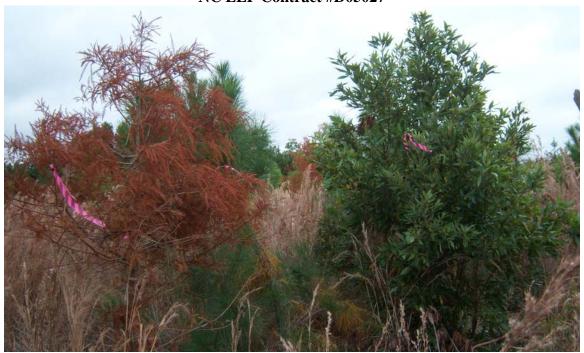
"Simpson Tract" Buffer Restoration Project

Beaufort County, NC Tar-Pamlico River Basin (Cataloging Unit #03020104)

Annual Monitoring Report – Year 5 of 5 (Task 11)

NC EEP Contract #D05027



Prepared For:

North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program 1652 Mail Service Center Raleigh, NC 27699-1652



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Submitted By:

Wetlands Resource Center 3970 Bowen Road Canal Winchester, Ohio 43110

Project Manager:

Cal Miller Office: 614-864-7511 Cell: 614-327-7034

Email: wetlandsresource@aol.com

Prepared By:

Land Management Group, Inc. 3805 Wrightsville Avenue, Suite 15 Wilmington, NC 28403

TABLE OF CONTENTS

	EXECUTIVE SUMMARY	. 1
l.	NARRATIVE Introduction Mitigation Goals and Objectives Pre-Construction Conditions Project Implementation	.2 .2
II.	AS-BUILTS	.3
III.	MONITORING PLAN	.4
IV.	MONITORING RESULTS (YEAR 5)	.4
٧.	CONCLUSION	.5
TABLE	1. PLANTED SPECIES LIST 2. PLANTED SPECIES LIST – SUPPLEMENTAL PLANTING (FEBRUARY 2009) 3. PLANTED SPECIES LIST – SUPPLEMENTAL PLANTING (MARCH 2010) 4. PLANTED SPECIES LIST – SUPPLEMENTAL PLANTING (MARCH 2011) 5. ANNUAL MONITORING DATA (YEAR 5) – CUMULATIVE SPREADSHEET	
FIGURI	ES	
	 VICINITY MAP NRCS SOIL SURVEY USGS TOPOGRAPHIC QUADRANGLE 1998 AERIAL PHOTOGRAPHY MAP BUFFER RESTORATION MAP 	
APPEN	DICES	
	 A. SITE PHOTOGRAPHS B. CONSERVATION EASEMENT PLAT – September 2006 C. INDIVIDUAL PLOT DATA SHEETS 	

EXECUTIVE SUMMARY

Prior to project implementation, the Simpson Tract was managed for silvicultural production. The site consisted of clear-cut timber blocks with trees either absent or sparsely populated. Under contract with the EEP, Wetlands Resource Center (WRC) restored 45.0 acres of riparian buffer which will improve water quality within Pungo Creek (a tributary of the Pungo River) in Beaufort County, NC.

The entire 45.0 acre area has been planted with an appropriate mixture of tree and shrub species at an average density of 600 stems/acre. Initial planting was completed in February 2007. A total of twenty-three (23) 0.10-acre permanent plots corresponding to a total of 2.3 acres (equivalent to 5% of the restoration area) were established throughout the project area. Year 5 monitoring was conducted in November 2012. Per the approved restoration plan, vegetative planting is deemed successful if survivorship of plantings and volunteers of desirable species meets or exceeds a target stem density of 320 stems/acre. Based on Year 5 monitoring, the success criterion has been met.

A total of 2,592 woody stems (excluding volunteer species such as sweet gum, *Liquidambar styraciflu*a, and red maple, *Acer rubrum*) were enumerated during the Year 5 monitoring event. This total corresponds to an average density of 1,127 stems per acre throughout the project area. At the conclusion of the Year 5 monitoring, all of the twenty-three plots met the established success criteria for target stem density. These totals represent a notable improvement over the conditions observed during the Year 3 and Year 4 monitoring events. These improvements are likely due to the supplemental planting conducted in March 2010 and 2011 and the persistence of relatively normal levels of precipitation during the majority of the growing season.

The following report summarizes the restoration project and includes more specific information related to project implementation and site progress through Year 5 monitoring.

1.0 NARRATIVE

Introduction

As approved by the EEP, WRC implemented the restoration of 45.0 acres of riparian buffer located at the headwaters of Pungo Creek, a fourth-order tributary of the Pungo River within the Tar-Pamlico River Basin (USGS 8-digit Hydrologic Unit 03020104; DWQ Subbasin 03-03-07). The project area is part of the "Simpson Tract," located approximately 10 miles south of Plymouth in Beaufort County, NC (refer to Figure 1). The project includes the establishment of characteristic tree and shrub species adjacent to open silvicultural ditches on the north side of Rodman Road (refer to Figures 2-5).

Mitigation Goals and Objectives

The proposed restoration project is intended to provide suitable, high-quality riparian buffer restoration as compensatory mitigation for buffer impacts authorized through the NC Division of Water Quality. The objective of the project is to restore appropriate vegetation and diffuse flow conditions to help reduce non-point source discharge of contaminants into adjacent water bodies and increase flood water retention. The primary function of the buffer restoration project detailed in this document is to restore the nitrogen (N) and sediment removal capacity of those areas situated adjacent to surface waters. In addition, the project will provide ancillary benefits to aquatic and terrestrial wildlife via enhanced niche habitat, microclimate modification and shade, and increased food-web support.

Pre-Construction Conditions

The 45-acre restoration area is part of a larger timber tract totaling 1,391 acres. Approximately 950 acres have been determined to be non-jurisdictional ("non-wetlands") by the NRCS (USACE concurrence of this determination has also been provided in previous submittals to the EEP). The remaining acreage has been confirmed to be jurisdictional wetlands. The predominant land use of the tract (both jurisdictional and non-jurisdictional areas) is silvicultural production. Prior land use practices (including herbicide, pesticide, and fertilizer application) serve as potential contributors to decreased water quality of adjacent surface waters (i.e. ditches and 'blue-line' streams). The natural vegetative assemblage of the tract has been modified over the years via prescribed drainage improvements (i.e. ditching), bedding, and planting of loblolly pine (*Pinus taeda*). These silvicultural practices have resulted in a community dominated by pine in more mature stands outside of the proposed buffer area. Hardwood species characteristic of headwater swamp communities of the Coastal Plain are either absent entirely or occur only in sparse locations. Typical canopy species of an undisturbed area would include swamp tupelo (*Nyssa biflora*), bald cypress (*Taxodium distichum*), pond pine (*Pinus serotina*), and Atlantic white cedar (*Chamaecyparis thyoides*). Understory species typical of non-

riverine swamp forest communities include American titi (*Cyrilla racemiflora*), sweet bay (*Magnolia virginiana*), red bay (*Persea borbonia*), fetterbush (*Lyonia lucida*), red maple (*Acer rubrum*), and catbrier (*Smilax* species).

Project Implementation

Site preparation commenced in the fall of 2006. During this period, areas of invasive or non-target species were drum-chopped and bush-hogged. Following these activities, a water-soluble herbicide was applied by a licensed applicator to reduce competition within the project area.

Site planting was completed on February 23, 2007. The installation of approximately 35,000 seedlings was supervised by LMG to ensure proper spacing and planting depths. LMG obtained a mix of hardwood and shrub seedlings which accurately represent the targeted headwater swamp community discussed in the approved restoration plan (Table 1). Hardwood tree seedlings comprised a majority of the planting for Zone 1 (150' wide), while shrubs were installed throughout Zone 2 (remaining 50'). Seedlings were planted on approximately 8' centers at a depth sufficient to cover the root collar throughout the project area. Following the planting activities, LMG inspected the project area to ensure that seedlings had been installed correctly.

Supplemental planting was initiated in February 2009. This planting included approximately 16,000 bare root seedlings and 800 larger potted specimens in an effort to offset observed mortality during Year 2 monitoring. Species such as bald cypress, black gum, and green ash were included as part of the supplemental planting. Table 2 provides additional information on quantity and size of the planted species.

Supplemental planting was also conducted in March 2010 and March 2011. The March 2010 supplemental planting included Atlantic white cedar, green ash, and a mix of common shrubs (Table 3). The March 2011 supplemental planting included bald cypress, black gum, green ash, and swamp black gum. Table 4 provides additional information on quantity and size of species planted in March 2011.

Refer to Appendix A for photographs of supplemental planting and existing site conditions during the Year 5 monitoring event.

2.0 AS-BUILTS

As specified by the approved restoration plan, a total of twenty-three (23) permanent monitoring plots were established, which corresponds to a total of 2.3 acres (equivalent to 5% of the restoration area). These plots were installed throughout the project area to provide for a representative sampling of the vegetative community.

Refer to the attached survey (Appendix B) of the buffer restoration area for the location and corresponding number of the permanent vegetative monitoring plots at the site.

3.0 MONITORING PLAN

Annual monitoring has been conducted near the end of each growing season for five years. Vegetative monitoring has been conducted at each of the twenty-three (23) 0.10-acre permanent plots. Vegetative planting is deemed successful if survivorship of plantings and volunteers of desirable species¹ meets or exceeds a target stem density of 320 stems/acre. Monitoring reports have been submitted annually to the EEP (by January 1 of each year). These reports have included results of vegetative monitoring and photographic documentation of site conditions. Monitoring reports have also identified contingency measures needed to remedy site deficiencies. For instance, supplemental planting has been necessary in areas of reduced survivorship.

