

**Post-Operational Assessment of Vegetation in the
Turkey Creek Unit, Big Thicket National Preserve
Hardin and Tyler Counties, Texas**

Prepared For:

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1.0 INTRODUCTION

Dixie Environmental Services Co. (DESCO) conducted a post-operational vegetation assessment in the Turkey Creek Unit (TCU) of the Big Thicket National Preserve (BTNP) in May and June of 2009. Data collected during this assessment was compared to data from the 2006 pre-operational assessment of vegetation conducted prior to the commencement of Seismic Exchange, Inc's (SEI, formerly Seismic Assistants, Ltd.) Knight Phase IV 3D Seismic Survey in order to evaluate and analyze project impacts to vegetation. The data was also used to evaluate the effectiveness of measures taken to minimize the impact of seismic activities.

The area covered by the vegetation mapping and assessment effort is located approximately 8 miles north of Kountze, in Hardin and Tyler Counties, Texas, and includes approximately 7,898 acres of National Park Service (NPS) administered lands within the TCU. **Figure 1** depicts the project area, as well as surrounding BTNP units.

All post-operational vegetation mapping, survey, and data analysis results are summarized in this report.

1.1 BACKGROUND

SEI completed a three-dimensional seismic survey, entitled Knight Phase IV 3D, within the Turkey Creek (TCU), Village Creek Corridor (VCCU), and Big Sandy Creek Corridor (BSCCU) Units of the Big Thicket National Preserve (BTNP or Preserve), as well as other lands administered by the BTNP. To meet National Park Service (NPS) regulatory requirements and support environmental impact analysis, existing vegetation was sampled and mapped within the TCU (prior to and one year following completion of operations) according to U.S. Geological Survey/National Park Service National Vegetation Mapping Program guidelines. Portions of the VCCU, BSCCU, and other lands administered by the BTNP located within the Knight Phase IV project area were not included in the scope of the vegetation mapping and assessment effort, as they are

Figure 1. Knight IV 3D Seismic Survey

Turkey Creek Unit (TCU), Big
Thicket National Preserve (BTNP)

Legend

2 1 0 2 Miles

- Drilled Source Points on TCU
- Receiver Stations on TCU
- Knight IV 3D Source Points
- Knight IV 3D Receiver Stations



BTNP Boundary (10/25/2006)

Map Coordinate System: Universal Transverse Mercator, Zone 15
Map Datum: North American Datum 1983
Map Produced 9/22/2009



Dixie Environmental Services Co., LP



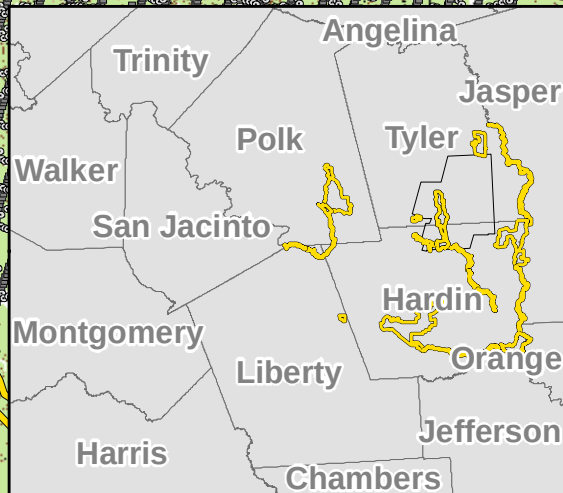
Beech
Creek
Unit

Hickory Creek
Savannah Unit

Turkey
Creek
Unit

Big Sandy Creek
Corridor Unit

Village Creek
Corridor Unit



smaller in size than the TCU, and proposed seismic operations within these areas were limited.

SEI contracted Dixie Environmental Services Co., LP (DESCO) to complete the vegetation assessments within the TCU. The 2006 pre-operational vegetation analysis characterized the existing vegetation occurring within the TCU; whereas, the post-operational assessment allowed for refinement of the vegetation map generated as a result of the pre-operational assessment, as well as the development of conclusions about impacts from the seismic survey derived from the amount of vegetation change in plots.

NPS personnel approved DESCO's Vegetation Sampling Plan for post-operational assessment on May 22, 2009, and fieldwork began shortly thereafter. DESCO replicated field methodologies from the *Pre-Operational Assessment of Vegetation in the Turkey Creek Unit, Big Thicket National Preserve* (DESCO, 2006) with regards to plot size, data notation, and data analyses.

As mentioned above, the existing vegetation was sampled and mapped according to U.S. Geological Survey/National Park Service Vegetation Mapping Program guidelines. The program emphasized the collection of data on key environmental variables and includes the *Standardized National Vegetation Classification System-NBS/NPS Vegetation Mapping Program* (TNC, 1994) and *Accuracy Assessment Procedures-NBS/NPS Vegetation Mapping Program* (ESRI, 1994) standard methodologies for data collection and analysis. Such data supports project planning, resource assessment, and biodiversity conservation.

1.2 MEASURES TAKEN TO MINIMIZE IMPACTS

Several methods were implemented during operations to uphold commitments to NPS and insure that SEI conducted operations in the most environmentally-friendly and least invasive manner possible. Third-party environmental monitors for seismic activities were present to ensure compliance with the approved *Plan of Operations for Knight IV*

3D Seismic Survey within the Big Thicket National Preserve and Other Lands Managed by the National Park Service, Hardin and Tyler Counties, Texas (DESCO, 2007). Monitors provided by SWCA Environmental Consultants (SWCA) were approved by the Preserve Superintendent and reported directly to the Preserve Superintendent or his representative.

The following measures were implemented by SEI and monitored by SWCA to minimize impacts to vegetation within the BTNP:

1. The cutting of woody vegetation (dead or alive) was limited by size to 3 inches in diameter, measured 1 foot above ground. All cuts must have been flush with the ground, and the heights of the remaining stumps were no greater than 1 inch from the ground surface. No limb larger than 3 inches in diameter, measured at the branch collar or branch bark ridges, were cut. The remaining limb did not extend more than 1 inch beyond the main trunk. Any trees found dead on the ground could have been cut and removed from the seismic line, regardless of size; however, dead trees that were still standing were cut in accordance with the size stipulations. Cutting of vegetation was limited to the minimum necessary to accommodate necessary travel along receiver lines. The use of motorized cutting equipment was also permitted.
2. Transport and set-up of pumps, hoses, and equipment was conducted under the same conditions and restrictions of access and vegetative trimming as operations along receiver lines.
3. Any size of yaupon holly (*Ilex vomitoria*) or the exotic Chinese tallow (*Triadica sebifera*) tree was cut only if leaves were showing or identified by an individual trained in tree identification.
4. Vegetation was selectively cut along receiver lines. Vegetation was cut in a manner that facilitated access for crews but also minimized the amount of vegetation cut.
5. No cypress knees were allowed to be cut.
6. To avoid negative impacts to Texas trailing phlox, SEI did not conduct operations within 50 feet of known sites. No access across or through these areas were permitted.
7. Several rare plants, including Carolina lily, wild lupine, yellow-fringed orchid, and scarlet catchfly were located and flagged during the pre-operational

vegetation survey, wetland delineation, and other field work. These areas were avoided via offsets during operations.

8. Wetland soils that exhibited denuded soils could have been replanted with herbaceous and/or woody plant species characteristic of those that occur adjacent to the impact corridor.

The most notable of the measures employed was the cutting/damage stipulations, including the 3-inch diameter limit, on the size of trees and branches that could be cut or damaged. Crews were frequently instructed on how to measure trees and were provided with the tools to effectively and efficiently measure trees and branches.

1.3 PROJECT-RELATED IMPACTS TO VEGETATION

The proposed seismic survey did have some minor impacts on the BTNP and surrounding environment that could not be completely avoided, even when complying with the aforementioned stipulations and operational constraints. A complete list of these impacts can be found in SWCA's *Final Monitoring Report Knight Phase IV 3D Seismic Prospect* (SWCA, 2008). Crews were permitted by NPS to cut vegetation less than the stipulated 3-inch size limit, so impacts were inevitable in the herbaceous, shrub and midstory layers. One of the more common issues encountered during the project was the cutting or damage of oversized and/or unauthorized trees. This occurred far less often than improperly cut trees; however, its occurrence could only be documented and not remedied. To prevent cutting or damage to oversized/unauthorized trees, monitors frequently discussed size stipulations with the crews, along with tree identification and measurement techniques. The majority of the oversized trees that were cut or damaged were only an inch or two above the stipulated 3-inch limit, and all trees impacted by surveying operations were confined to the midstory and shrub layers.

Vegetation impacts resulting from the passage of drill equipment were expected and minimal; however, in some cases, trees larger than the stipulated 3-inch diameter were impacted. These instances were typically the result of equipment being unable to

maneuver in densely vegetated areas. The oversized trees impacted by drilling operations were confined to the midstory layer.

Considering the scope of the project and the types and quantities of vegetative cover existing in the BTNP, impacts to oversized trees were minimal and explainable in most instances. Survey crews cooperated with the environmental monitors in a proactive manner in order to minimize stipulation infractions.

2.0 METHODOLOGY

DESCO replicated field methodologies from the 2006 pre-operational vegetation assessment in regards to plot size, data notation, and data analyses during the post-operational vegetation assessment. Data collected during the post-operational assessment was compared to the pre-operational assessment data in order to assess changes in vegetative composition of the project area and to provide a basis for discussion of impacts attributable to activities associated with the Knight Phase IV 3D seismic survey. As part of the assessment of project-related impacts, the comparison of data was used to determine if the presence of seismic crews encouraged the introduction and/or spread of noted exotic and/or noxious species.

Objectives of the pre- and post-operational assessments had both similarities and differences. The pre-operational assessment was conducted to collect information on the composition of vegetation present in the BTNP at the time of the assessment and to map vegetation to the “alliance” level according to the International Classification of Ecological Communities (ICEC) hierarchal classification system (Weakley, Patterson, et. al., 1998). It should be noted that some alliance names did include species that are not found in Texas, due to the broad range of these alliances. The post-operational assessment was also conducted to collect information on the composition of vegetation present in the BTNP at the time of the assessment; however, mapping alliances was not of great concern, as this had already been accomplished as a result of the pre-project assessment. In the post-operational assessment, 9 new plots were added to confirm

alliance types in order to comply with accuracy assessment procedures. The focus of the post-operational assessment was to provide an accurate assessment of project-related impacts by comparing the two data sets. Field methodology and data collection for both efforts were the same; however, the sampling design differed to suit the objectives of each assessment.

2.1 PRE-OPERATIONAL VEGETATION ASSESSMENT

Pre-operational vegetation alliances present in the TCU were determined through the following steps:

1. A review of a map illustrating “Potential Alliances to Occur within the Turkey Creek Unit” was conducted and utilized, along with other existing information (soils, topography, etc.), to identify potential alliance boundaries from aerial photography.
2. The project area was stratified based on the potential alliance classifications.
3. Polygons within each of the potential vegetation classifications were assigned numerical characters and a random sample was assigned for each distinct polygon and then selected for quantitative sampling. All sample plots were designed to coincide with SEI’s proposed locations of source and receiver lines.
4. The potential alliance classifications identified in the project area were ground-verified and modified as appropriate.
5. Field-verified alliance classifications and boundaries were revised from aerial photography to reflect the results of the field investigations.

2.2 SAMPLE DESIGN

The total number of sample plots per polygon and preliminary vegetation class, as well as the locations of the sample plots, were assigned using *Accuracy Assessment Procedures-NBS/NPS Vegetation Mapping Program* (ESRI, 1994) and *Standardized National Vegetation Classification System-NBS/NPS Vegetation Mapping Program* (TNC, 1994). Based on these documents and the preliminary vegetation mapping efforts, approximately

120 distinct polygons were identified within the project area and each polygon was assigned a preliminary vegetation class. Each polygon contained at least one sample plot, and the number of sample plots per preliminary vegetation class was determined by the size and quantity of the polygon(s) included in that class. This determination was made in accordance with the guidelines outlined in the above-mentioned accuracy assessment procedures.

The final number of sample plots in each vegetation class was based on the “Principles of the Species Area Curve”, as described in *The Study of Plant Communities: An Introduction to Plant Ecology* (Oosting, 1950). The number of species accumulated in the sample plots was plotted against the number, or size, of plots completed. Adequate sampling was defined as the point at which a 10% increase in sample plots produced a 10% or less increase of species accumulated. To ensure comprehensive coverage of each vegetation class, 2 additional sample plots were performed after the 10% rule had been achieved for each vegetation class. The species area curve was selected to determine the appropriate number of sample plots per vegetation class due to its ease of use during the field sampling efforts. If any of the small polygons with a single plot appeared to be different and unique as compared to the vegetation class in which it was originally assigned, then additional plots were placed in these areas in order to facilitate the accuracy necessary to meet the objectives of the project.

A review of BTNP’s burn management schedule was conducted prior to the onset of vegetation mapping. A number of burns were planned for the summer of 2006 and 2009, as well as mechanical treatment in some fire management units (FMUs) in 2007. Several sample vegetation plots had been placed within FMUs that were treated in 2006 and 2009. Due to the proposed burning and mechanical treatment schedule for 2006, 2007, and 2009, herbaceous layers were sampled in only 10% of the sample plots within these FMUs.

Treefall in the TCU was an issue while collecting data, since the pre-operational vegetation sampling field work was conducted within a year of Hurricane Rita’s passage

through the area. The TCU, located west of where the storm made landfall, was impacted by high north and northwest winds of the category four storm. Based on observations noted during the collection of vegetation data, pine trees and hardwoods in wetter habitats were affected the most by the high winds from the hurricane. The overall extent of treefall in the area was severe enough to potentially change the alliance classifications of vegetation communities in the TCU, especially in pine-dominant areas. For example, an area which would be classified as *Pinus taeda-Quercus (alba, falcata, stellata)* Forest Alliance prior to the hurricane would now be classified as *Quercus alba-Quercus (falcata, stellata)* Forest Alliance.

For the purposes of the vegetation sampling effort, the project area was considered to have four strata (**Table 1**).

Table 1. Vegetation Layer Classes and Associated Diameters		
Vegetation Stratum	Diameter at Breast Height (dbh)	
	Centimeters (cm)	Inches (in)
Overstory (canopy)	> 12.0	> 4.7
Midstory	2.5-12.0	1 – 4.7
Shrub	0.5-2.5	0.2 - 1
Herbaceous	all woody vegetation <0.5 was measured as % cover	all woody vegetation <0.2 was measured as % cover

In summarizing this data, density, dominance (basal area or % ground cover), and frequency values were determined for each species. Density is the number of individuals per unit area; dominance is the basal area or % ground cover per unit area; and frequency is the % of sample plots containing the species. ‘Per unit area’ refers to the sample plot size, or 250 square meters (m²). For the data collected, calculations were expressed in totals for all species, the plot totals, and relative percentages. Relative percentages for density, dominance, and frequency were summed into a single Importance Value, which reflects the ecological importance of the species within the vegetation community.

Importance Value (IV) evens out an imbalance of meaning applied to any single parameter. Relative Importance Value (RIV) was also calculated and was used throughout the document for ease of comparison of data (RIVs of all species in a plot/alliance add up to 100%) and consistency with previous publications; however, RIV has no real meaning in forest ecology. Equations for calculating forest dynamics follow the *Laboratory Manual of General Ecology* (Cox, 1996):

$$\text{Density} = \frac{\text{Number of Individuals}}{\text{Area Sampled (ha)}}$$

$$\text{Relative Density (\%)} = \frac{\text{Number of Individuals of a Species}}{\text{Number of Individuals for All Species}} \times 100$$

$$\text{Frequency} = \frac{\text{Number of Plots in which Species Occurs}}{\text{Total Number of Plots Sampled}} \times 100$$

$$\text{Relative Frequency (\%)} = \frac{\text{Frequency Value for a Species}}{\text{Total of Frequency Values for All Species}} \times 100$$

$$\text{Dominance} = \frac{\text{Basal Area of a Species / or canopy cover}}{\text{Area Sampled}} \times 100$$

$$\text{Relative Dominance (\%)} = \frac{\text{Number of Individuals of a Species}}{\text{Total of Dominance Values for All Species}} \times 100$$

$$\text{Importance Value} = \text{Relative Density} + \text{Relative Frequency} + \text{Relative Dominance}$$

$$\text{Relative Importance Value (\%)} = \frac{\text{Importance Value}}{3}$$

In addition to quantitative sampling, qualitative observations were made at each plot to assist in describing and classifying vegetative communities, seismic impacts, and other natural and anthropomorphic disturbances. Information was collected on topographic

position, landforms, hydrologic regime, and soils, and was supported by photographic documentation.

2.3 WOODLAND STANDS

2.3.1 Overstory-Midstory Strata

Quantitative sampling data was collected for the overstory and midstory strata using 250m² plots (25m x 10m). Plot boundaries were determined by measuring 12.5m directly north and south of a center point and 5m directly east and west of the center point. This was accomplished using a hand held compass and a measuring tape. Each center point, or plot center, was marked with a flagged PVC pipe. In addition, the plot number was marked on the PVC pipe with permanent ink. A second PVC pipe was placed on the northern center boundary of the plot to help orient the plot in the post-operational survey. Data collected during survey efforts included geographical coordinates of the center point, woody and herbaceous plant species present within the plot, number of occurrences of each plant species, and basal area (obtained by collecting the diameter at breast height (dbh) of each individual). Data on the overstory and midstory were separated during the actual data processing. Geographical coordinates of the center point were obtained by using a hand-held GPS unit (Magellan Meridian Gold, 3m accuracy).

2.3.2 Shrub Stratum

The shrub component was sampled using 25m² nested subplots (5m x 5m) within each 250m² plot used for the overstory and midstory species. The center point was the same for both the overstory and shrub plot. Plot boundaries were determined by measuring 2.5m directly north, south, east, and west of the center point. Data collected during survey efforts included shrub species within the plot, frequency of each species, and basal coverage (obtained by collecting the stem diameter of each individual).

2.3.3 Herbaceous Stratum

The herbaceous stratum was sampled using a 1m² (1m x 1m) frame. Ten random 1m² plots were sampled within each 250m² overstory/midstory plot to determine the

herbaceous plant species and their coverage. Direction and distance was recorded, using a hand held compass and measuring tape, from the center point of the 250m² overstory/midstory plot to the center point of each herbaceous plot. These measurements were taken during the pre-operational survey in order to locate the same subplots in the post-operational survey.

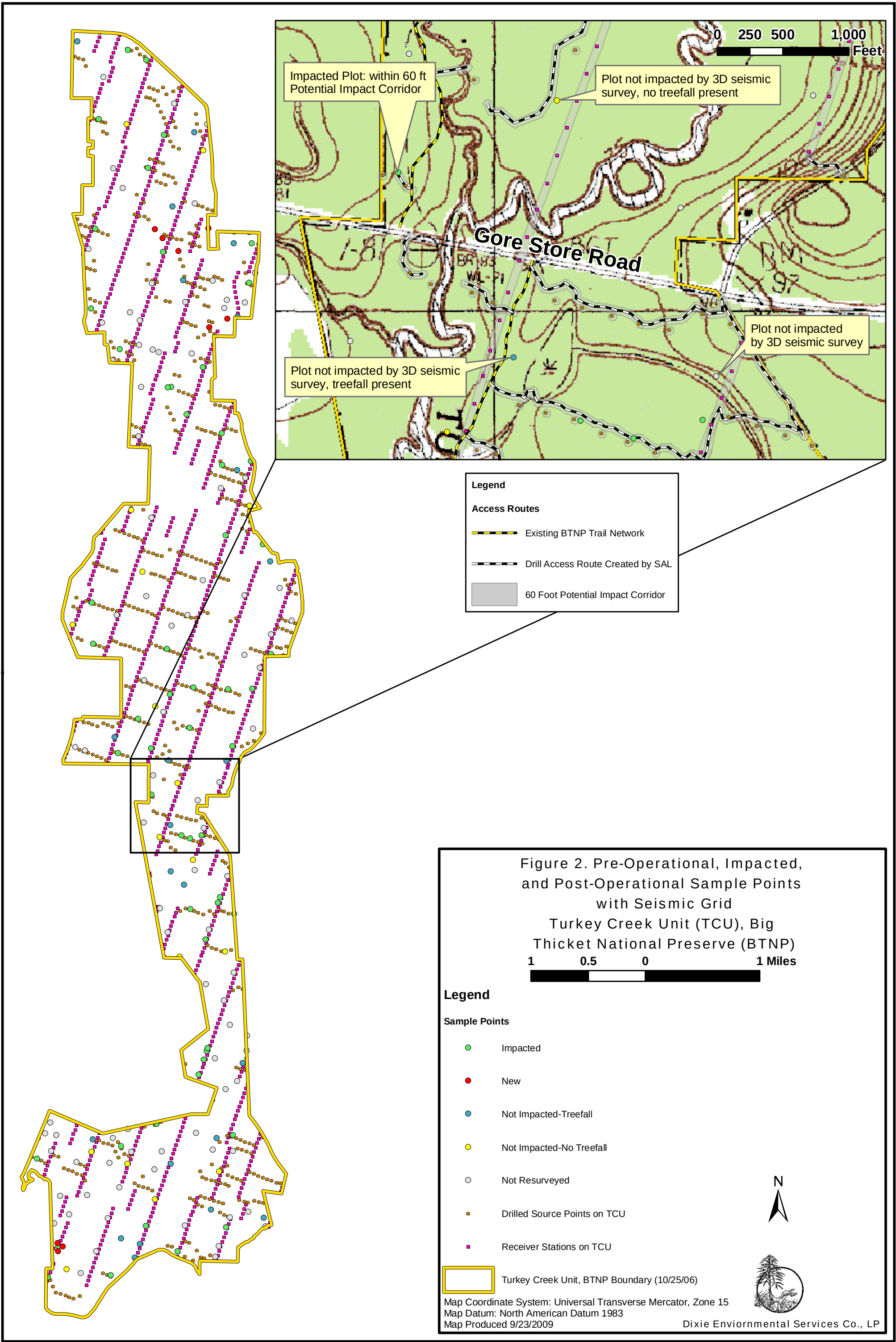
Data collected included species within the plot, an estimated percentage of species composition per plot, and an estimated percent ground cover. A vertical projection of the foliage of each species within the 1m² sample frames was used as a visual inspection to estimate percent ground cover for each plant species.

2.4 POST-OPERATIONAL VEGETATION ASSESSMENT

2.4.1 Sample Design

Fifty-six of the 186 sample plots surveyed in the 2006 pre-operational vegetation assessment intersected the final seismic grid of receiver and source lines, which included the source points and receiver stations, as well as the 60-foot (18.29m) travel corridor along the grid. These plots were termed “impacted plots” to differentiate them from the other plots that did not fall within the final grid (**Figure 2**). Of the 56 impacted plots, 43 contained data on the herbaceous layer.

As mentioned before, prior to the pre-operational vegetation sampling in 2006, Hurricane Rita, a category 4 storm, made landfall southeast of the Preserve and had a devastating effect on the forest. Severe weather impacted the TCU again in 2008 when Hurricane Ike, a category 2 storm, made landfall near the Preserve causing more widespread treefall. Though only a category 2 storm at landfall on the Gulf coast, Ike maintained its wind speeds far enough inland to cause damage to the TCU. The treefall caused by these two storms had the potential to cause the increased presence of exotic species. The increase of exotic species is one of the parameters evaluated as a part of the vegetation impact analysis of the seismic survey.



Exotic species are opportunistic and often have the potential to out-compete native species when natural and man-made disturbances occur. This being the case, if there is an increase in the presence of exotic species, it would be difficult to determine whether the cause of the increase was attributable to the seismic survey, treefall, or random chance.

In the 2009 post-operational survey, observations were made at each sample plot as to whether there was treefall or no treefall, as well as if there were seismic impacts or no seismic impacts. The data was sorted and analyzed based on these parameters to determine the extent of impacts of the seismic survey, while taking into account the impacts of the extreme storm events. There was an abundance of impacted plots present in some of the larger alliances, while there were few found in the smaller alliances. **Table 2** shows the number of herbaceous and woody strata plots for each alliance sampled during the post-operation vegetation assessment.

Table 2. Completed Plots in each Alliance by Vegetation Layer in Post-Operational Vegetation Assessment		
Alliance	Woody Plots	Herbaceous Plots
<i>Magnolia virginiana</i> - <i>Nyssa biflora</i> - <i>Quercus laurifolia</i>) Saturated Forest Alliance	2	4
<i>Nyssa (aquatica, biflora, ogeche)</i> Floodplain Seasonally Flooded Forest Alliance	0	2
<i>Fagus grandifolia</i> - <i>Quercus alba</i> Forest Alliance	1	1
<i>Pinus taeda</i> - <i>Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance	2	5
<i>Pinus palustris</i> Woodland Alliance	1	2
<i>Pinus taeda</i> - <i>Pinus echinata</i> Forest Alliance	1	3
<i>Pinus taeda</i> - <i>Quercus (alba, falcata, stellata)</i> Forest Alliance	2	21
<i>Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance	0	1

Table 2. Completed Plots in each Alliance by Vegetation Layer in Post-Operational Vegetation Assessment		
Alliance	Woody Plots	Herbaceous Plots
<i>Quercus nigra</i> Forest Alliance	1	
<i>Quercus alba</i> -(<i>Quercus nigra</i>) Forest Alliance	0	1
<i>Paspalum notatum</i> Herbaceous Alliance	0	1
<i>Pinus taeda</i> Seasonally Saturated Woodland Alliance	0	1
Mosaic	3	1
Totals	13	43

2.4.2 Sampling Methodology

Post-operational vegetation assessment sampling was conducted using the same methodology as that of the pre-operational vegetation assessment. Each of the 250m² and 25m² plots was measured from its center point, which was indicated by two marked PVC poles established during the pre-operational assessment. The azimuth and distance from the center pole of each of the 10 randomly-selected 1m² herbaceous subplots were recorded during the pre-operational assessment, as well. In all but two plots, the azimuth and distance of each of the subplots enabled the original sample subplots to be located. Herb plot coordinates could not be located for two plots during the post-operational vegetation assessment.

DESCO retained the services of plant taxonomist Dr. Larry Brown for both the pre- and post-operational vegetation assessments for quality assurance/quality control related to species identification.

2.5 DATA MANAGEMENT

Only those pre-operational sample plots that were re-sampled in the post-operational assessment were included in the pre-operational data set during data analysis. Each data

set was reviewed prior to comparison for species name consistency and format abnormalities.

2.5.1 Data Analysis Goals

The objectives of impact analyses were as follows:

1. To determine the amount of change in the herbaceous layer by measuring percent cover per alliance and per species within each alliance. Ecological analyses were preformed to determine the following species indices within each alliance:
 - Frequency
 - Relative Frequency
 - Dominance
 - Relative Dominance
 - Importance Value
 - Relative Importance Value
2. To determine the amount of change in the shrub layer at the alliance level and per species within each alliance by measuring vegetation with a diameter of 0.5-2.4cm. Ecological analyses were used to determine the following:
 - Frequency
 - Relative Frequency
 - Density
 - Relative Density
 - Dominance
 - Relative Dominance
 - Importance Value
 - Relative Importance Value
3. To determine the amount of change in the midstory layer at the alliance level and per species within each alliance by measuring trees with a dbh of 2.4-12cm. Ecological analyses were used to determine the following species indices within each alliance:
 - Frequency
 - Relative Frequency
 - Density
 - Relative Density
 - Dominance
 - Relative Dominance
 - Importance Value
 - Relative Importance Value

4. To confirm that the overstory layer did not change at the alliance level, nor did species composition within each alliance, as a result of seismic impacts by measuring trees with diameters greater than 12cm. Ecological analyses were used to determine the following species indices within each alliance:
 - Frequency
 - Relative Frequency
 - Density
 - Relative Density
 - Dominance
 - Relative Dominance
 - Importance Value
 - Relative Importance Value

Natural occurrences could have affected some individuals within sample plots. Notation during the field assessment was made of any damages that were observed and possible explanations for the damages are developed within the discussion (**Section 4.0**) of this report.

5. To measure changes in the presence of exotic and noxious species by analyzing changes in Importance Values of the species within each plot and alliance between the two years of assessment.

2.6 STATISTICAL ANALYSIS OF EXOTIC SPECIES

In addition to the impacted plots that were sampled to assess seismic impacts, DESCO sampled a total of 42 plots not impacted by the seismic survey, both with and without treefall present. These plots were sampled as control plots to allow for a comparison of natural changes in exotic species versus changes in exotic species within plots impacted by the seismic survey. Statistical analysis was conducted to determine differences. Of the 42 control plots that were sampled for comparison purposes, 23 had treefall present and the other 19 plots had no treefall present. Methodology of the statistical tests is included in the statistical report as **Appendix A**.

The statistical analysis was conducted in two different ways. First, the analysis was based on the change in Relative Importance Value (RIV) of each exotic species on a plot to plot level. Secondly, the analysis was based on the change in rank of species, which is also based on RIV within the overall data (all plots together).

3.0 RESULTS

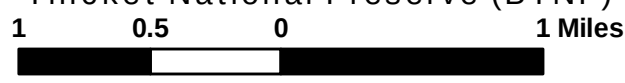
Overall analysis of the data from all TCU alliances, grouped together as a whole, is presented first; followed by individual data for each alliance, presented in the same order as it appeared in *Pre-Operational Assessment of Vegetation in the Turkey Creek Unit, Big Thicket National Preserve* (DESCO, 2007). Each sub-section presents data in the same organizational template, with post-operational assessment data presented prior to pre-operational assessment data. The first paragraph contains the alliance area in hectares (ha), the number of plots, area sampled, total density and basal area (dominance) of woody vegetation, as well as the number of plots and area sampled for herbaceous vegetation. The following paragraphs within each section contain the woody and herbaceous ecological indices. The remaining paragraphs of each section display and compare the density and basal area (dominance) of each stratum, as well as the dominant species present during each of the vegetation assessments.

3.1 OVERALL ALLIANCE DATA

Ninety-eight of the original 186 sample plots were re-surveyed during the post-operational vegetation assessment (**Figure 3**). Fifty-six of the 98 re-surveyed plots were impacted by seismic activity. The results from the analysis of these impacted plots are presented in this section and discussed in **Section 4.0**. The plots were located and positioned in the same locations as those sampled during the pre-operational assessment.

See **Appendix B** for a complete plot summary and **Appendix C** for a complete list of species documented in the Turkey Creek Unit. **Appendix D** summarizes density and basal area (dominance) of each stratum for all the TCU and each alliance, as well as the dominant species present during each of the vegetation assessments.

Figure 3. Sample Points in the
Post-Operational Vegetation Assessment
Turkey Creek Unit (TCU), Big
Thicket National Preserve (BTNP)



Legend

2009 Sample Points

- Impacted
- New
- Not Impacted-Treefall
- Not Impacted-No Treefall

- Hiking Trails
- Permanent Watercourses

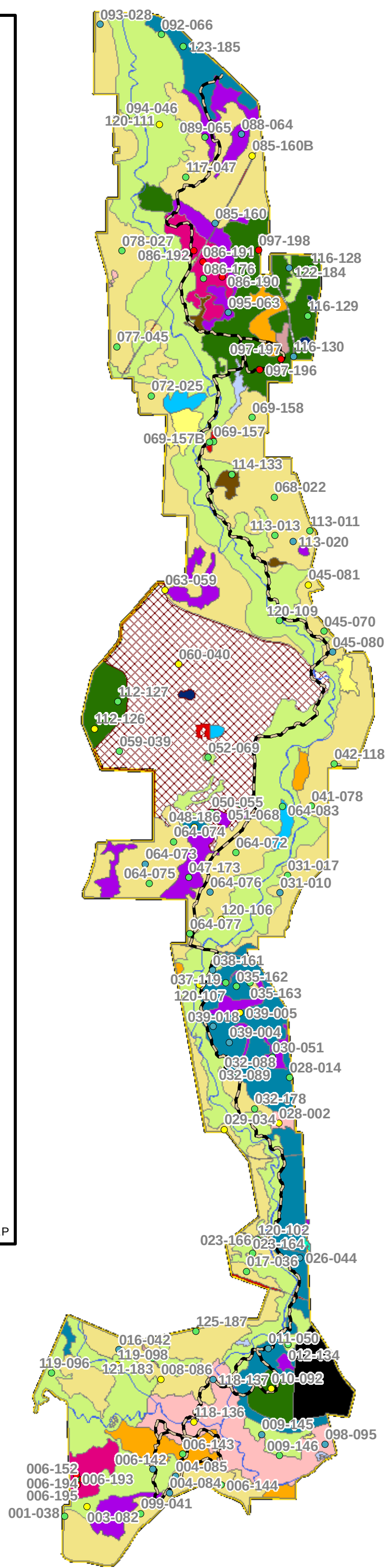
Vegetation Alliances

- Cyrilla racemiflora - Ilex coriacea - (Cliftonia monophylla) Saturated Shrubland Alliance [III.A.2.N.i (A.802)]
- Fagus grandifolia - Quercus alba Forest Alliance [I.B.2.N.a (A.228)]
- Magnolia virginiana - Nyssa biflora - (Quercus laurifolia) Saturated Forest Alliance [I.C.3.N.b (A.437)]
- Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance [I.B.2.N.f (A.345)]
- Nyssa (aquatica, biflora, ogeche) Floodplain Seasonally Flooded Forest Alliance [I.B.2.N.e (A.323)]
- Nyssa (aquatica, biflora, ogeche) Pond Seasonally Flooded Forest Alliance [I.B.2.N.e (A.324)]
- Paspalum notatum Herbaceous Alliance [V.A.5.N.c (A.1219)]
- Pinus palustris Woodland Alliance [II.A.4.N.a (A.499)]
- Pinus taeda - Pinus echinata Forest Alliance [I.A.8.N.b (A.129)]
- Pinus taeda - Quercus (alba, falcata, stellata) Forest Alliance [I.C.3.N.a (A.404)]
- Pinus taeda - Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance [I.C.3.N.b (A. 437)]
- Pinus taeda Seasonally Saturated Woodland Alliance [no alpha-numeric code]
- Quercus alba - (Quercus nigra) Forest Alliance [I.B.2.N.a (A.238)]
- Quercus nigra Forest Alliance [I.B.2.N.a (247)]
- Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance [I.B.2.N.d (A.292)]
- Taxodium distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance [I.B.2.N.e (A.337)]
- Mosaic Area
- Lands Added After Original Plan Approved
- Turkey Creek Unit, BTNP Boundary (10/25/06)



Map Coordinate System: Universal Transverse Mercator, Zone 15
Map Datum: North American Datum 1983
Map Produced 9/23/2009

Dixie Enviornmental Services Co., LP



The 56 250m² plots covered an area of 1.4 hectares. There are 84 species of woody vegetation (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 440 1m² subplots sampled for herbaceous vegetation within 44 of the 56 250m² plots, equaling an area of 0.044 hectares. There are 251 species of ground layer vegetation that are recorded in these subplots. The data shows there are 12,765 woody plants per ha, yielding 28.92m² per ha of basal area for all three woody strata. The pre-operational data showed there were 8,978 woody plants per ha, which yielded 30.22m² per ha of basal area for all three woody strata.

Post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.03, Pielou's Evenness Index (E') at 0.68, and a richness value of 84 species. Pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') was 3.04, Pielou's Evenness Index (E') at 0.69, and a richness value of 81 species.

Post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.63, Pielou's Evenness Index (E') at 0.84, and a richness value of 251 species. Pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.60, Pielou's Evenness Index (E') at 0.84, and a richness value of 244 species recorded within the plots.

A summary of the post-operational vegetation assessment data, as well as a comparison to the pre-operational data, for the fifty six (56) 250 m² plots is contained in **Table 3**.

Density and dominance (basal area) increased in the shrub layer and decreased in the overstory layer. The midstory layer showed an increase in dominance and a decrease in density. The post-operational data shows there are 406 individual trees per ha, yielding 24.00m² per ha of basal area within the overstory stratum. The midstory stratum data shows there are 1,479 woody plants per ha, yielding 4.28m² per ha of basal area. The shrub stratum data shows there are 10,880 woody plants per ha, yielding 0.64m² per ha of basal area.

Table 3. Summary of Pre- and Post-Operational Vegetation Analyses All Alliances		
Woody Vegetation¹	Pre-Operational³	Post-Operational
Number of Sample Plots	56	56
Area Sampled (ha)	1.400	1.400
Number of Species Recorded Within Plots (Richness)	81	84
Overall Species Evenness	0.69	0.68
Overall Species Diversity	3.04	3.03
Herbaceous Vegetation²		
Number of Sample Plots	440	440
Area Sampled (ha)	0.044	0.044
Number of Species Recorded Within Plots (Richness)	244	251
Overall Species Evenness	0.84	0.84
Overall Species Diversity	4.60	4.63

1 Woody vegetation was sampled in 10 m X 25 m (250 m²) rectangular plot.

2 Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m²) square sub-plots of the 250 m² rectangular plot.

3 Pre-operational vegetation analysis data set included only data from the plots that were sampled in the post-operational analysis.

In the pre-operational assessment, there were 425 trees per ha, which yielded 25.55m² per ha of basal area within the overstory stratum. The midstory stratum data showed there were 1,550 woody plants per ha, which yielded 4.14m² per ha of basal area. The shrub stratum data showed there were 7,003 woody plants per ha, which yielded 0.53m² per ha of basal area.

Density and dominance for each of the three strata, as well as the overall total for woody vegetation is displayed in **Table 4**.

Table 4. Summary of Woody Strata¹ Vegetation Analyses All Alliances		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	10,880	0.64
Midstory	1,479	4.28
Overstory	406	24.00
Overall Total	12,765	28.92
Pre-Operational²		
Shrub	7,003	0.53
Midstory	1,550	4.14
Overstory	425	25.55
Overall Total	8,978	30.22

¹ Woody vegetation was sampled in 10 m X 25 m (250 m²) rectangular plot.

² Pre-operational vegetation analysis data set included only data from the plots that were sampled in the post-operational analysis.

A summary and comparison, by alliance, of post-operational and pre-operational ecological indices is contained in **Table 5**. A comparison of the overall data shows that the pre-operational and post-operational indices are similar and very little change has occurred in the TCU as a whole.

Table 5. Summary and Comparison by Alliance of the Pre- and Post-Operational Ecological Indices

Alliance	Pre-Operational						Post-Operational					
	Diversity		Evenness		Richness		Diversity		Evenness		Richness	
	Herb	Woody	Herb	Woody	Herb	Woody	Herb	Woody	Herb	Woody	Herb	Woody
<i>Magnolia virginiana</i> - <i>Nyssa biflora</i> -(<i>Quercus laurifolia</i>) Saturated Forest Alliance	2.72	1.45	0.83	0.49	26.00	20.00	2.93	1.48	0.85	0.49	31.00	21.00
<i>Nyssa (aquatica, biflora, ogeche)</i> Floodplain Seasonally Flooded Forest Alliance	3.39	2.19	0.93	0.85	39.00	13.00	3.68	2.19	0.94	0.86	51.00	13.00
<i>Fagus grandifolia</i> - <i>Quercus alba</i> Forest Alliance	3.25	1.88	0.91	0.65	35.00	18.00	2.97	1.73	0.90	0.61	27.00	17.00
<i>Pinus taeda</i> - <i>Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance	3.78	2.41	0.91	0.65	64.00	40.00	3.72	2.80	0.90	0.77	63.00	38.00
<i>Pinus palustris</i> Woodland Alliance	3.54	2.09	0.92	0.75	48.00	16.00	3.66	2.15	0.89	0.81	60.00	14.00
<i>Pinus taeda</i> - <i>Pinus echinata</i> Forest Alliance	2.97	2.08	0.85	0.61	33.00	30.00	2.88	2.48	0.86	0.72	29.00	32.00
<i>Pinus taeda</i> - <i>Quercus (alba, falcata, stellata)</i> Forest Alliance	3.95	2.47	0.83	0.62	116.00	55.00	3.93	2.58	0.83	0.63	113.00	60.00
<i>Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance	3.40	1.10	0.94	0.53	37.00	8.00	3.03	1.35	0.88	0.65	31.00	8.00
<i>Quercus nigra</i> Forest Alliance		1.18		0.47		12.00		1.04		0.38		15.00
<i>Quercus alba</i> - (<i>Quercus nigra</i>) Forest Alliance	2.86	2.15	0.91	0.73	23.00	19.00	2.98	2.00	0.91	0.74	27.00	15.00
<i>Paspalum notatum</i> Herbaceous Alliance	3.62		0.95		45.00		3.24		0.92		34.00	
<i>Pinus taeda</i> Seasonally Saturated Woodland Alliance	3.45	1.70	0.93	0.74	41.00	10.00	3.54	1.89	0.93	0.79	44.00	11.00
Mosaic Group	2.30	2.51	0.92	0.80	12.00	23.00	2.36	2.41	0.95	0.75	12.00	25.00
Overall Turkey Creek Unit	4.60	3.04	0.84	0.69	244.00	81.00	4.63	3.03	0.84	0.68	251.00	84.00

3.2 INDIVIDUAL ALLIANCE DATA

During the pre-operational vegetation sampling and mapping program, twenty vegetation alliances were identified and mapped within the TCU. During the seismic survey, several alliances were not impacted due to restrictions placed on the seismic crews. The non-impacted alliances were not re-surveyed during the post-operational vegetation assessment. The following paragraphs are the results of the vegetation analysis for the 15 alliances that were impacted during the seismic survey. The data is presented on the alliance level.

3.2.1 *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)

Saturated Forest Alliance

The *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*) Saturated Forest Alliance encompasses approximately 155.91ha (385.25ac) of the TCU. This alliance occurs within the floodplain of Hickory, Turkey, and Village Creeks, within other lower topographic elevations along higher order drainages, in depressions within uplands, and along hillside seeps with generally acidic soils. Six 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.15 hectares. There are 21 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 40 1m² subplots within 4 of the 6 250m² plots sampled for herbaceous vegetation, equaling an area of 0.004 hectares. There are 31 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 10,006 woody plants per ha, yielding 32.82m² per ha of basal area for all three woody strata. The pre-operational data showed there were 6,973 woody plants per ha, yielding 32.84m² per ha of basal area for all three woody strata.

Post-operational woody vegetation analysis indices for this alliance include Shannon-Weaver's Diversity Index (H') at 1.48, Pielou's Evenness Index (E') at 0.49, and a richness value of 21 species. Pre-operational woody vegetation analysis indices for this alliance include Shannon-Weaver's Diversity Index (H') at 1.45, Pielou's Evenness Index (E') at 0.49, and a richness value of 20 species.

Post-operational herbaceous vegetation analysis indices for this alliance include Shannon-Weaver's Diversity Index (H') at 2.93, Pielou's Evenness Index (E') at 0.85, and a richness value of 31 species. Pre-operational herbaceous vegetation analysis indices for this alliance include Shannon-Weaver's Diversity Index (H') at 2.72, Pielou's Evenness Index (E') at 0.83, and a richness value of 26 species recorded within the plots.

A typical plot within this alliance is displayed in **Photos 1A** and **1B** in **Appendix E**. The data from the *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*) Saturated Forest Alliance shows a slight increase in richness and diversity but stability in evenness in the woody vegetation layer. An increase in richness, evenness, and diversity occurred in the herbaceous layer (**Table 6**).

Table 6. Summary of Pre- and Post-Operational Vegetation Analyses <i>Magnolia virginiana</i>-<i>Nyssa biflora</i>-(<i>Quercus laurifolia</i>) Saturated Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	6	6
Area Sampled (ha)	0.150	0.150
Number of Species Recorded Within Plots (Richness)	20	21
Overall Species Evenness	0.49	0.49
Overall Species Diversity	1.45	1.48
Herbaceous Vegetation		
Number of Sample Plots	40	40
Area Sampled (ha)	0.004	0.004
Number of Species Recorded Within Plots (Richness)	26	31
Overall Species Evenness	0.83	0.85
Overall Species Diversity	2.72	2.93

The data for the overstory stratum within this alliance indicates there are 513 individual trees per ha, yielding 24.38m² per ha of basal area (**Table 7**). During the pre-operational analysis, the overstory stratum had 553 individual trees per ha, which yielded 25.56m²

per ha of basal area. The overstory stratum in this alliance is dominated by *Nyssa biflora* with 187 trees per hectare.

The midstory stratum within this alliance contains 2,553 individual trees per ha, yielding 8.05m² per ha of basal area. During the pre-operational analysis, the midstory stratum had 2,287 individual trees per ha, which yielded 6.93m² per ha of basal area. The midstory stratum is dominated by *Cyrilla racemiflora* with 1,627 trees per hectare.

The shrub stratum within this alliance contains 6,940 individual woody species per ha, yielding 0.39m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 4,133 individual woody species per ha, which yielded 0.35m² per ha of basal area. In the shrub stratum, *Cyrilla racemiflora* is the dominant species with 4,873 individuals per hectare. Other important species in the shrub stratum, listed in order of dominance, include *Pinus taeda* and *Magnolia virginiana*. The pre-operational assessment data showed the dominant species to be *Cyrilla racemiflora*, *Halesia diptera*, and *Persea palustris*.

Table 7. Summary of Woody Strata Vegetation Analyses <i>Magnolia virginiana</i>-<i>Nyssa biflora</i>-(<i>Quercus laurifolia</i>) Saturated Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	6,940	0.39
Midstory	2,553	8.05
Overstory	513	24.38
Total	10,006	32.82
Pre-Operational		
Shrub	4,133	0.35
Midstory	2,287	6.93
Overstory	553	25.56
Total	6,973	32.84

3.2.2 *Nyssa (aquatica, biflora, ogeche)*

Floodplain Seasonally Flooded Forest Alliance

The *Nyssa (aquatica, biflora, ogeche)* Floodplain Seasonally Flooded Forest Alliance encompasses approximately 11.26ha (27.82ac) of the TCU. This alliance occurs within fairly deep, somewhat isolated depressions within the floodplains and upland vegetation community matrix. Two 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.05 hectares. There are 13 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 20 1m² subplots within the 2 250m² plots sampled for herbaceous vegetation, equaling an area of 0.002 hectares. There are 51 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 2,980 woody plants per ha, yielding 29.52m² per ha of basal area for all three woody strata. The pre-operational data showed there were 2,460 woody plants per ha, which yielded 43.05m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.19, Pielou's Evenness Index (E') at 0.86, and a richness value of 13 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.19, Pielou's Evenness Index (E') at 0.85, and a richness value of 13 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.68, Pielou's Evenness Index (E') at 0.94, and a richness value 51 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.39, Pielou's Evenness Index (E') at 0.93, and a richness value of 39 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 2A** and **2B** in **Appendix E**. The data from the *Nyssa (aquatica, biflora, ogeche)* Floodplain Seasonally Flooded Forest Alliance shows stability in richness, evenness, and diversity of woody vegetation. An increase in richness, evenness, and diversity occurred in the herbaceous layer (**Table 8**).

Table 8. Summary of Pre- and Post-Operational Vegetation Analyses <i>Nyssa (aquatica, biflora, ogeche)</i> Floodplain Seasonally Flooded Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	2	2
Area Sampled (ha)	0.050	0.050
Number of Species Recorded Within Plots (Richness)	13	13
Overall Species Evenness	0.85	0.86
Overall Species Diversity	2.19	2.19
Herbaceous Vegetation		
Number of Sample Plots	20	20
Area Sampled (ha)	0.002	0.002
Number of Species Recorded Within Plots (Richness)	39	51
Overall Species Evenness	0.93	0.94
Overall Species Diversity	3.39	3.68

The data for the overstory stratum within this alliance indicates there are 580 individual trees per ha, yielding 24.15m² per ha of basal area (**Table 9**). During the pre-operational analysis, the overstory stratum had 840 individual trees per ha, which yielded 38.52m² per ha of basal area. The overstory stratum in this alliance is dominated by *Nyssa biflora* with 320 trees per hectare. Other important species present in the overstory stratum, listed in order of dominance, include *Liquidambar styraciflua* and *Pinus taeda*. The pre-operational assessment data showed the dominant species to be *Nyssa biflora*, *Pinus taeda*, and *Quercus laurifolia*.

The midstory stratum within this alliance contains an average of 1,200 individual trees per ha, yielding 5.27m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,220 individual trees per ha, which yielded 4.51m² per ha of basal area. The midstory stratum is dominated by *Fraxinus pennsylvanica* with 340 trees per hectare. Other important species in the midstory stratum, listed in order of dominance, include *Liquidambar styraciflua* and *Crataegus opaca*. The pre-operational

assessment data showed the dominant species to be *Fraxinus pennsylvanica*, *Crataegus opaca*, and *Nyssa biflora*.

The shrub stratum within this alliance contains an average of 1,200 individual woody species per ha, yielding 0.10m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 400 individual woody species per ha, which yielded 0.02m² per ha of basal area. In the shrub stratum, *Campsis radicans* is the dominant species with 200 individuals per hectare. Other important species present in the shrub stratum, listed in order of dominance, include *Crataegus opaca* and *Alnus serrulata*. The dominant species present during the pre-operational assessment were *Campsis radicans* and *Brunnichia ovata*.

Table 9. Summary of Woody Strata Vegetation Analyses <i>Nyssa (aquatica, biflora, ogeche)</i> Floodplain Seasonally Flooded Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	1,200	0.10
Midstory	1,200	5.27
Overstory	580	24.15
Total	2,980	29.52
Pre-Operational		
Shrub	400	0.02
Midstory	1,220	4.51
Overstory	840	38.52
Total	2,460	43.05

3.2.3 *Fagus grandifolia-Quercus alba*

Forest Alliance

The *Fagus grandifolia-Quercus alba* Forest Alliance encompasses approximately 64.59ha (159.61ac) of the TCU. This alliance occurs in ravines and on ridges adjacent to creek bottoms and higher order drainages. Two 250m² rectangular plots were sampled

for woody vegetation, equaling an area of 0.05 hectares. There are 17 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 20 1m² subplots within the 2 250m² plot sampled for herbaceous vegetation, equaling an area of 0.002 hectares. There are 27 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 8,600 woody plants per ha, yielding 24.08m² per ha of basal area for all three woody strata. The pre-operational data showed there were 9,920 woody plants per ha, which yielded 26.53m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.73, Pielou's Evenness Index (E') at 0.61, and a richness value of 17 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.88, Pielou's Evenness Index (E') at 0.65, and a richness value of 18 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.97, Pielou's Evenness Index (E') at 0.90, and a richness value of 27 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.25, Pielou's Evenness Index (E') at 0.91, and a richness value of 35 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 3A** and **3B** in **Appendix E**. The data from the *Fagus grandifolia-Quercus alba* Forest Alliance shows an increase in diversity and a decrease in evenness and richness of woody vegetation. A decrease in evenness, richness and diversity occurred in the herbaceous layer (**Table 10**).

Table 10. Summary of Pre- and Post-Operational Vegetation Analyses <i>Fagus grandifolia-Quercus alba</i> Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	2	2
Area Sampled (ha)	0.050	0.050
Number of Species Recorded Within Plots (Richness)	18	17
Overall Species Evenness	0.65	0.61
Overall Species Diversity	1.88	1.73
Herbaceous Vegetation		
Number of Sample Plots	20	20
Area Sampled (ha)	0.002	0.002
Number of Species Recorded Within Plots (Richness)	35	27
Overall Species Evenness	0.91	0.90
Overall Species Diversity	3.25	2.97

The data for the overstory stratum within this alliance indicates there are 320 individual trees per ha, yielding 19.73m² per ha of basal area (**Table 11**). During the pre-operational analysis, the overstory stratum had 320 individual trees per ha, which yielded 21.68m² per ha of basal area. The overstory stratum in this alliance is dominated by *Fagus grandifolia* with 40 trees per hectare. Other important species in the overstory stratum, listed in order of dominance, include *Ilex opaca* and *Quercus hemisphaerica*. Pre-operational assessment data showed the dominant species to be *Fagus grandifolia*, *Ostrya virginiana*, and *Ilex opaca*.

The midstory stratum within this alliance contains 1,680 individual trees per ha, yielding 4.04m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 2,000 individual trees per ha, which yielded 4.42m² per ha of basal area. The dominant species present in the midstory stratum is *Quercus hemisphaerica* with 800 trees per hectare.

The shrub stratum within this alliance contains 6,600 individual woody species per ha, yielding 0.31m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 7,600 individual woody species per ha, which yielded 0.43m² per ha of basal area. In the shrub stratum, *Ilex vomitoria* is the dominant species with 4,200 individuals per hectare. Pre-operational assessment data showed the dominant species to be *Symplocos tinctoria*.

Table 11. Summary of Woody Strata Vegetation Analyses <i>Fagus grandifolia-Quercus alba</i> Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	6,600	0.31
Midstory	1,680	4.04
Overstory	320	19.73
Total	8,600	24.08
Pre-Operational		
Shrub	7,600	0.43
Midstory	2,000	4.42
Overstory	320	21.68
Total	9,920	26.53

3.2.4 *Pinus taeda-Quercus (phellos, nigra, laurifolia)*

Temporarily Flooded Forest Alliance

The *Pinus taeda-Quercus (phellos, nigra, laurifolia)* Forest Alliance encompasses approximately 875.96ha (2,164.53ac) of the TCU. This alliance occurs within the floodplains of Hickory, Turkey, and Village Creeks and other lower topographic elevations in the unit. Seven 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.175 hectares. There are 38 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 50 1m² subplots within 5 of the 7 250m² plots sampled for herbaceous vegetation, equaling an area of 0.005 hectares. There are 63 species of ground layer vegetation in the

post-operational survey that are recorded in these subplots. The data shows there are 10,617 woody plants per ha, yielding 36.18m² per ha of basal area for all three woody strata. The pre-operational data showed there were 8,938 woody plants per ha, yielding 36.14m² per ha of basal area for all three woody strata.

Post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.80, Pielou's Evenness Index (E') at 0.77, and a richness value of 38 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.41, Pielou's Evenness Index (E') at 0.65, and a richness value of 40 species.

Post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.72, Pielou's Evenness Index (E') at 0.90, and a richness value 63 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.78, Pielou's Evenness Index (E') at 0.91, and a richness value of 64 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photo 4** in **Appendix E**. The data from the *Pinus taeda-Quercus (phellos, nigra, laurifolia)* Forest Alliance shows a decrease in richness of woody and herbaceous vegetation, an increase in evenness and diversity of woody vegetation, and a decrease in evenness and diversity of herbaceous vegetation (**Table 12**).

Table 12. Summary of Pre- and Post-Operational Vegetation Analyses <i>Pinus taeda-Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	7	7
Area Sampled (ha)	0.175	0.175
Number of Species Recorded Within Plots (Richness)	40	38
Overall Species Evenness	0.65	0.77
Overall Species Diversity	2.41	2.80
Herbaceous Vegetation		
Number of Sample Plots	50	50
Area Sampled (ha)	0.005	0.005
Number of Species Recorded Within Plots (Richness)	64	63
Overall Species Evenness	0.91	0.90
Overall Species Diversity	3.78	3.72

The data for the overstory stratum within this alliance indicates there are 480 individual trees per ha, yielding 32.58m² per ha of basal area (**Table 13**). During the pre-operational analysis, the overstory stratum had 509 individual trees per ha, which yielded 32.61m² per ha of basal area. The dominant species in the overstory stratum is *Pinus taeda* with 131 trees per hectare.

The midstory stratum within this alliance contains 1,154 individual trees per ha, yielding 3.05m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,389 individual trees per ha, which yielded 2.98m² per ha of basal area. The dominant species in the midstory stratum is *Cyrilla racemiflora* with 337 trees per hectare.

The shrub stratum within this alliance contains 8,983 individual woody species per ha, yielding 0.55m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 7,040 individual woody species per ha, which yielded 0.55m² per ha of

basal area. In the shrub stratum, *Cyrilla racemiflora* is the dominant species with 1,949 trees per hectare.

Table 13. Summary of Woody Strata Vegetation Analyses <i>Pinus taeda-Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	8,983	0.55
Midstory	1,154	3.05
Overstory	480	32.58
Total	10,617	36.18
Pre-Operational		
Shrub	7,040	0.55
Midstory	1,389	2.98
Overstory	509	32.61
Total	8,938	36.14

3.2.5 *Pinus palustris*

Woodland Alliance

The *Pinus palustris* Woodland Alliance encompasses approximately 209.05ha (516.56ac) of the TCU. This alliance occurs in dry/mesic to xeric areas on deep sands and well drained soils. Three 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.75 hectares. There are 14 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 20 1m² subplots within 2 of the 3 250m² plots sampled for herbaceous vegetation, equaling an area of 0.002 hectares. There are 60 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 14,600 woody plants per ha, yielding 22.92m² per ha of basal area for all three woody strata. The pre-operational data showed there were 16,107 woody plants per ha, which yielded 30.11m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.15, Pielou's Evenness Index (E') at 0.81, and a richness value of 14 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.09, Pielou's Evenness Index (E') at 0.75, and a richness value of 16 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.66, Pielou's Evenness Index (E') at 0.89, and a richness value 60 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.54, Pielou's Evenness Index (E') at 0.92, and a richness value of 48 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 5A** and **5B** in **Appendix E**. The data from the *Pinus palustris* Woodland Alliance shows an increase in diversity and evenness and a decrease in richness of woody vegetation. Richness and diversity of herbaceous vegetation increased while the evenness decreased (**Table 14**).

Table 14. Summary of Pre- and Post-Operational Vegetation Analyses <i>Pinus palustris</i> Woodland Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	3	3
Area Sampled (ha)	0.075	0.075
Number of Species Recorded Within Plots (Richness)	16	14
Overall Species Evenness	0.75	0.81
Overall Species Diversity	2.09	2.15
Herbaceous Vegetation		
Number of Sample Plots	20	20
Area Sampled (ha)	0.002	0.002
Number of Species Recorded Within Plots (Richness)	48	60
Overall Species Evenness	0.92	0.89
Overall Species Diversity	3.54	3.66

The data for the overstory stratum within this alliance indicates there are 267 individual trees per ha, yielding 21.73m² per ha of basal area (**Table 15**). During the pre-operational analysis, the overstory stratum had 347 individual trees per ha, which yielded 28.70m² per ha of basal area. The dominant species in the overstory stratum is *Pinus palustris* with 213 trees per hectare.

The midstory stratum within this alliance contains 293 individual trees per ha, yielding 0.77m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 427 individual trees per ha, which yielded 0.72m² per ha of basal area. The midstory stratum is dominated by *Symplocos tinctoria* with 120 trees per hectare.

The shrub stratum within this alliance contains 14,040 individual woody species per ha, yielding 0.42m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 15,333 individual woody species per ha, which yielded 0.69m² per ha of basal area. In the shrub stratum, *Liquidambar styraciflua* is the dominant species with 3,200 individuals per hectare. Other important species in the shrub stratum, listed in order of dominance, include *Vaccinium arboreum* and *Ilex vomitoria*. The dominant species present during the pre-operational assessment were *Vaccinium arboreum*, *Liquidambar styraciflua*, and *Ilex vomitoria*.

Table 15. Summary of Woody Strata Vegetation Analyses <i>Pinus palustris</i> Woodland Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	14,040	0.42
Midstory	293	0.77
Overstory	267	21.73
Total	14,600	22.92
Pre-Operational		
Shrub	15,333	0.69
Midstory	427	0.72
Overstory	347	28.70
Total	16,107	30.11

3.2.6 *Pinus taeda*-*Pinus echinata*

Forest Alliance

The *Pinus taeda*-*Pinus echinata* Forest Alliance encompasses approximately 250.33ha (618.57ac) of the TCU. This alliance occurs on high, sandy, mesic to dry uplands in stands that may have been naturally or historically dominated by longleaf pine (*Pinus palustris*). Four 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.1 hectares. There are 32 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 30 1m² subplots within 3 of the 4 250m² plots sampled for herbaceous vegetation, equaling an area of 0.003 hectares. There are 29 species of ground layer vegetation in the post-operational survey that are recorded in these plots. The data shows there are 16,170 woody plants per ha, yielding 25.72m² per ha of basal area for all three woody strata. The pre-operational data showed there were 11,020 woody plants per ha, which yielded 27.08m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.48, Pielou's Evenness Index (E') at 0.72, and a richness value of

32 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.08, Pielou's Evenness Index (E') at 0.61, and a richness value of 30 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.88, Pielou's Evenness Index (E') at 0.86, and a richness value 29 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.97, Pielou's Evenness Index (E') at 0.85, and a richness value of 33 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photo 6** in **Appendix E**. The data from the *Pinus taeda-Pinus echinata* Forest Alliance shows an increase in richness, evenness, and diversity of woody vegetation. A decrease in richness and diversity and increase in evenness occurred in the herbaceous layer (**Table 16**).

Table 16. Summary of Pre- and Post-Operational Vegetation Analyses <i>Pinus taeda-Pinus echinata</i> Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	4	4
Area Sampled (ha)	0.100	0.100
Number of Species Recorded Within Plots (Richness)	30	32
Overall Species Evenness	0.61	0.72
Overall Species Diversity	2.08	2.48
Herbaceous Vegetation		
Number of Sample Plots	30	30
Area Sampled (ha)	0.003	0.003
Number of Species Recorded Within Plots (Richness)	33	29
Overall Species Evenness	0.85	0.86
Overall Species Diversity	2.97	2.88

The data for the overstory stratum within this alliance indicates there are 360 individual trees per ha, yielding 19.45m² per ha of basal area (**Table 17**). During the pre-operational analysis, the overstory stratum had 400 individual trees per ha, which yielded 22.22m² per ha of basal area. The overstory stratum in this alliance is dominated by *Pinus echinata* with 110 trees per hectare. Another important species present in the overstory stratum is *Pinus taeda*. The pre-operational assessment data showed the dominant species to be *Pinus taeda* and *Pinus echinata*.

The midstory stratum within this alliance contains 1,810 individual trees per ha, yielding 5.26m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,520 individual trees per ha, which yielded 4.13m² per ha of basal area. The midstory stratum is dominated by *Ilex vomitoria* with 810 trees per hectare.

The shrub stratum within this alliance contains 14,000 individual woody species per ha, yielding 1.01m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 9,100 individual woody species per ha, which yielded 0.73m² per ha of basal area. In the shrub stratum, *Ilex vomitoria* is the dominant species with 2,500 individuals per hectare. Other important species present in the shrub stratum of this alliance, listed in order of dominance, include *Liquidambar styraciflua* and *Vaccinium corymbosum*. The dominant species present during the pre-operational assessment was *Vaccinium corymbosum*, *Ilex vomitoria*, and *Quercus falcata*.

