Pre-Operational Assessment of Vegetation in the Beaumont Unit and Other Adjacent Lands of the Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas

Rivers Edge 3D Seismic Survey

Cimarex Energy Company
and
Century Exploration Houston, Inc.

Prepared for:

Big Thicket National Preserve
National Park Service
6044 FM 420
Kountze, TX 77625

Cimarex Energy, Co.
1700 Lincoln Street; Suite 1800
Denver, CO 80203

and

Century Exploration Houston, Inc.
10210 Grogans Mill Road
The Woodlands, TX 77380

Prepared by:

Dixie Environmental Services, Co., LP (DESCO)
26902 Nichols Sawmill Road
Magnolia, TX 77353

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DESCO
Arthur Perkins, Sr. Ecologist/Botanist, Project Manager/Primary Report Author
Jackie Gilliam, Regulatory Permit Coordinator
Justin Rowland, Regulatory Permit Coordinator, Report Editor
Tanya Matherne Matcek, President, Project Oversight, Report Editor
Gary Kowalski, Operations Manager, Project Oversight, Report Editor
David Young, Regulatory Permit Coordinator, Report Editor
Crystal Ledbetter, Field Office Coordinator, Data Processing and Management
Ally Freer, Ecologist/Botanist, Team Leader, Report Author
Seth Allan Ames, Biologist/Ecologist, Team Leader, Report Author
Misti Little, Biologist/Ecologist, Team Leader, GIS Manager
Noelle Boudreaux, Intern, Data Entry, Administrative Assistant

DESCO's Field Personnel
Ron Lance, Expert Ecologist/Dendrologist
Dr. Larry Brown, Plant Taxonomist
Dr. Jen Trusty, Ecologist/Botanist,
Jason Helvey, Team Leader, Ecologist
Julie Barnhart, Ecologist
Josh Brown, Ecologist
Bill Burgin, Ecologist
William Clayton, Ecologist
Brett Cormier, Ecologist
Juan Gracia, Ecologist
Richard Jeon, Ecologist
Scott Keating, Ecologist
Tug (Herbert) Kesler, Ecologist/Botanist
Kelly Kuitert, Ecologist
John Kinsey, Ecologist
Ann Kuba, Ecologist
Alicia Leftwich, Ecologist
Chris Little, Ecologist, Report Author
Casey McNeely, Ecologist
Roman Mayo, Ecologist
Hal Mitchell, Ecologist/Botanist
Adam Rachunek, Ecologist
Travis Silveus, Ecologist
Deborah Topp, Ecologist
John Linsey, Ecologist
Paula Von Weller, Ecologist

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1.0 INTRODUCTION

Cimarex Energy Company has proposed a three dimensional (3D) seismic survey, titled Rivers Edge 3D, within the Beaumont Unit (BU), Lower Neches River Corridor Unit (LNRCU), Village Creek Corridor Unit (VCCU) and the Little Pine Island – Pine Island Bayou Corridor Unit (LPI-PIBCU)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 project area according to U.S. Geological Survey (USGS)/NPS National Vegetation Mapping Program guidelines (ESRI and TNC, 1994). This vegetation analysis characterizes the existing vegetation occurring within the project area of the Big Thicket National Preserve.

The project area covers an area just northeast of Beaumont, in Hardin, Jasper, Jefferson, and Orange Counties, Texas. The project area includes approximately 17,375 acres (27.1 square miles) of NPS administered lands within and adjacent to the BU, the easternmost portion of LPI-PIBCU, the southernmost portion of the LNRCU, and southernmost portion the VCCU of the Preserve. **Figure 1**depicts the project area location within Hardin, Jasper, Jefferson, and Orange Counties, Texas.

For the purposes of the report, the project area that was mapped will be referred to as the "project area". If a specific unit of the Preserve is referenced, it will utilize the corridor unit name and/or acronym. Areas both inside and outside of the BTNP that are within the proposed Rivers Edge 3D operations area, are referred to as the "operations area."

Initially, Cimarex planned to conduct operations within a project area that encompassed 11,900 acres (18.6 square miles) of NPS lands in association with the proposed River Fork Phase II 3D seismic survey. After vegetation sampling field efforts were initiated for this project, it was discovered that Century Exploration Houston, Inc. (Century) planned to conduct seismic operations within the BTNP that also incorporated additional NPS lands that had some overlap with the River Fork Phase II project, which Century titled the Edgewater 3D seismic survey.

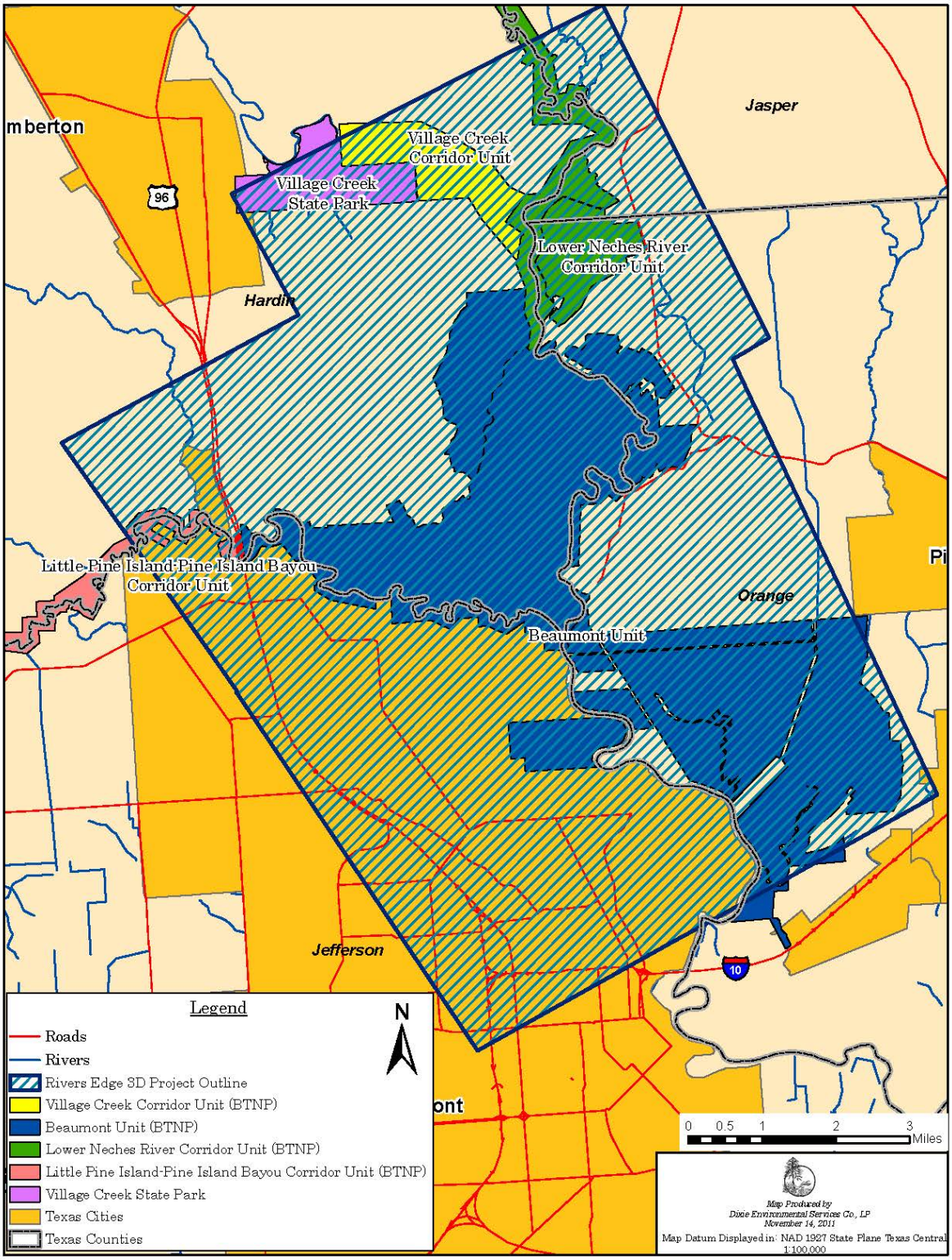


Figure 1: Rivers Edge3D Project Location, Big Thicket National Preserve, Hardin, Jasper, Jefferson, & Orange, TX

Century's project incorporated approximately 4,300 acres (6.7 square miles) of additional NPS lands. Cimarex and Century agreed to conduct a joint seismic program covering the area identified in both seismic survey projects, with Cimarex as the operator within the Preserve. Approximately 1,122 acres (1.8 square miles) of additional lands currently owned by The Conservation Fund, will soon be acquired by the NPS. This property, known as the Cooks Lake Addition, is within the existing project area and was added to the vegetation assessment after commencement since transfer of ownership to the NPS could occur prior to the completion of the seismic survey.The combined survey, as depicted in **Figure 1**, is titled the Rivers Edge 3D Seismic Survey.

The Vegetation Mapping and Sampling Plan (DESCO, 2011) was designed to analyze and map existing vegetation in the project area based on current characteristics of vegetation observed during the spring and summer of 2011. NPS personnel approved DESCO's final vegetation sampling plan in June 2011.

All pre-operational vegetation mapping, survey, sampling and data analysis results are summarized in this report. This information, which includes ecological data, was used in conjunction with the preparation of an Environmental Assessment to assist with documenting potential impacts from the proposed project. Additionally, the ecological data of this pre-operational vegetation mapping and sampling program will be used to analyze actual project impacts of the Rivers Edge 3D Seismic Survey within the BTNP during the post-operational vegetation sampling and impact assessment.