4.0 MONITORING RESULTS

Year 5 monitoring of the permanent vegetation plots was conducted on November 13 through 15, 2012. A total of 2,609 stems were counted throughout the twenty-three plots, which correlates to an average of 1,134 stems per acre within the project area (Table 5). Bald cypress (*Taxodium distichum*) was the most abundant planted woody species, with an observed total of 358 individuals. Other target species such as loblolly bay (*Gordonia lasianthus*) and pond pine (*Pinus serotina*) were also prevalent within the monitored plots. A total of 2,592 stems of planted species and desirable volunteers were documented in the twenty-three plots, which correlates to an average of 1,127 stems per acre. Densities of planted species and desirable volunteers ranged from 490 stems/acre (Plot 5) to 2,890 stems/acre (Plot 2). Acceptable survivorship of target and volunteer species was found at all of the 23 plots. Overall, plots exhibited marked improvement from Year 4 monitoring.

Refer to Appendix A for photographs of current site conditions and Appendix C for information regarding individual plot totals.

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Desirable species are considered as noninvasive species characteristic of riparian habitats. Simpson Tract Riparian Buffer Annual Monitoring Report – Year 5 of 5 Contract No. D05027

5.0 CONCLUSION

WRC has completed the fifth and final year of monitoring for the 45.0 acres of buffer restoration located in TAR-7 of the lower Tar-Pamlico Basin. At the end of Year 5 monitoring, all of the 23 plots have successfully met the vegetative success criteria of 320 stems per acre. This represents a marked improvement over the Year 4 monitoring results. While initial site regeneration was compromised by extreme drought conditions in the early stages of the project, the additional plantings and recruitment have provided the valuable seed source necessary to regenerate the target community and meet the stem density requirements for the project. As the project continues to mature, the buffer area will continue to help decrease source nutrient loading and concurrently increase nutrient removal capacity. In addition, the project will provide ancillary benefits to aquatic and terrestrial wildlife via enhanced niche habitat, microclimate modification and shade, and increased food-web support. By doing so, the proposed project will help to effectively mitigate for authorized loss of buffer habitat within the Tar-Pamlico Basin.



TABLE 1. Simpson Buffer Plant List (Planted February 2007)

Buffer Zone	Zone 1 (Trees)	
Stem Target:	600/ac (30ac.)	17,000
Species	# planted	(% of total)
Bald cypress (<i>Taxodium distichum</i>)	5,000	27.78%
White Cedar (Chamaemycyparis thyoides)	3,000	16.67%
Black Gum (Nyssa sylvatica)	4,000	22.22%
Green Ash (Fraxinus pennsylvanica)	5,000	27.78%
	Zone 2 (Shrubs)	
	1,000/ac (15ac.)	18,500
Red Bay (<i>Persea borbonia</i>)	5,000	33.33%
Sweet Bay (<i>Magnolia virginiana</i>)	6,000	40.00%
Fetterbush (<i>Lyonia lucida</i>)	2,000	13.33%
Wax Myrtle (Myrica cerifera)	5,500	36.67%
Total	35,500	

TABLE 2. Simpson Buffer Plant List (Supplemental Planting February 2009)

Buffer Zone	Bare Root Seedlings	
Species	# planted	Size
Bald cypress (<i>Taxodium distichum</i>)	4,500	1'-2'
Tulip Poplar (<i>Liriodendron tulipifera</i>)	1,500	1'-2'
Black Gum (<i>Nyssa sylvatica</i>)	4,500	1'-2'
Pond Pine (<i>Pinus serotina</i>)	3,000	1'-2'
Green Ash (<i>Fraxinus pennsylvanica</i>)	3,600	1'-2'
Total	17,100	
	Potted Trees	
Species	# planted	Size
Bald cypress (<i>Taxodium distichum</i>)	246	4'-6'
Sweet Bay (<i>Magnolia virginiana</i>)	130	2'-4'
White Cedar (Chamaemycyparis thyoides)	113	2'-5'
Green Ash (<i>Fraxinus pennsylvanica</i>)	329	2'-5'
Total	818	

TABLE 3. Simpson Buffer Plant List (Supplemental Planting March 2010)

Buffer Zone	Potted Trees	
Species	# planted	Size
White Cedar (Chamaemycyparis thyoides)	150	3'-4'
Green Ash (Fraxinus pennsylvanica)	150	4'-5'
Total	818	

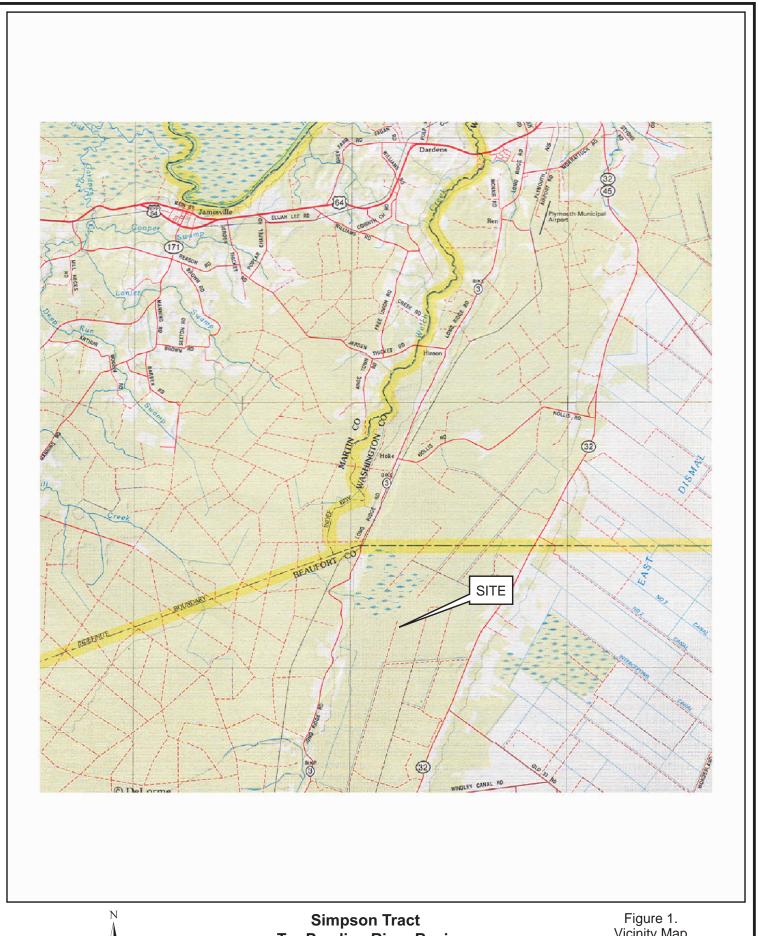
TABLE 4. Simpson Buffer Plant List (Supplemental Planting March 2011)

Buffer Zone	Bare Root Seedlings	
Species	# planted	Size
Bald cypress (<i>Taxodium distichum</i>)	10,000	1'-2'
Black Gum (<i>Nyssa sylvatica</i>)	7,200	1'-2'
Swamp Black Gum (<i>Nyssa biflora</i>)	800	1'-2'
Green Ash (Fraxinus pennsylvanica)	6,000	1'-2'
Total	17,100	

TABLE 5. MONITORING PLOT COMPARISON SIMPSON BUFFER RESTORATION YEAR 5 (2012)

	Plot #																							
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Atlantic White Cedar	8	4				5	2			1			1		6	2		1			1		3	34
Bald Cypress	44	11	6	5	25	39	22	14	35	20	7	5	3	10	19	14	8	21	15	9	18	2	6	358
Black Gum	1	6	1		1		2	1				1	1	1		3		2		1	1	2	2	26
Fetterbush	30	29	7	19		3		4				1		2			2		1			7		105
Green Ash									1								1	1			1		2	6
Pond Pine	25	5	7	14	9	14	26	33	19	15	20	10	19	9	2	4	4	1	3	10	2		2	253
Red Bay	18	33	6	6	2	3	5	9	5	1	3		1	2		1	1	4		3	1	2	8	114
Sweet Bay		2	1	1																2	2		2	10
Tulip Poplar								1							2	2								5
Wax Myrtle	10	16	15					2	11	38	4	1	1	9	4				3	1		3		118
American Holly		2				1		3	1						1									8
Bitter Gallberry	26	100	50	30									2	7	9	1	2	25	1		13	21	8	295
Blueberry	5	12	15	2	1	1	6	7	3			1		3			2	5	2	6		85		156
Loblolly Bay	70	60	40	46	10	26	19	47	22	18	32	71	46	15	19	30	30	36	53	40	6	25	15	776
Sweet Pepperbush						4	1								7		20	57	20	50	40	85		284
Zenobia		9	3		1	3	5	2	1				3	4	7				2		4			44
Persimmon		1																						1
Red Maple										13	1													14
Sweet Gum								1				1												2
TOTAL	237	290	151	123	49	99	88	124	98	106	67	91	77	62	76	57	70	153	100	122	89	232	48	2609
Total Counted Toward Success	237	289	151	123	49	99	88	123	98	93	66	90	77	62	76	57	70	153	100	122	89	232	48	2592
Stem Density (per ac)	2370	2890	1510	1230	490	990	880	1230	980	930	660	900	770	620	760	570	700	1530	1000	1220	890	2320	480	1127



