

**Fifth Annual Monitoring Report - 2009 Growing Season**

**Little Contentnea Creek Riparian Buffer Restoration – Phase 3  
(EEP Contract: 005020)**



**December 2009**

**Submitted to:**



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# Little Contentnea Creek Riparian Buffer Restoration – Phase 3 Fifth Annual Monitoring Report - 2009 Growing Season

Greene Environmental Services, LLC

## Introduction and Background

On 27 June 2005 the NC Ecosystem Enhancement Program awarded Greene Environmental Services a contract to restore 54.16 acres of riparian buffer along Little Contentnea Creek and its unnamed tributaries in southeastern Greene County, NC (Figure 1) (Phase 3). The project was a continuation of the successful Phase 1 and Phase 2 projects that restored a total of 87.1 acres of riparian buffers along unnamed tributaries to Little Contentnea Creek and Contentnea Creek. The Little Contentnea Creek Riparian Buffer Restoration Plan Phase 3 was implemented in 2005 with site preparation, the planting of 28,000 saplings of 11 species, and the establishment of 60 monitoring quadrats in 17 sampling units, as specified in the project's Mitigation Plan (GES, 2005) (Figure 2). Woody stem density, diameter, and height measurements were recorded in October 2009 within each of the 60, 100-square meter quadrats, as detailed in the Mitigation Plan. The monitoring results, management activities to date, and planned management activities are presented below.

## Results

During the October 2009 monitoring, 545 planted, woody stems were recorded within the 60 quadrats, resulting in an average density of 368 planted, woody stems per acre (Table 1). Additionally, a total of 3,022 native *volunteers* were recorded (1,859 *Acer rubrum*, and 1,111 *Liquidambar styraciflua*) within the monitoring quadrats (Table 2). All recorded stems combined (i.e. planted + *volunteer*), totaled 3,567 live stems and thus results in a calculated average density of 2,407 woody stems per acre. This density exceeds the success criterion of 320 live woody stems per acre by 652 percent.

Monitoring data for planted stems indicate that *Fraxinus pennsylvanica* is the most abundant tree species (24.77 percent relative density) while *Platanus occidentalis* was the species with the greatest average height (3.73 meters) (Table 1). Relative frequency, relative density and relative diameter was calculated for planted species and is presented here as the importance value. Based on this calculation, in 2009 *P. occidentalis* was the most important planted species in the project area with a value of 171.46, followed by *F. pennsylvanica*, which had a value of 92.42. Other important species included *Quercus nigra* (55.60), *Quercus phellos* (55.28) and *Taxodium distichum* (48.58). Other oaks that could not be definitively identified had an importance value of 54.37. Of the 60 monitoring plots, all exceeded the 320 total stems per acre criterion except for 11 plots or 18% of the plots (Table 3).

A comparison of key parameters between the 2008 and 2009 plot monitoring efforts indicated little change (Table 4). The highest five ranked species by importance values was the same (from high to low: *Platanus occidentalis*, *Fraxinus pennsylvanica*, *Quercus nigra* and *Quercus phellos*); the only change being that the unidentified oaks, *Quercus* spp. replaced *Taxodium distichum* as the fifth highest. The total number of planted stems per plot (thus calculated per acre) remained unchanged. The number of volunteers per plot, total stems per plot and per acre decreased by less than 1%.

Tables 5A through 64A includes numbers of stems, heights and diameters presented as averages and raw data for species found in each of the 60 plots. Also included is a qualitative assessment of the status of saplings (a value of 3 = vigorous, 2 = neutral, 1 = heavily grazed or senescing, and 0 = most aboveground tissue appeared dead but coppice sprouting possible). Tables 5B and 5C through 64B and 64C present woody plant heights and diameters, respectively, by size classes. Photo-documentation of each plot follows these tables.

### **Maintenance (Completed and Planned) and Qualitative Observations**

While conducting plot surveys some areas where planted sapling density was low was noted, both within and outside of the plots. In areas with moderate wet to poorly drained soils we prescribed supplemental plantings of *Taxodium distichum* and for moderately dry to dry soils we prescribed supplemental plantings of *Quercus* spp., *Liriodendron tulipifera*, *Platanus occidentalis* and *Diospyros virginiana*. During December of 2009 and January and February of 2010, approximately 200 seedlings of bare root *T. distichum* were planted in sampling units 1 and 2. Additionally, approximately 200 *T. distichum* and *L. tulipifera* seedlings were planted sample units 13 and 14 where previously planted saplings had been heavily grazed by rabbits and deer; plastic mesh plants guards were used to help reduce herbivory. On drier sites, approximately 600 *Quercus rubra*, *Q. alba*, and *P. occidentalis* along with 200 containerized *L. tulipifera* were planted in sample units 4, 5, 6 10, 11 and 12. Approximately 50 containerized *D. virginiana* were planted in sample unit 11.

The chief problems with seedling and sapling survival and success appeared to be insufficient rainfall at critical times of seedling establishment and growth, grazing by deer and rabbits and belowground root competition with the pre-existing or encroaching pasture grass, coastal Bermuda grass (*Cynodon dactylon*).