1.1 BACKGROUND

Prior to beginning geophysical operations, Cimarex must comply with NPS regulations found at 36 CFR 9B ("9B Regulations") and NPS National Environmental Policy Act ("NEPA") procedures. The 9B Regulations require a plan of operations to be submitted to NPS for approval and a suitable performance bond to be posted by Cimarex. The 9BRegulations and NPS NEPA procedures require NPS to analyze the effects that operations will have on the preservation, management, and use of the BTNP, and potential impacts (both beneficial and

adverse) on the human environment. The content of the Plan of Operations is based on information provided in the NPS document entitled *Plan of Operations Information Requirements for Proposed Geophysical Operations*. Based on this document and on guidance from the NPS, the Plan of Operations is separated into five documents:

1. Operational Information – This document addresses Sections I through VIII of the information requirements and is entitled *Plan of Operations: Cimarex Energy Company, Rivers Edge 3D Seismic SurveyWithin the Big Thicket National Preserve and Other Lands Managed by the National Park Service, Hardin, Jasper, Jefferson and Orange Counties, Texas* (DESCO, 2012)

2. Environmental Assessment – This document addresses Sections IX through XIII of the information requirements and is entitled *Environmental Assessment: Cimarex Energy Company Proposal to Conduct the Rivers Edge 3D Seismic Survey Within the Big Thicket National Preserve and Other Lands Managed by the National Park Service, Hardin, Jasper, Jefferson, and Orange Counties, Texas* (NPS, 2012). The EA was prepared in accordance with guidance contained in the *DO-12 Handbook and Director's Order* (NPS, 2002).

3. Field Investigations, Vegetation Assessment - The information contained in this document, *Pre-Operational Assessment of Vegetation in the Beaumont Unit and other adjacent lands of the Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas,* constitutes the results of the vegetation mapping and assessment effort, one of the three field investigations that were conducted in association with the Rivers Edge 3D Seismic Survey. Cimarex and Century also conducted wetland assessments and a cultural resource survey of lands managed by the NPS within the Rivers Edge 3D project area to assist with the development of the Plan of Operations and the preparation of the Environmental Assessment, as well as to provide a basis for analyzing post-operational impacts.

4. Field Investigations, Wetland Assessment - The report *Wetland Statement of Findings for Executive Order 11990 (Protection of Wetlands): Cimarex Energy Company's Rivers Edge 3D Seismic Survey, Big Thicket National Preserve, Texas* (DESCO, 2012) documents the results of the assessment of wetlands within the project area, values and functions of the wetlands, and potential impact to the wetlands.

5. Field Investigations, Archeological Survey - The report *An Archeological Survey for a 3-D Seismic Project in the Beaumont Unit and other adjacent lands of the Big Thicket National Preserve National Park Service Lands in Hardin, Jasper, Jefferson, and Orange Counties, Texas: The Rivers Edge Project* (BVRA, 2011) documents the results of the Cultural Resource Survey.

As mentioned above, existing vegetation was sampled and mapped according to USGS/NPS Vegetation Mapping Program guidelines to meet the NPS regulatory requirements and support

environmental impact analysis. 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) standard methodologies for data collection and analysis, as well as *Accuracy Assessment Procedures – NBS/NPS Vegetation Mapping Program* (ESRI, 1994). Such data supports project planning, resource assessment, and biodiversity conservation.

1.2 ENVIRONMENTAL SETTING

According to the NPS'*2006 Management Policies*, the NPS strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants.

The project area is within the Piney Woods Ecoregion (Gould, et. al., 1960)of southeast Texas, near the southern transition to the Gulf Prairies Ecoregion. The land surface is gently rolling with a vast network of creeks, rivers, floodplains, and wetlands. The area stays fairly moist, with an average annual rainfall of nearly 60 inches (**Figure 2**) and the most precipitation typically falling in the month of June (Southern Regional Climate Center, 2007). The project area experienced a record year for drought in Hardin, Jefferson, Jasper, and Orange Counties in 2011. Less than 40 inches of rain fell within the region, as indicated on **Figure 3,** and **s**everal parts of the project area, which would normally be seasonally or temporarily flooded, remained dry.

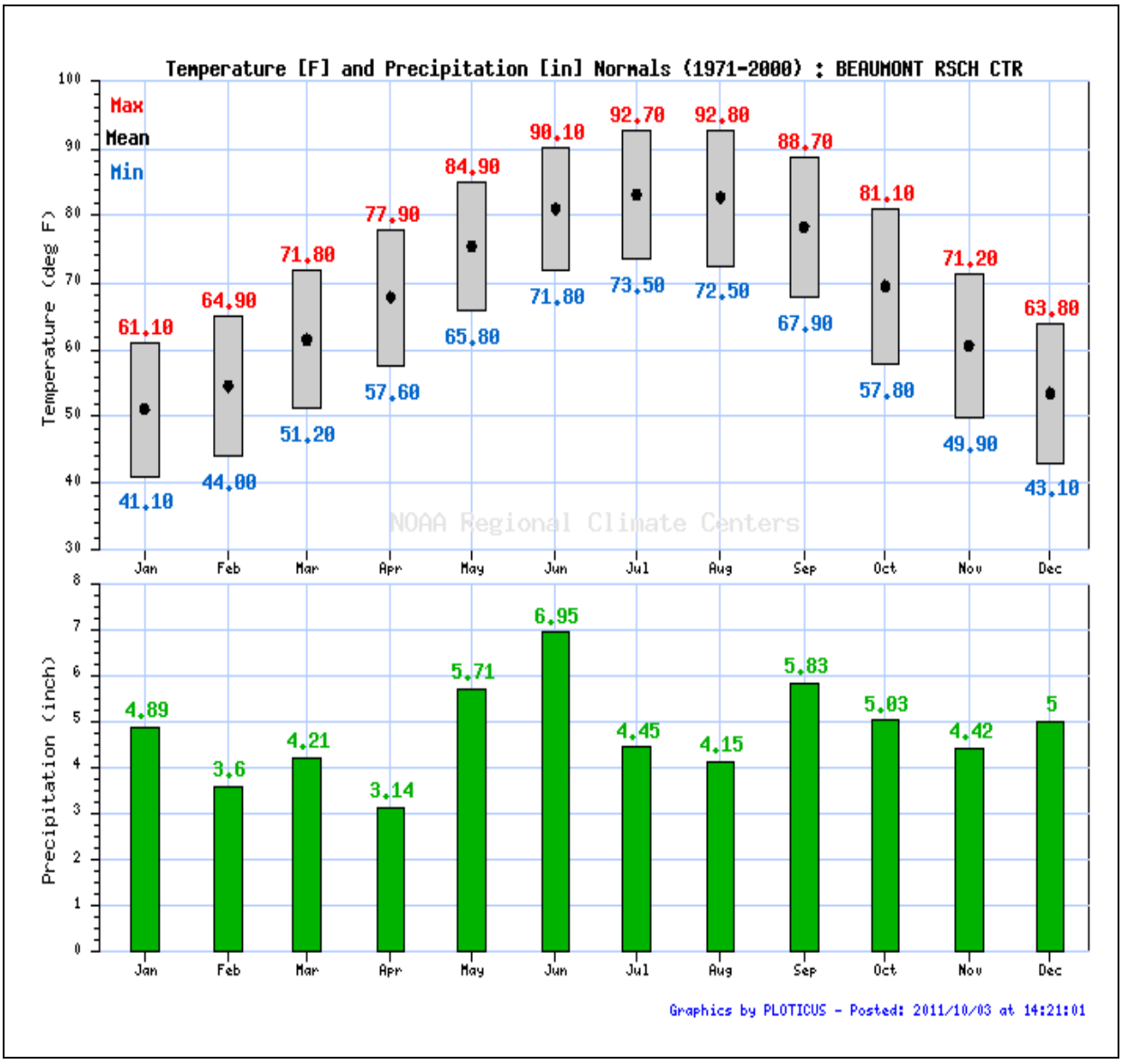


Figure 2: Project Area Climate Data from Beaumont Research Center (1971-2000)
Figure taken from Southern Regional Climate Center:
(http://www.srcc.lsu.edu/stations/index.php?action=metadata&network_station_id=410613), Accessed September 2011.