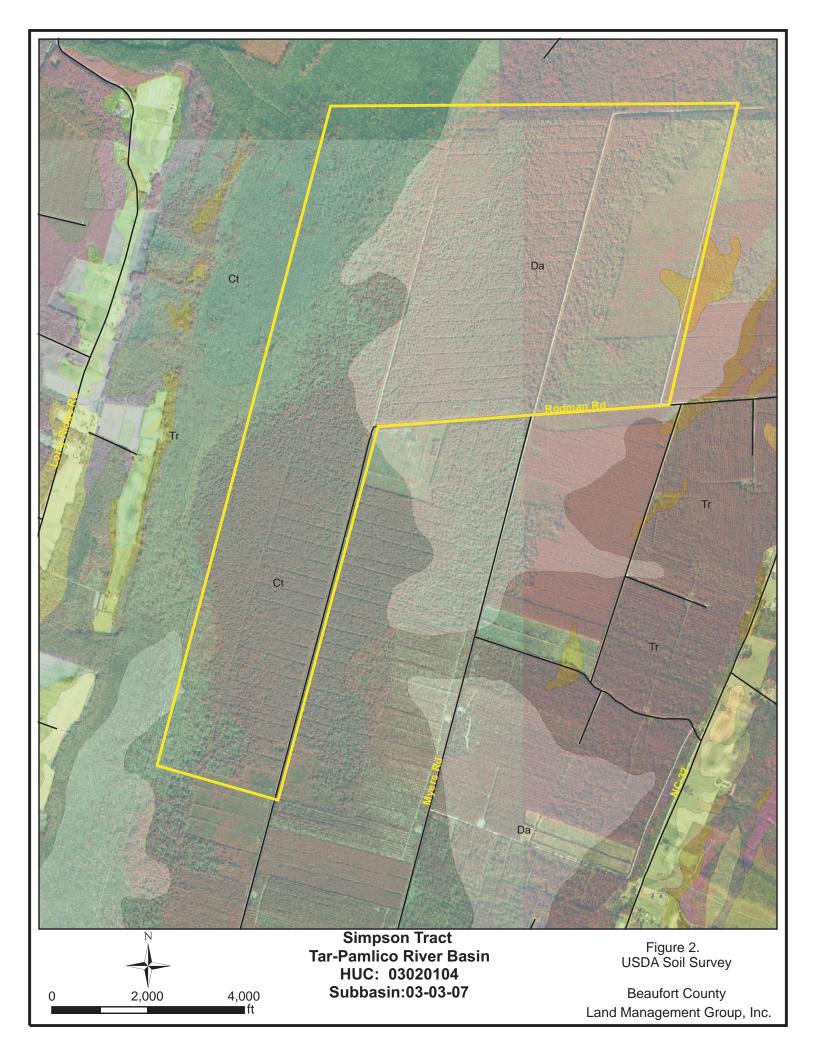


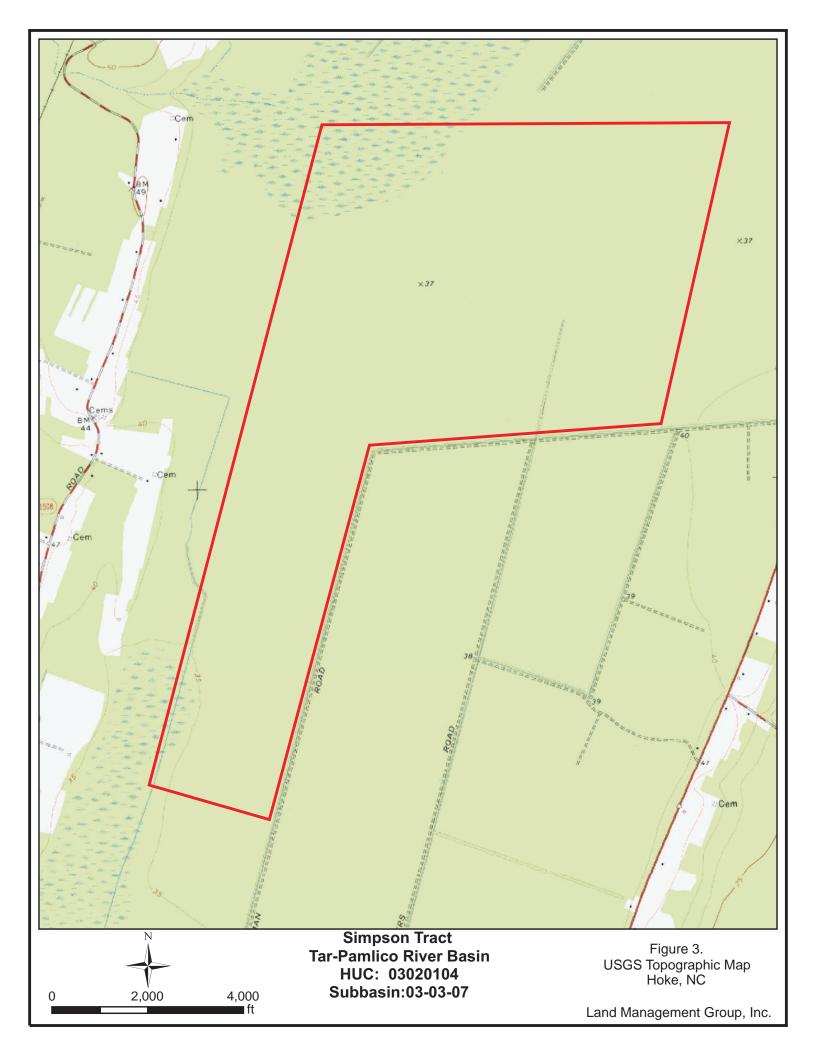
SCALE: 1" = 2 miles

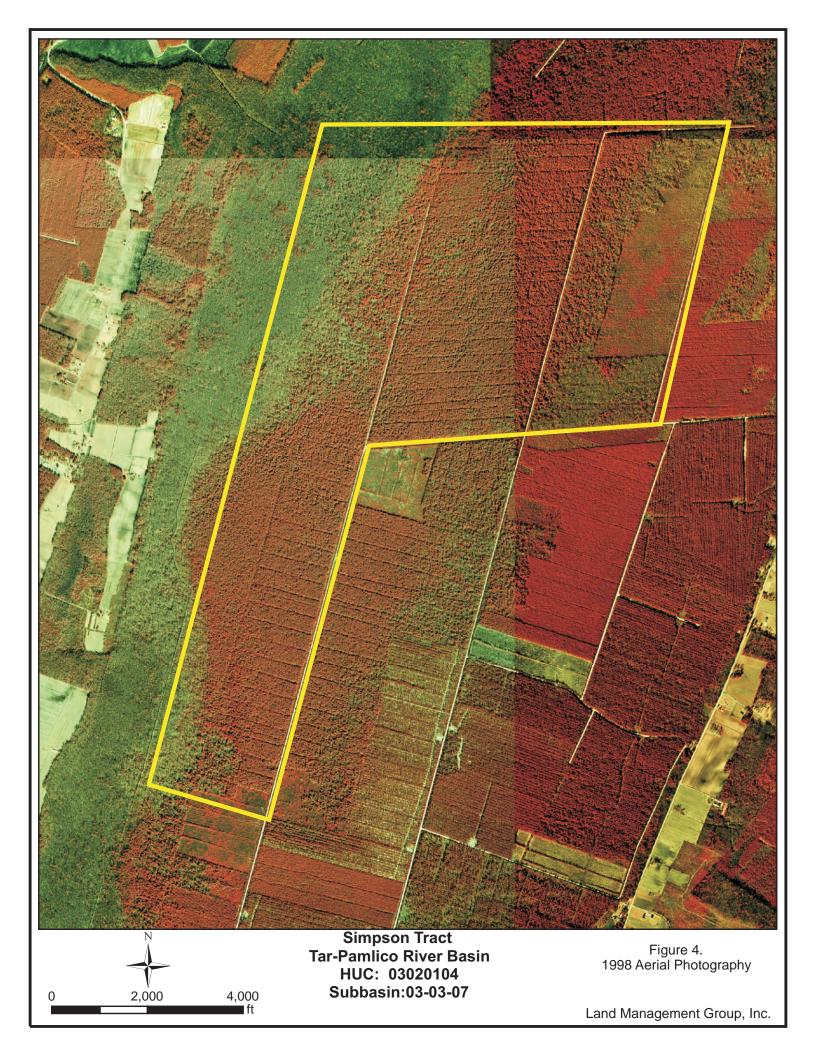
Tar-Pamlico River Basin HUC: 03020104 Subbasin:03-03-07

