



EEP Project Closeout Summary

Project ID & Status

Project Name/Number: Grimesland Phase I
EEP ID: 156
County: Pitt
Project Type: Wetland Restoration, Enhancement & Preservation
Current Status: 5 Years of Monitoring complete

Project Setting

Basin: Tar Pam
 Physiographic Region: Coastal Plain
 Ecoregion: Northern Inner Coastal Plain
 USGS Hydro Unit: 03020103

Project Performers

DOT Project Transfer in 2005

Project Timeline

Milestone	Date
Construction Completed	2000
Monitoring Year-1	June 2001
Replanting	March 2002
Monitoring Year-2	June 2003
Monitoring Year-3	June 2004
Monitoring Year-4	June 2005
Monitoring Year-5	June 2006

Project Restoration Components and Mitigation Assets

Wetland	Restoration Component	Asset Data				Wetland Type
		Level	Ratio	Acres	WMU	
	Bottomland Hardwood	C	0.33	7.80	2.60	RIP
	Cypress Gum Complex	P	0.20	348.00	69.60	RIP

Asset Summary

Level	Multip	Acres	WMU
R	1.00	0.0	0.0
E	0.50	0.0	0.0
C	0.33	7.80	2.60
P	0.20	348.00	69.60
		355.80	72.20

Standard Ratios

	Level	Ratio	Multiplier
Wetland	R	1	1.000
Wetland	E	2	0.500
Wetland	C	3	0.333
Wetland	P	5	0.200

The 550-acre Grimesland Sand Pit Mitigation Site is located in Pitt County near the community of Grimesland. The site is currently owned and mined by NCDOT. It is bounded on the north and the east by Grindle Creek, on the west by croplands and pine plantation, and on the south by the floodplain of the Tar River and the Tar River itself.

The site includes creation of 7.8 acres of forested riverine wetlands (cypress-gum swamp and coastal plain bottomland hardwoods) and the preservation of 348 acres of riverine cypress-gum swamp and bottomland hardwood forest.

P1 = Priority I Restoration
 P2 = Priority II Restoration
 P3 = Priority III Restoration

R = Restoration
 E = Wetland Enhancement
 EI = Stream Enhancement I
 EII = Stream Enhancement II
 C = Wetland Creation
 P = Preservation

SMU = Stream Mitigation Units
 WMU = Wetland Mitigation Units
 P/I/E = Perennial, Intermittent, Ephemeral