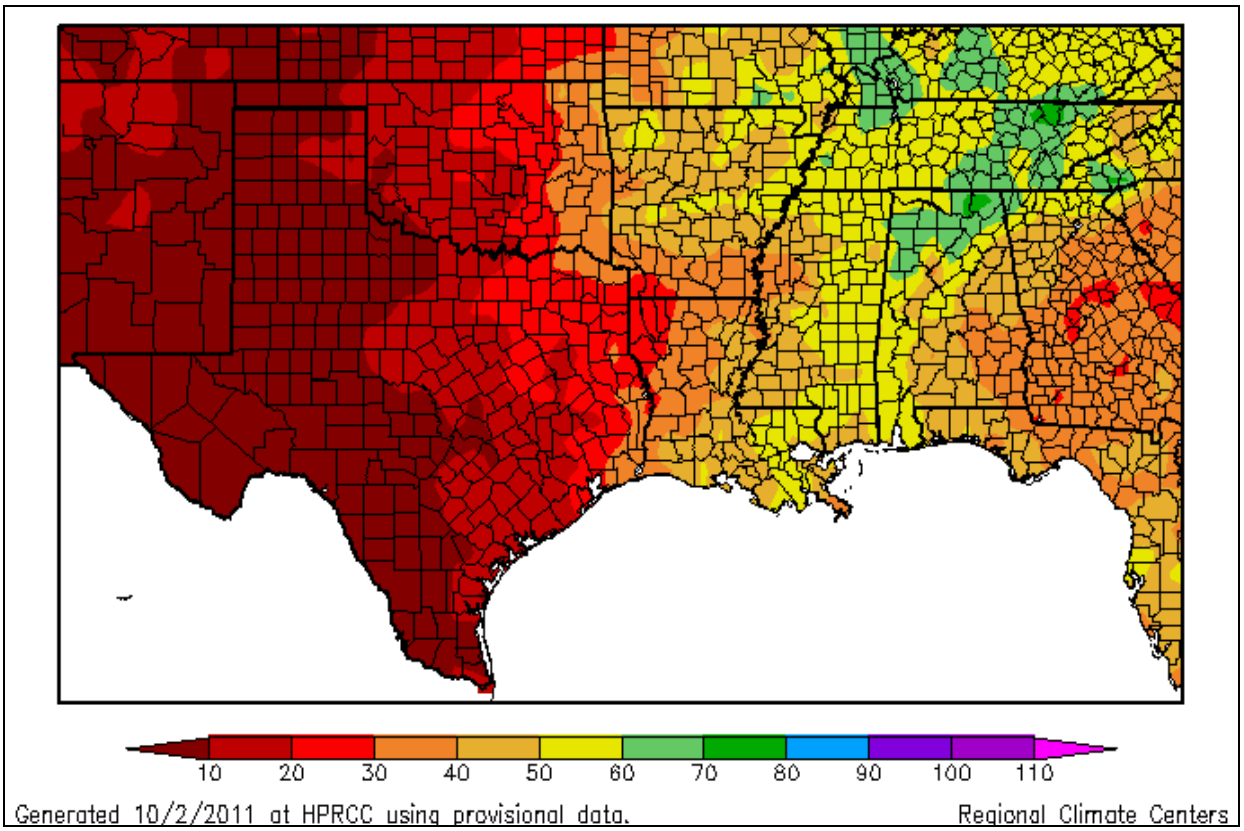


Figure 3: Project Area Rainfall Amounts 10/01/2010 through 9/30/2011
Map taken from Southern Regional Climate Center:http://www.srcc.lsu.edu/maps/current/index.php?action=update_daterange&saterange=Last12m#, Accessed September 2011

The BU is the southernmost unit of the BTNP. It is located on and surrounding the Neches River between Village Creek State Park to the north and Interstate Highway (IH) 10 to the south. The Lower Neches Valley Authority's (LNVA) saltwater barrier is within the BU. The LNVA maintains a canal system within the project vicinity. One of the canals begins in Lakeview, TX and connects to Pine Island Bayou creating a low elevation island commonly called the Beaumont Island. The BU has been expanded south of the confluence of Ten Mile Creek and the Neches River and south of the saltwater dam. Ten Mile Creek and Long Lake Bayou drain a vast complex of fresh water and tidal swamps, woodlands and marshes east of the Neches River. Little Pine Island Bayou discharges into the Neches River north of the LVNA saltwater dam. The confluence of Village Creek and the Neches River is within the northern portion of the project area. The project area, as a whole, is a vast complex of floodplains of the Neches River as well as its tributaries, creeks, bayous and adjacent uplands in the project area.

2.0 METHODOLOGY

Field survey data, aerial photography, topographic maps, soil maps, National Wetland Inventory (NWI) maps, and other information sources were used to map vegetation to the alliance and association levels according to the latest version of the United States National Vegetation Classification (NVC), formerly called the International Classification of Ecological Communities (ICEC) (NatureServe, 2011). The NVC is described in detail in **Section 3.1**. Alliances and associations are based on floristics, or species composition, and are named for the recurring dominant or co-dominant species in the uppermost canopy layer, unlike the higher-level categories, which are based on physiognomy. The previous three studies conducted in the Lance Rosier Unit (Blanton and Associates, 2001), the Big Sandy Creek Unit (PBS&J and DESCO, 2003), and the Turkey Creek Unit (DESCO, 2006) of the Preserve, mapped vegetation alliances within each of the respective project areas. The current program maps all alliance and association vegetation classes in the BTNP within project area.

The following tasks were performed in conducting the vegetation sampling and mapping for the project area:

1) A review of Harcombe and Marks' (1979) map illustrating potential natural vegetation classes predicted to occur within the project area was performed, and was utilized along with additional existing information (National Wetland Inventory [NWI] data, soils, topography, etc.) to identify and delineate preliminary vegetation class boundaries on color infrared (CIR) digital ortho-quarter quadrangle (DOQQ) aerial photography as described in **Section 2.1**.NWI polygons were used as preliminary vegetation classification instead of Harcombe and Marks' due to the low number of their classes in the project area.

2) The polygons within each of the preliminary vegetation classes were assigned a number. A random sample was allocated for each preliminary vegetation class for quantitative sampling. Sample plots were adjusted to coincide with proposed locations of source and receiver lines as explained in **Section 2.2.1.**

3) The preliminary vegetation classes identified in the project area were verified in the field and modified as necessary.

4) Individual sample plot data was analyzed and alliance and association names were assigned as described in **Section 2.2.4**.

5) Field-verified alliances, associations, and polygon boundaries were revised on aerial photography to reflect the results of the field investigations as described in **Section 2.4.**

2.1 PRELIMINARY VEGETATION MAPPING

Preliminary alliance polygon boundaries and vegetation plot locations were identified through aerial interpretation of 2008-2009 CIR DOQQs and the Harcombe and Marks's (1979) map illustrating potential natural vegetation classes within the project area. Other resources such as NWI maps, soil surveys, and topographical maps aided in the determination of these preliminary polygon boundaries. Polygon boundaries were digitized from the CIR photography to facilitate the development of the sampling design. Refer to **Section 2.2** for additional information regarding plot placement within preliminary vegetation class polygons.

2.2 QUANTITATIVE SAMPLING

2.2.1 Sampling Design

The total number of sample plots per 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 the *Standardized National Vegetation Classification System - NBS/NPS Vegetation Mapping Program* (TNC, 1994). Based on the aerial interpretation of a 2008-2009 CIR DOQQs, 1,004 occurrences of distinct vegetation mapping units (polygons) were identified within the project area. All preliminary vegetation classes originally contained at least one sample plot. The number of sample plots per preliminary vegetation class (potential alliance and association) was determined by the size and quantity of the preliminary vegetation class polygon(s).The recommended number of sample plots per vegetation mapping unit was determined by the guidelines outlined in **Table1**: Recommended Sample Plot Scenarios Based on Polygon Quantities and Vegetation Class Sizes (ESRI, 1994).

Table 1: Recommended Sample Plot Scenarios Based on Polygon Quantities and Vegetation Class Sizes			
Description	**Polygons in Class**	**Area Occupied by Class**	**Recommended Number of Samples per Class**
Abundant. Many polygons that cover a large area.	$\geq$ 30	$\geq$ 50 ha	30
Relatively Abundant. Class has few polygons that cover a large area.	< 30	$\geq$ 50 ha	20
Relatively Rare. Class has many polygons that cover a small area. Many polygons area close to the minimum mapping unit (MMU).	< 30	$\leq$ 50 ha	20
Rare. Class has few polygons, which may be wildly distributed Most or all polygons are close to the MMU.	$\geq$ 5, $\leq$ 30	< 50 ha	5
Very Rare. Class has too few polygons to permit sampling. Polygons are close to the MMU.	< 5	< 50 ha	Visit all and confirm

Source: Accuracy Assessment Procedures, NBS/NPS Vegetation Mapping Program (ESRI, 1994)

All preliminary vegetation classes with an area greater than the MMU (0.5 ha) contain at least one sample plot. Sample plots were distributed within preliminary vegetation classes and polygons based on the recommendations provided in **Table 1**.

The NBS/NPS Vegetation Mapping Program does not require a sample plot in each of the polygons, only that sample plots are allocated based on the number of hectares present and the number of polygons in each vegetation class. There were a total of 381 vegetation sample plots originally allocated in the project area. The total number of plots was determined utilizing the NBS/NPS protocol and coordination with NPS staff based on project specifics and past sampling events that occurred in the project area.

Vegetation plots were evaluated quantitatively utilizing the sampling methodologies identified in **Sections 2.2.2** and **2.2.3** below. The location of qualitative sampling points was taken by Global Positioning System (GPS) at transitions between vegetation communities. Transition areas were identified by the change in vegetation communities. The intent of this transition data was to

provide additional basis for vegetation class determinations and reduce the overall number of sample plots in each polygon. A qualitative assessment of vegetation communities was performed along each transect. This data is qualitative because there was not direct measurement of vegetation present. This assessment identified dominant species in each vegetation layer by visual assessment and the absence/presence of wetland indicators as defined by the U.S. Army Corps of Engineers (USACE, 1987). Each wetland polygon was classified in accordance with the Cowardin System (Cowardin, 1979).

Additional transects were sampled in transition areas that lacked either wetland assessment plots or vegetation sample plots, or in areas that required more data to determine the likeness or similarity of vegetation communities within polygons that may be discontinuous as well as polygons in which there were no sample plot data. Once all of the data was mapped, the project area was re-evaluated to determine if there were gaps or unique signature polygons that had not been either qualitatively assessed along a transect, or quantitatively assessed at a sample plot. Additional transect transition data was collected in those areas, as needed. This method is the recommended alternative included in NBS/NPS guidance documents.

Transition data collected was used to determine and refine vegetation classes by matching NWI classes to NVC classes. From this process, the number of vegetation mapping and analysis sample plots was determined, allocated, and randomly distributed within the project area.

Refer to **Table 2**below for a list of all preliminary vegetation classes and total number of polygons and sample plots per class.