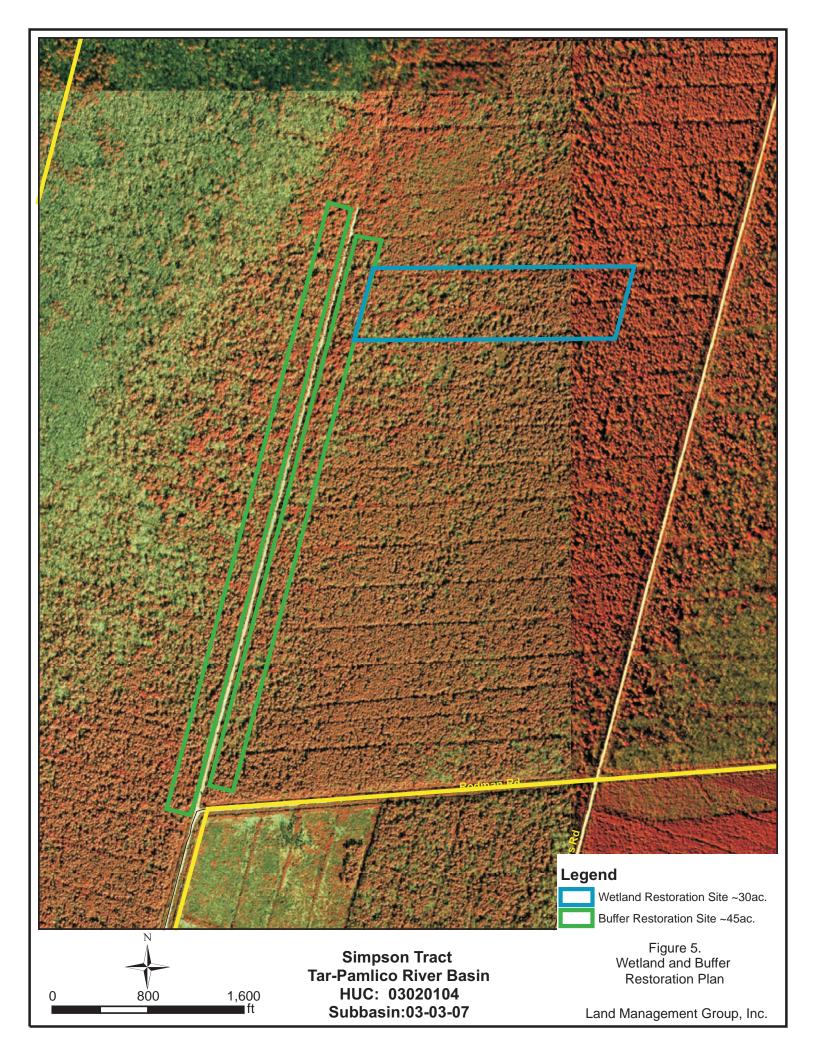
Figure 1. Vicinity Map

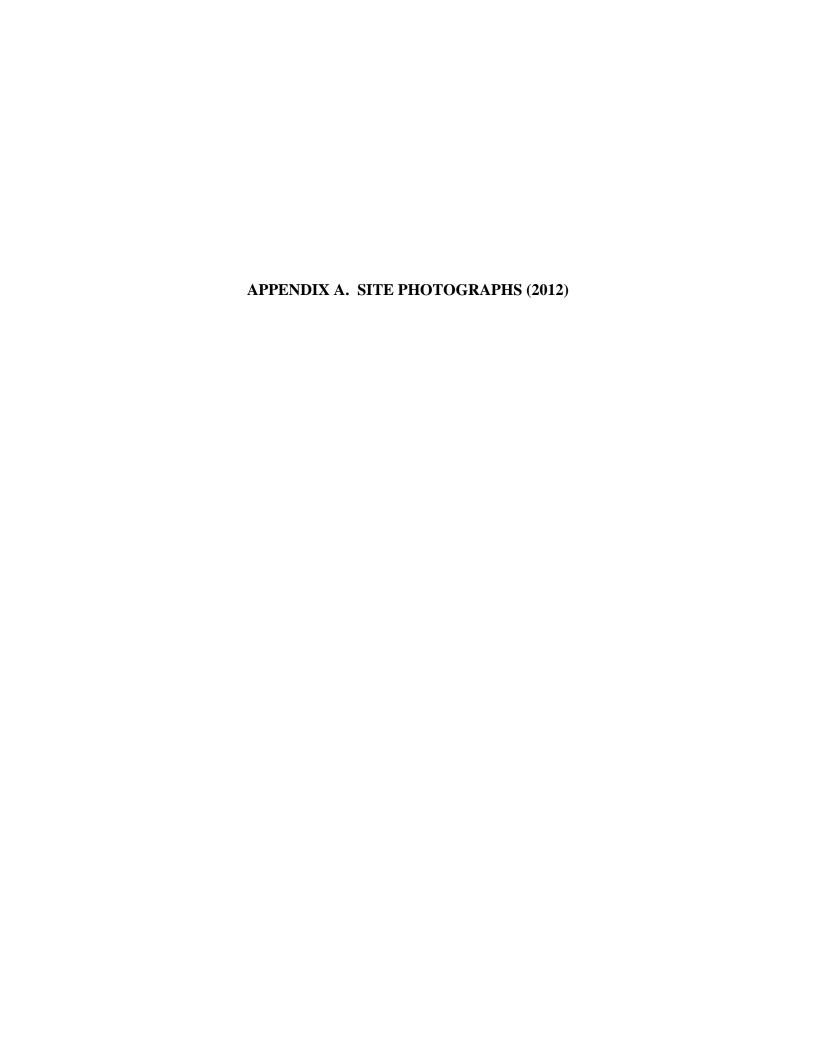
Delorme Gazetteer Land Management Group, Inc.











View of conditions at Plot 6



View of bald cypress at Plot 7



Wetlands Resource Center Cal Miller Simpson Tract Buffer Restoration Beaufort County, NC 40-05-625



View of conditions at Plot 9



View of conditions at Plot 14



Wetlands Resource Center Cal Miller Simpson Tract Buffer Restoration Beaufort County, NC 40-05-625



View of Atlantic white cedar at Plot 16



View of pond pine at Plot 18



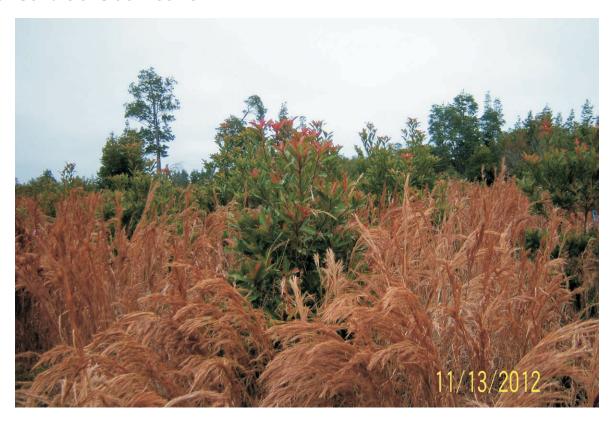
Wetlands Resource Center Cal Miller Simpson Tract Buffer Restoration Beaufort County, NC 40-05-625



View of bald cypress at Plot 19



View of conditions at Plot 20



Wetlands Resource Center Cal Miller Simpson Tract Buffer Restoration Beaufort County, NC 40-05-625



APPENDIX B. CONSERVATION EASEMENT PLAT & PLOT LOCATIONS

L:WETLANDS)2005 WETLANDS FILES\40-05-624 -- Simpson Tract, Wetland Restoration 30 ac, Cal Miller\ACAD\East Group_Final-Consv_Eas.dwg

Title Project: Simpson Buffer Restoration Applicant: Drawn By 4/17/07 1"=400' GSF Revision Date: t Number: Appendix B 40-05-625 Σ

EAST CROUP Surveying Technology LAND MANAGEMENT IS NOT RESPONSIBLE FOR THE ACCURACY OF SAID INFORMATION

THIS MAP IS BASED ON ORIGIANL DRAWINGS AND/OR SURVEY INFORMATION FROM:

LAND MANAGEMENT GROUP INC.

Environmental Consultants
Post Office Box 2522
Wilmington, North Carolina 28402
Telephone: 910-452-0001

LAND MANAGEMENT IS NOT RESPONSIBLE FOR LOCATING, OR THE LOCATION OF, UTILITIES, ANY UTILITIES SHOWN ON THIS PLAN HAVE BEEN PROVIDED BY THIRD PARTIES, AND ARE FOR GENERAL REFERENCE PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE OWNERAPPLICANT ANDIOR CONTRACTOR TO CONTACT A PROFESSIONAL UTILITY LOCATING COMPANY.

THOMAS D. SIMPSON DB 1418 PG 558 PLAT CAB. "F" SLIDE 23-4

THE NORTHERN BOUNDARY OF THE NEW CONSERVATION EASEMENTS RUN ALONG THE SOUTHERN BANK OF THE EXISTING CANALS (TYPICAL OF THE EASEMENTS ON THE SOUTH SIDE OF THE ROAD) THOMAS D. SIMPSON DB 1418 PG 558 PLAT CAB. "F" SLIDE 23-4

2387.43

EASEMENT AREA "B" (19)

2330,84*
EASEMENT AREA "D" (1)
10.59 AC. ±

N 15.0222" E

221.46; W 227.107.88 S

THE NORTHERN BOUNDARY OF THE NEW CONSERVATION EASEMENTS RUN ALONG THE SOUTHERN BANK OF THE EXISTING CANALS (TYPICAL OF THE EASEMENTS ON THE SOUTH SIDE OF THE ROAD)

THOMAS D. SIMPSON DB 1418 PG 558 PLAT CAB. "F" SLIDE 23-4

A COMMIS ON EXCHANGE AND A CONTROL OF THE CONTROL O

EASEMENT AREA "C" 10.43 AC. ±

(<u>;</u>

NEW ACCESS EASEMENT - 11.45 AC. ±

500.000 2 74.<u>55</u>27″ E

THE SOUTHERN BOUNDARY OF THE NEW CONSERVATION RESCRIPTION ALONG THE NORTHERN BAKE OF THE EXISTING CANALS (TYPICAL OF THE RESENTS ON THE NORTH SIDE OF THE ROAD)

ON THE NORTH SIDE OF THE ROAD)

2306.97'

2306.97'

(23)

EASEMENT AREA "A" 13.18 AC. ±

(b)

200.00' N 75.06'27"

N 14'59'35" E

__ 2835.73'__

EASEMENT SITES Site Location Map "="="=" HWY 32

APPENDIX C. INDIVIDUAL PLOT DATA SHEETS

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER 1

SPECIES	STRATUM (T, SA or SH)	Number of Individuals	HEIGHT (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	2	2	Planted	2
Atlantic White Cedar	T/SA	3	3	Planted	3
Atlantic White Cedar	T/SA	2	4	Planted	2
Atlantic White Cedar	T/SA	1	5	Planted	1
Bald Cypress	T/SA	26	1	Planted	26
Bald Cypress	T/SA	15	2	Planted	15
Bald Cypress	T/SA	2	3	Planted	2
Bald Cypress	T/SA	1	6	Planted	1
Black Gum	T/SA	1	5	Planted	1
Fetterbush	SH	1	1	Planted	1
Fetterbush	SH	8	2	Planted	8
Fetterbush	SH	10	3	Planted	10
Fetterbush	SH	10	4	Planted	10
Fetterbush	SH	1	5	Planted	1
Loblolly Bay	SH	23	1	Volunteer	23
Loblolly Bay	SH	24	3	Volunteer	24
Loblolly Bay	SH	23	4	Volunteer	23
Galberry	SH	4	2	Volunteer	4
Galberry	SH	6	4	Volunteer	6
Galberry	SH	11	6	Volunteer	11
Galberry	SH	5	8	Volunteer	5
Red Bay	SH	10	1	Planted	10
Red Bay	SH	1	4	Planted	1
Red Bay	SH	2	5	Planted	2
Red Bay	SH	3	6	Planted	3
Red Bay	SH	1	7	Planted	1
Red Bay	SH	1	10	Planted	1
Blueberry	SH	1	3	Volunteer	1
Blueberry	SH	4	4	Volunteer	4
Pond Pine	T/SA	4	1	Planted	4
Pond Pine	T/SA	5	2	Planted	5
Pond Pine	T/SA	6	3	Planted	6
Pond Pine	T/SA	4	4	Planted	4
Pond Pine	T/SA	2	5	Planted	2
Pond Pine	T/SA	1	6	Planted	1
Pond Pine	T/SA	3	7	Planted	3
Wax Myrtle	SH	1	1	Planted	1
Wax Myrtle	SH	5	4	Planted	5
Wax Myrtle	SH	1	6	Planted	1
Wax Myrtle	SH	2	7	Planted	2
Wax Myrtle	SH	1	8	Planted	1
	TOTAL SHRUBS	159		OBSERVED DENSITY (PER PLOT)	237
	TOTAL TREES OF PLANTED SPECIES	78		OBSERVED DENSITY (PER ACRE)	2370
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	237			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER 2