Table 17. Summary of Woody Strata Vegetation Analyses <i>Pinus taeda-Pinus echinata</i> Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	14,000	1.01
Midstory	1,810	5.26
Overstory	360	19.45
Total	16,170	25.72
Pre-Operational		
Shrub	9,100	0.73
Midstory	1,520	4.13
Overstory	400	22.22
Total	11,020	27.08

3.2.7 *Pinus taeda-Quercus (alba, falcata, stellata)*

Forest Alliance

The *Pinus taeda-Quercus (alba, falcata, stellata)* Forest Alliance encompasses approximately 924.14ha (2,283.57ac) of the TCU. This alliance occurs in mesic to dry/mesic, fire infrequent areas on topographically isolated hilltops, mid to lower slopes, protected ravines, and second bottoms. Twenty-three 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.575 hectares. There are 60 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 210 1m² subplots within 21 of the 23 250m² plots sampled for herbaceous vegetation, equaling an area of 0.021 hectares. There are 113 species of ground layer vegetation in the post-operational survey that are recorded in these plots. The data shows there are 14,794 woody plants per ha, yielding 26.27m² per ha of basal area for all three woody strata. The pre-operational data showed there were 8,278 woody plants per ha, which yielded 26.90m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.58, Pielou's Evenness Index (E') at 0.63, and a richness value of

60 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.47, Pielou's Evenness Index (E') at 0.62, and a richness value of 55 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.93, Pielou's Evenness Index (E') at 0.83, and a richness value 113 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.95, Pielou's Evenness Index (E') at 0.83, and a richness value of 116 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 7A** and **7B** in **Appendix E**. The data from the *Pinus taeda-Quercus (alba, falcata, stellata)* Forest Alliance shows an increase in richness, evenness, and diversity of woody vegetation. A decrease in richness and diversity and an increase in evenness occurred in the herbaceous layer (**Table 18**).

Table 18. Summary of Pre- and Post-Operational Vegetation Analyses <i>Pinus taeda-Quercus (alba, falcata, stellata)</i> Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	23	23
Area Sampled (ha)	0.575	0.575
Number of Species Recorded Within Plots (Richness)	55	60
Overall Species Evenness	0.62	0.63
Overall Species Diversity	2.47	2.58
Herbaceous Vegetation		
Number of Sample Plots	210	210
Area Sampled (ha)	0.021	0.021
Number of Species Recorded Within Plots (Richness)	116	113
Overall Species Evenness	0.83	0.83
Overall Species Diversity	3.95	3.93

The data for the overstory stratum within this alliance indicates there are 351 individual trees per ha, yielding 21.51m² per ha of basal area (**Table 19**). During the pre-operational analysis, the overstory stratum had 339 individual trees per ha, which yielded 22.04m² per ha of basal area. The overstory stratum in this alliance is dominated by *Pinus taeda* with 96 trees per hectare.

The midstory stratum within this alliance contains 1,433 individual trees per ha, yielding 3.95m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,671 individual trees per ha, which yielded 4.28m² per ha of basal area. The midstory stratum is dominated by *Ilex vomitoria* with 565 trees per hectare.

The shrub stratum within this alliance contains 13,010 individual woody species per ha, yielding 0.81m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 6,268 individual woody species per ha, which yielded 0.58m² per ha of basal area. In the shrub stratum, *Ilex vomitoria* is the dominant species with 4,504 individuals per hectare. Other important species in the shrub stratum, listed in order of dominance, are *Quercus hemisphaerica* and *Ilex coriacea*. The pre-operational assessment data showed the dominant species to be *Ilex vomitoria*, *Ilex coriacea*, and *Vitis rotundifolia*.

Table 19. Summary of Woody Strata Vegetation Analyses <i>Pinus taeda-Quercus (alba, falcata, stellata)</i> Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	13,010	0.81
Midstory	1,433	3.95
Overstory	351	21.51
Total	14,794	26.27
Pre-Operational		
Shrub	6,268	0.58
Midstory	1,671	4.28
Overstory	339	22.04
Total	8,278	26.90

3.2.8 *Quercus (phellos, nigra, laurifolia)*

Temporarily Flooded Forest Alliance

The *Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance encompasses approximately 120.89ha (298.72ac) of the TCU. This alliance occurs in large, high-gradient floodplains, on slightly higher elevations, on ridges and terraces within the floodplain, or in small, low-gradient floodplains with poorly-developed landforms. One 250m² rectangular plot was sampled for woody vegetation, equaling an area of 0.025 hectares. There are 8 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in this plot. There are 10 1m² subplots within the single 250m² plot sampled for herbaceous vegetation, equaling an area of 0.001 hectares. There are 31 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 7,680 woody plants per ha, yielding 30.56m² per ha of basal area for all three woody strata. The pre-operational data showed there were 11,360 woody plants per ha, which yielded 34.34m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.35, Pielou's Evenness Index (E') at 0.65, and a richness value of 8 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.10, Pielou's Evenness Index (E') at 0.53, and a richness value of 8 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.03, Pielou's Evenness Index (E') at 0.88, and a richness value 31 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.40, Pielou's Evenness Index (E') at 0.94, and a richness value of 37 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 8A** and **8B** in **Appendix E**. The data from the *Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance shows an increase in evenness and diversity but stability in richness of woody vegetation. The herbaceous layer shows a decrease in evenness, richness and diversity (**Table 20**).

Table 20. Summary of Pre- and Post-Operational Vegetation Analyses <i>Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	1	1
Area Sampled (ha)	0.025	0.025
Number of Species Recorded Within Plots (Richness)	8	8
Overall Species Evenness	0.53	0.65
Overall Species Diversity	1.10	1.35
Herbaceous Vegetation		
Number of Sample Plots	10	10
Area Sampled (ha)	0.001	0.001
Number of Species Recorded Within Plots (Richness)	37	31
Overall Species Evenness	0.94	0.88
Overall Species Diversity	3.40	3.03

The data for the overstory stratum within this alliance indicates there are 280 individual trees per ha, yielding 26.76m² per ha of basal area (**Table 21**). During the pre-operational analysis, the overstory stratum had 320 individual trees per ha, which yielded 31.25m² per ha of basal area. The overstory stratum in this alliance is dominated by *Liquidambar styraciflua* with 120 trees per hectare.

The midstory stratum within this alliance contains 1,000 individual trees per ha, yielding 3.54m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 600 individual trees per ha, which yielded 2.71m² per ha of basal area. The midstory stratum is dominated by *Carpinus caroliniana* with 240 trees per hectare. Other important species in the midstory stratum, listed in order of dominance, include *Ilex vomitoria* and *Ilex opaca*. The pre-operational assessment data showed the dominant species to be *Carpinus caroliniana*, *Liquidambar styraciflua*, and *Ilex opaca*.

The shrub stratum within this alliance contains 6,400 individual woody species per ha, yielding 0.26m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 10,440 individual woody species per ha, which yielded 0.38m² per ha of basal area. In the shrub stratum, *Sebastiania fruticosa* is the dominant species with 4,000 individuals per hectare. Other important species in the shrub stratum, listed in order of dominance, include *Carpinus caroliniana* and *Quercus nigra*. The pre-operational assessment data showed the dominant species to be *Sebastiania fruticosa*, *Quercus nigra*, and *Ilex opaca*.

Table 21. Summary of Woody Strata Vegetation Analyses <i>Quercus (phellos, nigra, laurifolia)</i> Temporarily Flooded Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	6,400	0.26
Midstory	1,000	3.54
Overstory	280	26.76
Total	7,680	30.56
Pre-Operational		
Shrub	10,440	0.38
Midstory	600	2.71
Overstory	320	31.25
Total	11,360	34.34

3.2.9 *Quercus nigra*

Forest Alliance

The *Quercus nigra* Forest Alliance encompasses approximately 18.44ha (45.56ac) of the TCU. This alliance occurs in mesic to dry/mesic areas on fine, loamy soils and along shallow high-order drainages, and within fire-sheltered areas. One 250m² rectangular plot was sampled for woody vegetation, equaling an area of 0.025 hectares. There are 15 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in this plot. The data shows there are 5,320 woody plants per ha, yielding 13.75m² per ha of basal area for all three woody strata. The pre-operational data showed there were 7,520 woody plants per ha, which yielded 14.72m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.04, Pielou's Evenness Index (E') at 0.38, and a richness value of 15 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.18, Pielou's Evenness Index (E') at 0.47, and a richness value of 12 species.

A typical plot in this alliance is illustrated in **Photo 9** in **Appendix E**. The data from the *Quercus nigra* Forest Alliance shows an increase in richness and a decrease in evenness and diversity of woody vegetation (**Table 22**).

Table 22. Summary of Pre- and Post-Operational Vegetation Analyses <i>Quercus nigra</i> Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	1	1
Area Sampled (ha)	0.025	0.025
Number of Species Recorded Within Plots (Richness)	12	15
Overall Species Evenness	0.47	0.38
Overall Species Diversity	1.18	1.04

The data for the overstory stratum within this alliance indicates there are 280 individual trees per ha, yielding 7.48m² per ha of basal area (**Table 23**). During the pre-operational analysis, the overstory stratum had 160 individual trees per ha, which yielded 7.89m² per ha of basal area. The overstory stratum in this alliance is dominated by *Quercus hemisphaerica* with 160 trees per hectare. Other important species in the overstory stratum, listed in order of dominance, include *Carya texana* and *Liquidambar styraciflua*. Pre-operational assessment data showed the dominant species to be *Quercus nigra*, *Carya tomentosa*, and *Quercus stellata*.

The midstory stratum within this alliance contains 1,520 individual trees per ha, yielding 6.10m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,760 individual trees per ha, which yielded 6.60m² per ha of basal area. The midstory stratum is dominated by *Ilex vomitoria* with 960 trees per hectare.

The shrub stratum within this alliance contains 3,520 individual woody species per ha, yielding 0.17m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 5,600 individual woody species per ha, which yielded 0.23m² per ha of basal area. In the shrub stratum, *Ilex vomitoria* is the dominant species with 2,760

individuals per hectare. Other important species in the shrub stratum, listed in order of dominance, include *Quercus hemisphaerica* and *Vaccinium arboretum*. The pre-operational assessment data showed the dominant species to be *Ilex vomitoria*, *Quercus nigra*, and *Asimina parviflora*.

Table 23. Summary of Woody Strata Vegetation Analyses		
<i>Quercus nigra</i>		
Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	3,520	0.17
Midstory	1,520	6.10
Overstory	280	7.48
Total	5,320	13.75
Pre-Operational		
Shrub	5,600	0.23
Midstory	1,760	6.60
Overstory	160	7.89
Total	7,520	14.72

3.2.10 *Quercus alba*-(*Quercus nigra*)

Forest Alliance

The *Quercus alba*-(*Quercus nigra*) Forest Alliance encompasses approximately 65.68ha (162.29ac) of the TCU. This alliance occurs in mesic to dry/mesic areas on acidic to circum-neutral soils in a variety of sites, including sandy swamp islands, slopes and ridge tops. One 250m² rectangular plot was sampled for woody vegetation, equaling an area of 0.025 hectares. There are 15 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in this plot. There are 10 1 m² subplots within the single 250m² plot sampled for herbaceous vegetation, equaling an area of 0.001 hectares. There are 27 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 14,440 woody plants per ha, yielding 20.08m² per ha of basal area for all three woody strata. The pre-operational data

showed there were 26,760 woody plants per ha, yielding 19.03m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.00, Pielou's Evenness Index (E') at 0.74, and a richness value of 15 species. Alliance pre-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.15, Pielou's Evenness Index (E') at 0.73, and a richness value of 19 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.98, Pielou's Evenness Index (E') at 0.91, and a richness value 27 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.86, Pielou's Evenness Index (E') at 0.91, and a richness value of 23 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photo 10** in **Appendix E**. The data from the *Quercus alba*-(*Quercus nigra*) Forest Alliance shows a decrease in richness and diversity and an increase in evenness of woody vegetation. An increase in richness and diversity and stability in evenness occurred in the herbaceous layer (**Table 24**).

Table 24. Summary of Pre- and Post-Operational Vegetation Analyses <i>Quercus alba</i>-(<i>Quercus nigra</i>) Forest Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	1	1
Area Sampled (ha)	0.025	0.025
Number of Species Recorded Within Plots (Richness)	19	15
Overall Species Evenness	0.73	0.74
Overall Species Diversity	2.15	2.00
Herbaceous Vegetation		
Number of Sample Plots	10	10
Area Sampled (ha)	0.001	0.001
Number of Species Recorded Within Plots (Richness)	23	27
Overall Species Evenness	0.91	0.91
Overall Species Diversity	2.86	2.98

The data for the overstory stratum within this alliance indicates there are 160 individual trees per ha, yielding 16.55m² per ha of basal area (**Table 25**). During the pre-operational analysis, the overstory stratum had 240 individual trees per ha, which yielded 16.07m² per ha of basal area. The overstory stratum in this alliance is dominated by *Quercus alba* with 80 trees per hectare.

The midstory stratum within this alliance contains 1,480 individual trees per ha, yielding 2.97m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 920 individual trees per ha, which yielded 1.63m² per ha of basal area. The midstory stratum is dominated by *Ilex vomitoria* with 340 trees per hectare.

The shrub stratum within this alliance contains 12,800 individual woody species per ha, yielding 0.56m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 25,600 individual woody species per ha, which yielded 1.33m² per ha of basal area. In the shrub stratum, *Quercus hemisphaerica* is the dominant species with 4,800 individuals per hectare. Other important species in the shrub stratum, listed in

order of dominance, include *Ilex vomitoria* and *Vaccinium arboreum*. The dominant species present during the pre-operational assessment were *Symplocos tinctoria*, *Quercus hemisphaerica* and *Ilex vomitoria*.

Table 25. Summary of Woody Strata Vegetation Analyses <i>Quercus alba</i>-(<i>Quercus nigra</i>) Forest Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	12,800	0.56
Midstory	1,480	2.97
Overstory	160	16.55
Total	14,440	20.08
Pre-Operational		
Shrub	25,600	1.33
Midstory	920	1.63
Overstory	240	16.07
Total	26,760	19.03

3.2.11 *Paspalum notatum*

Herbaceous Alliance

The *Paspalum notatum* Herbaceous Alliance encompasses approximately 8.31ha (20.54ac) of the TCU. This alliance occurs in artificial man-made and maintained habitats. Ten 1m² subplots within a single 250m² rectangular plot were sampled for herbaceous vegetation, equaling an area of 0.001 hectares. There are 34 species of ground layer vegetation in the post-operational survey that are recorded in these subplots.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.24, Pielou's Evenness Index (E') at 0.92, and a richness value 34 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.62, Pielou's Evenness Index (E') at 0.95, and a richness value of 45 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 11A, 11B, 12A, and 12B** in **Appendix E**. The data from the *Paspalum notatum* Herbaceous Alliance shows a decrease in richness, evenness, and diversity of herbaceous vegetation (**Table 26**).

Table 26. Summary of Pre- and Post-Operational Vegetation Analyses <i>Paspalum notatum</i> Herbaceous Alliance		
Herbaceous Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	10	10
Area Sampled (ha)	0.001	0.001
Number of Species Recorded Within Plots (Richness)	45	34
Overall Species Evenness	0.95	0.92
Overall Species Diversity	3.62	3.24

3.2.12 *Pinus taeda*

Seasonally Saturated Woodland Alliance

The *Pinus taeda* Seasonally Saturated Woodland Alliance encompasses approximately 4.65ha (11.49ac) of the TCU. This alliance occurs on relatively flat, poorly-drained soils which pond and hold water for periods of time. One 250m² rectangular plot was sampled for woody vegetation, equaling an area of 0.025 hectares. There are 11 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in this plot. There are 10 1m² subplots within the single 250m² plot sampled for herbaceous vegetation, equaling an area of 0.001 hectares. There are 44 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 8,760 woody plants per ha, yielding 16.63m² per ha of basal area for all three woody strata. The pre-operational data showed there were 5,480 woody plants per ha, which yielded 14.02m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.89, Pielou's Evenness Index (E') at 0.79, and a richness value of 11 species. Alliance pre-operational woody vegetation analysis indices include Shannon-

Weaver's Diversity Index (H') at 1.70, Pielou's Evenness Index (E') at 0.74, and a richness value of 10 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.54, Pielou's Evenness Index (E') at 0.93, and a richness value 44 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.45, Pielou's Evenness Index (E') at 0.93, and a richness value of 41 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photo 13** in **Appendix E**. The data from the *Pinus taeda* Seasonally Saturated Woodland Alliance shows an increase in richness, evenness, and diversity of woody and herbaceous vegetation (**Table 27**).

Table 27. Summary of Pre- and Post-Operational Vegetation Analyses <i>Pinus taeda</i> Seasonally Saturated Woodland Alliance		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	1	1
Area Sampled (ha)	0.025	0.025
Number of Species Recorded Within Plots (Richness)	10	11
Overall Species Evenness	0.74	0.79
Overall Species Diversity	1.70	1.89
Herbaceous Vegetation		
Number of Sample Plots	10	10
Area Sampled (ha)	0.001	0.001
Number of Species Recorded Within Plots (Richness)	41	44
Overall Species Evenness	0.93	0.93
Overall Species Diversity	3.45	3.54

The data for the overstory stratum within this alliance indicates there are 440 individual trees per ha, yielding 12.20m² per ha of basal area (**Table 28**). During the pre-operational analysis, the overstory stratum had 440 individual trees per ha, which yielded

11.02m² per ha of basal area. The overstory stratum in this alliance is dominated by *Pinus taeda* with 240 trees per hectare.

The midstory stratum within this alliance contains 1,120 individual trees per ha, yielding 3.50m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,040 individual trees per ha, which yielded 2.75m² per ha of basal area. The midstory stratum is dominated by *Pinus taeda* with 320 trees per hectare. Other important species in the midstory stratum, listed in order of dominance, include *Nyssa biflora* and *Quercus laurifolia*. During the pre-operational assessment, the midstory stratum was dominated by *Quercus laurifolia*, *Pinus taeda*, and *Nyssa biflora*.

The shrub stratum within this alliance contains 7,200 individual woody species per ha, yielding 0.93m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 4,000 individual woody species per ha, which yielded 0.25m² per ha of basal area. In the shrub stratum, *Ilex vomitoria* is the dominant species with 2,400 individuals per hectare. Other important species present in the shrub stratum, listed in order of dominance, include *Pinus taeda* and *Morella cerifera*. The dominant species present during the pre-operational assessment were *Morella cerifera*, *Pinus taeda*, and *Quercus nigra*.

Table 28. Summary of Woody Strata Vegetation Analyses <i>Pinus taeda</i> Seasonally Saturated Woodland Alliance		
	Density (Individuals per ha)	Dominance (m² per ha)
Post-Operational		
Shrub	7,200	0.93
Midstory	1,120	3.50
Overstory	440	12.20
Total	8,760	16.63
Pre-Operational		
Shrub	4,000	0.25
Midstory	1,040	2.75
Overstory	440	11.02
Total	5,480	14.02

3.2.13 Mosaic Group

The Mosaic Group encompasses approximately 995.98ha (403.06ac) of the TCU. This area is a combination of alliances that exhibit several vegetation classes, which could not be mapped at this level of detail. Five 250m² rectangular plots were sampled for woody vegetation, equaling an area of 0.125 hectares. There are 25 species of woody plants (trees and shrubs) in the post-operational survey that are recorded in these plots. There are 20 1m² subplots within 2 of the 4 250m² plots sampled for herbaceous vegetation, equaling an area of 0.002 hectares. There are 12 species of ground layer vegetation in the post-operational survey that are recorded in these subplots. The data shows there are 12,880 woody plants per ha, yielding 43.83m² per ha of basal area for all three woody strata. The pre-operational data showed there were 7,580 woody plants per ha, which yielded 43.82m² per ha of basal area for all three woody strata.

Alliance post-operational woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.41, Pielou's Evenness Index (E') at 0.75, and a richness value of 25 species. Alliance pre-operational woody vegetation analysis indices include Shannon-

Weaver's Diversity Index (H') at 2.51, Pielou's Evenness Index (E') at 0.80, and a richness value of 23 species.

Alliance post-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.36, Pielou's Evenness Index (E') at 0.95, and a richness value 12 species. Alliance pre-operational herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.30, Pielou's Evenness Index (E') at 0.92, and a richness value of 12 species recorded within the plots.

A typical plot in this alliance is illustrated in **Photos 14A, 14B, and 14C in Appendix E**. The data from the Mosaic Alliance shows an increase in richness and diversity but a decrease in evenness of woody vegetation. An increase in evenness and diversity of herbaceous vegetation occurred even though the number of species recorded within the plots remained the same (**Table 29**).

Table 29. Summary of Pre- and Post-Operational Vegetation Analyses Mosaic Group		
Woody Vegetation	Pre-Operational	Post-Operational
Number of Sample Plots	5	5
Area Sampled (ha)	0.125	0.125
Number of Species Recorded Within Plots (Richness)	23	25
Overall Species Evenness	0.80	0.75
Overall Species Diversity	2.51	2.41
Herbaceous Vegetation		
Number of Sample Plots	20	20
Area Sampled (ha)	0.002	0.002
Number of Species Recorded Within Plots (Richness)	12	12
Overall Species Evenness	0.92	0.95
Overall Species Diversity	2.30	2.36

The data for the overstory stratum within this alliance indicates there are 650 individual trees per ha, yielding 39.25m² per ha of basal area (**Table 30**). During the pre-operational analysis, the overstory stratum had 650 individual trees per ha, which yielded 39.19m² per ha of basal area. The overstory stratum in this alliance is dominated by *Pinus taeda* with 240 trees per hectare.

The midstory stratum within this alliance contains 1,430 individual trees per ha, yielding 4.12m² per ha of basal area. During the pre-operational analysis, the midstory stratum contained 1,480 individual trees per ha, which yielded 4.28m² per ha of basal area. The midstory stratum is dominated by *Cyrilla racemiflora* with 610 trees per hectare.

The shrub stratum within this alliance contains 10,800 individual woody species per ha, yielding 0.46m² per ha of basal area. During the pre-operational analysis, the shrub stratum contained 5,450 individual woody species per ha, which yielded 0.35m² per ha of basal area. In the shrub stratum, *Vaccinium corymbosum* is the dominant species with 2,400 individuals per hectare. Other important species present in the shrub stratum, listed in order of dominance, include *Ilex vomitoria* and *Symplocos tinctoria*. The dominant species present during the pre-operational assessment were *Ilex vomitoria*, *Vaccinium corymbosum*, and *Symplocos tinctoria*.

Table 30. Summary of Woody Strata Vegetation Analyses Mosaic Group		
	Density (Individuals per ha)	Dominance (m ² per ha)
Post-Operational		
Shrub	10,800	0.46
Midstory	1,430	4.12
Overstory	650	39.25
Total	12,880	43.83
Pre-Operational		
Shrub	5,450	0.35
Midstory	1,480	4.28
Overstory	650	39.19
Total	7,580	43.82

3.3 EXOTIC SPECIES ANALYSIS

The report of results of the statistical analysis of the changes in the presence in exotic species is included as **Appendix A**. The analyses suggest that there is no statistical indication that the seismic survey lead to an increase in the presence of exotic species. *Triadica sebifera* was, by far, the most widespread exotic species to be sampled, with far fewer plots containing any trace of *Ligustrum sinense*, *Lonicera japonica*, *Albizia julibrissin*, and *Lygodium japonicum*. *Cyperus entrerianus* and *Pinus elliottii* were not noted in any of the plots examined in 2006 or 2009. Further discussions on the presence of exotic species are presented next in **Section 4.0**.

4.0 DISCUSSION

In this section, the vegetation sampling results are discussed in relation to the causes of vegetative change that occurred over the past three years in the TCU. Some impacts resulted from operations associated with the Knight Phase IV 3D Seismic Survey and

some impacts occurred as the result of extreme weather events like Hurricanes Rita (2005) and Ike (2008), as well as other natural, gradual changes. Finally, the extents to which exotic species have spread in the alliances and comparison between the two years of assessment data are discussed.

4.1 HURRICANE DISTURBANCE / TREEFALL

While the overall extent of treefall in areas was severe enough to potentially change the alliance classifications of vegetation communities in the TCU as discussed in **Section 2.2**, post-operational vegetation data analysis did not support this supposition. The treefall did have an affect on plot data and ecological indices. In 2006, plot number 006-152 showed *Fagus grandifolia* was the dominant species in the overstory, with four fairly large individuals present. In the 2009 data for this plot, *Ilex opaca* is the dominant species and *Fagus grandifolia* is represented by a single individual, the largest of the four present in 2006. Additionally, a large *Quercus alba* rooted outside of the plot was lying in the plot, which impacted the smaller *Fagus grandifolia* trees.

While collecting plot data in 2006 and 2009, notes were taken on downed trees that affected the plots. Downed trees rooted in the plot were included in the data if the trees were still alive. If downed trees were rooted outside of the plot and/or no longer alive, the tree was excluded from the data. From qualitative descriptions of treefall, as well as from indicators such as locations in which plots had to be moved, severity of treefall in the general area was rated in intensity as low, medium, or high. Approximately 118 plot locations exhibited downed trees within the immediate area, and in 32 of these plot areas, the intensity of the disturbance was noted as being high. During the pre-operational vegetation survey, there were 19 instances in which plots had to be moved to accurately and safely collect data because of treefall.

One hundred eighteen (118) of the 186 vegetation plots sampled during the pre-operational assessment had varying amounts of treefall noted, affecting the data collected in many instances. During the post-operational assessment, 30 of the 54 seismic-

impacted plots had treefall present and 23 of the 42 control plots had treefall present. Seven of the seismic-impacted plots and 5 of the control plots were reclassified as treefall plots during the post-operational survey. During field work, efforts were made to increase the number of control plots in the no treefall category, but few were absent of treefall. After the 2009 vegetation survey, the total number of plots known to contain treefall is 130 plots (70%). Additional plots that were not re-sampled in the 2009 survey may have increased this number.

Photos 15 through **19**, in **Appendix E**, show examples of treefall noted in the post-operational assessment.

4.2 VEGETATION MAP FINALIZATION

Three polygons within three separate alliances warranted further sampling to comply with the accuracy assessment procedures and further assist in their classification. In review of the *Pre-Operational Vegetation Assessment*, Dr. Paul Harcombe had several comments about the alliance determination of polygons. These concerns necessitated additional sampling plots in the single-plot polygons. Three additional plots were sampled during the post-operational assessment in each of the *Fagus grandifolia-Quercus alba*, *Fagus grandifolia-Magnolia grandifolia*, and the larger of the *Pinus echinata-Quercus (alba, falcata, stellata)* Forest Alliance polygons to verify that the appropriate alliance name was assigned to each polygon.

Additional plot data of the single-plot polygons *Fagus grandifolia-Magnolia grandifolia* Forest Alliance and *Fagus grandifolia-Quercus alba* Forest Alliance support combining both alliances into the *Fagus grandifolia-Quercus alba* Forest Alliance. *Quercus hemisphaerica* is also a dominant species in several of these plots. A couple of the plots sampled indicate the area may exhibit the *Quercus hemisphaerica* Forest Alliance. In the overall alliance data *Quercus hemisphaerica* is the dominant species along with *Fagus grandifolia* and *Quercus alba*; but in the overstory strata, the data shows that *Fagus grandifolia* and *Quercus alba* are the dominant species. Aside from the data, the *Quercus*

hemisphaerica Forest Alliance is only known to occur west of the range of *Fagus grandifolia*. Landscape position, soils, and floristics support this classification.

Additional plot data and analysis of the *Pinus echinata*-*Quercus (alba, falcata, stellata)* Forest Alliance support this alliance being included in the *Pinus palustris* Woodland Alliance. Overall alliance data of these plots indicate *Pinus palustris* as the dominant overstory tree with *Pinus taeda* and *Pinus echinata* as co-dominants. Within the polygon in question, the density of the canopy in areas is greater than 60% and its classification was based on a single plot. Dominant canopy trees dictate the reasoning behind this polygon being classified in another forest alliance. The new classification allows for *Pinus palustris* dominant areas with greater than 60% canopy cover in fire suppressed areas to be included. Much of this polygon is located in BTNP fire management units, and periodic prescribed fires are performed; however, fire has been suppressed in the area for quite some time. With regular prescribed fires, the area will gradually change to a more natural structure of this alliance. Landscape position, soils, and floristics support this classification.

4.3 SEISMIC IMPACTS

Seismic impacts are defined as damages caused by conventional surveying, drilling, and recording equipment. The survey crews trimmed vegetation, less than 3 inches in diameter, in order to obtain a line-of-sight for placement of receiver stations. Source points were placed with a back-pack GPS unit, so that a conventional line-of-sight would not be necessary. Receiver lines ran in a north-northeast to south-southwest direction, while source racks were oriented in a west-northwest to east-southeast staggered pattern. Survey crews used chainsaws, machetes, and brush hooks to clear a path along these lines. The survey crews usually had a member place access flagging for drills within 60 feet of the receiver line or source rack. Drill crews utilized articulating tractor-mounted drilling rigs, which were 4 feet wide and 12 feet in length. Each drill towed a 100-gallon water reservoir. These tractor drills maneuvered well through the forest within the approved 60-foot travel corridors, generally following receiver and source lines. Each

drilling crew was permitted to use chainsaws to clear minimum amounts of vegetation from the drill path while operating in the BTNP. Recording crews subjected the area to foot traffic, with a minimum of five passes along any given receiver line, as a result of lay-out, troubleshooting, detonation of explosives, data collection, and pick-up phases of operations.

The herbaceous layer was affected the most by project-related traffic along these lines. In areas with sparse shrub and midstory layers, the seismic lines were hardly discernable, as was the case in most of the plots where seismic impacts were observed.

The ‘impact layer’ refers to shrubs and midstory trees that were less than 3 inches (7.62 cm) in diameter, measured at 1 foot above the ground surface. Apparent changes in the impact layer were expected to be evident during field survey efforts associated with the post-operational assessment, as well as in the comparison of pre- and post-operational assessment data and subsequent analysis of change. Seismic impacts had the potential to affect alliance diversity, evenness, and richness, as well as species frequency, density, dominance, importance, and the relative values of each within the impact layer. Impact layer changes are evident in several of the smaller alliances’ data sets. In the *Magnolia virginicus*-*Nyssa biflora*-(*Quercus laurifolia*) Saturated Forest Alliance, for instance, the sub-dominant species in the midstory and shrub layer changed from the pre-operational to post-operational survey even though there were only slight changes in the ecological indices for the alliance. These small changes in the shrub and midstory strata were expected and are common impacts observed in the TCU.

Major changes were not expected in the overstory, as crews were not permitted to cut down trees any larger than 3 inches in diameter, with the exception of *Triadica sebifera* and *Ilex vomitoria*. These species do not reach sizes necessary to be included in the overstory layer. There were a few instances where the crews were not aware that they were on BTNP property, had problems with their measuring devices, confused similar species, or drilling equipment became wedged, and consequently, trees larger than the stipulated limit were impacted. On several occasions, alive, fallen, oversized trees were

cut on a case-by-case basis to allow drilling equipment travel within the 60-foot corridor. All of these instances were approved by the NPS. The majority of oversized trees cut by the surveyors measured between 3-4 inches in diameter. Incidents of impact resulting from seismic activities outside the parameters of the permit stipulations were reported and discussed in the SWCA's report *Final Monitoring Report Knight Phase IV 3D Seismic Prospect* (2008).

Photos 20 through **24**, in **Appendix E**, show examples of seismic impacts within the TCU.

4.4 OTHER DISTURBANCES

Climate, fire, wildlife, and other natural occurrences also contributed to changes in vegetative composition between the two years of assessment. Precipitation fluctuations and temperature extremes would both have affected growth in the herbaceous layer. These natural occurrences had the potential to affect all four vegetation layers in a variety of ways. The herbaceous layer would vary the greatest due to fluctuations in climate, wildlife presence, prescribed burns, and other natural occurrences.

4.4.1 Wildlife

Wildlife presence in the plots, such as hog disturbance and game trails, would have also impacted the herbaceous layer in that vegetation would have been uprooted or inhibited from growth by frequent travel. Hog disturbance was observed in bottomland areas near creeks. It is important to note that impacts from hog disturbance are hard to differentiate from impacts that may have resulted from drill travel in bottomland areas. Evidence of hog disturbance was noted in the field in and adjacent to sampled plots. Herbaceous vegetation was disturbed greatly in these plots, as well as in nearby areas.

4.4.2 Fire

Several plots contained observable impacts from recent prescribed fires, which would have removed the herbaceous layer at the very least. Fire provides bare ground for

vegetation establishment, increases sunlight by removing smaller woody species, and returns nutrients to the soil, which usually leads to greater species diversity in early seres.

Similar to seismic impacts, the shrub and midstory layers would have sustained the most impact as a result of prescribed burns. As mentioned before, several plots contained observable impacts from recent fires, which would have impacted much of the shrub layer and some of the younger and less fire-tolerant trees in the midstory layer. The alliances affected by prescribed fire include the *Pinus palustris* Woodland Alliance, *Pinus taeda*-*Pinus echinata* Forest Alliance, and the *Pinus taeda*-*Quercus (alba, falcata, stellata)* Forest Alliance.

4.4.3 Additional Factors Contributing to Change

In addition to the causes of change discussed above, changes in the woody vegetation data could also be attributable to natural tree growth, slightly askew plot measurements, misidentification of similar species (or species in close proximity with similar bark), and increased ability to differentiate species between the two years of assessment. All of these factors could lead to inclusion of some individuals in the post-operational assessment, but not in the pre-operational assessment, or vice versa. The size classes for shrub and midstory layers would prevent some individuals, which were identified during the pre-operational assessment, from being included in the same layer during the post-operational assessment because of growth.

4.5 EXOTIC SPECIES

Overall, the importance value of exotic, invasive, and/or noxious species decreased between the two years of assessment. A list of species considered to be exotic, invasive, and/or noxious with the potential for occurrence in the TCU is listed in **Table 31**.

Table 31. Exotic, Invasive and/or Noxious Species	
Common Name	Scientific Name
Chinese Tallow	<i>Triadica sebifera</i>
Chinese Privet	<i>Ligustrum sinense</i>
Japanese Climbing Fern	<i>Lygodium japonicum</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
Silktree	<i>Albizia julibrissin</i>

The most common exotic species encountered during the pre- and post operational surveys was Chinese tallow (*Triadica sebifera*). Japanese honeysuckle (*Lonicera japonica*) showed the greatest presence after Chinese tallow within the TCU. The other three species showed a decrease in importance values in the single plots that contained the species. A summary of changes in ecological indices and importance values for exotic, invasive, and/or noxious species, both in the herbaceous and woody stratum, on the plot level, categorized by year, alliance, seismic impacted/not impacted, and by treefall present or not present are shown in **Tables 32** and **33**. The tables include all plots with exotic, invasive, and/or noxious species present that were sampled in 2009, including control plots which were not impacted by the seismic survey. Presence of the exotic, invasive, and/or noxious species of NPS concern is demonstrated in **Figure 4**.

Figure 4. Exotic Species in the Pre- and Post-Operational Vegetation Assessments
Turkey Creek Unit (TCU), Big
Thicket National Preserve (BTNP)

1 0.5 0 1 Miles

Legend

Exotic Species and Year Present in Plot

- Albizia julibrissin - 2006
- Lonicera japonica - 2006
- Lonicera japonica - both
- Lygodium japonicum - 2006
- Triadica sebifera - 2006
- Triadica sebifera - 2009
- Triadica sebifera - both
- Triadica sebifera - 2006 and Lonicera japonica - 2006
- Triadica sebifera - both and Ligustrum sinense - both
- Triadica sebifera - both and Lonicera japonica - 2009

Hiking Trails

Permanent Watercourses in the TCU

Turkey Creek Unit, BTNP Boundary (10/25/06)

Map Coordinate System: Universal Transverse Mercator, Zone 15
Map Datum: North American Datum 1983
Map Produced 9/23/2009

Dixie Environmental Services Co., LP

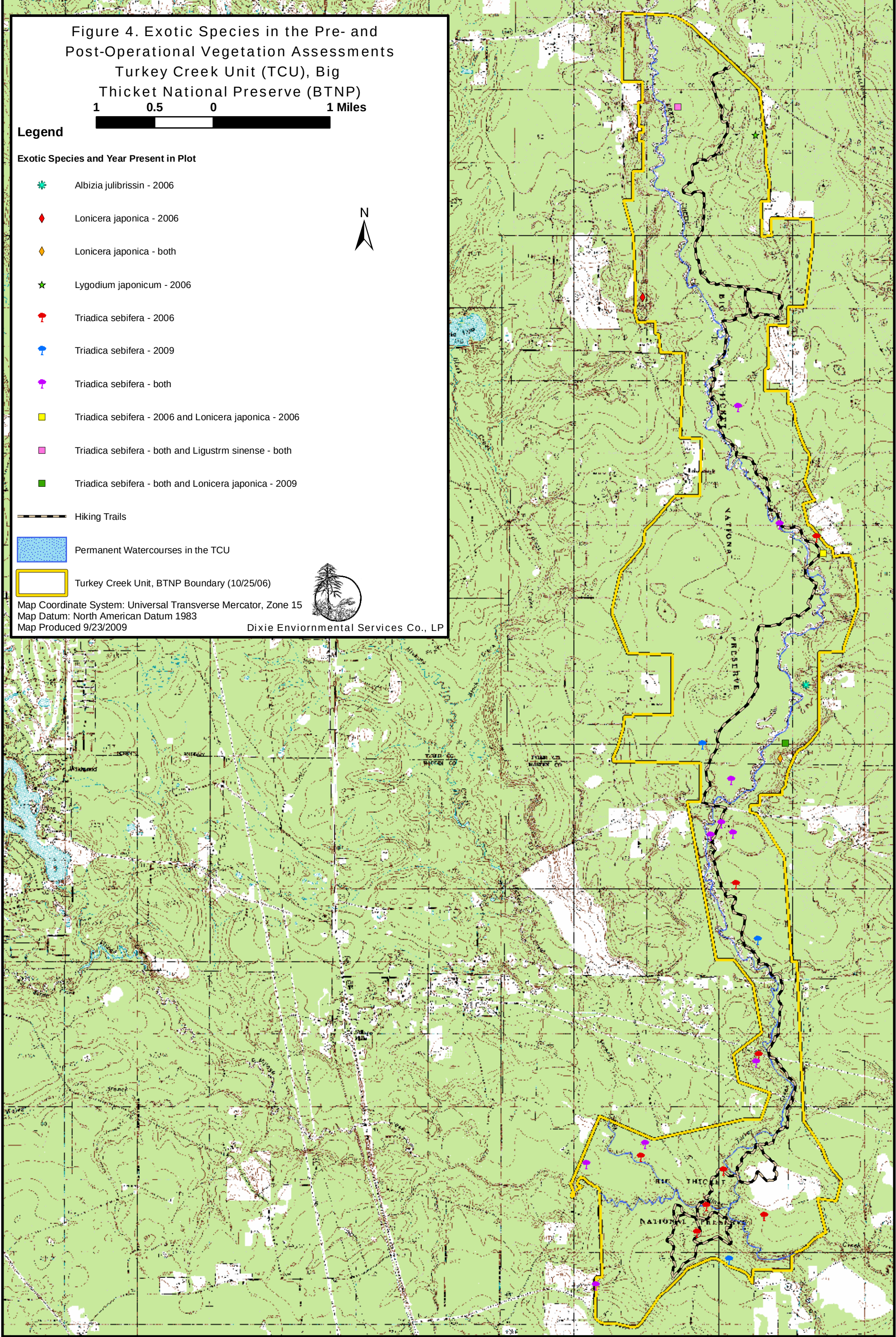


**Table 32. Summary of Ecological Indices and Importance Values
for Exotic, Invasive, and/or Noxious Species
In the Herbaceous Stratum on Plot Level
Categorized by Year, Alliance, Seismic Impacted/Not-Impacted,
and Treefall Present/Not Present**

Plot	Year	Impacted	Treefall Present	Dominance (Ground Coverage %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Triadica sebifera</i>							
037-119	2006	Yes	Yes	1.25	6.58	6.58	3.29
037-119x	2009	Yes	Yes	0.0	0.0	0.0	0.0
047-173	2006	Yes	No	0.0	0.0	0.0	0.0
047-173x	2009	Yes	No	0.25	0.45	0.45	0.22
114-133	2006	Yes	No	0.5	1.87	1.87	0.93
114-133X	2009	Yes	No	2	5.19	5.19	2.6
119-096	2006	Yes	Yes	0.75	1.2	1.2	0.6
119-096X	2009	Yes	Yes	0.5	1.07	1.07	0.53
120-109	2006	Yes	No	2	5.44	5.44	2.72
120-109X	2009	Yes	No	1.25	3.7	3.7	1.85
009-145	2006	No	Yes	0.25	1.08	1.08	0.54
009-145X	2009	No	Yes	0.0	0.0	0.0	0.0
016-042	2006	No	Yes	0.25	2.78	2.78	1.39
016-042X	2009	No	Yes	0.0	0.0	0.0	0.0
038-161	2006	No	Yes	1	9.3	9.3	4.65
038-161X	2009	No	Yes	0.25	3.33	3.33	1.67
039-004	2006	No	Yes	0.25	1.13	1.13	0.57
039-004X	2009	No	Yes	0.0	0.0	0.0	0.0
119-098	2006	No	No	0.25	0.74	0.74	0.37
119-098X	2009	No	No	0	0	0	0
120-107	2006	No	No	6.25	11.06	11.06	5.53
120-107X	2009	No	No	1.75	4.64	4.64	2.32
120-111	2006	No	No	1.25	1.59	1.59	0.8
120-111X	2009	No	No	0.75	1.27	1.27	0.63
001-038	2006	Yes	Yes	0.25	1.15	1.15	0.57
001-038X	2009	Yes	Yes	0.25	0.8	0.8	0.4
006-144	2006	Yes	Yes	0.0	0.0	0.0	0.0
006-144X	2009	Yes	Yes	0.25	0.74	0.74	0.37
023-166	2006	Yes	Yes	0.5	2.56	2.56	1.28
023-166X	2009	Yes	No	0.0	0.0	0.0	0.0
031-017	2006	Yes	Yes	0.25	0.85	0.85	0.42
031-017X	2009	Yes	Yes	0.75	1.57	1.57	0.78
032-178	2006	Yes	Yes	0.0	0.0	0.0	0.0
032-178X	2009	Yes	Yes	0.25	2.56	2.56	1.28
023-164	2006	Yes	No	0.25	1.12	1.12	0.56

**Table 32. Summary of Ecological Indices and Importance Values
for Exotic, Invasive, and/or Noxious Species
In the Herbaceous Stratum on Plot Level
Categorized by Year, Alliance, Seismic Impacted/Not-Impacted,
and Treefall Present/Not Present**

Plot	Year	Impacted	Treefall Present	Dominance (Ground Coverage %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
023-164X	2009	Yes	No	0.25	1.27	1.27	0.63
045-070	2006	Yes	No	0.25	0.6	0.6	0.3
045-070X	2009	Yes	No	0.0	0.0	0.0	0.0
045-080	2006	No	Yes	0.25	0.58	0.58	0.29
045-080X	2009	No	Yes	0.0	0.0	0.0	0.0
118-137	2006	No	Yes	0.25	0.34	0.34	0.17
118-137X	2009	No	Yes	0.0	0.0	0.0	0.0
118-136	2006	No	No	0.5	0.59	0.59	0.3
118-136X	2009	No	No	0.0	0.0	0.0	0.0
006-143	2006	Yes	Yes	0.25	0.59	0.59	0.3
006-143X	2009	Yes	Yes	0.0	0.0	0.0	0.0
<i>Ligustrum sinense</i>							
120-111	2006	No	No	0.5	0.64	0.64	0.32
120-111X	2009	No	No	0.25	0.42	0.42	0.21
<i>Lygodium japonicum</i>							
085-160B	2006	No	No	0.25	0.34	0.34	0.17
085-160BX	2009	No	No	0.0	0.0	0.0	0.0
<i>Lonicera japonica</i>							
031-017	2006	Yes	Yes	0.0	0.0	0.0	0.0
031-017X	2009	Yes	Yes	0.75	1.57	1.57	0.78
077-045	2006	Yes	Yes	0.75	3.37	3.37	1.69
077-045X	2009	Yes	Yes	0.0	0.0	0.0	0.0
031-010	2006	No	Yes	2.25	6.47	6.47	3.24
031-010X	2009	No	Yes	1.25	3.19	3.19	1.59
045-080	2006	No	Yes	0.25	0.58	0.58	0.29
045-080X	2009	No	Yes	0.0	0.0	0.0	0.0
<i>Albizia julibrissin</i>							
041-078	2006	Yes	No	0.25	0.76	0.76	0.38
041-078X	2009	Yes	No	0.0	0.0	0.0	0.0

**Table 33. Summary of Ecological Indices and Importance Values
for Exotic, Invasive, and/or Noxious Species
In the Woody Stratum on Plot Level
Categorized by Year, Alliance, Seismic Impacted/Not-Impacted,
and Treefall Present/Not Present**

Plot	Year	Impacted	Treefall Present	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Triadica sebifera</i>							
037-119	2006	Yes	Yes	0.01	0.03	4.58	2.29
037-119X	2009	Yes	Yes	0.02	0.08	14.79	7.39
114-133	2006	Yes	No	2.09	4.85	11.18	5.59
114-133X	2009	Yes	No	1.95	5.34	14.86	7.43
016-042	2006	No	Yes	0.0	0.0	0.0	0.0
016-042X	2009	No	Yes	0.01	0.04	4.17	2.09
038-161	2006	No	Yes	3.18	6.11	12.17	6.09
038-161X	2009	No	Yes	3.84	14.4	22.47	11.23
120-106	2006	No	No	0.01	0.02	5.58	2.79
120-106X	2009	No	No	0.26	0.94	23.06	11.53
120-107	2006	No	No	1.13	7.38	8.75	4.38
120-107X	2009	No	No	1.26	7.67	8.34	4.17
031-017	2006	Yes	Yes	0.0	0.0	0.0	0.0
031-017X	2009	Yes	Yes	0.06	0.23	2.75	1.37

There were a few plots in which an exotic species was documented during the post-operational assessment that had not been documented in the pre-operational assessment. There were also a few plots that contained exotic species during the pre-operational assessment, but no longer contained them during the post-operational assessment. Plot specific locations and importance values of exotic, invasive, and/or noxious species identified during the pre- and post-operational assessments are contained in **Appendix B**.

As evident in the above tables, species of concern did not cover a significant portion of any vegetation layer in the alliances or in individual plots. Statistical analysis of the changes in importance values on plot level and species ranking based on importance values indicate that the seismic survey did not lead to an increase in the presence of exotic species.

5.0 CONCLUSION

Dixie Environmental Services, Co., LP, in cooperation with the NPS, conducted the post-operational vegetation assessment of the TCU following SEI's Knight Phase IV Seismic Survey. Data was collected from a total of 107 vegetation sample plots, which included 56 seismic-impacted plots, 42 control plots utilized in exotic species analysis, and 9 new plots used in the ecological classification of alliance polygons.

Comparisons between the pre-operational and post-operational data show there are no more than expected levels of change. Impacts from the seismic survey did not change dominant species in the canopy or alliance classifications. Expected impacts from the seismic survey affected mostly the herbaceous, shrub and midstory strata. Ecological indices varied slightly; however, the variations were similar to the natural variations that occurred in non-impacted plots. DESCO believes the variations in vegetation composition and ecological indices are minimal and are as much a function of the seismic survey as the natural shifts in the forest. Seismic impacts were minimal as a result of SEI's cooperation with the NPS and environmental monitors, as well as the crews' compliance with permit stipulations and restrictions designed to minimize impacts to the environment.

Statistical analyses of the presence of exotic species between the pre-operational and post-operational data show that there is no statistical indication that the seismic survey activities lead to an increase in the presence of exotic species.

Data collected in the nine new plots in three different mapped alliance polygons resulted in the reclassification of two of the single-plot polygons classified during the pre-operational vegetation mapping and analysis. The *Fagus grandifolia*-*Magnolia grandiflora* Forest Alliance was reclassified and included in the *Fagus grandifolia*-*Quercus alba* Forest Alliance. The *Pinus echinata*-*Quercus (alba, falcata, stellata)* Forest Alliance was reclassified and included in the *Pinus palustris* Woodland Alliance.

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Appendix A

Statistical Analysis of Change in Exotic Species Presence in Association with the Knight IV 3D Seismic Operations

**STATISITICAL ANALYSIS OF CHANGE IN EXOTIC SPECIES
PRESENCE IN ASSOCIATION WITH THE KNIGHT IV 3D
SEISMIC OPERATIONS**

Submitted to:

National Park Service
Big Thicket National Preserve
Beaumont, Texas

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SEPTEMBER 2009

Introduction

Exotic species are invasive, non-native species to the southeast region of Texas. Naturally, there is introduction of exotic species as time passes. In addition, human intervention and severe natural phenomenon can accelerate the development or assist in the introduction of exotic species. While there is no control over severe, natural phenomena, we can try to control any adverse effects that human intervention might have. The Knight IV 3D Seismic Survey occurred between 2006 and 2008 in the Turkey Creek Unit of the Big Thicket National Preserve. Due to the nature of the research (see **Section 3.3** and **4.5** of the Post-Operational Vegetation Assessment Report for details) there are concerns that 3D seismic surveys could facilitate the increase of exotic species presence. The following report details the statistical analysis on this issue.

Issue

Field data collected on the presence of exotic species (herein referred as dependent variable) has been reported. In addition, other factors (herein referred as independent variables) that are expected to influence the presence of exotic species have been recorded as well. A total of 98 plots were re-examined in 2009 from the original 2006 survey of 186 plots. Fifty six (56) plots had been impacted by the 3D seismic survey, while 42 plots had not. Additionally, qualitative notes were taken on the presence of treefall in all plots in 2006 and 2009. As a result of Hurricane Rita in 2005, there was a considerable amount of treefall on the ground in 2006; the treefall issue was further compacted by Hurricane Ike in 2008. The question is if there is enough statistical evidence to suggest that any of the factors has influenced the presence of exotic species.

Report Structure

The presence of exotic species was examined in two strata within each plot, the herbaceous (or herb) and woody strata. The strata follow the same definition as found in **Section 2.3** of the Post-Operational Vegetation Assessment Report. Although the two strata originate from the same plot, they will be considered as independent experimental units in order to give more power to the statistical tests and hence error on the side of caution. The first part of the statistics report is separated into **Section 1: Herb Strata** and **Section 2: Woody Strata**. The presence of exotic species was also examined on a forest-wide scale, as viewed in the third segment of this report, **Section 3: Ranking Analysis**. All three sections of the statistics report examine the relative importance values (RIV) for each exotic species as defined in **Section 2.2** of the Post-Operational Vegetation Assessment Report.

Section 1: Herb Strata

First, it needs to be established that the year 2006 is different from year 2009. As **Figure 1** shows year 2006 has higher RIV than year 2009. However, there are three significant outliers, which could heavily bias the outcome and therefore further investigation is required.

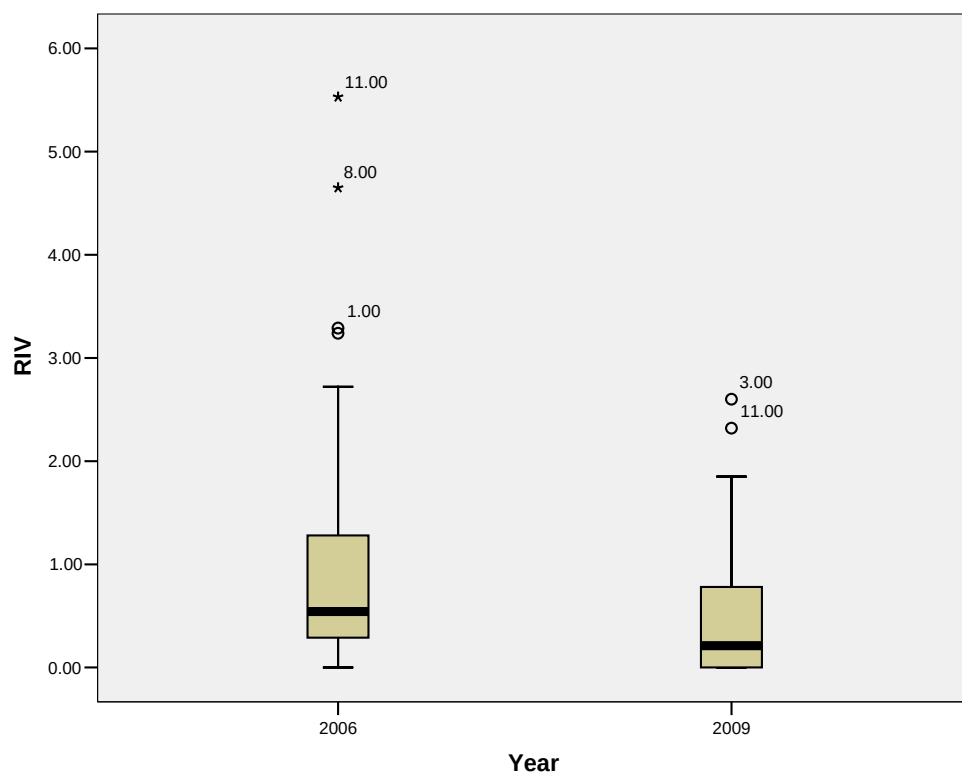


Figure 1: Overall Boxplot

In order to look at the issue on a finer scale, the year input is separated into two groups, impacted vs. not impacted. As **Figure 2** shows below there is a persistence of outliers among all groups. It needs to be noted that although there is a general decrease on the RIV as time passes, it appears that impacted plots in 2009 have higher RIV values than not impacted plots in 2009.

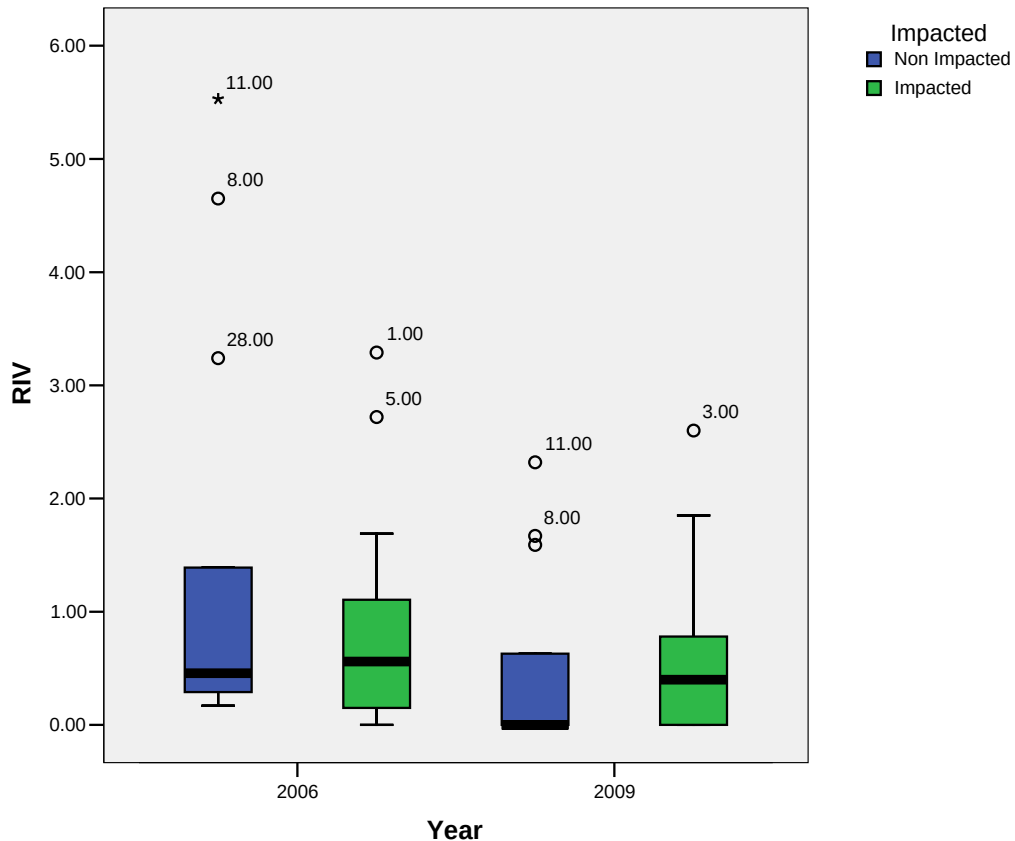


Figure 2.

The dependent variable here is defined to be RIV value and the independent variable is seismic impact looked at in two time periods. This means that while **Figure 1** shows the RIV values split by year, **Figure 2** further breaks it down by seismic impact vs. no seismic impact.

Figure 3 shows RIV values for each individual plot, it seems that for most of the plots the same RIV value is observed. There are about five plots that indicated a decrease in RIV value from 2006 to 2009. Also there are two plots that show quite an increase from 2006 to 2009.

The last three figures have shown that year 2006 and 2009 have relatively similar RIV values. A test will be conducted in order to determine if indeed the RIV values are the same or different.

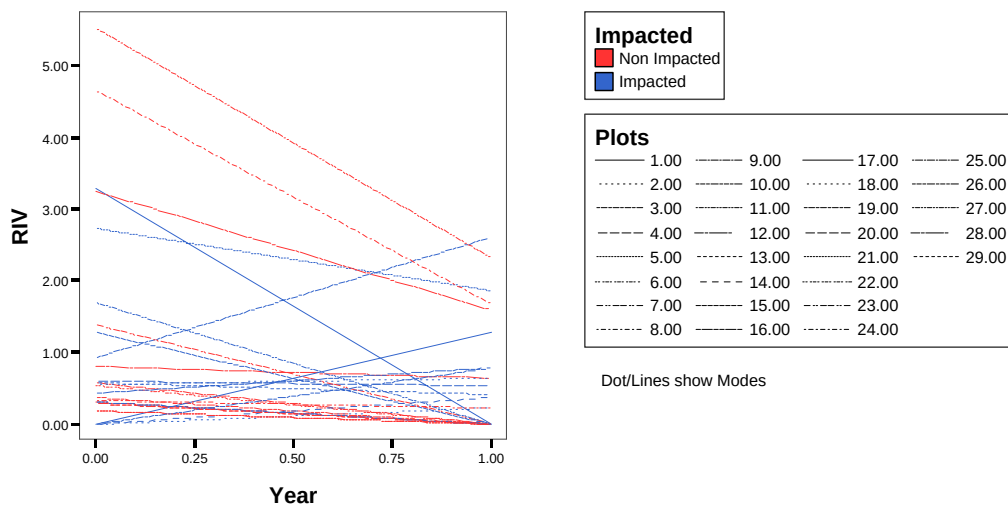


Figure 3

Figure 3 shows the individual plots RIV value as time goes from 2006 (labeled 0.00) to 2009 (labeled 1.00).

Working hypothesis

Ho: There is no difference in the presence of exotic species between areas impacted from seismic research (in 2009) vs. areas not impacted from seismic research in 2006 but later impacted from the research.

Ha: There is a significant difference in presence of exotic species between areas impacted from seismic research (in 2009) vs. areas not impacted from seismic research in 2006 but later impacted from the research.

Scientifically accepted type I error level $\alpha = 0.05$

Choosing the most powerful test:

Different testing methods were considered such as a t-test, ANOVA, and multiple linear regression (MLR) analysis on the RIV differences between 2006 and 2009. Given that MLR cannot handle random effects and that we have repeated measures, it was determined that repeated measure test with a diagonal compound symmetry covariance matrix of errors should be used (see **Table 1B** and note below). Additional interaction terms were removed from the model due to lack of statistical significance (conclusions drawn based on F-test).

Why use repeated measure test with a diagonal compound symmetry covariance matrix of errors?

Repeated Measures Analysis is used when there are variables of the same subject over time. In this scenario RIV is measured in the same plot over time (in 2006 and 2009). The usual analysis

of ANOVA and the other previously mentioned statistical tools make the assumption of independence of the data. Because variables of same subject over time are dependent, it is necessary to account for it. The next step is to decide what kind of dependence we have. The question in statistical terms translates which covariance matrix of the error should be used? The answer to this question can vary based on the criteria that are used. The “best” criterion used widely in the statistic community is the AIC. This criterion requires that the covariance matrix is specified. In this case “heterogeneous” indicates that the variances are different in the two time periods (2006 & 2009). “Compound symmetry” refers to the fact that the correlation remains the same over time.

In mathematical terms the final model will be the following.

$$Y_{ijk} = \mu + \tau_i + d_{ik} + \beta_j + a_l + (\tau\beta)_{ij} + e_{ijk}$$

Y = indicates levels of RIV

μ = indicates a base level of exotic species. No matter the influence of humans or severe nature condition, there will be some presence of exotic species.

τ_i = Main effect that accounts for the influence of the 3D seismic survey

β_j = time effect

$(\tau\beta)_{ij}$ = the interaction of time and 3D seismic survey

a_l = alliance effect takes into account the variation between alliances

d_{ik} = random effect of each plot

e_{ijk} = error term accounting for randomness on each individual observation

The dimensionality of model is shown on **Table 1A**.

Table 1A

Model Dimension ^a						
		Number of Levels	Covariance Structure	Number of Parameters	Subject Variables	Number of Subjects
Fixed Effects	Intercept	1	Heterogeneous Compound Symmetry	1	Plots	29
	Year	2		1		
	Impacted	2		1		
	Alliance	8		7		
	Year * Impacted	4		1		
Repeated Effects	Year	2		3		
Total		19		14		

a. Dependent Variable: RIV.

Table 1B

Information Criteria ^a	
-2 Restricted Log Likelihood	136.614
Akaike's Information Criterion (AIC)	142.614
Hurvich and Tsai's Criterion (AICC)	143.172
Bozdogan's Criterion (CAIC)	151.164
Schwarz's Bayesian Criterion (BIC)	148.164

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: RIV.

Estimates of Covariance Parameters ^a			
Parameter		Estimate	Std. Error
Repeated	Var: [Year=.00]	2.317851	.670531
Measures	Var: [Year=1.00]	.486357	.153968
	CSH rho	.705676	.113662

a. Dependent Variable: RIV.

Table 1B shows the AIC (an indicatory value that measures the spread of the variance) information criteria which indicates that the variance of the error will be different for every time period.

Table 2

Type III Tests of Fixed Effects ^a				
Source	Numerator df	Denominator df	F	Sig.
Intercept	1	28.811	11.726	.002
Year	1	27.000	6.551	.016
Impacted	1	27.633	.106	.748
Alliance	7	20.000	2.704	.038
Year * Impacted	1	27.000	2.397	.133

a. Dependent Variable: RIV.

Based on the results from **Table 2** we conclude the following:

Intercept is statistically significant (p-value=0.002< alpha=0.05). This means that no matter if other factors are present or not, there will always be some kind of exotic species presence.

Time is statistically significant (p-value=0.016< alpha=0.05). This means that as time passes, the presence of exotic species does not remain constant. This is explained e.g. due to hurricanes in the area.

Alliance is statistically significant (p-value=0.038< alpha=0.05). This means that as we move between alliances, the presence of exotic species is different. Although the scope of this project is not to examine alliance effect, it is important to include it in the model because of its influence. Since this factor is significant it means that its variation is not random, and therefore it influences the outcome in a non-random fashion. That being said, if the influence caused by

alliance is not taken into account, it can mask the effects that the 3D seismic survey could have. This means that an observed change on the exotic species could be attributed to the 3D seismic survey while in reality is caused by the alliance difference (see **Figure 4**) or vice versa.

