

ANNUAL REPORT FOR 2005



**Rocky Hock Creek Bridge
Chowan County
TIP No. B-3435
CAMA permit No. 105-02**



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SUMMARY

The Rocky Hock Creek Bridge Mitigation Site (B-3435) is located in Chowan County. This is an annual report documenting compensatory mitigation for temporary impacts associated with the replacement of Bridge No. 4 on SR 1207 over Rocky Hock Creek. The mitigation site was completed in December 2004.

The temporary impacts encompassed approximately 0.04 acres. The area that was impacted by mechanized clearing is being monitored to ensure that it returns to wetland jurisdictional status.

According to the *On-site Mitigation Plan for the Proposed replacement of Bridge No. 04 on SR 1207 over Rocky Hock Creek in Chowan County, North Carolina (27 June 2002)*, NCDOT is required to maintain and monitor gauges for one year. Based on the data collected from the on-site surface gauge and rain gauge, the fluctuations in the depth of the surface water is not solely attributed to rainfall events as required by the mitigation plan. The Rocky Hock Mitigation site has met the success criteria established by the mitigation plan and fulfilled the mitigation monitoring requirements, therefore NCDOT recommends removing the gauges.

After the first year of monitoring, the Rocky Hock Creek Bridge site shows by visual observation that the temporarily impacted area is returning to wetland jurisdictional status.

NCDOT recommends continuing vegetation monitoring of this site.

1.0 INTRODUCTION

1.1 Project Description

The Rocky Hock Creek Bridge Mitigation Site (B-3435) is located in Chowan County. This is an annual mitigation report for temporary impacts associated with the replacement of Bridge No. 4 on SR 1207 over Rocky Hock Creek (Figure 1).

1.2 Purpose

In order for a temporarily impacted site to be considered successful, the site must return to wetland jurisdictional status. This report details the hydrologic and vegetative monitoring in 2005 at the Rocky Hock Creek Bridge site.

1.3 Project History

December 2004	Project Completed
July 2005	Vegetation Monitoring (1 year)
March – December 2005	Hydrologic Monitoring (1 year)

2.0 HYDROLOGY: (YEAR 1 MONITORING)

2.1 Success Criteria

According to the *On-site Mitigation Plan for the Proposed replacement of Bridge No. 04 on SR 1207 over Rocky Hock Creek in Chowan County, North Carolina (27 June 2002)*, both restoration and enhancement areas will be considered

“a success if the areas exhibit periodic fluctuations of the water level that do not correspond to local rainfall events or that correspond disproportionately to local rainfall events. The intent here is to be able to identify fluctuations that can be attributed to wind tides versus those that may be due to precipitation.”

The NCDOT is required to maintain and monitor the gauges for one year.

2.2 Hydrologic Description

The site was constructed by removing the existing causeway and returning the elevation to that of the adjacent wetlands. One surface water gauge and one rain gauge were installed to record fluctuation in surface water depths compared to rainfall events.