NH	N/I	DI	וים	D	

Species	Stratum (T. SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	(T, SA or SH) T/SA	Number of Individuals	Height (feet)	Planted	Success Criteria
Atlantic White Cedar	T/SA	2	3	Planted	2
Atlantic White Cedar	T/SA	1	4	Planted	1
Bald Cypress	T/SA	4	1	Planted	4
Bald Cypress	T/SA	4	2	Planted	4
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	2	6	Planted	2
Black Gum	T/SA	3	1	Planted	3
Black Gum	T/SA	3	2	Planted	3
Blueberry	SH	3	4	Volunteer	3
Blueberry	SH	9	6	Volunteer	9
Galberry	SH	30	5	Volunteer	30
Galberry	SH	46	7	Volunteer	46
Galberry	SH	20	9	Volunteer	20
Galberry	SH	4	12	Volunteer	4
Loblolly Bay	SH	20	5	Volunteer	20
Loblolly Bay	SH	20	7	Volunteer	20
Loblolly Bay	SH	10	10	Volunteer	10
Loblolly Bay	SH	10	15	Volunteer	10
Red Bay	SH	1	1	Planted	1
Red Bay	SH	2	2	Planted	2
Red Bay	SH	3	3	Planted	3
Red Bay	SH	7	4	Planted	7
Red Bay	SH	2	6	Planted	2
Red Bay	SH	6	8	Planted	6
Red Bay	SH	2	10	Planted	2
Red Bay	SH	10	12	Planted	10
Fetterbush	SH	3	2	Planted	3
Fetterbush	SH	4	3	Planted	4
Fetterbush	SH	13	4	Planted	13
Fetterbush	SH	2	5	Planted	2
Fetterbush	SH	5	6	Planted	5
Fetterbush	SH	2	7	Planted	2
Sweet Bay	SH	1	4	Planted	1
Sweet Bay	SH	1	8	Planted	1
Wax Myrtle	SH	1	5	Planted	1
Wax Myrtle	SH	2	7	Planted	2
Wax Myrtle	SH	8	8	Planted	8
Wax Myrtle	SH	3	10	Planted	3
Wax Myrtle	SH	2	14	Planted	2
American Holly	SH	2	1	Volunteer	2
Zenobia	SH	1	1	Volunteer	1
Zenobia	SH	2	4	Volunteer	2
Zenobia	SH	1	5	Volunteer	1
Zenobia	SH	4	7	Volunteer	4
Zenobia	SH	1	8	Volunteer	1
Pond Pine	T/SA	2	11	Planted	2
Pond Pine	T/SA	2	2	Planted	2
Pond Pine	T/SA	1	4	Planted	1
Persimmon	T/SA	1	10	Volunteer	0
	TOTAL SHRUBS	263		OBSERVED DENSITY (PER PLOT)	289
	TOTAL TREES OF PLANTED SPECIES	26		OBSERVED DENSITY (PER ACRE)	2890
	TOTAL TREES OF VOLUNTEER SPECIES	1			
	TOTAL INDIVIDUALS	290			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER 3

٦	NI	TIM	B.	\mathbf{F}	D

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	3	1	Planted	3
Bald Cypress	T/SA	2	2	Planted	2
Bald Cypress	T/SA	1	4	Planted	1
Black Gum	T/SA	1	1	Planted	1
Loblolly Bay	SH	10	2	Volunteer	10
Loblolly Bay	SH	15	4	Volunteer	15
Loblolly Bay	SH	15	8	Volunteer	15
Galberry	SH	20	5	Volunteer	20
Galberry	SH	10	7	Volunteer	10
Galberry	SH	20	10	Volunteer	20
Fetterbush	SH	1	1	Planted	1
Fetterbush	SH	2	2	Planted	2
Fetterbush	SH	1	3	Planted	1
Fetterbush	SH	2	4	Planted	2
Fetterbush	SH	1	6	Planted	1
Red Bay	SH	2	1	Planted	2
Red Bay	SH	1	4	Planted	1
Red Bay	SH	2	10	Planted	2
Red Bay	SH	1	15	Planted	1
Sweet Bay	SH	1	4	Planted	1
Blueberry	SH	3	3	Volunteer	3
Blueberry	SH	4	4	Volunteer	4
Blueberry	SH	5	6	Volunteer	5
Blueberry	SH	3	7	Volunteer	3
Wax Myrtle	SH	1	1	Planted	1
Wax Myrtle	SH	1	3	Planted	1
Wax Myrtle	SH	1	4	Planted	1
Wax Myrtle	SH	4	7	Planted	4
Wax Myrtle	SH	6	8	Planted	6
Wax Myrtle	SH	2	10	Planted	2
Pond Pine	T/SA	3	1	Planted	3
Pond Pine	T/SA	3	2	Planted	3
Pond Pine	T/SA	1	6	Planted	1
	SH	2	2		2
Zenobia		1		Volunteer	
Zenobia	SH TOTAL SHRUBS	1 137	4	OBSERVED DENSITY (PER PLOT)	1 151
	TOTAL TREES OF PLANTED SPECIES	14		OBSERVED DENSITY (PER ACRE)	1510
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	151			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER 4

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	4	1	Planted	4
Bald Cypress	T/SA	1	6	Planted	1
Loblolly Bay	SH	20	3	Volunteer	20
Loblolly Bay	SH	20	5	Volunteer	20
Loblolly Bay	SH	3	8	Volunteer	3
Loblolly Bay	SH	3	12	Volunteer	3
Red Bay	SH	3	1	Planted	3
Red Bay	SH	2	3	Planted	2
Red Bay	SH	1	6	Planted	1
Sweet Bay	SH	1	2	Planted	1
Galberry	SH	10	6	Volunteer	10
Galberry	SH	10	8	Volunteer	10
Galberry	SH	10	10	Volunteer	10
Pond Pine	T/SA	2	2	Planted	2
Pond Pine	T/SA	2	3	Planted	2
Pond Pine	T/SA	4	4	Planted	4
Pond Pine	T/SA	4	5	Planted	4
Pond Pine	T/SA	2	6	Planted	2
Blueberry	SH	1	2	Volunteer	1
Blueberry	SH	1	2	Volunteer	1
Fetterbush	SH	4	2	Planted	4
Fetterbush	SH	4	3	Planted	4
Fetterbush	SH	8	4	Planted	8
Fetterbush	SH	2	5	Planted	2
Fetterbush	SH	1	6	Planted	1
	TOTAL SHRUBS	104		OBSERVED DENSITY (PER PLOT)	123
	TOTAL TREES OF PLANTED SPECIES	19		OBSERVED DENSITY (PER ACRE)	1230
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	123			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012

PLOT NUMBER 5

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	16	1	Planted	16
Bald Cypress	T/SA	9	2	Planted	9
Black Gum	T/SA	1	2	Planted	1
Red Bay	SH	1	5	Planted	1
Red Bay	SH	1	7	Planted	1
Loblolly Bay	SH	8	1	Volunteer	8
Loblolly Bay	SH	1	2	Volunteer	1
Loblolly Bay	SH	1	5	Volunteer	1
Pond Pine	T/SA	1	1	Planted	1
Pond Pine	T/SA	3	2	Planted	3
Pond Pine	T/SA	1	3	Planted	1
Pond Pine	T/SA	1	4	Planted	1
Pond Pine	T/SA	1	6	Planted	1
Pond Pine	T/SA	2	8	Planted	2
Blueberry	SH	1	4	Volunteer	1
Zenobia	SH	1	4	Volunteer	1
	TOTAL SHRUBS	14		OBSERVED DENSITY (PER PLOT)	49
	TOTAL TREES OF PLANTED SPECIES	35		OBSERVED DENSITY (PER ACRE)	490
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	49			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER 6

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	2	Planted	1
Atlantic White Cedar	T/SA	3	3	Planted	3
Atlantic White Cedar	T/SA	1	6	Planted	1
Bald Cypress	T/SA	10	1	Planted	10
Bald Cypress	T/SA	8	2	Planted	8
Bald Cypress	T/SA	6	3	Planted	6
Bald Cypress	T/SA	3	4	Planted	3
Bald Cypress	T/SA	2	5	Planted	2
Bald Cypress	T/SA	5	6	Planted	5
Bald Cypress	T/SA	4	7	Planted	4
Bald Cypress	T/SA	1	8	Planted	1
Fetterbush	SH	2	2	Planted	2
Fetterbush	SH	1	5	Planted	1
Red Bay	SH	1	3	Planted	1
Red Bay	SH	1	5	Planted	1
Red Bay	SH	1	6	Planted	1
Loblolly Bay	SH	7	1	Volunteer	7
Loblolly Bay	SH	3	2	Volunteer	3
Loblolly Bay	SH	5	3	Volunteer	5
Loblolly Bay	SH	7	4	Volunteer	7
Loblolly Bay	SH	2	6	Volunteer	2
Loblolly Bay	SH	1	7	Volunteer	1
Loblolly Bay	SH	1	10	Volunteer	1
Pond Pine	T/SA	4	1	Planted	4
Pond Pine	T/SA	1	3	Planted	1
Pond Pine	T/SA	2	4	Planted	2
Pond Pine	T/SA	4	6	Planted	4
Pond Pine	T/SA	3	7	Planted	3
American Holly	SH	1	1	Volunteer	1
Blueberry	SH	1	1	Volunteer	1
Sweet Pepperbush	SH	3	1	Volunteer	3
Sweet Pepperbush	SH	1	2	Volunteer	1
Zenobia	SH	1	1	Volunteer	1
Zenobia	SH	1	2	Volunteer	1
Zenobia	SH	1	3	Volunteer	1
	TOTAL SHRUBS	41		OBSERVED DENSITY (PER PLOT)	99
	TOTAL TREES OF PLANTED SPECIES	58		OBSERVED DENSITY (PER ACRE)	990
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	99			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER 7