Table 1. Importance values for planted species. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	Total No. Stems	Plot Frequency	Average Height (cm)	Average Diameter (cm)	Average Status	Relative Frequency	Relative Density	Relative Diameter	Importance Value
<i>Diospyros virginiana</i>	6	3	92±62	0.9±0.2	0.5±0.8	5.00	1.10	0.11	<b>6.21</b>
<i>Fraxinus pennsylvanica</i>	135	39	70±40	0.9±0.4	1.6±0.5	65.00	24.77	2.65	<b>92.42</b>
<i>Liriodendron tulipifera</i>	17	7	135±113	1.0±0.8	2.2±0.8	11.67	3.12	0.67	<b>15.46</b>
<i>Platanus occidentalis</i>	115	40	373±245	4.2±3.7	2.5±0.8	66.67	21.12	83.67	<b>171.46</b>
<i>Quercus alba</i>	15	10	41±16	0.7±0.3	1.1±0.6	16.67	2.75	0.20	<b>19.62</b>
<i>Quercus lyrata</i>	1	1	38±	0.6±0.0	2.0±0.0	1.67	0.18	0.01	<b>1.86</b>
<i>Quercus michauxii</i>	19	2	50±0	0.4±0.2	2.0±0.4	3.33	3.49	0.11	<b>6.93</b>
<i>Quercus nigra</i>	50	27	93±66	0.9±0.7	1.9±0.7	45.00	9.17	1.43	<b>55.60</b>
<i>Quercus pagoda</i>	1	1	183±0	1.0±0.0	3.0±0.0	1.67	0.18	0.02	<b>1.87</b>
<i>Quercus phellos</i>	53	26	152±94	1.2±0.7	2.3±0.7	43.33	9.72	2.23	<b>55.28</b>
<i>Quercus rubra</i>	20	15	113±111	1.2±1.1	1.9±0.8	25.00	3.67	1.47	<b>30.14</b>
<i>Quercus virginiana</i>	14	6	187±79	1.5±0.8	2.6±0.5	10.00	2.57	0.97	<b>13.54</b>
<i>Quercus spp.</i>	55	26	63±43	0.8±0.4	1.6±0.7	43.33	10.09	0.95	<b>54.37</b>
<i>Taxodium distichum</i>	44	21	141±94	1.6±1.7	2.2±0.6	35.00	8.07	5.51	<b>48.58</b>
<b>Totals</b>	545	60				100	100	100	<b>300</b>

Table 2. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>	1175	684		2	1					1859
<i>Crataegus spp.</i>	1	14	2	1						18
<i>Ilex opaca</i>	5	3	1	1						10
<i>Liquidambar styraciflua</i>	270	487	220	108	10	8	4	3	1	1111
<i>Morella cerifera</i>				1						1
<i>Pinus taeda</i>	1	11	4			1				17
<i>Prunus serotina</i>		1	1							2
<i>Rhus copallinum</i>			1				1			2
<i>Salix nigra</i>							2			2
<b>Totals</b>	1441	1197	229	113	11	9	7	3	1	3022



Table 3. Stems per plot and calculated per acre. Little Contentnea Creek Riparian Buffer Restoration-Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

<b>Plot</b>	<b>Planted Stems/Plot</b>	<b>Planted Stems/Acre</b>	<b>Volunteers/Plot</b>	<b>Total Stems/Plot</b>	<b>Total Stems/Acre</b>
1-1	10	405	0	10	405
1-2	8	324	0	8	324
1-3	8	324	0	8	324
2-1	9	364	0	9	364
2-2	4	162	31	35	1417
2-3	9	364	1	10	405
2-4	6	243	0	6	243
3-1	6	243	4	10	405
3-2	13	526	126	139	5628
3-3	13	526	113	126	5101
4-1	10	405	38	48	1943
4-2	3	121	2	5	202
4-3	9	364	1	10	405
5-1	6	243	61	67	2713
5-2	6	243	34	40	1619
5-3	4	162	0	4	162
6-1	6	243	52	58	2348
6-2	12	486	30	42	1700
6-3	7	283	35	42	1700
6-4	9	364	75	84	3401
7-1	4	162	25	29	1174
7-2	7	283	2	9	364
7-3	6	243	34	40	1619
8-1	8	324	7	15	607
8-2	9	364	0	9	364
8-3	10	405	1	11	445
8-4	6	243	0	6	243
9-1	12	486	0	12	486
9-2	6	243	13	19	769
9-3	10	405	14	24	972
9-4	5	202	2	7	283
10-1	7	283	0	7	283
10-2	26	1053	3	29	1174
10-3	11	445	0	11	445
11-1	8	324	0	8	324
11-2	5	202	0	5	202
11-3	15	607	0	15	607
11-4	15	607	0	15	607
12-1	11	445	17	28	1134
12-2	13	526	13	26	1053
12-3	6	243	56	62	2510
12-4	6	243	0	6	243
13-1	9	364	1	10	405
13-2	10	405	1	11	445
13-3	16	648	0	16	648
13-4	14	567	1	15	607

Continued

Table 3. Continues. Stems per plot and calculated per acre. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Plot	Planted Stems/Plot	Planted Stems/Acre	Volunteers/Plot	Total Stems/Plot	Total Stems/Acre
14-1	11	445	342	353	14291
14-2	3	121	420	423	17126
14-3	1	40	720	721	29190
14-4	4	162	690	694	28097
15-1	16	648	5	21	850
15-2	13	526	25	38	1538
15-3	10	405	9	19	769
15-4	11	445	4	15	607
16-1	11	445	0	11	445
16-2	9	364	0	9	364
16-3	12	486	6	18	729
17-1	9	364	4	13	526
17-2	10	405	4	14	567
17-3	12	486	0	12	486
Totals	545	$\bar{x} = 368$	3022	3567	$\bar{x} = 2407$

Table 4. Comparison of key parameters between 2008 annual monitoring data to 2009 annual monitoring data. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Parameter	2008 Monitoring Data	2009 Monitoring Data
Importance Value (Five highest ranked planted species)	<ol style="list-style-type: none"> <li>1. <i>Platanus occidentalis</i></li> <li>2. <i>Fraxinus pennsylvanica</i></li> <li>3. <i>Quercus nigra</i></li> <li>4. <i>Quercus phellos</i></li> <li>5. <i>Taxodium distichum</i></li> </ol>	<ol style="list-style-type: none"> <li>1. <i>Platanus occidentalis</i></li> <li>2. <i>Fraxinus pennsylvanica</i></li> <li>3. <i>Quercus nigra</i></li> <li>4. <i>Quercus phellos</i></li> <li>5. <i>Quercus</i> spp.</li> </ol>
Total number planted stems in all 60 plots	545	545
Total number volunteer stems in all 60 plots	3049	3022
Total number planted and volunteer stems in all 60 plots	3594	3567
Average number planted stem/acre	368	368
Average number total stems /acre	2424	2407