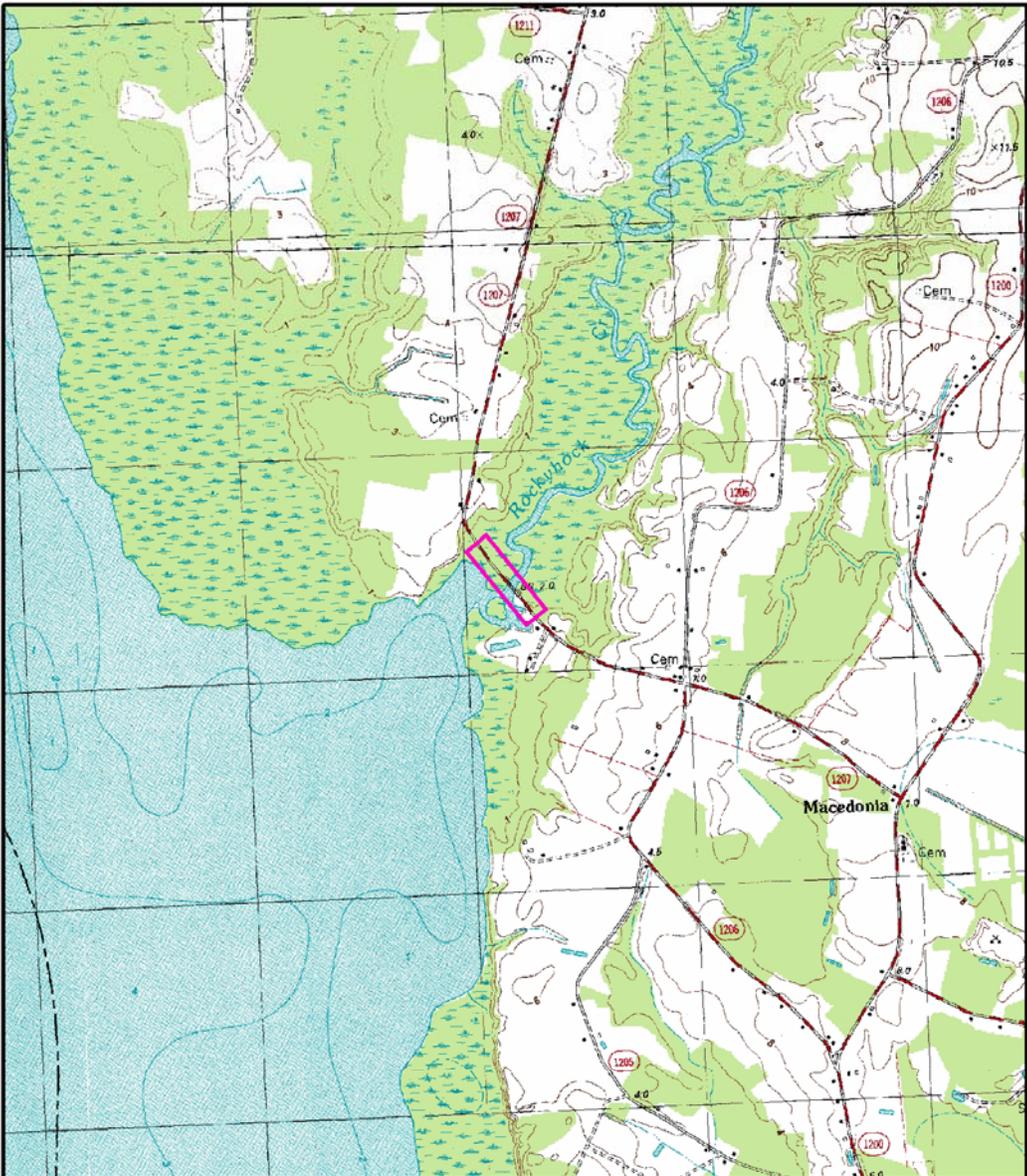


Figure 1. Rocky Hock Creek Bridge Site Location Map

Approximate Project Location

0 1,000 2,000

Feet

N

2.3 Results of Hydrologic Monitoring

2.3.1 Site Data

The resource agencies in conjunction with NCDOT decided that since Rocky Hock is part of a wind driven tidal system, it must exhibit occasional surface flooding that is attributed to wind tides and not associated with precipitation.

The data collected from the on-site surface and rain gauge show fluctuations in the depth of the surface water that is not solely attributed to rainfall events.

2.3.2 Climate Data

Figure 2 represents an examination of the local climate in comparison with historical data in order to determine whether 2005 was “normal” in terms of climate conditions. The two lines represent the 30th and 70th percentiles of monthly precipitation for Edenton, NC. The bars are monthly rainfall totals for 2005.