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	4	Planted	1
Atlantic White Cedar	T/SA	1	6	Planted	1
Bald Cypress	T/SA	3	1	Planted	3
Bald Cypress	T/SA	4	2	Planted	4
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	3	4	Planted	3
Bald Cypress	T/SA	2	5	Planted	2
Bald Cypress	T/SA	4	6	Planted	4
Bald Cypress	T/SA	3	7	Planted	3
Bald Cypress	T/SA	2	8	Planted	2
Black Gum	T/SA	2	1	Planted	2
Red Bay	SH	1	6	Planted	1
Red Bay	SH	1	8	Planted	1
Red Bay	SH	1	12	Planted	1
Red Bay	SH	2	15	Planted	2
Loblolly Bay	SH	4	1	Volunteer	4
Loblolly Bay	SH	5	3	Volunteer	5
Loblolly Bay	SH	3	4	Volunteer	3
Loblolly Bay	SH	2	5	Volunteer	2
Loblolly Bay	SH	3	6	Volunteer	3
Loblolly Bay	SH	1	8	Volunteer	1
Loblolly Bay	SH	1	10	Volunteer	1
Blueberry	SH	3	3	Volunteer	3
Blueberry	SH	3	4	Volunteer	3
Pond Pine	T/SA	1	1	Planted	1
Pond Pine	T/SA	6	3	Planted	6
Pond Pine	T/SA	1	4	Planted	1
Pond Pine	T/SA	3	5	Planted	3
Pond Pine	T/SA	5	6	Planted	5
Pond Pine	T/SA	5	8	Planted	5
Pond Pine	T/SA	5	10	Planted	5
Sweet Pepperbush	SH	1	1	Volunteer	1
Zenobia	SH	1	1	Volunteer	1
Zenobia	SH	2	2	Volunteer	2
Zenobia	SH	1	3	Volunteer	1
Zenobia	SH	1	4	Volunteer	1
	TOTAL SHRUBS	36		OBSERVED DENSITY (PER PLOT)	88
	TOTAL TREES OF PLANTED SPECIES	52		OBSERVED DENSITY (PER ACRE)	880
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	88			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	1	neight (leet)	Planted	1
	T/SA	7	2	Planted	7
Bald Cypress	T/SA	2	3	Planted	2
Bald Cypress	T/SA	1	4		1
Bald Cypress				Planted	
Bald Cypress	T/SA	2	5	Planted	2
Bald Cypress	T/SA		6	Planted	
Black Gum	T/SA	1	1	Planted	1
Red Bay	SH	6	1	Planted	6
Red Bay	SH	1	2	Planted	1
Red Bay	SH	1	3	Planted	1
Red Bay	SH	1	6	Planted	1
Tulip Poplar	T/SA	1	2	Planted	1
Loblolly Bay	SH	17	1	Volunteer	17
Loblolly Bay	SH	8	2	Volunteer	8
Loblolly Bay	SH	2	3	Volunteer	2
Loblolly Bay	SH	4	4	Volunteer	4
Loblolly Bay	SH	3	6	Volunteer	3
Loblolly Bay	SH	5	7	Volunteer	5
Loblolly Bay	SH	7	8	Volunteer	7
Loblolly Bay	SH	1	12	Volunteer	1
Blueberry	SH	4	2	Volunteer	4
Blueberry	SH	2	3	Volunteer	2
Blueberry	SH	1	4	Volunteer	1
Wax Myrtle	SH	1	2	Planted	1
Wax Myrtle	SH	1	3	Planted	1
American Holly	SH	2	1	Volunteer	2
American Holly	SH	1	2	Volunteer	1
Pond Pine	T/SA	6	1	Planted	6
Pond Pine	T/SA	4	2	Planted	4
Pond Pine	T/SA	4	3	Planted	4
Pond Pine	T/SA	5	4	Planted	5
Pond Pine	T/SA	4	6	Planted	4
Pond Pine	T/SA	3	7	Planted	3
Pond Pine	T/SA	4	8	Planted	4
Pond Pine	T/SA	3	9	Planted	3
Sweet Gum	T/SA	1	12	Volunteer	0
Fetterbush	SH	3	12		3
	SH	1	7	Planted Planted	1
Fetterbush					1
Zenobia	SH	1	3	Volunteer	
Zenobia	SH	1	4	Volunteer	1
	TOTAL SHRUBS	74		OBSERVED DENSITY (PER PLOT)	123
	TOTAL TREES OF PLANTED SPECIES	49		OBSERVED DENSITY (PER ACRE)	1230
	TOTAL TREES OF VOLUNTEER SPECIES	1			
	TOTAL INDIVIDUALS	124			