Table 5B. Plot 1-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 5C. Plot 1-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded



Table 6B. Plot 1-2. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Total</b>										0

\*No Volunteers Recorded

Table 6C. Plot 1-2. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Total</b>											0

\*No Volunteers Recorded



Table 7B. Plot 1-3. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 7C. Plot 1-3. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded





Table 8B. Plot 2-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 8C. Plot 2-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded











Table 11B. Plot 2-4. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.\*

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 11C. Plot 2-4. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.\*

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded





Table 12B. Plot 3-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>		1								1
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>				1						1
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>			2							2
<b>Totals</b>		1	2	1						4

Table 12C. Plot 3-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>		1									1
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>				1							1
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>			1		1						2
<b>Totals</b>		1	1	1	1						4



































Table 20B. Plot 5-3. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 20C. Plot 5-3. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 Cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded

















Table 24B. Plot 6-4. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>			25	25	25					75
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>			25	25	25					75

Table 24C. Plot 6-4. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>		25	25	25							75
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>		25	25	25							75





















Table 29B. Plot 8-2. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 29C. Plot 8-2. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded







Table 31B. Plot 8-4. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 31C. Plot 8-4. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded





Table 32B. Plot 9-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 32C. Plot 9-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded

















Table 36B. Plot 10-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 36C. Plot 10-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded







Table 38B. Plot 10-3. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 38C. Plot 10-3. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded



Table 39B. Plot 11-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 39C. Plot 11-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded





Table 40B. Plot 11-2. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 40C. Plot 11-2. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded



Table 41B. Plot 11-3. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 41C. Plot 11-3. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded



Table 42B. Plot 11-4. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 42C. Plot 11-4. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded









Table 44B. Plot 12-2. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>	5	1								6
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>		1	6							7
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>	5	2	6							13

Table 44C. Plot 12-2. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>	1	5									6
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>		2	3	2							7
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>	1	7	3	2							13







Table 46B. Plot 12-4. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 46C. Plot 12-4. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded







Table 48A. Plot 13-2. 2009 Monitoring Data – Little Contentnea Creek Riparian Buffer Restoration – Phase 3 – Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	Number of Stems	Average Height (cm)	Average Diameter (cm)	Average Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status
<i>Diospyros virginiana</i>																			
<i>Fraxinus pennsylvanica</i>	3	22±2	0.4±0.1	1.0±0		25 0.4	1	0.4	20	0.3	1	22	0.4	0.3	1	22	0.4		
<i>Liriodendron tulipifera</i>																			
<i>Nyssa biflora</i>																			
<i>Platanus occidentalis</i>	1	78±0	0.4±0	1.0±0	78	0.4	1												
<i>Quercus falcate</i>																			
<i>Quercus lyrata</i>																			
<i>Quercus nigra</i>	1	52±0	0.5±0	2.0±0	52	0.5	2												
<i>Quercus michauxii</i>																			
<i>Quercus phellos</i>	2	31±1	0.3±0	2.0±0	30	0.3	2	32	0.3	2									
<i>Quercus rubra</i>																			
<i>Quercus virginiana</i>																			
<i>Quercus spp.</i>	3	61±23	0.5±0.1	1.3±0.6	72	0.6	2	77	0.6	1	34	0.4	1						
<i>Taxodium distichum</i>																			
<b>Total planted stems /plot</b>	10																		
<b>Total planted /acre</b>	405																		
<b>Total planted and volunteer stems/acre</b>	445																		



Table 49A. Plot 13-3. 2009 Monitoring Data – Little Contentnea Creek Riparian Buffer Restoration – Phase 3 – Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report.

Species	Number of Stems	Average Height (cm)	Average Diameter (cm)	Average Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	Height (cm)	Diameter (cm)	Status	
<i>Diospyros virginiana</i>																				
<i>Fraxinus pennsylvanica</i>	4	53 <sub>±</sub> 15	0.6 <sub>±</sub> 0.1	1.8 <sub>±</sub> 0.5	69	0.7	2	51	0.6	2	33	0.5	1	60	0.7	2				
<i>Liriodendron tulipifera</i>																				
<i>Nyssa biflora</i>																				
<i>Platanus occidentalis</i>																				
<i>Quercus falcate</i>																				
<i>Quercus lyrata</i>																				
<i>Quercus nigra</i>																				
<i>Quercus michauxii</i>																				
<i>Quercus phellos</i>	2	77 <sub>±</sub> 18	0.9 <sub>±</sub> 0.3	1.5 <sub>±</sub> 0.7	89	0.7	1	64	1.1	2										
<i>Quercus rubra</i>	1	68 <sub>±</sub> 0	1 <sub>±</sub> 0	2.0 <sub>±</sub> 0	68	1	2													
<i>Quercus virginiana</i>																				
<i>Quercus spp.</i>	7	62 <sub>±</sub> 43	0.8 <sub>±</sub> 0.3	1.4 <sub>±</sub> 0.5		0.48	1	0.516	0.81	1	1	0.8	0.88	110	1.2	2	95	1.0	0.88	1
						1.101	2	0.544	0.51	1	16		0.8		1		95		0.8	
<i>Taxodium distichum</i>	2	42 <sub>±</sub> 32	0.4 <sub>±</sub> 0.1	2.0 <sub>±</sub> 0	19	0.3	2	64	0.4	2										
<b>Total planted stems /plot</b>	16																			
<b>Total planted /acre</b>	648																			
<b>Total planted and volunteer stems/acre</b>	648																			

22  
2

Table 49B. Plot 13-3. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 49C. Plot 13-3. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded











































Table 59B. Plot 16-1. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 59C. Plot 16-1. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded





Table 60B. Plot 16-2. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 60C. Plot 16-2. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded

















Table 64B. Plot 17-3. Volunteer woody stems summary by height size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc. 2009 Annual Report\*.