Table 2: Preliminary Vegetation Classes (NWI), Number of Polygons per Class, Total Area within the Class, and Number of Sample Plots per Class Allotted within the Project Area

Code[1]	Preliminary Vegetation Class[2] (Cowardin Description or Upland Vegetation Class)	# of Polygons[3]	Total Area (ha)	# of Sample Plots
PEM1A	Palustrine, Emergent, Persistent, Temporary flooded	7	28.28	6
PEM1C	Palustrine, Emergent, Persistent, Seasonally flooded	13	19.89	6
PEM1F	Palustrine, Emergent, Persistent, Semi-permanentlyflooded	36	371.55	31

Table 2: Preliminary Vegetation Classes (NWI), Number of Polygons per Class, Total Area within the Class, and Number of Sample Plots per Class Allotted within the Project Area				
Code[1]	**Preliminary Vegetation Class[2] (Cowardin Description or Upland Vegetation Class)**	**# of Polygons[3]**	**Total Area (ha)**	**# of Sample Plots**
PFO1/2F	Palustrine, Forested, Broad-Leaveddeciduous, Needle-Leaved-deciduous, Semi-permanently flooded	162	1,766.03	38
PFO1/4A	Palustrine, Forested, Broad-Leaved-deciduous, Needle-Leavedevergreen, Temporary flooded	2	7.19	2
PFO1A	Palustrine, Forested, Broad-Leaved deciduous, Temporary flooded	215	1,521.44	47
PFO1C	Palustrine, Forested, Broad-Leaved deciduous, Seasonally flooded	219	960.03	32
PFO1F	Palustrine, Forested, Broad-Leaved-deciduous, Semi-permanentlyflooded	7	18.60	5
PFO2/1F	Palustrine, Forested, Needle-Leaved deciduous, Broad-Leaved deciduous, Semi-permanentlyflooded	10	62.55	20
PFO2F	Palustrine, Forested, Needle-Leaved-deciduous, Semi-permanentlyflooded	3	8.62	3
PFO4A	Palustrine, Forested, Needle-Leaved-evergreen, Temporary flooded	1	0.89	1
PSS1/2F	Palustrine, Scrub-Shrub, Broad-Leaved deciduous, Needle-Leaved-deciduous, Semi-permanentlyflooded	1	5.40	1
PSS1A	Palustrine, Scrub-Shrub Broad-Leaved-deciduous, Temporary flooded	1	20.10	1
PSS1C	Palustrine, Scrub-Shrub Broad-Leaved-deciduous, Seasonally flooded	2	6.17	2
PSS1F	Palustrine, Scrub-Shrub Broad-Leaved-deciduous, Semi-permanently flooded	5	23.13	5
PUBF	Palustrine, Unconsolidated bottom, Semi-permanently flooded	1	0.63	1
Upland– PT	*Pinustaeda*ForestAlliance	22	205.04	30
Upland– PTPE	*Pinus taeda – Pinusechinata*ForestAlliance	5	9.63	5
Upland– PTQAFS	*Pinus taeda – Quercus* (*alba, falcata, stellata*) Forest Alliance	35	268.60	42
Upland– PTQPNL	*Pinus taeda – Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance	62	319.67	42
Upland– QPNL	*Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance	178	789.31	47
Upland– UUH	Undetermined Uplands Herbaceous within ROWs	17	64.20	14
	Total	**1,004**	**6,476.95**	**381**

[1] Codes for upland vegetation classes correspond to preliminary upland alliance determinations.
[2]Preliminary upland vegetation classes determined through analysis of qualitative transect data obtained during project wetland data collection.
[3]Represents polygons greater than the 0.5 hectare MMU. Polygons smaller than the MMU will be absorbed into adjacent alliances/associations.

Initially, all sample plots were randomly placed and then were shifted to the nearest seismic grid line (through GIS and/or direct field observations) to assist with the post-operational vegetation assessment and impact analysis. Since a significant portion of this project will be accessed with

helicopter-portable drill units, seismic source points were located in canopy openings that would facilitate helicopter-portable drilling. In instances where a polygon was not intersected by a seismic line, the sample plot was left in its original location to enable definition of the potential vegetation alliance and association of the polygon. All pre-operational sample plots willnot be sampled during the post-operational vegetation assessment and impact analysis. A portion of the sample plots that are not located on seismic lines will be re-sampled and serve as control sample for the natural disturbance and exotic species statistical analysis. The remaining sample plots that are not located on seismic lines will not be re-sampled during post-operational assessment and impact analysis.

Refer to **Appendix F, Map 2** for sample plot locations. An itemized list of sample plot locations is provided in **Appendix C**. Potential alliance and association polygons were modified and updated during field survey efforts based on the data collected. Once the fieldwork was complete, a final map was produced reflecting the classified alliances and associations within the project area.

2.2.2 Random Sample Method

Four strata were observed and sampled at most of the sample plots determined by the Accuracy Assessment Procedures (ESRI, 1994) and the Standardized Vegetation Classification System (TNC, 1994) (**Table 3:**Stratum and DBH Size Parameters). Overstory, midstory, shrub, and herbaceous strata were sampled at all sample plots.

Table 3: Stratum and DBH[1] Size Parameters

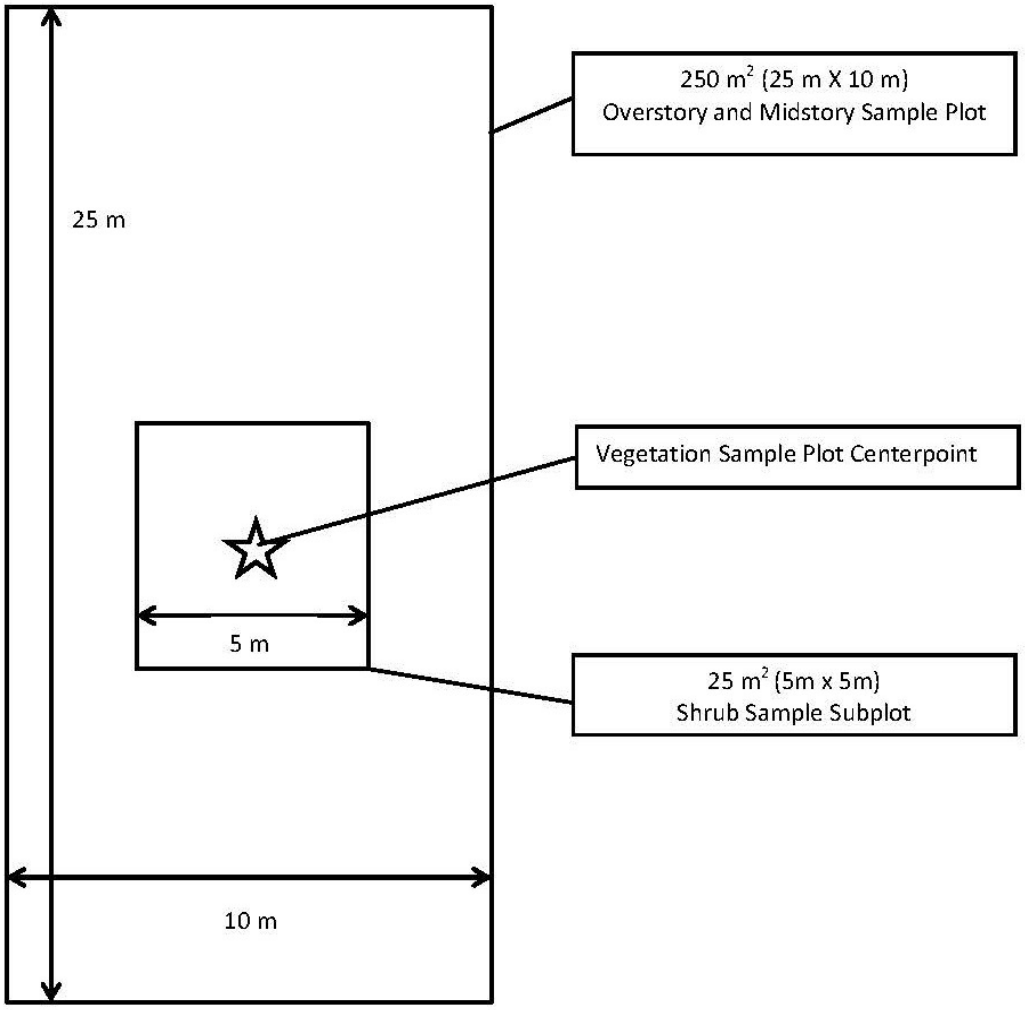
Stratum	Size
Overstory (canopy)	≥12 cm dbh
Midstory	2.5-12 cm dbh
Shrub	0.5-2.5 cm dbh
Herbaceous[2]	% Ground cover

[1]dbhrefers to diameter measured at breast height, which is approximately 4.5 feet from ground level

[2]Within the herbaceous sample plots, all woody vegetation <0.5 cm dbh was calculated as percent ground cover.

Sample plot centers and central northern boundary points were marked with white electrical polyvinyl chloride (PVC) conduit. The PVC pipes, as well as associated flagging tape utilized to mark plot boundaries, were left in the field to facilitate locating and orienting the exact plot boundary during the post-operational vegetation assessment and impact analysis. **Figure 4** demonstrates the plot layout for the vegetation sample plots.