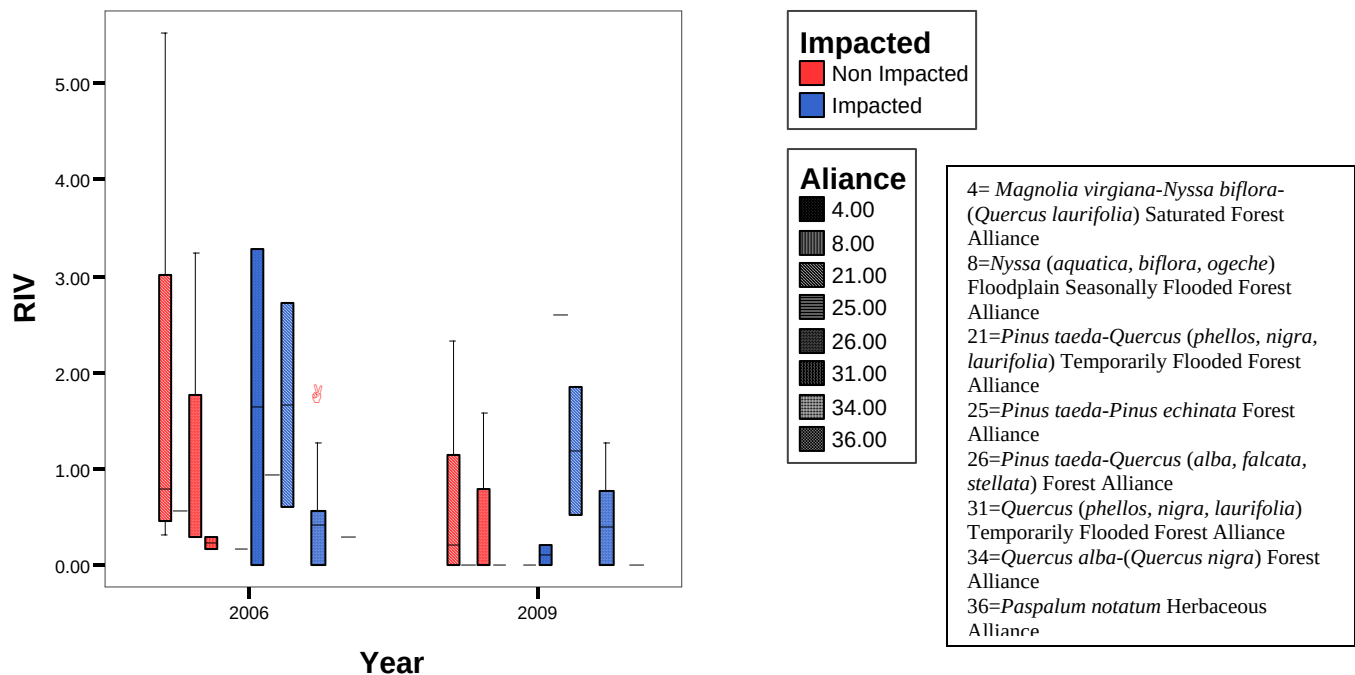


Figure 4: It indicates that there is similar fluctuation of RIV based on alliance and seismic research.

Seismic impact (main effect) is not statistically significant (p-value=0.748> alpha=0.05). This indicates that there is no statistical measurement bias from the observations taken.

Time & Seismic Impact interaction is not statistically significant (p-value=0.133> alpha=0.05). This looks at the seismic impact while taking into account the time passage from 2006 to 2009 (see **Figure 5**). This means that there is not enough evidence to suggest that the 3D seismic survey influenced the presence of exotic species. The p-value here says that there is a 13.3% chance to observe difference in the sampled plots while in reality the presence of exotic species in the forest is the same (forest here is defined as the entire area which was impacted by the research and the area not impacted by the seismic research).

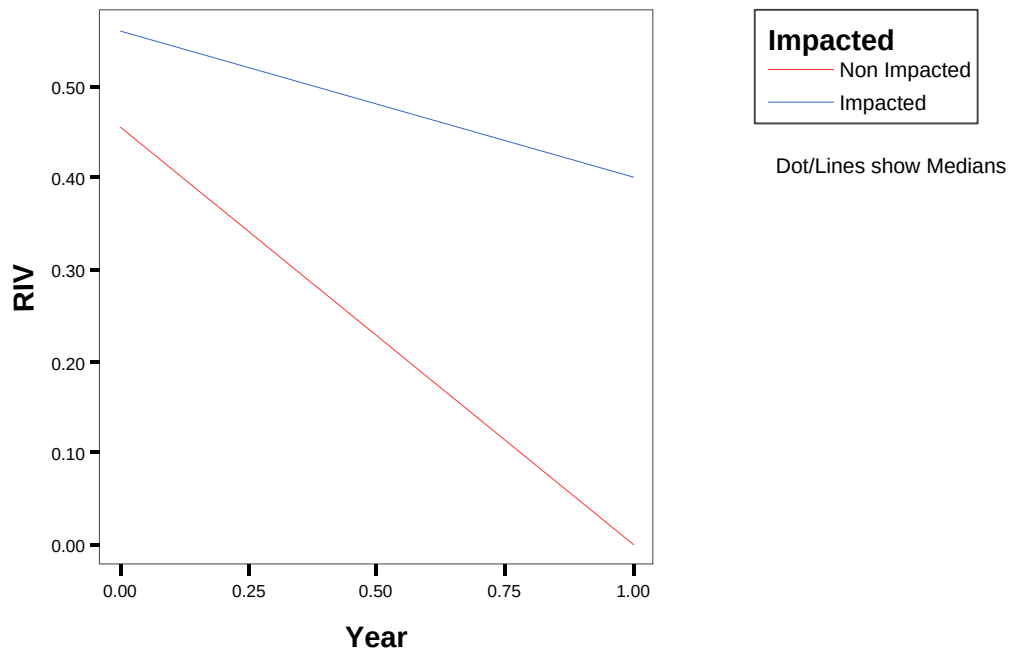


Figure 5. Shows the median (the median is used due to the presence of outliers which, in turn, can artificially inflate the mean) fluctuation for impacted vs. not impacted.

Section 2: Woody Strata

First, it needs to be established if year 2006 is different from year 2009. As **Figure 6** shows year 2006 has lower RIV values than year 2009.

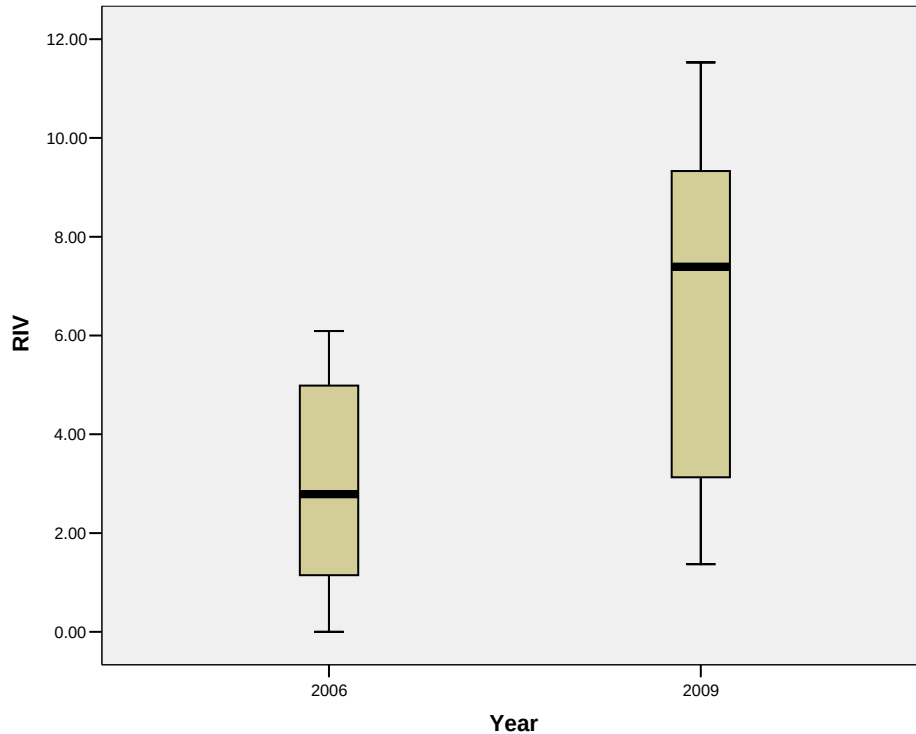


Figure 6: Overall Boxplot

In order to look at the issue on a finer scale, the year input is separated to two groups impacted vs. not impacted. As **Figure 7** shows, there is an increase from year 2006 to 2009. In addition, it can be seen that not impacted plots have higher presence of exotic species than impacted plots.

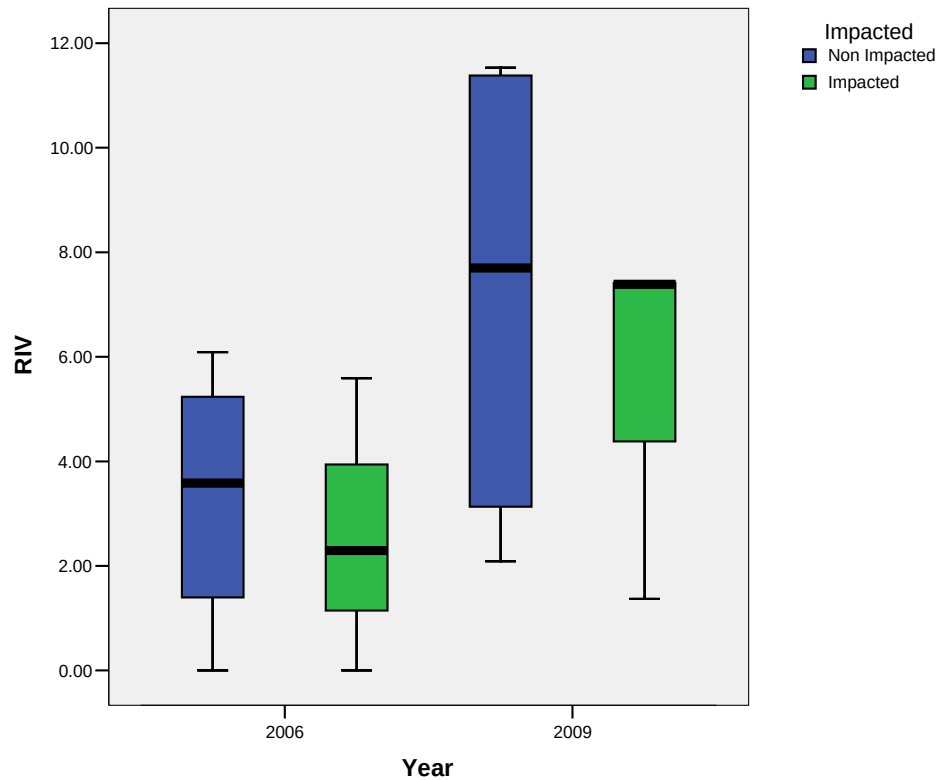


Figure 7.

Dependent variable here is defined to be RIV and independent variable is seismic impact vs. seismic impact looked at two time periods. This means that while **Figure 6** shows the RIV values split by year, **Figure 7** further breaks it down by seismic impact vs. no seismic impact. .

Figure 8 shows RIVs for each individual plot. It seems that for almost all plots there is an increase in RIV values as time passes from 2006 to 2009. This trend is similar for impacted plots and not impacted plots.

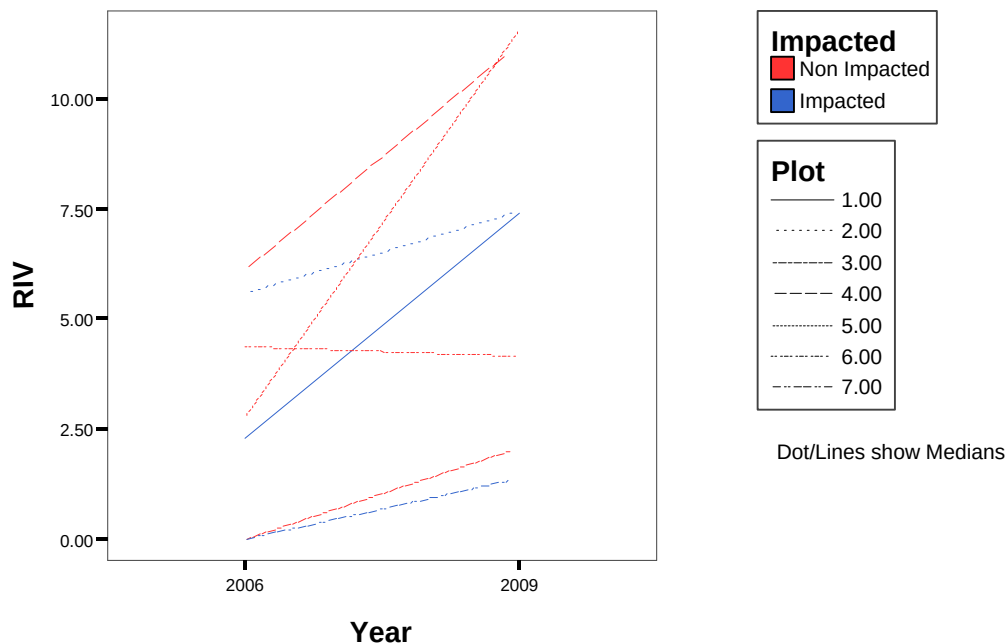


Figure 8

It shows the individual plots RV value as time goes from 2006 to 2009.

Figures 6, 7, and 8 have indicated that year 2009 has higher RIV on presence of exotic species than year 2006.

Working hypothesis

Ho: There is no difference in the presence of exotic species between areas impacted from seismic research (in 2009) vs. areas not impacted from seismic research in 2006 but later impacted from the research.

Ha: There is a significant difference in presence of exotic species between areas impacted from seismic research (in 2009) vs. areas not impacted from seismic research in 2006 but later impacted from the research.

Scientifically accepted type I error level $\alpha = 0.05$

Choosing the most powerful test:

Different testing methods were considered such as t-test, ANOVA, and multiple linear regression (MLR) analysis on the RIV difference between 2006 and 2009. Given that MLR cannot handle random effects and that we have repeated measures, it was determined that repeated measure test with a diagonal compound symmetry covariance matrix of errors should be used (see **Table 3B** and note below). In addition there were many interaction terms that were statistically

insignificant and were removed from the model. Additional interaction terms were removed from the model due to lack of statistical significance, conclusions drawn based on F-test.

Why use repeated measure test with a diagonal compound symmetry covariance matrix of errors?

Repeated Measures Analysis is used when there are variables of the same subject over time. In this scenario RIV is measured in the same plot over time (in 2006 and 2009). The usual analysis of ANOVA and the other previously mentioned statistical tools make the assumption of independence of the data. Because variables of same subject over time are dependent it is necessary to account for it. The next step is to decide what kind of dependence we have. The question in statistical terms translates which covariance matrix of the error should be used? The answer to this question can vary based on the criteria that are used. The “best” criterion used widely in the statistic community is the AIC. This criterion requires that the covariance matrix is specified. In this case “heterogeneous” indicates that the variances are different in the two time periods (2006 & 2009). “Compound symmetry” refers to the fact that the correlation remains the same over time.

In mathematical terms the final model will be the following.

$$Y_{ijk} = \mu + \tau_i + d_{ik} + \beta_j + a_l + (\tau\beta)_{ij} + e_{ijkl}$$

Y = indicates levels of IV

μ = indicates a base level of exotic species. No matter the influence of humans or severe nature condition there will be some presence of exotic species.

τ_i = Main effect that accounts for the influence of the seismic research

β_j = time effect

$(\tau\beta)_{ij}$ = the interaction of time and seismic research

a_l = alliance effect takes into account the variation between alliances

d_{ik} = random effect of each plot

e_{ijkl} = error term accounting for randomness on each individual observation

The dimensionality of model is shown on **Table 3A**.

Table 3A

		Model Dimension ^a				
		Number of Levels	Covariance Structure	Number of Parameters	Subject Variables	Number of Subjects
Fixed Effects	Intercept	1	Heterogeneous Compound Symmetry	1	Plot	7
	Year	2		1		
	Impacted	2		1		
	Alliance	4		2		
	Year * Impacted	4		1		
Repeated Effects	Year	2		3		
Total		15		9		

a. Dependent Variable: RIV.

Table 3B

Information Criteria ^a		Estimates of Covariance Parameters ^a		
-2 Restricted Log Likelihood	55.026	Parameter	Estimate	Std. Error
Akaike's Information Criterion (AIC)	61.026	Repeated Var: [Year=.00]	7.178753	4.540242
Hurvich and Tsai's Criterion (AICC)	65.026	Measures Var: [Year=1.00]	18.918513	11.965118
Bozdogan's Criterion (CAIC)	64.933	CSH rho	.661651	.251432
Schwarz's Bayesian Criterion (BIC)	61.933			

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: RIV.

a. Dependent Variable: RIV.

Table 3B shows the AIC (an indicatory value that measures the spread of the variance) information criteria which indicates that the variance of the error will be different for every time period.

Table 4

Type III Tests of Fixed Effects ^a				
Source	Numerator df	Denominator df	F	Sig.
Intercept	1	5.000	14.274	.013
Year	1	5.000	7.230	.043
Impacted	1	5.000	.268	.627
Year * Impacted	1	5.000	.220	.659

a. Dependent Variable: RIV.

Based on the results from **Table 4** we conclude the following:

Intercept is statistically significant ($p\text{-value}=0.013 < \alpha=0.05$). This means that no matter if other factors are present or not, there will always be some kind of exotic species presence.

Time is statistically significant ($p\text{-value}=0.043 < \alpha=0.05$). This means that as time passes the presence of exotic species does not remain constant (This is explained e.g. due to hurricanes in the area). Statistically, there is a difference due to other impacts except from 3D seismic surveys.

Alliance cannot be determined. Given that there is equal number of alliances as the number of plots observed with presence of exotic species, it is impossible to determine the influence of alliance. The model runs out of degrees of freedom and therefore no p-value can be calculated.

Seismic impact (main effect) is not statistically significant ($p\text{-value}=0.627 > \alpha=0.05$). This indicates that there is no statistical measurement bias from the observations taken.

Time & Seismic Impact interaction is not statistically significant ($p\text{-value}=0.659 > \alpha=0.05$). This means that there is not enough evidence to suggest that impacts from the 3D seismic survey influenced the presence of exotic species. This looks at the seismic impact while taking into account the time elapsed from 2006 to 2009 (see **Figure 9**). The p-value here says that there is a 65.9% chance to observe a difference in the sampled plots; while in reality, the presence of exotic species in the forest is the same (forest here is defined as the entire area which was impacted by the research and the area not impacted by the 3D seismic survey).

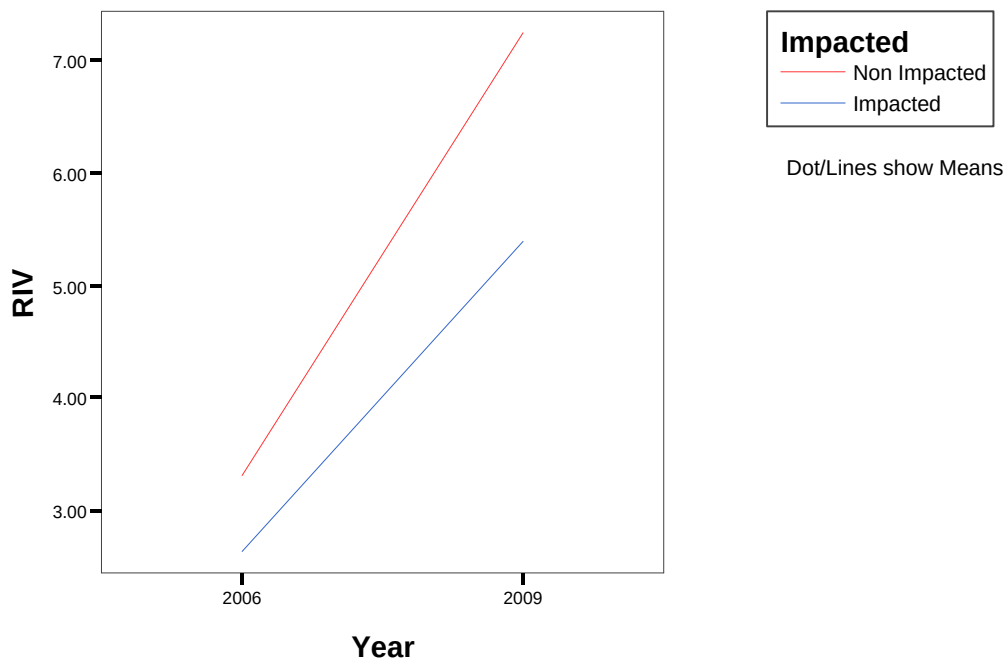


Figure 9 shows the mean fluctuation for impacted vs. not impacted plots. Notice that on the previous model, median was used; but since there are not any outliers present, the mean can be used.

Conclusion

Both models reach the same conclusion. Time itself is an important factor that determines the presence of exotic species. It must be noted that the time effect could be confounded with other effects such as treefall effect (assumed to have been caused from two or more different hurricanes). Given that all but one plot had identical treefall status in both year 2006 and 2009, it is impossible to determine what effect treefall would have had. In order to be able to assess the influence of treefall from 2006 to 2009, we must have observed plots without treefall present in 2006 and then with present treefall in 2009. No adequate number of such plots was available for either herb or woody plots containing exotic species. As far as 3D seismic survey impacts are concerned, there is no statistical indication that 3D seismic surveys lead to an increase in the presence of exotic species. In the herb stratum, there was a general drop in RIVs and in the woody there was a general increase of RIVs. Both those observed differences were statistically insignificant, and most likely were observed due to natural variation among plots.

Section 3: Ranking Analysis

Ranking Analysis

In addition to RIV value on a given plot, exotic species are also given an overall forest-wide RIV value. Based on this overall RIV value each exotic species takes a ranking value among all species (native and not native). In order to examine if the ranking order of the exotic species has changed, it is necessary to examine if the ranking order of the all the species has changed. The analysis will be performed only on the Herb Strata, as the Woody Strata only has one exotic species present.

Herb Strata

Currently there is no available test of known method to test the ranking distribution of two populations with categorical values. In other words, a species can be thought of as a variable and each species is thought as a level of this categorical variable. RIV is the outcome value for each level. In order to further understand the fluctuation of the species, a test must be devised.

Methodology

Based on the RIV measurements in 2006 each species is given a ranking value. If the species distribution in the forest had not changed for 3 years then the RIV values should have remained the same when the plots were measured in 2009. Under this scenario if the 2006 RIV values are subtracted from 2009 RIV, then the RIV difference (Rdif) should be equal to zero. As **Figure 10** shows, although the Rdif is clustered around zero, the range is very wide from -300 to + 350. In other words, this means that if a species was ranked as number 50 in 2006 and it is ranked as 20

in 2009 then the Rdif would be equal to -30. Hence, it will indicate that that species' rank has dropped by 30 places.

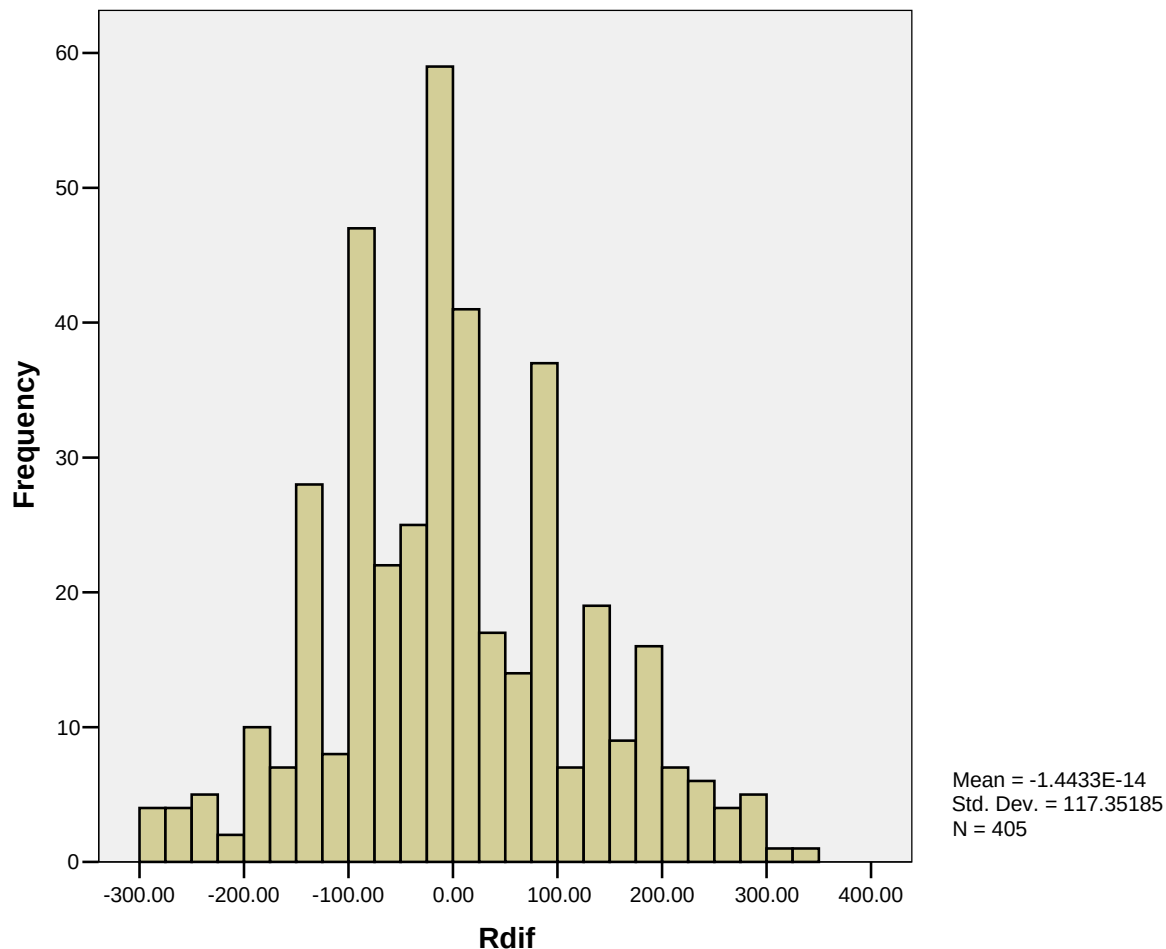


Figure 10: Distribution of Rdif

One way to see if the ranking has changed between the two time periods is to test if the correlation is equal to 1 or not. Under the null hypothesis, the RIV values in 2006 should have remained unchanged for 2009 and hence a correlation of 1.

Working hypothesis (All species)

Ho: There is no difference in the RIV values for each species between year 2006 and year 2009.

Ha: There is a difference in the RIV values for each species between year 2006 and year 2009.

Scientifically accepted type I error level $\alpha = 0.05$

As indicated on **Figure 11**, there is a spread of the RIV values between years 2006 and 2009. Under the null hypothesis all the points should be aligning on a diagonal line.

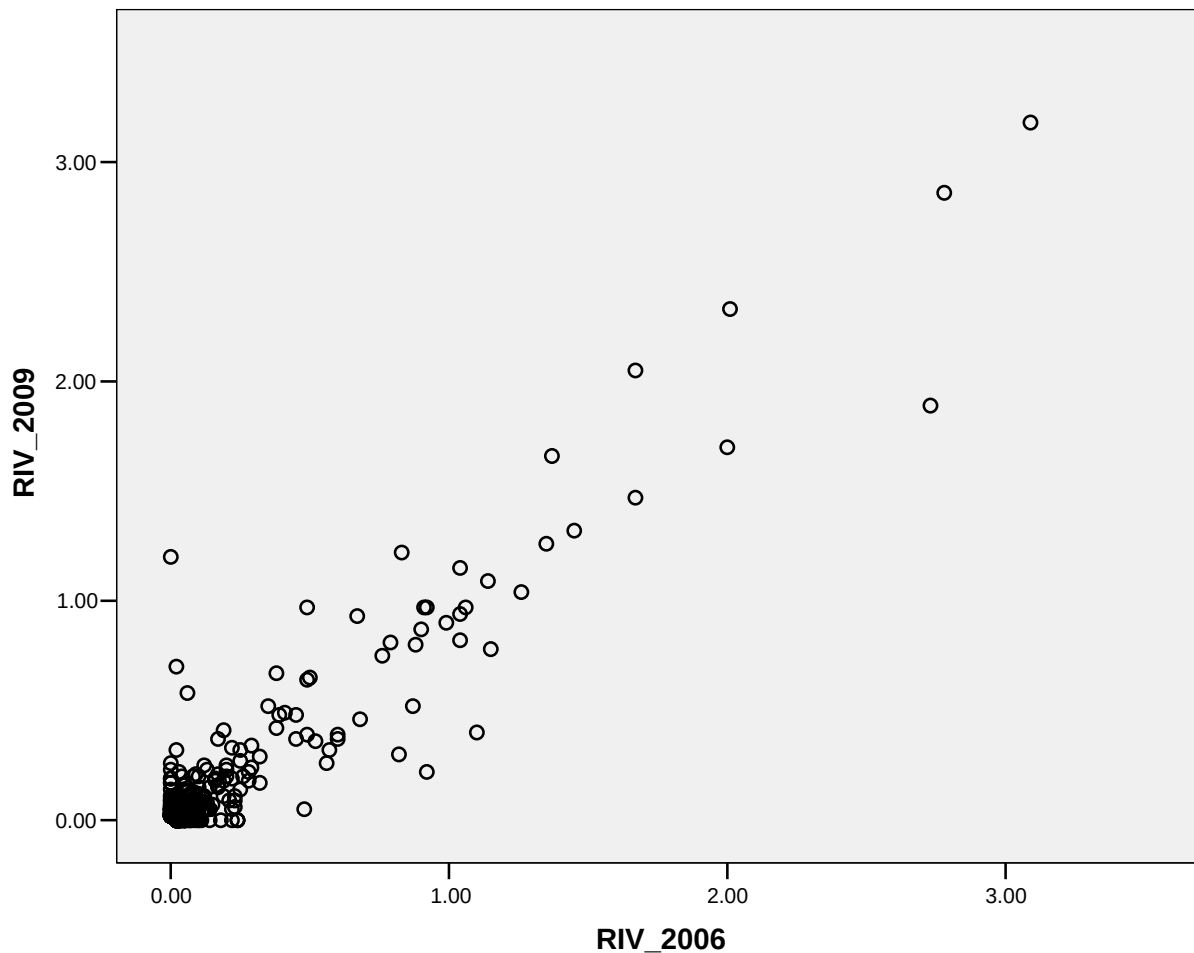


Figure 11: Alignment of 2006 RIV values and 2009 RIV values.

Sperman's' correlation value is used to determine if the RIV values have changed. Table 1 demonstrates two things.

- 1) The correlation is statistically significant different from zero ($p\text{-value}=0.0 < \alpha=0.005$). This indicates that generally speaking, species with high RIV values in 2006 continued to have high RIV values in 2009.
- 2) The correlation is statistically significant different from one ($p\text{-value}=0.00 < \alpha=0.05$). This indicates that although the high ranking species in 2006 are still high ranking in 2009, they do not maintain the same ranking position.

Correlations

			RIV_2006	RIV_2009
Spearman's rho	RIV_2006	Correlation Coefficient	1.000	.488**
		Sig. (2-tailed)	.	.000
		N	405	405
	RIV_2009	Correlation Coefficient	.488**	1.000
		Sig. (2-tailed)	.000	.
		N	405	405

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5: Correlation test based on asymptotically symmetric distribution of ranks

Working hypothesis (Exotic species)

Ho: There is no difference in the RIV values for the exotic species between year 2006 and year 2009.

Ha: There is a difference in the RIV values for each exotic between year 2006 and year 2009.

Due to the fact there are only five exotic species present, the correlation test will have very low power or ability to detect differences between RIV values in 2006 and RIV values in 2009. It was therefore determined to use a binomial test.

The hypothesis that can be tested here is to see if the decrease is a statically significant decrease or it is a possible random event.

Ho: There is 50% chance that an exotic species decreases in rank between year 2006 and year 2009.

Ha: There is a chance different than 50% that an exotic species decreases in rank between year 2006 and year 2009.

Scientifically accepted type I error level $\alpha = 0.05$

Binomial Test				
	Occurrences	Observed Proportion	Test Proportion	Exact Significance test (2 tailed)
Rank Change	5	0.999	0.500	0.03125
No Rank Change	0	0.000		
Total	5			

Table 6: Binomial test

As **Table 6** demonstrates there is enough statistical evidence ($p\text{-value}=0.03125 < \alpha=0.05$) to reject the null hypothesis that the rank decreased by a chance of 50%. Therefore it is concluded

that the change in rank cannot be attributed to a 50% random chance. In loose terms, there is only a 3.125% chance that the decrease in rank among the exotic species is a random event.

Conclusion

The statistical analysis for the ranking positions is intuitive. High ranking species in 2006 continued to score high ranking in 2009 and low ranking species 2006 continued to score low in ranking for 2009. Although the scoring remained in relatively the same levels, the ranking was interchanged. For example, the top five species with the highest ranking in 2006 traded places among them in 2009. Finally, five out of the five exotic species had a decrease in ranking from 2006 to 2009. This combination of five independent decreases could have happened with a 3% chance; therefore, it is concluded that there is some other factor, rather than pure chance, that is driving the decrease within the herbaceous strata.

Summary

The individual herb and woody strata plot data indicated that as far as 3D seismic survey impacts are concerned, there is no statistical indication that 3D seismic surveys lead to an increase in the presence of exotic species. In the herb stratum, there was a general drop in RIVs and in the woody there was a general increase of RIVs. Both those observed differences were statistically insignificant, and most likely were observed due to natural variation among plots. The forest-wide ranking analysis also demonstrated, statistically speaking, that the activities of a 3D seismic survey do not increase the presence of exotic species within the herbaceous strata.

Appendix B

Plot Summary of the Post-Operational Vegetation Assessment

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
001-038	369297	3370729	5/27/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y		triseb-both
003-082	369554	3370849	6/15/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		N	Not Impacted	N	N	Only tree data collected, no herb data /coordinates available	
004-084	370533	3371018	6/15/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	Y	Y	No seismic impacts, downfall present	
004-085	370600	3371207	6/15/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	Y	Y	No seismic impacts, downfall present	
006-142	370342	3371284	6/13/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	Y	Y		
006-143	370686	3371456	6/13/09	Quercus alba- (Quercus nigra) Forest Alliance		Y	Impacted	Y	Y	Receiver line crossing N/S through plot, cut veg apparent	triseb-06
006-144	371130	3371086	5/27/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y		triseb-09
006-152	369452	3371175	5/27/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		Y	Impacted	Y	Y	Possible RL through plot, some old signs of cutting but not very obvious	
006-193	369450	3371213	5/27/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		N	New				
006-194	369521	3371163	5/27/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		Y	New				
006-195	369457	3371094	5/27/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		N	New				
008-086	370427	3372331	6/18/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	N	N	one large oak and few pines down, but very old....Keeping as control for now due to age of trees down (oak is 33, pines are 15 and 13)	
009-145	371614	3371686	5/28/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	Y	Y		triseb-06

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
009-146	371809	3371405	5/28/09	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Impacted	Y	Y	Shows impacted in table but no notes referring to impacted by seismic. Probable impacted as area is open and would have been hard to see	
010-092	371722	3372225	5/28/09	Pinus palustris Woodland Alliance	3601	Y	Not Impacted	N	N	Burn was intense, some data trees and shrubs affected	
011-050	371681	3372674	6/12/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Not Impacted	Y	Y	No notes at all on data sheet, assuming treefall as listed and per AP/group discussion	
012-134	371910	3372723	6/12/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Impacted	N	Y	No obvious seismic impact within plot. On old tram, but veg not disturbed. Treefall present (some living cracked/bent trees alive measured)	
016-042	369975	3372680	6/4/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	Y	Y		triseb-both
017-036	371431	3373581	6/17/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	N	RL with observed cut veg in plot center N/S	
023-164	371504	3373798	5/29/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	N	RL with observed cut veg in plot	triseb-both
023-166	371539	3373898	5/29/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	N	No mention of tree fall in notes. RL with cut veg in plot	triseb-06
026-044	372053	3373741	5/29/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Not Impacted	N	Y	POSSIBLE CONTROL. Receiver approx 50 feet away, not in plot/ possibly another seismic path through south of plot, maybe just animal path very narrow, veg not cut ... treefall large PIN TAE storm affected in plot	

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
028-002	371805	3375318	6/1/09	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	N	N		
028-014	371927	3375846	6/18/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Impacted	N	N		
029-034	371172	3375247	6/17/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	N	N	Had some trees rooted outside that fell/possibly treefall, but compared data to pre-veg and no major discrepancy, so keeping as no downfall	
030-051	371734	3376075	6/18/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance		Y	Impacted	N	N	RL crosses west side of plot	
031-010	371838	3378000	6/2/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	Y	Y	No Seismic Impact observed on ground	lonjap-both
031-017	371909	3378205	6/2/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	RL and possible SL in Plot...Downfall minimal and appears older	triseb-both lonjap-09
032-088	371322	3375912	6/11/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Impacted	Y	Y	Drill path in plot, treefall minimal/small trees and limbs	
032-089	371701	3375982	6/18/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Impacted	N	N	RL crosses west side of plot	
032-178	371525	3375487	6/1/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	RL and cut veg within plot	triseb-09
035-162	371316	3376909	6/1/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Impacted	N	N	24 dbh QUE FAL near center point dead standing (assuming dead at pre veg sampling)	
035-163	371469	3376949	6/1/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	N	RL and cut veg in plot. No downfall mentioned in notes	
037-119	371183	3376951	6/1/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance		Y	Impacted	Y	Y	Source path at north pole	triseb-both

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
038-161	371024	3377097	6/11/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	N	Y	Minimal treefall, Fallen oak top in south end of plot covered herb plot 4, could keep as no downfall	triseb-both
039-004	371227	3376255	6/11/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Not Impacted	Y	Y		triseb-06
039-005	371349	3376604	6/11/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Not Impacted	N	N		
039-018	371064	3376427	6/11/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Not Impacted	Y	Y	Downfall appears to be older than storms	
041-078	372192	3379008	6/17/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	N	RL crosses through plot center (east of) going N/S	albjul-06
042-118	372489	3379482	6/3/09	Nyssa (aquatica, biflora, ogeche) Floodplain Seasonally Flooded Forest Alliance		Y	Impacted	Y	Y	?	
045-070	372332	3381035	6/3/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	N	RL on west side of plot	triseb-06
045-080	372429	3380817	6/3/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	Y	Y	source line close to south plot, not in, recovered nicely due to open veg in that area..Tree fall minimal to one large ACE RUB rooted out fell into plot	triseb-06 lonjap-06
045-081	372153	3381589	6/18/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	N	N	SL south of plot with NO Impact	
047-173	370766	3378181	6/16/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance	3702	Y	Impacted	N	N	RL through NW plot corner, Nyssa not on prev herb data but prevalent now	triseb-09
048-186	370822	3378761	6/16/09	Pinus taeda- Pinus echinata Forest Alliance		Y	Not Impacted	N	N		
050-055	371029	3378932	6/16/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance	3702	N	Impacted	N	Y	RL crossed plot center with cut veg observed. Downfall present	
051-068	371391	3379012	6/2/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance	3702	N	Impacted	Y	N	ONLY minimal treefall, small trees/limbs, no large downed trees in plot area	

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
052-069	370988	3379582	6/15/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	3702	N	Impacted	Y	Y	source line through plot, one pin tae affected as downfall, but also ran over by drill (8-10 dbh)	
053-091	371063	3379892	6/19/09	Quercus nigra Forest Alliance	3701	Y	Not Impacted	N	N		
059-039	369936	3379664	6/5/09	Mosaic	3701	N	Impacted	N	N	SL/drill path in plot	
060-040	370658	3380690	6/15/09	Mosaic	3701	N	Not Impacted	N	N		
063-059	370519	3381411	6/16/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance	3701	N	Not Impacted	N	N	On rd edge, and maintenance cut 1 yaupon at 4.5 dbh, still counting as control as not seismic and no downfall	
064-072	371308	3378471	6/2/09	Mosaic	3702	N	Impacted	N	Y	changed to downfall, one large NYS on plot edge (just out) broke/bent over, could affect herb data, only small minimal other treefall	
064-073	370252	3378346	6/12/09	Mosaic		Y	Not Impacted	N	Y	Receiver line outside of plot, listed as control, impacted at 60' and 100' but NOT IN PLOT. Notes indicate newly fallen trees (alive) that would affect herb stratum	
064-074	370538	3378600	6/12/09	Mosaic	3702	N	Impacted	Y	Y	SL/drill path on south plot end	
064-075	370304	3378114	6/12/09	Mosaic		Y	Impacted	Y	Y	Source line on plot north edge, but not in plot. Impacts did not affect plot veg per MP, but said brush dragged into north end, so calling impacted	

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
064-076	370993	3378013	6/16/09	Mosaic	3702	N	Not Impacted	Y	Y	source line within 60 feet, but not impacting plot	
064-077	370767	3377526	6/16/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	3702	N	Impacted	N	Y	Source line near plot, not within but path cutting ended at south plot border	
064-083	371852	3378994	6/2/09	Quercus nigra Forest Alliance	3702	N	Impacted	N	N	source path in plot	
068-022	371763	3382657	6/5/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	Y	changed to downfall, one que fal at 14.0 topped broken down in plot	
069-157	371032	3383253	6/3/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	Open veg, but possible source path north end/not readily observable	
069-157B	371001	3383248	6/3/09	Paspalum notatum Herbaceous Alliance		Y	Impacted	N	N	pad site with road/trail so seismic path not readily observable; NO TREES	
069-158	371491	3383507	6/3/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	larger open shrub layer, if seismic path in plot not able to determine due to regrowth	
072-025	370318	3383788	6/9/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	source path in plot	
077-045	369944	3384350	6/9/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	source path in plot, tree fall minimal in plot, some larger pines outside of plot down	lonjap-06
078-027	369983	3385477	6/9/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	source path in plot, tree fall minimal in plot	
083-016	371830	3384484	6/19/09	Pinus taeda Seasonally Flooded Woodland Alliance (WPS Group)	3201	N	Not Impacted	N	N		
085-160	371078	3385799	6/6/09	Paspalum notatum Herbaceous Alliance		Y	Not Impacted	Y	Y	Is within ROW so seismic used would not be evident, maintained ROW so storm damaged trees in ROW pushed to edge within plot	

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
085-160B	371498	3386583	6/6/09	Paspalum notatum Herbaceous Alliance		Y	Not Impacted	N	N	Is within ROW so seismic used would not be evident, maintained ROW so storm damaged trees in ROW pushed to edge within plot, one cor flo 8.5 bent/broken from this maintenance..still counting as no Downfall	lygjap-06
086-176	370929	3385151	6/8/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		Y	Impacted	Y	N	RL with cut veg runs just inside NW corner of plot. No downfall mentioned in notes	
086-190	371146	3385168	6/8/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		N	New				
086-191	370925	3385348	6/8/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		N	New				
086-192	370820	3385475	6/8/09	Fagus grandifolia-Magnolia grandiflora Forest Alliance		Y	New				
088-064	371372	3386835	6/10/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance		Y	Not Impacted	Y	Y		
089-065	370948	3386832	6/8/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance		Y	Impacted	Y	Y	RL in plot	
092-066	370436	3388014	6/8/09	Quercus (michauxii, pagoda, shumardii)-Liquidambar styraciflua Temporarily Flooded Forest Alliance		Y	Impacted	Y	Y	Source path in plot, herb plot 4 affected in rootball	
093-028	369760	3388107	6/10/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	Y	Y		
094-046	370020	3387023	6/10/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		N	Impacted	N	N	source drill path through plot center; NO HERBS	
095-063	371213	3384759	6/10/09	Magnolia virginiana-Nyssa biflora- (Quercus laurifolia) Saturated Forest Alliance		Y	Not Impacted	N	Y	Changed to downfall, large blowdown tree in plot (que alb)	

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
097-196	371586	3384090	6/6/09	Pinus palustris Woodland Alliance		Y	New				
097-197	371835	3384214	6/6/09	Pinus palustris Woodland Alliance		Y	New				
097-198	371572	3385484	6/8/09	Pinus palustris Woodland Alliance		Y	New				
098-095	372352	3371573	5/28/09	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	N	Y	Changed to downfall, numerous data trees alive, but horizontal and uprooted	
099-041	370187	3370769	5/26/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	y	Y	source path in plot	
112-126	369662	3379905	6/5/09	Pinus palustris Woodland Alliance	3701	N	Not Impacted	N	N	Burned. Notes say was a trail, but possibly firebreak/not in plot	
112-127	369922	3380233	6/5/09	Pinus palustris Woodland Alliance	3701	N	Impacted	Y	Y	Drill path in plot, treefall minimal/small trees and limbs	
113-011	372175	3382214	6/10/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	changed to Impacted, rec line in west plot edge with cut veg	
113-013	371792	3382143	6/5/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	N		
113-020	371978	3382074	6/5/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Not Impacted	Y	Y	Impacts not in plot, drill access path within 20 feet of plot, changed to control as impacts not in plot, but could keep as impacted if needed due to proximity	
114-133	371257	3382829	6/5/09	Nyssa (aquatica, biflora, ogeche) Floodplain Seasonally Flooded Forest Alliance		Y	Impacted	N	N	Very faint rec line signs, but open understory so hard to determine	triseb-both
116-128	372181	3385274	6/4/09	Pinus palustris Woodland Alliance		Y	Impacted	N	N	Impact plot, evidence not easily observable due to burn area	
116-129	372130	3384717	6/4/09	Pinus palustris Woodland Alliance		Y	Impacted	N	Y	Impact plot, evidence not easily observable due to burn area, large trees downed in plot so changed to downfall	

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
116-130	371969	3384216	6/4/09	Pinus palustris Woodland Alliance		Y	Not Impacted	Y	Y	Burned.	
117-047	370693	3386362	6/9/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	Y	Y	Seismic activity not readily observed, but very possible due to open under story, leaving as impacted	
118-136	370816	3371824	6/17/09	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	N	N		triseb-06
118-137	371055	3372311	6/12/09	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	Y	Y		triseb-06
119-096	369165	3372403	6/17/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Impacted	Y	Y	RL through plot/SL on south plot	triseb-both
119-098	369917	3372500	6/18/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	N	N		triseb-06
120-102	371569	3373984	5/29/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		Y	Impacted	N	N	Potential receiver in plot (on edge, hard to determine but looks like oriented path in correct azimuth), part of plot may have slumped off on bank of creek.	
120-106	371160	3377691	6/16/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	3702	N	Not Impacted	N	N		triseb-both
120-107	370877	3376922	6/11/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	N	N	Large tallow trees in area "girdled" probably from management, may affect data if measured last time.	triseb-both
120-109	371827	3381211	6/15/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Impacted	N	N	RL with some cut veg N/S through plot, changed from original designation of not impacted	triseb-both

Appendix B. Plot Summary											
Point #	Easting/X /Latitude	Northing/Y/ Longitude	Date	Alliance ID	Burn Unit	Herb	Category	Treefall Observations		Notes	Exotic Species- Year
								2006	2009		
120-111	370430	3386967	6/9/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		Y	Not Impacted	Y	N	No downfall noted	triseb-both lingsin- both
121-183	370339	3372573	6/4/09	Pinus taeda Seasonally Flooded Woodland Alliance (WPS Group)		Y	Impacted	N	N	ATV trail thru plot, seismic could have used but did not affect any more than trail already there	
122-184	371925	3385276	6/10/09	Pinus taeda-Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance		N	Not Impacted	Y	Y		
123-185	370696	3387857	6/8/09	Pinus taeda- Pinus echinata Forest Alliance	3101	N	Impacted	N	Y	Changed to treefall, numerous large pines topped, some in plot, alive. Drill path in plot, very intensely burned	
125-187	370842	3372888	6/4/09	Pinus taeda-Quercus (alba, falcata, stellata) Forest Alliance		N	Impacted	Y	Y	Trail nearby plot SW corner that drill crew could have used	

Appendix C

Plant Species Documented in the Turkey Creek Unit

**Plant Species List
Turkey Creek Unit,
Big Thicket National Preserve**

Genus	Species	Common Name
<i>Acalypha</i>	<i>rhomboidea</i>	Rhomboid Copperleaf
<i>Acalypha</i>	<i>sp.</i>	Copperleaf
<i>Acalypha</i>	<i>virginica</i>	Virginia Copperleaf
<i>Acer</i>	<i>barbatum</i>	Florida Maple
<i>Acer</i>	<i>rubrum</i>	Red Maple
<i>Acer</i>	<i>rubrum</i> var. <i>drummondii</i>	Drummond Red Maple
<i>Albizia</i>	<i>julibrissin</i>	Silktree
<i>Alnus</i>	<i>serrulata</i>	Hazel Alder
<i>Ambrosia</i>	<i>artemisiifolia</i>	Common Ragweed
<i>Andropogon</i>	<i>glomeratus</i>	Bushy Bluestem
<i>Andropogon</i>	<i>ternarius</i>	Splitbeard Bluestem
<i>Andropogon</i>	<i>virginicus</i>	Broomsedge Bluestem
<i>Aralia</i>	<i>spinosa</i>	Devil's Walking Stick
<i>Arisaema</i>	<i>triphylla</i> var. <i>triphylla</i>	Five-leaf Jack-in-the-pulpit
<i>Aristolochia</i>	<i>reticulata</i>	Texas Dutchman's Pipe
<i>Aristolochia</i>	<i>serpentaria</i>	Virginia Dutchman's Pipe
<i>Arnoglossum</i>	<i>ovatum</i>	Ovateleaf Cacalia
<i>Arnoglossum</i>	<i>ovatum</i> var. <i>ovatum</i>	Ovateleaf Cacalia
<i>Arundinaria</i>	<i>gigantea</i>	Giant Cane
<i>Asclepias</i>	<i>longifolia</i> var. <i>longifolia</i>	Longleaf Milkweed
<i>Asimina</i>	<i>parviflora</i>	Small-flowered Pawpaw
<i>Aster</i>	<i>sp.</i>	Aster
<i>Axonopus</i>	<i>fissifolius</i>	Common Carpetgrass
<i>Baccharis</i>	<i>halimifolia</i>	Eastern Baccharis
<i>Baptisia</i>	<i>sphaerocarpa</i>	Green Wild Indigo
<i>Berchemia</i>	<i>scandens</i>	Alabama Supplejack
<i>Bignonia</i>	<i>capreolata</i>	Crossvine
<i>Boehmeria</i>	<i>cylindrica</i>	Falsenettle
<i>Boltonia</i>	<i>diffusa</i>	Small-head Boltonia
<i>Botrychium</i>	<i>biterdatum</i>	Sparselobe Grapefern
<i>Brunnichia</i>	<i>ovata</i>	American Buckwheatvine
<i>Bulbostylis</i>	<i>ciliatifolia</i>	Drawn-together Hairsedge
<i>Bumelia</i>	<i>lanuginosa</i>	Gum Bully
<i>Callicarpa</i>	<i>americana</i>	American Beautyberry
<i>Campsis</i>	<i>radicans</i>	Common Trumpetcreeper
<i>Cardamine</i>	<i>sp.</i>	Bittercress
<i>Carex</i>	<i>abscondita</i>	Thicket Caric Sedge
<i>Carex</i>	<i>atlantica</i>	Prickly Bog Sedge
<i>Carex</i>	<i>blanda</i>	Woodland Sedge
<i>Carex</i>	<i>caroliniana</i>	Carolina Sedge
<i>Carex</i>	<i>cherokeensis</i>	Cherokee Sedge
<i>Carex</i>	<i>complanata</i>	Hirsute Sedge
<i>Carex</i>	<i>corrugata</i>	Wriggle-fruit Caric Sedge
<i>Carex</i>	<i>crebriflora</i>	Close-flower Caric Sedge
<i>Carex</i>	<i>debilis</i>	White Edge Sedge
<i>Carex</i>	<i>debilis</i> var. <i>debilis</i>	Spindlefruit Sedge
<i>Carex</i>	<i>digitalis</i>	Slender Woodland Sedge
<i>Carex</i>	<i>glaucescens</i>	Southern Sedge
<i>Carex</i>	<i>intumescens</i>	Bladder Sedge
<i>Carex</i>	<i>sp.</i>	Caric Sedge

**Plant Species List
Turkey Creek Unit,
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Genus	Species	Common Name
<i>Carex</i>	<i>tenax</i>	Wire Caric Sedge
<i>Carpinus</i>	<i>caroliniana</i>	American Hornbeam
<i>Carya</i>	<i>cordiformis</i>	Bitternut Hickory
<i>Carya</i>	<i>texana</i>	Black Hickory
<i>Carya</i>	<i>tomentosa</i>	Mockernut Hickory
<i>Castanea</i>	<i>pumila</i>	Chinquapin
<i>Celtis</i>	<i>laevigata</i>	Sugarberry
<i>Celtis</i>	<i>tenuifolia</i>	Dwarf Hackberry
<i>Centella</i>	<i>erecta</i>	Spadeleaf
<i>Cephalanthus</i>	<i>occidentalis</i>	Common Buttonbush
<i>Chamaesyce</i>	<i>maculata</i>	Spotted Spurge
<i>Chasmanthium</i>	<i>latifolium</i>	Inland Sea Oats
<i>Chasmanthium</i>	<i>laxum</i>	Slender Woodoats
<i>Chasmanthium</i>	<i>sessiliflorum</i>	Longleaf Woodoats
<i>Chenopodium</i>	<i>ambrosioides</i>	Mexican Tea
<i>Chionanthus</i>	<i>virginicus</i>	White Fringetree
<i>Chrysopsis</i>	<i>pilosa</i>	Soft Goldenaster
<i>Clematis</i>	<i>virginiana</i>	Devil's Darning Needles
<i>Clethra</i>	<i>alnifolia</i>	Sweet Pepperbrush
<i>Cocculus</i>	<i>carolinus</i>	Carolina Snailseed
<i>Commelina</i>	<i>erecta</i>	Erect Dayflower
<i>Conyza</i>	<i>canadensis</i>	Horsetail Conyza
<i>Cornus</i>	<i>florida</i>	Flowering Dogwood
<i>Cornus</i>	<i>foemina</i>	English Dogwood
<i>Crataegus</i>	<i>marshallii</i>	Parsley Hawthorn
<i>Crataegus</i>	<i>opaca</i>	Riverflat hawthorn
<i>Crataegus</i>	<i>spathulata</i>	Littlehip Hawthorn
<i>Croptilon</i>	<i>divaricatum</i>	Slender Goldenweed
<i>Croptilon</i>	<i>rigidifolium</i>	Stiffleaf Scratchdaisy
<i>Crotolaria</i>	<i>sagittalis</i>	Arrow Crotalaria
<i>Croton</i>	<i>argyranthemus</i>	Healing Croton
<i>Croton</i>	<i>glandulosus</i>	Vente Conmigo
<i>Croton</i>	<i>willdenowii</i>	Wildenow's Croton
<i>Cyperus</i>	<i>croceus</i>	Baldwin's Flatsedge
<i>Cyperus</i>	<i>retroflexus</i>	Backward-flexed Flatsedge
<i>Cyrilla</i>	<i>racemiflora</i>	Swamp Titi
<i>Desmodium</i>	<i>laevigatum</i>	Smooth Tickclover
<i>Desmodium</i>	<i>lanceolata</i>	Ticktrefoil
<i>Desmodium</i>	<i>sp.</i>	Tickclover
<i>Dichanthelium</i>	<i>aciculare</i>	Needleleaf Rosette Grass
<i>Dichanthelium</i>	<i>acuminatum</i>	Tapered Rosette Grass
<i>Dichanthelium</i>	<i>boscii</i>	Bosc's Panicgrass
<i>Dichanthelium</i>	<i>commutatum</i>	Variable Panicgrass
<i>Dichanthelium</i>	<i>dichotomum</i>	Cypress Panicgrass
<i>Dichanthelium</i>	<i>laxiflorum</i>	Openflower Rosette Grass
<i>Dichanthelium</i>	<i>ovale</i>	Eggleaf Rosette Grass
<i>Dichanthelium</i>	<i>scoparium</i>	Velvet Panicum
<i>Dichanthelium</i>	<i>sp.</i>	Rosette Grass
<i>Dichanthelium</i>	<i>sphaerocarpon</i>	Roundseed Panicgrass
<i>Diodia</i>	<i>teres</i>	Rough Buttonweed

**Plant Species List
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Big Thicket National Preserve**

Genus	Species	Common Name
<i>Diodia</i>	<i>virginiana</i>	Virginia Buttonweed
<i>Drosera</i>	<i>brevifolia</i>	Dwarf Sundew
<i>Drosera</i>	<i>capillaris</i>	Sundew
<i>Eleocharis</i>	<i>microcarpa</i>	Smallseed Spikerush
<i>Eleocharis</i>	<i>tuberculosa</i>	Tuberculate Spikerush
<i>Elephantopus</i>	<i>carolinianus</i>	Leafy Elephantfoot
<i>Elephantopus</i>	<i>tomentosus</i>	Hairy Elephantfoot
<i>Epifagus</i>	<i>virginiana</i>	Virginia Beechdrops
<i>Eragrostis</i>	<i>spectabilis</i>	Purple Lovegrass
<i>Erechtites</i>	<i>hieraciifolia</i>	American Burnweed
<i>Erythrina</i>	<i>herbacea</i>	Coralbean
<i>Euonymus</i>	<i>americanus</i>	Bursting-heart
<i>Eupatorium</i>	<i>capillifolium</i>	Dogfennel
<i>Eupatorium</i>	<i>coelestinum</i>	Mistflower
<i>Eupatorium</i>	<i>lancifolium</i>	Lanceleaf Thoroughwort
<i>Eupatorium</i>	<i>rotundifolium</i>	Roundleaf Thoroughwort
<i>Eupatorium</i>	<i>serotinum</i>	Late-flowering Thoroughwort
<i>Euphorbia</i>	<i>corollata</i>	Flowering Spurge
<i>Evax</i>	<i>candida</i>	Silver Pygmycudweed
<i>Fagus</i>	<i>grandifolia</i>	American Beech
<i>Fimbristylis</i>	<i>puberula</i>	Hairy Fimbry
<i>Frangula</i>	<i>caroliniana</i>	Carolina Buckthorn
<i>Fraxinus</i>	<i>americana</i>	White Ash
<i>Fraxinus</i>	<i>caroliniana</i>	Carolina Ash
<i>Fraxinus</i>	<i>pennsylvanica</i>	Green Ash
<i>Galactia</i>	<i>volubilis</i>	Milkpea
<i>Galium</i>	<i>aparine</i>	Catchweed Bedstraw
<i>Galium</i>	<i>pilosum</i>	Hairy Bedstraw
<i>Galium</i>	<i>sp.</i>	Bedstraw
<i>Galium</i>	<i>tinctorium</i>	Dye Bedstraw
<i>Galium</i>	<i>trifida</i>	Threepedal Bedstraw
<i>Galium</i>	<i>uniflorum</i>	Smooth Bedstraw
<i>Gamochaeta</i>	<i>purpurea</i>	Spoonleaf Purple Everlasting
<i>Gelsemium</i>	<i>sempervirens</i>	Carolina Jessamine
<i>Gratiola</i>	<i>virginiana</i>	Virginia Hedgehyssop
<i>Halesia</i>	<i>diptera</i>	Two-wing Silverbell
<i>Hamamelis</i>	<i>virginiana</i>	American Witchhazel
<i>Hedeoma</i>	<i>hispidum</i>	Rough Hedeoma
<i>Helenium</i>	<i>drummondii</i>	Fringed Sneezeweed
<i>Helenium</i>	<i>flexuosum</i>	Purplehead Sneezeweed
<i>Helianthemum</i>	<i>carolinianum</i>	Carolina Frostweed
<i>Helianthemum</i>	<i>georgianum</i>	Georgia Sunrose
<i>Heliotropium</i>	<i>tenellum</i>	Pasture Heliotrope
<i>Hydrocotyle</i>	<i>umbellata</i>	Manyflower Marsh Pennywort
<i>Hydrolea</i>	<i>ovata</i>	Ovate False Fiddleleaf
<i>Hymenopappus</i>	<i>artemisiifolius</i>	Ragweed Woollywhite
<i>Hypericum</i>	<i>cistifolium</i>	Roundpod St. Johnswort
<i>Hypericum</i>	<i>crus-andreae</i>	St. Peterswort
<i>Hypericum</i>	<i>galioides</i>	Gedstraw St. Johnswort
<i>Hypericum</i>	<i>hypericoides</i>	St. Andrew's cross

**Plant Species List
Turkey Creek Unit,
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Genus	Species	Common Name
<i>Hypoxis</i>	<i>hirsuta</i>	Hairy Yellow Stargrass
<i>Ilex</i>	<i>ambigua</i>	Carolina Holly
<i>Ilex</i>	<i>coriacea</i>	Baygall holly
<i>Ilex</i>	<i>opaca</i>	American Holly
<i>Ilex</i>	<i>vomitaria</i>	Yaupon Holly
<i>Indigofera</i>	<i>suffruticosa</i>	Shrubby Indigo
<i>Itea</i>	<i>virginica</i>	Virginia Sweetspire
<i>Juncus</i>	<i>repens</i>	Creeping Rush
<i>Juniperus</i>	<i>virginiana</i>	Eastern Redcedar
<i>Justicia</i>	<i>ovata</i>	Looseflower Water-willow
<i>Justicia</i>	<i>ovata</i> var. <i>lanceolata</i>	Looseflower Water-willow
<i>Krigia</i>	<i>dandelion</i>	Tuber Dandelion
<i>Lactuca</i>	<i>sp.</i>	Lettuce
<i>Lechea</i>	<i>mucronata</i>	Hairy Pinweed
<i>Lechea</i>	<i>tenuifolia</i>	Narrow-leaf Pinweed
<i>Leersia</i>	<i>virginica</i>	Whitegrass
<i>Liatris</i>	<i>acidota</i>	Sharp Gayfeather
<i>Liatris</i>	<i>elegans</i>	Pinkscale Gayfeather
<i>Liatris</i>	<i>pycnostachya</i>	Kansas Gayfeather
<i>Liatris</i>	<i>sp.</i>	Gayfeather
<i>Lilium</i>	<i>michauxii</i>	Carolina Lily
<i>Lindernia</i>	<i>dubia</i>	Yellowseed False Pimpernel
<i>Linum</i>	<i>medium</i> var. <i>texanum</i>	Texas Flax
<i>Liquidambar</i>	<i>styraciflua</i>	Sweetgum
<i>Loeflingia</i>	<i>squarrosa</i>	Spreading Loeflingia
<i>Lonicera</i>	<i>japonica</i>	Japanese Honeysuckle
<i>Lonicera</i>	<i>sempervirens</i>	Red-flowered Honeysuckle
<i>Ludwigia</i>	<i>linearis</i>	Narrow-leaf Seedbox
<i>Ludwigia</i>	<i>pilosa</i>	Hairy Seedbox
<i>Lycopus</i>	<i>virginicus</i>	Virginia Bugleweed
<i>Lyonia</i>	<i>mariana</i>	Staggerbush
<i>Lysimachia</i>	<i>radicans</i>	Trailing Loosestrife
<i>Magnolia</i>	<i>grandiflora</i>	Southern Magnolia
<i>Magnolia</i>	<i>virginiana</i>	Sweetbay
<i>Matelea</i>	<i>gonocarpa</i>	Milkvine
<i>Mikania</i>	<i>scandens</i>	Climbing Hempweed
<i>Mimosa</i>	<i>latidens</i>	Kairn's Sensitive-briar
<i>Mitchella</i>	<i>repens</i>	Partridgeberry
<i>Mollugo</i>	<i>verticillata</i>	Green Carpetweed
<i>Monarda</i>	<i>citriodora</i>	Lemon Beebalm
<i>Monarda</i>	<i>punctata</i>	Spotted Beebalm
<i>Morella</i>	<i>caroliniensis</i>	Southern Bayberry
<i>Morella</i>	<i>cerifera</i>	Wax Myrtle
<i>Morus</i>	<i>rubra</i>	Red Mulberry
<i>Nandina</i>	<i>domestica</i>	Nandina
<i>Nyssa</i>	<i>biflora</i>	Swamp Blackgum
<i>Nyssa</i>	<i>sylvatica</i>	Black Gum
<i>Oenothera</i>	<i>laciniata</i>	Cutleaf Evening Primrose
<i>Oplismenus</i>	<i>hirtellus</i>	Basketgrass
<i>Osmunda</i>	<i>regalis</i>	Royalfern