Species	0.0<0.5 m	0.5<1.0 m	1.0<1.5 m	1.5<2.0 m	2.0<2.5 m	2.5<3.0 m	3.0<3.5 m	3.5<4.0 m	4.0<4.5 m	Totals
<i>Acer rubrum</i>										
<i>Crataegus spp.</i>										
<i>Ilex opaca</i>										
<i>Liquidambar styraciflua</i>										
<i>Morella cerifera</i>										
<i>Pinus taeda</i>										
<i>Prunus serotina</i>										
<i>Rhus copallinum</i>										
<i>Salix nigra</i>										
<b>Totals</b>										0

\*No Volunteers Recorded

Table 64C. Plot 17-3. Volunteer woody stems summary by stem diameter size class. Little Contentnea Creek Riparian Buffer Restoration- Phase 3 Greene County, NC. Greene Environmental Services, Inc., 2009 Annual Report\*.

Species	0.0<1.0 cm	1.0<2.5 cm	2.5<5.0 cm	5.0<10.0 cm	10.0<15.0 cm	15.0<20.0 cm	20.0<25.0 cm	25.0<30.0 cm	30.0<35.0 cm	35.0<40.0 cm	Totals
<i>Acer rubrum</i>											
<i>Crataegus spp.</i>											
<i>Ilex opaca</i>											
<i>Liquidambar styraciflua</i>											
<i>Morella cerifera</i>											
<i>Pinus taeda</i>											
<i>Prunus serotina</i>											
<i>Rhus copallinum</i>											
<i>Salix nigra</i>											
<b>Totals</b>											0

\*No Volunteers Recorded

Addendum 1. Summary table of stem counts by plot for five monitoring years, 2005-2009. Data for the final year of monitoring is in bold and the change in stem counts from the first to the last monitoring effort is in italics. Little Contentnea Creek Riparian Buffer Restoration. Greene County, NC, Greene Environmental Services, Inc., 2009 Annual Report.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
1-1	1-2005	7	283	0	7	283
1-1	2-2006	5	202	1	6	243
1-1	3-2007	12	486	0	12	486
1-1	4-2008	11	445	3	14	567
<b>1-1</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>0</b>	<b>10</b>	<b>405</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>3</i>	<i>121</i>	<i>0</i>	<i>3</i>	<i>121</i>
1-2	1-2005	12	486	0	12	486
1-2	2-2006	10	405	0	10	405
1-2	3-2007	13	526	0	13	526
1-2	4-2008	11	445	0	11	445
<b>1-2</b>	<b>5-2009</b>	<b>8</b>	<b>324</b>	<b>0</b>	<b>8</b>	<b>324</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>-4</i>	<i>-162</i>	<i>0</i>	<i>-4</i>	<i>-162</i>
1-3	1-2005	8	324	0	8	324
1-3	2-2006	9	364	0	9	364
1-3	3-2007	11	445	0	11	445
1-3	4-2008	10	405	0	10	405
<b>1-3</b>	<b>5-2009</b>	<b>8</b>	<b>324</b>	<b>0</b>	<b>8</b>	<b>324</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
2-1	1-2005	9	364	0	9	364
2-1	2-2006	8	324	0	8	324
2-1	3-2007	8	324	0	8	324
2-1	4-2008	7	283	0	7	283
<b>2-1</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>0</b>	<b>9</b>	<b>364</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
2-2	1-2005	12	486	27	39	1579
2-2	2-2006	4	162	23	27	1093
2-2	3-2007	9	364	34	43	1741
2-2	4-2008	6	243	18	24	972
<b>2-2</b>	<b>5-2009</b>	<b>4</b>	<b>162</b>	<b>31</b>	<b>35</b>	<b>1417</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>-8</i>	<i>-324</i>	<i>4</i>	<i>-4</i>	<i>-162</i>
2-3	1-2005	13	526	0	13	526
2-3	2-2006	13	526	2	15	607
2-3	3-2007	15	607	2	17	688
2-3	4-2008	15	607	1	16	648
<b>2-3</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>1</b>	<b>10</b>	<b>405</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>-4</i>	<i>-162</i>	<i>1</i>	<i>-3</i>	<i>-121</i>

Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
2-4	1-2005	9	364	0	9	364
2-4	2-2006	8	324	1	9	364
2-4	3-2007	9	364	0	9	364
2-4	4-2008	7	283	0	7	283
<b>2-4</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>0</b>	<b>6</b>	<b>243</b>
<i>Δ Monitoring Year 1 to 5</i>		-3	-121	0	-3	-121
3-1	1-2005	6	243	1	7	283
3-1	2-2006	9	364	0	9	364
3-1	3-2007	10	405	115	125	5061
3-1	4-2008	10	405	10	20	810
<b>3-1</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>4</b>	<b>10</b>	<b>405</b>
<i>Δ Monitoring Year 1 to 5</i>		0	0	3	3	121
3-2	1-2005	5	202	0	5	202
3-2	2-2006	14	567	501	515	20850
3-2	3-2007	14	567	1003	1017	41174
3-2	4-2008	14	567	303	317	12834
<b>3-2</b>	<b>5-2009</b>	<b>13</b>	<b>526</b>	<b>126</b>	<b>139</b>	<b>5628</b>
<i>Δ Monitoring Year 1 to 5</i>		8	324	126	134	5425
3-3	1-2005	12	486	0	12	486
3-3	2-2006	11	445	206	217	8785
3-3	3-2007	18	729	525	543	21984
3-3	4-2008	23	931	219	242	9798
<b>3-3</b>	<b>5-2009</b>	<b>13</b>	<b>526</b>	<b>113</b>	<b>126</b>	<b>5101</b>
<i>Δ Monitoring Year 1 to 5</i>		1	40	113	114	4615
4-1	1-2005	12	486	14	26	1053
4-1	2-2006	11	445	39	50	2024
4-1	3-2007	14	567	94	108	4372
4-1	4-2008	14	567	42	56	2267
<b>4-1</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>38</b>	<b>48</b>	<b>1943</b>
<i>Δ Monitoring Year 1 to 5</i>		-2	-81	24	22	891
4-2	1-2005	7	283	0	7	283
4-2	2-2006	6	243	30	36	1457
4-2	3-2007	7	283	222	229	9271
4-2	4-2008	7	283	12	19	769
<b>4-2</b>	<b>5-2009</b>	<b>3</b>	<b>121</b>	<b>2</b>	<b>5</b>	<b>202</b>
<i>Δ Monitoring Year 1 to 5</i>		-4	-162	2	-2	-81
4-3	1-2005	10	405	0	10	405
4-3	2-2006	10	405	5	15	607
4-3	3-2007	10	405	1	11	445
4-3	4-2008	9	364	2	11	445
<b>4-3</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>1</b>	<b>10</b>	<b>405</b>
<i>Δ Monitoring Year 1 to 5</i>		-1	-40	1	0	0

Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
5-1	1-2005	11	445	6	17	688
5-1	2-2006	9	364	64	73	2955
5-1	3-2007	12	486	216	228	9231
5-1	4-2008	8	324	67	75	3036
<b>5-1</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>61</b>	<b>67</b>	<b>2713</b>
<i>Δ Monitoring Year 1 to 5</i>		-5	-202	55	50	2024
5-2	1-2005	10	405	2	12	486
5-2	2-2006	12	486	18	30	1215
5-2	3-2007	14	567	63	77	3117
5-2	4-2008	11	445	28	39	1579
<b>5-2</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>34</b>	<b>40</b>	<b>1619</b>
<i>Δ Monitoring Year 1 to 5</i>		-4	-162	32	28	1133
5-3	1-2005	9	364	0	9	364
5-3	2-2006	9	364	8	17	688
5-3	3-2007	12	486	108	120	4858
5-3	4-2008	10	405	25	35	1417
<b>5-3</b>	<b>5-2009</b>	<b>4</b>	<b>162</b>	<b>0</b>	<b>4</b>	<b>162</b>
<i>Δ Monitoring Year 1 to 5</i>		-5	-202	0	-5	-202
6-1	1-2005	8	324	0	8	324
6-1	2-2006	8	324	3	11	445
6-1	3-2007	14	567	221	235	9514
6-1	4-2008	12	486	22	34	1377
<b>6-1</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>52</b>	<b>58</b>	<b>2348</b>
<i>Δ Monitoring Year 1 to 5</i>		-2	-81	52	50	2024
6-2	1-2005	10	405	0	10	405
6-2	2-2006	12	486	103	115	4656
6-2	3-2007	14	567	105	119	4818
6-2	4-2008	15	607	37	52	2105
<b>6-2</b>	<b>5-2009</b>	<b>12</b>	<b>486</b>	<b>30</b>	<b>42</b>	<b>1700</b>
<i>Δ Monitoring Year 1 to 5</i>		2	81	30	32	1296
6-3	1-2005	12	486	0	12	486
6-3	2-2006	11	445	750	761	30810
6-3	3-2007	12	486	220	232	9393
6-3	4-2008	12	486	16	28	1134
<b>6-3</b>	<b>5-2009</b>	<b>7</b>	<b>283</b>	<b>35</b>	<b>42</b>	<b>1700</b>
<i>Δ Monitoring Year 1 to 5</i>		-5	-202	35	30	1215
6-4	1-2005	11	445	0	11	445
6-4	2-2006	8	324	46	54	2186
6-4	3-2007	12	486	214	226	9150
6-4	4-2008	9	364	65	74	2996
<b>6-4</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>75</b>	<b>84</b>	<b>3401</b>
<i>Δ Monitoring Year 1 to 5</i>		-2	-81	75	73	2955

Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
7-1	1-2005	10	405	0	10	405
7-1	2-2006	11	445	201	212	8583
7-1	3-2007	7	283	33	40	1619
7-1	4-2008	2	81	49	51	2065
<b>7-1</b>	<b>5-2009</b>	<b>4</b>	<b>162</b>	<b>25</b>	<b>29</b>	<b>1174</b>
<i>Δ Monitoring Year 1 to 5</i>		-6	-243	25	19	769
7-2	1-2005	7	283	0	7	283
7-2	2-2006	7	283	2	9	364
7-2	3-2007	8	324	3	11	445
7-2	4-2008	7	283	0	7	283
<b>7-2</b>	<b>5-2009</b>	<b>7</b>	<b>283</b>	<b>2</b>	<b>9</b>	<b>364</b>
<i>Δ Monitoring Year 1 to 5</i>		0	0	2	2	81
7-3	1-2005	12	486	0	12	486
7-3	2-2006	9	364	5	14	567
7-3	3-2007	8	324	2	10	405
7-3	4-2008	7	283	3	10	405
<b>7-3</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>34</b>	<b>40</b>	<b>1619</b>
<i>Δ Monitoring Year 1 to 5</i>		-6	-243	34	28	1134
8-1	1-2005	10	405	0	10	405
8-1	2-2006	10	405	6	16	648
8-1	3-2007	13	526	3	16	648
8-1	4-2008	12	486	7	19	769
<b>8-1</b>	<b>5-2009</b>	<b>8</b>	<b>324</b>	<b>7</b>	<b>15</b>	<b>607</b>
<i>Δ Monitoring Year 1 to 5</i>		-2	-81	7	5	202
8-2	1-2005	6	243	0	6	243
8-2	2-2006	3	121	0	3	121
8-2	3-2007	2	81	0	2	81
8-2	4-2008	3	121	0	3	121
<b>8-2</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>0</b>	<b>9</b>	<b>364</b>
<i>Δ Monitoring Year 1 to 5</i>		3	121	0	3	121
8-3	1-2005	6	243	0	6	243
8-3	2-2006	6	243	4	10	405
8-3	3-2007	8	324	4	12	486
8-3	4-2008	6	243	3	9	364
<b>8-3</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>1</b>	<b>11</b>	<b>445</b>
<i>Δ Monitoring Year 1 to 5</i>		4	162	1	5	202
8-4	1-2005	7	283	0	7	283
8-4	2-2006	8	324	4	12	486
8-4	3-2007	7	283	0	7	283
8-4	4-2008	6	243	0	6	243
<b>8-4</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>0</b>	<b>6</b>	<b>243</b>
<i>Δ Monitoring Year 1 to 5</i>		-1	-40	0	-1	-40

Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
9-1	1-2005	5	202	0	5	202
9-1	2-2006	8	324	4	12	486
9-1	3-2007	12	486	2	14	567
9-1	4-2008	9	364	1	10	405
<b>9-1</b>	<b>5-2009</b>	<b>12</b>	<b>486</b>	<b>0</b>	<b>12</b>	<b>486</b>
<i>Δ Monitoring Year 1 to 5</i>		7	283	0	7	283
9-2	1-2005	9	364	0	9	364
9-2	2-2006	6	243	5	11	445
9-2	3-2007	12	486	7	19	769
9-2	4-2008	8	324	3	11	445
<b>9-2</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>13</b>	<b>19</b>	<b>769</b>
<i>Δ Monitoring Year 1 to 5</i>		-3	-121	13	10	405
9-3	1-2005	7	283	0	7	283
9-3	2-2006	9	364	47	56	2267
9-3	3-2007	6	243	6	12	486
9-3	4-2008	6	243	9	15	607
<b>9-3</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>14</b>	<b>24</b>	<b>972</b>
<i>Δ Monitoring Year 1 to 5</i>		3	121	14	17	688
9-4	1-2005	7	283	0	7	283
9-4	2-2006	5	202	1	6	243
9-4	3-2007	9	364	9	18	729
9-4	4-2008	6	243	0	6	243
<b>9-4</b>	<b>5-2009</b>	<b>5</b>	<b>202</b>	<b>2</b>	<b>7</b>	<b>283</b>
<i>Δ Monitoring Year 1 to 5</i>		-2	-81	2	0	0
10-1	1-2005	5	202	0	5	202
10-1	2-2006	12	486	0	12	486
10-1	3-2007	11	445	0	11	445
10-1	4-2008	12	486	0	12	486
<b>10-1</b>	<b>5-2009</b>	<b>7</b>	<b>283</b>	<b>0</b>	<b>7</b>	<b>283</b>
<i>Δ Monitoring Year 1 to 5</i>		2	81	0	2	81
10-2	1-2005	8	324	0	8	324
10-2	2-2006	10	405	13	23	931
10-2	3-2007	10	405	19	29	1174
10-2	4-2008	7	283	15	22	891
<b>10-2</b>	<b>5-2009</b>	<b>26</b>	<b>1053</b>	<b>3</b>	<b>29</b>	<b>1174</b>
<i>Δ Monitoring Year 1 to 5</i>		18	729	3	21	850

Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
10-3	1-2005	5	202	0	5	202
10-3	2-2006	8	324	2	10	405
10-3	3-2007	10	405	4	14	567
10-3	4-2008	8	324	0	8	324
<b>10-3</b>	<b>5-2009</b>	<b>11</b>	<b>445</b>	<b>0</b>	<b>11</b>	<b>445</b>
<i>Δ Monitoring Year 1 to 5</i>		6	243	0	6	243
11-1	1-2005	1	40	0	1	40
11-1	2-2006	0	0	0	0	0
11-1	3-2007	0	0	0	0	0
11-1	4-2008	0	0	0	0	0
<b>11-1</b>	<b>5-2009</b>	<b>8</b>	<b>324</b>	<b>0</b>	<b>8</b>	<b>324</b>
<i>Δ Monitoring Year 1 to 5</i>		7	283	0	7	283
11-2	1-2005	5	202	1	6	243
11-2	2-2006	5	202	24	29	1174
11-2	3-2007	7	283	22	29	1174
11-2	4-2008	17	688	30	47	1903
<b>11-2</b>	<b>5-2009</b>	<b>5</b>	<b>202</b>	<b>0</b>	<b>5</b>	<b>202</b>
<i>Δ Monitoring Year 1 to 5</i>		0	0	-1	-1	-40
11-3	1-2005	7	283	0	7	283
11-3	2-2006	8	324	4	12	486
11-3	3-2007	9	364	1	10	405
11-3	4-2008	15	607	2	17	688
<b>11-3</b>	<b>5-2009</b>	<b>15</b>	<b>607</b>	<b>0</b>	<b>15</b>	<b>607</b>
<i>Δ Monitoring Year 1 to 5</i>		8	324	0	8	324
11-4	1-2005	10	405	0	10	405
11-4	2-2006	4	162	1	5	202
11-4	3-2007	6	243	0	6	243
11-4	4-2008	4	162	0	4	162
<b>11-4</b>	<b>5-2009</b>	<b>15</b>	<b>607</b>	<b>0</b>	<b>15</b>	<b>607</b>
<i>Δ Monitoring Year 1 to 5</i>		5	202	0	5	202
12-1	1-2005	1	40	0	1	40
12-1	2-2006	4	162	5	9	364
12-1	3-2007	5	202	7	12	486
12-1	4-2008	9	364	22	31	1255
<b>12-1</b>	<b>5-2009</b>	<b>11</b>	<b>445</b>	<b>17</b>	<b>28</b>	<b>1134</b>
<i>Δ Monitoring Year 1 to 5</i>		10	405	17	27	1093
12-2	1-2005	0	0	0	0	0
12-2	2-2006	9	364	7	16	648
12-2	3-2007	7	283	10	17	688
12-2	4-2008	11	445	19	30	1215
<b>12-2</b>	<b>5-2009</b>	<b>13</b>	<b>526</b>	<b>13</b>	<b>26</b>	<b>1053</b>
<i>Δ Monitoring Year 1 to 5</i>		13	526	13	26	1053



Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
12-3	1-2005	8	324	0	8	324
12-3	2-2006	2	81	59	61	2470
12-3	3-2007	4	162	45	49	1984
12-3	4-2008	9	364	47	56	2267
<b>12-3</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>56</b>	<b>62</b>	<b>2510</b>
<i>Δ Monitoring Year 1 to 5</i>		-2	-81	56	54	2186
12-4	1-2005	13	526	0	13	526
12-4	2-2006	10	405	0	10	405
12-4	3-2007	12	486	0	12	486
12-4	4-2008	7	283	0	7	283
<b>12-4</b>	<b>5-2009</b>	<b>6</b>	<b>243</b>	<b>0</b>	<b>6</b>	<b>243</b>
<i>Δ Monitoring Year 1 to 5</i>		-7	-283	0	-7	-283
13-1	1-2005	3	121	0	3	121
13-1	2-2006	4	162	225	229	9271
13-1	3-2007	6	243	40	46	1862
13-1	4-2008	4	162	13	17	688
<b>13-1</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>1</b>	<b>10</b>	<b>405</b>
<i>Δ Monitoring Year 1 to 5</i>		6	243	1	7	283
13-2	1-2005	8	324	0	8	324
13-2	2-2006	7	283	6	13	526
13-2	3-2007	15	607	3	18	729
13-2	4-2008	9	364	1	10	405
<b>13-2</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>1</b>	<b>11</b>	<b>445</b>
<i>Δ Monitoring Year 1 to 5</i>		2	81	1	3	121
13-3	1-2005	3	121	0	3	121
13-3	2-2006	7	283	1	8	324
13-3	3-2007	10	405	0	10	405
13-3	4-2008	9	364	2	11	445
<b>13-3</b>	<b>5-2009</b>	<b>16</b>	<b>648</b>	<b>0</b>	<b>16</b>	<b>648</b>
<i>Δ Monitoring Year 1 to 5</i>		13	526	0	13	526
13-4	1-2005	1	40	0	1	40
13-4	2-2006	5	202	0	5	202
13-4	3-2007	6	243	0	6	243
13-4	4-2008	1	40	0	1	40
<b>13-4</b>	<b>5-2009</b>	<b>14</b>	<b>567</b>	<b>1</b>	<b>15</b>	<b>607</b>
<i>Δ Monitoring Year 1 to 5</i>		13	526	1	14	567

Addendum 1. Continued. Summary table of stem counts by plot for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
14-1	1-2005	5	202	0	5	202
14-1	2-2006	0	0	256	256	10364
14-1	3-2007	9	364	261	270	10931
14-1	4-2008	8	324	420	428	17328
<b>14-1</b>	<b>5-2009</b>	<b>11</b>	<b>445</b>	<b>342</b>	<b>353</b>	<b>14291</b>
<i>Δ Monitoring Year 1 to 5</i>		6	243	342	348	14089
14-2	1-2005	7	283	0	7	283
14-2	2-2006	1	40	713	714	28907
14-2	3-2007	7	283	311	318	12874
14-2	4-2008	8	324	577	585	23684
<b>14-2</b>	<b>5-2009</b>	<b>3</b>	<b>121</b>	<b>420</b>	<b>423</b>	<b>17126</b>
<i>Δ Monitoring Year 1 to 5</i>		-4	-162	420	416	16842
14-3	1-2005	8	324	0	8	324
14-3	2-2006	10	405	752	762	30850
14-3	3-2007	10	405	294	304	12308
14-3	4-2008	7	283	352	359	14534
<b>14-3</b>	<b>5-2009</b>	<b>1</b>	<b>40</b>	<b>720</b>	<b>721</b>	<b>29190</b>
<i>Δ Monitoring Year 1 to 5</i>		-7	-283	720	713	28866
14-4	1-2005	11	445	0	11	445
14-4	2-2006	15	607	407	422	17085
14-4	3-2007	14	567	159	173	7004
14-4	4-2008	12	486	530	542	21943
<b>14-4</b>	<b>5-2009</b>	<b>4</b>	<b>162</b>	<b>690</b>	<b>694</b>	<b>28097</b>
<i>Δ Monitoring Year 1 to 5</i>		-7	-283	690	683	27652
15-1	1-2005	5	202	0	5	202
15-1	2-2006	14	567	29	43	1741
15-1	3-2007	14	567	13	27	1093
15-1	4-2008	10	405	11	21	850
<b>15-1</b>	<b>5-2009</b>	<b>16</b>	<b>648</b>	<b>5</b>	<b>21</b>	<b>850</b>
<i>Δ Monitoring Year 1 to 5</i>		11	445	5	16	648
15-2	1-2005	2	81	0	2	81
15-2	2-2006	15	607	35	50	2024
15-2	3-2007	13	526	12	25	1012
15-2	4-2008	14	567	26	40	1619
<b>15-2</b>	<b>5-2009</b>	<b>13</b>	<b>526</b>	<b>25</b>	<b>38</b>	<b>1538</b>
<i>Δ Monitoring Year 1 to 5</i>		11	445	25	36	1457
15-3	1-2005	8	324	0	8	324
15-3	2-2006	13	526	25	38	1538
15-3	3-2007	12	486	15	27	1093
15-3	4-2008	7	283	12	19	769
<b>15-3</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>9</b>	<b>19</b>	<b>769</b>
<i>Δ Monitoring Year 1 to 5</i>		2	81	9	11	445