Figure 4: Diagram of the Vegetation Sample Plot Layout



Overstory:

The sample was taken at the pre-determined location using a 250 square meter (m²) plot (25m x 10m). Sample plot boundaries were determined by measuring 12.5m directly north and south of the center point and 5m directly east and west of the center point. This was done with the use of

pre-measured rope or measuring tape. To calculate density, dominance(basal area or percent ground cover), and frequency, each survey team collected the following:

- Identify species
- Number of occurrences
- Basal coverage by collecting dbh

Midstory:

One sample was taken at the pre-determined location using a 250m² plot (25m x 10m). This was the same sample plot and area as the overstory sample plot. To calculate density, dominance, and frequency, each survey team collected the following:

- Identify species
- Number of occurrences
- Basal coverage by collecting dbh

Shrub:

When conducting the verification of the shrub stratum, the sample plot was identified within the 25m² plot (5m x 5m). The center point, was the same as the overstory sample plot, measured 2.5 m in each of the four cardinal directions. Density and frequency was calculated at each shrub sample location. To calculate density, dominance, and frequency, each survey team collected the following:

- Identify species
- Number of occurrences
- Basal coverage by collecting dbh

Herbaceous:

When conducting the verification of the herbaceous stratum,10 random sample plots within the 250m² overstory/midstory plot were identified. Each sample plot was randomly selected and center points were recorded by noting the direction (azimuth) and distance to the overstory/midstory plot center point to facilitate re-sampling, as near as possible, of the same sample plot during the post-operational vegetation assessment and impact analysis. The direction was measured with an azimuth compass with foresight measurement and the distance was measured with a loggers taper or a transect tape. Each of the ten plots was 1m² (1m x 1m)

defined by pre-constructed quadrants. To calculate the species diversity, density, and dominance, each survey team collected the following:

- Notate the sample number (1 through 10)
- Notate the azimuth and distance of plot center to overstory plot center
- Identify all species and estimate % of species composition per plot
- Record estimated % of plot ground cover.

2.2.3 Quantitative Methods and Calculations

Density, dominance, and frequency values were determined for each species. Density refers to the number of individuals per unit area, dominance to the basal area or percent ground cover per unit area, and frequency is the fraction of sample plots containing the species. The number of individuals refers to the number of individual plants except when this could not be determined then in refers to the number of individual stems. 'Per unit area' refers to the sample plot size (250 m^2, 0.01 hectares) extrapolated to standard area of one hectare. Values were expressed in the totals for all species and the plot totals, as well as relative value. Relative density, dominance, and frequency were combined into a single Relative Importance Value. This prevented an imbalance of importance applied to any single parameter. The following equations were used to calculate each ecological parameter:

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

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

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

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

$$\text{Dominance} = \frac{\text{Basal Area of a Species or Canopy Cover}}{\text{Area Sampled}} \text{ X 100}$$

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

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

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

To make the identification of the alliance and association classifications and their locations, Importance Values for each species present were assessed and ranked to determine dominant species for each individual sample plot. The species with the highest Importance Values (dominant species) in each strata and overall for the plot were then utilized to group sample plots by alliance and association. Once vegetation alliances and associations were defined, Importance Values for each species within the alliance and association were calculated. The alliance and association classifications were then analyzed via Breys Curtis ordination analyses (multi-variable statistical similarity test) to confirm the classification and identify plots that may need reclassification.

Richness values (R'), as well as Pielou's Evenness (J') and Shannon Weaver's Diversity Indices (H') (Ludwig, 1988), were compared among the overstory plots within each alliance. The number of species per sample is a measure of richness. Thus, the more species present in a sample, the "richer" the sample. The total number of species present is the "richness" value for this vegetation assessment.

$$\mathbf{R' = \frac{\#\ of\ species\ present}{1}}$$

Pielou's Evenness is a measure of the relative abundance of the different species making up the richness of an area. Evenness ranges from zero to one. When evenness is close to zero, it indicates that most of the individuals belong to one or a few species. When the evenness is close to one, it indicates that each species comprises the same number of individuals. Pielou's Evenness Index is calculated as follows:

$$J' = \frac{H'}{\ln (S)}$$

$$H' = -(\text{sum of species in plot or alliance}) \left[\left(\frac{\text{\# of species A}}{\text{total of all species}} \right) \ln \left(\frac{\text{\# of species A}}{\text{total of all species}} \right) \right]$$

S = # of species in a plot or alliance.

Shannon Weaver's Diversity Index is a measure of species composition and distribution, which is made up of two components: richness and evenness. The higher the diversity index, the more diverse the system, in this case the alliance or association. Shannon Weaver's Diversity Index is calculated as follows:

$$H' = -\sum_{i=1}^{S} \left[\left(\frac{n_i}{n} \right) \ln \left(\frac{n_i}{n} \right) \right] \quad \text{or}$$

$$H' = -(\text{sum of species in plot or alliance}) \left[\left(\frac{\text{\# of species A}}{\text{total of all species}} \right) \ln \left(\frac{\text{\# of species A}}{\text{total of all species}} \right) \right]$$

2.2.4 Quantitative Analysis and Classifying Alliances and Associations

Once the individual plot data was calculated, the plots were grouped into NVC vegetation associations. Grouping of NVC vegetation association was based on dominant vegetation and common associate species present, soils, hydrology, and landscape position. The individual plot data was then grouped into potential alliances, and the data was recalculated at the alliance level and individual association level. The dominant species and other parameters (i.e. environmental setting, associate species, hydrology, etc.) of the alliance descriptions were then cross-checked with the data.

Bray-Curtis Ordination coordinates were calculated for each individual sample plot within the alliance. Bray-Curtis Ordination Analysis is a multi-variable statistical similarity test. The calculations used the importance values of the species present in each of the vegetation sample plots, and were weighted towards the dominant species in the sample. These coordinates were then plotted on a scatter-gram chart. Sample plots that were grouped together on the chart were statistically similar and the outliers were different. The individual sample plots that graphed as outliers were then re-assessed based on dominant species present, hydrologic regime and

landscape position and grouped into a different alliance and/or association. The similarity test and classification based on the ecological data was repeated until all individual plots were assigned to the appropriate alliance and/or association.

2.2.5 Qualitative Data Collection and Use

During field data collection of the vegetation sample plots and during the collection of field data for the wetlands assessment plots, transect transition data was collected in the field. Data was collected on the vegetation communities along transects, including a qualitative assessment of dominant species within each vegetative layer present, polygon numbers, the NWI classification (made based on field observations if applicable) and notes on the presence or lack of wetland indicators. GPS points were taken at transitions between vegetation communities. Additional transects were sampled in transition areas that were lacking in wetland sample plots or vegetation sampling plots, or in areas that required more data to determine the likeness of vegetation communities within polygons that may be discontinuous. Once all of the wetland assessment sample plots, vegetation mapping sample plots, and transect transition data were mapped, the project area was reevaluated to determine if there are gaps or unique signature polygons that had not been either qualitatively assessed along a transect or a wetland assessment sample plot or quantitatively assessed at a vegetation sample plot. Additional transition data was collected in these areas.

Qualitative data was collected at 173 wetland assessment plots. Data collection included the completion of a Routine Determination Form in accordance with the USACE 1987 Manual (USACE, 1987) and the Regional Supplement tothe Army Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (USACE, 2010). The USACE Regional Supplement requires that an estimate of absolute cover of each vegetative species present be performed within a 30 foot radius of the sampling plot. The dominant species in each plot, soils, hydrologic regime, and landscape position was used to classify the data of the wetland assessment plots in to an alliance or association. These wetland assessment plot classifications were used as an additional source of information to classify polygons on the vegetation map into their respective alliances and associations.

2.2.6 Polygon Classification

Individual sample plot alliance and association classifications were compared with the preliminary map. Polygons containing a single classification for all individual sample plots were assigned a specific alliance and/or association designation. In polygons with multiple classifications assigned to the individual sample plots, the map polygon and individual sample plot data were re-evaluated. Signatures on the map were scrutinized to determine if a signature existed to differentiate between individual sample plot alliance names within and around that polygon with multiple classifications. If a different signature existed, the map polygons were revised to reflect this change. If a different signature did not occur, the plot data was re-evaluated at the polygon level. All individual sample plot data for the polygon were grouped together and the data were recalculated. The dominant species of the polygon sample plots were re-assessed and compared to alliance and association descriptions. The Bray-Curtis scatter-gram was checked again for outliers. If the polygon data was consistent or matched the alliance description, the polygon was assigned that alliance name. If the data was inconsistent or did not match, and there was not a discernible signature on the map, the plot was assumed to be a plant community inclusion within the dominant polygon vegetation alliance.

Transect transition data and classified wetland assessment plot data was used to further aid in map polygon classification and editing. The transect transition data was used to refine polygon boundary locations and classify polygons. Wetland assessment plot data was used to classify map polygons. Quantitative vegetation sample plot data took precedence over the qualitative data.

2.2.7 Plant Taxa Determinations

Larry Brown, Ph.D., a local and regional expert plant taxonomist, served as the authority for determining vegetative species identifications on the project. Any species that could not be positively identified in the field was collected and the sample provided to Dr. Brown for identification. A quality control system of documenting unidentified species was used to ensure

the species identified was transferred to the field data collected. Taxonomic nomenclature used for the assessment followed the *Flora of North America North of Mexico* (1993).

2.3 OTHER QUALITATIVE SAMPLING

2.3.1 Herbarium Voucher Specimens

Voucher plant species were collected in the field. A voucher specimen is a representative sample providing verification of the identification of a species and the area from which it was collected (i.e. state, county, etc.). Voucher specimens collected were identified and compared to the *Annotated Checklist Of The Vascular Flora Of The Beaumont Unit Of The Big Thicket National Preserve, Hardin, Jefferson, And Orange Counties, Texas* (Brown et al., unpublished data). The annotated checklist is the latest and most complete list available within the project area. Any species encountered that was not included on the list was collected in the field.

All voucher species were collected outside of the sample plot locations, if available. Voucher species were pressed at the end of each day. For each voucher specimen collected, the following information was annotated: technical name, location, habitat, collected by, and date. Following completion of the project, all specimens were turned over to Dr. Brown for curation and final annotation in accordance with standard herbarium practices. Refer to **Appendix B**, **Table B-2** for a complete list of voucher specimens collected and documented by Dr. Brown while associated with the current vegetation assessment.

2.3.2 Soil Characterization

The following soil information was obtained within each plot: depth of pit (inches), soil horizons encountered, Munsell colors in the matrix and mottles, mottle abundance and contrast, texture, structure, and presence of concretions, as well as hydric soil indicators such as sulfuric odor, low-chroma colors, gleying, and organic streaking.