**Plant Species List
Turkey Creek Unit,
Big Thicket National Preserve**

Genus	Species	Common Name
<i>Ostrya</i>	<i>virginiana</i>	Eastern Hophornbean
<i>Oxalis</i>	<i>debilis</i> var. <i>corymbosa</i>	Pink Woodsorrel
<i>Oxalis</i>	<i>dillenii</i>	Yellow Woodsorrel
<i>Pallavicinia</i>	sp.	Liverwort
<i>Panicum</i>	<i>dichotomum</i>	Parted Panicum
<i>Panicum</i>	<i>rigidulum</i>	Redtop Panicum
<i>Panicum</i>	<i>tenerum</i>	Blue-joint Panicgrass
<i>Parthenocissus</i>	<i>quinquefolia</i>	Virginia Creeper
<i>Paspalum</i>	<i>floridanum</i>	Florida Paspalum
<i>Paspalum</i>	<i>notatum</i>	Bahiagrass
<i>Paspalum</i>	sp.	Crowngrass
<i>Perilla</i>	<i>frutescens</i>	Beefsteakplant
<i>Persea</i>	<i>borbonia</i>	Redbay
<i>Persea</i>	<i>palustris</i>	Swamp Redbay
<i>Phyla</i>	<i>nodiflora</i>	Turkey Tangle Fogfruit
<i>Physostegia</i>	<i>digitalis</i>	Finger False Dragonhead
<i>Phytolacca</i>	<i>americana</i>	American Pokeweed
<i>Pinus</i>	<i>echinata</i>	Shortleaf Pine
<i>Pinus</i>	<i>palustris</i>	Longleaf Pine
<i>Pinus</i>	<i>taeda</i>	Loblolly Pine
<i>Piptochaetium</i>	<i>avenaceum</i>	Blackseed Needlegrass
<i>Pityopsis</i>	<i>graminifolia</i>	Silkgrass
<i>Plantago</i>	<i>aristata</i>	Bottlebrush Plantain
<i>Platanus</i>	<i>occidentalis</i>	American Sycamore
<i>Pluchea</i>	<i>camphorata</i>	Camphorweed
<i>Pluchea</i>	<i>foetida</i>	Stinking Marsh Fleabane
<i>Poa</i>	<i>autumnalis</i>	Autumn Bluegrass
<i>Polygonum</i>	<i>punctatum</i>	Water Smartweed
<i>Polypremum</i>	<i>procumbens</i>	Juniperleaf
<i>Polystichum</i>	<i>acrostichoides</i>	Christmasfern
<i>Poncirus</i>	<i>trifoliata</i>	Trifoliate Orange
<i>Proserpinaca</i>	<i>palustris</i>	Marsh Mermaidweed
<i>Proserpinaca</i>	<i>pectinata</i>	Combleaf Mermaidweed
<i>Prunus</i>	<i>caroliniana</i>	Laurel Cherry
<i>Prunus</i>	<i>serotina</i>	Black cherry
<i>Pteridium</i>	<i>aquilinum</i> var. <i>pseudocaudatum</i>	Western Brackenfern
<i>Pyrrhopappus</i>	<i>carolinianus</i>	Carolina desert-chicory
<i>Quercus</i>	<i>alba</i>	White Oak
<i>Quercus</i>	<i>falcata</i>	Southern Red Oak
<i>Quercus</i>	<i>hemisphaerica</i>	Durant's Oak
<i>Quercus</i>	<i>incana</i>	Bluejack Oak
<i>Quercus</i>	<i>laurifolia</i>	Laurel Oak
<i>Quercus</i>	<i>margarettae</i>	Runner Oak
<i>Quercus</i>	<i>michauxii</i>	Swamp Chestnut Oak
<i>Quercus</i>	<i>nigra</i>	Water Oak
<i>Quercus</i>	<i>pagoda</i>	Cherrybark Oak
<i>Quercus</i>	<i>similis</i>	Bottomland Post Oak
<i>Quercus</i>	<i>stellata</i>	Post Oak
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	Maryland Meadow beauty
<i>Rhexia</i>	sp.	Meadowbeauty

**Plant Species List
Turkey Creek Unit,
Big Thicket National Preserve**

Genus	Species	Common Name
<i>Rhododendron</i>	<i>canescens</i>	Piedmont Azalea
<i>Rhododendron</i>	<i>viscosum</i>	Swamp Azalea
<i>Rhus</i>	<i>copallinum</i>	Flameleaf Sumac
<i>Rhus</i>	<i>lanceolata</i>	Prairie Sumac
<i>Rhynchosia</i>	<i>sp.</i>	Snoutbean
<i>Rhynchospora</i>	<i>caduca</i>	Anglestem Beakrush
<i>Rhynchospora</i>	<i>elliottii</i>	Elliott's Beakrush
<i>Rhynchospora</i>	<i>filifolia</i>	Threadleaf Beakrush
<i>Rhynchospora</i>	<i>inexpansa</i>	Nodding Beakrush
<i>Rhynchospora</i>	<i>mixta</i>	Mingled Beakrush
<i>Rhynchospora</i>	<i>perplexa</i>	Ambiguous Beakrush
<i>Rhynchospora</i>	<i>pusilla</i>	Little Beakbush
<i>Rubus</i>	<i>argutus</i>	Highbush Blackberry
<i>Rubus</i>	<i>sp.</i>	Dewberry
<i>Rubus</i>	<i>trivialis</i>	Southern Dewberry
<i>Ruellia</i>	<i>caroliniensis</i>	Carolina Wild Petunia
<i>Ruellia</i>	<i>humilis</i>	Fringeleaf Wild Petunia
<i>Sanicula</i>	<i>canadensis</i>	Canada Sanicle
<i>Sassafras</i>	<i>albidum</i>	Sassafras
<i>Saururus</i>	<i>cernuus</i>	Lizard's Tail
<i>Schizachyrium</i>	<i>scoparium</i>	Little Bluestem
<i>Schizachyrium</i>	<i>tenerum</i>	Slender Bluestem
<i>Scleria</i>	<i>ciliata</i>	Fringed Nutrush
<i>Scleria</i>	<i>oligantha</i>	Littlehead Nutrush
<i>Scleria</i>	<i>reticularis</i>	Netted Nutrush
<i>Scleria</i>	<i>sp.</i>	Nutrush
<i>Scleria</i>	<i>triglomerata</i>	Whip Nutrush
<i>Scoparia</i>	<i>dulcis</i>	Licorice Weed
<i>Scutellaria</i>	<i>elliptica</i>	Hairy Skullcap
<i>Scutellaria</i>	<i>ovata</i>	Heartleaf Skullcap
<i>Sebastiania</i>	<i>fruticosa</i>	Sebastian Bush
<i>Selaginella</i>	<i>sp.</i>	Spikemoss
<i>Sida</i>	<i>ciliaris</i>	Bracted Fanpetals
<i>Sida</i>	<i>spinosa</i>	Prickly Fanpetals
<i>Sideroxylon</i>	<i>lanuginosa</i>	Gum Bully
<i>Smilax</i>	<i>bona-nox</i>	Saw Greenbrier
<i>Smilax</i>	<i>glauca</i>	Cat Greenbrier
<i>Smilax</i>	<i>laurifolia</i>	Laurel Greenbrier
<i>Smilax</i>	<i>pumila</i>	Sarsaparilla Greenbrier
<i>Smilax</i>	<i>rotundifolia</i>	Roundlead Greenbrier
<i>Smilax</i>	<i>smallii</i>	Lanceleaf Greenbrier
<i>Solanum</i>	<i>ptycanthum</i>	West Indian Nightshade
<i>Solanum</i>	<i>sp.</i>	Nightshade
<i>Solidago</i>	<i>odora</i>	Fragrant Goldenrod
<i>Spermolepis</i>	<i>divaricata</i>	Forked Scaleseed
<i>Sphagnum</i>	<i>sp.</i>	Sphagnum
<i>Stillingia</i>	<i>sylvatica</i>	Queen's-delight
<i>Styrax</i>	<i>americana</i>	American Snowbell
<i>Styrax</i>	<i>grandifolia</i>	Bigleaf Snowbell
<i>Symphotrichum</i>	<i>dumosum</i>	Bushy Aster

**Plant Species List
Turkey Creek Unit,
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Genus	Species	Common Name
<i>Symphotrichum</i>	<i>lateraflorum</i>	Calico Aster
<i>Symphotrichum</i>	<i>praealtum</i>	Willowleaf aster
<i>Symplocos</i>	<i>tinctoria</i>	Common Sweetleaf
<i>Taxodium</i>	<i>distichum</i>	Bald Cypress
<i>Teucrium</i>	<i>canadense</i>	Canada Germander
<i>Tilia</i>	<i>americana</i> var. <i>caroliniana</i>	American Basswood
<i>Tilia</i>	<i>caroliniana</i>	American Basswood
<i>Toxicodendron</i>	<i>pubescens</i>	Atlantic Poison Oak
<i>Toxicodendron</i>	<i>radicans</i>	Eastern Poison Ivy
<i>Trachelospermum</i>	<i>difforme</i>	American Star Jasmine
<i>Tragia</i>	<i>betonicifolia</i>	Betonyleaf Noseburn
<i>Tragia</i>	<i>smallii</i>	Small's Noseburn
<i>Tragia</i>	<i>urticifolia</i>	Nettleleaf Noseburn
<i>Triadenum</i>	<i>walterii</i>	Greater Marsh St. Johnswort
<i>Triadica</i>	<i>sebifera</i>	Chinese Tallow
<i>Tridens</i>	<i>strictus</i>	Longspike Tridens
<i>Trillium</i>	<i>gracile</i>	Sabine River Wakerobin
<i>Ulmus</i>	<i>alata</i>	Winged Elm
<i>Ulmus</i>	<i>americana</i>	American Elm
<i>Ulmus</i>	<i>crassifolia</i>	Cedar Elm
<i>Ulmus</i>	<i>rubra</i>	Slippery Elm
Unknown	<i>sp.</i>	Unknown Species
<i>Vaccinium</i>	<i>arboreum</i>	Farkleberry
<i>Vaccinium</i>	<i>corymbosum</i>	Highbush Blueberry
<i>Vaccinium</i>	<i>elliottii</i>	Elliot's Blueberry
<i>Vaccinium</i>	<i>stamineum</i>	Deerberry
<i>Verbena</i>	<i>halei</i>	Texas Vervain
<i>Verbesina</i>	<i>virginica</i>	White Crownbeard
<i>Viburnum</i>	<i>acerifolium</i>	Mapleleaf Virburnum
<i>Viburnum</i>	<i>dentatum</i>	Southern Arrowwood
<i>Viburnum</i>	<i>prunifolium</i>	Blackhaw
<i>Viburnum</i>	<i>rufidulum</i>	Rusty Blackhaw
<i>Viola</i>	<i>palmata</i>	Early Blue Violet
<i>Viola</i>	<i>sororia</i>	Sisterly Violet
<i>Vitis</i>	<i>aestivalis</i>	Summer Grape
<i>Vitis</i>	<i>cinerea</i>	Sweet grape
<i>Vitis</i>	<i>rotundifolia</i>	Muscadine Grape
<i>Vulpia</i>	<i>octoflora</i>	Sixweeks Fescue
<i>Vulpia</i>	<i>sciurea</i>	Squirrel Annual Fescue
<i>Wahlenbergia</i>	<i>marginata</i>	Southern Rockbell
<i>Xyris</i>	<i>ambigua</i>	Coastal Plain Yelloweyed Grass
<i>Xyris</i>	<i>difformis</i>	Bog Yelloweyed Grass

Appendix D

Alliance Summaries of the Pre- and Post-Operational Vegetation Assessments

**Table 1A. Summary of the Herbaceous Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Sphagnum</i>	sp.	0.07	0.33	3.56	10.70	11.02	3.67
<i>Ilex</i>	<i>vomitorea</i>	0.82	3.90	1.79	5.38	9.28	3.09
<i>Mitchella</i>	<i>repens</i>	0.41	1.95	1.52	4.57	6.52	2.17
<i>Quercus</i>	<i>hemisphaerica</i>	0.52	2.49	1.07	3.21	5.70	1.90
<i>Vitis</i>	<i>rotundifolia</i>	0.64	3.03	0.77	2.32	5.35	1.78
<i>Chasmanthium</i>	<i>laxum</i>	0.14	0.65	1.51	4.54	5.19	1.73
<i>Smilax</i>	<i>pumila</i>	0.45	2.17	0.83	2.49	4.66	1.55
<i>Smilax</i>	<i>glauc</i>	0.66	3.14	0.48	1.45	4.59	1.53
<i>Smilax</i>	<i>bona-nox</i>	0.57	2.71	0.59	1.76	4.47	1.49
<i>Vaccinium</i>	<i>corymbosum</i>	0.32	1.52	0.95	2.87	4.38	1.46
<i>Pinus</i>	<i>taeda</i>	0.55	2.60	0.51	1.54	4.14	1.38
<i>Persea</i>	<i>palustris</i>	0.57	2.71	0.45	1.35	4.06	1.35
<i>Ilex</i>	<i>opaca</i>	0.57	2.71	0.42	1.26	3.97	1.32
<i>Acer</i>	<i>rubrum</i>	0.55	2.60	0.30	0.89	3.49	1.16
<i>Sassafras</i>	<i>albidum</i>	0.48	2.28	0.34	1.01	3.28	1.09
<i>Cyrilla</i>	<i>racemiflora</i>	0.23	1.08	0.68	2.05	3.13	1.04
<i>Chasmanthium</i>	<i>sessiliflorum</i>	0.16	0.76	0.69	2.06	2.82	0.94
<i>Ilex</i>	<i>coriacea</i>	0.16	0.76	0.68	2.05	2.81	0.94
<i>Callicarpa</i>	<i>americana</i>	0.39	1.84	0.31	0.92	2.76	0.92
<i>Toxicodendron</i>	<i>radicans</i>	0.23	1.08	0.49	1.48	2.57	0.86
<i>Quercus</i>	<i>nigra</i>	0.30	1.41	0.34	1.02	2.43	0.81
<i>Dichanthelium</i>	<i>commutatum</i>	0.32	1.52	0.30	0.90	2.42	0.81
<i>Elephantopus</i>	<i>tomentosus</i>	0.23	1.08	0.43	1.28	2.36	0.79
<i>Liquidambar</i>	<i>styraciflua</i>	0.27	1.30	0.32	0.97	2.27	0.76
<i>Symplocos</i>	<i>tinctoria</i>	0.20	0.98	0.42	1.26	2.24	0.75
<i>Arundinaria</i>	<i>gigantea</i>	0.07	0.33	0.63	1.89	2.22	0.74
<i>Gelsemium</i>	<i>sempervirens</i>	0.32	1.52	0.22	0.67	2.18	0.73
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.23	1.08	0.35	1.06	2.14	0.71
<i>Bignonia</i>	<i>capreolata</i>	0.14	0.65	0.48	1.45	2.10	0.70
<i>Smilax</i>	<i>smallii</i>	0.30	1.41	0.22	0.67	2.07	0.69
<i>Rhododendron</i>	<i>viscosum</i>	0.16	0.76	0.41	1.23	1.99	0.66
<i>Schizachyrium</i>	<i>scoparium</i>	0.07	0.33	0.55	1.64	1.96	0.65
<i>Carex</i>	<i>digitalis</i>	0.23	1.08	0.26	0.77	1.85	0.62

**Table 1A. Summary of the Herbaceous Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Morella</i>	<i>cerifera</i>	0.16	0.76	0.32	0.97	1.73	0.58
<i>Paspalum</i>	<i>notatum</i>	0.02	0.11	0.53	1.60	1.71	0.57
<i>Nyssa</i>	<i>sylvatica</i>	0.23	1.08	0.19	0.58	1.66	0.55
<i>Sebastiania</i>	<i>fruticosa</i>	0.16	0.76	0.30	0.89	1.65	0.55
<i>Scleria</i>	<i>oligantha</i>	0.18	0.87	0.25	0.75	1.62	0.54
<i>Triadica</i>	<i>sebifera</i>	0.23	1.08	0.14	0.43	1.51	0.50
<i>Quercus</i>	<i>alba</i>	0.20	0.98	0.18	0.53	1.50	0.50
<i>Ostrya</i>	<i>virginiana</i>	0.16	0.76	0.16	0.49	1.25	0.42
<i>Carpinus</i>	<i>caroliniana</i>	0.14	0.65	0.18	0.53	1.18	0.39
<i>Dichanthelium</i>	<i>sp.</i>	0.09	0.43	0.24	0.73	1.17	0.39
<i>Rubus</i>	<i>argutus</i>	0.16	0.76	0.13	0.39	1.15	0.38
<i>Piptochaetium</i>	<i>avenaceum</i>	0.11	0.54	0.20	0.60	1.14	0.38
<i>Vaccinium</i>	<i>stamineum</i>	0.16	0.76	0.13	0.38	1.13	0.38
<i>Carex</i>	<i>debilis</i>	0.07	0.33	0.25	0.75	1.08	0.36
<i>Vaccinium</i>	<i>arboreum</i>	0.16	0.76	0.10	0.31	1.07	0.36
<i>Dichanthelium</i>	<i>acuminatum</i>	0.11	0.54	0.16	0.49	1.04	0.35
<i>Carex</i>	<i>abscondita</i>	0.09	0.43	0.17	0.51	0.95	0.32
<i>Dichanthelium</i>	<i>boscii</i>	0.14	0.65	0.10	0.29	0.94	0.31
<i>Poa</i>	<i>autumnalis</i>	0.02	0.11	0.27	0.80	0.91	0.30
<i>Magnolia</i>	<i>virginiana</i>	0.09	0.43	0.14	0.43	0.86	0.29
<i>Dichanthelium</i>	<i>aciculare</i>	0.09	0.43	0.14	0.43	0.86	0.29
<i>Magnolia</i>	<i>grandiflora</i>	0.14	0.65	0.07	0.20	0.85	0.28
<i>Asimina</i>	<i>parviflora</i>	0.14	0.65	0.06	0.19	0.84	0.28
<i>Dichanthelium</i>	<i>laxiflorum</i>	0.09	0.43	0.13	0.39	0.83	0.28
<i>Fagus</i>	<i>grandifolia</i>	0.11	0.54	0.09	0.26	0.80	0.27
<i>Polygonum</i>	<i>punctatum</i>	0.02	0.11	0.22	0.65	0.76	0.25
<i>Paspalum</i>	<i>floridanum</i>	0.05	0.22	0.17	0.51	0.73	0.24
<i>Hamamelis</i>	<i>virginiana</i>	0.09	0.43	0.10	0.29	0.72	0.24
<i>Cornus</i>	<i>florida</i>	0.11	0.54	0.06	0.17	0.71	0.24
<i>Rhynchospora</i>	<i>perplexa</i>	0.05	0.22	0.16	0.48	0.69	0.23
<i>Oxalis</i>	<i>dillenii</i>	0.07	0.33	0.12	0.36	0.68	0.23
<i>Carex</i>	<i>cherokeensis</i>	0.05	0.22	0.15	0.46	0.68	0.23
<i>Prunus</i>	<i>caroliniana</i>	0.09	0.43	0.06	0.17	0.60	0.20

**Table 1A. Summary of the Herbaceous Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Nyssa</i>	<i>biflora</i>	0.09	0.43	0.05	0.15	0.59	0.20
<i>Prunus</i>	<i>serotina</i>	0.09	0.43	0.05	0.15	0.59	0.20
<i>Oplismenus</i>	<i>hirtellus</i>	0.09	0.43	0.05	0.14	0.57	0.19
<i>Chionanthus</i>	<i>virginicus</i>	0.09	0.43	0.05	0.14	0.57	0.19
<i>Smilax</i>	<i>rotundifolia</i>	0.09	0.43	0.04	0.12	0.55	0.18
<i>Berchemia</i>	<i>scandens</i>	0.09	0.43	0.04	0.12	0.55	0.18
<i>Viola</i>	<i>sororia</i>	0.09	0.43	0.04	0.12	0.55	0.18
<i>Styrax</i>	<i>americana</i>	0.07	0.33	0.07	0.22	0.55	0.18
<i>Quercus</i>	<i>stellata</i>	0.02	0.11	0.14	0.43	0.53	0.18
<i>Quercus</i>	<i>laurifolia</i>	0.05	0.22	0.10	0.31	0.52	0.17
<i>Rhynchospora</i>	<i>pusilla</i>	0.02	0.11	0.14	0.41	0.52	0.17
<i>Pteridium</i>	<i>aquilinum</i> var. <i>pseudocaudatum</i>	0.05	0.22	0.10	0.29	0.51	0.17
<i>Hypericum</i>	<i>galioides</i>	0.05	0.22	0.10	0.29	0.51	0.17
<i>Liatris</i>	<i>pycnostachya</i>	0.05	0.22	0.10	0.29	0.51	0.17
<i>Sanicula</i>	<i>canadensis</i>	0.07	0.33	0.06	0.17	0.50	0.17
<i>Quercus</i>	<i>falcata</i>	0.07	0.33	0.05	0.15	0.48	0.16
<i>Polystichum</i>	<i>acrostichoides</i>	0.05	0.22	0.09	0.26	0.47	0.16
<i>Helianthemum</i>	<i>georgianum</i>	0.02	0.11	0.12	0.36	0.47	0.16
<i>Justicia</i>	<i>ovata</i> var. <i>lanceolata</i>	0.07	0.33	0.05	0.14	0.46	0.15
<i>Triadenum</i>	<i>walterii</i>	0.02	0.11	0.11	0.34	0.45	0.15
<i>Desmodium</i>	sp.	0.07	0.33	0.04	0.12	0.44	0.15
<i>Galium</i>	sp.	0.07	0.33	0.04	0.12	0.44	0.15
<i>Juncus</i>	<i>repens</i>	0.02	0.11	0.11	0.32	0.43	0.14
<i>Vaccinium</i>	<i>elliottii</i>	0.07	0.33	0.03	0.10	0.43	0.14
<i>Dichantherium</i>	<i>dichotomum</i>	0.07	0.33	0.03	0.10	0.43	0.14
<i>Morella</i>	<i>caroliniensis</i>	0.05	0.22	0.07	0.20	0.42	0.14
<i>Hypericum</i>	<i>hypericoides</i>	0.07	0.33	0.03	0.09	0.41	0.14
<i>Galium</i>	<i>pilosum</i>	0.07	0.33	0.02	0.07	0.39	0.13
<i>Smilax</i>	<i>laurifolia</i>	0.07	0.33	0.02	0.07	0.39	0.13
<i>Fraxinus</i>	<i>americana</i>	0.07	0.33	0.02	0.07	0.39	0.13
<i>Brunnichia</i>	<i>ovata</i>	0.05	0.22	0.06	0.17	0.39	0.13
<i>Lyonia</i>	<i>mariana</i>	0.05	0.22	0.06	0.17	0.39	0.13
<i>Rhynchosia</i>	sp.	0.02	0.11	0.09	0.27	0.38	0.13

**Table 1A. Summary of the Herbaceous Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Viburnum</i>	<i>dentatum</i>	0.07	0.33	0.02	0.05	0.38	0.13
Unknown	sp.	0.07	0.33	0.02	0.05	0.38	0.13
<i>Tragia</i>	<i>smallii</i>	0.05	0.22	0.05	0.15	0.37	0.12
<i>Rhynchospora</i>	<i>mixta</i>	0.02	0.11	0.09	0.26	0.36	0.12
<i>Mimosa</i>	<i>latidens</i>	0.02	0.11	0.09	0.26	0.36	0.12
<i>Carex</i>	<i>blanda</i>	0.02	0.11	0.09	0.26	0.36	0.12
<i>Rhynchospora</i>	<i>inexpansa</i>	0.05	0.22	0.05	0.14	0.35	0.12
<i>Commelina</i>	<i>erecta</i>	0.05	0.22	0.05	0.14	0.35	0.12
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	0.05	0.22	0.04	0.12	0.34	0.11
<i>Scleria</i>	<i>triglomerata</i>	0.05	0.22	0.04	0.12	0.34	0.11
<i>Elephantopus</i>	<i>carolinianus</i>	0.05	0.22	0.03	0.10	0.32	0.11
<i>Liatris</i>	<i>acidota</i>	0.02	0.11	0.07	0.20	0.31	0.10
<i>Fraxinus</i>	<i>caroliniana</i>	0.05	0.22	0.03	0.09	0.30	0.10
<i>Galium</i>	<i>trifida</i>	0.05	0.22	0.03	0.09	0.30	0.10
<i>Tragia</i>	<i>urticifolia</i>	0.05	0.22	0.03	0.09	0.30	0.10
<i>Viola</i>	<i>palmata</i>	0.05	0.22	0.03	0.09	0.30	0.10
<i>Scutellaria</i>	<i>elliptica</i>	0.05	0.22	0.02	0.07	0.28	0.09
<i>Ludwigia</i>	<i>pilosa</i>	0.05	0.22	0.02	0.07	0.28	0.09
<i>Carya</i>	<i>texana</i>	0.05	0.22	0.02	0.07	0.28	0.09
<i>Andropogon</i>	<i>glomeratus</i>	0.02	0.11	0.06	0.17	0.28	0.09
<i>Toxicodendron</i>	<i>pubescens</i>	0.02	0.11	0.06	0.17	0.28	0.09
<i>Galactia</i>	<i>volubilis</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Arisaema</i>	<i>triphylla</i> var. <i>triphylla</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Verbesina</i>	<i>virginica</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Acer</i>	<i>barbatum</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Carya</i>	<i>tomentosa</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Campsis</i>	<i>radicans</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Cyperus</i>	<i>retroflexus</i>	0.05	0.22	0.02	0.05	0.27	0.09
<i>Crataegus</i>	<i>marshallii</i>	0.05	0.22	0.01	0.03	0.25	0.08
<i>Morus</i>	<i>rubra</i>	0.05	0.22	0.01	0.03	0.25	0.08
<i>Diodia</i>	<i>virginiana</i>	0.05	0.22	0.01	0.03	0.25	0.08
<i>Ulmus</i>	<i>alata</i>	0.05	0.22	0.01	0.03	0.25	0.08
<i>Croton</i>	<i>argyranthemus</i>	0.05	0.22	0.01	0.03	0.25	0.08

**Table 1A. Summary of the Herbaceous Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Itea</i>	<i>virginica</i>	0.05	0.22	0.01	0.03	0.25	0.08
<i>Lysimachia</i>	<i>radicans</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Conyza</i>	<i>canadensis</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Diodia</i>	<i>teres</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Rubus</i>	<i>trivialis</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Crataegus</i>	<i>opaca</i>	0.02	0.11	0.04	0.12	0.23	0.08
<i>Arnoglossum</i>	<i>ovatum</i> var. <i>ovatum</i>	0.02	0.11	0.04	0.12	0.23	0.08
<i>Ruellia</i>	<i>humilis</i>	0.02	0.11	0.04	0.12	0.23	0.08
<i>Indigofera</i>	<i>suffruticosa</i>	0.02	0.11	0.04	0.12	0.23	0.08
<i>Carex</i>	<i>corrugata</i>	0.02	0.11	0.04	0.12	0.23	0.08
<i>Crataegus</i>	<i>spatulata</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Scleria</i>	<i>ciliata</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Chenopodium</i>	<i>ambrosioides</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Wahlenbergia</i>	<i>marginata</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Leersia</i>	<i>virginica</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Galium</i>	<i>uniflorum</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Helenium</i>	<i>flexuosum</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Polypremum</i>	<i>procumbens</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Sida</i>	<i>spinosa</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Boltonia</i>	<i>diffusa</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Erythrina</i>	<i>herbacea</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Rhynchospora</i>	<i>filifolia</i>	0.02	0.11	0.02	0.07	0.18	0.06
<i>Mollugo</i>	<i>verticillata</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Gratiola</i>	<i>virginiana</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Cephalanthus</i>	<i>occidentalis</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Helianthemum</i>	<i>carolinianum</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Lechea</i>	<i>mucronata</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Hypericum</i>	<i>cistifolium</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Viburnum</i>	<i>prunifolium</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Bulbostylis</i>	<i>ciliatifolia</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Chamaesyce</i>	<i>maculata</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Linum</i>	<i>medium</i> var. <i>texanum</i>	0.02	0.11	0.02	0.05	0.16	0.05

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<i>Lonicera</i>	<i>japonica</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Gamochaeta</i>	<i>purpurea</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Quercus</i>	<i>pagoda</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Monarda</i>	<i>citriodora</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Clematis</i>	<i>virginiana</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Lycopus</i>	<i>virginicus</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Lactuca</i>	sp.	0.02	0.11	0.01	0.03	0.14	0.05
<i>Physostegia</i>	<i>digitalis</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Vitis</i>	<i>aestivalis</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Perilla</i>	<i>frutescens</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Eupatorium</i>	<i>rotundifolium</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Croptilon</i>	<i>divaricatum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Plantago</i>	<i>aristata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Clethra</i>	<i>alnifolia</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Lechea</i>	<i>tenuifolia</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Cardamine</i>	sp.	0.02	0.11	0.01	0.03	0.14	0.05
<i>Cocculus</i>	<i>carolinus</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carex</i>	sp.	0.02	0.11	0.01	0.03	0.14	0.05
<i>Liatris</i>	sp.	0.02	0.11	0.01	0.03	0.14	0.05
<i>Hedeoma</i>	<i>hispidum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Schizachyrium</i>	<i>tenerum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Evax</i>	<i>candida</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Viburnum</i>	<i>rufidulum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Fimbristylis</i>	<i>puberula</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Ludwigia</i>	<i>linearis</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Pluchea</i>	<i>foetida</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Eleocharis</i>	<i>tuberculosa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Pluchea</i>	<i>camphorata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Lilium</i>	<i>michauxii</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Rhynchospora</i>	<i>elliottii</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Solidago</i>	<i>odora</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Aralia</i>	<i>spinosa</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Sida</i>	<i>ciliaris</i>	0.02	0.11	0.01	0.02	0.13	0.04

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Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Solanum</i>	<i>ptycanthum</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Rubus</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Bumelia</i>	<i>lanuginosa</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Juniperus</i>	<i>virginiana</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Andropogon</i>	<i>ternarius</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Boehmeria</i>	<i>cylindrica</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Scleria</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Pinus</i>	<i>palustris</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Ilex</i>	<i>ambigua</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Vulpia</i>	<i>octoflora</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Oxalis</i>	<i>debilis</i> var. <i>corymbosa</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Solanum</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Croton</i>	<i>glandulosus</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Ambrosia</i>	<i>artemisiifolia</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Celtis</i>	<i>laevigata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Aristolochia</i>	<i>serpentaria</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Spermolepis</i>	<i>divaricata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Scutellaria</i>	<i>ovata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Sideroxylon</i>	<i>lanuginosa</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Crotolaria</i>	<i>sagittalis</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Acalypha</i>	<i>virginica</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Albizia</i>	<i>julibrissin</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Oenothera</i>	<i>laciniata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Epifagus</i>	<i>virginiana</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Croton</i>	<i>willdenowii</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Loeflingia</i>	<i>squarrosa</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Phytolacca</i>	<i>americana</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Carex</i>	<i>caroliniana</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Lonicera</i>	<i>sempervirens</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Poncirus</i>	<i>trifoliata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Rhus</i>	<i>copallinum</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Chasmanthium</i>	<i>latifolium</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Andropogon</i>	<i>virginicus</i>	0.02	0.11	0.01	0.02	0.13	0.04

**Table 1A. Summary of the Herbaceous Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Rhexia</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Tridens</i>	<i>strictus</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Aster</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Styrax</i>	<i>grandifolia</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Centella</i>	<i>erecta</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Aristolochia</i>	<i>reticulata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Acalypha</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Asclepias</i>	<i>longifolia</i> var. <i>longifolia</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Xyris</i>	<i>difformis</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Heliotropium</i>	<i>tenellum</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Paspalum</i>	sp.	0.02	0.11	0.01	0.02	0.13	0.04
<i>Hydrolea</i>	<i>ovata</i>	0.02	0.11	0.01	0.02	0.13	0.04
<i>Axonopus</i>	<i>fissifolius</i>	0.02	0.11	0.01	0.02	0.13	0.04
Totals			100.00	33.30	100.00	200.00	66.67

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ilex</i>	<i>vomitorea</i>	0.73	3.36	1.99	6.10	9.46	3.15
<i>Sphagnum</i>	sp.	0.05	0.21	2.89	8.83	9.04	3.01
<i>Mitchella</i>	<i>repens</i>	0.39	1.79	1.90	5.82	7.61	2.54
<i>Smilax</i>	<i>bona-nox</i>	0.73	3.36	0.77	2.36	5.72	1.91
<i>Chasmanthium</i>	<i>laxum</i>	0.32	1.47	1.30	3.96	5.43	1.81
<i>Pinus</i>	<i>taeda</i>	0.73	3.36	0.57	1.76	5.12	1.71
<i>Vitis</i>	<i>rotundifolia</i>	0.52	2.42	0.79	2.42	4.83	1.61
<i>Quercus</i>	<i>hemisphaerica</i>	0.55	2.52	0.72	2.21	4.73	1.58
<i>Smilax</i>	<i>pumila</i>	0.43	2.00	0.82	2.50	4.50	1.50
<i>Chasmanthium</i>	<i>sessiliflorum</i>	0.25	1.16	0.89	2.71	3.87	1.29
<i>Ilex</i>	<i>opaca</i>	0.55	2.52	0.43	1.30	3.82	1.27
<i>Selaginella</i>	sp.	0.02	0.11	1.11	3.41	3.51	1.17
<i>Ilex</i>	<i>coriacea</i>	0.20	0.95	0.81	2.49	3.43	1.14
<i>Acer</i>	<i>rubrum</i>	0.52	2.42	0.33	1.01	3.42	1.14
<i>Smilax</i>	<i>glauca</i>	0.48	2.21	0.38	1.15	3.35	1.12
<i>Scleria</i>	<i>oligantha</i>	0.41	1.89	0.38	1.16	3.06	1.02
<i>Callicarpa</i>	<i>americana</i>	0.39	1.79	0.40	1.23	3.02	1.01
<i>Cyrilla</i>	<i>racemiflora</i>	0.25	1.16	0.61	1.86	3.01	1.00
<i>Vaccinium</i>	<i>corymbosum</i>	0.30	1.37	0.51	1.56	2.93	0.98
<i>Gelsemium</i>	<i>sempervirens</i>	0.41	1.89	0.28	0.87	2.76	0.92
<i>Quercus</i>	<i>nigra</i>	0.41	1.89	0.27	0.83	2.72	0.91
<i>Symplocos</i>	<i>tinctoria</i>	0.27	1.26	0.44	1.34	2.60	0.87
<i>Dichanthelium</i>	<i>commutatum</i>	0.34	1.58	0.29	0.89	2.46	0.82
<i>Sassafras</i>	<i>albidum</i>	0.32	1.47	0.30	0.92	2.39	0.80
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.30	1.37	0.33	1.01	2.37	0.79
<i>Toxicodendron</i>	<i>radicans</i>	0.20	0.95	0.44	1.36	2.30	0.77
<i>Persea</i>	<i>borbonia</i>	0.32	1.47	0.27	0.82	2.29	0.76
<i>Rubus</i>	<i>argutus</i>	0.11	0.53	0.49	1.51	2.04	0.68
<i>Elephantopus</i>	<i>tomentosus</i>	0.18	0.84	0.36	1.11	1.95	0.65
<i>Bignonia</i>	<i>capreolata</i>	0.16	0.74	0.39	1.20	1.93	0.64
<i>Nyssa</i>	<i>sylvatica</i>	0.34	1.58	0.11	0.33	1.91	0.64
<i>Liquidambar</i>	<i>styraciflua</i>	0.25	1.16	0.20	0.61	1.76	0.59
<i>Schizachyrium</i>	<i>scoparium</i>	0.07	0.32	0.45	1.37	1.69	0.56

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Carex</i>	<i>caroliniana</i>	0.14	0.63	0.34	1.04	1.67	0.56
<i>Morella</i>	<i>cerifera</i>	0.11	0.53	0.33	1.01	1.53	0.51
<i>Quercus</i>	<i>alba</i>	0.18	0.84	0.22	0.66	1.50	0.50
<i>Sebastiania</i>	<i>fruticosa</i>	0.18	0.84	0.20	0.63	1.47	0.49
<i>Arundinaria</i>	<i>gigantea</i>	0.09	0.42	0.34	1.03	1.45	0.48
<i>Triadica</i>	<i>sebifera</i>	0.20	0.95	0.13	0.40	1.35	0.45
<i>Persea</i>	<i>palustris</i>	0.18	0.84	0.16	0.49	1.33	0.44
<i>Ostrya</i>	<i>virginiana</i>	0.20	0.95	0.11	0.35	1.29	0.43
<i>Carex</i>	<i>digitalis</i>	0.16	0.74	0.18	0.56	1.29	0.43
<i>Carex</i>	<i>debilis</i> var. <i>debilis</i>	0.11	0.53	0.22	0.66	1.19	0.40
<i>Dichanthelium</i>	<i>boscii</i>	0.18	0.84	0.10	0.30	1.14	0.38
<i>Viola</i>	<i>sororia</i>	0.16	0.74	0.13	0.38	1.12	0.37
<i>Scleria</i>	<i>triglomerata</i>	0.07	0.32	0.26	0.80	1.11	0.37
<i>Cornus</i>	<i>florida</i>	0.18	0.84	0.09	0.26	1.10	0.37
<i>Dichanthelium</i>	<i>scoparium</i>	0.09	0.42	0.22	0.68	1.10	0.37
<i>Dichanthelium</i>	<i>acuminatum</i>	0.14	0.63	0.15	0.45	1.08	0.36
<i>Asimina</i>	<i>parviflora</i>	0.16	0.74	0.10	0.30	1.03	0.34
<i>Prunus</i>	<i>caroliniana</i>	0.11	0.53	0.15	0.45	0.98	0.33
<i>Vaccinium</i>	<i>arboreum</i>	0.16	0.74	0.07	0.21	0.94	0.31
<i>Nyssa</i>	<i>biflora</i>	0.14	0.63	0.10	0.31	0.94	0.31
<i>Berchemia</i>	<i>scandens</i>	0.14	0.63	0.08	0.24	0.87	0.29
<i>Andropogon</i>	<i>glomeratus</i>	0.09	0.42	0.14	0.43	0.85	0.28
<i>Paspalum</i>	<i>notatum</i>	0.02	0.11	0.24	0.75	0.85	0.28
<i>Vaccinium</i>	<i>stamineum</i>	0.07	0.32	0.16	0.50	0.82	0.27
<i>Sanicula</i>	<i>canadensis</i>	0.14	0.63	0.06	0.17	0.80	0.27
<i>Galium</i>	<i>aparine</i>	0.14	0.63	0.05	0.16	0.79	0.26
<i>Magnolia</i>	<i>virginiana</i>	0.11	0.53	0.09	0.26	0.79	0.26
<i>Oplismenus</i>	<i>hirtellus</i>	0.11	0.53	0.08	0.24	0.77	0.26
<i>Polypremum</i>	<i>procumbens</i>	0.11	0.53	0.08	0.24	0.77	0.26
<i>Juncus</i>	<i>repens</i>	0.05	0.21	0.18	0.56	0.77	0.26
<i>Fagus</i>	<i>grandifolia</i>	0.09	0.42	0.11	0.33	0.75	0.25
<i>Carex</i>	<i>abscondita</i>	0.07	0.32	0.14	0.43	0.75	0.25
<i>Eupatorium</i>	<i>coelestinum</i>	0.07	0.32	0.14	0.43	0.75	0.25

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Rhynchospora</i>	<i>pusilla</i>	0.02	0.11	0.21	0.64	0.75	0.25
<i>Smilax</i>	<i>rotundifolia</i>	0.11	0.53	0.07	0.21	0.73	0.24
<i>Justicia</i>	<i>ovata</i>	0.07	0.32	0.12	0.36	0.68	0.23
<i>Smilax</i>	<i>smallii</i>	0.11	0.53	0.05	0.14	0.66	0.22
<i>Aristolochia</i>	<i>serpentaria</i>	0.11	0.53	0.03	0.10	0.63	0.21
<i>Dichanthelium</i>	<i>aciculare</i>	0.07	0.32	0.09	0.28	0.59	0.20
<i>Piptochaetium</i>	<i>avenaceum</i>	0.05	0.21	0.13	0.38	0.59	0.20
<i>Hypericum</i>	<i>hypericoides</i>	0.09	0.42	0.05	0.16	0.58	0.19
<i>Rhododendron</i>	<i>viscosum</i>	0.05	0.21	0.12	0.36	0.58	0.19
<i>Crataegus</i>	<i>opaca</i>	0.02	0.11	0.15	0.47	0.57	0.19
<i>Chionanthus</i>	<i>virginicus</i>	0.09	0.42	0.05	0.14	0.56	0.19
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	0.09	0.42	0.04	0.12	0.54	0.18
<i>Hypericum</i>	<i>galioides</i>	0.05	0.21	0.11	0.33	0.54	0.18
<i>Rhynchospora</i>	<i>inexpansa</i>	0.07	0.32	0.07	0.21	0.52	0.17
<i>Tragia</i>	<i>urticifolia</i>	0.07	0.32	0.07	0.21	0.52	0.17
<i>Morella</i>	<i>caroliniensis</i>	0.07	0.32	0.06	0.19	0.51	0.17
<i>Hypericum</i>	<i>crus-andreae</i>	0.09	0.42	0.02	0.07	0.49	0.16
<i>Aristolochia</i>	<i>reticulata</i>	0.07	0.32	0.06	0.17	0.49	0.16
<i>Magnolia</i>	<i>grandiflora</i>	0.07	0.32	0.05	0.16	0.47	0.16
<i>Eupatorium</i>	<i>capillifolium</i>	0.07	0.32	0.05	0.14	0.45	0.15
<i>Phyla</i>	<i>nodiflora</i>	0.07	0.32	0.05	0.14	0.45	0.15
<i>Galium</i>	<i>pilosum</i>	0.07	0.32	0.05	0.14	0.45	0.15
<i>Chasmanthium</i>	<i>latifolium</i>	0.05	0.21	0.07	0.23	0.44	0.15
<i>Rhynchospora</i>	<i>mixta</i>	0.05	0.21	0.07	0.23	0.44	0.15
<i>Croptilon</i>	<i>divaricatum</i>	0.02	0.11	0.11	0.33	0.44	0.15
<i>Triadenum</i>	<i>walterii</i>	0.02	0.11	0.11	0.33	0.44	0.15
<i>Diodia</i>	<i>teres</i>	0.05	0.21	0.07	0.21	0.42	0.14
<i>Hamamelis</i>	<i>virginiana</i>	0.05	0.21	0.07	0.21	0.42	0.14
<i>Helianthemum</i>	<i>georgianum</i>	0.02	0.11	0.10	0.31	0.42	0.14
<i>Rhynchospora</i>	<i>perplexa</i>	0.02	0.11	0.10	0.31	0.42	0.14
<i>Smilax</i>	<i>laurifolia</i>	0.07	0.32	0.03	0.09	0.40	0.13
<i>Styrax</i>	<i>americana</i>	0.05	0.21	0.06	0.19	0.40	0.13
<i>Quercus</i>	<i>falcata</i>	0.05	0.21	0.06	0.19	0.40	0.13

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Halesia</i>	<i>diptera</i>	0.05	0.21	0.06	0.17	0.38	0.13
<i>Rhododendron</i>	<i>canescens</i>	0.05	0.21	0.06	0.17	0.38	0.13
<i>Carex</i>	<i>glaucescens</i>	0.02	0.11	0.09	0.28	0.38	0.13
<i>Quercus</i>	<i>laurifolia</i>	0.05	0.21	0.05	0.16	0.37	0.12
<i>Dichanthelium</i>	<i>sphaerocarpon</i>	0.05	0.21	0.05	0.16	0.37	0.12
<i>Rhynchospora</i>	<i>caduca</i>	0.02	0.11	0.08	0.24	0.35	0.12
<i>Brunnichia</i>	<i>ovata</i>	0.05	0.21	0.04	0.12	0.33	0.11
<i>Arnoglossum</i>	<i>ovatum</i>	0.02	0.11	0.07	0.23	0.33	0.11
<i>Ruellia</i>	<i>humilis</i>	0.05	0.21	0.03	0.10	0.31	0.10
<i>Panicum</i>	<i>tenerum</i>	0.02	0.11	0.07	0.21	0.31	0.10
<i>Frangula</i>	<i>caroliniana</i>	0.05	0.21	0.03	0.09	0.30	0.10
<i>Oxalis</i>	<i>dillenii</i>	0.05	0.21	0.03	0.09	0.30	0.10
<i>Scoparia</i>	<i>dulcis</i>	0.05	0.21	0.03	0.09	0.30	0.10
<i>Mimosa</i>	<i>latidens</i>	0.02	0.11	0.06	0.19	0.30	0.10
<i>Xyris</i>	<i>ambigua</i>	0.05	0.21	0.02	0.07	0.28	0.09
<i>Desmodium</i>	<i>laevigatum</i>	0.05	0.21	0.02	0.07	0.28	0.09
<i>Rubus</i>	<i>trivialis</i>	0.05	0.21	0.02	0.07	0.28	0.09
<i>Vitis</i>	<i>aestivalis</i>	0.02	0.11	0.06	0.17	0.28	0.09
<i>Pteridium</i>	<i>aquilinum</i> var. <i>pseudocaudatum</i>	0.02	0.11	0.06	0.17	0.28	0.09
<i>Arisaema</i>	<i>triphylla</i> var. <i>triphylla</i>	0.05	0.21	0.02	0.06	0.27	0.09
<i>Vaccinium</i>	<i>elliottii</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Rhus</i>	<i>copallinum</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Oxalis</i>	<i>debilis</i> var. <i>corymbosa</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Prunus</i>	<i>serotina</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Campsis</i>	<i>radicans</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Euphorbia</i>	<i>corollata</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Lyonia</i>	<i>mariana</i>	0.05	0.21	0.02	0.05	0.26	0.09
<i>Wahlenbergia</i>	<i>marginata</i>	0.02	0.11	0.05	0.16	0.26	0.09
<i>Panicum</i>	<i>dichotomum</i>	0.05	0.21	0.01	0.03	0.24	0.08
<i>Scutellaria</i>	<i>elliptica</i>	0.05	0.21	0.01	0.03	0.24	0.08
<i>Euonymus</i>	<i>americanus</i>	0.05	0.21	0.01	0.03	0.24	0.08
<i>Viola</i>	<i>palmata</i>	0.05	0.21	0.01	0.03	0.24	0.08
<i>Baccharis</i>	<i>halimifolia</i>	0.02	0.11	0.05	0.14	0.24	0.08

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Liatris</i>	<i>acidota</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Osmunda</i>	<i>regalis</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Carpinus</i>	<i>caroliniana</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Polygonum</i>	<i>punctatum</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Commelina</i>	<i>erecta</i>	0.02	0.11	0.05	0.14	0.24	0.08
<i>Toxicodendron</i>	<i>pubescens</i>	0.02	0.11	0.04	0.12	0.23	0.08
<i>Scleria</i>	<i>reticularis</i>	0.02	0.11	0.03	0.10	0.21	0.07
<i>Ambrosia</i>	<i>artemisiifolia</i>	0.02	0.11	0.03	0.10	0.21	0.07
<i>Crataegus</i>	<i>marshallii</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Boltonia</i>	<i>diffusa</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Cyperus</i>	<i>croceus</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Liatris</i>	<i>elegans</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Panicum</i>	<i>rigidulum</i>	0.02	0.11	0.03	0.09	0.19	0.06
<i>Baptisia</i>	<i>sphaerocarpa</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Galium</i>	<i>tinctorium</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Pityopsis</i>	<i>graminifolia</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Liatris</i>	<i>pycnostachya</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Croton</i>	<i>glandulosus</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Nandina</i>	<i>domestica</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Carex</i>	<i>intumescens</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Fraxinus</i>	<i>americana</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Chamaesyce</i>	<i>maculata</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Dichanthelium</i>	<i>ovale</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Mikania</i>	<i>scandens</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Chenopodium</i>	<i>ambrosioides</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Mollugo</i>	<i>verticillata</i>	0.02	0.11	0.02	0.07	0.17	0.06
<i>Dichanthelium</i>	<i>dichotomum</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Krigia</i>	<i>dandelion</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Lonicera</i>	<i>japonica</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Quercus</i>	<i>stellata</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Quercus</i>	<i>pagoda</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Desmodium</i>	<i>lanceolata</i>	0.02	0.11	0.02	0.05	0.16	0.05
<i>Pinus</i>	<i>echinata</i>	0.02	0.11	0.02	0.05	0.16	0.05

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Carex</i>	<i>blanda</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Pallavicinia</i>	sp.	0.02	0.11	0.01	0.03	0.14	0.05
<i>Verbesina</i>	<i>virginica</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Erythrina</i>	<i>herbacea</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Viburnum</i>	<i>dentatum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Eleocharis</i>	<i>microcarpa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Alnus</i>	<i>serrulata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Lilium</i>	<i>michauxii</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Aralia</i>	<i>spinosa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carya</i>	<i>tomentosa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Pyrrhopappus</i>	<i>carolinianus</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Tragia</i>	<i>smallii</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Stillingia</i>	<i>sylvatica</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Botrychium</i>	<i>biterdatum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Oenothera</i>	<i>laciniata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Loeflingia</i>	<i>squarrosa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Croton</i>	<i>willdenowii</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Helianthemum</i>	<i>carolinianum</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Indigofera</i>	<i>suffruticosa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Trillium</i>	<i>gracile</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Saururus</i>	<i>cernuus</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Teucrium</i>	<i>canadense</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carex</i>	<i>complanata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Sideroxylon</i>	<i>lanuginosa</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carex</i>	<i>tenax</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carex</i>	<i>cherokeensis</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carex</i>	<i>atlantica</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Proserpinaca</i>	<i>pectinata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Juniperus</i>	<i>virginiana</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Tridens</i>	<i>strictus</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Carex</i>	<i>crebriflora</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Lonicera</i>	<i>sempervirens</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Helenium</i>	<i>drummondii</i>	0.02	0.11	0.01	0.03	0.14	0.05

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Hydrolea</i>	<i>ovata</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Gratiola</i>	<i>virginiana</i>	0.02	0.11	0.01	0.03	0.14	0.05
<i>Matelea</i>	<i>gonocarpa</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Quercus</i>	<i>incana</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Cocculus</i>	<i>carolinus</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Lindernia</i>	<i>dubia</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Solidago</i>	<i>odora</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Ilex</i>	<i>ambigua</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Eupatorium</i>	<i>serotinum</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Eupatorium</i>	<i>lanceifolium</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Quercus</i>	<i>michauxii</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Tragia</i>	<i>betonicifolia</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Andropogon</i>	<i>virginicus</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Proserpinaca</i>	<i>palustris</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Ruellia</i>	<i>caroliniensis</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Monarda</i>	<i>punctata</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Symphyotrichum</i>	<i>lateraflorum</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Croptilon</i>	<i>rigidifolium</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Chrysopsis</i>	<i>pilosa</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Vulpia</i>	<i>sciurea</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Bulbostylis</i>	<i>ciliatifolia</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Hedeoma</i>	<i>hispidum</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Lycopus</i>	<i>virginicus</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Symphyotrichum</i>	<i>dumosum</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Taxodium</i>	<i>distichum</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Sida</i>	<i>spinosa</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Hymenopappus</i>	<i>artemisiifolius</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Verbena</i>	<i>halei</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Plantago</i>	<i>aristata</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Gamochaeta</i>	<i>purpurea</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Cephalanthus</i>	<i>occidentalis</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Pinus</i>	<i>palustris</i>	0.02	0.11	0.01	0.02	0.12	0.04

**Table 1B. Summary of the Herbaceous Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Trachelospermum</i>	<i>difforme</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Justicia</i>	<i>ovata</i> var. <i>lanceolata</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Symphyotrichum</i>	<i>praealtum</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Aster</i>	sp.	0.02	0.11	0.01	0.02	0.12	0.04
<i>Carya</i>	<i>texana</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Ludwigia</i>	<i>linearis</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Epifagus</i>	<i>virginiana</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Hypoxis</i>	<i>hirsuta</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Hydrocotyle</i>	<i>umbellata</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Viburnum</i>	<i>acerifolium</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Poncirus</i>	<i>trifoliata</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Carex</i>	<i>corrugata</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Drosera</i>	<i>brevifolia</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Eleocharis</i>	<i>tuberculosa</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Elephantopus</i>	<i>carolinianus</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Drosera</i>	<i>capillaris</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Centella</i>	<i>erecta</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Acalypha</i>	<i>rhomboidea</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Ludwigia</i>	<i>pilosa</i>	0.02	0.11	0.01	0.02	0.12	0.04
<i>Eragrostis</i>	<i>spectabilis</i>	0.02	0.11	0.01	0.02	0.12	0.04
Totals			100.00	32.69	100.00	200.00	66.67

**Table 1C. Summary of the Woody Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	0.65	16.29	1814.55	25.91	0.17	31.59	73.79	24.60
<i>Cyrtilla</i>	<i>racemiflora</i>	0.18	4.52	634.91	9.07	0.07	12.71	26.30	8.77
<i>Vaccinium</i>	<i>corymbosum</i>	0.16	4.07	560.00	8.00	0.03	5.79	17.86	5.95
<i>Symplocos</i>	<i>tinctoria</i>	0.20	4.98	421.82	6.02	0.03	4.81	15.82	5.27
<i>Vaccinium</i>	<i>arboreum</i>	0.11	2.71	349.09	4.98	0.02	4.52	12.22	4.07
<i>Quercus</i>	<i>hemisphaerica</i>	0.15	3.62	232.73	3.32	0.03	4.92	11.87	3.96
<i>Ilex</i>	<i>coriacea</i>	0.13	3.17	363.64	5.19	0.02	3.38	11.74	3.91
<i>Persea</i>	<i>palustris</i>	0.20	4.98	269.09	3.84	0.01	2.46	11.28	3.76
<i>Callicarpa</i>	<i>americana</i>	0.15	3.62	305.45	4.36	0.01	2.54	10.52	3.51
<i>Rhododendron</i>	<i>viscosum</i>	0.07	1.81	370.91	5.30	0.01	2.73	9.84	3.28
<i>Quercus</i>	<i>nigra</i>	0.20	4.98	130.91	1.87	0.01	1.68	8.52	2.84
<i>Liquidambar</i>	<i>styraciflua</i>	0.13	3.17	145.45	2.08	0.02	3.25	8.49	2.83
<i>Ilex</i>	<i>opaca</i>	0.20	4.98	94.55	1.35	0.01	2.14	8.46	2.82
<i>Vitis</i>	<i>rotundifolia</i>	0.13	3.17	116.36	1.66	0.02	3.54	8.37	2.79
<i>Magnolia</i>	<i>grandiflora</i>	0.13	3.17	116.36	1.66	0.01	1.95	6.78	2.26
<i>Sebastiania</i>	<i>fruticosa</i>	0.07	1.81	232.73	3.32	0.01	1.51	6.65	2.22
<i>Morella</i>	<i>cerifera</i>	0.11	2.71	174.55	2.49	0.01	1.11	6.32	2.11
<i>Quercus</i>	<i>falcata</i>	0.05	1.36	87.27	1.25	0.02	3.38	5.98	1.99
<i>Pinus</i>	<i>taeda</i>	0.07	1.81	29.09	0.42	0.00	0.32	2.55	0.85
<i>Quercus</i>	<i>alba</i>	0.05	1.36	50.91	0.73	0.00	0.43	2.52	0.84
<i>Ostrya</i>	<i>virginiana</i>	0.04	0.90	65.45	0.93	0.00	0.57	2.41	0.80
<i>Asimina</i>	<i>parviflora</i>	0.07	1.81	29.09	0.42	0.00	0.11	2.33	0.78
<i>Magnolia</i>	<i>virginiana</i>	0.05	1.36	29.09	0.42	0.00	0.49	2.26	0.75
<i>Nyssa</i>	<i>sylvatica</i>	0.05	1.36	21.82	0.31	0.00	0.16	1.83	0.61
<i>Carpinus</i>	<i>caroliniana</i>	0.04	0.90	21.82	0.31	0.00	0.57	1.78	0.59
<i>Prunus</i>	<i>caroliniana</i>	0.04	0.90	36.36	0.52	0.00	0.14	1.56	0.52
<i>Halesia</i>	<i>diptera</i>	0.02	0.45	50.91	0.73	0.00	0.22	1.40	0.47
<i>Vaccinium</i>	<i>stamineum</i>	0.04	0.90	21.82	0.31	0.00	0.16	1.38	0.46
<i>Acer</i>	<i>rubrum</i>	0.04	0.90	14.55	0.21	0.00	0.22	1.33	0.44
<i>Vaccinium</i>	<i>elliottii</i>	0.04	0.90	21.82	0.31	0.00	0.08	1.30	0.43
<i>Styrax</i>	<i>grandifolia</i>	0.04	0.90	21.82	0.31	0.00	0.05	1.27	0.42
<i>Sassafras</i>	<i>albidum</i>	0.04	0.90	14.55	0.21	0.00	0.05	1.17	0.39
<i>Fagus</i>	<i>grandifolia</i>	0.02	0.45	7.27	0.10	0.00	0.43	0.99	0.33
<i>Ulmus</i>	<i>alata</i>	0.02	0.45	7.27	0.10	0.00	0.43	0.99	0.33
<i>Vitis</i>	<i>aestivalis</i>	0.02	0.45	7.27	0.10	0.00	0.24	0.80	0.27
<i>Erechtites</i>	<i>hieraciifolia</i>	0.02	0.45	7.27	0.10	0.00	0.24	0.80	0.27
<i>Morella</i>	<i>caroliniensis</i>	0.02	0.45	7.27	0.10	0.00	0.22	0.77	0.26
<i>Castanea</i>	<i>pumila</i>	0.02	0.45	14.55	0.21	0.00	0.05	0.71	0.24
<i>Crataegus</i>	<i>marshallii</i>	0.02	0.45	7.27	0.10	0.00	0.11	0.66	0.22
<i>Ulmus</i>	<i>rubra</i>	0.02	0.45	7.27	0.10	0.00	0.11	0.66	0.22

**Table 1C. Summary of the Woody Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Campsis</i>	<i>radicans</i>	0.02	0.45	7.27	0.10	0.00	0.11	0.66	0.22
<i>Ilex</i>	<i>ambigua</i>	0.02	0.45	7.27	0.10	0.00	0.11	0.66	0.22
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.02	0.45	7.27	0.10	0.00	0.11	0.66	0.22
<i>Morus</i>	<i>rubra</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Brunnichia</i>	<i>ovata</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Smilax</i>	<i>glauca</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Cephalanthus</i>	<i>occidentalis</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Lyonia</i>	<i>mariana</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Nyssa</i>	<i>biflora</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Bignonia</i>	<i>capreolata</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Triadica</i>	<i>sebifera</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Smilax</i>	<i>smallii</i>	0.02	0.45	7.27	0.10	0.00	0.03	0.58	0.19
<i>Cornus</i>	<i>florida</i>	0.02	0.45	0.73	0.01	0.00	0.01	0.47	0.16
Totals			100.00	7002.91	100.00	0.53	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	0.71	9.31	418.18	26.98	0.92	22.22	58.51	19.50
<i>Cyrilla</i>	<i>racemiflora</i>	0.24	3.10	256.00	16.52	0.67	16.24	35.86	11.95
<i>Ilex</i>	<i>opaca</i>	0.60	7.88	90.91	5.87	0.32	7.68	21.42	7.14
<i>Quercus</i>	<i>hemisphaerica</i>	0.36	4.77	87.27	5.63	0.26	6.27	16.68	5.56
<i>Nyssa</i>	<i>sylvatica</i>	0.47	6.21	72.73	4.69	0.23	5.44	16.33	5.44
<i>Persea</i>	<i>palustris</i>	0.31	4.06	64.73	4.18	0.12	2.99	11.22	3.74
<i>Liquidambar</i>	<i>styraciflua</i>	0.40	5.25	36.36	2.35	0.11	2.74	10.33	3.44
<i>Nyssa</i>	<i>biflora</i>	0.16	2.15	43.64	2.82	0.20	4.75	9.71	3.24
<i>Pinus</i>	<i>taeda</i>	0.24	3.10	37.09	2.39	0.14	3.46	8.96	2.99
<i>Quercus</i>	<i>nigra</i>	0.29	3.82	37.82	2.44	0.11	2.60	8.86	2.95
<i>Symplocos</i>	<i>tinctoria</i>	0.22	2.86	34.91	2.25	0.06	1.51	6.63	2.21
<i>Vaccinium</i>	<i>arboreum</i>	0.27	3.58	24.00	1.55	0.06	1.48	6.61	2.20
<i>Carpinus</i>	<i>caroliniana</i>	0.20	2.63	21.82	1.41	0.10	2.53	6.56	2.19
<i>Magnolia</i>	<i>grandiflora</i>	0.27	3.58	21.82	1.41	0.06	1.53	6.52	2.17
<i>Magnolia</i>	<i>virginiana</i>	0.18	2.39	29.09	1.88	0.09	2.17	6.44	2.15
<i>Acer</i>	<i>rubrum</i>	0.24	3.10	23.27	1.50	0.07	1.65	6.25	2.08
<i>Vitis</i>	<i>rotundifolia</i>	0.24	3.10	28.36	1.83	0.03	0.63	5.56	1.85
<i>Ostrya</i>	<i>virginiana</i>	0.18	2.39	24.00	1.55	0.07	1.60	5.54	1.85
<i>Ilex</i>	<i>coriacea</i>	0.22	2.86	29.09	1.88	0.03	0.73	5.47	1.82
<i>Cornus</i>	<i>florida</i>	0.16	2.15	23.27	1.50	0.05	1.14	4.79	1.60
<i>Quercus</i>	<i>falcata</i>	0.15	1.91	17.45	1.13	0.07	1.62	4.66	1.55
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.04	0.48	18.91	1.22	0.07	1.75	3.45	1.15
<i>Fagus</i>	<i>grandifolia</i>	0.13	1.67	8.73	0.56	0.03	0.83	3.06	1.02
<i>Quercus</i>	<i>alba</i>	0.13	1.67	9.45	0.61	0.03	0.61	2.89	0.96
<i>Quercus</i>	<i>laurifolia</i>	0.09	1.19	8.73	0.56	0.02	0.54	2.30	0.77
<i>Sassafras</i>	<i>albidum</i>	0.09	1.19	7.27	0.47	0.02	0.60	2.26	0.75

