

# ANNUAL REPORT FOR 2001



**Little McQueen Mitigation Site  
Robeson County  
Project No. 8.T461801  
TIP No. R-2558**



Prepared By:  
Natural Systems Unit & Roadside Environmental Unit  
North Carolina Department of Transportation  
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## **SUMMARY**

The Little McQueen Mitigation Site is located in Robeson County and serves as mitigation for the widening of US 74 in Robeson and Columbus Counties. Planted in 1999, the site is to be monitored for vegetation success a minimum of three years.

Vegetation monitoring was performed on the approximately 2.3 acres involving tree planting on this site. Based on the results of the third year monitoring, an average density of 389 trees/acre was obtained from the three vegetation transects. This is above the required 320 trees/acre (for 3 years) stated in the success criteria. NCDOT requests that 2001 represent the final year for vegetation monitoring. Although the vegetation count for year one (1999) included data for transect 1 only, the NCDOT considers that data from the 2000 and 2001 monitoring periods, including transects 1, 2 and 3, demonstrates that the vegetation planting at this site has been successful. The years 2000 and 2001 yielded vegetation counts above the 320 trees/acre requirement and have shown an increase from 373 trees/acre (2000) to 389 trees/acre (2001). Naturally regenerating target seedlings can also be found along several sections within the site.

Furthermore, the Special Conditions (Section h, Numbers 1,2,3 and 4) required for the Department of the Army Permit (Action ID # 199501106) have been completed. The specified culverts were removed from the site and open roads (other than the main access road) were made impassible by tree plantings and installing a cable lock at the entrance of the site. Therefore, NCDOT recommends closing the Little McQueen Mitigation Site.

## 1.0 INTRODUCTION

### 1.1 Project Description

The Little McQueen Mitigation Site is located in the southeastern corner of Robeson County. The property is bounded by US 74 to the south, NC 72 to the west, the Lumber River to the east and Lumber River State Park to the north (Figure 1). The site contains approximately 810 acres and serves as mitigation for the widening of US 74 in Robeson and Columbus Counties (DOA Action ID. 199501106). The majority of Little McQueen Tract is preservation, but small portions have been planted to enhance the site.

The site was first monitored for vegetation in 1999. However, two of the three planting transects were inaccessible due to flooding from hurricanes. The second year of monitoring (2000) included vegetation monitoring results for all three planting transects, as does the 2001 annual monitoring.

### 1.2 Purpose

Monitoring of the Little McQueen Tract is required to demonstrate successful mitigation. The site is monitored for vegetation only, no hydrologic monitoring is required. The following report details the results of vegetative monitoring during 2001 at the Little McQueen Mitigation Site.

### 1.3 Project History

April 1999	Site planted
October 1999	Vegetation Monitoring (1 yr.)
October 2000	Vegetation Monitoring (2 yr.)
August 2001	Vegetation Monitoring (3 yr.)

## 2.0 DEBIT LEDGER

Little McQueen	Mit. Plan	Debit	TIP DEBIT
Habitat	Acres at Start	Acres Remain	
BLH / SPH Preservation	810	810	R-2558
		0	