2.3.3 Site Photographs

Each team took representative photographs of each plot to document the alliance. Plot photos were taken from the northern end of the plot, facing south to the center point of the plot. Photographs were also taken of each soil profile and its soil pit. Representative photos of alliances are included in **Appendix E.**

2.3.4 Threatened, Endangered, or Rare Vegetation

During the course of the project, observations were made for federally and/or state-listed threatened or endangered species or rare vegetation. No listed species were observed during field investigations.

2.4 VEGETATION MAPPING REVISIONS AND EDITING

The preliminary vegetation alliance map was modified based on the ground verification effort. Due to the sample design, virtually the entire project site was field-verified. This extensive ground verification was intended to ensure the accuracy of the vegetation classes being mapped. This level of ground verification and corresponding map modification eliminated the need for determining thematic accuracy as discussed in Section 5.7 of the NPS document titled *Accuracy Assessment Procedures- NBS/NPS Vegetation Mapping Program* (ESRI, 1994). **Appendix F, Maps 1 and 2 (A, B,** and **C)**, document vegetation alliances and sample plot locations.

Map editing occurred, based on values for species, as described in **Section 2.2.3**. In addition to the actual vegetation plot data, two other sources of information were used in map editing. First, GPS coordinates of shifts in vegetation communities encountered in the field were collected. As the field teams moved from place to place within the project area, GPS coordinates and notes were taken of transitional areas between two or more vegetation communities. Secondly, wetland data was compiled from the wetland investigation of source and access routes within the project area. This data included wetland locations and information on wetland vegetation communities.

Several GIS shapefiles of the boundary of the project area and other BTNP assets were provided to DESCO by NPS personnel over the duration of this project. At any given time throughout the course of the project, the most recent file was used for mapping purposes. The position of the boundary was not consistent in all of the provided files; therefore, maps included in this report portray a few vegetation plots and polygons that extend outside of the project area boundary. These areas were verified in the field to ensure that the plots were inside the project area using observations of the boundary markings on trees. For a variety of reasons, the aerial photography base on which the data layers are displayed contains spatial inaccuracies. This variance results in limited misalignment, but does not affect the accuracy of the data layers themselves.

3.0 RESULTS

This section provides a discussion of vegetation classes, as well as a summary of the results of the vegetation mapping and sampling efforts conducted within the BU and other adjacent lands of the BTNP within the Rivers Edge 3D seismic survey. **Section 3.1** provides an overview of the vegetation classification system utilized. **Section 3.2** provides a discussion of the overall vegetation composition within the project area. **Sections 3.3.1** through **3.3.33** and **Section 3.4** discuss the findings in each of the observed vegetation alliances and each component association.

3.1 OVERVIEW OF VEGETATION CLASSIFICATION SYSTEM

For this study, vegetation mapping follows the NVC (NatureServe, 2011) guidelines. The upper five levels of the NVC hierarchy are based on physiognomy, whereas the two lower levels (alliance and association) are based on floristics. The alliance level is based on species composition, named for the constant dominant or co-dominant species in the uppermost canopy layer. The association level is defined by individual plant communities or repeating complex of plant communities. For purposes of this assessment, importance values were used to identify the major stratum dominants. The hierarchy is:

System
- Class
  - Subclass
    - Group

Subgroup
Formation
Alliance
Association

An example of the alphanumeric designations used in this hierarchy is **1.C.3.N.a (A.404)**, used for *Pinus taeda* Forest Alliance.

1 indicates forest as the class

C indicates mixed evergreen-deciduous forest as the subclass

3 indicates mixed needle-leaved evergreen – cold deciduous forest as the group

N indicates natural or semi-natural as the subgroup

a indicates rounded-crowned temperate or sub-polar needle-leaved evergreen forest

(A.404) indicates *Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance as the alliance (See **Section 3.3** for alphanumeric designations of other alliances).

A limitation to using NVC may be that some of the NVC categories could have been based on vegetation types previously reported in the literature that were not defined by quantitative data, but instead by qualitative investigations. Although quantitative data may not define the NVC, the alliance names presented in this inventory are consistent with the NVC. Each alliance name was selected by comparing the alliance description to the actual quantitative results of the study. For alliance descriptions that were not exact, the closest representative alliance name was utilized. All alliances identified were mapped based on the minimum mapping unit consistent with the mapping guidelines set forth for this project.

3.2 VEGETATION COMPOSITION

Data from a total of 391 vegetation sample plots was collected during field efforts. There were 381 vegetation sample plots in the original sampling plan. Ten additional plots were added in the field to further define polygon or alliance vegetation. This occurred when the vegetation in the sample plot was not the target vegetation class, the sample plot spanned two vegetation classes, or unique vegetation communities were identified in the field that could not be classified

into a known vegetation classification. In each case, vegetation plots were added to resolve the issue.

Along with the vegetation sample plot data, the qualitative data collected at wetland assessment plots and transition transect data were used in the vegetation mapping and classification process. Qualitative data from 173 wetland assessment plots were classified into alliances and associations. Transition transect data was collected along 396 transects, which included a total of 2,154 transition points.

A total of 33 alliances and 25associations were classified from quantitative vegetation sample plot data. Thirty eight vegetation types in total were mapped from the vegetation sample plot data as listed in **Appendix D.** Sixteen (16) of the classified alliances had a single component association, 4 of the alliances had multiple component associations and, and 13 alliances had no component associations. An additional 6 vegetation communities were identified from qualitative data from the wetland assessment plots. In total, 41 different vegetation communities were mapped. Three of the vegetation communities that were identified from qualitative data could not be mapped due to likeness of aerial photography signatures. A total of 555 species of vascular vegetation were identified within the 391 vegetation sample plots; 137 of these species were identified within the woody strata and 541 were identified within the herbaceous stratum.

The modified importance value for dominant species of the highest dominant strata present was primarily used to classify data from each vegetation sample plot. Dominant species of other strata present and other key species present were used to further classify and refine the classification of the vegetation sample plot data. Dominant species will have the highest modified importance value in their related alliances and associations. **Table D-4** in **Appendix D** summarizes key woody species used to classify vegetation in the forest, woodland, and shrub alliances that occur within the project area, as well as the modified importance values of the key species within the alliance they occur. For example, the data indicate that loblolly pine (*Pinus taeda*) has its highest importance values in the pine dominant alliances and lower values in other alliances in which it occurs.

3.3 ALLIANCE AND ASSOCIATION COMPOSITION

The BU and other lands administered by the BTNP within the project area are comprised of four vegetation classes as defined by NVC (NatureServe, 2011): forest, woodland, shrubland, and herbaceous. Class Forest is represented by three subclasses: evergreen, deciduous, and mixed evergreen/deciduous. Subclass evergreen forest is represented by one alliance and two associations, subclass deciduous forest is represented by eighteen alliances and eighteen associations, and subclass mixed evergreen/deciduous forest is represented by three alliances and two associations. Class woodland is represented by one subclass: deciduous woodland, and one alliances and one association. Class shrubland is represented by two subclasses: evergreen shrubland, and deciduous Shrubland with two alliances and one association. Class herbaceous is represented by two subclasses: perennial graminoid and perennial forb by one alliance. Perennial graminoid subclass in represented by five alliances and two associations. Perennial forb subclass in represented by four alliances and one association.

In all, thirty three (33) alliances were identified by quantitative vegetation plot data within the project area. Within the 33 alliances, 25 component associations were identified. The alliances and associations identified in the BU and other lands administered by the BTNP within the project area, the alphanumeric designation, and unique identifiers of each are listed in **Table D-1** of **Appendix D**.

The alliance title lists, in certain circumstances, one or more potentially dominant species. These alliances are generally designed to cover a broad geographical range and several vegetation associations. There are several species included in the titles of these alliances that are not found in the BTNP and were not encountered during field sampling efforts. Species listed in the alliance and association titles that are not found in the BTNP are *Acer saccharinum* and *Nyssa ogeche*. *Quercus shumardii* and *Vaccinium fuscatum* are found in the southeast Texas area; however, these species were not encountered in any of the vegetation plots.

Complete descriptions of NVC alliances can be reviewed at the U.S. National Vegetation Classification web site (USNVC, 2011) and associations can be examined at NatureServe Explorer (NatureServe, 2011), listed by name and alphanumeric designations. The following are

the individual alliance and association data and descriptions as they occur in the project area. The descriptions are summarized from the NatureServe Explorer (NatureServe, 2011), sample plot data, and incidental observations made during vegetation sampling and collecting transect transition data.

3.3.1 *Pinu staeda* Forest Alliance

Pinus taeda Forest Alliance encompasses approximately 701.56 ha (1,733.58 ac) of the project area. This alliance occurs on the higher elevations as well as lower elevation areas that were historically planted as timber/pulp wood plantations. Many of the ridges/levees adjacent to Long Bayou, the LNVA canal on the west side of the Beaumont Island area, and the peripheral upland areas of the project area contain this vegetation community. This alliance can occur on a wide range of soil types. Hydrologic regimes of this alliance range from saturated and temporarily flooded to mesic and dry/mesic conditions within the project area. This alliance includes both successional forest, following cropping or site conversion, and natural forest (NatureServe, 2011). On the portion of the BTNP within project area, the aerial signature of loblolly pine (*Pinus taeda*) dominant areas along with field observations show that these areas are not naturally occurring and would be considered successional forest. The aerial signatures and field observation show the pine trees were planted in rows, which is not a signature for naturally occurring pine trees.

Sixty five (65) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 1.625 ha. Eighty two (82) species of woody plants (trees and shrubs) were recorded in these plots. Six hundred fifty (650) 1 m x 1 m plots within the sixty five 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.065 ha. One hundred sixty four (164) species of ground layer vegetation were recorded within these six hundred fifty 1 m^2 plots. The data shows there are 3,572 woody plants per ha, comprising 29.41 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.029, Pielou's Evenness Index (J') at 0.687, and a richness value of 82 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.997, Pielou's Evenness Index (J') at 0.784, and a richness value of 164 species.