SIMPSON FARM BUFFER RESTORATION SITE ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS YEAR 5-2012 PLOT NUMBER

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	4	1	Planted	4
Bald Cypress	T/SA	4	2	Planted	4
Bald Cypress	T/SA	7	3	Planted	7
Bald Cypress	T/SA	1	4	Planted	1
Bald Cypress	T/SA	6	5	Planted	6
Bald Cypress	T/SA	6	6	Planted	6
Bald Cypress	T/SA	6	8	Planted	6
Bald Cypress	T/SA	1	12	Planted	1
Green Ash	T/SA	1	4	Planted	1
Red Bay	SH	1	1	Planted	1
Red Bay	SH	1	3	Planted	1
Red Bay	SH	2	4	Planted	2
Red Bay	SH	1	9	Planted	1
Wax Myrtle	SH	2	1	Planted	2
Wax Myrtle	SH	1	3	Planted	1
Wax Myrtle	SH	6	4	Planted	6
Wax Myrtle	SH	1	6	Planted	1
Wax Myrtle	SH	1	10	Planted	1
Loblolly Bay	SH	8	1	Volunteer	8
Loblolly Bay	SH	3	2	Volunteer	3
Loblolly Bay	SH	4	3	Volunteer	4
Loblolly Bay	SH	3	5	Volunteer	3
Loblolly Bay	SH	4	8	Volunteer	4
American Holly	SH	1	1	Volunteer	1
Pond Pine	T/SA	5	1	Planted	5
Pond Pine	T/SA	2	2	Planted	2
Pond Pine	T/SA	1	3	Planted	1
Pond Pine	T/SA	2	4	Planted	2
Pond Pine	T/SA	1	5	Planted	1
Pond Pine	T/SA	2	6	Planted	2
Pond Pine	T/SA	3	7	Planted	3
Pond Pine	T/SA	3	8	Planted	3
Blueberry	SH	1	2	Volunteer	1
Blueberry	SH	1	3	Volunteer	1
Blueberry	SH	1	4	Volunteer	1
Zenobia	SH	1	4	Volunteer	1
Zellobia	TOTAL SHRUBS	43	4	OBSERVED DENSITY (PER PLOT)	98
	TOTAL TREES OF PLANTED SPECIES	55		OBSERVED DENSITY (PER ACRE)	980
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	98			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	7	Planted	1
Bald Cypress	T/SA	1	1	Planted	1
Bald Cypress	T/SA	1	2	Planted	1
Bald Cypress	T/SA	5	3	Planted	5
Bald Cypress	T/SA	3	4	Planted	3
Bald Cypress	T/SA	1	6	Planted	1
Bald Cypress	T/SA	2	7	Planted	2
Bald Cypress	T/SA	5	8	Planted	5
Bald Cypress	T/SA	2	10	Planted	2
Wax Myrtle	SH	9	1	Planted	9
Wax Myrtle	SH	12	2	Planted	12
Wax Myrtle	SH	2	3	Planted	2
Wax Myrtle	SH	7	4	Planted	7
Wax Myrtle	SH	3	5	Planted	3
Wax Myrtle	SH	5	6	Planted	5
Pond Pine	T/SA	1	1	Planted	1
Pond Pine	T/SA	3	2	Planted	3
Pond Pine	T/SA	2	3	Planted	2
Pond Pine	T/SA	2	4	Planted	2
Pond Pine	T/SA	1	5	Planted	1
Pond Pine	T/SA	4	7	Planted	4
Pond Pine	T/SA	1	8	Planted	1
Pond Pine	T/SA	1	10	Planted	1
Red Maple	T/SA	1	1	Volunteer	0
Red Maple	T/SA	2	2	Volunteer	0
Red Maple	T/SA	4	3	Volunteer	0
Red Maple	T/SA	3	4	Volunteer	0
Red Maple	T/SA	2	6	Volunteer	0
Red Maple	T/SA	1	7	Volunteer	0
Loblolly Bay	SH	16	1	Volunteer	16
Loblolly Bay	SH	2	2	Volunteer	2
Red Bay	SH	1	4	Planted	1
	TOTAL SHRUBS	57		OBSERVED DENSITY (PER PLOT)	93
	TOTAL TREES OF PLANTED SPECIES	36		OBSERVED DENSITY (PER ACRE)	930
	TOTAL TREES OF VOLUNTEER SPECIES	13			
	TOTAL INDIVIDUALS	106			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	3	1	Planted	3
Bald Cypress	T/SA	4	2	Planted	4
Red Bay	SH	1	1	Planted	1
Red Bay	SH	1	4	Planted	1
Red Bay	SH	1	6	Planted	1
Wax Myrtle	SH	1	3	Planted	1
Wax Myrtle	SH	1	5	Planted	1
Wax Myrtle	SH	1	6	Planted	1
Wax Myrtle	SH	1	7	Planted	1
Pond Pine	T/SA	3	1	Planted	3
Pond Pine	T/SA	5	2	Planted	5
Pond Pine	T/SA	4	3	Planted	4
Pond Pine	T/SA	5	4	Planted	5
Pond Pine	T/SA	1	5	Planted	1
Pond Pine	T/SA	1	6	Planted	1
Pond Pine	T/SA	1	7	Planted	1
Loblolly Bay	SH	7	1	Volunteer	7
Loblolly Bay	SH	4	2	Volunteer	4
Loblolly Bay	SH	6	3	Volunteer	6
Loblolly Bay	SH	5	4	Volunteer	5
Loblolly Bay	SH	3	5	Volunteer	3
Loblolly Bay	SH	3	6	Volunteer	3
Loblolly Bay	SH	2	7	Volunteer	2
Loblolly Bay	SH	2	8	Volunteer	2
Red Maple	T/SA	1	1	Volunteer	0
,	TOTAL SHRUBS	39		OBSERVED DENSITY (PER PLOT)	66
	TOTAL TREES OF PLANTED SPECIES	27		OBSERVED DENSITY (PER ACRE)	660
	TOTAL TREES OF VOLUNTEER SPECIES	1			
	TOTAL INDIVIDUALS	67			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	2	1	Planted	2
Bald Cypress	T/SA	1	2	Planted	1
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	1	4	Planted	1
Black Gum	T/SA	1	1	Planted	1
Loblolly Bay	SH	5	1	Volunteer	5
Loblolly Bay	SH	10	2	Volunteer	10
Loblolly Bay	SH	5	3	Volunteer	5
Loblolly Bay	SH	12	4	Volunteer	12
Loblolly Bay	SH	19	6	Volunteer	19
Loblolly Bay	SH	17	8	Volunteer	17
Loblolly Bay	SH	3	10	Volunteer	3
Pond Pine	T/SA	1	1	Planted	1
Pond Pine	T/SA	2	2	Planted	2
Pond Pine	T/SA	3	3	Planted	3
Pond Pine	T/SA	1	4	Planted	1
Pond Pine	T/SA	1	5	Planted	1
Pond Pine	T/SA	1	6	Planted	1
Pond Pine	T/SA	1	10	Planted	1
Wax Myrtle	SH	1	5	Planted	1
Sweetgum	T/SA	1	3	Volunteer	0
Blueberry	SH	1	4	Volunteer	1
Fetterbush	SH	1	2	Planted	1
	TOTAL SHRUBS	74		OBSERVED DENSITY (PER PLOT)	90
	TOTAL TREES OF PLANTED SPECIES	16		OBSERVED DENSITY (PER ACRE)	900
	TOTAL TREES OF VOLUNTEER SPECIES	1			
	TOTAL INDIVIDUALS	91			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	2	Planted	1
Bald Cypress	T/SA	1	1	Planted	1
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	1	5	Planted	1
Black Gum	T/SA	1	1	Planted	1
Loblolly Bay	SH	3	1	Volunteer	3
Loblolly Bay	SH	11	2	Volunteer	11
Loblolly Bay	SH	4	3	Volunteer	4
Loblolly Bay	SH	8	4	Volunteer	8
Loblolly Bay	SH	1	5	Volunteer	1
Loblolly Bay	SH	12	6	Volunteer	12
Loblolly Bay	SH	3	8	Volunteer	3
Loblolly Bay	SH	4	10	Volunteer	4
Red Bay	SH	1	1	Planted	1
Pond Pine	T/SA	2	1	Planted	2
Pond Pine	T/SA	1	2	Planted	1
Pond Pine	T/SA	5	3	Planted	5
Pond Pine	T/SA	3	4	Planted	3
Pond Pine	T/SA	3	5	Planted	3
Pond Pine	T/SA	5	6	Planted	5
Gallberry	SH	2	2	Planted	2
Wax Myrtle	SH	1	2	Volunteer	1
Zenobia	SH	1	2	Volunteer	1
Zenobia	SH	2	3	Volunteer	2
	TOTAL SHRUBS	53		OBSERVED DENSITY (PER PLOT)	77
	TOTAL TREES OF PLANTED SPECIES	24		OBSERVED DENSITY (PER ACRE)	770
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	77			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	4	1	Planted	4
Bald Cypress	T/SA	5	2	Planted	5
Bald Cypress	T/SA	1	3	Planted	1
Black Gum	T/SA	1	1	Planted	1
Loblolly Bay	SH	4	1	Volunteer	4
Loblolly Bay	SH	2	2	Volunteer	2
Loblolly Bay	SH	2	3	Volunteer	2
Loblolly Bay	SH	2	4	Volunteer	2
Loblolly Bay	SH	1	6	Volunteer	1
Loblolly Bay	SH	2	7	Volunteer	2
Loblolly Bay	SH	1	8	Volunteer	1
Loblolly Bay	SH	1	10	Volunteer	1
Wax Myrtle	SH	3	3	Planted	3
Wax Myrtle	SH	2	4	Planted	2
Wax Myrtle	SH	2	6	Planted	2
Wax Myrtle	SH	1	8	Planted	1
Wax Myrtle	SH	1	10	Planted	1
Red Bay	SH	1	5	Planted	1
Red Bay	SH	1	7	Planted	1
Pond Pine	T/SA	2	4	Planted	2
Pond Pine	T/SA	2	5	Planted	2
Pond Pine	T/SA	4	6	Planted	4
Pond Pine	T/SA	1	7	Planted	1
Zenobia	SH	2	1	Volunteer	2
Zenobia	SH	2	2	Volunteer	2
Gallberry	SH	4	2	Volunteer	4
Gallberry	SH	2	3	Volunteer	2
Gallberry	SH	1	5	Volunteer	1
Blueberry	SH	1	3	Volunteer	1
Blueberry	SH	2	4	Volunteer	2
Fetterbush	SH	1	2	Planted	1
Fetterbush	SH	1	4	Planted	1
	TOTAL SHRUBS	42		OBSERVED DENSITY (PER PLOT)	62
	TOTAL TREES OF PLANTED SPECIES	20		OBSERVED DENSITY (PER ACRE)	620
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	62			

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Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individua Counted toward Success Criteria
Atlantic White Cedar	T/SA	3	3	Planted	3
Atlantic White Cedar	T/SA	1	4	Planted	1
Atlantic White Cedar	T/SA	2	7	Planted	2
Bald Cypress	T/SA	2	2	Planted	2
Bald Cypress	T/SA	6	3	Planted	6
Bald Cypress	T/SA	1	4	Planted	1
Bald Cypress	T/SA	1	5	Planted	1
Bald Cypress	T/SA	6	6	Planted	6
Bald Cypress	T/SA	1	7	Planted	1
Bald Cypress	T/SA	2	8	Planted	2
Tulip Poplar	T/SA	1	3	Planted	1
Tulip Poplar	T/SA	1	4	Planted	1
Loblolly Bay	SH	3	1	Volunteer	3
Loblolly Bay	SH	5	2	Volunteer	5
Loblolly Bay	SH	2	3	Volunteer	2
Loblolly Bay	SH	2	4	Volunteer	2
Loblolly Bay	SH	2	5	Volunteer	2
Loblolly Bay	SH	2	7	Volunteer	2
Loblolly Bay	SH	3	8	Volunteer	3
Wax Myrtle	SH	2	4	Planted	2
Wax Myrtle	SH	2	8	Planted	2
Pond Pine	T/SA	1	3	Planted	1
Pond Pine	T/SA	1	4	Planted	1
Gallberry	SH	4	2	Volunteer	4
Gallberry	SH	3	3	Volunteer	3
Gallberry	SH	1	5	Volunteer	1
Gallberry	SH	1	7	Volunteer	1
American Holly	SH	1	3	Volunteer	1
Sweet Pepperbush	SH	3	2	Volunteer	3
Sweet Pepperbush	SH	4	3	Volunteer	4
Zenobia	SH	1	2	Volunteer	1
Zenobia	SH	3	3	Volunteer	3
Zenobia	SH	1	4	Volunteer	1
Zenobia	SH	1	5	Volunteer	1
Zenobia	SH	1	7	Volunteer	1
Zenobla	TOTAL SHRUBS	47	,	OBSERVED DENSITY (PER PLOT)	76
	TOTAL TREES OF PLANTED SPECIES	29		OBSERVED DENSITY (PER ACRE)	760
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	76			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	1	Planted	1
Atlantic White Cedar	T/SA	1	3	Planted	1
Bald Cypress	T/SA	3	1	Planted	3
Bald Cypress	T/SA	3	2	Planted	3
Bald Cypress	T/SA	3	3	Planted	3
Bald Cypress	T/SA	5	4	Planted	5
Tulip Poplar	T/SA	1	3	Planted	1
Tulip Poplar	T/SA	1	4	Planted	1
Black Gum	T/SA	2	1	Planted	2
Black Gum	T/SA	1	3	Planted	1
Loblolly Bay	SH	5	1	Volunteer	5
Loblolly Bay	SH	5	2	Volunteer	5
Loblolly Bay	SH	8	3	Volunteer	8
Loblolly Bay	SH	6	4	Volunteer	6
Loblolly Bay	SH	3	5	Volunteer	3
Loblolly Bay	SH	2	6	Volunteer	2
Loblolly Bay	SH	1	8	Volunteer	1
Red Bay	SH	1	4	Planted	1
Pond Pine	T/SA	2	4	Planted	2
Pond Pine	T/SA	1	5	Planted	1
Pond Pine	T/SA	1	8	Planted	1
Gallberry	SH	1	1	Volunteer	1
	TOTAL SHRUBS	32		OBSERVED DENSITY (PER PLOT)	57
	TOTAL TREES OF PLANTED SPECIES	25		OBSERVED DENSITY (PER ACRE)	570
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	57			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	3	1	Planted	3
Bald Cypress	T/SA	3	2	Planted	3
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	1	4	Planted	1
Green Ash	T/SA	1	4	Planted	1
Pond Pine	T/SA	2	1	Planted	2
Pond Pine	T/SA	2	2	Planted	2
Loblolly Bay	SH	3	1	Volunteer	3
Loblolly Bay	SH	5	2	Volunteer	5
Loblolly Bay	SH	11	3	Volunteer	11
Loblolly Bay	SH	5	4	Volunteer	5
Loblolly Bay	SH	3	6	Volunteer	3
Loblolly Bay	SH	3	8	Volunteer	3
Red Bay	SH	1	5	Planted	1
Blueberry	SH	1	2	Volunteer	1
Blueberry	SH	1	3	Volunteer	1
Fetterbush	SH	1	1	Planted	1
Fetterbush	SH	1	3	Planted	1
Gallberry	SH	2	2	Volunteer	2
Sweet Pepperbush	SH	9	1	Volunteer	9
Sweet Pepperbush	SH	8	2	Volunteer	8
Sweet Pepperbush	SH	3	3	Volunteer	3
	TOTAL SHRUBS	57		OBSERVED DENSITY (PER PLOT)	70
	TOTAL TREES OF PLANTED SPECIES	13		OBSERVED DENSITY (PER ACRE)	700
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	70			