**Table 1C. Summary of the Woody Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Quercus</i>	<i>stellata</i>	0.05	0.72	6.55	0.42	0.02	0.51	1.65	0.55
<i>Crataegus</i>	<i>opaca</i>	0.02	0.24	6.55	0.42	0.03	0.80	1.47	0.49
<i>Chionanthus</i>	<i>virginicus</i>	0.07	0.95	2.91	0.19	0.00	0.11	1.25	0.42
<i>Vaccinium</i>	<i>corymbosum</i>	0.05	0.72	6.55	0.42	0.00	0.11	1.25	0.42
<i>Fraxinus</i>	<i>americana</i>	0.05	0.72	2.18	0.14	0.01	0.21	1.07	0.36
<i>Pinus</i>	<i>echinata</i>	0.04	0.48	2.18	0.14	0.02	0.38	1.00	0.33
<i>Prunus</i>	<i>serotina</i>	0.05	0.72	2.18	0.14	0.00	0.11	0.97	0.32
<i>Carya</i>	<i>texana</i>	0.04	0.48	2.18	0.14	0.01	0.29	0.91	0.30
<i>Vitis</i>	<i>aestivalis</i>	0.04	0.48	2.18	0.14	0.01	0.18	0.80	0.27
<i>Quercus</i>	<i>margarettae</i>	0.02	0.24	5.82	0.38	0.01	0.18	0.79	0.26
<i>Juniperus</i>	<i>virginiana</i>	0.04	0.48	1.45	0.09	0.01	0.20	0.77	0.26
<i>Ulmus</i>	<i>rubra</i>	0.04	0.48	2.18	0.14	0.00	0.12	0.74	0.25
<i>Celtis</i>	<i>laevigata</i>	0.04	0.48	1.45	0.09	0.01	0.16	0.73	0.24
<i>Morus</i>	<i>rubra</i>	0.04	0.48	1.45	0.09	0.01	0.15	0.73	0.24
<i>Ulmus</i>	<i>alata</i>	0.02	0.24	3.64	0.23	0.01	0.22	0.69	0.23
<i>Pinus</i>	<i>palustris</i>	0.04	0.48	1.45	0.09	0.00	0.12	0.69	0.23
<i>Morella</i>	<i>cerifera</i>	0.04	0.48	2.18	0.14	0.00	0.05	0.67	0.22
<i>Berchemia</i>	<i>scandens</i>	0.04	0.48	2.18	0.14	0.00	0.04	0.66	0.22
<i>Cephalanthus</i>	<i>occidentalis</i>	0.04	0.48	1.45	0.09	0.00	0.05	0.62	0.21
<i>Campsis</i>	<i>radicans</i>	0.04	0.48	1.45	0.09	0.00	0.04	0.61	0.20
<i>Crataegus</i>	<i>marshallii</i>	0.04	0.48	1.45	0.09	0.00	0.03	0.60	0.20
<i>Viburnum</i>	<i>rufidulum</i>	0.02	0.24	2.91	0.19	0.01	0.13	0.56	0.19
<i>Quercus</i>	<i>incana</i>	0.02	0.24	1.45	0.09	0.01	0.15	0.48	0.16
<i>Prunus</i>	<i>caroliniana</i>	0.02	0.24	2.18	0.14	0.00	0.05	0.43	0.14
<i>Carya</i>	<i>tomentosa</i>	0.02	0.24	0.73	0.05	0.01	0.14	0.42	0.14
<i>Triadica</i>	<i>sebifera</i>	0.02	0.24	1.45	0.09	0.00	0.03	0.37	0.12
<i>Hamamelis</i>	<i>virginiana</i>	0.02	0.24	1.45	0.09	0.00	0.02	0.36	0.12
<i>Vitis</i>	<i>cinerea</i>	0.02	0.24	1.45	0.09	0.00	0.02	0.35	0.12
<i>Ilex</i>	<i>ambigua</i>	0.02	0.24	0.73	0.05	0.00	0.03	0.32	0.11
<i>Alnus</i>	<i>serrulata</i>	0.02	0.24	0.73	0.05	0.00	0.02	0.31	0.10
<i>Rhododendron</i>	<i>viscosum</i>	0.02	0.24	0.73	0.05	0.00	0.02	0.30	0.10
<i>Crataegus</i>	<i>spathulata</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.29	0.10
<i>Smilax</i>	<i>glauca</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.29	0.10
Totals			100.00	1549.82	100.00	4.14	100.00	300.00	100.00
Overstory									
<i>Pinus</i>	<i>taeda</i>	0.65	14.12	102.55	24.14	8.21	32.14	70.41	23.47
<i>Liquidambar</i>	<i>styraciflua</i>	0.40	8.63	29.82	7.02	1.99	7.79	23.44	7.81
<i>Nyssa</i>	<i>biflora</i>	0.22	4.71	43.64	10.27	1.50	5.88	20.85	6.95
<i>Quercus</i>	<i>nigra</i>	0.33	7.06	24.73	5.82	1.25	4.89	17.77	5.92
<i>Quercus</i>	<i>hemisphaerica</i>	0.22	4.71	26.18	6.16	1.61	6.30	17.17	5.72
<i>Nyssa</i>	<i>sylvatica</i>	0.35	7.45	21.82	5.14	0.67	2.63	15.22	5.07

**Table 1C. Summary of the Woody Stratum in All Alliances in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ilex</i>	<i>opaca</i>	0.31	6.67	22.55	5.31	0.44	1.73	13.71	4.57
<i>Pinus</i>	<i>palustris</i>	0.11	2.35	14.55	3.42	1.85	7.23	13.00	4.33
<i>Quercus</i>	<i>falcata</i>	0.18	3.92	16.00	3.77	0.79	3.08	10.77	3.59
<i>Quercus</i>	<i>laurifolia</i>	0.13	2.75	13.82	3.25	1.19	4.64	10.64	3.55
<i>Magnolia</i>	<i>virginiana</i>	0.16	3.53	11.64	2.74	0.41	1.61	7.88	2.63
<i>Acer</i>	<i>rubrum</i>	0.18	3.92	9.45	2.23	0.44	1.71	7.86	2.62
<i>Quercus</i>	<i>alba</i>	0.15	3.14	8.73	2.05	0.58	2.27	7.46	2.49
<i>Pinus</i>	<i>echinata</i>	0.09	1.96	8.73	2.05	0.76	2.99	7.01	2.34
<i>Fagus</i>	<i>grandifolia</i>	0.09	1.96	5.82	1.37	0.70	2.73	6.06	2.02
<i>Ostrya</i>	<i>virginiana</i>	0.09	1.96	5.82	1.37	0.44	1.72	5.05	1.68
<i>Magnolia</i>	<i>grandiflora</i>	0.07	1.57	4.36	1.03	0.46	1.81	4.41	1.47
<i>Carya</i>	<i>texana</i>	0.07	1.57	5.82	1.37	0.36	1.42	4.36	1.45
<i>Cyrilla</i>	<i>racemiflora</i>	0.09	1.96	6.55	1.54	0.12	0.49	3.99	1.33
<i>Cornus</i>	<i>florida</i>	0.11	2.35	5.09	1.20	0.09	0.34	3.90	1.30
<i>Persea</i>	<i>palustris</i>	0.09	1.96	5.09	1.20	0.08	0.31	3.47	1.16
<i>Sassafras</i>	<i>albidum</i>	0.07	1.57	4.36	1.03	0.10	0.41	3.00	1.00
<i>Quercus</i>	<i>pagoda</i>	0.04	0.78	3.64	0.86	0.33	1.30	2.94	0.98
<i>Quercus</i>	<i>michauxii</i>	0.05	1.18	2.18	0.51	0.31	1.22	2.91	0.97
<i>Carya</i>	<i>tomentosa</i>	0.05	1.18	2.18	0.51	0.18	0.69	2.38	0.79
<i>Carpinus</i>	<i>caroliniana</i>	0.05	1.18	3.64	0.86	0.06	0.24	2.27	0.76
<i>Quercus</i>	<i>stellata</i>	0.04	0.78	2.18	0.51	0.05	0.19	1.49	0.50
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.02	0.39	2.91	0.68	0.07	0.27	1.35	0.45
<i>Fraxinus</i>	<i>americana</i>	0.04	0.78	1.45	0.34	0.04	0.15	1.28	0.43
<i>Carya</i>	<i>cordiformis</i>	0.02	0.39	0.73	0.17	0.13	0.51	1.07	0.36
<i>Ulmus</i>	<i>alata</i>	0.02	0.39	1.45	0.34	0.08	0.32	1.05	0.35
<i>Triadica</i>	<i>sebifera</i>	0.02	0.39	2.18	0.51	0.04	0.14	1.05	0.35
<i>Vaccinium</i>	<i>arboreum</i>	0.02	0.39	0.73	0.17	0.06	0.23	0.79	0.26
<i>Ulmus</i>	<i>crassifolia</i>	0.02	0.39	0.73	0.17	0.06	0.22	0.79	0.26
<i>Platanus</i>	<i>occidentalis</i>	0.02	0.39	0.73	0.17	0.03	0.13	0.70	0.23
<i>Prunus</i>	<i>serotina</i>	0.02	0.39	0.73	0.17	0.03	0.10	0.66	0.22
<i>Celtis</i>	<i>laevigata</i>	0.02	0.39	0.73	0.17	0.02	0.08	0.64	0.21
<i>Tilia</i>	<i>caroliniana</i>	0.02	0.39	0.73	0.17	0.01	0.04	0.61	0.20
<i>Acer</i>	<i>rubrum</i> var. <i>drummondii</i>	0.02	0.39	0.73	0.17	0.01	0.03	0.60	0.20
Totals			100.00	424.73	100.00	25.55	100.00	300.00	100.00

**Table 1D. Summary of the Woody Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	0.65	13.00	2807.27	25.80	0.19	29.72	68.51	22.84
<i>Quercus</i>	<i>hemisphaerica</i>	0.31	6.14	1170.91	10.76	0.05	7.49	24.38	8.13
<i>Cyrilla</i>	<i>racemiflora</i>	0.22	4.33	816.73	7.51	0.06	9.64	21.48	7.16
<i>Ilex</i>	<i>coriacea</i>	0.18	3.61	874.18	8.03	0.03	5.35	17.00	5.67
<i>Callicarpa</i>	<i>americana</i>	0.27	5.42	400.00	3.68	0.01	2.09	11.18	3.73
<i>Symplocos</i>	<i>tinctoria</i>	0.20	3.97	378.18	3.48	0.02	3.55	11.00	3.67
<i>Vaccinium</i>	<i>corymbosum</i>	0.20	3.97	516.36	4.75	0.01	2.25	10.96	3.65
<i>Liquidambar</i>	<i>styraciflua</i>	0.13	2.53	320.00	2.94	0.03	5.13	10.59	3.53
<i>Vaccinium</i>	<i>arboreum</i>	0.18	3.61	322.91	2.97	0.02	3.78	10.35	3.45
<i>Pinus</i>	<i>taeda</i>	0.11	2.17	356.36	3.28	0.03	4.25	9.69	3.23
<i>Quercus</i>	<i>nigra</i>	0.20	3.97	174.55	1.60	0.01	2.11	7.69	2.56
<i>Vitis</i>	<i>rotundifolia</i>	0.20	3.97	160.00	1.47	0.01	1.87	7.31	2.44
<i>Rhododendron</i>	<i>viscosum</i>	0.05	1.08	414.55	3.81	0.01	2.29	7.19	2.40
<i>Persea</i>	<i>borbonia</i>	0.15	2.89	203.64	1.87	0.01	1.69	6.45	2.15
<i>Morella</i>	<i>cerifera</i>	0.16	3.25	152.73	1.40	0.01	1.46	6.11	2.04
<i>Ilex</i>	<i>opaca</i>	0.18	3.61	109.09	1.00	0.01	1.48	6.10	2.03
<i>Sebastiania</i>	<i>fruticosa</i>	0.13	2.53	225.45	2.07	0.01	1.15	5.75	1.92
<i>Persea</i>	<i>palustris</i>	0.13	2.53	109.09	1.00	0.00	0.43	3.96	1.32
<i>Magnolia</i>	<i>grandiflora</i>	0.09	1.81	102.55	0.94	0.01	1.09	3.84	1.28
<i>Acer</i>	<i>rubrum</i>	0.07	1.44	36.36	0.33	0.01	1.51	3.28	1.09
<i>Vaccinium</i>	<i>stamineum</i>	0.07	1.44	87.27	0.80	0.01	0.94	3.19	1.06
<i>Quercus</i>	<i>falcata</i>	0.07	1.44	72.73	0.67	0.01	0.97	3.08	1.03
<i>Ostrya</i>	<i>virginiana</i>	0.04	0.72	72.73	0.67	0.01	1.64	3.03	1.01
<i>Carya</i>	<i>cordiformis</i>	0.07	1.44	94.55	0.87	0.00	0.56	2.87	0.96
<i>Quercus</i>	<i>margarettae</i>	0.02	0.36	65.45	0.60	0.01	1.60	2.56	0.85
<i>Magnolia</i>	<i>virginiana</i>	0.05	1.08	87.27	0.80	0.00	0.61	2.49	0.83
<i>Carya</i>	<i>tomentosa</i>	0.02	0.36	109.09	1.00	0.01	0.92	2.29	0.76
<i>Triadica</i>	<i>sebifera</i>	0.05	1.08	65.45	0.60	0.00	0.40	2.09	0.70
<i>Quercus</i>	<i>alba</i>	0.05	1.08	43.64	0.40	0.00	0.49	1.98	0.66
<i>Quercus</i>	<i>laurifolia</i>	0.05	1.08	29.09	0.27	0.00	0.09	1.44	0.48
<i>Asimina</i>	<i>parviflora</i>	0.05	1.08	21.82	0.20	0.00	0.07	1.35	0.45
<i>Fagus</i>	<i>grandifolia</i>	0.02	0.36	80.00	0.74	0.00	0.25	1.34	0.45
<i>Nyssa</i>	<i>sylvatica</i>	0.04	0.72	21.82	0.20	0.00	0.40	1.33	0.44
<i>Sassafras</i>	<i>albidum</i>	0.04	0.72	36.36	0.33	0.00	0.18	1.24	0.41
<i>Quercus</i>	<i>michauxii</i>	0.04	0.72	21.82	0.20	0.00	0.13	1.06	0.35
<i>Juniperus</i>	<i>virginiana</i>	0.04	0.72	21.82	0.20	0.00	0.07	0.99	0.33
<i>Smilax</i>	<i>glauca</i>	0.04	0.72	21.82	0.20	0.00	0.07	0.99	0.33
<i>Quercus</i>	<i>pagoda</i>	0.02	0.36	43.64	0.40	0.00	0.13	0.90	0.30
<i>Rhus</i>	<i>copallina</i>	0.02	0.36	21.82	0.20	0.00	0.25	0.81	0.27
<i>Pinus</i>	<i>echinata</i>	0.02	0.36	7.27	0.07	0.00	0.36	0.79	0.26

**Table 1D. Summary of the Woody Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Campsis</i>	<i>radicans</i>	0.02	0.36	7.27	0.07	0.00	0.36	0.79	0.26
<i>Nyssa</i>	<i>biflora</i>	0.02	0.36	7.27	0.07	0.00	0.20	0.63	0.21
<i>Crataegus</i>	<i>marshallii</i>	0.02	0.36	7.27	0.07	0.00	0.20	0.63	0.21
<i>Crataegus</i>	<i>opaca</i>	0.02	0.36	21.82	0.20	0.00	0.07	0.63	0.21
<i>Alnus</i>	<i>serrulata</i>	0.02	0.36	7.27	0.07	0.00	0.11	0.54	0.18
<i>Berchemia</i>	<i>scandens</i>	0.02	0.36	14.55	0.13	0.00	0.04	0.54	0.18
<i>Cornus</i>	<i>florida</i>	0.02	0.36	14.55	0.13	0.00	0.04	0.54	0.18
<i>Halesia</i>	<i>diptera</i>	0.02	0.36	14.55	0.13	0.00	0.04	0.54	0.18
<i>Frangula</i>	<i>caroliniana</i>	0.02	0.36	14.55	0.13	0.00	0.04	0.54	0.18
<i>Prunus</i>	<i>caroliniana</i>	0.02	0.36	7.27	0.07	0.00	0.09	0.52	0.17
<i>Vitis</i>	<i>aestivalis</i>	0.02	0.36	7.27	0.07	0.00	0.09	0.52	0.17
<i>Hypericum</i>	<i>hypericoides</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Prunus</i>	<i>serotina</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Toxicodendron</i>	<i>radicans</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Rhus</i>	<i>lanceolata</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Castanea</i>	<i>pumila</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Carya</i>	<i>texana</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Aralia</i>	<i>spinosa</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Gelsemium</i>	<i>sempervirens</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Quercus</i>	<i>stellata</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
<i>Smilax</i>	<i>smallii</i>	0.02	0.36	7.27	0.07	0.00	0.02	0.45	0.15
Totals			100.00	10880.00	100.00	0.64	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitaria</i>	0.67	8.87	369.45	24.98	0.88	20.64	54.49	18.16
<i>Cyrilla</i>	<i>racemiflora</i>	0.25	3.36	277.82	18.78	0.76	17.67	39.81	13.27
<i>Ilex</i>	<i>opaca</i>	0.64	8.39	98.18	6.64	0.37	8.57	23.60	7.87
<i>Quercus</i>	<i>hemisphaerica</i>	0.40	5.28	90.91	6.15	0.28	6.63	18.06	6.02
<i>Nyssa</i>	<i>sylvatica</i>	0.44	5.76	58.91	3.98	0.19	4.51	14.25	4.75
<i>Nyssa</i>	<i>biflora</i>	0.20	2.64	50.91	3.44	0.21	4.86	10.94	3.65
<i>Pinus</i>	<i>taeda</i>	0.24	3.12	41.45	2.80	0.16	3.72	9.64	3.21
<i>Liquidambar</i>	<i>styraciflua</i>	0.33	4.32	30.55	2.06	0.10	2.33	8.71	2.90
<i>Acer</i>	<i>rubrum</i>	0.33	4.32	25.45	1.72	0.08	1.99	8.02	2.67
<i>Vaccinium</i>	<i>arboreum</i>	0.29	3.84	30.55	2.06	0.07	1.73	7.64	2.55
<i>Magnolia</i>	<i>virginiana</i>	0.22	2.88	32.73	2.21	0.11	2.52	7.61	2.54
<i>Quercus</i>	<i>nigra</i>	0.24	3.12	31.27	2.11	0.09	2.03	7.26	2.42
<i>Magnolia</i>	<i>grandiflora</i>	0.27	3.60	23.27	1.57	0.08	1.78	6.95	2.32
<i>Carya</i>	<i>cordiformis</i>	0.20	2.64	22.55	1.52	0.11	2.56	6.72	2.24
<i>Ostrya</i>	<i>virginiana</i>	0.20	2.64	24.00	1.62	0.08	1.85	6.11	2.04
<i>Persea</i>	<i>palustris</i>	0.16	2.16	31.27	2.11	0.08	1.75	6.02	2.01
<i>Symplocos</i>	<i>tinctoria</i>	0.20	2.64	29.09	1.97	0.06	1.39	6.00	2.00

**Table 1D. Summary of the Woody Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Quercus</i>	<i>falcata</i>	0.18	2.40	16.00	1.08	0.05	1.21	4.69	1.56
<i>Ilex</i>	<i>coriacea</i>	0.16	2.16	25.45	1.72	0.03	0.72	4.60	1.53
<i>Vitis</i>	<i>rotundifolia</i>	0.18	2.40	21.09	1.43	0.03	0.69	4.51	1.50
<i>Persea</i>	<i>borbonia</i>	0.09	1.20	23.27	1.57	0.05	1.26	4.03	1.34
<i>Cornus</i>	<i>florida</i>	0.16	2.16	13.09	0.88	0.04	0.94	3.98	1.33
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.02	0.24	12.36	0.84	0.09	2.01	3.09	1.03
<i>Quercus</i>	<i>laurifolia</i>	0.11	1.44	8.00	0.54	0.03	0.67	2.65	0.88
<i>Fagus</i>	<i>grandifolia</i>	0.13	1.68	5.82	0.39	0.02	0.39	2.47	0.82
<i>Quercus</i>	<i>alba</i>	0.11	1.44	7.27	0.49	0.01	0.32	2.25	0.75
<i>Sassafras</i>	<i>albidum</i>	0.11	1.44	5.09	0.34	0.02	0.37	2.15	0.72
<i>Quercus</i>	<i>stellata</i>	0.05	0.72	5.82	0.39	0.02	0.43	1.54	0.51
<i>Crataegus</i>	<i>opaca</i>	0.02	0.24	6.55	0.44	0.03	0.67	1.35	0.45
<i>Carya</i>	<i>tomentosa</i>	0.05	0.72	4.36	0.29	0.01	0.31	1.32	0.44
<i>Fraxinus</i>	<i>americana</i>	0.05	0.72	2.18	0.15	0.01	0.34	1.20	0.40
<i>Quercus</i>	<i>margarettae</i>	0.04	0.48	6.55	0.44	0.01	0.22	1.14	0.38
<i>Juniperus</i>	<i>virginiana</i>	0.05	0.72	2.18	0.15	0.01	0.27	1.13	0.38
<i>Prunus</i>	<i>caroliniana</i>	0.05	0.72	3.64	0.25	0.00	0.11	1.08	0.36
<i>Ulmus</i>	<i>alata</i>	0.04	0.48	4.36	0.29	0.01	0.27	1.04	0.35
<i>Pinus</i>	<i>echinata</i>	0.04	0.48	2.18	0.15	0.01	0.34	0.97	0.32
<i>Triadica</i>	<i>sebifera</i>	0.02	0.24	3.64	0.25	0.02	0.37	0.86	0.29
<i>Celtis</i>	<i>laevigata</i>	0.04	0.48	1.45	0.10	0.01	0.22	0.79	0.26
<i>Pinus</i>	<i>palustris</i>	0.04	0.48	1.45	0.10	0.01	0.17	0.75	0.25
<i>Ulmus</i>	<i>rubra</i>	0.04	0.48	1.45	0.10	0.01	0.13	0.71	0.24
<i>Prunus</i>	<i>serotina</i>	0.04	0.48	1.45	0.10	0.00	0.11	0.68	0.23
<i>Vitis</i>	<i>aestivalis</i>	0.04	0.48	1.45	0.10	0.00	0.08	0.66	0.22
<i>Styrax</i>	<i>americana</i>	0.02	0.24	3.64	0.25	0.01	0.14	0.63	0.21
<i>Chionanthus</i>	<i>virginicus</i>	0.04	0.48	1.45	0.10	0.00	0.04	0.61	0.20
<i>Celtis</i>	<i>tenuifolia</i>	0.04	0.48	1.45	0.10	0.00	0.02	0.60	0.20
<i>Carya</i>	<i>texana</i>	0.02	0.24	1.45	0.10	0.01	0.22	0.56	0.19
<i>Viburnum</i>	<i>rufidulum</i>	0.02	0.24	1.45	0.10	0.00	0.10	0.43	0.14
<i>Bumelia</i>	<i>lanuginosa</i>	0.02	0.24	2.18	0.15	0.00	0.03	0.42	0.14
<i>Diodia</i>	<i>virginiana</i>	0.02	0.24	1.45	0.10	0.00	0.04	0.37	0.12
<i>Campsis</i>	<i>radicans</i>	0.02	0.24	0.73	0.05	0.00	0.03	0.32	0.11
<i>Quercus</i>	<i>incana</i>	0.02	0.24	0.73	0.05	0.00	0.03	0.32	0.11
<i>Berchemia</i>	<i>scandens</i>	0.02	0.24	0.73	0.05	0.00	0.02	0.31	0.10
<i>Frangula</i>	<i>caroliniana</i>	0.02	0.24	0.73	0.05	0.00	0.02	0.31	0.10
<i>Morus</i>	<i>rubra</i>	0.02	0.24	0.73	0.05	0.00	0.02	0.31	0.10
<i>Crataegus</i>	<i>marshallii</i>	0.02	0.24	0.73	0.05	0.00	0.02	0.31	0.10
<i>Quercus</i>	<i>michauxii</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Vaccinium</i>	<i>corymbosum</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Vitis</i>	<i>cinerea</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10

**Table 1D. Summary of the Woody Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Rhus</i>	<i>copallina</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Rhododendron</i>	<i>canescens</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Morella</i>	<i>cerifera</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Castanea</i>	<i>pumila</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Cornus</i>	<i>foemina</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
<i>Crataegus</i>	<i>spathulata</i>	0.02	0.24	0.73	0.05	0.00	0.01	0.30	0.10
Totals			100.00	1479.27	100.00	4.28	100.00	300.00	100.00
Overstory									
<i>Pinus</i>	<i>taeda</i>	0.64	13.57	96.73	23.84	8.16	34.01	71.41	23.80
<i>Liquidambar</i>	<i>styraciflua</i>	0.38	8.14	29.82	7.35	2.18	9.09	24.58	8.19
<i>Nyssa</i>	<i>biflora</i>	0.20	4.26	39.27	9.68	1.82	7.58	21.52	7.17
<i>Quercus</i>	<i>hemisphaerica</i>	0.29	6.20	29.09	7.17	1.57	6.56	19.93	6.64
<i>Quercus</i>	<i>nigra</i>	0.31	6.59	24.73	6.09	1.13	4.71	17.40	5.80
<i>Ilex</i>	<i>opaca</i>	0.33	6.98	23.27	5.73	0.52	2.17	14.89	4.96
<i>Nyssa</i>	<i>sylvatica</i>	0.29	6.20	21.09	5.20	0.60	2.49	13.89	4.63
<i>Pinus</i>	<i>palustris</i>	0.09	1.94	13.09	3.23	1.37	5.73	10.89	3.63
<i>Quercus</i>	<i>alba</i>	0.18	3.88	13.09	3.23	0.87	3.64	10.75	3.58
<i>Quercus</i>	<i>falcata</i>	0.18	3.88	13.82	3.41	0.61	2.54	9.82	3.27
<i>Acer</i>	<i>rubrum</i>	0.18	3.88	8.73	2.15	0.43	1.79	7.82	2.61
<i>Quercus</i>	<i>laurifolia</i>	0.13	2.71	8.00	1.97	0.54	2.25	6.94	2.31
<i>Pinus</i>	<i>echinata</i>	0.09	1.94	9.45	2.33	0.62	2.60	6.87	2.29
<i>Magnolia</i>	<i>virginiana</i>	0.13	2.71	10.18	2.51	0.32	1.35	6.57	2.19
<i>Magnolia</i>	<i>grandiflora</i>	0.13	2.71	6.55	1.61	0.53	2.21	6.53	2.18
<i>Fagus</i>	<i>grandifolia</i>	0.11	2.33	5.09	1.25	0.64	2.65	6.23	2.08
<i>Cyrilla</i>	<i>racemiflora</i>	0.11	2.33	8.73	2.15	0.17	0.69	5.17	1.72
<i>Carya</i>	<i>texana</i>	0.09	1.94	5.82	1.43	0.33	1.36	4.73	1.58
<i>Cornus</i>	<i>florida</i>	0.09	1.94	4.36	1.08	0.07	0.29	3.30	1.10
<i>Sassafras</i>	<i>albidum</i>	0.09	1.94	3.64	0.90	0.09	0.39	3.22	1.07
<i>Quercus</i>	<i>michauxii</i>	0.05	1.16	2.18	0.54	0.32	1.32	3.02	1.01
<i>Ostrya</i>	<i>virginiana</i>	0.07	1.55	4.36	1.08	0.09	0.38	3.00	1.00
<i>Carya</i>	<i>cordiformis</i>	0.07	1.55	4.36	1.08	0.07	0.31	2.93	0.98
<i>Persea</i>	<i>palustris</i>	0.07	1.55	2.91	0.72	0.06	0.24	2.50	0.83
<i>Ilex</i>	<i>vomitorea</i>	0.05	1.16	2.18	0.54	0.05	0.21	1.91	0.64
<i>Quercus</i>	<i>pagoda</i>	0.02	0.39	1.45	0.36	0.27	1.13	1.87	0.62
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.04	0.78	2.91	0.72	0.08	0.32	1.81	0.60
<i>Carya</i>	<i>tomentosa</i>	0.04	0.78	1.45	0.36	0.14	0.60	1.73	0.58
<i>Ulmus</i>	<i>alata</i>	0.02	0.39	0.73	0.18	0.07	0.30	0.87	0.29
<i>Vaccinium</i>	<i>arboreum</i>	0.02	0.39	0.73	0.18	0.07	0.29	0.85	0.28
<i>Ulmus</i>	<i>americana</i>	0.02	0.39	0.73	0.18	0.05	0.21	0.77	0.26
<i>Platanus</i>	<i>occidentalis</i>	0.02	0.39	0.73	0.18	0.03	0.14	0.70	0.23

**Table 1D. Summary of the Woody Stratum in All Alliances in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Triadica</i>	<i>sebifera</i>	0.02	0.39	0.73	0.18	0.02	0.08	0.65	0.22
<i>Celtis</i>	<i>laevigata</i>	0.02	0.39	0.73	0.18	0.02	0.08	0.64	0.21
<i>Tilia</i>	<i>americana</i> var. <i>caroliniana</i>	0.02	0.39	0.73	0.18	0.02	0.07	0.64	0.21
<i>Quercus</i>	<i>stellata</i>	0.02	0.39	0.73	0.18	0.01	0.05	0.61	0.20
<i>Persea</i>	<i>borbonia</i>	0.02	0.39	0.73	0.18	0.01	0.04	0.61	0.20
<i>Crataegus</i>	<i>opaca</i>	0.02	0.39	0.73	0.18	0.01	0.04	0.61	0.20
<i>Morus</i>	<i>rubra</i>	0.02	0.39	0.73	0.18	0.01	0.04	0.60	0.20
<i>Symplocos</i>	<i>tinctoria</i>	0.02	0.39	0.73	0.18	0.01	0.03	0.60	0.20
<i>Quercus</i>	<i>similis</i>	0.02	0.39	0.73	0.18	0.01	0.03	0.60	0.20
Totals			100.00	405.82	100.00	24.00	100.00	300.00	100.00

**Table 2A. Summary of the Herbaceous Stratum in the *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)
Saturated Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Sphagnum</i>	<i>sp.</i>	0.75	8.11	39.19	79.67	87.78	29.26
<i>Cyrilla</i>	<i>racemiflora</i>	1.00	10.81	3.31	6.73	17.55	5.85
<i>Smilax</i>	<i>laurifolia</i>	0.75	8.11	0.25	0.51	8.62	2.87
<i>Magnolia</i>	<i>virginiana</i>	0.50	5.41	0.50	1.02	6.42	2.14
<i>Persea</i>	<i>palustris</i>	0.50	5.41	0.31	0.64	6.04	2.01
<i>Smilax</i>	<i>bona-nox</i>	0.50	5.41	0.19	0.38	5.79	1.93
<i>Itea</i>	<i>virginica</i>	0.50	5.41	0.13	0.25	5.66	1.89
<i>Rhynchospora</i>	<i>mixta</i>	0.25	2.70	0.94	1.91	4.61	1.54
<i>Hypericum</i>	<i>galioides</i>	0.25	2.70	0.88	1.78	4.48	1.49
<i>Quercus</i>	<i>laurifolia</i>	0.25	2.70	0.75	1.52	4.23	1.41
<i>Nyssa</i>	<i>sylvatica</i>	0.25	2.70	0.63	1.27	3.97	1.32
<i>Morella</i>	<i>caroliniensis</i>	0.25	2.70	0.63	1.27	3.97	1.32
<i>Triadica</i>	<i>sebifera</i>	0.25	2.70	0.31	0.64	3.34	1.11
<i>Acer</i>	<i>rubrum</i>	0.25	2.70	0.25	0.51	3.21	1.07
<i>Ilex</i>	<i>coriacea</i>	0.25	2.70	0.13	0.25	2.96	0.99
<i>Pinus</i>	<i>taeda</i>	0.25	2.70	0.13	0.25	2.96	0.99
<i>Clethra</i>	<i>alnifolia</i>	0.25	2.70	0.13	0.25	2.96	0.99
<i>Mitchella</i>	<i>repens</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Gelsemium</i>	<i>sempervirens</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Solanum</i>	<i>sp.</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Smilax</i>	<i>glauca</i>	0.25	2.70	0.06	0.13	2.83	0.94
Unknown	<i>sp.</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Andropogon</i>	<i>ternarius</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Nyssa</i>	<i>biflora</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Rhexia</i>	<i>sp.</i>	0.25	2.70	0.06	0.13	2.83	0.94
<i>Bignonia</i>	<i>capreolata</i>	0.25	2.70	0.06	0.13	2.83	0.94
Totals			100.00	49.19	100.00	200.00	66.67

**Table 2B. Summary of the Herbaceous Stratum in the *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)
Saturated Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Sphagnum</i>	sp.	0.50	4.35	31.75	57.86	62.21	20.74
<i>Selaginella</i>	sp.	0.25	2.17	12.25	22.32	24.50	8.17
<i>Cyrilla</i>	<i>racemiflora</i>	1.00	8.70	3.06	5.58	14.28	4.76
<i>Nyssa</i>	<i>biflora</i>	0.75	6.52	0.63	1.14	7.66	2.55
<i>Ilex</i>	<i>coriacea</i>	0.75	6.52	0.63	1.14	7.66	2.55
<i>Smilax</i>	<i>laurifolia</i>	0.75	6.52	0.31	0.57	7.09	2.36
<i>Persea</i>	<i>palustris</i>	0.50	4.35	0.31	0.57	4.92	1.64
<i>Smilax</i>	<i>glauca</i>	0.50	4.35	0.19	0.34	4.69	1.56
<i>Ilex</i>	<i>opaca</i>	0.50	4.35	0.13	0.23	4.58	1.53
<i>Vaccinium</i>	<i>corybosum</i>	0.50	4.35	0.13	0.23	4.58	1.53
<i>Smilax</i>	<i>bona-nox</i>	0.50	4.35	0.13	0.23	4.58	1.53
<i>Scleria</i>	<i>triglomerata</i>	0.25	2.17	1.25	2.28	4.45	1.48
<i>Rhynchospora</i>	<i>mixta</i>	0.25	2.17	0.75	1.37	3.54	1.18
<i>Osmunda</i>	<i>regalis</i>	0.25	2.17	0.50	0.91	3.09	1.03
<i>Morella</i>	<i>caroliniensis</i>	0.25	2.17	0.50	0.91	3.09	1.03
<i>Quercus</i>	<i>laurifolia</i>	0.25	2.17	0.38	0.68	2.86	0.95
<i>Andropogon</i>	<i>glomeratus</i>	0.25	2.17	0.38	0.68	2.86	0.95
<i>Hypericum</i>	<i>galioides</i>	0.25	2.17	0.31	0.57	2.74	0.91
<i>Galium</i>	<i>tinctorium</i>	0.25	2.17	0.25	0.46	2.63	0.88
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	0.25	2.17	0.19	0.34	2.52	0.84
<i>Pinus</i>	<i>taeda</i>	0.25	2.17	0.13	0.23	2.40	0.80
<i>Mitchella</i>	<i>repens</i>	0.25	2.17	0.13	0.23	2.40	0.80
<i>Juncus</i>	<i>repens</i>	0.25	2.17	0.13	0.23	2.40	0.80
<i>Gelsemium</i>	<i>sempervirens</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Acer</i>	<i>rubrum</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Lycopus</i>	<i>virginicus</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Triadica</i>	<i>sebifera</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Magnolia</i>	<i>virginiana</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Persea</i>	<i>borbonia</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Proserpinaca</i>	<i>palustris</i>	0.25	2.17	0.06	0.11	2.29	0.76
<i>Quercus</i>	<i>nigra</i>	0.25	2.17	0.06	0.11	2.29	0.76
Totals			100.00	54.88	100.00	200.00	66.67

**Table 2C. Summary of the Woody Stratum in the *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)
Saturated Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.83	38.46	3133.33	75.81	0.32	89.59	203.86	67.95
<i>Halesia</i>	<i>diptera</i>	0.17	7.69	466.67	11.29	0.01	2.97	21.96	7.32
<i>Persea</i>	<i>palustris</i>	0.17	7.69	133.33	3.23	0.01	1.49	12.41	4.14
<i>Morella</i>	<i>caroliniensis</i>	0.17	7.69	66.67	1.61	0.01	2.97	12.28	4.09
<i>Magnolia</i>	<i>virginiana</i>	0.17	7.69	66.67	1.61	0.01	1.49	10.79	3.60
<i>Ilex</i>	<i>vomitorea</i>	0.17	7.69	66.67	1.61	0.00	0.37	9.68	3.23
<i>Triadica</i>	<i>sebigera</i>	0.17	7.69	66.67	1.61	0.00	0.37	9.68	3.23
<i>Pinus</i>	<i>taeda</i>	0.17	7.69	66.67	1.61	0.00	0.37	9.68	3.23
<i>Vaccinium</i>	<i>corymbosum</i>	0.17	7.69	66.67	1.61	0.00	0.37	9.68	3.23
Totals			100.00	4133.33	100.00	0.35	100.00	300.00	100.00
Midstory Class									
<i>Cyrilla</i>	<i>racemiflora</i>	1.00	15.00	1420.00	62.10	4.09	58.94	136.04	45.35
<i>Nyssa</i>	<i>biflora</i>	0.83	12.50	320.00	13.99	1.26	18.12	44.61	14.87
<i>Magnolia</i>	<i>virginiana</i>	0.67	10.00	133.33	5.83	0.48	6.98	22.82	7.61
<i>Ilex</i>	<i>opaca</i>	0.67	10.00	73.33	3.21	0.31	4.41	17.61	5.87
<i>Persea</i>	<i>palustris</i>	0.67	10.00	80.00	3.50	0.11	1.60	15.10	5.03
<i>Ilex</i>	<i>coriacea</i>	0.50	7.50	66.67	2.92	0.09	1.23	11.65	3.88
<i>Pinus</i>	<i>taeda</i>	0.50	7.50	40.00	1.75	0.14	2.04	11.29	3.76
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	7.50	40.00	1.75	0.11	1.63	10.88	3.63
<i>Nyssa</i>	<i>sylvatica</i>	0.17	2.50	66.67	2.92	0.20	2.90	8.31	2.77
<i>Quercus</i>	<i>laurifolia</i>	0.33	5.00	13.33	0.58	0.04	0.57	6.15	2.05
<i>Quercus</i>	<i>nigra</i>	0.17	2.50	6.67	0.29	0.06	0.91	3.71	1.24
<i>Pinus</i>	<i>palustris</i>	0.17	2.50	6.67	0.29	0.02	0.27	3.06	1.02
<i>Magnolia</i>	<i>grandiflora</i>	0.17	2.50	6.67	0.29	0.02	0.27	3.06	1.02
<i>Ilex</i>	<i>vomitorea</i>	0.17	2.50	6.67	0.29	0.01	0.08	2.87	0.96
<i>Symplocos</i>	<i>tinctoria</i>	0.17	2.50	6.67	0.29	0.00	0.05	2.84	0.95
Totals			100.00	2286.67	100.00	6.93	100.00	300.00	100.00
Overstory Class									
<i>Nyssa</i>	<i>biflora</i>	1.00	20.69	166.67	30.12	6.37	24.93	75.74	25.25
<i>Quercus</i>	<i>laurifolia</i>	0.67	13.79	86.67	15.66	8.81	34.48	63.93	21.31
<i>Magnolia</i>	<i>virginiana</i>	0.83	17.24	73.33	13.25	3.09	12.09	42.58	14.19
<i>Pinus</i>	<i>taeda</i>	0.17	3.45	86.67	15.66	3.10	12.14	31.25	10.42
<i>Cyrilla</i>	<i>racemiflora</i>	0.67	13.79	53.33	9.64	1.05	4.12	27.55	9.18
<i>Acer</i>	<i>rubrum</i>	0.33	6.90	26.67	4.82	1.75	6.83	18.55	6.18
<i>Quercus</i>	<i>nigra</i>	0.33	6.90	13.33	2.41	0.28	1.08	10.39	3.46
<i>Ilex</i>	<i>opaca</i>	0.33	6.90	13.33	2.41	0.27	1.05	10.35	3.45
<i>Nyssa</i>	<i>sylvatica</i>	0.17	3.45	20.00	3.61	0.37	1.45	8.51	2.84
<i>Liquidambar</i>	<i>styraciflua</i>	0.17	3.45	6.67	1.20	0.37	1.44	6.09	2.03
<i>Persea</i>	<i>palustris</i>	0.17	3.45	6.67	1.20	0.10	0.40	5.05	1.68
Totals			100.00	553.33	100.00	25.56	100.00	300.00	100.00

**Table 2D. Summary of the Woody Stratum in the *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)
Saturated Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.83	25.00	4873.33	70.22	0.30	76.60	171.82	57.27
<i>Pinus</i>	<i>taeda</i>	0.50	15.00	266.67	3.84	0.01	2.37	21.22	7.07
<i>Magnolia</i>	<i>virginiana</i>	0.17	5.00	400.00	5.76	0.02	6.10	16.87	5.62
<i>Ilex</i>	<i>coriacea</i>	0.17	5.00	466.67	6.72	0.01	2.37	14.10	4.70
<i>Quercus</i>	<i>laurifolia</i>	0.33	10.00	200.00	2.88	0.00	1.02	13.90	4.63
<i>Morella</i>	<i>cerifera</i>	0.17	5.00	133.33	1.92	0.02	5.76	12.69	4.23
<i>Nyssa</i>	<i>biflora</i>	0.17	5.00	66.67	0.96	0.01	3.05	9.01	3.00
<i>Halesia</i>	<i>diptera</i>	0.17	5.00	133.33	1.92	0.00	0.68	7.60	2.53
<i>Triadica</i>	<i>sebigera</i>	0.17	5.00	133.33	1.92	0.00	0.68	7.60	2.53
<i>Vaccinium</i>	<i>corybosum</i>	0.17	5.00	66.67	0.96	0.00	0.34	6.30	2.10
<i>Ilex</i>	<i>opaca</i>	0.17	5.00	66.67	0.96	0.00	0.34	6.30	2.10
<i>Persea</i>	<i>palustris</i>	0.17	5.00	66.67	0.96	0.00	0.34	6.30	2.10
<i>Ilex</i>	<i>vomitaria</i>	0.17	5.00	66.67	0.96	0.00	0.34	6.30	2.10
Totals			100.00	6940.00	100.00	0.39	100.00	300.00	100.00
Midstory Class									
<i>Cyrilla</i>	<i>racemiflora</i>	1.00	15.38	1626.67	63.71	4.98	61.81	140.90	46.97
<i>Nyssa</i>	<i>biflora</i>	0.83	12.82	360.00	14.10	1.23	15.29	42.21	14.07
<i>Magnolia</i>	<i>virginiana</i>	0.83	12.82	146.67	5.74	0.57	7.13	25.69	8.56
<i>Ilex</i>	<i>opaca</i>	0.67	10.26	73.33	2.87	0.24	3.04	16.16	5.39
<i>Pinus</i>	<i>taeda</i>	0.50	7.69	66.67	2.61	0.25	3.06	13.36	4.45
<i>Ilex</i>	<i>coriacea</i>	0.50	7.69	66.67	2.61	0.11	1.37	11.67	3.89
<i>Persea</i>	<i>palustris</i>	0.50	7.69	46.67	1.83	0.11	1.31	10.83	3.61
<i>Nyssa</i>	<i>sylvatica</i>	0.17	2.56	53.33	2.09	0.23	2.91	7.56	2.52
<i>Liquidambar</i>	<i>styraciflua</i>	0.33	5.13	20.00	0.78	0.06	0.76	6.67	2.22
<i>Persea</i>	<i>borbonia</i>	0.17	2.56	40.00	1.57	0.06	0.75	4.88	1.63
<i>Magnolia</i>	<i>grandiflora</i>	0.17	2.56	13.33	0.52	0.04	0.55	3.64	1.21
<i>Acer</i>	<i>rubrum</i>	0.17	2.56	6.67	0.26	0.06	0.79	3.61	1.20
<i>Quercus</i>	<i>nigra</i>	0.17	2.56	6.67	0.26	0.06	0.72	3.54	1.18
<i>Pinus</i>	<i>palustris</i>	0.17	2.56	6.67	0.26	0.03	0.37	3.19	1.06
<i>Quercus</i>	<i>hemisphaerica</i>	0.17	2.56	13.33	0.52	0.01	0.10	3.19	1.06
<i>Vaccinium</i>	<i>corybosum</i>	0.17	2.56	6.67	0.26	0.00	0.06	2.88	0.96
Totals			100.00	2553.33	100.00	8.05	100.00	300.00	100.00
Overstory Class									
<i>Nyssa</i>	<i>biflora</i>	0.83	19.23	186.67	36.36	10.01	41.04	96.64	32.21
<i>Quercus</i>	<i>laurifolia</i>	0.83	19.23	53.33	10.39	4.43	18.16	47.78	15.93
<i>Cyrilla</i>	<i>racemiflora</i>	0.83	19.23	60.00	11.69	1.17	4.78	35.70	11.90
<i>Magnolia</i>	<i>virginiana</i>	0.50	11.54	53.33	10.39	2.13	8.72	30.65	10.22
<i>Pinus</i>	<i>taeda</i>	0.17	3.85	73.33	14.29	2.68	10.98	29.11	9.70
<i>Nyssa</i>	<i>sylvatica</i>	0.17	3.85	33.33	6.49	1.52	6.22	16.55	5.52
<i>Acer</i>	<i>rubrum</i>	0.33	7.69	13.33	2.60	1.49	6.10	16.39	5.46
<i>Quercus</i>	<i>nigra</i>	0.33	7.69	20.00	3.90	0.63	2.58	14.17	4.72
<i>Ilex</i>	<i>opaca</i>	0.33	7.69	20.00	3.90	0.35	1.43	13.01	4.34
Totals			100.00	513.33	100.00	24.38	100.00	300.00	100.00

**Table 3A. Summary of the Herbaceous Stratum in the *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Poa</i>	<i>autumnalis</i>	0.50	2.38	5.88	18.08	20.46	6.82
<i>Polygonum</i>	<i>punctatum</i>	0.50	2.38	4.75	14.62	17.00	5.67
<i>Rhynchospora</i>	<i>perplexa</i>	0.50	2.38	3.25	10.00	12.38	4.13
<i>Triadenum</i>	<i>walterii</i>	0.50	2.38	2.38	7.31	9.69	3.23
<i>Juncus</i>	<i>repens</i>	0.50	2.38	2.38	7.31	9.69	3.23
<i>Pinus</i>	<i>taeda</i>	1.00	4.76	1.38	4.23	8.99	3.00
<i>Justicia</i>	<i>ovata</i> var. <i>lanceolata</i>	1.00	4.76	0.88	2.69	7.45	2.48
<i>Dichanthelium</i>	sp.	1.00	4.76	0.38	1.15	5.92	1.97
<i>Brunnichia</i>	<i>ovata</i>	0.50	2.38	1.13	3.46	5.84	1.95
<i>Smilax</i>	<i>bona-nox</i>	0.50	2.38	1.13	3.46	5.84	1.95
<i>Styrax</i>	<i>americana</i>	0.50	2.38	1.13	3.46	5.84	1.95
<i>Crataegus</i>	<i>opaca</i>	0.50	2.38	0.88	2.69	5.07	1.69
<i>Quercus</i>	<i>laurifolia</i>	0.50	2.38	0.75	2.31	4.69	1.56
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	0.50	2.38	0.75	2.31	4.69	1.56
<i>Helenium</i>	<i>flexuosum</i>	0.50	2.38	0.50	1.54	3.92	1.31
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.50	2.38	0.38	1.15	3.53	1.18
<i>Gratiola</i>	<i>virginiana</i>	0.50	2.38	0.38	1.15	3.53	1.18
<i>Cephalanthus</i>	<i>occidentalis</i>	0.50	2.38	0.38	1.15	3.53	1.18
<i>Ilex</i>	<i>vomitaria</i>	0.50	2.38	0.38	1.15	3.53	1.18
<i>Ilex</i>	<i>opaca</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Carex</i>	sp.	0.50	2.38	0.25	0.77	3.15	1.05
<i>Nyssa</i>	<i>biflora</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Triadica</i>	<i>sebifera</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Vitis</i>	<i>rotundifolia</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Campsis</i>	<i>radicans</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Schizachyrium</i>	<i>scoparium</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Dichanthelium</i>	<i>dichotomum</i>	0.50	2.38	0.25	0.77	3.15	1.05
<i>Scleria</i>	<i>triglomerata</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Scleria</i>	sp.	0.50	2.38	0.13	0.38	2.77	0.92
<i>Dichanthelium</i>	<i>aciculare</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Nyssa</i>	<i>sylvatica</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Rubus</i>	<i>argutus</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Prunus</i>	<i>serotina</i>	0.50	2.38	0.13	0.38	2.77	0.92

**Table 3A. Summary of the Herbaceous Stratum in the *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Juniperus</i>	<i>virginiana</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Smilax</i>	<i>glauca</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Acer</i>	<i>rubrum</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Callicarpa</i>	<i>americana</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Berchemia</i>	<i>scandens</i>	0.50	2.38	0.13	0.38	2.77	0.92
<i>Diodia</i>	<i>virginiana</i>	0.50	2.38	0.13	0.38	2.77	0.92
Totals			100.00	32.50	100.00	200.00	66.67

**Table 3B. Summary of the Herbaceous Stratum in the *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Juncus</i>	<i>repens</i>	0.50	1.89	3.75	10.03	11.92	3.97
<i>Crataegus</i>	<i>opaca</i>	0.50	1.89	3.38	9.03	10.92	3.64
<i>Chasmanthium</i>	<i>laxum</i>	1.00	3.77	2.38	6.35	10.13	3.38
<i>Triadenum</i>	<i>walterii</i>	0.50	1.89	2.38	6.35	8.24	2.75
<i>Rhynchospora</i>	<i>perplexa</i>	0.50	1.89	2.25	6.02	7.91	2.64
<i>Carex</i>	<i>glaucescens</i>	0.50	1.89	2.00	5.35	7.24	2.41
<i>Dichanthelium</i>	<i>aciculare</i>	0.50	1.89	1.75	4.68	6.57	2.19
<i>Carex</i>	<i>debilis</i>	0.50	1.89	1.63	4.35	6.23	2.08
<i>Smilax</i>	<i>rotundifolia</i>	1.00	3.77	0.88	2.34	6.11	2.04
<i>Styrax</i>	<i>americana</i>	0.50	1.89	1.25	3.34	5.23	1.74
<i>Scleria</i>	<i>oligantha</i>	0.50	1.89	1.13	3.01	4.90	1.63
<i>Justicia</i>	<i>ovata</i>	0.50	1.89	1.13	3.01	4.90	1.63
<i>Baccharis</i>	<i>halimifolia</i>	0.50	1.89	1.00	2.68	4.56	1.52
<i>Polygonum</i>	<i>punctatum</i>	0.50	1.89	1.00	2.68	4.56	1.52
<i>Triadica</i>	<i>sebifera</i>	0.50	1.89	1.00	2.68	4.56	1.52
<i>Carex</i>	<i>abscondita</i>	0.50	1.89	0.88	2.34	4.23	1.41
<i>Brunnichia</i>	<i>ovata</i>	0.50	1.89	0.75	2.01	3.89	1.30
<i>Dichanthelium</i>	<i>commutatum</i>	0.50	1.89	0.50	1.34	3.22	1.07
<i>Eupatorium</i>	<i>capillifolium</i>	0.50	1.89	0.50	1.34	3.22	1.07
<i>Scoparia</i>	<i>dulcis</i>	0.50	1.89	0.50	1.34	3.22	1.07
<i>Mikania</i>	<i>scandens</i>	0.50	1.89	0.50	1.34	3.22	1.07
<i>Phyla</i>	<i>nodiflora</i>	0.50	1.89	0.50	1.34	3.22	1.07
<i>Andropogon</i>	<i>glomeratus</i>	0.50	1.89	0.50	1.34	3.22	1.07
<i>Dichanthelium</i>	<i>dichotomum</i>	0.50	1.89	0.38	1.00	2.89	0.96
<i>Ilex</i>	<i>vomitaria</i>	0.50	1.89	0.38	1.00	2.89	0.96
<i>Quercus</i>	<i>laurifolia</i>	0.50	1.89	0.38	1.00	2.89	0.96
<i>Xyris</i>	<i>ambigua</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Carex</i>	<i>crebriflora</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Cyrilla</i>	<i>racemiflora</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Eleocharis</i>	<i>microcarpa</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Alnus</i>	<i>serrulata</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Polypremum</i>	<i>procumbens</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Carex</i>	<i>atlantica</i>	0.50	1.89	0.25	0.67	2.56	0.85

**Table 3B. Summary of the Herbaceous Stratum in the *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Campsis</i>	<i>radicans</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Gratiola</i>	<i>virginiana</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Saururus</i>	<i>cernuus</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Nyssa</i>	<i>biflora</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	0.50	1.89	0.25	0.67	2.56	0.85
<i>Pallavicinia</i>	sp.	0.50	1.89	0.25	0.67	2.56	0.85
<i>Aster</i>	sp.	0.50	1.89	0.13	0.33	2.22	0.74
<i>Andropogon</i>	<i>virginicus</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Pinus</i>	<i>taeda</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Scleria</i>	<i>triglomerata</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Diodia</i>	<i>teres</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Lindernia</i>	<i>dubia</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Hypericum</i>	<i>crus-andreae</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Taxodium</i>	<i>distichum</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Cephalanthus</i>	<i>occidentalis</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Hydrocotyle</i>	<i>umbellata</i>	0.50	1.89	0.13	0.33	2.22	0.74
<i>Justicia</i>	<i>ovata</i> var. <i>lanceolata</i>	0.50	1.89	0.13	0.33	2.22	0.74
Totals			100.00	37.38	100.00	200.00	66.67

**Table 3C. Summary of the Woody Stratum in the *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Campsis</i>	<i>radicans</i>	0.50	50.00	200.00	50.00	0.02	80.00	180.00	60.00
<i>Brunnichia</i>	<i>ovata</i>	0.50	50.00	200.00	50.00	0.00	20.00	120.00	40.00
Totals			100.00	400.00	100.00	0.02	100.00	300.00	100.00
Midstory Class									
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.50	11.11	500.00	40.98	1.95	43.12	95.21	31.74
<i>Crataegus</i>	<i>opaca</i>	0.50	11.11	180.00	14.75	0.92	20.31	46.18	15.39
<i>Nyssa</i>	<i>biflora</i>	0.50	11.11	160.00	13.11	0.97	21.53	45.75	15.25
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	11.11	140.00	11.48	0.40	8.80	31.38	10.46
<i>Nyssa</i>	<i>sylvatica</i>	0.50	11.11	80.00	6.56	0.14	3.17	20.84	6.95
<i>Vaccinium</i>	<i>corymbosum</i>	0.50	11.11	80.00	6.56	0.05	1.06	18.73	6.24
<i>Triadica</i>	<i>sebifera</i>	0.50	11.11	40.00	3.28	0.04	0.87	15.26	5.09
<i>Alnus</i>	<i>serrulata</i>	0.50	11.11	20.00	1.64	0.03	0.59	13.34	4.45
<i>Cephalanthus</i>	<i>occidentalis</i>	0.50	11.11	20.00	1.64	0.03	0.56	13.31	4.44
Totals			100.00	1220.00	100.00	4.51	100.00	300.00	100.00
Overstory Class									
<i>Nyssa</i>	<i>biflora</i>	0.50	11.11	420.00	50.00	12.52	32.50	93.61	31.20
<i>Pinus</i>	<i>taeda</i>	0.50	11.11	100.00	11.90	14.56	37.81	60.82	20.27
<i>Quercus</i>	<i>laurifolia</i>	1.00	22.22	80.00	9.52	5.03	13.05	44.80	14.93
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	22.22	80.00	9.52	2.07	5.38	37.13	12.38
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.50	11.11	80.00	9.52	1.92	4.98	25.61	8.54
<i>Triadica</i>	<i>sebifera</i>	0.50	11.11	60.00	7.14	1.01	2.61	20.86	6.95
<i>Nyssa</i>	<i>sylvatica</i>	0.50	11.11	20.00	2.38	1.41	3.67	17.16	5.72
Totals			100.00	840.00	100.00	38.52	100.00	300.00	100.00

**Table 3D. Summary of the Woody Stratum in the *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Campsis</i>	<i>radicans</i>	0.50	25.00	200.00	16.67	0.06	64.00	105.67	35.22
<i>Crataegus</i>	<i>opaca</i>	0.50	25.00	600.00	50.00	0.01	12.00	87.00	29.00
<i>Alnus</i>	<i>serrulata</i>	0.50	25.00	200.00	16.67	0.02	20.00	61.67	20.56
<i>Quercus</i>	<i>laurifolia</i>	0.50	25.00	200.00	16.67	0.00	4.00	45.67	15.22
Totals			100.00	1200.00	100.00	0.10	100.00	300.00	100.00
Midstory Class									
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.50	7.14	340.00	28.33	2.37	44.94	80.41	26.80
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	14.29	180.00	15.00	0.49	9.28	38.57	12.86
<i>Crataegus</i>	<i>opaca</i>	0.50	7.14	180.00	15.00	0.79	14.96	37.10	12.37
<i>Nyssa</i>	<i>biflora</i>	1.00	14.29	120.00	10.00	0.59	11.14	35.42	11.81
<i>Triadica</i>	<i>sebifera</i>	0.50	7.14	100.00	8.33	0.44	8.27	23.75	7.92
<i>Quercus</i>	<i>laurifolia</i>	1.00	14.29	60.00	5.00	0.14	2.70	21.98	7.33
<i>Styrax</i>	<i>americana</i>	0.50	7.14	100.00	8.33	0.17	3.17	18.65	6.22
<i>Cyrilla</i>	<i>racemiflora</i>	0.50	7.14	40.00	3.33	0.11	2.15	12.62	4.21
<i>Diospyros</i>	<i>virginiana</i>	0.50	7.14	40.00	3.33	0.04	0.79	11.27	3.76
<i>Pinus</i>	<i>taeda</i>	0.50	7.14	20.00	1.67	0.13	2.41	11.22	3.74
<i>Cornus</i>	<i>foemina</i>	0.50	7.14	20.00	1.67	0.01	0.19	9.00	3.00
Totals			100.00	1200.00	100.00	5.27	100.00	300.00	100.00
Overstory Class									
<i>Nyssa</i>	<i>biflora</i>	1.00	22.22	320.00	55.17	10.89	45.11	122.50	40.83
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	22.22	80.00	13.79	4.07	16.86	52.87	17.62
<i>Pinus</i>	<i>taeda</i>	0.50	11.11	60.00	10.34	6.85	28.34	49.80	16.60
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.50	11.11	60.00	10.34	1.27	5.27	26.72	8.91
<i>Triadica</i>	<i>sebifera</i>	0.50	11.11	20.00	3.45	0.54	2.23	16.79	5.60
<i>Crataegus</i>	<i>opaca</i>	0.50	11.11	20.00	3.45	0.27	1.10	15.66	5.22
<i>Quercus</i>	<i>laurifolia</i>	0.50	11.11	20.00	3.45	0.27	1.10	15.66	5.22
Totals			100.00	580.00	100.00	24.15	100.00	300.00	100.00

**Table 4A. Summary of the Herbaceous Stratum in the *Fagus grandifolia*-*Quercus alba*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Smilax</i>	<i>pumila</i>	1.00	4.55	6.50	17.87	22.41	7.47
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	2.27	6.50	17.87	20.14	6.71
<i>Symplocos</i>	<i>tinctoria</i>	1.00	4.55	4.50	12.37	16.92	5.64
<i>Mitchella</i>	<i>repens</i>	1.00	4.55	3.00	8.25	12.79	4.26
<i>Ilex</i>	<i>vomitorea</i>	0.50	2.27	3.25	8.93	11.21	3.74
<i>Ilex</i>	<i>opaca</i>	1.00	4.55	1.25	3.44	7.98	2.66
<i>Callicarpa</i>	<i>americana</i>	1.00	4.55	1.13	3.09	7.64	2.55
<i>Smilax</i>	<i>glauca</i>	1.00	4.55	0.88	2.41	6.95	2.32
<i>Persea</i>	<i>palustris</i>	1.00	4.55	0.50	1.37	5.92	1.97
<i>Sassafras</i>	<i>albidum</i>	1.00	4.55	0.50	1.37	5.92	1.97
<i>Vitis</i>	<i>rotundifolia</i>	1.00	4.55	0.25	0.69	5.23	1.74
<i>Quercus</i>	<i>nigra</i>	0.50	2.27	1.00	2.75	5.02	1.67
<i>Quercus</i>	<i>alba</i>	0.50	2.27	0.75	2.06	4.33	1.44
<i>Ostrya</i>	<i>virginiana</i>	0.50	2.27	0.75	2.06	4.33	1.44
<i>Sebastiania</i>	<i>fruticosa</i>	0.50	2.27	0.63	1.72	3.99	1.33
<i>Dichanthelium</i>	<i>commutatum</i>	0.50	2.27	0.63	1.72	3.99	1.33
<i>Prunus</i>	<i>caroliniana</i>	0.50	2.27	0.63	1.72	3.99	1.33
<i>Cornus</i>	<i>florida</i>	0.50	2.27	0.50	1.37	3.65	1.22
<i>Gelsemium</i>	<i>sempervirens</i>	0.50	2.27	0.50	1.37	3.65	1.22
<i>Magnolia</i>	<i>grandiflora</i>	0.50	2.27	0.38	1.03	3.30	1.10
<i>Smilax</i>	<i>bona-nox</i>	0.50	2.27	0.38	1.03	3.30	1.10
<i>Scleria</i>	<i>oligantha</i>	0.50	2.27	0.25	0.69	2.96	0.99
<i>Pinus</i>	<i>taeda</i>	0.50	2.27	0.25	0.69	2.96	0.99
<i>Ilex</i>	<i>ambigua</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Epifagus</i>	<i>virginiana</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Styrax</i>	<i>americana</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Dichanthelium</i>	<i>boscii</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Aralia</i>	<i>spinosa</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Fagus</i>	<i>grandifolia</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Vaccinium</i>	<i>elliottii</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Carya</i>	<i>tomentosa</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Arisaema</i>	<i>triphylla</i> var. <i>triphylla</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Vaccinium</i>	<i>arboreum</i>	0.50	2.27	0.13	0.34	2.62	0.87
<i>Fraxinus</i>	<i>americana</i>	0.50	2.27	0.13	0.34	2.62	0.87
Totals			100.00	36.38	100.00	200.00	66.67