A typical plot within this alliance is portrayed in **Photos 1-1 and 1-2**, **Appendix E.** The overall data in the *Pinus taeda* Forest Alliance is summarized in **Table 4**. Summary alliance data is presented in **Appendix A, Table 1 (A-D)**.

Table 4: Summary of Vegetation Analyses for *Pinus taeda* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	65
Area Sampled (ha)	1.625
Number of Species Recorded Within Plots (Richness)	82
Overall Species Evenness	0.687
Overall Species Diversity	3.029
Herbaceous Vegetation[2]	
Number of Sample Plots	650
Area Sampled (ha)	0.065
Number of Species Recorded Within Plots (Richness)	164
Overall Species Evenness	0.784
Overall Species Diversity	3.997

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 459 individual trees per ha, which comprise a total basal area of 24.74 m^2 per ha. The overstory stratum in this alliance is dominated by loblolly pine, which is composed of 332.89 trees per ha, contributing 20.12 m^2 per ha of basal area. Sweetgum (*Liquidambar styraciflua*) is the highest ranking associate species, with an average of 29.56 trees per ha, contributing 1.47 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include water oak *(Quercus nigra)*, Chinese tallow (*Triadica sebifera*), and blackgum (*Nyssa sylvatica*).

The midstory within this alliance contained an average of 1,249.72 individual trees per ha, comprising 4.19 m^2 of basal area per ha. The midstory stratum is dominated by yaupon holly (*Ilex vomitoria*), with other important species including Chinese tallow, blackgum, and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 3,864 individual shrubs per ha, comprising 0.47 m^2 of basal area per ha. Yaupon holly is the dominant species. Other important

species present in the shrub stratum of this alliance include muscadine grape (*Vitus rotundifolia*), sweetgum, and American beautyberry (*Callicarpa americana*).

The data shows there is a total of 4.03 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, high bush blackberry (*Rubus argutus*) is the dominant species with 0.46% of the total ground cover. Other important species present in the herbaceous layer of this alliance are muscadine grape, yaupon holly (seedlings), and poison ivy (*Toxicodendron radicans*).

The vegetation of this alliance is similar in nature to the *Pinus taeda – Pinus echinata* Forest Alliance, *Pinus taeda - Quercus* (*alba, falcata, stellata*) Forest Alliance, the *Pinus taeda - Quercus* (*phellos, nigra, laurifolia*) Forest Alliance and the *Pinus taeda* Planted Forest Alliance. The *Pinus taeda* Forest Alliance is dominated by loblolly pine with varying amounts of oaks and other hardwoods. However, the amount of associate oaks and other hardwoods remain fairly low (<25%). The project area is just south of the normal range of short leaf pine (*Pinus echinata*). The lack of short leaf pine would not affect the alliance classification as *Pinus taeda – Pinus echinata* Forest Alliance; however, the aerial signatures indicate that these areas are not naturally occurring and were planted in rows. The *Pinus taeda* Planted Forest Alliance includes only dense, monospecific, plantation stands of pine. The *Pinus taeda* dominant stands within the project area have been thinned and have matured beyond this condition. The *Pinus taeda* Forest Alliance allows for planted and naturalized loblolly pine communities. This alliance is a semi-natural or successional vegetation community.

3.3.1.1 Proposed Associations within the *Pinus taeda* Forest Alliance

There are not any reported component associations for this Alliance. The analysis of data collected at the 65 vegetation sample plots show two distinct potential associations within this alliance: *Pinus taeda* Forest and *Pinus taeda* Temporarily Flooded Forest.

The *Pinus taeda* Forest would be more related and similar to the upper to mid slope forest, *Pinus taeda - Quercus* (*alba, falcata, stellata*) Forest Alliance. This proposed association exhibits

mesic to dry/mesic hydrologic regimes and associate species without a significant amount of oaks present.

The *Pinus taeda* Temporarily Flooded Forest, would be more related to the lower slope and oak/pine bottomland floodplain forest, *Pinus taeda- Quercus* (*phellos, nigra, laurifolia*) Forest Alliance. This proposed association shows mesic to temporarily flooded wetland hydrologic regimes and associate species without a significant amount of oaks present.

Proposed Association - Pinus taeda Forest

Pinus taeda Forest association encompasses approximately 575.6 ha (1,422.33 ac) of the project area. This alliance occurs on the higher elevations within the landscape with more dry hydrologic regimes and associate species more commonly found in upland vegetation communities.

Thirty nine (39) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.975 ha. Sixty five (65) species of woody plants (trees and shrubs) were recorded in these plots. Three hundred ninety (390) 1 m x 1 m plots within the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.039 ha. One hundred thirty nine (139) species of ground layer vegetation were recorded within the 390 1 m^2 plots. The data shows there are 1,982 woody plants per ha, comprising 9.38 m^2 per ha of basal area for all three woody strata. Proposed association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.722, Pielou's Evenness Index (J') at 0.652, and a richness value of 65 species. Proposed association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.996, Pielou's Evenness Index (J') at 0.81, and a richness value of 139 species.

A typical plot within this proposed association is portrayed in **Photo 1-1**, **Appendix E.** The overall data in the proposed *Pinus taeda* Forest association is summarized in **Table 5**. Summary proposed association data is presented in **Appendix A, Table 1-1 (A-D)**.

Table 5: Summary of Vegetation Analyses for the Proposed Association-*Pinus taeda* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	39
Area Sampled (ha)	0.975
Number of Species Recorded Within Plots (Richness)	85
Overall Species Evenness	0.652
Overall Species Diversity	2.722
Herbaceous Vegetation[2]	
Number of Sample Plots	390
Area Sampled (ha)	0.039
Number of Species Recorded Within Plots (Richness)	139
Overall Species Evenness	0.81
Overall Species Diversity	3.996

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this proposed association indicates there are 427.88 individual trees per ha, which comprise a total basal area of 25.78 m^2 per ha. The overstory stratum in this proposed association is dominated by loblolly pine, which is composed of 305.67 trees per ha, contributing 20.36 m^2 per ha of basal area. Sweetgum is the highest ranking associate species, with an average of 34.10 trees per ha, contributing 2.01 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include water oak, blackgum, and Chinese tallow.

The midstory within this proposed association contained an average of 1,133.00 individual trees per ha, comprising 3.68 m^2 of basal area per ha. The midstory stratum is dominated by yaupon holly, with other important species including sweetgum, water oak, and loblolly pine, respectively in order of dominance.

The shrub stratum within this proposed association contained an average of 3,973.41 individual shrubs per ha, comprising 0.50 m^2 of basal area per ha. Yaupon holly is the dominant species. Other important species present in the shrub stratum of this proposed association include American beautyberry, muscadine grape, and sweetgum.

The data shows there is a total of 6.7 % ground cover provided by herbaceous vegetation in this proposed association. Within the herbaceous layer, highbush blackberry is the dominant species with 0.76% of the total ground cover. Other important species present in the herbaceous layer of this proposed association are muscadine grape, yaupon holly (seedlings), and American beautyberry.

Proposed Association -Pinus taeda Temporarily Flooded Forest

The proposed *Pinus taeda* Temporarily Flooded Forest association encompasses approximately 125.96 ha (311.25ac) of the project area. This alliance occurs on the lower elevations within the landscape with more wet hydrologic regimes and associate species more commonly found in more wet vegetation communities.

Within the proposed *Pinus taeda* Temporarily Flooded Forest association, twenty six (26) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.65 ha. Forty nine (49) species of woody plants (trees and shrubs) were recorded in these plots. Two hundred sixty (260) 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.026 ha. Ninety three (93) species of ground layer vegetation were recorded within the 260 1 m^2 plots. The data shows there are 6,041 woody plants per ha, comprising 28.97 m^2 per ha of basal area for all three woody strata. Proposed association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.944, Pielou's Evenness Index (J') at 0.757, and a richness value of 49 species. Proposed association vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.764, Pielou's Evenness Index (J') at 0.83, and a richness value of 93 species.

A typical plot within this proposed association is portrayed in **Photo 1-2**, **Appendix E.** The overall data in the proposed *Pinus taeda* Temporarily Flooded Forest association is summarized in **Table 6**. Summary alliance data is presented in **Appendix A, Table 1-2 (A-D)**.

Table 6:Summary of Vegetation Analyses for the Proposed Association-*Pinus taeda* Temporarily Flooded Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	26
Area Sampled (ha)	0.65
Number of Species Recorded Within Plots (Richness)	49
Overall Species Evenness	0.757
Overall Species Diversity	2.944
Herbaceous Vegetation[2]	
Number of Sample Plots	260
Area Sampled (ha)	0.026
Number of Species Recorded Within Plots (Richness)	93
Overall Species Evenness	0.83
Overall Species Diversity	3.764

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this proposed association indicates there are 546.15 individual trees per ha, which comprise a total basal area of 28.97 m^2 per ha. The overstory stratum in this proposed association is dominated by loblolly pine, which is composed of 404.62 trees per ha, contributing 23.18 m^2 per ha of basal area. Chinese tallow is the highest ranking associate species, with an average of 40 trees per ha, contributing 0.92 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include sweetgum, water oak, laurel oak (*Quercus laurifolia*), and American hornbeam (*Carpinus caroliniana*).

The midstory within this proposed association contained an average of 1,541.54 individual trees per ha, comprising 4.97 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including sweetgum, yaupon holly, and loblolly pine, respectively in order of dominance.