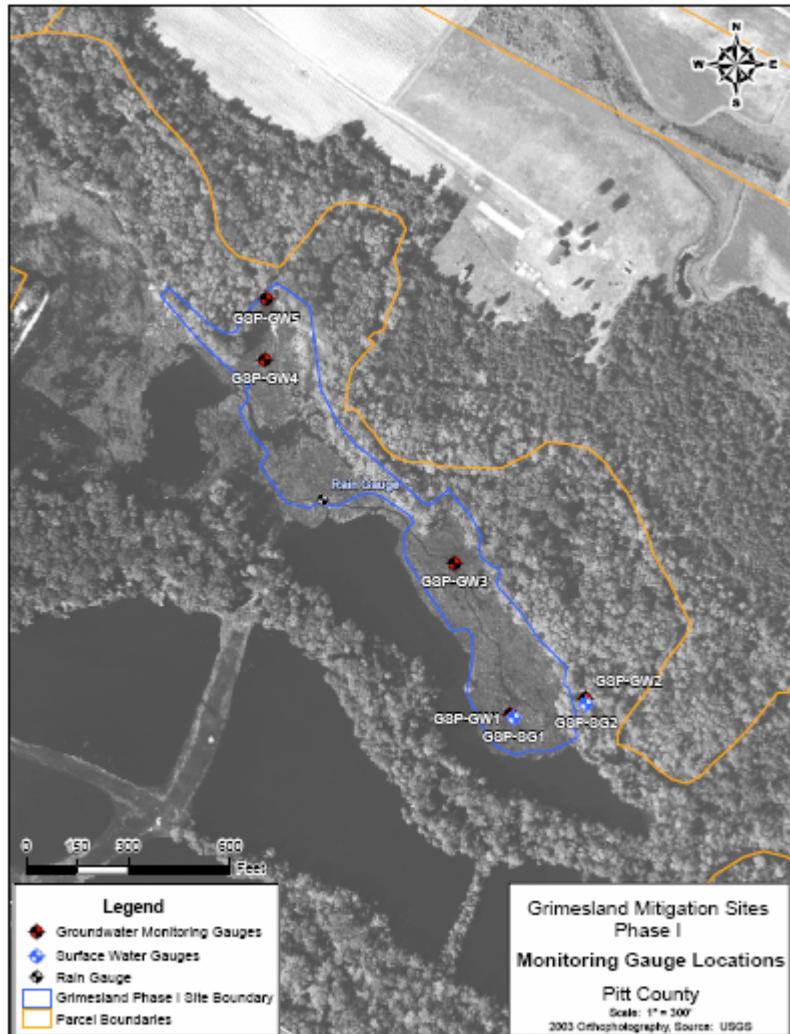


Figure 2

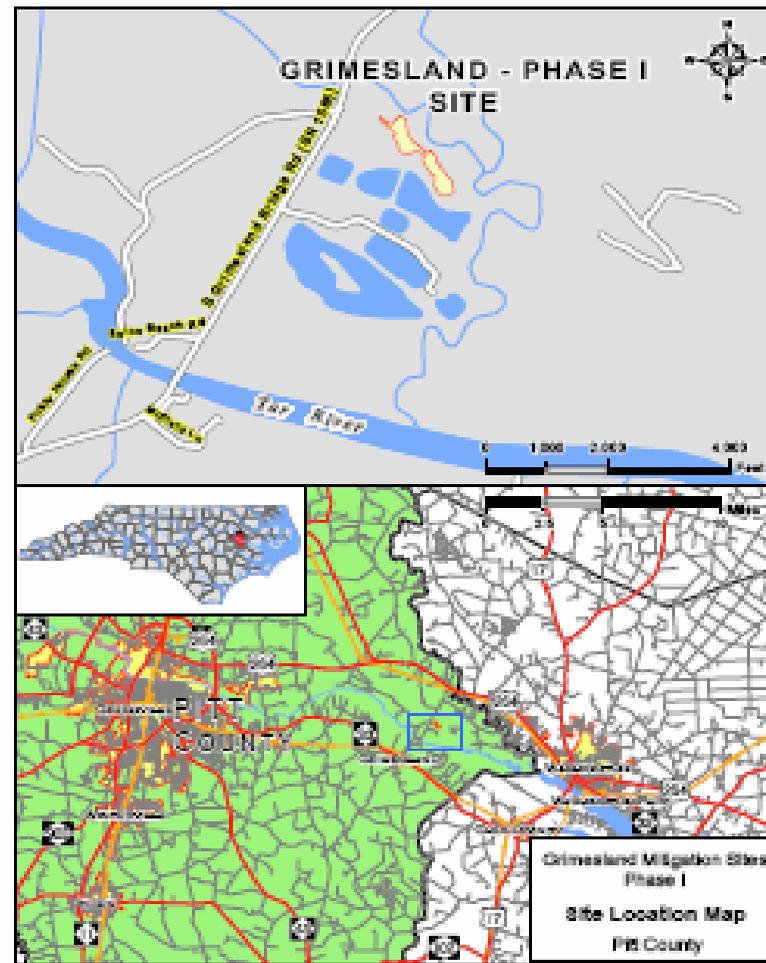


Figure 1

Table 1. 2002 Hydrologic Monitoring Results

Monitoring Gauge	< 5%	5 – 8%	8 – 12%	> 12.5%	Actual %	Success Dates
GSP-GW1				✓	58.7	June 25- Nov. 16
GSP-GW2				✓	100.0	March 15- Nov. 16
GSP-GW3				✓	100.0	March 15- Nov. 16
GSP-GW4				✓	58.7	June 25- Nov. 16
GSP-GW5				✓	100.0	March 15- Nov. 16

Specific Gauge Problems:

GW1: Data was unable to be downloaded in June; thus there is no data available between May 14 and June 24.