**Table 4B. Summary of the Herbaceous Stratum in the *Fagus grandifolia*-*Quercus alba*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Symplocos</i>	<i>tinctoria</i>	1.00	5.71	4.88	18.22	23.94	7.98
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	5.71	3.50	13.08	18.80	6.27
<i>Ilex</i>	<i>vomitaria</i>	1.00	5.71	3.13	11.68	17.40	5.80
<i>Smilax</i>	<i>pumila</i>	1.00	5.71	3.13	11.68	17.40	5.80
<i>Mitchella</i>	<i>repens</i>	1.00	5.71	3.00	11.21	16.93	5.64
<i>Persea</i>	<i>borbonia</i>	1.00	5.71	1.25	4.67	10.39	3.46
<i>Pinus</i>	<i>taeda</i>	1.00	5.71	0.75	2.80	8.52	2.84
<i>Smilax</i>	<i>bona-nox</i>	1.00	5.71	0.50	1.87	7.58	2.53
<i>Sebastiania</i>	<i>fruticosa</i>	0.50	2.86	0.88	3.27	6.13	2.04
<i>Ilex</i>	<i>opaca</i>	0.50	2.86	0.75	2.80	5.66	1.89
<i>Dichanthelium</i>	<i>commutatum</i>	0.50	2.86	0.63	2.34	5.19	1.73
<i>Callicarpa</i>	<i>americana</i>	0.50	2.86	0.63	2.34	5.19	1.73
<i>Prunus</i>	<i>caroliniana</i>	0.50	2.86	0.50	1.87	4.73	1.58
<i>Quercus</i>	<i>alba</i>	0.50	2.86	0.50	1.87	4.73	1.58
<i>Gelsemium</i>	<i>sempervirens</i>	0.50	2.86	0.50	1.87	4.73	1.58
<i>Cornus</i>	<i>florida</i>	0.50	2.86	0.38	1.40	4.26	1.42
<i>Smilax</i>	<i>glauca</i>	0.50	2.86	0.38	1.40	4.26	1.42
<i>Scleria</i>	<i>oligantha</i>	0.50	2.86	0.25	0.93	3.79	1.26
<i>Ostrya</i>	<i>virginiana</i>	0.50	2.86	0.25	0.93	3.79	1.26
<i>Ilex</i>	<i>ambigua</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Magnolia</i>	<i>virginiana</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Nyssa</i>	<i>sylvatica</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Quercus</i>	<i>nigra</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Vaccinium</i>	<i>corybosum</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Chasmanthium</i>	<i>laxum</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Panicum</i>	<i>dichotomum</i>	0.50	2.86	0.13	0.47	3.32	1.11
<i>Viburnum</i>	<i>acerifolium</i>	0.50	2.86	0.13	0.47	3.32	1.11
Totals			100.00	26.75	100.00	200.00	66.67

**Table 4C. Summary of the Woody Stratum in the *Fagus grandifolia*-*Quercus alba*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Symplocos</i>	<i>tinctoria</i>	0.50	12.50	4200.00	55.26	0.19	44.04	111.80	37.27
<i>Ilex</i>	<i>vomitorea</i>	0.50	12.50	1400.00	18.42	0.14	33.03	63.95	21.32
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	12.50	200.00	2.63	0.06	14.68	29.81	9.94
<i>Prunus</i>	<i>caroliniana</i>	0.50	12.50	800.00	10.53	0.02	3.67	26.70	8.90
<i>Persea</i>	<i>palustris</i>	0.50	12.50	400.00	5.26	0.01	1.83	19.60	6.53
<i>Nyssa</i>	<i>sylvatica</i>	0.50	12.50	200.00	2.63	0.00	0.92	16.05	5.35
<i>Callicarpa</i>	<i>americana</i>	0.50	12.50	200.00	2.63	0.00	0.92	16.05	5.35
<i>Magnolia</i>	<i>grandiflora</i>	0.50	12.50	200.00	2.63	0.00	0.92	16.05	5.35
Totals			100.00	7600.00	100.00	0.43	100.00	300.00	100.00
Midstory Class									
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	5.00	740.00	37.00	1.80	40.68	82.68	27.56
<i>Ilex</i>	<i>vomitorea</i>	1.00	10.00	520.00	26.00	0.54	12.15	48.15	16.05
<i>Ilex</i>	<i>opaca</i>	1.00	10.00	120.00	6.00	0.79	17.89	33.89	11.30
<i>Cornus</i>	<i>florida</i>	1.00	10.00	240.00	12.00	0.20	4.45	26.45	8.82
<i>Nyssa</i>	<i>sylvatica</i>	1.00	10.00	40.00	2.00	0.26	5.83	17.83	5.94
<i>Fraxinus</i>	<i>americana</i>	1.00	10.00	40.00	2.00	0.18	4.13	16.13	5.38
<i>Symplocos</i>	<i>tinctoria</i>	0.50	5.00	60.00	3.00	0.21	4.82	12.82	4.27
<i>Quercus</i>	<i>nigra</i>	0.50	5.00	60.00	3.00	0.10	2.33	10.33	3.44
<i>Quercus</i>	<i>alba</i>	0.50	5.00	20.00	1.00	0.16	3.56	9.56	3.19
<i>Prunus</i>	<i>caroliniana</i>	0.50	5.00	60.00	3.00	0.05	1.19	9.19	3.06
<i>Fagus</i>	<i>grandifolia</i>	0.50	5.00	20.00	1.00	0.05	1.08	7.08	2.36
<i>Ilex</i>	<i>ambigua</i>	0.50	5.00	20.00	1.00	0.04	0.89	6.89	2.30
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	5.00	20.00	1.00	0.03	0.57	6.57	2.19
<i>Carpinus</i>	<i>caroliniana</i>	0.50	5.00	20.00	1.00	0.01	0.22	6.22	2.07
<i>Persea</i>	<i>palustris</i>	0.50	5.00	20.00	1.00	0.01	0.22	6.22	2.07
Totals			100.00	2000.00	100.00	4.42	100.00	300.00	100.00
Overstory Class									
<i>Fagus</i>	<i>grandifolia</i>	1.00	25.00	80.00	25.00	11.96	55.17	105.17	35.06
<i>Ostrya</i>	<i>virginiana</i>	1.00	25.00	80.00	25.00	2.36	10.89	60.89	20.30
<i>Ilex</i>	<i>opaca</i>	0.50	12.50	80.00	25.00	1.92	8.84	46.34	15.45
<i>Quercus</i>	<i>nigra</i>	0.50	12.50	20.00	6.25	3.04	14.03	32.78	10.93
<i>Quercus</i>	<i>alba</i>	0.50	12.50	40.00	12.50	1.50	6.90	31.90	10.63
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	12.50	20.00	6.25	0.90	4.17	22.92	7.64
Totals			100.00	320.00	100.00	21.68	100.00	300.00	100.00

**Table 4D. Summary of the Woody Stratum in the *Fagus grandifolia*-*Quercus alba*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	0.50	14.29	2200.00	33.33	0.18	58.75	106.37	35.46
<i>Symplocos</i>	<i>tinctoria</i>	1.00	28.57	2200.00	33.33	0.07	22.50	84.40	28.13
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	14.29	1400.00	21.21	0.03	10.00	45.50	15.17
<i>Persea</i>	<i>borbonia</i>	0.50	14.29	400.00	6.06	0.01	2.50	22.85	7.62
<i>Prunus</i>	<i>caroliniana</i>	0.50	14.29	200.00	3.03	0.02	5.00	22.32	7.44
<i>Vaccinium</i>	<i>corybosum</i>	0.50	14.29	200.00	3.03	0.00	1.25	18.57	6.19
Totals			100.00	6600.00	100.00	0.31	100.00	300.00	100.00
Midstory Class									
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	5.88	800.00	47.62	2.13	52.56	106.07	35.36
<i>Ilex</i>	<i>vomitorea</i>	1.00	11.76	400.00	23.81	0.48	11.79	47.37	15.79
<i>Nyssa</i>	<i>sylvatica</i>	1.00	11.76	60.00	3.57	0.36	8.83	24.16	8.05
<i>Ilex</i>	<i>opaca</i>	1.00	11.76	60.00	3.57	0.21	5.07	20.41	6.80
<i>Fraxinus</i>	<i>americana</i>	1.00	11.76	40.00	2.38	0.18	4.51	18.65	6.22
<i>Symplocos</i>	<i>tinctoria</i>	0.50	5.88	100.00	5.95	0.27	6.78	18.61	6.20
<i>Prunus</i>	<i>caroliniana</i>	0.50	5.88	60.00	3.57	0.08	1.95	11.41	3.80
<i>Ostrya</i>	<i>virginiana</i>	0.50	5.88	20.00	1.19	0.16	3.89	10.96	3.65
<i>Vaccinium</i>	<i>arboreum</i>	0.50	5.88	40.00	2.38	0.05	1.27	9.54	3.18
<i>Fagus</i>	<i>grandifolia</i>	0.50	5.88	20.00	1.19	0.07	1.84	8.91	2.97
<i>Cornus</i>	<i>florida</i>	0.50	5.88	40.00	2.38	0.02	0.49	8.75	2.92
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	5.88	20.00	1.19	0.03	0.79	7.86	2.62
<i>Carpinus</i>	<i>caroliniana</i>	0.50	5.88	20.00	1.19	0.01	0.24	7.32	2.44
Totals			100.00	1680.00	100.00	4.04	100.00	300.00	100.00
Overstory Class									
<i>Fagus</i>	<i>grandifolia</i>	1.00	20.00	40.00	12.50	9.41	47.71	80.21	26.74
<i>Ilex</i>	<i>opaca</i>	1.00	20.00	120.00	37.50	3.44	17.44	74.94	24.98
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	20.00	60.00	18.75	3.58	18.15	56.90	18.97
<i>Ostrya</i>	<i>virginiana</i>	1.00	20.00	40.00	12.50	1.15	5.83	38.33	12.78
<i>Quercus</i>	<i>alba</i>	0.50	10.00	40.00	12.50	1.55	7.84	30.34	10.11
<i>Persea</i>	<i>palustris</i>	0.50	10.00	20.00	6.25	0.60	3.03	19.28	6.43
Totals			100.00	320.00	100.00	19.73	100.00	300.00	100.00

**Table 5A. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Chasmanthium</i>	<i>laxum</i>	0.50	2.38	6.88	20.55	22.93	7.64
<i>Arundinaria</i>	<i>gigantea</i>	0.33	1.59	3.13	9.34	10.93	3.64
<i>Bignonia</i>	<i>capreolata</i>	0.50	2.38	2.42	7.22	9.60	3.20
<i>Carex</i>	<i>debilis</i> var. <i>debilis</i>	0.50	2.38	1.83	5.48	7.86	2.62
<i>Ilex</i>	<i>vomitorea</i>	1.00	4.76	0.96	2.86	7.63	2.54
<i>Sebastiania</i>	<i>fruticosa</i>	0.50	2.38	1.42	4.23	6.62	2.21
<i>Pinus</i>	<i>taeda</i>	0.67	3.17	0.71	2.12	5.29	1.76
<i>Ilex</i>	<i>opaca</i>	0.83	3.97	0.42	1.25	5.21	1.74
<i>Persea</i>	<i>palustris</i>	0.67	3.17	0.67	1.99	5.17	1.72
<i>Cyrilla</i>	<i>racemiflora</i>	0.33	1.59	1.17	3.49	5.07	1.69
<i>Rhododendron</i>	<i>viscosum</i>	0.17	0.79	1.38	4.11	4.90	1.63
<i>Smilax</i>	<i>glauca</i>	0.67	3.17	0.54	1.62	4.79	1.60
<i>Carex</i>	<i>abscondita</i>	0.33	1.59	0.96	2.86	4.45	1.48
<i>Vitis</i>	<i>rotundifolia</i>	0.67	3.17	0.42	1.25	4.42	1.47
<i>Carpinus</i>	<i>caroliniana</i>	0.50	2.38	0.58	1.74	4.12	1.37
<i>Dichanthelium</i>	<i>commutatum</i>	0.50	2.38	0.58	1.74	4.12	1.37
<i>Smilax</i>	<i>bona-nox</i>	0.67	3.17	0.29	0.87	4.05	1.35
<i>Acer</i>	<i>rubrum</i>	0.67	3.17	0.25	0.75	3.92	1.31
<i>Carex</i>	<i>digitalis</i>	0.33	1.59	0.71	2.12	3.70	1.23
<i>Toxicodendron</i>	<i>radicans</i>	0.50	2.38	0.42	1.25	3.63	1.21
<i>Vaccinium</i>	<i>corymbosum</i>	0.33	1.59	0.63	1.87	3.46	1.15
<i>Nyssa</i>	<i>sylvatica</i>	0.50	2.38	0.33	1.00	3.38	1.13
<i>Mitchella</i>	<i>repens</i>	0.50	2.38	0.25	0.75	3.13	1.04
<i>Triadica</i>	<i>sebifera</i>	0.33	1.59	0.46	1.37	2.96	0.99
<i>Quercus</i>	<i>hemisphaerica</i>	0.33	1.59	0.46	1.37	2.96	0.99
<i>Sassafras</i>	<i>albidum</i>	0.50	2.38	0.17	0.50	2.88	0.96
<i>Quercus</i>	<i>nigra</i>	0.33	1.59	0.42	1.25	2.83	0.94
<i>Carex</i>	<i>cherokeensis</i>	0.17	0.79	0.67	1.99	2.79	0.93
<i>Scleria</i>	<i>oligantha</i>	0.33	1.59	0.33	1.00	2.58	0.86
<i>Smilax</i>	<i>pumila</i>	0.33	1.59	0.25	0.75	2.33	0.78
<i>Dichanthelium</i>	<i>aciculare</i>	0.17	0.79	0.50	1.49	2.29	0.76
<i>Rubus</i>	<i>argutus</i>	0.33	1.59	0.21	0.62	2.21	0.74
<i>Berchemia</i>	<i>scandens</i>	0.33	1.59	0.21	0.62	2.21	0.74
<i>Liquidambar</i>	<i>styraciflua</i>	0.33	1.59	0.21	0.62	2.21	0.74
<i>Viola</i>	<i>sororia</i>	0.33	1.59	0.13	0.37	1.96	0.65
<i>Gelsemium</i>	<i>sempervirens</i>	0.33	1.59	0.08	0.25	1.84	0.61
<i>Lysimachia</i>	<i>radicans</i>	0.17	0.79	0.33	1.00	1.79	0.60

**Table 5A. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Lyonia</i>	<i>mariana</i>	0.17	0.79	0.21	0.62	1.42	0.47
<i>Leersia</i>	<i>virginica</i>	0.17	0.79	0.17	0.50	1.29	0.43
<i>Oplismenus</i>	<i>hirtellus</i>	0.17	0.79	0.13	0.37	1.17	0.39
<i>Quercus</i>	<i>pagoda</i>	0.17	0.79	0.13	0.37	1.17	0.39
<i>Styrax</i>	<i>americana</i>	0.17	0.79	0.13	0.37	1.17	0.39
<i>Lycopus</i>	<i>virginicus</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Pluchia</i>	<i>camphorata</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Elephantopus</i>	<i>carolinianus</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Paspalum</i>	<i>floridanum</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Ilex</i>	<i>coriacea</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Smilax</i>	<i>smallii</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Vaccinium</i>	<i>stamineum</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Dichanthelium</i>	<i>dichotomum</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Nyssa</i>	<i>biflora</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Oxalis</i>	<i>dillenii</i>	0.17	0.79	0.08	0.25	1.04	0.35
<i>Boehmeria</i>	<i>cylindrica</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Viburnum</i>	<i>dentatum</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Asclepias</i>	<i>longifolia</i> var. <i>longifolia</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Ulmus</i>	<i>alata</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Hamamelis</i>	<i>virginiana</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Pteridium</i>	<i>aquilinum</i> var. <i>pseudocaudatum</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Magnolia</i>	<i>grandiflora</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Aristolochia</i>	<i>serpentaria</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Vaccinium</i>	<i>arboreum</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Justicia</i>	<i>ovata</i> var. <i>lanceolata</i>	0.17	0.79	0.04	0.12	0.92	0.31
<i>Oxalis</i>	<i>debilis</i> var. <i>corymbosa</i>	0.17	0.79	0.04	0.12	0.92	0.31
Totals			100.00	33.46	100.00	200.00	66.67

**Table 5B. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Chasmanthium</i>	<i>laxum</i>	0.60	2.73	5.35	19.28	22.01	7.34
<i>Arundinaria</i>	<i>gigantea</i>	0.60	2.73	1.75	6.31	9.03	3.01
<i>Carex</i>	<i>caroliniana</i>	0.60	2.73	1.65	5.95	8.67	2.89
<i>Bignonia</i>	<i>capreolata</i>	0.60	2.73	1.60	5.77	8.49	2.83
<i>Carex</i>	<i>debilis</i> var. <i>debilis</i>	0.60	2.73	1.20	4.32	7.05	2.35
<i>Dichantherium</i>	<i>commutatum</i>	0.60	2.73	1.20	4.32	7.05	2.35
<i>Toxicodendron</i>	<i>radicans</i>	0.60	2.73	1.05	3.78	6.51	2.17
<i>Cyrilla</i>	<i>racemiflora</i>	0.40	1.82	1.15	4.14	5.96	1.99
<i>Smilax</i>	<i>glauca</i>	0.80	3.64	0.45	1.62	5.26	1.75
<i>Carex</i>	<i>abscondita</i>	0.40	1.82	0.90	3.24	5.06	1.69
<i>Smilax</i>	<i>bona-nox</i>	0.80	3.64	0.35	1.26	4.90	1.63
<i>Sebastiana</i>	<i>fruticosa</i>	0.60	2.73	0.45	1.62	4.35	1.45
<i>Rhododendron</i>	<i>viscosum</i>	0.20	0.91	0.90	3.24	4.15	1.38
<i>Acer</i>	<i>rubrum</i>	0.60	2.73	0.35	1.26	3.99	1.33
<i>Mitchella</i>	<i>repens</i>	0.60	2.73	0.35	1.26	3.99	1.33
<i>Pinus</i>	<i>taeda</i>	0.60	2.73	0.35	1.26	3.99	1.33
<i>Ilex</i>	<i>opaca</i>	0.60	2.73	0.30	1.08	3.81	1.27
<i>Quercus</i>	<i>nigra</i>	0.60	2.73	0.30	1.08	3.81	1.27
<i>Carex</i>	<i>digitalis</i>	0.40	1.82	0.45	1.62	3.44	1.15
<i>Vaccinium</i>	<i>corybosum</i>	0.20	0.91	0.70	2.52	3.43	1.14
<i>Vitis</i>	<i>rotundifolia</i>	0.60	2.73	0.15	0.54	3.27	1.09
<i>Berchemia</i>	<i>scandens</i>	0.40	1.82	0.40	1.44	3.26	1.09
<i>Triadica</i>	<i>sebifera</i>	0.40	1.82	0.35	1.26	3.08	1.03
<i>Scleria</i>	<i>oligantha</i>	0.40	1.82	0.30	1.08	2.90	0.97
<i>Justicia</i>	<i>ovata</i>	0.20	0.91	0.55	1.98	2.89	0.96
<i>Liquidambar</i>	<i>styraciflua</i>	0.40	1.82	0.25	0.90	2.72	0.91
<i>Persea</i>	<i>borbonia</i>	0.20	0.91	0.45	1.62	2.53	0.84
<i>Vaccinium</i>	<i>arboreum</i>	0.40	1.82	0.15	0.54	2.36	0.79
<i>Aristolochia</i>	<i>serpentaria</i>	0.40	1.82	0.15	0.54	2.36	0.79
<i>Ilex</i>	<i>vomitorea</i>	0.40	1.82	0.15	0.54	2.36	0.79
<i>Chasmanthium</i>	<i>latifolium</i>	0.20	0.91	0.40	1.44	2.35	0.78
<i>Oplismenus</i>	<i>hirtellus</i>	0.20	0.91	0.40	1.44	2.35	0.78
<i>Aristolochia</i>	<i>reticulata</i>	0.20	0.91	0.40	1.44	2.35	0.78
<i>Viola</i>	<i>sororia</i>	0.40	1.82	0.10	0.36	2.18	0.73
<i>Gelsemium</i>	<i>sempervirens</i>	0.40	1.82	0.10	0.36	2.18	0.73
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.40	1.82	0.10	0.36	2.18	0.73
<i>Dichantherium</i>	<i>sphaerocarpon</i>	0.20	0.91	0.35	1.26	2.17	0.72

**Table 5B. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Rubus</i>	<i>argutus</i>	0.20	0.91	0.30	1.08	1.99	0.66
<i>Carex</i>	<i>intumescens</i>	0.20	0.91	0.20	0.72	1.63	0.54
<i>Quercus</i>	<i>pagoda</i>	0.20	0.91	0.15	0.54	1.45	0.48
<i>Nyssa</i>	<i>biflora</i>	0.20	0.91	0.15	0.54	1.45	0.48
<i>Magnolia</i>	<i>virginiana</i>	0.20	0.91	0.10	0.36	1.27	0.42
<i>Hypericum</i>	<i>hypericoides</i>	0.20	0.91	0.10	0.36	1.27	0.42
<i>Callicarpa</i>	<i>americana</i>	0.20	0.91	0.10	0.36	1.27	0.42
<i>Carex</i>	<i>cherokeensis</i>	0.20	0.91	0.10	0.36	1.27	0.42
<i>Nyssa</i>	<i>sylvatica</i>	0.20	0.91	0.10	0.36	1.27	0.42
<i>Rhynchospora</i>	<i>inexpansa</i>	0.20	0.91	0.10	0.36	1.27	0.42
<i>Oxalis</i>	<i>dillenii</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Ilex</i>	<i>coriacea</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Hypoxis</i>	<i>hirsuta</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Symplocos</i>	<i>tinctoria</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Tragia</i>	<i>betonicifolia</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Carex</i>	<i>corrugata</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Lyonia</i>	<i>mariana</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Persea</i>	<i>palustris</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Hypericum</i>	<i>crus-andreae</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Quercus</i>	<i>michauxii</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Campsis</i>	<i>radicans</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Styrax</i>	<i>americana</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Quercus</i>	<i>hemisphaerica</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.20	0.91	0.05	0.18	1.09	0.36
<i>Sassafras</i>	<i>albidum</i>	0.20	0.91	0.05	0.18	1.09	0.36
Totals			100.00	27.75	100.00	200.00	66.67

**Table 5C. Summary of the Woody Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.43	10.71	1948.57	27.68	0.21	38.16	76.55	25.52
<i>Rhododendron</i>	<i>viscosum</i>	0.14	3.57	2114.29	30.03	0.07	12.15	45.76	15.25
<i>Vaccinium</i>	<i>corymbosum</i>	0.14	3.57	1085.71	15.42	0.10	17.42	36.41	12.14
<i>Ilex</i>	<i>vomitorea</i>	0.57	14.29	291.43	4.14	0.03	4.52	22.94	7.65
<i>Ilex</i>	<i>opaca</i>	0.29	7.14	171.43	2.44	0.03	5.27	14.84	4.95
<i>Ilex</i>	<i>coriacea</i>	0.29	7.14	228.57	3.25	0.02	3.85	14.24	4.75
<i>Sebastiania</i>	<i>fruticosa</i>	0.29	7.14	285.71	4.06	0.01	1.82	13.02	4.34
<i>Magnolia</i>	<i>virginiana</i>	0.29	7.14	171.43	2.44	0.02	2.84	12.41	4.14
<i>Carpinus</i>	<i>caroliniana</i>	0.14	3.57	114.29	1.62	0.02	4.05	9.25	3.08
<i>Persea</i>	<i>palustris</i>	0.14	3.57	57.14	0.81	0.02	3.24	7.62	2.54
<i>Vaccinium</i>	<i>stamineum</i>	0.14	3.57	114.29	1.62	0.01	1.01	6.21	2.07
<i>Erechtites</i>	<i>hieraciifolia</i>	0.14	3.57	57.14	0.81	0.01	1.82	6.21	2.07
<i>Acer</i>	<i>rubrum</i>	0.14	3.57	57.14	0.81	0.00	0.81	5.19	1.73
<i>Nyssa</i>	<i>sylvatica</i>	0.14	3.57	57.14	0.81	0.00	0.81	5.19	1.73
<i>Magnolia</i>	<i>grandiflora</i>	0.14	3.57	57.14	0.81	0.00	0.81	5.19	1.73
<i>Vaccinium</i>	<i>arboreum</i>	0.14	3.57	57.14	0.81	0.00	0.81	5.19	1.73
<i>Bignonia</i>	<i>capreolata</i>	0.14	3.57	57.14	0.81	0.00	0.20	4.59	1.53
<i>Cephalanthus</i>	<i>occidentalis</i>	0.14	3.57	57.14	0.81	0.00	0.20	4.59	1.53
<i>Lyonia</i>	<i>mariana</i>	0.14	3.57	57.14	0.81	0.00	0.20	4.59	1.53
Totals			100.00	7040.00	100.00	0.55	100.00	300.00	100.00
Midstory Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.43	5.56	480.00	34.57	0.72	24.27	64.39	21.46
<i>Nyssa</i>	<i>sylvatica</i>	0.71	9.26	142.86	10.29	0.40	13.58	33.13	11.04
<i>Ilex</i>	<i>opaca</i>	0.71	9.26	120.00	8.64	0.42	14.12	32.02	10.67
<i>Ilex</i>	<i>vomitorea</i>	0.57	7.41	125.71	9.05	0.19	6.24	22.70	7.57
<i>Carpinus</i>	<i>caroliniana</i>	0.43	5.56	68.57	4.94	0.28	9.38	19.88	6.63
<i>Pinus</i>	<i>taeda</i>	0.29	3.70	80.00	5.76	0.24	7.93	17.40	5.80
<i>Quercus</i>	<i>nigra</i>	0.43	5.56	28.57	2.06	0.10	3.21	10.82	3.61
<i>Liquidambar</i>	<i>styraciflua</i>	0.29	3.70	45.71	3.29	0.11	3.58	10.58	3.53
<i>Magnolia</i>	<i>virginiana</i>	0.43	5.56	34.29	2.47	0.06	2.12	10.14	3.38
<i>Ilex</i>	<i>coriacea</i>	0.29	3.70	57.14	4.12	0.06	2.08	9.90	3.30
<i>Persea</i>	<i>palustris</i>	0.29	3.70	45.71	3.29	0.08	2.65	9.64	3.21
<i>Quercus</i>	<i>laurifolia</i>	0.29	3.70	17.14	1.23	0.06	2.13	7.07	2.36
<i>Symplocos</i>	<i>tinctoria</i>	0.14	1.85	28.57	2.06	0.07	2.24	6.14	2.05
<i>Acer</i>	<i>rubrum</i>	0.29	3.70	17.14	1.23	0.03	0.88	5.82	1.94
<i>Vitis</i>	<i>rotundifolia</i>	0.29	3.70	11.43	0.82	0.01	0.27	4.80	1.60
<i>Nyssa</i>	<i>biflora</i>	0.14	1.85	5.71	0.41	0.03	1.09	3.35	1.12
<i>Fagus</i>	<i>grandifolia</i>	0.14	1.85	5.71	0.41	0.03	0.96	3.23	1.08
<i>Vaccinium</i>	<i>arboreum</i>	0.14	1.85	11.43	0.82	0.01	0.48	3.15	1.05
<i>Pinus</i>	<i>palustris</i>	0.14	1.85	5.71	0.41	0.02	0.74	3.00	1.00
<i>Vitis</i>	<i>cinerea</i>	0.14	1.85	11.43	0.82	0.01	0.23	2.90	0.97
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.14	1.85	5.71	0.41	0.01	0.46	2.72	0.91
<i>Campsis</i>	<i>radicans</i>	0.14	1.85	5.71	0.41	0.01	0.38	2.64	0.88

**Table 5C. Summary of the Woody Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Cephalanthus</i>	<i>occidentalis</i>	0.14	1.85	5.71	0.41	0.01	0.27	2.53	0.84
<i>Magnolia</i>	<i>grandiflora</i>	0.14	1.85	5.71	0.41	0.01	0.24	2.50	0.83
<i>Berchemia</i>	<i>scandens</i>	0.14	1.85	5.71	0.41	0.01	0.18	2.45	0.82
<i>Morella</i>	<i>cerifera</i>	0.14	1.85	5.71	0.41	0.00	0.09	2.36	0.79
<i>Quercus</i>	<i>hemisphaerica</i>	0.14	1.85	5.71	0.41	0.00	0.09	2.36	0.79
<i>Chionanthus</i>	<i>virginica</i>	0.14	1.85	5.71	0.41	0.00	0.09	2.36	0.79
Totals			100.00	1388.57	100.00	2.98	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	0.71	12.20	131.43	25.84	12.50	38.34	76.37	25.46
<i>Liquidambar</i>	<i>styraciflua</i>	0.71	12.20	74.29	14.61	6.19	19.00	45.80	15.27
<i>Ilex</i>	<i>opaca</i>	0.86	14.63	74.29	14.61	1.47	4.50	33.74	11.25
<i>Nyssa</i>	<i>sylvatica</i>	0.71	12.20	62.86	12.36	2.66	8.17	32.72	10.91
<i>Nyssa</i>	<i>biflora</i>	0.43	7.32	45.71	8.99	1.56	4.78	21.09	7.03
<i>Quercus</i>	<i>michauxii</i>	0.43	7.32	17.14	3.37	2.45	7.51	18.20	6.07
<i>Quercus</i>	<i>nigra</i>	0.29	4.88	17.14	3.37	0.80	2.44	10.69	3.56
<i>Quercus</i>	<i>pagoda</i>	0.14	2.44	11.43	2.25	1.87	5.73	10.42	3.47
<i>Carpinus</i>	<i>caroliniana</i>	0.29	4.88	17.14	3.37	0.31	0.95	9.20	3.07
<i>Persea</i>	<i>palustris</i>	0.29	4.88	17.14	3.37	0.25	0.76	9.01	3.00
<i>Magnolia</i>	<i>virginiana</i>	0.29	4.88	11.43	2.25	0.22	0.67	7.79	2.60
<i>Pinus</i>	<i>palustris</i>	0.14	2.44	5.71	1.12	1.06	3.24	6.80	2.27
<i>Quercus</i>	<i>alba</i>	0.14	2.44	5.71	1.12	0.60	1.83	5.40	1.80
<i>Ulmus</i>	<i>crassifolia</i>	0.14	2.44	5.71	1.12	0.45	1.37	4.93	1.64
<i>Acer</i>	<i>rubrum</i>	0.14	2.44	5.71	1.12	0.16	0.50	4.06	1.35
<i>Acer</i>	<i>rubrum</i> var. <i>drummondii</i>	0.14	2.44	5.71	1.12	0.07	0.22	3.78	1.26
Totals			100.00	508.57	100.00	32.61	100.00	300.00	100.00

**Table 5D. Summary of the Woody Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.43	9.38	1142.86	12.72	0.15	26.91	49.01	16.34
<i>Rhododendron</i>	<i>viscosum</i>	0.14	3.13	2400.00	26.72	0.08	13.76	43.60	14.53
<i>Ilex</i>	<i>vomitorea</i>	0.43	9.38	857.14	9.54	0.05	9.31	28.22	9.41
<i>Sebastiania</i>	<i>fruticosa</i>	0.43	9.38	742.86	8.27	0.03	5.67	23.31	7.77
<i>Vaccinium</i>	<i>arboreum</i>	0.14	3.13	628.57	7.00	0.07	12.55	22.67	7.56
<i>Ilex</i>	<i>coriacea</i>	0.43	9.38	297.14	3.31	0.01	2.27	14.95	4.98
<i>Vaccinium</i>	<i>stamineum</i>	0.14	3.13	285.71	3.18	0.04	7.08	13.39	4.46
<i>Carpinus</i>	<i>caroliniana</i>	0.29	6.25	228.57	2.54	0.01	2.02	10.82	3.61
<i>Quercus</i>	<i>nigra</i>	0.14	3.13	171.43	1.91	0.02	4.25	9.28	3.09
<i>Magnolia</i>	<i>grandiflora</i>	0.14	3.13	285.71	3.18	0.02	2.83	9.14	3.05
<i>Persea</i>	<i>borbonia</i>	0.14	3.13	171.43	1.91	0.02	3.64	8.68	2.89
<i>Quercus</i>	<i>pagoda</i>	0.14	3.13	342.86	3.82	0.01	1.21	8.16	2.72
<i>Triadica</i>	<i>sebifera</i>	0.14	3.13	285.71	3.18	0.01	1.62	7.92	2.64
<i>Vaccinium</i>	<i>corybosum</i>	0.14	3.13	285.71	3.18	0.01	1.62	7.92	2.64
<i>Ilex</i>	<i>opaca</i>	0.14	3.13	171.43	1.91	0.02	2.83	7.87	2.62
<i>Persea</i>	<i>palustris</i>	0.14	3.13	171.43	1.91	0.00	0.61	5.64	1.88
<i>Callicarpa</i>	<i>americana</i>	0.14	3.13	114.29	1.27	0.00	0.40	4.80	1.60
<i>Berchemia</i>	<i>scandens</i>	0.14	3.13	114.29	1.27	0.00	0.40	4.80	1.60
<i>Toxicodendron</i>	<i>radicans</i>	0.14	3.13	57.14	0.64	0.00	0.20	3.96	1.32
<i>Vitis</i>	<i>rotundifolia</i>	0.14	3.13	57.14	0.64	0.00	0.20	3.96	1.32
<i>Magnolia</i>	<i>virginiana</i>	0.14	3.13	57.14	0.64	0.00	0.20	3.96	1.32
<i>Quercus</i>	<i>michauxii</i>	0.14	3.13	57.14	0.64	0.00	0.20	3.96	1.32
<i>Morella</i>	<i>cerifera</i>	0.14	3.13	57.14	0.64	0.00	0.20	3.96	1.32
Totals			100.00	8982.86	100.00	0.55	100.00	300.00	100.00
Midstory Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.43	6.38	337.14	29.21	0.60	19.67	55.26	18.42
<i>Ilex</i>	<i>opaca</i>	0.71	10.64	137.14	11.88	0.48	15.68	38.19	12.73
<i>Nyssa</i>	<i>sylvatica</i>	0.57	8.51	102.86	8.91	0.30	9.98	27.40	9.13
<i>Ilex</i>	<i>vomitorea</i>	0.57	8.51	91.43	7.92	0.26	8.60	25.03	8.34
<i>Carpinus</i>	<i>caroliniana</i>	0.43	6.38	80.00	6.93	0.33	10.99	24.30	8.10
<i>Pinus</i>	<i>taeda</i>	0.29	4.26	91.43	7.92	0.29	9.38	21.56	7.19
<i>Quercus</i>	<i>nigra</i>	0.43	6.38	34.29	2.97	0.15	4.81	14.16	4.72
<i>Ilex</i>	<i>coriacea</i>	0.29	4.26	68.57	5.94	0.07	2.39	12.58	4.19
<i>Persea</i>	<i>borbonia</i>	0.14	2.13	45.71	3.96	0.14	4.73	10.82	3.61
<i>Magnolia</i>	<i>virginiana</i>	0.43	6.38	28.57	2.48	0.05	1.71	10.57	3.52
<i>Acer</i>	<i>rubrum</i>	0.43	6.38	28.57	2.48	0.03	1.14	10.00	3.33
<i>Quercus</i>	<i>laurifolia</i>	0.29	4.26	11.43	0.99	0.08	2.54	7.78	2.59
<i>Nyssa</i>	<i>biflora</i>	0.29	4.26	11.43	0.99	0.07	2.26	7.50	2.50
<i>Symplocos</i>	<i>tinctoria</i>	0.14	2.13	22.86	1.98	0.05	1.54	5.64	1.88
<i>Liquidambar</i>	<i>styraciflua</i>	0.14	2.13	11.43	0.99	0.03	1.14	4.26	1.42
<i>Magnolia</i>	<i>grandiflora</i>	0.14	2.13	11.43	0.99	0.03	0.90	4.02	1.34
<i>Pinus</i>	<i>palustris</i>	0.14	2.13	5.71	0.50	0.03	1.06	3.69	1.23
<i>Vaccinium</i>	<i>arboreum</i>	0.14	2.13	5.71	0.50	0.02	0.53	3.15	1.05

**Table 5D. Summary of the Woody Stratum in the *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Campsis</i>	<i>radicans</i>	0.14	2.13	5.71	0.50	0.01	0.37	2.99	1.00
<i>Berchemia</i>	<i>scandens</i>	0.14	2.13	5.71	0.50	0.01	0.24	2.86	0.95
<i>Quercus</i>	<i>hemisphaerica</i>	0.14	2.13	5.71	0.50	0.00	0.13	2.76	0.92
<i>Vitis</i>	<i>cinerea</i>	0.14	2.13	5.71	0.50	0.00	0.13	2.76	0.92
<i>Chionanthus</i>	<i>virginicus</i>	0.14	2.13	5.71	0.50	0.00	0.09	2.71	0.90
Totals			100.00	1154.29	100.00	3.05	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	0.71	11.63	137.14	28.57	11.83	36.31	76.51	25.50
<i>Liquidambar</i>	<i>styraciflua</i>	0.71	11.63	80.00	16.67	7.14	21.91	50.21	16.74
<i>Ilex</i>	<i>opaca</i>	0.86	13.95	62.86	13.10	1.49	4.57	31.62	10.54
<i>Nyssa</i>	<i>sylvatica</i>	0.71	11.63	57.14	11.90	1.52	4.68	28.21	9.40
<i>Quercus</i>	<i>michauxii</i>	0.43	6.98	17.14	3.57	2.49	7.65	18.20	6.07
<i>Quercus</i>	<i>nigra</i>	0.43	6.98	17.14	3.57	1.06	3.25	13.80	4.60
<i>Nyssa</i>	<i>biflora</i>	0.29	4.65	17.14	3.57	1.28	3.91	12.14	4.05
<i>Quercus</i>	<i>pagoda</i>	0.14	2.33	11.43	2.38	2.12	6.52	11.22	3.74
<i>Magnolia</i>	<i>virginiana</i>	0.29	4.65	17.14	3.57	0.50	1.53	9.75	3.25
<i>Carpinus</i>	<i>caroliniana</i>	0.29	4.65	11.43	2.38	0.25	0.76	7.79	2.60
<i>Pinus</i>	<i>palustris</i>	0.14	2.33	5.71	1.19	0.93	2.85	6.37	2.12
<i>Quercus</i>	<i>alba</i>	0.14	2.33	5.71	1.19	0.63	1.94	5.45	1.82
<i>Ulmus</i>	<i>americana</i>	0.14	2.33	5.71	1.19	0.39	1.20	4.71	1.57
<i>Pinus</i>	<i>echinata</i>	0.14	2.33	5.71	1.19	0.36	1.12	4.63	1.54
<i>Acer</i>	<i>rubrum</i>	0.14	2.33	5.71	1.19	0.21	0.64	4.15	1.38
<i>Quercus</i>	<i>hemisphaerica</i>	0.14	2.33	5.71	1.19	0.15	0.45	3.96	1.32
<i>Persea</i>	<i>palustris</i>	0.14	2.33	5.71	1.19	0.08	0.25	3.77	1.26
<i>Persea</i>	<i>borbonia</i>	0.14	2.33	5.71	1.19	0.08	0.25	3.77	1.26
<i>Magnolia</i>	<i>grandiflora</i>	0.14	2.33	5.71	1.19	0.07	0.22	3.73	1.24
Totals			100.00	480.00	100.00	32.58	100.00	300.00	100.00

**Table 6A. Summary of the Herbaceous Stratum in the *Pinus palustris*
Woodland Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Vaccinium</i>	<i>corymbosum</i>	1.00	3.28	8.00	13.79	17.07	5.69
<i>Schizachyrium</i>	<i>scoparium</i>	0.50	1.64	7.88	13.58	15.22	5.07
<i>Morella</i>	<i>cerifera</i>	1.00	3.28	6.13	10.56	13.84	4.61
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	3.28	5.25	9.05	12.33	4.11
<i>Paspalum</i>	<i>floridanum</i>	0.50	1.64	3.50	6.03	7.67	2.56
<i>Quercus</i>	<i>stellata</i>	0.50	1.64	3.13	5.39	7.03	2.34
<i>Gelsemium</i>	<i>sempervirens</i>	1.00	3.28	1.88	3.23	6.51	2.17
<i>Rubus</i>	<i>argutus</i>	1.00	3.28	1.63	2.80	6.08	2.03
<i>Dichanthelium</i>	<i>acuminatum</i>	1.00	3.28	1.63	2.80	6.08	2.03
<i>Vitis</i>	<i>rotundifolia</i>	0.50	1.64	2.13	3.66	5.30	1.77
<i>Smilax</i>	<i>glauca</i>	1.00	3.28	1.13	1.94	5.22	1.74
<i>Tragia</i>	<i>smallii</i>	1.00	3.28	1.13	1.94	5.22	1.74
<i>Pinus</i>	<i>taeda</i>	1.00	3.28	1.00	1.72	5.00	1.67
<i>Dichanthelium</i>	<i>laxiflorum</i>	0.50	1.64	1.88	3.23	4.87	1.62
<i>Ilex</i>	<i>vomitaria</i>	1.00	3.28	0.75	1.29	4.57	1.52
<i>Desmodium</i>	sp.	1.00	3.28	0.63	1.08	4.36	1.45
<i>Quercus</i>	<i>nigra</i>	0.50	1.64	1.50	2.59	4.23	1.41
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	3.28	0.50	0.86	4.14	1.38
<i>Galactia</i>	<i>volubilis</i>	1.00	3.28	0.38	0.65	3.93	1.31
<i>Toxicodendron</i>	<i>pubescens</i>	0.50	1.64	1.25	2.16	3.79	1.26
<i>Scleria</i>	<i>ciliata</i>	0.50	1.64	0.63	1.08	2.72	0.91
<i>Galium</i>	sp.	0.50	1.64	0.50	0.86	2.50	0.83
<i>Callicarpa</i>	<i>americana</i>	0.50	1.64	0.50	0.86	2.50	0.83
<i>Scleria</i>	<i>oligantha</i>	0.50	1.64	0.50	0.86	2.50	0.83
<i>Scutellaria</i>	<i>elliptica</i>	0.50	1.64	0.38	0.65	2.29	0.76
<i>Liatris</i>	<i>pycnostachya</i>	0.50	1.64	0.38	0.65	2.29	0.76
<i>Elephantopus</i>	<i>tomentosus</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Galium</i>	<i>pilosum</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Tragia</i>	<i>urticifolia</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Liatris</i>	sp.	0.50	1.64	0.25	0.43	2.07	0.69
<i>Smilax</i>	<i>bona-nox</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Physostegia</i>	<i>digitalis</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Hypericum</i>	<i>hypericoides</i>	0.50	1.64	0.25	0.43	2.07	0.69

**Table 6A. Summary of the Herbaceous Stratum in the *Pinus palustris*
Woodland Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Eupatorium</i>	<i>rotundifolium</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Sassafras</i>	<i>albidum</i>	0.50	1.64	0.25	0.43	2.07	0.69
<i>Piptochaetium</i>	<i>avenaceum</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Vaccinium</i>	<i>stamineum</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Acer</i>	<i>rubrum</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Aster</i>	sp.	0.50	1.64	0.13	0.22	1.85	0.62
<i>Paspalum</i>	sp.	0.50	1.64	0.13	0.22	1.85	0.62
<i>Aristolochia</i>	<i>reticulata</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Croton</i>	<i>argyranthemus</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Andropogon</i>	<i>virginicus</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Solidago</i>	<i>odora</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Unknown</i>	sp.	0.50	1.64	0.13	0.22	1.85	0.62
<i>Mitchella</i>	<i>repens</i>	0.50	1.64	0.13	0.22	1.85	0.62
<i>Dichanthelium</i>	sp.	0.50	1.64	0.13	0.22	1.85	0.62
<i>Pinus</i>	<i>palustris</i>	0.50	1.64	0.13	0.22	1.85	0.62
Totals			100.00	58.00	100.00	200.00	66.67

**Table 6B. Summary of the Herbaceous Stratum in the *Pinus palustris*
Woodland Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Morella</i>	<i>cerifera</i>	1.00	2.63	6.63	10.66	13.30	4.43
<i>Ilex</i>	<i>vomitorea</i>	1.00	2.63	4.75	7.65	10.28	3.43
<i>Dichanthelium</i>	<i>scoparium</i>	1.00	2.63	4.63	7.44	10.08	3.36
<i>Rubus</i>	<i>argutus</i>	0.50	1.32	5.25	8.45	9.77	3.26
<i>Schizachyrium</i>	<i>scoparium</i>	1.00	2.63	4.38	7.04	9.67	3.22
<i>Callicarpa</i>	<i>americana</i>	1.00	2.63	3.50	5.63	8.27	2.76
<i>Eupatorium</i>	<i>coelestinum</i>	1.00	2.63	3.00	4.83	7.46	2.49
<i>Vaccinium</i>	<i>stamineum</i>	0.50	1.32	3.13	5.03	6.35	2.12
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	2.63	2.25	3.62	6.25	2.08
<i>Pinus</i>	<i>taeda</i>	1.00	2.63	1.88	3.02	5.65	1.88
<i>Gelsemium</i>	<i>sempervirens</i>	1.00	2.63	1.75	2.82	5.45	1.82
<i>Vitis</i>	<i>rotundifolia</i>	0.50	1.32	2.00	3.22	4.54	1.51
<i>Dichanthelium</i>	<i>acuminatum</i>	1.00	2.63	1.13	1.81	4.44	1.48
<i>Chasmanthium</i>	<i>sessiliflorum</i>	1.00	2.63	1.13	1.81	4.44	1.48
<i>Polypremum</i>	<i>procumbens</i>	1.00	2.63	1.00	1.61	4.24	1.41
<i>Chasmanthium</i>	<i>laxum</i>	0.50	1.32	1.63	2.62	3.93	1.31
<i>Smilax</i>	<i>bona-nox</i>	1.00	2.63	0.75	1.21	3.84	1.28
<i>Tragia</i>	<i>urticifolia</i>	1.00	2.63	0.75	1.21	3.84	1.28
<i>Quercus</i>	<i>falcata</i>	0.50	1.32	1.25	2.01	3.33	1.11
<i>Galium</i>	<i>aparine</i>	1.00	2.63	0.25	0.40	3.03	1.01
<i>Aristolochia</i>	<i>reticulata</i>	1.00	2.63	0.25	0.40	3.03	1.01
<i>Smilax</i>	<i>glauca</i>	0.50	1.32	1.00	1.61	2.93	0.98
<i>Toxicodendron</i>	<i>pubescens</i>	0.50	1.32	0.88	1.41	2.72	0.91
<i>Quercus</i>	<i>nigra</i>	0.50	1.32	0.88	1.41	2.72	0.91
<i>Scleria</i>	<i>reticularis</i>	0.50	1.32	0.75	1.21	2.52	0.84
<i>Elephantopus</i>	<i>tomentosus</i>	0.50	1.32	0.63	1.01	2.32	0.77
<i>Pityopsis</i>	<i>graminifolia</i>	0.50	1.32	0.50	0.80	2.12	0.71
<i>Baptisia</i>	<i>sphaerocarpa</i>	0.50	1.32	0.50	0.80	2.12	0.71
<i>Quercus</i>	<i>stellata</i>	0.50	1.32	0.38	0.60	1.92	0.64
<i>Eupatorium</i>	<i>capillifolium</i>	0.50	1.32	0.38	0.60	1.92	0.64
<i>Desmodium</i>	<i>lanceolata</i>	0.50	1.32	0.38	0.60	1.92	0.64
<i>Tragia</i>	<i>smallii</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Pyrrhopappus</i>	<i>carolinianus</i>	0.50	1.32	0.25	0.40	1.72	0.57

**Table 6B. Summary of the Herbaceous Stratum in the *Pinus palustris*
Woodland Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Rhus</i>	<i>copallina</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Smilax</i>	<i>smallii</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Teucrium</i>	<i>canadense</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Carex</i>	<i>complanata</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Desmodium</i>	<i>laevigatum</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Stillingia</i>	<i>sylvatica</i>	0.50	1.32	0.25	0.40	1.72	0.57
<i>Scutellaria</i>	<i>elliptica</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Smilax</i>	<i>rotundifolia</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Scoparia</i>	<i>dulcis</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Hypericum</i>	<i>crus-andreae</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Oxalis</i>	<i>debilis</i> var. <i>corymbosa</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Quercus</i>	<i>incana</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Solidago</i>	<i>odora</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Eupatorium</i>	<i>lancifolium</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Vaccinium</i>	<i>arboreum</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Symphyotrichum</i>	<i>praealtum</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Phyla</i>	<i>nodiflora</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Bignonia</i>	<i>capreolata</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Galium</i>	<i>pilosum</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Dichanthelium</i>	<i>aciculare</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Scleria</i>	<i>oligantha</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Symphyotrichum</i>	<i>lateraflorum</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Symphyotrichum</i>	<i>dumosum</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Pinus</i>	<i>palustris</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Sassafras</i>	<i>albidum</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Ruellia</i>	<i>caroliniensis</i>	0.50	1.32	0.13	0.20	1.52	0.51
<i>Euphorbia</i>	<i>corollata</i>	0.50	1.32	0.13	0.20	1.52	0.51
Totals			100.00	62.13	100.00	200.00	66.67

**Table 6C. Summary of the Woody Stratum in the *Pinus palustris*
Woodland Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Vaccinium</i>	<i>arboreum</i>	0.33	5.88	4933.33	32.17	0.28	40.46	78.51	26.17
<i>Liquidambar</i>	<i>styraciflua</i>	0.67	11.76	2000.00	13.04	0.13	19.08	43.89	14.63
<i>Ilex</i>	<i>vomitorea</i>	0.67	11.76	2400.00	15.65	0.07	9.92	37.34	12.45
<i>Quercus</i>	<i>nigra</i>	1.00	17.65	666.67	4.35	0.05	7.63	29.63	9.88
<i>Morella</i>	<i>cerifera</i>	0.67	11.76	1600.00	10.43	0.03	4.58	26.78	8.93
<i>Callicarpa</i>	<i>americana</i>	0.33	5.88	2133.33	13.91	0.04	6.11	25.90	8.63
<i>Persea</i>	<i>palustris</i>	0.33	5.88	533.33	3.48	0.03	4.96	14.32	4.77
<i>Vaccinium</i>	<i>corymbosum</i>	0.33	5.88	533.33	3.48	0.01	1.53	10.89	3.63
<i>Symplocos</i>	<i>tinctoria</i>	0.33	5.88	133.33	0.87	0.02	3.44	10.19	3.40
<i>Acer</i>	<i>rubrum</i>	0.33	5.88	133.33	0.87	0.01	1.53	8.28	2.76
<i>Rhodoendron</i>	<i>viscosum</i>	0.33	5.88	133.33	0.87	0.00	0.38	7.13	2.38
<i>Asimina</i>	<i>parviflora</i>	0.33	5.88	133.33	0.87	0.00	0.38	7.13	2.38
Totals			100.00	15333.33	100.00	0.69	100.00	300.00	100.00
Midstory Class									
<i>Symplocos</i>	<i>tinctoria</i>	0.33	20.00	146.67	34.37	0.28	38.74	93.11	31.04
<i>Persea</i>	<i>palustris</i>	0.33	20.00	160.00	37.50	0.19	26.93	84.43	28.14
<i>Quercus</i>	<i>falcata</i>	0.33	20.00	53.33	12.50	0.16	21.51	54.01	18.00
<i>Vaccinium</i>	<i>arboreum</i>	0.33	20.00	53.33	12.50	0.03	4.03	36.53	12.18
<i>Ilex</i>	<i>vomitorea</i>	0.33	20.00	13.33	3.12	0.06	8.79	31.92	10.64
Totals			100.00	426.67	100.00	0.72	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>palustris</i>	1.00	37.50	226.67	65.38	26.42	92.05	194.93	64.98
<i>Quercus</i>	<i>falcata</i>	0.67	25.00	53.33	15.38	1.04	3.64	44.02	14.67
<i>Pinus</i>	<i>taeda</i>	0.33	12.50	26.67	7.69	0.62	2.15	22.34	7.45
<i>Quercus</i>	<i>stellata</i>	0.33	12.50	26.67	7.69	0.39	1.35	21.54	7.18
<i>Quercus</i>	<i>nigra</i>	0.33	12.50	13.33	3.85	0.24	0.82	17.17	5.72
Totals			100.00	346.67	100.00	28.70	100.00	300.00	100.00

**Table 6D. Summary of the Woody Stratum in the *Pinus palustris*
Woodland Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Liquidambar</i>	<i>styraciflua</i>	0.67	11.11	3200.00	22.79	0.15	35.07	68.97	22.99
<i>Vaccinium</i>	<i>arboreum</i>	0.33	5.56	3106.67	22.13	0.07	16.09	43.78	14.59
<i>Ilex</i>	<i>vomitorea</i>	0.67	11.11	2666.67	18.99	0.05	12.52	42.63	14.21
<i>Morella</i>	<i>cerifera</i>	1.00	16.67	1333.33	9.50	0.03	8.14	34.30	11.43
<i>Callicarpa</i>	<i>americana</i>	0.67	11.11	1333.33	9.50	0.03	6.26	26.87	8.96
<i>Symplocos</i>	<i>tintoria</i>	0.33	5.56	533.33	3.80	0.06	13.15	22.50	7.50
<i>Vaccinium</i>	<i>stamineum</i>	0.33	5.56	533.33	3.80	0.01	2.50	11.86	3.95
<i>Persea</i>	<i>palustris</i>	0.33	5.56	400.00	2.85	0.01	1.88	10.28	3.43
<i>Quercus</i>	<i>nigra</i>	0.33	5.56	266.67	1.90	0.01	1.25	8.71	2.90
<i>Quercus</i>	<i>hemisphaerica</i>	0.33	5.56	266.67	1.90	0.01	1.25	8.71	2.90
<i>Quercus</i>	<i>stellata</i>	0.33	5.56	133.33	0.95	0.00	0.63	7.13	2.38
<i>Quercus</i>	<i>falcata</i>	0.33	5.56	133.33	0.95	0.00	0.63	7.13	2.38
<i>Acer</i>	<i>rubrum</i>	0.33	5.56	133.33	0.95	0.00	0.63	7.13	2.38
Totals			100.00	14040.00	100.00	0.42	100.00	300.00	100.00
Midstory Class									
<i>Symplocos</i>	<i>tintoria</i>	0.33	20.00	120.00	40.91	0.22	29.17	90.08	30.03
<i>Persea</i>	<i>palustris</i>	0.33	20.00	93.33	31.82	0.15	19.60	71.41	23.80
<i>Quercus</i>	<i>falcata</i>	0.33	20.00	53.33	18.18	0.19	25.27	63.46	21.15
<i>Quercus</i>	<i>stellata</i>	0.33	20.00	13.33	4.55	0.14	18.09	42.64	14.21
<i>Ilex</i>	<i>vomitorea</i>	0.33	20.00	13.33	4.55	0.06	7.87	32.41	10.80
Totals			100.00	293.33	100.00	0.77	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>palustris</i>	1.00	50.00	213.33	80.00	20.87	96.06	226.06	75.35
<i>Quercus</i>	<i>falcata</i>	0.33	16.67	26.67	10.00	0.40	1.84	28.50	9.50
<i>Quercus</i>	<i>nigra</i>	0.33	16.67	13.33	5.00	0.25	1.16	22.82	7.61
<i>Quercus</i>	<i>stellata</i>	0.33	16.67	13.33	5.00	0.21	0.94	22.61	7.54
Totals			100.00	266.67	100.00	21.73	100.00	300.00	100.00

**Table 7A. Summary of the Herbaceous Stratum in the *Pinus taeda*-*Pinus echinata*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ilex</i>	<i>vomitorea</i>	1.00	6.25	5.08	27.98	34.23	11.41
<i>Vaccinium</i>	<i>corymbosum</i>	0.67	4.17	2.58	14.22	18.39	6.13
<i>Vaccinium</i>	<i>stamineum</i>	0.67	4.17	1.25	6.88	11.05	3.68
<i>Persea</i>	<i>palustris</i>	1.00	6.25	0.83	4.59	10.84	3.61
<i>Smilax</i>	<i>pumila</i>	0.67	4.17	1.08	5.96	10.13	3.38
<i>Smilax</i>	<i>smallii</i>	1.00	6.25	0.58	3.21	9.46	3.15
<i>Asimina</i>	<i>parviflora</i>	0.67	4.17	0.50	2.75	6.92	2.31
<i>Quercus</i>	<i>hemisphaerica</i>	0.67	4.17	0.50	2.75	6.92	2.31
<i>Fagus</i>	<i>grandifolia</i>	0.33	2.08	0.83	4.59	6.67	2.22
<i>Sassafras</i>	<i>albidum</i>	0.67	4.17	0.33	1.83	6.00	2.00
<i>Acer</i>	<i>rubrum</i>	0.67	4.17	0.25	1.38	5.54	1.85
<i>Ilex</i>	<i>opaca</i>	0.67	4.17	0.25	1.38	5.54	1.85
<i>Smilax</i>	<i>glauca</i>	0.67	4.17	0.17	0.92	5.08	1.69
<i>Quercus</i>	<i>falcata</i>	0.33	2.08	0.50	2.75	4.84	1.61
<i>Callicarpa</i>	<i>americana</i>	0.33	2.08	0.50	2.75	4.84	1.61
<i>Lyonia</i>	<i>mariana</i>	0.33	2.08	0.42	2.29	4.38	1.46
<i>Vitis</i>	<i>rotundifolia</i>	0.33	2.08	0.33	1.83	3.92	1.31
<i>Viburnum</i>	<i>prunifolium</i>	0.33	2.08	0.25	1.38	3.46	1.15
<i>Magnolia</i>	<i>grandiflora</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Liquidambar</i>	<i>styraciflua</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Gelsemium</i>	<i>sempervirens</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Mitchella</i>	<i>repens</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Morella</i>	<i>cerifera</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Viburnum</i>	<i>rufidulum</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Cardamine</i>	sp.	0.33	2.08	0.17	0.92	3.00	1.00
<i>Ilex</i>	<i>coriacea</i>	0.33	2.08	0.17	0.92	3.00	1.00
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.33	2.08	0.08	0.46	2.54	0.85
<i>Vaccinium</i>	<i>arboreum</i>	0.33	2.08	0.08	0.46	2.54	0.85
<i>Elephantopus</i>	<i>tomentosus</i>	0.33	2.08	0.08	0.46	2.54	0.85
<i>Hypericum</i>	<i>hypericoides</i>	0.33	2.08	0.08	0.46	2.54	0.85
<i>Dichanthelium</i>	<i>laxiflorum</i>	0.33	2.08	0.08	0.46	2.54	0.85
<i>Ostrya</i>	<i>virginiana</i>	0.33	2.08	0.08	0.46	2.54	0.85
<i>Acer</i>	<i>barbatum</i>	0.33	2.08	0.08	0.46	2.54	0.85
Totals			100.00	18.17	100.00	200.00	66.67

**Table 7B. Summary of the Herbaceous Stratum in the *Pinus taeda*-*Pinus echinata*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ilex</i>	<i>vomitorea</i>	1.00	7.14	4.92	38.56	45.70	15.23
<i>Ilex</i>	<i>opaca</i>	0.67	4.76	0.83	6.54	11.30	3.77
<i>Smilax</i>	<i>bona-nox</i>	0.67	4.76	0.75	5.88	10.64	3.55
<i>Vaccinium</i>	<i>corybosum</i>	0.33	2.38	1.00	7.84	10.22	3.41
<i>Vitis</i>	<i>rotundifolia</i>	0.67	4.76	0.67	5.23	9.99	3.33
<i>Nyssa</i>	<i>sylvatica</i>	1.00	7.14	0.25	1.96	9.10	3.03
<i>Quercus</i>	<i>hemisphaerica</i>	0.67	4.76	0.33	2.61	7.38	2.46
<i>Persea</i>	<i>borbonia</i>	0.67	4.76	0.33	2.61	7.38	2.46
<i>Acer</i>	<i>rubrum</i>	0.67	4.76	0.33	2.61	7.38	2.46
<i>Elephantopus</i>	<i>tomentosus</i>	0.33	2.38	0.50	3.92	6.30	2.10
<i>Ostrya</i>	<i>virginiana</i>	0.67	4.76	0.17	1.31	6.07	2.02
<i>Callicarpa</i>	<i>americana</i>	0.67	4.76	0.17	1.31	6.07	2.02
<i>Pinus</i>	<i>taeda</i>	0.67	4.76	0.17	1.31	6.07	2.02
<i>Smilax</i>	<i>pumila</i>	0.33	2.38	0.42	3.27	5.65	1.88
<i>Mitchella</i>	<i>repens</i>	0.33	2.38	0.25	1.96	4.34	1.45
<i>Pinus</i>	<i>echinata</i>	0.33	2.38	0.25	1.96	4.34	1.45
<i>Quercus</i>	<i>alba</i>	0.33	2.38	0.17	1.31	3.69	1.23
<i>Lyonia</i>	<i>mariana</i>	0.33	2.38	0.17	1.31	3.69	1.23
<i>Chionanthus</i>	<i>virginicus</i>	0.33	2.38	0.17	1.31	3.69	1.23
<i>Dichanthelium</i>	<i>sphaerocarpon</i>	0.33	2.38	0.17	1.31	3.69	1.23
<i>Quercus</i>	<i>falcata</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Scleria</i>	<i>oligantha</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Vaccinium</i>	<i>elliottii</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Sassafras</i>	<i>albidum</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Smilax</i>	<i>glauca</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Morella</i>	<i>cerifera</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Quercus</i>	<i>nigra</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Cornus</i>	<i>florida</i>	0.33	2.38	0.08	0.65	3.03	1.01
<i>Gelsemium</i>	<i>sempervirens</i>	0.33	2.38	0.08	0.65	3.03	1.01
Totals			100.00	12.75	100.00	200.00	66.67