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Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	3	Planted	1
Bald Cypress	T/SA	15	1	Planted	15
Bald Cypress	T/SA	5	2	Planted	5
Bald Cypress	T/SA	1	3	Planted	1
Black Gum	T/SA	2	1	Planted	2
Green Ash	T/SA	1	1	Planted	1
Galberry	SH	10	2	Volunteer	10
Galberry	SH	10	6	Volunteer	10
Galberry	SH	5	8	Volunteer	5
Loblolly Bay	SH	8	3	Volunteer	8
Loblolly Bay	SH	10	5	Volunteer	10
Loblolly Bay	SH	10	7	Volunteer	10
Loblolly Bay	SH	8	10	Volunteer	8
Red Bay	SH	1	2	Planted	1
Red Bay	SH	2	12	Planted	2
Red Bay	SH	1	15	Planted	1
Pond Pine	T/SA	1	3	Planted	1
Sweet Pepperbush	SH	7	3	Volunteer	7
Sweet Pepperbush	SH	10	4	Volunteer	10
Sweet Pepperbush	SH	20	5	Volunteer	20
Sweet Pepperbush	SH	11	6	Volunteer	11
Sweet Pepperbush	SH	9	8	Volunteer	9
Blueberry	SH	1	2	Volunteer	1
Blueberry	SH	4	3	Volunteer	4
	TOTAL SHRUBS	127		OBSERVED DENSITY (PER PLOT)	153
	TOTAL TREES OF PLANTED SPECIES	26		OBSERVED DENSITY (PER ACRE)	1530
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	153			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	10	1	Planted	10
Bald Cypress	T/SA	3	2	Planted	3
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	1	5	Planted	1
Pond Pine	T/SA	2	1	Planted	2
Pond Pine	T/SA	1	3	Planted	1
Loblolly Bay	SH	15	1	Volunteer	15
Loblolly Bay	SH	15	2	Volunteer	15
Loblolly Bay	SH	15	3	Volunteer	15
Loblolly Bay	SH	4	4	Volunteer	4
Loblolly Bay	SH	2	5	Volunteer	2
Loblolly Bay	SH	2	6	Volunteer	2
Wax Myrtle	SH	1	1	Planted	1
Wax Myrtle	SH	1	3	Planted	1
Wax Myrtle	SH	1	7	Planted	1
Fetterbush	SH	1	1	Planted	1
Blueberry	SH	2	1	Volunteer	2
Gallberry	SH	1	1	Volunteer	1
Sweet Pepperbush	SH	10	1	Volunteer	10
Sweet Pepperbush	SH	7	2	Volunteer	7
Sweet Pepperbush	SH	2	3	Volunteer	2
Sweet Pepperbush	SH	1	4	Volunteer	1
Zenobia	SH	2	1	Volunteer	2
	TOTAL SHRUBS	82		OBSERVED DENSITY (PER PLOT)	100
	TOTAL TREES OF PLANTED SPECIES	18		OBSERVED DENSITY (PER ACRE)	1000
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	100			

PLOT NUMBER

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Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	5	1	Planted	5
Bald Cypress	T/SA	3	2	Planted	3
Bald Cypress	T/SA	1	6	Planted	1
Black Gum	T/SA	1	3	Planted	1
Red Bay	SH	2	2	Planted	2
Red Bay	SH	1	6	Planted	1
Sweet Bay	SH	1	2	Planted	1
Sweet Bay	SH	1	5	Planted	1
Pond Pine	T/SA	1	1	Planted	1
Pond Pine	T/SA	1	2	Planted	1
Pond Pine	T/SA	5	3	Planted	5
Pond Pine	T/SA	1	4	Planted	1
Pond Pine	T/SA	1	6	Planted	1
Pond Pine	T/SA	1	7	Planted	1
Loblolly Bay	SH	5	2	Volunteer	5
Loblolly Bay	SH	15	4	Volunteer	15
Loblolly Bay	SH	10	6	Volunteer	10
Loblolly Bay	SH	10	8	Volunteer	10
Wax Myrlte	SH	1	4	Planted	1
Sweet Pepperbush	SH	25	2	Volunteer	25
Sweet Pepperbush	SH	25	3	Volunteer	25
Blueberry	SH	3	2	Volunteer	3
Blueberry	SH	3	4	Volunteer	3
	TOTAL SHRUBS	102		OBSERVED DENSITY (PER PLOT)	122
	TOTAL TREES OF PLANTED SPECIES	20		OBSERVED DENSITY (PER ACRE)	1220
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	122			

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Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	1	Planted	1
Black Gum	T/SA	1	2	Planted	1
Bald Cypress	T/SA	10	1	Planted	10
Bald Cypress	T/SA	5	2	Planted	5
Bald Cypress	T/SA	1	3	Planted	1
Bald Cypress	T/SA	1	4	Planted	1
Bald Cypress	T/SA	1	5	Planted	1
Green Ash	T/SA	1	4	Planted	1
Loblolly Bay	SH	1	2	Volunteer	1
Loblolly Bay	SH	1	3	Volunteer	1
Loblolly Bay	SH	3	4	Volunteer	3
Loblolly Bay	SH	1	5	Volunteer	1
Red Bay	SH	1	2	Planted	1
Sweet Bay	SH	2	2	Planted	2
Pond Pine	T/SA	1	1	Planted	1
Pond Pine	T/SA	1	3	Planted	1
Gallberry	SH	2	1	Volunteer	2
Gallberry	SH	6	2	Volunteer	6
Gallberry	SH	4	3	Volunteer	4
Gallberry	SH	1	4	Volunteer	1
Sweet Pepperbush	SH	25	2	Volunteer	25
Sweet Pepperbush	SH	15	3	Volunteer	15
Zenobia	SH	1	1	Volunteer	1
Zenobia	SH	3	2	Volunteer	3
	TOTAL SHRUBS	66		OBSERVED DENSITY (PER PLOT)	89
	TOTAL TREES OF PLANTED SPECIES	23		OBSERVED DENSITY (PER ACRE)	890
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	89			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	T/SA	2	2	Planted	2
Black Gum	T/SA	2	1	Planted	2
Wax Myrtle	SH	1	7	Planted	1
Wax Myrtle	SH	2	10	Planted	2
Fetterbush	SH	4	2	Planted	4
Fetterbush	SH	2	3	Planted	2
Fetterbush	SH	1	4	Planted	1
Galberry	SH	2	1	Volunteer	2
Galberry	SH	1	2	Volunteer	1
Galberry	SH	3	3	Volunteer	3
Galberry	SH	5	4	Volunteer	5
Galberry	SH	1	7	Volunteer	1
Galberry	SH	2	8	Volunteer	2
Galberry	SH	7	10	Volunteer	7
Sweet Pepperbush	SH	25	1	Volunteer	25
Sweet Pepperbush	SH	25	2	Volunteer	25
Sweet Pepperbush	SH	20	4	Volunteer	20
Sweet Pepperbush	SH	15	6	Volunteer	15
Red Bay	SH	1	3	Planted	1
Red Bay	SH	1	12	Planted	1
Loblolly Bay	SH	10	2	Volunteer	10
Loblolly Bay	SH	10	4	Volunteer	10
Loblolly Bay	SH	5	6	Volunteer	5
Blueberry	SH	25	4	Volunteer	25
Blueberry	SH	30	6	Volunteer	30
Blueberry	SH	30	8	Volunteer	30
	TOTAL SHRUBS	228		OBSERVED DENSITY (PER PLOT)	232
	TOTAL TREES OF PLANTED SPECIES	4		OBSERVED DENSITY (PER ACRE)	2320
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	232			

Species	Stratum (T, SA or SH)	Number of Individuals	Height (feet)	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Atlantic White Cedar	T/SA	1	2	Planted	1
Atlantic White Cedar	T/SA	2	4	Planted	2
Bald Cypress	T/SA	4	1	Planted	4
Bald Cypress	T/SA	2	2	Planted	2
Black Gum	T/SA	1	2	Planted	1
Black Gum	T/SA	1	3	Planted	1
Green Ash	T/SA	2	3	Planted	2
Red Bay	T/SA	3	3	Planted	3
Red Bay	T/SA	1	4	Planted	1
Red Bay	T/SA	3	6	Planted	3
Red Bay	T/SA	1	8	Planted	1
Pond Pine	T/SA	1	2	Planted	1
Pond Pine	T/SA	1	3	Planted	1
Sweet Bay	SH	1	1	Planted	1
Sweet Bay	SH	1	2	Planted	1
Loblolly Bay	SH	5	2	Volunteer	5
Loblolly Bay	SH	5	3	Volunteer	5
Loblolly Bay	SH	5	6	Volunteer	5
Gallberry	SH	5	1	Volunteer	5
Gallberry	SH	3	2	Volunteer	3
	TOTAL SHRUBS	25		OBSERVED DENSITY (PER PLOT)	48
	TOTAL TREES OF PLANTED SPECIES	23		OBSERVED DENSITY (PER ACRE)	480
	TOTAL TREES OF VOLUNTEER SPECIES	0			
	TOTAL INDIVIDUALS	48			