GW 5: The gauge malfunctioned on March 30, and was not able to be downloaded until June 24.

SG1: This gauge stopped reading between June 16 and June 24, when it was repaired. The gauge also did not record between October 3 and October 8.

SG2: Gauge stopped recording between October 3 and October 7.

Table 1. 2003 Phase I Hydrologic Monitoring Results

Monitoring Gauge	< 5%	5 – 8%	8 – 12%	> 12.5%	Actual %	Success Dates
GSP-GW1+				×	100	March 15-Nov 16
GSP-GW2+				×	46.6	April 30-August 22 Sept 18-Nov 16
GSP-GW3+				×	81.4	April 30-Nov 16
GSP-GW4+				×	100	March 15-Nov 16
GSP-GW5*				×	36.4	June 20-Sept 17
GSP-SG1						
GSP-SG2						

* Gauge was inundated with 10" of standing water for approximately 2 months.

+ Gauge met the success criterion during an average rainfall month (March, June and August).

Specific Gauge Problems:

- GW5 experienced gauge malfunctions and stopped recording data (April 1-June 20) and (September 18-December 1). During the period from June 20-August 20, the gauge was inundated with 10" of standing water.

Table 1. 2004 Phase I Hydrologic Monitoring Results

Monitoring Gauge	< 5%	5 – 8%	8 – 12%	> 12.5%	Actual %	Success Dates
GSP-GW1+				x	48.2	March 15-April 24 May 23-July 14 July 21-Nov 16
GSP-GW2+				x	71.3	March 15-Sept 6
GSP-GW3+				x	100	March 15-Nov 16
GSP-GW4+				x	79.8	March 15-Aug 31 Sept 29-Nov 16
GSP-GW5+				x	38.9	May 21-Aug 24 Sept 29-Nov 16

+ Gauge met the success criterion during an average rainfall month (February, April, May, August, September, October, and November).

Specific Gauge Problems:

- GW5 was not set to record every 24 hours. This resulted in the gauge recording data every other day.

Table 1. 2005 Phase I Hydrologic Monitoring Results

Monitoring Gauge	< 5%	5 – 8%	8 – 12%	> 12.5%	Actual %	Success Dates
GSP-GW1+				x	99.6	March 15-May 2 May 4-November 16
GSP-GW2+				x	82.2	March 15-April 26 June 10-November 16
GSP-GW3+				x	100	March 15-November 16
GSP-GW4+				x	77.7	March 15-September 22
GSP-GW5+				x	100	March 15-November 16

+ Gauge met the success criterion during an average rainfall month (March, April, May, July and September).

Appendix A contains plots of the groundwater depth at each monitoring gauge location during 2005. In addition to documenting the groundwater level relative to the ground surface (within 12"), these monitoring gauge graphs are designed to show the reaction of the groundwater level to specific rainfall events. The maximum number of consecutive days that the gauge indicates successful hydrology is noted on each graph. Precipitation events recorded by the onsite rain gauge are included on each graph. Plots of the data recorded at each of the two surface water gauges are also included in Appendix A.

Table 1. 2006 Phase I Hydrologic Monitoring Results

Monitoring Gauge	< 5%	5 – 8%	8 – 12%	> 12.5%	Actual %	Success Dates
GSP-GW1				x	97.6	March 21-November 16
GSP-GW2				x	100	March 15-November 16
GSP-GW3				x	100	March 15-November 16
GSP-GW4				x	100	March 15-November 16
GSP-GW5				x	100	March 15-November 16

Stem Counts Per Acre By Plot

		Plots				
MY	CY	Ave	1	2	3	4
Y1	2001	None				
Y2	2002	646	663	680	608	633
Y3	2003	541	493	680	579	411
Y4	2004	473	374	680	506	332
Y5	2005	452	374	583	521	332
Y6	2006	441	357	555	521	332