**Table 7C. Summary of the Woody Stratum in the *Pinus taeda*-*Pinus echinata*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Vaccinium</i>	<i>corymbosum</i>	0.25	5.88	3800.00	41.76	0.15	20.86	68.50	22.83
<i>Ilex</i>	<i>vomitorea</i>	0.75	17.65	2200.00	24.18	0.13	17.65	59.47	19.82
<i>Quercus</i>	<i>falcata</i>	0.50	11.76	1100.00	12.09	0.24	33.16	57.01	19.00
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	11.76	200.00	2.20	0.13	17.91	31.88	10.63
<i>Persea</i>	<i>palustris</i>	0.25	5.88	700.00	7.69	0.02	2.67	16.25	5.42
<i>Vitis</i>	<i>rotundifolia</i>	0.25	5.88	100.00	1.10	0.03	4.28	11.26	3.75
<i>Morella</i>	<i>cerifera</i>	0.25	5.88	300.00	3.30	0.01	1.60	10.78	3.59
<i>Callicarpa</i>	<i>americana</i>	0.25	5.88	200.00	2.20	0.00	0.53	8.61	2.87
<i>Quercus</i>	<i>hemisphaerica</i>	0.25	5.88	100.00	1.10	0.00	0.27	7.25	2.42
<i>Vaccinium</i>	<i>stamineum</i>	0.25	5.88	100.00	1.10	0.00	0.27	7.25	2.42
<i>Asimina</i>	<i>parviflora</i>	0.25	5.88	100.00	1.10	0.00	0.27	7.25	2.42
<i>Pinus</i>	<i>taeda</i>	0.25	5.88	100.00	1.10	0.00	0.27	7.25	2.42
<i>Smilax</i>	<i>glauca</i>	0.25	5.88	100.00	1.10	0.00	0.27	7.25	2.42
Totals			100.00	9100.00	100.00	0.73	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	0.75	9.38	590.00	38.82	1.60	38.74	86.94	28.98
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	6.25	120.00	7.89	0.43	10.51	24.66	8.22
<i>Persea</i>	<i>palustris</i>	0.25	3.12	200.00	13.16	0.31	7.49	23.78	7.93
<i>Cornus</i>	<i>florida</i>	0.50	6.25	80.00	5.26	0.22	5.44	16.95	5.65
<i>Pinus</i>	<i>taeda</i>	0.25	3.12	50.00	3.29	0.31	7.57	13.98	4.66
<i>Quercus</i>	<i>stellata</i>	0.25	3.12	70.00	4.61	0.20	4.95	12.69	4.23
<i>Nyssa</i>	<i>sylvatica</i>	0.50	6.25	40.00	2.63	0.13	3.17	12.05	4.02
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	6.25	40.00	2.63	0.10	2.43	11.31	3.77
<i>Vaccinium</i>	<i>arboreum</i>	0.50	6.25	20.00	1.32	0.14	3.44	11.01	3.67
<i>Quercus</i>	<i>margarettae</i>	0.25	3.12	80.00	5.26	0.10	2.42	10.81	3.60
<i>Acer</i>	<i>rubrum</i>	0.50	6.25	30.00	1.97	0.02	0.46	8.68	2.89
<i>Ilex</i>	<i>opaca</i>	0.50	6.25	20.00	1.32	0.04	0.86	8.43	2.81
<i>Quercus</i>	<i>nigra</i>	0.50	6.25	20.00	1.32	0.01	0.35	7.92	2.64
<i>Viburnum</i>	<i>rufidulum</i>	0.25	3.12	40.00	2.63	0.07	1.81	7.57	2.52
<i>Magnolia</i>	<i>grandiflora</i>	0.25	3.12	40.00	2.63	0.07	1.77	7.53	2.51
<i>Quercus</i>	<i>incana</i>	0.25	3.12	20.00	1.32	0.09	2.07	6.51	2.17
<i>Pinus</i>	<i>echinata</i>	0.25	3.12	10.00	0.66	0.10	2.52	6.30	2.10
<i>Quercus</i>	<i>alba</i>	0.25	3.12	10.00	0.66	0.07	1.72	5.50	1.83
<i>Sassafras</i>	<i>albidum</i>	0.25	3.12	10.00	0.66	0.03	0.80	4.59	1.53
<i>Ostrya</i>	<i>virginiana</i>	0.25	3.12	10.00	0.66	0.03	0.68	4.47	1.49
<i>Juniperus</i>	<i>virginiana</i>	0.25	3.12	10.00	0.66	0.02	0.48	4.26	1.42
<i>Quercus</i>	<i>falcata</i>	0.25	3.12	10.00	0.66	0.01	0.30	4.09	1.36
Totals			100.00	1520.00	100.00	4.13	100.00	300.00	100.00

**Table 7C. Summary of the Woody Stratum in the *Pinus taeda*-*Pinus echinata*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	0.75	23.08	150.00	37.50	8.29	37.32	97.90	32.63
<i>Pinus</i>	<i>echinata</i>	0.75	23.08	90.00	22.50	7.20	32.41	77.99	26.00
<i>Quercus</i>	<i>falcata</i>	0.75	23.08	90.00	22.50	4.17	18.76	64.33	21.44
<i>Quercus</i>	<i>hemisphaerica</i>	0.25	7.69	40.00	10.00	0.79	3.56	21.26	7.09
<i>Pinus</i>	<i>palustris</i>	0.25	7.69	10.00	2.50	1.52	6.84	17.04	5.68
<i>Quercus</i>	<i>nigra</i>	0.25	7.69	10.00	2.50	0.13	0.60	10.79	3.60
<i>Cornus</i>	<i>florida</i>	0.25	7.69	10.00	2.50	0.11	0.51	10.70	3.57
Totals			100.00	400.00	100.00	22.22	100.00	300.00	100.00

**Table 7D. Summary of the Woody Stratum in the *Pinus taeda*-*Pinus echinata*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitaria</i>	0.75	13.04	2500.00	17.86	0.14	13.42	44.32	14.77
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	8.70	1400.00	10.00	0.25	25.10	43.79	14.60
<i>Vaccinium</i>	<i>corybosum</i>	0.25	4.35	3100.00	22.14	0.09	8.95	35.44	11.81
<i>Quercus</i>	<i>hemisphaerica</i>	0.75	13.04	1200.00	8.57	0.08	8.17	29.79	9.93
<i>Quercus</i>	<i>margarettae</i>	0.25	4.35	900.00	6.43	0.14	13.81	24.59	8.20
<i>Carya</i>	<i>tomentosa</i>	0.25	4.35	1500.00	10.71	0.08	7.98	23.04	7.68
<i>Quercus</i>	<i>falcata</i>	0.50	8.70	800.00	5.71	0.08	7.98	22.39	7.46
<i>Persea</i>	<i>borbonia</i>	0.25	4.35	900.00	6.43	0.06	5.64	16.42	5.47
<i>Callicarpa</i>	<i>americana</i>	0.25	4.35	500.00	3.57	0.01	0.97	8.89	2.96
<i>Rhus</i>	<i>copallina</i>	0.25	4.35	300.00	2.14	0.02	2.14	8.63	2.88
<i>Pinus</i>	<i>echinata</i>	0.25	4.35	100.00	0.71	0.03	3.11	8.17	2.72
<i>Sassafras</i>	<i>albidum</i>	0.25	4.35	200.00	1.43	0.01	0.97	6.75	2.25
<i>Morella</i>	<i>cerifera</i>	0.25	4.35	200.00	1.43	0.01	0.97	6.75	2.25
<i>Quercus</i>	<i>nigra</i>	0.25	4.35	100.00	0.71	0.00	0.19	5.26	1.75
<i>Ilex</i>	<i>opaca</i>	0.25	4.35	100.00	0.71	0.00	0.19	5.26	1.75
<i>Vaccinium</i>	<i>stamineum</i>	0.25	4.35	100.00	0.71	0.00	0.19	5.26	1.75
<i>Gelsemium</i>	<i>sempervirens</i>	0.25	4.35	100.00	0.71	0.00	0.19	5.26	1.75
Totals			100.00	14000.00	100.00	1.01	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitaria</i>	0.75	7.69	810.00	44.75	2.34	44.37	96.81	32.27
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	10.26	150.00	8.29	0.55	10.44	28.99	9.66
<i>Persea</i>	<i>borbonia</i>	0.25	2.56	140.00	7.73	0.26	4.86	15.16	5.05
<i>Pinus</i>	<i>taeda</i>	0.25	2.56	60.00	3.31	0.43	8.24	14.12	4.71
<i>Cornus</i>	<i>florida</i>	0.50	5.13	70.00	3.87	0.20	3.81	12.80	4.27
<i>Quercus</i>	<i>margarettae</i>	0.50	5.13	90.00	4.97	0.13	2.48	12.58	4.19
<i>Vaccinium</i>	<i>arboreum</i>	0.50	5.13	30.00	1.66	0.21	4.08	10.87	3.62
<i>Ilex</i>	<i>opaca</i>	0.50	5.13	50.00	2.76	0.11	2.18	10.07	3.36
<i>Quercus</i>	<i>falcata</i>	0.50	5.13	60.00	3.31	0.08	1.58	10.02	3.34
<i>Nyssa</i>	<i>sylvatica</i>	0.50	5.13	40.00	2.21	0.14	2.59	9.93	3.31
<i>Liquidambar</i>	<i>styraciflua</i>	0.50	5.13	30.00	1.66	0.10	1.87	8.66	2.89
<i>Quercus</i>	<i>stellata</i>	0.25	2.56	50.00	2.76	0.13	2.50	7.82	2.61
<i>Sassafras</i>	<i>albidum</i>	0.50	5.13	20.00	1.10	0.04	0.72	6.96	2.32
<i>Magnolia</i>	<i>grandiflora</i>	0.25	2.56	30.00	1.66	0.09	1.75	5.97	1.99
<i>Carya</i>	<i>tomentosa</i>	0.25	2.56	40.00	2.21	0.04	0.85	5.62	1.87
<i>Quercus</i>	<i>alba</i>	0.25	2.56	10.00	0.55	0.10	1.81	4.92	1.64
<i>Pinus</i>	<i>echinata</i>	0.25	2.56	10.00	0.55	0.09	1.64	4.76	1.59
<i>Viburnum</i>	<i>rufidulum</i>	0.25	2.56	20.00	1.10	0.06	1.06	4.73	1.58
<i>Magnolia</i>	<i>virginiana</i>	0.25	2.56	20.00	1.10	0.02	0.40	4.06	1.35
<i>Acer</i>	<i>rubrum</i>	0.25	2.56	20.00	1.10	0.02	0.32	3.99	1.33

**Table 7D. Summary of the Woody Stratum in the *Pinus taeda*-*Pinus echinata*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Symplocos</i>	<i>tinctoria</i>	0.25	2.56	10.00	0.55	0.04	0.73	3.85	1.28
<i>Ostrya</i>	<i>virginiana</i>	0.25	2.56	10.00	0.55	0.03	0.63	3.75	1.25
<i>Juniperus</i>	<i>virginiana</i>	0.25	2.56	10.00	0.55	0.02	0.37	3.49	1.16
<i>Quercus</i>	<i>incana</i>	0.25	2.56	10.00	0.55	0.02	0.35	3.46	1.15
<i>Quercus</i>	<i>nigra</i>	0.25	2.56	10.00	0.55	0.01	0.24	3.36	1.12
<i>Rhus</i>	<i>copallina</i>	0.25	2.56	10.00	0.55	0.01	0.13	3.25	1.08
Totals			100.00	1810.00	100.00	5.26	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>echinata</i>	0.75	21.43	110.00	30.56	6.92	35.56	87.55	29.18
<i>Pinus</i>	<i>taeda</i>	0.50	14.29	100.00	27.78	6.43	33.07	75.13	25.04
<i>Quercus</i>	<i>falcata</i>	0.75	21.43	70.00	19.44	3.20	16.47	57.35	19.12
<i>Ilex</i>	<i>vomitorea</i>	0.50	14.29	20.00	5.56	0.58	3.00	22.84	7.61
<i>Pinus</i>	<i>palustris</i>	0.25	7.14	10.00	2.78	1.63	8.36	18.28	6.09
<i>Quercus</i>	<i>hemisphaerica</i>	0.25	7.14	20.00	5.56	0.28	1.43	14.13	4.71
<i>Quercus</i>	<i>nigra</i>	0.25	7.14	20.00	5.56	0.28	1.42	14.12	4.71
<i>Cornus</i>	<i>florida</i>	0.25	7.14	10.00	2.78	0.13	0.68	10.60	3.53
Totals			100.00	360.00	100.00	19.45	100.00	300.00	100.00

**Table 8A. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ilex</i>	<i>vomitorea</i>	0.95	4.72	2.42	9.72	14.44	4.81
<i>Mitchella</i>	<i>repens</i>	0.45	2.25	2.02	8.12	10.37	3.46
<i>Vitis</i>	<i>rotundifolia</i>	0.77	3.82	1.05	4.20	8.02	2.67
<i>Quercus</i>	<i>hemisphaerica</i>	0.68	3.37	0.93	3.74	7.11	2.37
<i>Chasmanthium</i>	<i>sessiliflorum</i>	0.27	1.35	1.36	5.48	6.83	2.28
<i>Smilax</i>	<i>bona-nox</i>	0.68	3.37	0.83	3.33	6.70	2.23
<i>Smilax</i>	<i>pumila</i>	0.64	3.15	0.80	3.19	6.34	2.11
<i>Smilax</i>	<i>glauc</i>	0.77	3.82	0.60	2.42	6.24	2.08
<i>Smilax</i>	<i>smallii</i>	0.41	2.02	0.86	3.47	5.49	1.83
<i>Ilex</i>	<i>coriacea</i>	0.14	0.67	1.17	4.70	5.38	1.79
<i>Sassafras</i>	<i>albidum</i>	0.64	3.15	0.52	2.10	5.25	1.75
<i>Acer</i>	<i>rubrum</i>	0.68	3.37	0.42	1.69	5.06	1.69
<i>Persea</i>	<i>palustris</i>	0.59	2.92	0.48	1.92	4.84	1.61
<i>Ilex</i>	<i>opaca</i>	0.59	2.92	0.44	1.78	4.70	1.57
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.36	1.80	0.67	2.69	4.49	1.50
<i>Elephantopus</i>	<i>tomentosus</i>	0.32	1.57	0.72	2.88	4.45	1.48
<i>Pinus</i>	<i>taeda</i>	0.50	2.47	0.44	1.78	4.25	1.42
<i>Callicarpa</i>	<i>americana</i>	0.50	2.47	0.35	1.41	3.89	1.30
<i>Dichanthelium</i>	<i>commutatum</i>	0.45	2.25	0.35	1.41	3.66	1.22
<i>Vaccinium</i>	<i>corymbosum</i>	0.32	1.57	0.45	1.83	3.40	1.13
<i>Toxicodendron</i>	<i>radicans</i>	0.27	1.35	0.45	1.83	3.17	1.06
<i>Quercus</i>	<i>alba</i>	0.36	1.80	0.24	0.96	2.76	0.92
<i>Cyrilla</i>	<i>racemiflora</i>	0.18	0.90	0.44	1.78	2.68	0.89
<i>Rhododendron</i>	<i>viscosum</i>	0.23	1.12	0.39	1.55	2.68	0.89
<i>Ostrya</i>	<i>virginiana</i>	0.27	1.35	0.33	1.32	2.67	0.89
<i>Carex</i>	<i>digitalis</i>	0.32	1.57	0.23	0.91	2.49	0.83
<i>Symplocos</i>	<i>tinctoria</i>	0.23	1.12	0.27	1.10	2.22	0.74
<i>Quercus</i>	<i>nigra</i>	0.32	1.57	0.16	0.64	2.21	0.74
<i>Scleria</i>	<i>oligantha</i>	0.14	0.67	0.33	1.32	2.00	0.67
<i>Hamamelis</i>	<i>virginiana</i>	0.23	1.12	0.20	0.82	1.95	0.65
<i>Arundinaria</i>	<i>gigantea</i>	0.05	0.22	0.41	1.64	1.87	0.62
<i>Piptochaetium</i>	<i>avenaceum</i>	0.14	0.67	0.30	1.19	1.86	0.62
<i>Vaccinium</i>	<i>arboreum</i>	0.18	0.90	0.17	0.68	1.58	0.53

**Table 8A. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Gelsemium</i>	<i>sempervirens</i>	0.23	1.12	0.09	0.37	1.49	0.50
<i>Nyssa</i>	<i>sylvatica</i>	0.18	0.90	0.14	0.55	1.45	0.48
<i>Carex</i>	<i>abscondita</i>	0.09	0.45	0.24	0.96	1.41	0.47
<i>Dichanthelium</i>	<i>boscii</i>	0.18	0.90	0.13	0.50	1.40	0.47
<i>Triadica</i>	<i>sebifera</i>	0.23	1.12	0.07	0.27	1.40	0.47
<i>Chionanthus</i>	<i>virginicus</i>	0.18	0.90	0.09	0.37	1.26	0.42
<i>Pteridium</i>	<i>aquilinum</i> var. <i>pseudocaudatum</i>	0.09	0.45	0.19	0.78	1.23	0.41
<i>Magnolia</i>	<i>virginiana</i>	0.09	0.45	0.19	0.78	1.23	0.41
<i>Smilax</i>	<i>rotundifolia</i>	0.18	0.90	0.08	0.32	1.22	0.41
<i>Morella</i>	<i>cerifera</i>	0.18	0.90	0.07	0.27	1.17	0.39
<i>Cornus</i>	<i>florida</i>	0.18	0.90	0.07	0.27	1.17	0.39
<i>Prunus</i>	<i>caroliniana</i>	0.18	0.90	0.07	0.27	1.17	0.39
<i>Podophyllum</i>	<i>peltatum</i>	0.05	0.22	0.23	0.91	1.14	0.38
<i>Polystichum</i>	<i>acrostichoides</i>	0.09	0.45	0.17	0.68	1.13	0.38
<i>Asimina</i>	<i>parviflora</i>	0.18	0.90	0.06	0.23	1.13	0.38
<i>Liquidambar</i>	<i>styraciflua</i>	0.18	0.90	0.05	0.18	1.08	0.36
<i>Prunus</i>	<i>serotina</i>	0.14	0.67	0.09	0.37	1.04	0.35
<i>Rhynchosia</i>	sp.	0.05	0.22	0.18	0.73	0.95	0.32
<i>Magnolia</i>	<i>grandiflora</i>	0.14	0.67	0.06	0.23	0.90	0.30
<i>Galium</i>	<i>pilosum</i>	0.14	0.67	0.05	0.18	0.86	0.29
<i>Fagus</i>	<i>grandifolia</i>	0.14	0.67	0.05	0.18	0.86	0.29
<i>Vaccinium</i>	<i>stamineum</i>	0.14	0.67	0.05	0.18	0.86	0.29
<i>Chasmanthium</i>	<i>laxum</i>	0.09	0.45	0.08	0.32	0.77	0.26
<i>Dichanthelium</i>	<i>laxiflorum</i>	0.09	0.45	0.08	0.32	0.77	0.26
<i>Galium</i>	<i>trifida</i>	0.09	0.45	0.06	0.23	0.68	0.23
<i>Viola</i>	<i>palmata</i>	0.09	0.45	0.06	0.23	0.68	0.23
<i>Carpinus</i>	<i>caroliniana</i>	0.09	0.45	0.06	0.23	0.68	0.23
<i>Fraxinus</i>	<i>caroliniana</i>	0.09	0.45	0.06	0.23	0.68	0.23
<i>Oplismenus</i>	<i>hirtellus</i>	0.09	0.45	0.05	0.18	0.63	0.21
<i>Sanicula</i>	<i>canadensis</i>	0.09	0.45	0.05	0.18	0.63	0.21
<i>Carya</i>	<i>texana</i>	0.09	0.45	0.05	0.18	0.63	0.21
<i>Morus</i>	<i>rubra</i>	0.09	0.45	0.03	0.14	0.59	0.20
<i>Verbesina</i>	<i>virginica</i>	0.09	0.45	0.03	0.14	0.59	0.20

**Table 8A. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Fraxinus</i>	<i>americana</i>	0.09	0.45	0.03	0.14	0.59	0.20
<i>Quercus</i>	<i>falcata</i>	0.09	0.45	0.03	0.14	0.59	0.20
<i>Carex</i>	<i>corrugata</i>	0.05	0.22	0.08	0.32	0.54	0.18
<i>Scleria</i>	<i>triglomerata</i>	0.05	0.22	0.07	0.27	0.50	0.17
<i>Bignonia</i>	<i>capreolata</i>	0.05	0.22	0.05	0.18	0.41	0.14
<i>Galium</i>	<i>uniflorum</i>	0.05	0.22	0.05	0.18	0.41	0.14
<i>Erythrina</i>	<i>herbacea</i>	0.05	0.22	0.05	0.18	0.41	0.14
<i>Vaccinium</i>	<i>elliottii</i>	0.05	0.22	0.05	0.18	0.41	0.14
<i>Hypericum</i>	<i>cistifolium</i>	0.05	0.22	0.03	0.14	0.36	0.12
<i>Lonicera</i>	<i>japonica</i>	0.05	0.22	0.03	0.14	0.36	0.12
<i>Viburnum</i>	<i>acerifolium</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Lilium</i>	<i>michauxii</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Arisaema</i>	<i>triphylla</i> var. <i>triphylla</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Rubus</i>	<i>argutus</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Dichanthelium</i>	<i>dichotomum</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Viola</i>	<i>sororia</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Clematis</i>	<i>virginiana</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Acer</i>	<i>barbatum</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Lactuca</i>	sp.	0.05	0.22	0.02	0.09	0.32	0.11
<i>Desmodium</i>	sp.	0.05	0.22	0.02	0.09	0.32	0.11
<i>Dichanthelium</i>	<i>acuminatum</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Morella</i>	<i>caroliniensis</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Cocculus</i>	<i>carolinus</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Vitis</i>	<i>aestivalis</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Carya</i>	<i>tomentosa</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Sebastiana</i>	<i>fruticosa</i>	0.05	0.22	0.02	0.09	0.32	0.11
<i>Diodia</i>	<i>virginiana</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Commelina</i>	<i>erecta</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Passiflora</i>	<i>lutea</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Berchemia</i>	<i>scandens</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Celtis</i>	<i>laevigata</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Brunnichia</i>	<i>ovata</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Scutellaria</i>	<i>elliptica</i>	0.05	0.22	0.01	0.05	0.27	0.09

**Table 8A. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ludwigia</i>	<i>pilosa</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Crataegus</i>	<i>marshallii</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Galium</i>	sp.	0.05	0.22	0.01	0.05	0.27	0.09
<i>Ulmus</i>	<i>alata</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Carex</i>	<i>caroliniana</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Scutellaria</i>	<i>ovata</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Lonicera</i>	<i>sempervirens</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Poncirus</i>	<i>trifoliata</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Sideroxylon</i>	<i>lanuginosa</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Rhus</i>	<i>copallinum</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Solanum</i>	<i>ptycanthum</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Cyperus</i>	<i>retroflexus</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Rubus</i>	sp.	0.05	0.22	0.01	0.05	0.27	0.09
<i>Campsis</i>	<i>radicans</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Albizia</i>	<i>julibrissin</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Bumelia</i>	<i>lanuginosa</i>	0.05	0.22	0.01	0.05	0.27	0.09
<i>Viburnum</i>	<i>dentatum</i>	0.05	0.22	0.01	0.05	0.27	0.09
Totals			100.00	24.90	100.00	200.00	66.67

**Table 8B. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Ilex</i>	<i>vomitorea</i>	0.90	4.30	2.33	8.78	13.08	4.36
<i>Mitchella</i>	<i>repens</i>	0.43	2.04	2.87	10.79	12.83	4.28
<i>Smilax</i>	<i>bona-nox</i>	0.81	3.85	1.25	4.70	8.55	2.85
<i>Chasmanthium</i>	<i>sessiliflorum</i>	0.38	1.81	1.73	6.49	8.30	2.77
<i>Smilax</i>	<i>pumila</i>	0.67	3.17	1.21	4.57	7.73	2.58
<i>Vitis</i>	<i>rotundifolia</i>	0.62	2.94	1.14	4.30	7.24	2.41
<i>Quercus</i>	<i>hemisphaerica</i>	0.76	3.62	0.92	3.45	7.07	2.36
<i>Pinus</i>	<i>taeda</i>	0.86	4.07	0.61	2.28	6.36	2.12
<i>Ilex</i>	<i>coriacea</i>	0.14	0.68	1.43	5.37	6.05	2.02
<i>Acer</i>	<i>rubrum</i>	0.67	3.17	0.51	1.93	5.09	1.70
<i>Ilex</i>	<i>opaca</i>	0.62	2.94	0.51	1.93	4.87	1.62
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.48	2.26	0.65	2.46	4.73	1.58
<i>Smilax</i>	<i>glauca</i>	0.57	2.71	0.50	1.88	4.60	1.53
<i>Sassafras</i>	<i>albidum</i>	0.48	2.26	0.57	2.15	4.41	1.47
<i>Scleria</i>	<i>oligantha</i>	0.48	2.26	0.50	1.88	4.14	1.38
<i>Callicarpa</i>	<i>americana</i>	0.48	2.26	0.35	1.30	3.56	1.19
<i>Gelsemium</i>	<i>sempervirens</i>	0.48	2.26	0.31	1.16	3.43	1.14
<i>Symplocos</i>	<i>tinctoria</i>	0.38	1.81	0.39	1.48	3.29	1.10
<i>Elephantopus</i>	<i>tomentosus</i>	0.24	1.13	0.56	2.10	3.24	1.08
<i>Vaccinium</i>	<i>corybosum</i>	0.29	1.36	0.48	1.79	3.15	1.05
<i>Quercus</i>	<i>nigra</i>	0.43	2.04	0.25	0.94	2.98	0.99
<i>Nyssa</i>	<i>sylvatica</i>	0.43	2.04	0.14	0.54	2.57	0.86
<i>Toxicodendron</i>	<i>radicans</i>	0.24	1.13	0.38	1.43	2.56	0.85
<i>Dichanthelium</i>	<i>commutatum</i>	0.38	1.81	0.18	0.67	2.48	0.83
<i>Dichanthelium</i>	<i>boscii</i>	0.33	1.58	0.19	0.72	2.30	0.77
<i>Persea</i>	<i>borbonia</i>	0.33	1.58	0.19	0.72	2.30	0.77
<i>Cyrilla</i>	<i>racemiflora</i>	0.14	0.68	0.38	1.43	2.11	0.70
<i>Ostrya</i>	<i>virginiana</i>	0.29	1.36	0.19	0.72	2.07	0.69
<i>Asimina</i>	<i>parviflora</i>	0.29	1.36	0.18	0.67	2.03	0.68
<i>Chasmanthium</i>	<i>laxum</i>	0.24	1.13	0.24	0.90	2.03	0.68
<i>Quercus</i>	<i>alba</i>	0.24	1.13	0.23	0.85	1.98	0.66
<i>Carex</i>	<i>digitalis</i>	0.19	0.90	0.26	0.99	1.89	0.63
<i>Prunus</i>	<i>caroliniana</i>	0.19	0.90	0.26	0.99	1.89	0.63

**Table 8B. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Cornus</i>	<i>florida</i>	0.29	1.36	0.13	0.49	1.85	0.62
<i>Persea</i>	<i>palustris</i>	0.19	0.90	0.24	0.90	1.80	0.60
<i>Viola</i>	<i>sororia</i>	0.19	0.90	0.23	0.85	1.76	0.59
<i>Sanicula</i>	<i>canadensis</i>	0.24	1.13	0.11	0.40	1.53	0.51
<i>Triadica</i>	<i>sebifera</i>	0.24	1.13	0.08	0.31	1.44	0.48
<i>Piptochaetium</i>	<i>avenaceum</i>	0.10	0.45	0.26	0.99	1.44	0.48
<i>Fagus</i>	<i>grandifolia</i>	0.14	0.68	0.19	0.72	1.40	0.47
<i>Scleria</i>	<i>triglomerata</i>	0.05	0.23	0.30	1.12	1.35	0.45
<i>Arundinaria</i>	<i>gigantea</i>	0.05	0.23	0.29	1.07	1.30	0.43
<i>Vaccinium</i>	<i>arboreum</i>	0.19	0.90	0.10	0.36	1.26	0.42
<i>Liquidambar</i>	<i>styraciflua</i>	0.19	0.90	0.07	0.27	1.17	0.39
<i>Hamamelis</i>	<i>virginiana</i>	0.10	0.45	0.14	0.54	0.99	0.33
<i>Chionanthus</i>	<i>virginicus</i>	0.14	0.68	0.07	0.27	0.95	0.32
<i>Dichanthelium</i>	<i>acuminatum</i>	0.14	0.68	0.07	0.27	0.95	0.32
<i>Magnolia</i>	<i>virginiana</i>	0.10	0.45	0.13	0.49	0.95	0.32
<i>Oplismenus</i>	<i>hirtellus</i>	0.14	0.68	0.06	0.22	0.90	0.30
<i>Rhododendron</i>	<i>canescens</i>	0.10	0.45	0.12	0.45	0.90	0.30
<i>Smilax</i>	<i>smallii</i>	0.14	0.68	0.05	0.18	0.86	0.29
<i>Galium</i>	<i>aparine</i>	0.14	0.68	0.05	0.18	0.86	0.29
<i>Galium</i>	<i>pilosum</i>	0.10	0.45	0.08	0.31	0.77	0.26
<i>Carex</i>	<i>caroliniana</i>	0.10	0.45	0.08	0.31	0.77	0.26
<i>Magnolia</i>	<i>grandiflora</i>	0.10	0.45	0.08	0.31	0.77	0.26
<i>Bignonia</i>	<i>capreolata</i>	0.10	0.45	0.07	0.27	0.72	0.24
<i>Hypericum</i>	<i>hypericoides</i>	0.10	0.45	0.06	0.22	0.68	0.23
<i>Sebastiania</i>	<i>fruticosa</i>	0.10	0.45	0.06	0.22	0.68	0.23
<i>Frangula</i>	<i>caroliniana</i>	0.10	0.45	0.06	0.22	0.68	0.23
<i>Rubus</i>	<i>argutus</i>	0.10	0.45	0.06	0.22	0.68	0.23
<i>Pteridium</i>	<i>aquilinum</i> var. <i>pseudocaudatum</i>	0.05	0.23	0.12	0.45	0.67	0.22
<i>Morella</i>	<i>cerifera</i>	0.10	0.45	0.05	0.18	0.63	0.21
<i>Smilax</i>	<i>rotundifolia</i>	0.10	0.45	0.05	0.18	0.63	0.21
<i>Vaccinium</i>	<i>stamineum</i>	0.10	0.45	0.05	0.18	0.63	0.21
<i>Arisaema</i>	<i>triphylla</i> var. <i>triphylla</i>	0.10	0.45	0.04	0.14	0.60	0.20
<i>Prunus</i>	<i>serotina</i>	0.10	0.45	0.04	0.13	0.59	0.20

**Table 8B. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Carpinus</i>	<i>caroliniana</i>	0.05	0.23	0.10	0.36	0.58	0.19
<i>Berchemia</i>	<i>scandens</i>	0.10	0.45	0.02	0.09	0.54	0.18
<i>Aristolochia</i>	<i>serpentaria</i>	0.10	0.45	0.02	0.09	0.54	0.18
<i>Euonymus</i>	<i>americanus</i>	0.10	0.45	0.02	0.09	0.54	0.18
<i>Dichanthelium</i>	<i>scoparium</i>	0.10	0.45	0.02	0.09	0.54	0.18
<i>Viola</i>	<i>palmata</i>	0.10	0.45	0.02	0.09	0.54	0.18
<i>Ambrosia</i>	<i>artemisiifolia</i>	0.05	0.23	0.07	0.27	0.49	0.16
<i>Cyperus</i>	<i>croceus</i>	0.05	0.23	0.06	0.22	0.45	0.15
<i>Rhynchospora</i>	<i>inexpansa</i>	0.05	0.23	0.05	0.18	0.41	0.14
<i>Fraxinus</i>	<i>americana</i>	0.05	0.23	0.05	0.18	0.41	0.14
<i>Lonicera</i>	<i>japonica</i>	0.05	0.23	0.04	0.13	0.36	0.12
<i>Krigia</i>	<i>dandelion</i>	0.05	0.23	0.04	0.13	0.36	0.12
<i>Halesia</i>	<i>diptera</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Lonicera</i>	<i>sempervirens</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Viburnum</i>	<i>dentatum</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Carex</i>	<i>blanda</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Morella</i>	<i>caroliniensis</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Carya</i>	<i>tomentosa</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Sideroxylon</i>	<i>lanuginosa</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Botrychium</i>	<i>biterdatum</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Trillium</i>	<i>gracile</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Aralia</i>	<i>spinosa</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Lilium</i>	<i>michauxii</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Desmodium</i>	<i>laevigatum</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Juniperus</i>	<i>virginiana</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Euphorbia</i>	<i>corollata</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Verbesina</i>	<i>virginica</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Erythrina</i>	<i>herbacea</i>	0.05	0.23	0.02	0.09	0.32	0.11
<i>Carya</i>	<i>texana</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Panicum</i>	<i>dichotomum</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Trachelospermum</i>	<i>difforme</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Eupatorium</i>	<i>serotinum</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Rhus</i>	<i>copallina</i>	0.05	0.23	0.01	0.04	0.27	0.09

**Table 8B. Summary of the Herbaceous Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Dichanthelium</i>	<i>aciculare</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Epifagus</i>	<i>virginiana</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Cocculus</i>	<i>carolinus</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Scutellaria</i>	<i>elliptica</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Eupatorium</i>	<i>coelestinum</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Andropogon</i>	<i>glomeratus</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Rubus</i>	<i>trivialis</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Hypericum</i>	<i>crus-andreae</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Ruellia</i>	<i>humilis</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Poncirus</i>	<i>trifoliata</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Brunnichia</i>	<i>ovata</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Matelea</i>	<i>gonocarpa</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Eupatorium</i>	<i>capillifolium</i>	0.05	0.23	0.01	0.04	0.27	0.09
<i>Carex</i>	<i>debilis</i> var. <i>debilis</i>	0.05	0.23	0.01	0.04	0.27	0.09
Totals			100.00	26.59	100.00	200.00	66.67

**Table 8C. Summary of the Woody Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	0.83	20.88	2857.39	45.59	0.30	51.34	117.81	39.27
<i>Ilex</i>	<i>coriacea</i>	0.13	3.30	626.09	9.99	0.03	5.61	18.90	6.30
<i>Vitis</i>	<i>rotundifolia</i>	0.26	6.59	260.87	4.16	0.04	6.72	17.48	5.83
<i>Quercus</i>	<i>hemisphaerica</i>	0.22	5.49	243.48	3.88	0.04	7.66	17.04	5.68
<i>Callicarpa</i>	<i>americana</i>	0.22	5.49	400.00	6.38	0.03	4.38	16.26	5.42
<i>Symplocos</i>	<i>tinctoria</i>	0.26	6.59	243.48	3.88	0.01	2.46	12.93	4.31
<i>Ilex</i>	<i>opaca</i>	0.26	6.59	121.74	1.94	0.01	2.10	10.64	3.55
<i>Persea</i>	<i>palustris</i>	0.17	4.40	243.48	3.88	0.01	2.10	10.38	3.46
<i>Magnolia</i>	<i>grandiflora</i>	0.13	3.30	173.91	2.77	0.02	3.33	9.40	3.13
<i>Vaccinium</i>	<i>arboresum</i>	0.13	3.30	139.13	2.22	0.02	2.81	8.32	2.77
<i>Rhododendron</i>	<i>viscosum</i>	0.09	2.20	226.09	3.61	0.01	2.34	8.14	2.71
<i>Quercus</i>	<i>nigra</i>	0.17	4.40	86.96	1.39	0.01	1.70	7.48	2.49
<i>Ostrya</i>	<i>virginiana</i>	0.09	2.20	156.52	2.50	0.01	1.23	5.92	1.97
<i>Vaccinium</i>	<i>corymbosum</i>	0.09	2.20	69.57	1.11	0.01	1.05	4.36	1.45
<i>Quercus</i>	<i>alba</i>	0.09	2.20	69.57	1.11	0.00	0.76	4.07	1.36
<i>Sassafras</i>	<i>albidum</i>	0.09	2.20	34.78	0.55	0.00	0.12	2.87	0.96
<i>Fagus</i>	<i>grandifolia</i>	0.04	1.10	17.39	0.28	0.01	0.94	2.31	0.77
<i>Ulmus</i>	<i>alata</i>	0.04	1.10	17.39	0.28	0.01	0.94	2.31	0.77
<i>Cyrilla</i>	<i>racemiflora</i>	0.04	1.10	34.78	0.55	0.00	0.29	1.95	0.65
<i>Vitis</i>	<i>aestivalis</i>	0.04	1.10	17.39	0.28	0.00	0.53	1.90	0.63
<i>Styrax</i>	<i>grandifolia</i>	0.04	1.10	34.78	0.55	0.00	0.06	1.71	0.57
<i>Crataegus</i>	<i>marshallii</i>	0.04	1.10	17.39	0.28	0.00	0.23	1.61	0.54
<i>Morella</i>	<i>cerifera</i>	0.04	1.10	17.39	0.28	0.00	0.23	1.61	0.54
<i>Ilex</i>	<i>ambigua</i>	0.04	1.10	17.39	0.28	0.00	0.23	1.61	0.54
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.04	1.10	17.39	0.28	0.00	0.23	1.61	0.54
<i>Ulmus</i>	<i>rubra</i>	0.04	1.10	17.39	0.28	0.00	0.23	1.61	0.54
<i>Asimina</i>	<i>parviflora</i>	0.04	1.10	17.39	0.28	0.00	0.06	1.43	0.48
<i>Pinus</i>	<i>taeda</i>	0.04	1.10	17.39	0.28	0.00	0.06	1.43	0.48
<i>Smilax</i>	<i>smallii</i>	0.04	1.10	17.39	0.28	0.00	0.06	1.43	0.48
<i>Quercus</i>	<i>falcata</i>	0.04	1.10	17.39	0.28	0.00	0.06	1.43	0.48
<i>Liquidambar</i>	<i>styraciflua</i>	0.04	1.10	17.39	0.28	0.00	0.06	1.43	0.48
<i>Morus</i>	<i>rubra</i>	0.04	1.10	17.39	0.28	0.00	0.06	1.43	0.48
<i>Cornus</i>	<i>florida</i>	0.04	1.10	1.74	0.03	0.00	0.02	1.15	0.38
Totals			100.00	6267.83	100.00	0.58	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	0.96	10.78	706.09	42.25	1.58	36.94	89.97	29.99
<i>Ilex</i>	<i>opaca</i>	0.61	6.86	107.83	6.45	0.37	8.63	21.95	7.32
<i>Quercus</i>	<i>hemisphaerica</i>	0.57	6.37	102.61	6.14	0.31	7.35	19.86	6.62
<i>Nyssa</i>	<i>sylvatica</i>	0.57	6.37	69.57	4.16	0.19	4.52	15.05	5.02

**Table 8C. Summary of the Woody Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Quercus</i>	<i>nigra</i>	0.30	3.43	64.35	3.85	0.17	3.92	11.20	3.73
<i>Vaccinium</i>	<i>arboreum</i>	0.48	5.39	43.48	2.60	0.11	2.66	10.65	3.55
<i>Ostrya</i>	<i>virginiana</i>	0.35	3.92	53.91	3.23	0.15	3.44	10.59	3.53
<i>Vitis</i>	<i>rotundifolia</i>	0.43	4.90	62.61	3.75	0.06	1.36	10.01	3.34
<i>Acer</i>	<i>rubrum</i>	0.35	3.92	38.26	2.29	0.14	3.20	9.41	3.14
<i>Magnolia</i>	<i>grandiflora</i>	0.39	4.41	36.52	2.19	0.11	2.68	9.28	3.09
<i>Liquidambar</i>	<i>styraciflua</i>	0.43	4.90	31.30	1.87	0.10	2.38	9.16	3.05
<i>Pinus</i>	<i>taeda</i>	0.26	2.94	34.78	2.08	0.15	3.62	8.64	2.88
<i>Quercus</i>	<i>falcata</i>	0.22	2.45	31.30	1.87	0.13	3.06	7.38	2.46
<i>Persea</i>	<i>palustris</i>	0.26	2.94	45.22	2.71	0.07	1.71	7.36	2.45
<i>Symplocos</i>	<i>tinctoria</i>	0.26	2.94	40.00	2.39	0.06	1.45	6.78	2.26
<i>Carpinus</i>	<i>caroliniana</i>	0.22	2.45	15.65	0.94	0.07	1.73	5.11	1.70
<i>Fagus</i>	<i>grandifolia</i>	0.17	1.96	15.65	0.94	0.07	1.58	4.48	1.49
<i>Cornus</i>	<i>florida</i>	0.17	1.96	17.39	1.04	0.05	1.17	4.17	1.39
<i>Sassafras</i>	<i>albidum</i>	0.17	1.96	15.65	0.94	0.05	1.26	4.16	1.39
<i>Ilex</i>	<i>coriacea</i>	0.17	1.96	22.61	1.35	0.02	0.55	3.86	1.29
<i>Magnolia</i>	<i>virginiana</i>	0.09	0.98	20.87	1.25	0.05	1.27	3.50	1.17
<i>Cyrilla</i>	<i>racemiflora</i>	0.13	1.47	17.39	1.04	0.02	0.43	2.94	0.98
<i>Quercus</i>	<i>alba</i>	0.13	1.47	10.43	0.62	0.03	0.63	2.72	0.91
<i>Prunus</i>	<i>serotina</i>	0.13	1.47	5.22	0.31	0.01	0.26	2.04	0.68
<i>Chionanthus</i>	<i>virginicus</i>	0.13	1.47	5.22	0.31	0.01	0.23	2.01	0.67
<i>Vitis</i>	<i>aestivalis</i>	0.09	0.98	5.22	0.31	0.02	0.41	1.70	0.57
<i>Celtis</i>	<i>laevigata</i>	0.09	0.98	3.48	0.21	0.02	0.37	1.56	0.52
<i>Ulmus</i>	<i>alata</i>	0.04	0.49	8.70	0.52	0.02	0.50	1.51	0.50
<i>Crataegus</i>	<i>marshallii</i>	0.09	0.98	3.48	0.21	0.00	0.07	1.26	0.42
<i>Carya</i>	<i>texana</i>	0.04	0.49	3.48	0.21	0.02	0.51	1.21	0.40
<i>Pinus</i>	<i>echinata</i>	0.04	0.49	3.48	0.21	0.02	0.46	1.16	0.39
<i>Vaccinium</i>	<i>corymbosum</i>	0.04	0.49	6.96	0.42	0.01	0.13	1.03	0.34
<i>Juniperus</i>	<i>virginiana</i>	0.04	0.49	1.74	0.10	0.02	0.39	0.98	0.33
<i>Morus</i>	<i>rubra</i>	0.04	0.49	1.74	0.10	0.01	0.32	0.91	0.30
<i>Carya</i>	<i>tomentosa</i>	0.04	0.49	1.74	0.10	0.01	0.32	0.91	0.30
<i>Berchemia</i>	<i>scandens</i>	0.04	0.49	3.48	0.21	0.00	0.06	0.76	0.25
<i>Hamamelis</i>	<i>virginiana</i>	0.04	0.49	3.48	0.21	0.00	0.06	0.76	0.25
<i>Ulmus</i>	<i>rubra</i>	0.04	0.49	1.74	0.10	0.01	0.16	0.75	0.25
<i>Fraxinus</i>	<i>americana</i>	0.04	0.49	1.74	0.10	0.00	0.12	0.71	0.24
<i>Quercus</i>	<i>stellata</i>	0.04	0.49	1.74	0.10	0.00	0.04	0.63	0.21
<i>Rhododendron</i>	<i>viscosum</i>	0.04	0.49	1.74	0.10	0.00	0.04	0.63	0.21
<i>Smilax</i>	<i>glauca</i>	0.04	0.49	1.74	0.10	0.00	0.02	0.61	0.20
<i>Campsis</i>	<i>radicans</i>	0.04	0.49	1.74	0.10	0.00	0.02	0.61	0.20
Totals			100.00	1671.30	100.00	4.28	100.00	300.00	100.00

**Table 8C. Summary of the Woody Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	0.87	17.54	90.43	26.67	7.99	36.24	80.45	26.82
<i>Liquidambar</i>	<i>styraciflua</i>	0.48	9.65	27.83	8.21	1.86	8.42	26.27	8.76
<i>Quercus</i>	<i>hemisphaerica</i>	0.30	6.14	24.35	7.18	2.08	9.45	22.77	7.59
<i>Quercus</i>	<i>nigra</i>	0.35	7.02	29.57	8.72	1.18	5.34	21.08	7.03
<i>Nyssa</i>	<i>sylvatica</i>	0.43	8.77	20.87	6.15	0.47	2.12	17.05	5.68
<i>Ilex</i>	<i>opaca</i>	0.35	7.02	20.87	6.15	0.44	1.98	15.16	5.05
<i>Quercus</i>	<i>falcata</i>	0.22	4.39	15.65	4.62	1.02	4.62	13.63	4.54
<i>Magnolia</i>	<i>grandiflora</i>	0.17	3.51	10.43	3.08	1.11	5.02	11.60	3.87
<i>Carya</i>	<i>texana</i>	0.17	3.51	13.91	4.10	0.87	3.93	11.55	3.85
<i>Quercus</i>	<i>alba</i>	0.22	4.39	12.17	3.59	0.67	3.05	11.03	3.68
<i>Acer</i>	<i>rubrum</i>	0.22	4.39	10.43	3.08	0.47	2.12	9.58	3.19
<i>Ostrya</i>	<i>virginiana</i>	0.13	2.63	6.96	2.05	0.85	3.83	8.52	2.84
<i>Cornus</i>	<i>florida</i>	0.22	4.39	10.43	3.08	0.19	0.86	8.33	2.78
<i>Fagus</i>	<i>grandifolia</i>	0.09	1.75	5.22	1.54	0.42	1.91	5.20	1.73
<i>Sassafras</i>	<i>albidum</i>	0.09	1.75	6.96	2.05	0.19	0.88	4.68	1.56
<i>Carya</i>	<i>tomentosa</i>	0.09	1.75	3.48	1.03	0.34	1.55	4.33	1.44
<i>Quercus</i>	<i>pagoda</i>	0.04	0.88	5.22	1.54	0.23	1.03	3.45	1.15
<i>Pinus</i>	<i>echinata</i>	0.04	0.88	3.48	1.03	0.30	1.38	3.28	1.09
<i>Pinus</i>	<i>palustris</i>	0.04	0.88	1.74	0.51	0.38	1.74	3.13	1.04
<i>Carex</i>	<i>corrugata</i>	0.04	0.88	1.74	0.51	0.31	1.40	2.79	0.93
<i>Ulmus</i>	<i>alata</i>	0.04	0.88	3.48	1.03	0.19	0.87	2.78	0.93
<i>Vaccinium</i>	<i>arboreum</i>	0.04	0.88	1.74	0.51	0.14	0.64	2.03	0.68
<i>Platanus</i>	<i>occidentalis</i>	0.04	0.88	1.74	0.51	0.08	0.37	1.76	0.59
<i>Fraxinus</i>	<i>americana</i>	0.04	0.88	1.74	0.51	0.07	0.33	1.72	0.57
<i>Prunus</i>	<i>serotina</i>	0.04	0.88	1.74	0.51	0.06	0.27	1.66	0.55
<i>Celtis</i>	<i>laevigata</i>	0.04	0.88	1.74	0.51	0.05	0.22	1.61	0.54
<i>Persea</i>	<i>palustris</i>	0.04	0.88	1.74	0.51	0.04	0.16	1.55	0.52
<i>Tilia</i>	<i>caroliniana</i>	0.04	0.88	1.74	0.51	0.03	0.12	1.51	0.50
<i>Magnolia</i>	<i>virginiana</i>	0.04	0.88	1.74	0.51	0.02	0.11	1.50	0.50
Totals			100.00	339.13	100.00	22.04	100.00	300.00	100.00

**Table 8D. Summary of the Woody Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	0.91	16.15	4504.35	34.62	0.34	42.25	93.02	31.01
<i>Quercus</i>	<i>hemisphaerica</i>	0.39	6.92	1930.43	14.84	0.08	9.91	31.67	10.56
<i>Ilex</i>	<i>coriacea</i>	0.13	2.31	1669.57	12.83	0.07	8.64	23.78	7.93
<i>Callicarpa</i>	<i>americana</i>	0.43	7.69	626.09	4.81	0.03	3.12	15.62	5.21
<i>Pinus</i>	<i>taeda</i>	0.09	1.54	730.43	5.61	0.05	5.95	13.10	4.37
<i>Vitis</i>	<i>rotundifolia</i>	0.35	6.15	313.04	2.41	0.03	3.33	11.89	3.96
<i>Vaccinium</i>	<i>arboreum</i>	0.26	4.62	156.52	1.20	0.02	2.57	8.39	2.80
<i>Symplocos</i>	<i>tinctoria</i>	0.22	3.85	295.65	2.27	0.02	2.19	8.31	2.77
<i>Quercus</i>	<i>nigra</i>	0.22	3.85	226.09	1.74	0.02	2.28	7.86	2.62
<i>Ostrya</i>	<i>virginiana</i>	0.09	1.54	173.91	1.34	0.02	3.08	5.95	1.98
<i>Persea</i>	<i>borbonia</i>	0.17	3.08	226.09	1.74	0.01	1.05	5.87	1.96
<i>Magnolia</i>	<i>grandiflora</i>	0.17	3.08	158.26	1.22	0.01	1.46	5.75	1.92
<i>Ilex</i>	<i>opaca</i>	0.22	3.85	121.74	0.94	0.01	0.97	5.75	1.92
<i>Acer</i>	<i>rubrum</i>	0.13	2.31	69.57	0.53	0.02	2.78	5.63	1.88
<i>Cyrilla</i>	<i>racemiflora</i>	0.09	1.54	191.30	1.47	0.01	1.64	4.65	1.55
<i>Vaccinium</i>	<i>corybosum</i>	0.13	2.31	156.52	1.20	0.00	0.38	3.89	1.30
<i>Rhododendron</i>	<i>viscosum</i>	0.04	0.77	226.09	1.74	0.01	1.35	3.86	1.29
<i>Liquidambar</i>	<i>styraciflua</i>	0.09	1.54	69.57	0.53	0.01	1.60	3.68	1.23
<i>Asimina</i>	<i>parviflora</i>	0.13	2.31	52.17	0.40	0.00	0.13	2.84	0.95
<i>Quercus</i>	<i>alba</i>	0.09	1.54	52.17	0.40	0.01	0.80	2.74	0.91
<i>Fagus</i>	<i>grandifolia</i>	0.04	0.77	191.30	1.47	0.00	0.46	2.70	0.90
<i>Nyssa</i>	<i>sylvatica</i>	0.09	1.54	52.17	0.40	0.01	0.76	2.70	0.90
<i>Persea</i>	<i>palustris</i>	0.09	1.54	69.57	0.53	0.00	0.17	2.24	0.75
<i>Morella</i>	<i>cerifera</i>	0.09	1.54	34.78	0.27	0.00	0.34	2.14	0.71
<i>Smilax</i>	<i>glauca</i>	0.09	1.54	52.17	0.40	0.00	0.13	2.07	0.69
<i>Juniperus</i>	<i>virginiana</i>	0.09	1.54	52.17	0.40	0.00	0.13	2.07	0.69
<i>Magnolia</i>	<i>virginiana</i>	0.04	0.77	86.96	0.67	0.00	0.34	1.77	0.59
<i>Carpinus</i>	<i>caroliniana</i>	0.04	0.77	86.96	0.67	0.00	0.21	1.65	0.55
<i>Triadica</i>	<i>sebifera</i>	0.04	0.77	34.78	0.27	0.00	0.34	1.37	0.46
<i>Sassafras</i>	<i>albidum</i>	0.04	0.77	52.17	0.40	0.00	0.13	1.30	0.43
<i>Crataegus</i>	<i>marshallii</i>	0.04	0.77	17.39	0.13	0.00	0.38	1.28	0.43
<i>Quercus</i>	<i>michauxii</i>	0.04	0.77	34.78	0.27	0.00	0.21	1.25	0.42
<i>Sebastiania</i>	<i>fruticosa</i>	0.04	0.77	34.78	0.27	0.00	0.17	1.21	0.40
<i>Cornus</i>	<i>florida</i>	0.04	0.77	34.78	0.27	0.00	0.08	1.12	0.37
<i>Frangula</i>	<i>caroliniana</i>	0.04	0.77	34.78	0.27	0.00	0.08	1.12	0.37
<i>Vaccinium</i>	<i>stamineum</i>	0.04	0.77	34.78	0.27	0.00	0.08	1.12	0.37
<i>Vitis</i>	<i>aestivalis</i>	0.04	0.77	17.39	0.13	0.00	0.17	1.07	0.36
<i>Quercus</i>	<i>falcata</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
<i>Aralia</i>	<i>spinosa</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
<i>Hypericum</i>	<i>hypericoides</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
<i>Smilax</i>	<i>smallii</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32

**Table 8D. Summary of the Woody Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Carya</i>	<i>texana</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
<i>Rhus</i>	<i>lanceolata</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
<i>Prunus</i>	<i>serotina</i>	0.04	0.77	17.39	0.13	0.00	0.04	0.95	0.32
Totals			100.00	13010.43	100.00	0.81	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	0.87	10.64	565.22	39.44	1.32	33.39	83.47	27.82
<i>Ilex</i>	<i>opaca</i>	0.70	8.51	111.30	7.77	0.50	12.54	28.82	9.61
<i>Quercus</i>	<i>hemisphaerica</i>	0.48	5.85	102.61	7.16	0.33	8.26	21.27	7.09
<i>Nyssa</i>	<i>sylvatica</i>	0.48	5.85	60.87	4.25	0.18	4.43	14.53	4.84
<i>Vaccinium</i>	<i>arboreum</i>	0.48	5.85	60.87	4.25	0.13	3.27	13.37	4.46
<i>Ostrya</i>	<i>virginiana</i>	0.35	4.26	50.43	3.52	0.16	4.03	11.81	3.94
<i>Acer</i>	<i>rubrum</i>	0.43	5.32	36.52	2.55	0.13	3.41	11.28	3.76
<i>Quercus</i>	<i>nigra</i>	0.30	3.72	59.13	4.13	0.13	3.34	11.19	3.73
<i>Magnolia</i>	<i>grandiflora</i>	0.39	4.79	36.52	2.55	0.12	2.94	10.28	3.43
<i>Vitis</i>	<i>rotundifolia</i>	0.39	4.79	46.96	3.28	0.07	1.67	9.74	3.25
<i>Liquidambar</i>	<i>styraciflua</i>	0.30	3.72	33.04	2.31	0.12	3.02	9.05	3.02
<i>Persea</i>	<i>palustris</i>	0.13	1.60	43.48	3.03	0.11	2.91	7.54	2.51
<i>Pinus</i>	<i>taeda</i>	0.22	2.66	27.83	1.94	0.11	2.76	7.36	2.45
<i>Quercus</i>	<i>falcata</i>	0.26	3.19	19.13	1.33	0.07	1.89	6.42	2.14
<i>Symplocos</i>	<i>tinctoria</i>	0.17	2.13	24.35	1.70	0.05	1.33	5.16	1.72
<i>Carpinus</i>	<i>caroliniana</i>	0.22	2.66	13.91	0.97	0.06	1.46	5.09	1.70
<i>Cornus</i>	<i>florida</i>	0.22	2.66	12.17	0.85	0.05	1.25	4.76	1.59
<i>Sassafras</i>	<i>albidum</i>	0.17	2.13	8.70	0.61	0.03	0.78	3.51	1.17
<i>Fagus</i>	<i>grandifolia</i>	0.17	2.13	8.70	0.61	0.03	0.75	3.49	1.16
<i>Magnolia</i>	<i>virginiana</i>	0.04	0.53	17.39	1.21	0.04	0.91	2.65	0.88
<i>Cyrilla</i>	<i>racemiflora</i>	0.09	1.06	15.65	1.09	0.01	0.33	2.48	0.83
<i>Quercus</i>	<i>alba</i>	0.13	1.60	8.70	0.61	0.01	0.20	2.40	0.80
<i>Persea</i>	<i>borbonia</i>	0.09	1.06	6.96	0.49	0.02	0.63	2.18	0.73
<i>Ilex</i>	<i>coriacea</i>	0.09	1.06	10.43	0.73	0.01	0.22	2.01	0.67
<i>Ulmus</i>	<i>alata</i>	0.04	0.53	8.70	0.61	0.02	0.55	1.68	0.56
<i>Ulmus</i>	<i>rubra</i>	0.09	1.06	3.48	0.24	0.01	0.34	1.65	0.55
<i>Prunus</i>	<i>serotina</i>	0.09	1.06	3.48	0.24	0.01	0.27	1.58	0.53
<i>Vitis</i>	<i>aestivalis</i>	0.09	1.06	3.48	0.24	0.01	0.22	1.52	0.51
<i>Prunus</i>	<i>caroliniana</i>	0.09	1.06	3.48	0.24	0.00	0.12	1.42	0.47
<i>Carya</i>	<i>texana</i>	0.04	0.53	3.48	0.24	0.02	0.57	1.35	0.45
<i>Pinus</i>	<i>echinata</i>	0.04	0.53	3.48	0.24	0.02	0.50	1.28	0.43
<i>Juniperus</i>	<i>virginiana</i>	0.04	0.53	1.74	0.12	0.02	0.46	1.11	0.37
<i>Celtis</i>	<i>laevigata</i>	0.04	0.53	1.74	0.12	0.02	0.46	1.11	0.37
<i>Carya</i>	<i>tomentosa</i>	0.04	0.53	1.74	0.12	0.02	0.38	1.03	0.34
<i>Quercus</i>	<i>stellata</i>	0.04	0.53	3.48	0.24	0.00	0.08	0.85	0.28
<i>Chionanthus</i>	<i>virginicus</i>	0.04	0.53	1.74	0.12	0.00	0.07	0.72	0.24
<i>Frangula</i>	<i>caroliniana</i>	0.04	0.53	1.74	0.12	0.00	0.06	0.71	0.24
<i>Quercus</i>	<i>laurifolia</i>	0.04	0.53	1.74	0.12	0.00	0.04	0.70	0.23

**Table 8D. Summary of the Woody Stratum in the *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Crataegus</i>	<i>marshallii</i>	0.04	0.53	1.74	0.12	0.00	0.04	0.70	0.23
<i>Rhododendron</i>	<i>canescens</i>	0.04	0.53	1.74	0.12	0.00	0.03	0.68	0.23
<i>Parthenocissus</i>	<i>quinquefolia</i>	0.04	0.53	1.74	0.12	0.00	0.03	0.68	0.23
<i>Quercus</i>	<i>michauxii</i>	0.04	0.53	1.74	0.12	0.00	0.03	0.68	0.23
<i>Celtis</i>	<i>tenuifolia</i>	0.04	0.53	1.74	0.12	0.00	0.03	0.68	0.23
Totals			100.00	1433.04	100.00	3.95	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	0.91	17.65	95.65	27.23	8.98	41.75	86.62	28.87
<i>Liquidambar</i>	<i>styraciflua</i>	0.43	8.40	29.57	8.42	2.05	9.51	26.33	8.78
<i>Quercus</i>	<i>hemisphaerica</i>	0.39	7.56	26.09	7.43	1.71	7.95	22.94	7.65
<i>Quercus</i>	<i>nigra</i>	0.35	6.72	29.57	8.42	1.18	5.49	20.62	6.87
<i>Quercus</i>	<i>alba</i>	0.26	5.04	20.87	5.94	1.31	6.11	17.09	5.70
<i>Nyssa</i>	<i>sylvatica</i>	0.39	7.56	20.87	5.94	0.48	2.21	15.71	5.24
<i>Magnolia</i>	<i>grandiflora</i>	0.26	5.04	13.91	3.96	1.25	5.79	14.79	4.93
<i>Quercus</i>	<i>falcata</i>	0.26	5.04	17.39	4.95	0.85	3.93	13.93	4.64
<i>Ilex</i>	<i>opaca</i>	0.30	5.88	19.13	5.45	0.38	1.77	13.10	4.37
<i>Carya</i>	<i>texana</i>	0.17	3.36	12.17	3.47	0.70	3.25	10.08	3.36
<i>Acer</i>	<i>rubrum</i>	0.22	4.20	10.43	2.97	0.46	2.13	9.30	3.10
<i>Fagus</i>	<i>grandifolia</i>	0.13	2.52	6.96	1.98	0.48	2.24	6.74	2.25
<i>Cornus</i>	<i>florida</i>	0.17	3.36	8.70	2.48	0.14	0.66	6.50	2.17
<i>Sassafras</i>	<i>albidum</i>	0.17	3.36	6.96	1.98	0.20	0.92	6.26	2.09
<i>Carya</i>	<i>tomentosa</i>	0.09	1.68	3.48	0.99	0.34	1.59	4.26	1.42
<i>Ostrya</i>	<i>virginiana</i>	0.09	1.68	6.96	1.98	0.12	0.55	4.21	1.40
<i>Pinus</i>	<i>echinata</i>	0.04	0.84	1.74	0.50	0.18	0.82	2.16	0.72
<i>Ulmus</i>	<i>alata</i>	0.04	0.84	1.74	0.50	0.17	0.80	2.13	0.71
<i>Vaccinium</i>	<i>arboreum</i>	0.04	0.84	1.74	0.50	0.16	0.76	2.10	0.70
<i>Platanus</i>	<i>occidentalis</i>	0.04	0.84	1.74	0.50	0.08	0.37	1.70	0.57
<i>Fraxinus</i>	<i>pennsylvanica</i>	0.04	0.84	1.74	0.50	0.07	0.34	1.67	0.56
<i>Celtis</i>	<i>laevigata</i>	0.04	0.84	1.74	0.50	0.04	0.21	1.54	0.51
<i>Tilia</i>	<i>americana</i> var. <i>caroliniana</i>	0.04	0.84	1.74	0.50	0.04	0.18	1.52	0.51
<i>Persea</i>	<i>palustris</i>	0.04	0.84	1.74	0.50	0.04	0.18	1.52	0.51
<i>Magnolia</i>	<i>virginiana</i>	0.04	0.84	1.74	0.50	0.02	0.11	1.44	0.48
<i>Ilex</i>	<i>vomitaria</i>	0.04	0.84	1.74	0.50	0.02	0.10	1.43	0.48
<i>Morus</i>	<i>rubra</i>	0.04	0.84	1.74	0.50	0.02	0.10	1.43	0.48
<i>Carpinus</i>	<i>caroliniana</i>	0.04	0.84	1.74	0.50	0.02	0.09	1.43	0.48
<i>Symplocos</i>	<i>tinctoria</i>	0.04	0.84	1.74	0.50	0.02	0.09	1.43	0.48
Totals			100.00	351.30	100.00	21.51	100.00	300.00	100.00

**Table 9A. Summary of the Herbaceous Stratum in the *Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Chasmanthium</i>	<i>laxum</i>	1.00	2.70	23.50	28.40	31.10	10.37
<i>Toxicodendron</i>	<i>radicans</i>	1.00	2.70	9.25	11.18	13.88	4.63
<i>Bignonia</i>	<i>capreolata</i>	1.00	2.70	5.50	6.65	9.35	3.12
<i>Oxalis</i>	<i>dillenii</i>	1.00	2.70	3.75	4.53	7.23	2.41
<i>Carex</i>	<i>blanda</i>	1.00	2.70	3.75	4.53	7.23	2.41
<i>Quercus</i>	<i>nigra</i>	1.00	2.70	3.75	4.53	7.23	2.41
<i>Carpinus</i>	<i>caroliniana</i>	1.00	2.70	3.00	3.63	6.33	2.11
<i>Carex</i>	<i>cherokeensis</i>	1.00	2.70	2.75	3.32	6.03	2.01
<i>Carex</i>	<i>digitalis</i>	1.00	2.70	2.00	2.42	5.12	1.71
<i>Vitis</i>	<i>rotundifolia</i>	1.00	2.70	2.00	2.42	5.12	1.71
<i>Rubus</i>	<i>trivialis</i>	1.00	2.70	2.00	2.42	5.12	1.71
<i>Piptochaetium</i>	<i>avenaceum</i>	1.00	2.70	2.00	2.42	5.12	1.71
<i>Smilax</i>	<i>bona-nox</i>	1.00	2.70	1.75	2.11	4.82	1.61
<i>Ilex</i>	<i>opaca</i>	1.00	2.70	1.50	1.81	4.52	1.51
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	2.70	1.50	1.81	4.52	1.51
<i>Sanicula</i>	<i>canadensis</i>	1.00	2.70	1.50	1.81	4.52	1.51
<i>Dichanthelium</i>	<i>commutatum</i>	1.00	2.70	1.25	1.51	4.21	1.40
<i>Pinus</i>	<i>taeda</i>	1.00	2.70	1.25	1.51	4.21	1.40
<i>Dichanthelium</i>	<i>boscii</i>	1.00	2.70	1.25	1.51	4.21	1.40
<i>Gelsemium</i>	<i>sempervirens</i>	1.00	2.70	1.25	1.51	4.21	1.40
<i>Elephantopus</i>	<i>carolinianus</i>	1.00	2.70	1.00	1.21	3.91	1.30
<i>Smilax</i>	<i>glauca</i>	1.00	2.70	0.75	0.91	3.61	1.20
<i>Carex</i>	<i>abscondita</i>	1.00	2.70	0.75	0.91	3.61	1.20
<i>Dichanthelium</i>	<i>acuminatum</i>	1.00	2.70	0.75	0.91	3.61	1.20
<i>Smilax</i>	<i>smallii</i>	1.00	2.70	0.75	0.91	3.61	1.20
<i>Nyssa</i>	<i>sylvatica</i>	1.00	2.70	0.75	0.91	3.61	1.20
<i>Galium</i>	<i>sp.</i>	1.00	2.70	0.50	0.60	3.31	1.10
<i>Viola</i>	<i>sororia</i>	1.00	2.70	0.50	0.60	3.31	1.10
<i>Perilla</i>	<i>frutescens</i>	1.00	2.70	0.50	0.60	3.31	1.10
<i>Phytolacca</i>	<i>americana</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Chasmanthium</i>	<i>latifolium</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Acalypha</i>	<i>virginica</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Styrax</i>	<i>grandifolia</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Ilex</i>	<i>vomitaria</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Oplismenus</i>	<i>hirtellus</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	2.70	0.25	0.30	3.00	1.00
<i>Acalypha</i>	<i>sp.</i>	1.00	2.70	0.25	0.30	3.00	1.00
Totals			100.00	82.75	100.00	200.00	66.67