Addendum 1. Continued. Summary table of stem counts for five monitoring years, 2005-2009.

Plot Number	Monitoring Year – Growing Season	Number of Planted Stems Per Plot	Number of Planted Stems Per Acre	Number of Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Plot	Total Planted and Volunteer Stems Per Acre
15-4	1-2005	11	445	0	11	445
15-4	2-2006	15	607	7	22	891
15-4	3-2007	11	445	7	18	729
15-4	4-2008	11	445	15	26	1053
<b>15-4</b>	<b>5-2009</b>	<b>11</b>	<b>445</b>	<b>4</b>	<b>15</b>	<b>607</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>0</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>162</i>
16-1	1-2005	10	405	0	10	405
16-1	2-2006	10	405	1	11	445
16-1	3-2007	9	364	1	10	405
16-1	4-2008	8	324	0	8	324
<b>16-1</b>	<b>5-2009</b>	<b>11</b>	<b>445</b>	<b>0</b>	<b>11</b>	<b>445</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>1</i>	<i>40</i>	<i>0</i>	<i>1</i>	<i>40</i>
16-2	1-2005	6	243	0	6	243
16-2	2-2006	10	405	1	11	445
16-2	3-2007	7	283	0	7	283
16-2	4-2008	7	283	0	7	283
<b>16-2</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>0</b>	<b>9</b>	<b>364</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>3</i>	<i>121</i>	<i>0</i>	<i>3</i>	<i>121</i>
16-3	1-2005	4	162	0	4	162
16-3	2-2006	10	405	425	435	17611
16-3	3-2007	11	445	16	27	1093
16-3	4-2008	11	445	4	15	607
<b>16-3</b>	<b>5-2009</b>	<b>12</b>	<b>486</b>	<b>6</b>	<b>18</b>	<b>729</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>8</i>	<i>324</i>	<i>6</i>	<i>14</i>	<i>567</i>
17-1	1-2005	8	324	0	8	324
17-1	2-2006	9	364	3	12	486
17-1	3-2007	7	283	7	14	567
17-1	4-2008	7	283	6	13	526
<b>17-1</b>	<b>5-2009</b>	<b>9</b>	<b>364</b>	<b>4</b>	<b>13</b>	<b>526</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>1</i>	<i>40</i>	<i>4</i>	<i>5</i>	<i>202</i>
17-2	1-2005	5	202	0	5	202
17-2	2-2006	10	405	2	12	486
17-2	3-2007	12	486	2	14	567
17-2	4-2008	10	405	0	10	405
<b>17-2</b>	<b>5-2009</b>	<b>10</b>	<b>405</b>	<b>4</b>	<b>14</b>	<b>567</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>5</i>	<i>202</i>	<i>4</i>	<i>9</i>	<i>364</i>
17-3	1-2005	5	202	0	5	202
17-3	2-2006	12	486	0	12	486
17-3	3-2007	8	324	4	12	486
17-3	4-2008	10	405	0	10	405
<b>17-3</b>	<b>5-2009</b>	<b>12</b>	<b>486</b>	<b>0</b>	<b>12</b>	<b>486</b>
<i>Δ Monitoring Year 1 to 5</i>		<i>7</i>	<i>283</i>	<i>0</i>	<i>7</i>	<i>283</i>

Addendum 2. Summary table of average stem count for all plots by monitoring year 2005-2009. Little Contentnea Creek Riparian Buffer Restoration. Greene County, NC, Greene Environmental Services, Inc., 2009 Annual Report.

<b>Monitoring Year – Growing Season</b>	<b>Parameters for All Plots by Year</b>	<b>Number of Planted Stems Per Plot</b>	<b>Number of Planted Stems Per Acre</b>	<b>Number of Volunteer Stems Per Plot</b>	<b>Total Planted and Volunteer Stems Per Plot</b>	<b>Total Planted and Volunteer Stems Per Acre</b>
1-2005	Average	8	305	1	8	339
	Standard Deviation	3	131	4	6	233
	Plot Count	60	60	60	60	60
2-2006	Average	8	343	85	93	3772
	Standard Deviation	4	145	186	186	7522
	Plot Count	60	60	60	60	60
3-2007	Average	10	401	74	84	3414
	Standard Deviation	3	138	161	162	6547
	Plot Count	60	60	60	60	60
4-2008	Average	9	368	51	60	2425
	Standard Deviation	4	157	125	126	5088
	Plot Count	60	60	60	60	60
5-2009	Average	9	368	50	59	2407
	Standard Deviation	4	165	142	141	5695
	Plot Count	60	60	60	60	60
	Highest Average During Five year Monitoring	10	401	85	93	7522
	Lowest Average During Five year Monitoring	8	305	1	8	339
	Change in Stem Average Stems from First to Fifth Monitoring Year	1	63	49	51	2068