ staff to "close out" the mitigation site.

Section 1. PHOTO REFERENCE SITES

(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site:
6 photos were taken from 3 photo point locations

Dates reference photos have been taken at this site: 9/30/09, 2/25/10

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

Other Information relative to site photo reference: A site map with photo point locations is included with this report.

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):

Estimated causes, and proposed/required remedial action:

ADDITIONAL COMMENTS: Planted vegetation is surviving along the streambank and within the buffer area. Streambank reforestation included American Sycamore, Yellow Poplar, River Birch, Black Cherry, Black Willow, Silky Dogwood. Other vegetation noted: lespedeza, pokeberry, Juncus.sp., white oak, and various grasses.

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.

Tributary to Gunpowder Creek is stabilized for the Year 2 Winter evaluation. The two crossvanes that had water piping under them within the step pool area during the last evaluation are now functioning properly at this time. A bankfull event has occurred since last monitoring evaluation. There are two locations where minor bank scouring has occurred as noted below. NCDOT will continue to monitor this stream relocation.

Date 2/25/2010	Sta. 0+90 -NSD-	Sta. 1+10 -NSD-	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?	Minor bank scouring on right bank	Minor bank scouring on left bank			
Other problems noted?					

Tributary to Gunpowder Creek

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

Photo Point #2 (Downstream)

Photo Point #3 (Upstream)

Photo Point #3 (Downstream)

Year 2 Winter – February 2010

B-3126
LITTLE GUNPOWDER CREEK
PHOTO LOCATIONS

⊕ - PHOTO POINT LOCATIONS

Stantec

CONST. REV.

R/W REV.

APPROX. LOCATION WAS NOT DESIGNATED UTILITY REP. POINTED OUT AREA OF CROSSING

CLASS II RIP RAP STRUCTURE ITEM

END STREAM RELOCATION STA 3+15 = STA 16+11 -L- 60' Lt.

16+80.00 160.00

BEGIN 3 STRAND BW FENCE 16+00

PROP. 3 STRAND BW FENCE

19+24.00 145.00

J. CARL & M.
DB 688
DB 369

STEP POOLS SEE DETAIL SHT. 2C

CROSS VANE SEE DETAIL SHT. 2C

NATURAL CHANNEL SHOWN IN DETAIL SEE SHT. 2A DOE 1300 CY

BEGIN STREAM RELOCATION STA 0+00 = STA 18+87 -L- 86.5' Lt

SEE NOTE 1

PROP. LINE FOLLOWS CL CREEK

GUNPOWDER CREEK

173.59' N19°21'57"W

50.84' N89°27'13"E

330.45' N19°21'57"W

158.00' N03°57'08"E

15" CSP W/ 3 ELBOWS

24" CMP REMOVE

BL-3 -L- POS 20+30.5

BL-PMC 23+13.25

b3126_photopoints.dgn 10/13/2009 7:31:53 AM