**Table 9B. Summary of the Herbaceous Stratum in the *Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Chasmanthium</i>	<i>laxum</i>	1.00	3.23	16.75	26.48	29.71	9.90
<i>Rubus</i>	<i>argutus</i>	1.00	3.23	8.50	13.44	16.66	5.55
<i>Bignonia</i>	<i>capreolata</i>	1.00	3.23	7.50	11.86	15.08	5.03
<i>Toxicodendron</i>	<i>radicans</i>	1.00	3.23	6.25	9.88	13.11	4.37
<i>Carex</i>	<i>caroliniana</i>	1.00	3.23	5.00	7.91	11.13	3.71
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	3.23	2.50	3.95	7.18	2.39
<i>Vitis</i>	<i>aestivalis</i>	1.00	3.23	2.50	3.95	7.18	2.39
<i>Quercus</i>	<i>nigra</i>	1.00	3.23	2.25	3.56	6.78	2.26
<i>Halesia</i>	<i>diptera</i>	1.00	3.23	2.00	3.16	6.39	2.13
<i>Chasmanthium</i>	<i>latifolium</i>	1.00	3.23	1.25	1.98	5.20	1.73
<i>Vitis</i>	<i>rotundifolia</i>	1.00	3.23	1.25	1.98	5.20	1.73
<i>Nandina</i>	<i>domestica</i>	1.00	3.23	1.00	1.58	4.81	1.60
<i>Scleria</i>	<i>oligantha</i>	1.00	3.23	0.75	1.19	4.41	1.47
<i>Galium</i>	<i>aparine</i>	1.00	3.23	0.75	1.19	4.41	1.47
<i>Carex</i>	<i>tenax</i>	1.00	3.23	0.50	0.79	4.02	1.34
<i>Oxalis</i>	<i>debilis</i> var. <i>corymbosa</i>	1.00	3.23	0.50	0.79	4.02	1.34
<i>Smilax</i>	<i>smallii</i>	1.00	3.23	0.50	0.79	4.02	1.34
<i>Parthenocissus</i>	<i>quinquefolia</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Viola</i>	<i>sororia</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Aristolochia</i>	<i>serpentaria</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Berchemia</i>	<i>scandens</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Sanicula</i>	<i>canadensis</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Justicia</i>	<i>ovata</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Elephantopus</i>	<i>carolinianus</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Dichanthelium</i>	<i>boscii</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Acalypha</i>	<i>rhomboidea</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Eragrostis</i>	<i>spectabilis</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Dichanthelium</i>	<i>commutatum</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Nyssa</i>	<i>sylvatica</i>	1.00	3.23	0.25	0.40	3.62	1.21
<i>Oplismenus</i>	<i>hirtellus</i>	1.00	3.23	0.25	0.40	3.62	1.21
Totals			100.00	63.25	100.00	200.00	66.67

**Table 9C. Summary of the Woody Stratum in the *Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	16.67	8000.00	76.63	0.29	76.45	169.74	56.58
<i>Quercus</i>	<i>nigra</i>	1.00	16.67	1200.00	11.49	0.04	10.33	38.49	12.83
<i>Ilex</i>	<i>opaca</i>	1.00	16.67	400.00	3.83	0.03	8.26	28.76	9.59
<i>Carpinus</i>	<i>caroliniana</i>	1.00	16.67	400.00	3.83	0.01	2.07	22.56	7.52
<i>Styrax</i>	<i>grandifolia</i>	1.00	16.67	400.00	3.83	0.01	2.07	22.56	7.52
<i>Ilex</i>	<i>vomitorea</i>	1.00	16.67	40.00	0.38	0.00	0.83	17.88	5.96
Totals			100.00	10440.00	100.00	0.38	100.00	300.00	100.00
Midstory Class									
<i>Carpinus</i>	<i>caroliniana</i>	1.00	20.00	240.00	40.00	1.62	59.97	119.97	39.99
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	20.00	80.00	13.33	0.58	21.47	54.80	18.27
<i>Ilex</i>	<i>opaca</i>	1.00	20.00	120.00	20.00	0.32	11.78	51.78	17.26
<i>Ilex</i>	<i>vomitorea</i>	1.00	20.00	80.00	13.33	0.11	3.89	37.22	12.41
<i>Vitis</i>	<i>rotundifolia</i>	1.00	20.00	80.00	13.33	0.08	2.90	36.23	12.08
Totals			100.00	600.00	100.00	2.71	100.00	300.00	100.00
Overstory Class									
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	33.33	200.00	62.50	14.71	47.07	142.91	47.64
<i>Quercus</i>	<i>nigra</i>	1.00	33.33	40.00	12.50	15.39	49.26	95.09	31.70
<i>Carpinus</i>	<i>caroliniana</i>	1.00	33.33	80.00	25.00	1.15	3.67	62.00	20.67
Totals			100.00	320.00	100.00	31.25	100.00	300.00	100.00

**Table 9D. Summary of the Woody Stratum in the *Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	33.33	4000.00	62.50	0.10	39.39	135.23	45.08
<i>Carpinus</i>	<i>caroliniana</i>	1.00	33.33	1600.00	25.00	0.08	30.30	88.64	29.55
<i>Quercus</i>	<i>nigra</i>	1.00	33.33	800.00	12.50	0.08	30.30	76.14	25.38
Totals			100.00	6400.00	100.00	0.26	100.00	300.00	100.00
Midstory Class									
<i>Carpinus</i>	<i>caroliniana</i>	1.00	16.67	240.00	24.00	1.86	52.56	93.23	31.08
<i>Ilex</i>	<i>vomitorea</i>	1.00	16.67	280.00	28.00	0.47	13.30	57.97	19.32
<i>Ilex</i>	<i>opaca</i>	1.00	16.67	200.00	20.00	0.53	14.95	51.61	17.20
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	16.67	80.00	8.00	0.51	14.43	39.10	13.03
<i>Bumelia</i>	<i>lanuginosa</i>	1.00	16.67	120.00	12.00	0.08	2.15	30.82	10.27
<i>Vitis</i>	<i>rotundifolia</i>	1.00	16.67	80.00	8.00	0.09	2.60	27.26	9.09
Totals			100.00	1000.00	100.00	3.54	100.00	300.00	100.00
Overstory Class									
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	33.33	120.00	42.86	11.21	41.89	118.08	39.36
<i>Quercus</i>	<i>nigra</i>	1.00	33.33	40.00	14.29	13.68	51.13	98.75	32.92
<i>Carpinus</i>	<i>caroliniana</i>	1.00	33.33	120.00	42.86	1.87	6.98	83.17	27.72
Totals			100.00	280.00	100.00	26.76	100.00	300.00	100.00

**Table 10A. Summary of the Woody Stratum in the *Quercus nigra*
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	33.33	4000.00	71.43	0.20	86.21	190.97	63.66
<i>Quercus</i>	<i>nigra</i>	1.00	33.33	1200.00	21.43	0.02	10.34	65.11	21.70
<i>Asimina</i>	<i>parviflora</i>	1.00	33.33	400.00	7.14	0.01	3.45	43.92	14.64
Totals			100.00	5600.00	100.00	0.23	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	10.00	1000.00	56.82	3.41	51.65	118.47	39.49
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	10.00	240.00	13.64	0.83	12.55	36.18	12.06
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	10.00	120.00	6.82	0.59	8.92	25.73	8.58
<i>Carpinus</i>	<i>caroliniana</i>	1.00	10.00	80.00	4.55	0.46	6.95	21.50	7.17
<i>Quercus</i>	<i>nigra</i>	1.00	10.00	80.00	4.55	0.38	5.73	20.27	6.76
<i>Quercus</i>	<i>stellata</i>	1.00	10.00	40.00	2.27	0.31	4.76	17.03	5.68
<i>Ulmus</i>	<i>rubra</i>	1.00	10.00	80.00	4.55	0.11	1.73	16.27	5.42
<i>Magnolia</i>	<i>grandiflora</i>	1.00	10.00	40.00	2.27	0.20	3.05	15.32	5.11
<i>Carya</i>	<i>texana</i>	1.00	10.00	40.00	2.27	0.15	2.33	14.61	4.87
<i>Ostrya</i>	<i>virginiana</i>	1.00	10.00	40.00	2.27	0.15	2.33	14.61	4.87
Totals			100.00	1760.00	100.00	6.60	100.00	300.00	100.00
Overstory Class									
<i>Quercus</i>	<i>nigra</i>	1.00	25.00	40.00	25.00	4.07	51.59	101.59	33.86
<i>Carya</i>	<i>tomentosa</i>	1.00	25.00	40.00	25.00	1.81	22.93	72.93	24.31
<i>Quercus</i>	<i>stellata</i>	1.00	25.00	40.00	25.00	1.52	19.27	69.27	23.09
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	25.00	40.00	25.00	0.49	6.22	56.22	18.74
Totals			100.00	160.00	100.00	7.89	100.00	300.00	100.00

**Table 10B. Summary of the Woody Stratum in the *Quercus nigra*
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	33.33	2760.00	78.41	0.13	73.94	185.69	61.90
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	33.33	720.00	20.45	0.02	10.82	64.61	21.54
<i>Vaccinium</i>	<i>arboreum</i>	1.00	33.33	40.00	1.14	0.03	15.24	49.71	16.57
Totals			100.00	3520.00	100.00	0.17	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	8.33	960.00	63.16	3.56	58.43	129.92	43.31
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	8.33	80.00	5.26	0.48	7.90	21.49	7.16
<i>Carpinus</i>	<i>caroliniana</i>	1.00	8.33	80.00	5.26	0.48	7.79	21.39	7.13
<i>Ostrya</i>	<i>virginiana</i>	1.00	8.33	80.00	5.26	0.24	3.94	17.54	5.85
<i>Acer</i>	<i>rubrum</i>	1.00	8.33	40.00	2.63	0.38	6.23	17.20	5.73
<i>Magnolia</i>	<i>grandiflora</i>	1.00	8.33	40.00	2.63	0.25	4.17	15.14	5.05
<i>Carya</i>	<i>tomentosa</i>	1.00	8.33	40.00	2.63	0.20	3.30	14.26	4.75
<i>Juniperus</i>	<i>virginiana</i>	1.00	8.33	40.00	2.63	0.13	2.18	13.14	4.38
<i>Ulmus</i>	<i>alata</i>	1.00	8.33	40.00	2.63	0.13	2.18	13.14	4.38
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	8.33	40.00	2.63	0.11	1.85	12.82	4.27
<i>Celtis</i>	<i>laevigata</i>	1.00	8.33	40.00	2.63	0.10	1.56	12.52	4.17
<i>Celtis</i>	<i>tenuifolia</i>	1.00	8.33	40.00	2.63	0.03	0.46	11.43	3.81
Totals			100.00	1520.00	100.00	6.10	100.00	300.00	100.00
Overstory Class									
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	25.00	160.00	57.14	4.76	63.70	145.84	48.61
<i>Carya</i>	<i>texana</i>	1.00	25.00	40.00	14.29	1.81	24.20	63.48	21.16
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	25.00	40.00	14.29	0.45	6.05	45.34	15.11
<i>Quercus</i>	<i>stellata</i>	1.00	25.00	40.00	14.29	0.45	6.05	45.34	15.11
Totals			100.00	280.00	100.00	7.48	100.00	300.00	100.00

**Table 11A. Summary of the Herbaceous Stratum in the *Quercus alba*-(*Quercus nigra*)
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Mitchella</i>	<i>repens</i>	1.00	4.35	16.50	39.05	43.40	14.47
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	4.35	8.50	20.12	24.47	8.16
<i>Symplocos</i>	<i>tinctoria</i>	1.00	4.35	2.75	6.51	10.86	3.62
<i>Ilex</i>	<i>vomitaria</i>	1.00	4.35	2.50	5.92	10.26	3.42
<i>Smilax</i>	<i>pumila</i>	1.00	4.35	2.50	5.92	10.26	3.42
<i>Quercus</i>	<i>alba</i>	1.00	4.35	1.50	3.55	7.90	2.63
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	4.35	1.25	2.96	7.31	2.44
<i>Callicarpa</i>	<i>americana</i>	1.00	4.35	0.75	1.78	6.12	2.04
<i>Pinus</i>	<i>taeda</i>	1.00	4.35	0.75	1.78	6.12	2.04
<i>Ilex</i>	<i>opaca</i>	1.00	4.35	0.75	1.78	6.12	2.04
<i>Persea</i>	<i>palustris</i>	1.00	4.35	0.50	1.18	5.53	1.84
<i>Acer</i>	<i>rubrum</i>	1.00	4.35	0.50	1.18	5.53	1.84
<i>Magnolia</i>	<i>grandiflora</i>	1.00	4.35	0.50	1.18	5.53	1.84
<i>Smilax</i>	<i>bona-nox</i>	1.00	4.35	0.50	1.18	5.53	1.84
<i>Sassafras</i>	<i>albidum</i>	1.00	4.35	0.50	1.18	5.53	1.84
<i>Vaccinium</i>	<i>elliottii</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Chasmanthium</i>	<i>sessiliflorum</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Morus</i>	<i>rubra</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Elephantopus</i>	<i>tomentosus</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Scleria</i>	<i>oligantha</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Triadica</i>	<i>sebifera</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Vitis</i>	<i>rotundifolia</i>	1.00	4.35	0.25	0.59	4.94	1.65
<i>Viburnum</i>	<i>dentatum</i>	1.00	4.35	0.25	0.59	4.94	1.65
Totals			100.00	42.25	100.00	200.00	66.67

**Table 11B. Summary of the Herbaceous Stratum in the *Quercus alba*-(*Quercus nigra*)
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Mitchella</i>	<i>repens</i>	1.00	3.70	14.50	36.71	40.41	13.47
<i>Quercus</i>	<i>alba</i>	1.00	3.70	3.25	8.23	11.93	3.98
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	3.70	2.75	6.96	10.67	3.56
<i>Ilex</i>	<i>vomitorea</i>	1.00	3.70	2.25	5.70	9.40	3.13
<i>Pinus</i>	<i>taeda</i>	1.00	3.70	2.25	5.70	9.40	3.13
<i>Smilax</i>	<i>pumila</i>	1.00	3.70	1.50	3.80	7.50	2.50
<i>Callicarpa</i>	<i>americana</i>	1.00	3.70	1.25	3.16	6.87	2.29
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	3.70	1.25	3.16	6.87	2.29
<i>Ilex</i>	<i>opaca</i>	1.00	3.70	1.00	2.53	6.24	2.08
<i>Vitis</i>	<i>rotundifolia</i>	1.00	3.70	1.00	2.53	6.24	2.08
<i>Symplocos</i>	<i>tinctoria</i>	1.00	3.70	1.00	2.53	6.24	2.08
<i>Ilex</i>	<i>coriacea</i>	1.00	3.70	0.75	1.90	5.60	1.87
<i>Fagus</i>	<i>grandifolia</i>	1.00	3.70	0.75	1.90	5.60	1.87
<i>Scleria</i>	<i>oligantha</i>	1.00	3.70	0.75	1.90	5.60	1.87
<i>Persea</i>	<i>palustris</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Quercus</i>	<i>nigra</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Chasmanthium</i>	<i>sessiliflorum</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Sassafras</i>	<i>albidum</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Dichanthelium</i>	<i>commutatum</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Asimina</i>	<i>parviflora</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Magnolia</i>	<i>grandiflora</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Vaccinium</i>	<i>elliottii</i>	1.00	3.70	0.50	1.27	4.97	1.66
<i>Smilax</i>	<i>bona-nox</i>	1.00	3.70	0.25	0.63	4.34	1.45
<i>Carex</i>	<i>digitalis</i>	1.00	3.70	0.25	0.63	4.34	1.45
<i>Acer</i>	<i>rubrum</i>	1.00	3.70	0.25	0.63	4.34	1.45
<i>Chasmanthium</i>	<i>laxum</i>	1.00	3.70	0.25	0.63	4.34	1.45
<i>Vaccinium</i>	<i>corybosum</i>	1.00	3.70	0.25	0.63	4.34	1.45
Totals			100.00	39.50	100.00	200.00	66.67

**Table 11C. Summary of the Woody Stratum in the *Quercus alba*-(*Quercus nigra*)
Forest Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Symplocos</i>	<i>tinctoria</i>	1.00	7.69	5600.00	21.88	0.35	26.63	56.19	18.73
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	7.69	6400.00	25.00	0.27	20.12	52.81	17.60
<i>Ilex</i>	<i>vomitorea</i>	1.00	7.69	4400.00	17.19	0.35	26.63	51.51	17.17
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	7.69	2800.00	10.94	0.08	5.92	24.55	8.18
<i>Magnolia</i>	<i>grandiflora</i>	1.00	7.69	1200.00	4.69	0.07	5.33	17.71	5.90
<i>Persea</i>	<i>palustris</i>	1.00	7.69	1200.00	4.69	0.05	3.55	15.93	5.31
<i>Quercus</i>	<i>alba</i>	1.00	7.69	1200.00	4.69	0.02	1.78	14.15	4.72
<i>Vaccinium</i>	<i>arboreum</i>	1.00	7.69	400.00	1.56	0.06	4.73	13.99	4.66
<i>Vaccinium</i>	<i>elliottii</i>	1.00	7.69	800.00	3.13	0.02	1.18	12.00	4.00
<i>Ilex</i>	<i>opaca</i>	1.00	7.69	400.00	1.56	0.03	2.37	11.62	3.87
<i>Nyssa</i>	<i>sylvatica</i>	1.00	7.69	400.00	1.56	0.01	0.59	9.85	3.28
<i>Prunus</i>	<i>caroliniana</i>	1.00	7.69	400.00	1.56	0.01	0.59	9.85	3.28
<i>Quercus</i>	<i>nigra</i>	1.00	7.69	400.00	1.56	0.01	0.59	9.85	3.28
Totals			100.00	25600.00	100.00	1.33	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	20.00	480.00	52.17	0.88	54.19	126.37	42.12
<i>Ilex</i>	<i>opaca</i>	1.00	20.00	240.00	26.09	0.47	28.69	74.78	24.93
<i>Cornus</i>	<i>florida</i>	1.00	20.00	80.00	8.70	0.15	9.31	38.00	12.67
<i>Symplocos</i>	<i>tinctoria</i>	1.00	20.00	80.00	8.70	0.09	5.45	34.14	11.38
<i>Morus</i>	<i>rubra</i>	1.00	20.00	40.00	4.35	0.04	2.36	26.71	8.90
Totals			100.00	920.00	100.00	1.63	100.00	300.00	100.00
Overstory Class									
<i>Quercus</i>	<i>alba</i>	1.00	20.00	80.00	33.33	9.20	57.23	110.56	36.85
<i>Fagus</i>	<i>grandifolia</i>	1.00	20.00	40.00	16.67	4.78	29.73	66.39	22.13
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	20.00	40.00	16.67	1.08	6.69	43.36	14.45
<i>Sassafras</i>	<i>albidum</i>	1.00	20.00	40.00	16.67	0.53	3.30	39.97	13.32
<i>Fraxinus</i>	<i>americana</i>	1.00	20.00	40.00	16.67	0.49	3.05	39.72	13.24
Totals			100.00	240.00	100.00	16.07	100.00	300.00	100.00

**Table 11D. Summary of the Woody Stratum in the *Quercus alba*-(*Quercus nigra*)
Forest Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	12.50	4800.00	37.50	0.23	40.85	90.85	30.28
<i>Ilex</i>	<i>vomitorea</i>	1.00	12.50	2000.00	15.63	0.06	11.27	39.39	13.13
<i>Vaccinium</i>	<i>arboreum</i>	1.00	12.50	400.00	3.12	0.13	22.54	38.16	12.72
<i>Persea</i>	<i>palustris</i>	1.00	12.50	1200.00	9.38	0.06	9.86	31.73	10.58
<i>Quercus</i>	<i>alba</i>	1.00	12.50	1200.00	9.38	0.02	4.23	26.10	8.70
<i>Sebastiania</i>	<i>fruticosa</i>	1.00	12.50	1200.00	9.38	0.02	4.23	26.10	8.70
<i>Symplocos</i>	<i>tinctoria</i>	1.00	12.50	1200.00	9.38	0.02	4.23	26.10	8.70
<i>Quercus</i>	<i>nigra</i>	1.00	12.50	800.00	6.25	0.02	2.82	21.57	7.19
Totals			100.00	12800.00	100.00	0.56	100.00	300.00	100.00
Midstory Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	11.11	640.00	43.24	1.19	40.10	94.45	31.48
<i>Ilex</i>	<i>opaca</i>	1.00	11.11	360.00	24.32	0.71	23.97	59.40	19.80
<i>Fraxinus</i>	<i>americana</i>	1.00	11.11	40.00	2.70	0.42	14.33	28.14	9.38
<i>Symplocos</i>	<i>tinctoria</i>	1.00	11.11	160.00	10.81	0.18	5.91	27.83	9.28
<i>Cornus</i>	<i>florida</i>	1.00	11.11	80.00	5.41	0.23	7.63	24.14	8.05
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	11.11	80.00	5.41	0.14	4.77	21.28	7.09
<i>Morus</i>	<i>rubra</i>	1.00	11.11	40.00	2.70	0.05	1.69	15.51	5.17
<i>Nyssa</i>	<i>sylvatica</i>	1.00	11.11	40.00	2.70	0.03	0.95	14.77	4.92
<i>Fagus</i>	<i>grandifolia</i>	1.00	11.11	40.00	2.70	0.02	0.66	14.48	4.83
Totals			100.00	1480.00	100.00	2.97	100.00	300.00	100.00
Overstory Class									
<i>Quercus</i>	<i>alba</i>	1.00	33.33	80.00	50.00	9.71	58.69	142.03	47.34
<i>Fagus</i>	<i>grandifolia</i>	1.00	33.33	40.00	25.00	5.03	30.37	88.71	29.57
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	33.33	40.00	25.00	1.81	10.93	69.27	23.09
Totals			100.00	160.00	100.00	16.55	100.00	300.00	100.00

**Table 12A. Summary of the Herbaceous Stratum in the *Paspalum notatum*
Herbaceous Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Paspalum</i>	<i>notatum</i>	1.00	2.22	23.50	36.02	38.24	12.75
<i>Helianthemum</i>	<i>georgianum</i>	1.00	2.22	5.25	8.05	10.27	3.42
<i>Mimosa</i>	<i>latidens</i>	1.00	2.22	3.75	5.75	7.97	2.66
<i>Elephantopus</i>	<i>tomentosus</i>	1.00	2.22	3.00	4.60	6.82	2.27
<i>Dichanthelium</i>	<i>acuminatum</i>	1.00	2.22	2.75	4.21	6.44	2.15
<i>Conyza</i>	<i>canadensis</i>	1.00	2.22	2.00	3.07	5.29	1.76
<i>Diodia</i>	<i>teres</i>	1.00	2.22	2.00	3.07	5.29	1.76
<i>Indigofera</i>	<i>suffruticosa</i>	1.00	2.22	1.75	2.68	4.90	1.63
<i>Commelina</i>	<i>erecta</i>	1.00	2.22	1.75	2.68	4.90	1.63
<i>Chenopodium</i>	<i>ambrosioides</i>	1.00	2.22	1.25	1.92	4.14	1.38
<i>Wahlenbergia</i>	<i>marginata</i>	1.00	2.22	1.25	1.92	4.14	1.38
<i>Polypremum</i>	<i>procumbens</i>	1.00	2.22	1.00	1.53	3.75	1.25
<i>Sida</i>	<i>spinosa</i>	1.00	2.22	1.00	1.53	3.75	1.25
<i>Oxalis</i>	<i>dillenii</i>	1.00	2.22	1.00	1.53	3.75	1.25
<i>Monarda</i>	<i>citriodora</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Bulbostylis</i>	<i>ciliatifolia</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Mollugo</i>	<i>verticillata</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Gamochaeta</i>	<i>purpurea</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Tragia</i>	<i>urticifolia</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Helianthemum</i>	<i>carolinianum</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Lechea</i>	<i>mucronata</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Chamaesyce</i>	<i>maculata</i>	1.00	2.22	0.75	1.15	3.37	1.12
<i>Hedeoma</i>	<i>hispidum</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Evax</i>	<i>candida</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Cyperus</i>	<i>retroflexus</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Rubus</i>	<i>argutus</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Pinus</i>	<i>taeda</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Croptilon</i>	<i>divaricatum</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Plantago</i>	<i>aristata</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Lechea</i>	<i>tenuifolia</i>	1.00	2.22	0.50	0.77	2.99	1.00
<i>Heliotropium</i>	<i>tenellum</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Vulpia</i>	<i>octoflora</i>	1.00	2.22	0.25	0.38	2.61	0.87

**Table 12A. Summary of the Herbaceous Stratum in the *Paspalum notatum*
Herbaceous Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Croton</i>	<i>glandulosus</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Ambrosia</i>	<i>artemisiifolia</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Sida</i>	<i>ciliaris</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Crotolaria</i>	<i>sagittalis</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Croton</i>	<i>argyranthemus</i>	1.00	2.22	0.25	0.38	2.61	0.87
Unknown	sp.	1.00	2.22	0.25	0.38	2.61	0.87
<i>Rhynchospora</i>	<i>inexpansa</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Oenothera</i>	<i>laciniata</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Spermolepis</i>	<i>divaricata</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Croton</i>	<i>willdenowii</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Loeflingia</i>	<i>squarrosa</i>	1.00	2.22	0.25	0.38	2.61	0.87
<i>Dichanthelium</i>	<i>aciculare</i>	1.00	2.22	0.25	0.38	2.61	0.87
Totals			100.00	65.25	100.00	200.00	66.67

**Table 12B. Summary of the Herbaceous Stratum in the *Paspalum notatum*
Herbaceous Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Paspalum</i>	<i>notatum</i>	1.00	2.94	10.75	22.75	25.69	8.56
<i>Croptilon</i>	<i>divaricatum</i>	1.00	2.94	4.75	10.05	12.99	4.33
<i>Helianthemum</i>	<i>georgianum</i>	1.00	2.94	4.50	9.52	12.46	4.15
<i>Diodia</i>	<i>teres</i>	1.00	2.94	2.75	5.82	8.76	2.92
<i>Dichanthelium</i>	<i>acuminatum</i>	1.00	2.94	2.75	5.82	8.76	2.92
<i>Mimosa</i>	<i>latidens</i>	1.00	2.94	2.75	5.82	8.76	2.92
<i>Wahlenbergia</i>	<i>marginata</i>	1.00	2.94	2.25	4.76	7.70	2.57
<i>Commelina</i>	<i>erecta</i>	1.00	2.94	2.00	4.23	7.17	2.39
<i>Tragia</i>	<i>urticifolia</i>	1.00	2.94	1.50	3.17	6.12	2.04
<i>Elephantopus</i>	<i>tomentosus</i>	1.00	2.94	1.50	3.17	6.12	2.04
<i>Mollugo</i>	<i>verticillata</i>	1.00	2.94	1.00	2.12	5.06	1.69
<i>Chamaesyce</i>	<i>maculata</i>	1.00	2.94	1.00	2.12	5.06	1.69
<i>Croton</i>	<i>glandulosus</i>	1.00	2.94	1.00	2.12	5.06	1.69
<i>Oxalis</i>	<i>dillenii</i>	1.00	2.94	1.00	2.12	5.06	1.69
<i>Chenopodium</i>	<i>ambrosioides</i>	1.00	2.94	1.00	2.12	5.06	1.69
<i>Rubus</i>	<i>trivialis</i>	1.00	2.94	0.75	1.59	4.53	1.51
<i>Polypremum</i>	<i>procumbens</i>	1.00	2.94	0.50	1.06	4.00	1.33
<i>Loeflingia</i>	<i>squarrosa</i>	1.00	2.94	0.50	1.06	4.00	1.33
<i>Croton</i>	<i>willdenowii</i>	1.00	2.94	0.50	1.06	4.00	1.33
<i>Helianthemum</i>	<i>carolinianum</i>	1.00	2.94	0.50	1.06	4.00	1.33
<i>Oenothera</i>	<i>laciniata</i>	1.00	2.94	0.50	1.06	4.00	1.33
<i>Indigofera</i>	<i>suffruticosa</i>	1.00	2.94	0.50	1.06	4.00	1.33
<i>Vulpia</i>	<i>sciurea</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Bulbostylis</i>	<i>ciliatifolia</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Hedeoma</i>	<i>hispidum</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Vitis</i>	<i>rotundifolia</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Monarda</i>	<i>punctata</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Croptilon</i>	<i>rigidifolium</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Chrysopsis</i>	<i>pilosa</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Sida</i>	<i>spinosa</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Hymenopappus</i>	<i>artemisiifolius</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Verbena</i>	<i>halei</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Plantago</i>	<i>aristata</i>	1.00	2.94	0.25	0.53	3.47	1.16
<i>Gamochaeta</i>	<i>purpurea</i>	1.00	2.94	0.25	0.53	3.47	1.16
Totals			100.00	47.25	100.00	200.00	66.67

**Table 13A. Summary of the Herbaceous Stratum in the *Pinus taeda*
Seasonally Saturated Woodland Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Dichanthelium</i>	<i>sp.</i>	1.00	2.44	9.75	17.18	19.62	6.54
<i>Schizachyrium</i>	<i>scoparium</i>	1.00	2.44	7.75	13.66	16.10	5.37
<i>Rhynchospora</i>	<i>pusilla</i>	1.00	2.44	6.00	10.57	13.01	4.34
<i>Liatris</i>	<i>pycnostachya</i>	1.00	2.44	3.50	6.17	8.61	2.87
<i>Liatris</i>	<i>acidota</i>	1.00	2.44	3.00	5.29	7.73	2.58
<i>Dichanthelium</i>	<i>aciculare</i>	1.00	2.44	2.75	4.85	7.28	2.43
<i>Andropogon</i>	<i>glomeratus</i>	1.00	2.44	2.50	4.41	6.84	2.28
<i>Ruellia</i>	<i>humilis</i>	1.00	2.44	1.75	3.08	5.52	1.84
<i>Rhynchospora</i>	<i>inexpansa</i>	1.00	2.44	1.75	3.08	5.52	1.84
<i>Arnoglossum</i>	<i>ovatum</i> var. <i>ovatum</i>	1.00	2.44	1.75	3.08	5.52	1.84
<i>Crataegus</i>	<i>spathulata</i>	1.00	2.44	1.25	2.20	4.64	1.55
<i>Pinus</i>	<i>taeda</i>	1.00	2.44	1.25	2.20	4.64	1.55
<i>Nyssa</i>	<i>biflora</i>	1.00	2.44	1.00	1.76	4.20	1.40
<i>Boltonia</i>	<i>diffusa</i>	1.00	2.44	1.00	1.76	4.20	1.40
<i>Rhynchospora</i>	<i>filifolia</i>	1.00	2.44	1.00	1.76	4.20	1.40
<i>Linum</i>	<i>medium</i> var. <i>texanum</i>	1.00	2.44	0.75	1.32	3.76	1.25
<i>Hypericum</i>	<i>galioides</i>	1.00	2.44	0.75	1.32	3.76	1.25
<i>Ludwigia</i>	<i>pilsoa</i>	1.00	2.44	0.75	1.32	3.76	1.25
<i>Ilex</i>	<i>opaca</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Gelsemium</i>	<i>sempervirens</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Rhynchospora</i>	<i>perplexa</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Fimbristylis</i>	<i>puberula</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Ludwigia</i>	<i>linearis</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Pluchea</i>	<i>foetida</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Eleocharis</i>	<i>tuberculosa</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Schizachyrium</i>	<i>tenerum</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Hypericum</i>	<i>hypericoides</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Rhynchospora</i>	<i>elliottii</i>	1.00	2.44	0.50	0.88	3.32	1.11
<i>Centella</i>	<i>erecta</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Quercus</i>	<i>nigra</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Ilex</i>	<i>vomitaria</i>	1.00	2.44	0.25	0.44	2.88	0.96

**Table 13A. Summary of the Herbaceous Stratum in the *Pinus taeda*
Seasonally Saturated Woodland Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Berchemia</i>	<i>scandens</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Xyris</i>	<i>difformis</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Smilax</i>	<i>bona-nox</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Tridens</i>	<i>strictus</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Scutellaria</i>	<i>elliptica</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Hydrolea</i>	<i>ovata</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Crataegus</i>	<i>marshallii</i>	1.00	2.44	0.25	0.44	2.88	0.96
<i>Axonopus</i>	<i>fissifolius</i>	1.00	2.44	0.25	0.44	2.88	0.96
Totals			100.00	56.75	100.00	200.00	66.67

**Table 13B. Summary of the Herbaceous Stratum in the *Pinus taeda*
Seasonally Saturated Woodland Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Schizachyrium</i>	<i>scoparium</i>	1.00	2.27	11.00	17.81	20.09	6.70
<i>Rhynchospora</i>	<i>pusilla</i>	1.00	2.27	9.25	14.98	17.25	5.75
<i>Rhynchospora</i>	<i>caduca</i>	1.00	2.27	3.50	5.67	7.94	2.65
<i>Andropogon</i>	<i>glomeratus</i>	1.00	2.27	3.50	5.67	7.94	2.65
<i>Hypericum</i>	<i>galioides</i>	1.00	2.27	3.50	5.67	7.94	2.65
<i>Arnoglossum</i>	<i>ovatum</i>	1.00	2.27	3.25	5.26	7.54	2.51
<i>Panicum</i>	<i>tenerum</i>	1.00	2.27	3.00	4.86	7.13	2.38
<i>Liatris</i>	<i>acidota</i>	1.00	2.27	2.00	3.24	5.51	1.84
<i>Rhynchospora</i>	<i>inexpansa</i>	1.00	2.27	1.50	2.43	4.70	1.57
<i>Panicum</i>	<i>rigidulum</i>	1.00	2.27	1.25	2.02	4.30	1.43
<i>Liatris</i>	<i>elegans</i>	1.00	2.27	1.25	2.02	4.30	1.43
<i>Ruellia</i>	<i>humilis</i>	1.00	2.27	1.25	2.02	4.30	1.43
<i>Crataegus</i>	<i>marshallii</i>	1.00	2.27	1.25	2.02	4.30	1.43
<i>Pinus</i>	<i>taeda</i>	1.00	2.27	1.25	2.02	4.30	1.43
<i>Boltonia</i>	<i>diffusa</i>	1.00	2.27	1.25	2.02	4.30	1.43
<i>Dichanthelium</i>	<i>ovale</i>	1.00	2.27	1.00	1.62	3.89	1.30
<i>Liatris</i>	<i>pycnostachya</i>	1.00	2.27	1.00	1.62	3.89	1.30
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	2.27	1.00	1.62	3.89	1.30
<i>Berchemia</i>	<i>scandens</i>	1.00	2.27	0.75	1.21	3.49	1.16
<i>Nyssa</i>	<i>biflora</i>	1.00	2.27	0.75	1.21	3.49	1.16
<i>Phyla</i>	<i>nodiflora</i>	1.00	2.27	0.75	1.21	3.49	1.16
<i>Smilax</i>	<i>bona-nox</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Tridens</i>	<i>strictus</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Proserpinaca</i>	<i>pectinata</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Hypericum</i>	<i>hypericoides</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Ilex</i>	<i>opaca</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Gelsemium</i>	<i>sempervirens</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Polypremum</i>	<i>procumbens</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Ilex</i>	<i>vomitorea</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Helenium</i>	<i>drummondii</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Hydrolea</i>	<i>ovata</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Xyris</i>	<i>ambigua</i>	1.00	2.27	0.50	0.81	3.08	1.03
<i>Ludwigia</i>	<i>linearis</i>	1.00	2.27	0.25	0.40	2.68	0.89

**Table 13B. Summary of the Herbaceous Stratum in the *Pinus taeda*
Seasonally Saturated Woodland Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Cyrilla</i>	<i>racemiflora</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Drosera</i>	<i>brevifolia</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Rhexia</i>	<i>mariana</i> var. <i>mariana</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Eleocharis</i>	<i>tuberculosa</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Drosera</i>	<i>capillaris</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Centella</i>	<i>erecta</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Rhynchospora</i>	<i>mixta</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Ludwigia</i>	<i>pilsoa</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Morella</i>	<i>caroliniensis</i>	1.00	2.27	0.25	0.40	2.68	0.89
<i>Acer</i>	<i>rubrum</i>	1.00	2.27	0.25	0.40	2.68	0.89
Totals			100.00	61.75	100.00	200.00	66.67

**Table 13C. Summary of the Woody Stratum in the *Pinus taeda*
Seasonally Saturated Woodland Alliance in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Morella</i>	<i>cerifera</i>	1.00	20.00	2400.00	60.00	0.13	53.13	133.12	44.38
<i>Pinus</i>	<i>taeda</i>	1.00	20.00	400.00	10.00	0.07	28.13	58.12	19.38
<i>Quercus</i>	<i>nigra</i>	1.00	20.00	400.00	10.00	0.03	12.50	42.50	14.17
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	20.00	400.00	10.00	0.01	3.12	33.12	11.04
<i>Nyssa</i>	<i>biflora</i>	1.00	20.00	400.00	10.00	0.01	3.12	33.12	11.04
Totals			100.00	4000.00	100.00	0.25	100.00	300.00	100.00
Midstory Class									
<i>Quercus</i>	<i>laurifolia</i>	1.00	11.11	280.00	26.92	0.56	20.30	58.33	19.44
<i>Pinus</i>	<i>taeda</i>	1.00	11.11	240.00	23.08	0.58	20.98	55.17	18.39
<i>Nyssa</i>	<i>biflora</i>	1.00	11.11	80.00	7.69	0.88	32.12	50.92	16.97
<i>Ilex</i>	<i>opaca</i>	1.00	11.11	200.00	19.23	0.37	13.33	43.67	14.56
<i>Morella</i>	<i>cerifera</i>	1.00	11.11	80.00	7.69	0.10	3.60	22.40	7.47
<i>Quercus</i>	<i>falcata</i>	1.00	11.11	40.00	3.85	0.18	6.42	21.38	7.13
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	11.11	40.00	3.85	0.05	1.83	16.78	5.59
<i>Quercus</i>	<i>alba</i>	1.00	11.11	40.00	3.85	0.02	0.71	15.67	5.22
<i>Crataegus</i>	<i>spathulata</i>	1.00	11.11	40.00	3.85	0.02	0.71	15.67	5.22
Totals			100.00	1040.00	100.00	2.75	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	1.00	25.00	240.00	54.55	5.41	49.08	128.63	42.88
<i>Quercus</i>	<i>laurifolia</i>	1.00	25.00	80.00	18.18	2.34	21.22	64.40	21.47
<i>Nyssa</i>	<i>biflora</i>	1.00	25.00	80.00	18.18	1.95	17.71	60.90	20.30
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	25.00	40.00	9.09	1.32	11.98	46.07	15.36
Totals			100.00	440.00	100.00	11.02	100.00	300.00	100.00

**Table 13D. Summary of the Woody Stratum in the *Pinus taeda*
Seasonally Saturated Woodland Alliance in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	1.00	16.67	2400.00	33.33	0.23	24.58	74.58	24.86
<i>Pinus</i>	<i>taeda</i>	1.00	16.67	1200.00	16.67	0.32	34.75	68.08	22.69
<i>Morella</i>	<i>cerifera</i>	1.00	16.67	1600.00	22.22	0.16	17.80	56.69	18.90
<i>Ilex</i>	<i>opaca</i>	1.00	16.67	800.00	11.11	0.14	15.25	43.03	14.34
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	16.67	800.00	11.11	0.04	4.24	32.02	10.67
<i>Quercus</i>	<i>nigra</i>	1.00	16.67	400.00	5.56	0.03	3.39	25.61	8.54
Totals			100.00	7200.00	100.00	0.93	100.00	300.00	100.00
Midstory Class									
<i>Pinus</i>	<i>taeda</i>	1.00	10.00	320.00	28.57	0.78	22.38	60.95	20.32
<i>Nyssa</i>	<i>biflora</i>	1.00	10.00	120.00	10.71	1.13	32.32	53.03	17.68
<i>Quercus</i>	<i>laurifolia</i>	1.00	10.00	200.00	17.86	0.71	20.30	48.15	16.05
<i>Ilex</i>	<i>opaca</i>	1.00	10.00	200.00	17.86	0.48	13.59	41.45	13.82
<i>Quercus</i>	<i>falcata</i>	1.00	10.00	40.00	3.57	0.23	6.48	20.05	6.68
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	10.00	80.00	7.14	0.06	1.66	18.80	6.27
<i>Quercus</i>	<i>alba</i>	1.00	10.00	40.00	3.57	0.04	1.10	14.67	4.89
<i>Morella</i>	<i>cerifera</i>	1.00	10.00	40.00	3.57	0.03	0.81	14.38	4.79
<i>Ilex</i>	<i>vomitorea</i>	1.00	10.00	40.00	3.57	0.03	0.81	14.38	4.79
<i>Crataegus</i>	<i>spathulata</i>	1.00	10.00	40.00	3.57	0.02	0.56	14.13	4.71
Totals			100.00	1120.00	100.00	3.50	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	1.00	25.00	240.00	54.55	6.05	49.60	129.15	43.05
<i>Quercus</i>	<i>laurifolia</i>	1.00	25.00	80.00	18.18	2.65	21.76	64.95	21.65
<i>Nyssa</i>	<i>biflora</i>	1.00	25.00	80.00	18.18	2.17	17.81	60.99	20.33
<i>Liquidambar</i>	<i>styraciflua</i>	1.00	25.00	40.00	9.09	1.32	10.82	44.92	14.97
Totals			100.00	440.00	100.00	12.20	100.00	300.00	100.00

**Table 14A. Summary of the Herbaceous Stratum in the *Mosaic*
Group in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Vaccinium</i>	<i>corymbosum</i>	1.00	8.33	4.50	28.12	36.46	12.15
<i>Ilex</i>	<i>coriacea</i>	1.00	8.33	2.75	17.19	25.52	8.51
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	8.33	2.25	14.06	22.40	7.47
<i>Ilex</i>	<i>vomitorea</i>	1.00	8.33	1.75	10.94	19.27	6.42
<i>Rhododendron</i>	<i>viscosum</i>	1.00	8.33	1.25	7.81	16.15	5.38
<i>Symplocos</i>	<i>tinctoria</i>	1.00	8.33	0.75	4.69	13.02	4.34
<i>Persea</i>	<i>palustris</i>	1.00	8.33	0.75	4.69	13.02	4.34
<i>Smilax</i>	<i>pumila</i>	1.00	8.33	0.75	4.69	13.02	4.34
<i>Vitis</i>	<i>rotundifolia</i>	1.00	8.33	0.50	3.12	11.46	3.82
<i>Smilax</i>	<i>glauca</i>	1.00	8.33	0.25	1.56	9.90	3.30
<i>Acer</i>	<i>rubrum</i>	1.00	8.33	0.25	1.56	9.90	3.30
<i>Callicarpa</i>	<i>americana</i>	1.00	8.33	0.25	1.56	9.90	3.30
Totals			100.00	16.00	100.00	200.00	66.67

**Table 14B. Summary of the Herbaceous Stratum in the *Mosaic*
Group in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Dominance (Ground Coverage, %)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Vaccinium</i>	<i>corybosum</i>	1.00	8.33	5.00	25.32	33.65	11.22
<i>Ilex</i>	<i>vomitorea</i>	1.00	8.33	4.00	20.25	28.59	9.53
<i>Ilex</i>	<i>coriacea</i>	1.00	8.33	2.25	11.39	19.73	6.58
<i>Persea</i>	<i>borbonia</i>	1.00	8.33	1.75	8.86	17.19	5.73
<i>Vitis</i>	<i>rotundifolia</i>	1.00	8.33	1.50	7.59	15.93	5.31
<i>Smilax</i>	<i>pumila</i>	1.00	8.33	1.50	7.59	15.93	5.31
<i>Quercus</i>	<i>hemisphaerica</i>	1.00	8.33	1.25	6.33	14.66	4.89
<i>Pinus</i>	<i>taeda</i>	1.00	8.33	0.75	3.80	12.13	4.04
<i>Rhododendron</i>	<i>viscosum</i>	1.00	8.33	0.75	3.80	12.13	4.04
<i>Ilex</i>	<i>opaca</i>	1.00	8.33	0.50	2.53	10.86	3.62
<i>Acer</i>	<i>rubrum</i>	1.00	8.33	0.25	1.27	9.60	3.20
<i>Smilax</i>	<i>bona-nox</i>	1.00	8.33	0.25	1.27	9.60	3.20
Totals			100.00	19.75	100.00	200.00	66.67

**Table 14C. Summary of the Woody Stratum in the *Mosaic*
Group in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Ilex</i>	<i>vomitorea</i>	0.75	16.67	1100.00	20.18	0.13	37.95	74.80	24.93
<i>Vaccinium</i>	<i>corymbosum</i>	0.75	16.67	1100.00	20.18	0.05	15.07	51.92	17.31
<i>Symplocos</i>	<i>tinctoria</i>	0.50	11.11	800.00	14.68	0.07	18.97	44.76	14.92
<i>Ilex</i>	<i>coriacea</i>	0.50	11.11	1000.00	18.35	0.02	5.58	35.04	11.68
<i>Cyrilla</i>	<i>racemiflora</i>	0.25	5.56	250.00	4.59	0.04	11.27	21.42	7.14
<i>Persea</i>	<i>palustris</i>	0.25	5.56	400.00	7.34	0.01	2.23	15.13	5.04
<i>Ilex</i>	<i>opaca</i>	0.25	5.56	100.00	1.83	0.02	5.02	12.41	4.14
<i>Morella</i>	<i>cerifera</i>	0.25	5.56	200.00	3.67	0.00	1.12	10.34	3.45
<i>Castanea</i>	<i>pumila</i>	0.25	5.56	200.00	3.67	0.00	1.12	10.34	3.45
<i>Liquidambar</i>	<i>styraciflua</i>	0.25	5.56	100.00	1.83	0.00	0.56	7.95	2.65
<i>Vaccinium</i>	<i>elliottii</i>	0.25	5.56	100.00	1.83	0.00	0.56	7.95	2.65
<i>Magnolia</i>	<i>grandiflora</i>	0.25	5.56	100.00	1.83	0.00	0.56	7.95	2.65
Totals			100.00	5450.00	100.00	0.35	100.00	300.00	100.00
Midstory Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.25	3.85	610.00	41.22	1.80	42.19	87.25	29.08
<i>Nyssa</i>	<i>sylvatica</i>	0.50	7.69	150.00	10.14	0.65	15.10	32.92	10.97
<i>Ilex</i>	<i>vomitorea</i>	0.75	11.54	210.00	14.19	0.23	5.27	30.99	10.33
<i>Persea</i>	<i>palustris</i>	0.50	7.69	100.00	6.76	0.52	12.13	26.58	8.86
<i>Ilex</i>	<i>opaca</i>	0.75	11.54	90.00	6.08	0.34	7.90	25.52	8.51
<i>Ilex</i>	<i>coriacea</i>	0.75	11.54	70.00	4.73	0.05	1.07	17.33	5.78
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	7.69	50.00	3.38	0.22	5.16	16.23	5.41
<i>Magnolia</i>	<i>grandiflora</i>	0.50	7.69	20.00	1.35	0.05	1.12	10.16	3.39
<i>Acer</i>	<i>rubrum</i>	0.25	3.85	40.00	2.70	0.09	2.08	8.62	2.87
<i>Quercus</i>	<i>alba</i>	0.25	3.85	40.00	2.70	0.04	0.88	7.43	2.48
<i>Quercus</i>	<i>nigra</i>	0.25	3.85	20.00	1.35	0.10	2.23	7.42	2.47
<i>Magnolia</i>	<i>virginiana</i>	0.25	3.85	20.00	1.35	0.09	2.07	7.26	2.42
<i>Symplocos</i>	<i>tinctoria</i>	0.25	3.85	30.00	2.03	0.05	1.11	6.98	2.33
<i>Nyssa</i>	<i>biflora</i>	0.25	3.85	10.00	0.68	0.06	1.33	5.85	1.95
<i>Fagus</i>	<i>grandifolia</i>	0.25	3.85	10.00	0.68	0.01	0.22	4.75	1.58
<i>Vaccinium</i>	<i>corymbosum</i>	0.25	3.85	10.00	0.68	0.01	0.17	4.69	1.56
Totals			100.00	1480.00	100.00	4.28	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	1.00	22.22	250.00	38.46	23.07	58.87	119.55	39.85
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	11.11	160.00	24.62	8.79	22.42	58.14	19.38
<i>Quercus</i>	<i>nigra</i>	0.25	5.56	70.00	10.77	1.90	4.84	21.16	7.05
<i>Nyssa</i>	<i>sylvatica</i>	0.50	11.11	30.00	4.62	0.63	1.61	17.33	5.78
<i>Nyssa</i>	<i>biflora</i>	0.25	5.56	40.00	6.15	1.61	4.10	15.80	5.27
<i>Acer</i>	<i>rubrum</i>	0.50	11.11	20.00	3.08	0.43	1.10	15.29	5.10
<i>Pinus</i>	<i>echinata</i>	0.25	5.56	10.00	1.54	1.56	3.97	11.06	3.69

**Table 14C. Summary of the Woody Stratum in the *Mosaic*
Group in the Pre-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Magnolia</i>	<i>virginiana</i>	0.25	5.56	20.00	3.08	0.50	1.28	9.91	3.30
<i>Persea</i>	<i>palustris</i>	0.25	5.56	20.00	3.08	0.31	0.79	9.42	3.14
<i>Sassafras</i>	<i>albidum</i>	0.25	5.56	10.00	1.54	0.18	0.45	7.54	2.51
<i>Ilex</i>	<i>opaca</i>	0.25	5.56	10.00	1.54	0.12	0.30	7.39	2.46
<i>Cyrilla</i>	<i>racemiflora</i>	0.25	5.56	10.00	1.54	0.11	0.29	7.38	2.46
Totals			100.00	650.00	100.00	39.19	100.00	300.00	100.00

**Table 14D. Summary of the Woody Stratum in the *Mosaic*
Group in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
Shrub Class									
<i>Vaccinium</i>	<i>corybosum</i>	1.00	17.39	2400.00	22.22	0.07	14.83	54.44	18.15
<i>Ilex</i>	<i>vomitorea</i>	0.50	8.70	2100.00	19.44	0.12	25.00	53.14	17.71
<i>Symplocos</i>	<i>tinctoria</i>	0.50	8.70	1700.00	15.74	0.13	27.12	51.56	17.19
<i>Ilex</i>	<i>coriacea</i>	0.75	13.04	1200.00	11.11	0.03	6.36	30.51	10.17
<i>Cyrilla</i>	<i>racemiflora</i>	0.50	8.70	900.00	8.33	0.06	12.71	29.74	9.91
<i>Quercus</i>	<i>hemisphaerica</i>	0.25	4.35	1100.00	10.19	0.02	4.66	19.19	6.40
<i>Vitis</i>	<i>rotundifolia</i>	0.50	8.70	300.00	2.78	0.01	1.27	12.74	4.25
<i>Ilex</i>	<i>opaca</i>	0.25	4.35	100.00	0.93	0.02	3.81	9.09	3.03
<i>Sebastiania</i>	<i>fruticosa</i>	0.25	4.35	300.00	2.78	0.01	1.27	8.40	2.80
<i>Callicarpa</i>	<i>americana</i>	0.25	4.35	200.00	1.85	0.00	0.85	7.05	2.35
<i>Rhododendron</i>	<i>viscosum</i>	0.25	4.35	200.00	1.85	0.00	0.85	7.05	2.35
<i>Castanea</i>	<i>pumila</i>	0.25	4.35	100.00	0.93	0.00	0.42	5.70	1.90
<i>Persea</i>	<i>borbonia</i>	0.25	4.35	100.00	0.93	0.00	0.42	5.70	1.90
<i>Persea</i>	<i>palustris</i>	0.25	4.35	100.00	0.93	0.00	0.42	5.70	1.90
Totals			100.00	10800.00	100.00	0.46	100.00	300.00	100.00
Midstory Class									
<i>Cyrilla</i>	<i>racemiflora</i>	0.50	6.45	610.00	42.66	1.75	42.51	91.62	30.54
<i>Nyssa</i>	<i>sylvatica</i>	0.75	9.68	120.00	8.39	0.44	10.69	28.75	9.58
<i>Ilex</i>	<i>vomitorea</i>	0.75	9.68	170.00	11.89	0.16	3.84	25.41	8.47
<i>Ilex</i>	<i>opaca</i>	0.75	9.68	90.00	6.29	0.30	7.27	23.24	7.75
<i>Magnolia</i>	<i>virginiana</i>	0.50	6.45	60.00	4.20	0.30	7.35	17.99	6.00
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	6.45	40.00	2.80	0.24	5.75	15.00	5.00
<i>Nyssa</i>	<i>biflora</i>	0.25	3.23	50.00	3.50	0.32	7.66	14.38	4.79
<i>Ilex</i>	<i>coriacea</i>	0.50	6.45	70.00	4.90	0.08	1.95	13.30	4.43
<i>Acer</i>	<i>rubrum</i>	0.50	6.45	50.00	3.50	0.12	3.02	12.96	4.32
<i>Persea</i>	<i>palustris</i>	0.50	6.45	40.00	2.80	0.10	2.41	11.65	3.88
<i>Magnolia</i>	<i>grandiflora</i>	0.50	6.45	30.00	2.10	0.11	2.67	11.22	3.74
<i>Symplocos</i>	<i>tinctoria</i>	0.50	6.45	30.00	2.10	0.05	1.17	9.72	3.24
<i>Quercus</i>	<i>alba</i>	0.25	3.23	30.00	2.10	0.04	1.00	6.32	2.11
<i>Quercus</i>	<i>nigra</i>	0.25	3.23	10.00	0.70	0.08	1.91	5.83	1.94
<i>Fagus</i>	<i>grandifolia</i>	0.25	3.23	10.00	0.70	0.02	0.48	4.40	1.47
<i>Vaccinium</i>	<i>arboreum</i>	0.25	3.23	10.00	0.70	0.01	0.17	4.10	1.37
<i>Castanea</i>	<i>pumila</i>	0.25	3.23	10.00	0.70	0.01	0.16	4.09	1.36
Totals			100.00	1430.00	100.00	4.12	100.00	300.00	100.00
Overstory Class									
<i>Pinus</i>	<i>taeda</i>	1.00	23.53	240.00	36.92	24.48	62.38	122.83	40.94
<i>Quercus</i>	<i>hemisphaerica</i>	0.50	11.76	150.00	23.08	8.30	21.16	56.00	18.67
<i>Quercus</i>	<i>nigra</i>	0.25	5.88	70.00	10.77	2.08	5.31	21.96	7.32
<i>Acer</i>	<i>rubrum</i>	0.50	11.76	30.00	4.62	0.69	1.77	18.15	6.05

**Table 14D. Summary of the Woody Stratum in the *Mosaic*
Group in the Post-Operational Survey
Turkey Creek Unit, Big Thicket National Preserve**

Genus	Species	Frequency	Relative Frequency (%)	Density (# individuals/ha)	Relative Density (%)	Dominance (sq m/ha)	Relative Dominance (%)	Importance Value	Relative Importance Value (%)
<i>Nyssa</i>	<i>biflora</i>	0.25	5.88	50.00	7.69	1.78	4.55	18.12	6.04
<i>Cyrilla</i>	<i>racemiflora</i>	0.25	5.88	30.00	4.62	0.54	1.37	11.87	3.96
<i>Nyssa</i>	<i>sylvatica</i>	0.25	5.88	20.00	3.08	0.54	1.39	10.35	3.45
<i>Magnolia</i>	<i>virginiana</i>	0.25	5.88	20.00	3.08	0.26	0.65	9.61	3.20
<i>Quercus</i>	<i>alba</i>	0.25	5.88	10.00	1.54	0.17	0.42	7.84	2.61
<i>Sassafras</i>	<i>albidum</i>	0.25	5.88	10.00	1.54	0.15	0.39	7.81	2.60
<i>Ilex</i>	<i>opaca</i>	0.25	5.88	10.00	1.54	0.13	0.34	7.76	2.59
<i>Persea</i>	<i>palustris</i>	0.25	5.88	10.00	1.54	0.11	0.29	7.71	2.57
Totals			100.00	650.00	100.00	39.25	100.00	300.00	100.00

Appendix E

Representative Photographs of Vegetation Alliances at Plot Level, Seismic Impacts, and Treefall



Photo 1A. *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)
Saturated Forest Alliance
Post-Operational Assessment



Photo 1B. *Magnolia virginiana*-*Nyssa biflora*-(*Quercus laurifolia*)
Saturated Forest Alliance
Pre-Operational Assessment



Photo 2A. *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance
Post-Operational Assessment



Photo 2B. *Nyssa (aquatica, biflora, ogeche)*
Floodplain Seasonally Flooded Forest Alliance
Pre-Operational Assessment



Photo 3A. *Fagus grandifolia*-*Quercus alba*
Forest Alliance
Post-Operational Assessment



Photo 3B. *Fagus grandifolia*-*Quercus alba*
Forest Alliance
Pre-Operational Assessment



Photo 4. *Pinus taeda-Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance
Post-Operational Assessment



Photo 5A. *Pinus palustris*
Woodland Alliance
Post-Operational Assessment

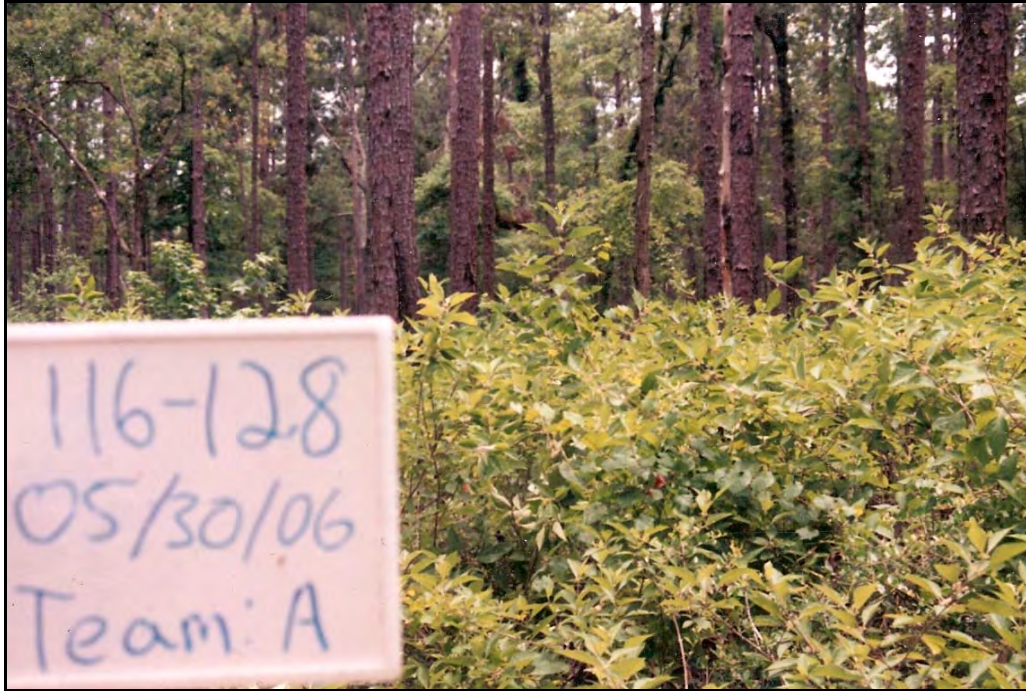


Photo 5B. *Pinus palustris*
Woodland Alliance
Pre-Operational Assessment



Photo 6. *Pinus taeda*-*Pinus echinata*
Forest Alliance
Post-Operational Assessment



Photo 7A. *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance
Post-Operational Assessment



Photo 7B. *Pinus taeda-Quercus (alba, falcata, stellata)*
Forest Alliance
Pre-Operational Assessment



Photo 8A. *Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance
Post-Operational Assessment



Photo 8B. *Quercus (phellos, nigra, laurifolia)*
Temporarily Flooded Forest Alliance
Pre-Operational Assessment



Photo 9. *Quercus nigra*
Forest Alliance
Post-Operational Assessment



Photo 10. *Quercus alba*-(*Quercus nigra*)
Forest Alliance
Post-Operational Assessment



Photo 11A. *Paspalum notatum*
Herbaceous Alliance
Post-Operational Assessment



Photo 11B. *Paspalum notatum*
Herbaceous Alliance
Pre-Operational Assessment



Photo 12A. *Paspalum notatum*
Herbaceous Alliance
Post-Operational Assessment



Photo 12B. *Paspalum notatum*
Herbaceous Alliance
Pre-Operational Assessment



Photo 13. *Pinus taeda*
Seasonally Saturated Woodland Alliance
Post-Operational Assessment



Photo 14A. Mosaic Group
Post-Operational Assessment



Photo 14B. Mosaic Group
Post-Operational Assessment



Photo 14C. Mosaic Group
Post-Operational Assessment



Photo 15. Treefall in Plot 004-085
Post-Operational Assessment



Photo 16. Treefall in Plot 006-144
Post-Operational Assessment



Photo 17. Treefall in Plot 006-152
Post-Operational Assessment



Photo 18. Treefall in Plot 064-076
Post-Operational Assessment



Photo 19. Treefall in Plot 118-137
Post-Operational Assessment



Photo 20. Receiver line, Facing South
Plot 041-078
Post-Operational Assessment



Photo 21. Receiver line, Facing North
Plot 086-176
Post-Operational Assessment



Photo 22. Seismic Trail through Plot 059-039
Post-Operational Assessment



Photo 23. Source Point
Plot 064-072
Post-Operational Assessment



Photo 24. Source Point
Plot 064-083
Post-Operational Assessment

Appendix F

Maps of Sample Plots in the Turkey Creek Unit