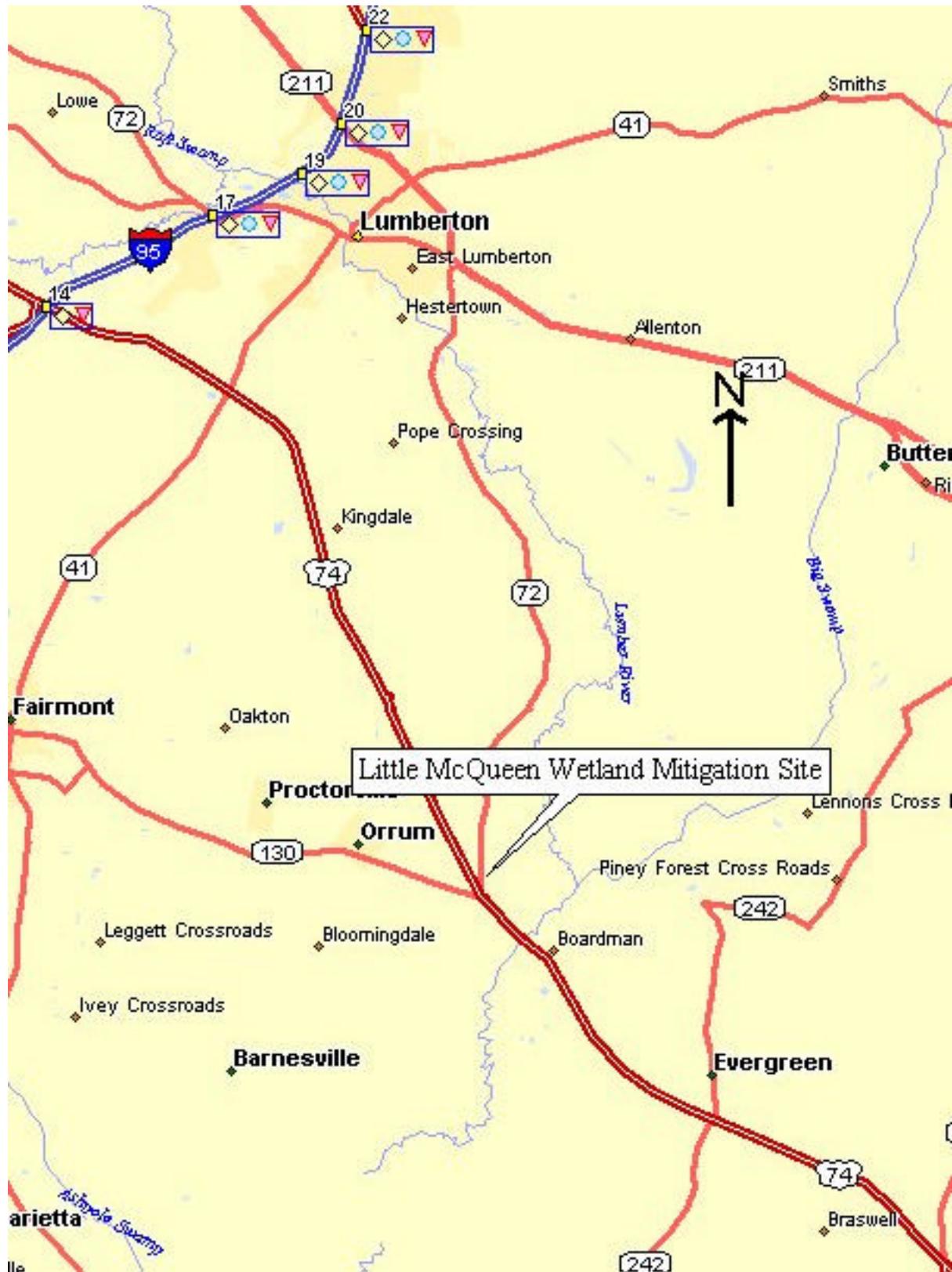


Figure 1  
Site Location Map

### 3.0 VEGETATION: LITTLE MCQUEEN MITIGATION SITE (YEAR 3 MONITORING)

#### 3.1 Success Criteria

NCDOT will monitor the site for three years. 320 stems per acre survival criterion for planted seedlings will be used to determine success.

#### 3.2 Description of Species

The following species were planted in the Wetland Area:

##### Wetland Area (2.3 Ac.)

*Taxodium distichum*, Bald cypress

*Quercus michauxii*, Swamp Chestnut Oak

*Nyssa aquatica*, Water Tupelo

#### 3.3 Results of Vegetation Monitoring (3 year)

Transect #	Baldcypress	Swamp Chestnut Oak	Water Tupelo	Total (1 year)	Total (at planting)	Density (Tree/Acre)
1	12	3	1	16	23	473
2	6		3	9	20	306
3	1	7		8	14	389
<b>Avg. Density</b>						<b>389</b>

**Site Notes:** Other species noted: *Aster* sp., grapevine, fennel, volunteer cypress and water oak.

As noted last year there was no evidence of vehicle or foot traffic observed on NCDOT property. There are several large trees down across the planted transects. The culvert that was removed across Steven’s Canal has made access extremely difficult.

### **3.4 Conclusions**

Of the 810 total acres on this site, approximately 2.3 acres involved tree planting. There were 3 vegetation monitoring transects established throughout the planted areas. The 2001 vegetation monitoring of the site revealed an average density of 389 trees/acre, which is above the 320 trees/ acre success criteria.

### **4.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS**

The 2001 vegetation monitoring of the site revealed an average density of 389 trees/acre. This is above the 320 trees/acre requirement in the third year of monitoring according to the success criteria. Therefore, the NCDOT proposes closing the Little McQueen Mitigation Site. Although the vegetation count for year one (1999) was incomplete, the NCDOT considers that data from the 2000 and 2001 monitoring periods represents trees planted in 1999 that survived the flooding of that first year. The years 2000 and 2001 yielded vegetation counts above the 320 trees/acre requirement and have shown an increase from 373 trees/acre (2000) to 389 trees/acre (2001). Naturally regenerating target seedlings are present along several sections within the site.

The Special Conditions (Section h, Numbers 1,2,3 and 4) required for the Department of the Army Permit (Action ID # 199501106) have been completed. The specified culverts were removed from the site and open roads (other than the main access road) were made impassible by tree plantings and installing a locked cable at the entrance of the site. Therefore, NCDOT recommends closing the Little McQueen Mitigation Site.

**APPENDIX A**  
**SITE PHOTOS**



Photo 1 (Transect 1)



Photo 2 (Transect 1)



Photo 3 (Transect 2)



Photo 4 (Transect 2)



Photo 5 (Transect 3)