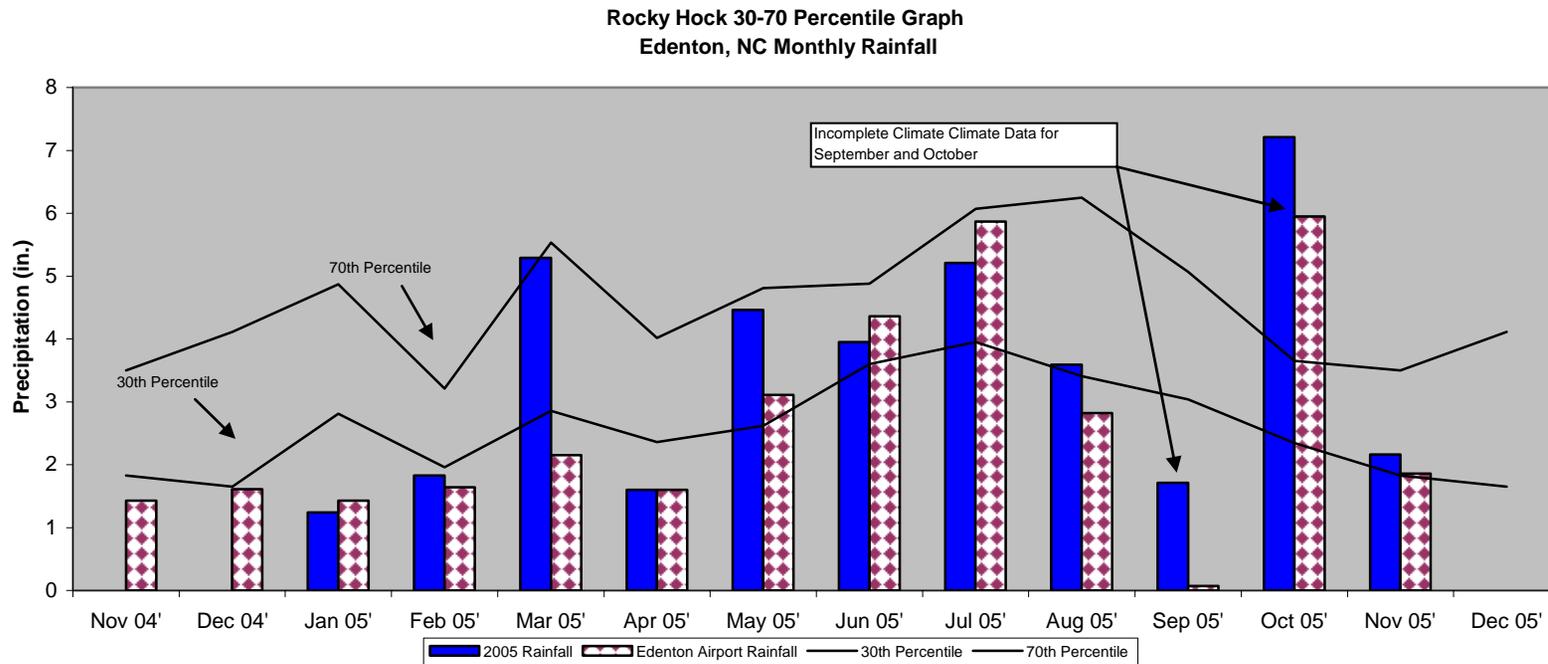
The historical data was collected from the State Climate Office of North Carolina. The rainfall data from the Edenton Station is incomplete for September and October. On-site rainfall was collected from the middle of January through December.

Overall, the on-site rainfall for 2005 was normal. The rainfall for January, February, April and September was below normal. The rainfall for March, May, June, July, August, and November was normal and October was above normal.

2.4 Conclusions

As required by the mitigation plan, the data collected from the on-site surface and rain gauge show that the fluctuations in the depth of the surface water is not solely attributed to rainfall events.

Figure 2. 30-70 Percentile Graph.



3.0 VEGETATION: (YEAR 1 MONITORING)

3.1 Success Criteria

Due to the possibility that previous compaction, mechanized clearing, and/or other site alterations might prevent the temporary wetland impact area from returning to wetland jurisdictional status, the permittee shall provide an annual update on the wetland areas temporarily impacted by this project. This annual update will consist of photographs and a brief report on the progress of the temporarily impacted areas. After three years of monitoring, the permittee shall schedule a field meeting with Division of Coastal Management (DCM), Department of Water Quality (DWQ), and Wildlife Resource Commission (WRC) to determine if the temporarily impacted areas have re-attained jurisdictional wetland status. If at the end of three years the area has not re-attained jurisdictional wetland status, DCM and the above listed agencies shall determine whether a compensatory wetland mitigation plan will be required.

3.2 Description of Species

There were no species planted to compensate for the temporary impacts. The temporarily impacted areas were left to revegetate naturally.

3.3 Results of Vegetation Monitoring

Species noted in the temporary impact area are as follows: cattails, arrowhead, black willow, sawgrass, fennel, green ash, wool-grass, rush, fern, and sweetgum.

3.4 Conclusions

There were approximately 0.04 acres of temporary impacts on site. Rocky Hock Creek Bridge site shows signs that natural re-vegetation is occurring and that the impacted areas are re-attaining jurisdictional wetland status.

4.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS

According to the *On-site Mitigation Plan for the Proposed replacement of Bridge No. 04 on SR 1207 over Rocky Hock Creek in Chowan County, North Carolina (27 June 2002)*, NCDOT is required to maintain and monitor gauges for one year. Based on the data collected from the on-site surface gauge and rain gauge, the fluctuations in the depth of the surface water is not solely attributed to rainfall events as required by the mitigation plan. The Rocky Hock Mitigation site has met the hydrology success criteria established by the mitigation plan and fulfilled the mitigation monitoring requirements, therefore NCDOT recommends removing

the gauges. NCDOT will continue vegetation monitoring at the Rocky Hock Creek Bridge Site.

APPENDIX A

SURFACE GAUGE GRAPH

APPENDIX B

SITE PHOTOS

Rocky Hock Creek Bridge



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

Rocky Hock Creek Bridge



Photo 7



Photo 8