The shrub stratum within this proposed association contained an average of 3,755.39 individual shrubs per ha, comprising 0.44 m^2 of basal area per ha. Muscadine grape is the dominant species. Other important species present in the shrub stratum of this proposed association include sweetgum, yaupon holly, and Chinese tallow.

The data shows there is a total of 15.43 % ground cover provided by herbaceous vegetation in this proposed association. Within the herbaceous layer, narrow-leaf woodoats (*Chasmanthium laxum*) is the dominant species with 3.08 % of the total ground cover. Other important species present in the herbaceous layer of this proposed association are muscadine grape, yaupon holly, and crossvine (*Bignonia capreolata*).

3.3.2 *Acer rubrum – Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance

Acer rubrum- Fraxinus pennsylvanica Seasonally Flooded Forest Alliance encompasses approximately 212.77 ha (525.76 ac) of the project area. This alliance occurs in lower transitional elevations within and adjacent to cypress/tupelo swamps and other deep wetland vegetation communities. In the Beaumont Island area, much of the landscape is broken up by a complex drainage system creating islands of varying dimensions and elevations. This alliance along with others occupies the lower elevations of these islands transitioning into the predominantly *Nyssa aquatica-Taxoduim distichum* Semi-permanently Flooded Forest. This alliance also occurs in the upper reaches of high order drainages in the project area. Soils of supporting this alliance are level or nearly level water-deposited clayey or loamy sediments on floodplains of rivers and large perennial streams. Occurrences of this alliance are flooded or saturated for a significant portion of the growing season (NatureServe, 2011).

Thirteen (13) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.325 ha. Forty five (45) species of woody plants (trees and shrubs) were recorded in these plots. One hundred thirty (130) 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.013 ha. One hundred thirty eight (130) species of ground layer vegetation were recorded within the one hundred thirty 1 m^2 plots. The data shows there are 7,246.15 woody plants per ha, comprising 21.44 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.648, Pielou's Evenness Index (J') at 0.696, and a richness value of 45 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.122, Pielou's Evenness Index (J') at 0.847, and a richness value of 130 species.

The plot within this alliance is portrayed in **Photo 2**, **Appendix E.** The overall data in the *Acer rubrum- Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance is summarized in **Table 7**. Summary alliance data is presented in **Appendix A, Table 2 (A-D).**

Table 7: Summary of Vegetation Analyses for *Acer rubrum- Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	13
Area Sampled (ha)	0.325
Number of Species Recorded Within Plots (Richness)	45
Overall Species Evenness	0.696
Overall Species Diversity	2.648
Herbaceous Vegetation[2]	
Number of Sample Plots	130
Area Sampled (ha)	0.013
Number of Species Recorded Within Plots (Richness)	130
Overall Species Evenness	0.847
Overall Species Diversity	4.122

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 366.15 individual trees per ha, which comprise a total basal area of 17.72 m^2 per ha. The overstory stratum in this alliance is dominated by red maple (*Acer rubrum*) and green ash (*Fraxinus pennsylvanica*). The average number of individual canopy size trees per hectare of red maple is 80 trees per ha, which contributes 4.05 m^2 per ha of basal area. Green ash is comprised of 57.14 trees per ha, contributing 2.16 m^2 per ha of basal area. The third most important tree in the canopy of the alliance is the invasive exotic species Chinese tallow. Other important species, listed in the order of dominance in the overstory, include sweetgum, bald cypress (*Taxodium distichum*), and water hickory (*Carya aquatica*).

The midstory within this alliance contained an average of 901.54 individual trees per ha, comprising 3.96 m^2 of basal area per ha. The midstory stratum is dominated by deciduous holly (*Ilex decidua*), with other important species including Chinese tallow, red maple, and green ash, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 6,132.31 individual shrubs per ha, comprising 0.49 m^2 of basal area per ha. The shrub stratum is dominated by Chinese tallow, with other important species including arrowwood (*Viburnum dentatum*), red maple, and American hornbeam, respectively in order of dominance.

The data shows there is a total of 27.30 % ground cover provided by all herbaceous vegetation in this alliance. Within the herbaceous layer, trailing loosestrife (*Lysimachia radicans*) was the dominant species with 2.52 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are American buckwheat vine (*Brunnichia ovata*), and Chinese tallow.

This alliance is similar to vegetation communities of the *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance. These two alliances have similar hydrologic regimes, landscape positions, and associate species. The difference is of course the dominant or co-dominant species present. The *Triadica sebifera* Seasonally Flooded Forest Alliance, which is an exotic species dominated vegetation community, will also occur in the same hydrologic regimes and landscape positions. The *Traidica sebifera* Seasonally Flooded Forest Alliance may be out competing many of the species occurring in the *Acer rubrum- Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance and transitioning from one alliance to the other. Sample plot data with *Triadica sebifera* as the dominant species were in polygons that were classified byother data as this alliance and occupying shallow edges of swamp type vegetation communities.

3.3.2.1 Proposed Association within the *Acer rubrum – Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance

There are no component associations for this Alliance that occur in southeast Texas. The analysis of data collected at the 13 vegetation sample plots show that *Acer rubrum* is consistently a dominant species in the canopy stratum and *Fraxinus pennsylvanica* and *Liquidambar styraciflua* are co-dominant or present in plot data. Two herbaceous species are dominant or have a significant presence in the plot data. These two species are *Chasmanthium latifolia* and *Lysimachia radicans*. A proposed association for this alliance would be *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua*/*Chasmanthium latifolia- Lysimachia radicans* Forest.

Proposed Association - Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans Forest

Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / *Chasmanthium latifolia – Lysimachiaradicans* Forest is the only component association for alliance within the project area. The summary and sample plot data is the same as the *Acer rubrum- Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance data.

3.3.3 *Betula nigra* - (*Platanus occidentalis*) Temporarily Flooded Forest Alliance

Betula nigra-(*Platanus occidentalis*) Temporarily Flooded Forest Alliance encompasses approximately 57.15 ha (141.21 ac) of the project area. This alliance occurs in the project area along the upper portions of the Neches River within the project area and along shallow drainages on natural levees. These areas endure frequent natural disturbance in the form of flooding. Soils are well drained deep alluvial sands, with little organic material. Shallow flooding occurs seasonally to occasionally, and usually for short durations (NatureServe, 2011). This alliance within the current project area lacks significant amounts of mature sycamore (*Platanus occidentalis*). *Platanus occidentalis* may be more susceptible to damage from high winds and loose soils.

One (1) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.025 ha. Sixteen (16) species of woody plants (trees and shrubs) were recorded in this plot. Ten 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.001 ha. Twenty two (22) species of ground layer vegetation were recorded within these ten 1 m^2 plots. The data shows there are 11,560 woody plants per ha, comprising 17.38 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.418, Pielou's Evenness Index (J') at 0.872, and a richness value of 16 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.936, Pielou's Evenness Index (J') at 0.857, and a richness value of 22 species.

A typical plot within this alliance is portrayed in **Photo 3 Appendix E.** The overall data in the *Betula nigra* -(*Platanus occidentalis*) Temporarily Flooded Forest Alliance is summarized in **Table 8**. Summary alliance data is presented in **Appendix A, Table 3 (A-D).**

Table 8: Summary of Vegetation Analyses for *Betula nigra*-(*Platanus occidentalis*) Temporarily Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	1
Area Sampled (ha)	0.025
Number of Species Recorded Within Plots (Richness)	16
Overall Species Evenness	0.872
Overall Species Diversity	2.418
Herbaceous Vegetation[2]	
Number of Sample Plots	10
Area Sampled (ha)	0.001
Number of Species Recorded Within Plots (Richness)	22
Overall Species Evenness	0.95
Overall Species Diversity	2.936

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 120 individual trees per ha, which comprise a total basal area of 12.32 m^2 per ha. The overstory stratum in this alliance is dominated by river birch *(Betula nigra),* which is composed of 40 trees per ha and contributes 5.2 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include bald cypress and sweetgum.

The midstory within this alliance contained an average of 1,280 individual trees per ha, comprising 4.40 m^2 of basal area per ha. The midstory stratum is dominated by deciduous holly, with other important species including Chinese tallow, American hornbeam, and red maple, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 10,000 individual shrubs per ha, comprising 0.57 m^2 of basal area per ha. Seedlings of laurel oak are the dominant shrub species, with American hornbeam and Chinese tallow as the next two ranked species within the shrub stratum for this alliance, respectively.

The data shows there is a total of 23.35 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer common greenbrier (*Smilax rotundifolia*) is the dominant species with 2.75 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are small individuals of arrowwood, and common trumpetcreeper (*Campsis radicans*).

The *Betula nigra* -(*Platanus occidentalis*) Temporarily Flooded Forest Alliance is similar to the *Platanus occidentalis* – (*Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum* Temporarily Flooded Forest Alliance landscape positions but this alliance has a slightly more wet hydrologic regime and with moderately well drained sandy to silty soils (NatureServe, 2011).

3.3.3.1 Component association Within the *Betula nigra-(Platanus occidentalis)* Temporarily Flooded Forest Alliance

The component association within this alliance would be the *Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest based on vegetation plot data, hydrology, and landscape position.

Component Association: Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica Forest

The *Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest is the only component association for alliance within the project area. This association occurs within the floodplains of the northern portions of the NechesRiver and Village Creek inside the project area. The summary and sample plot data is the same as the *Betula nigra-(Platanus occidentalis)* Temporarily Flooded Forest Alliance data.

3.3.4 *Fraxinus caroliniana* Seasonally Flooded Forest Alliance

Fraxinus caroliniana Seasonally Flooded Forest Alliance encompasses approximately 6.10 ha (15.10 ac) of the project area. This alliance occurs in the project area as an inclusion within the *Nyssa aquatica – Taxodium distichum* Semi-Permanently Flooded Forest Alliance and the *Taxodium distichum -Nyssa aquatic /Fraxinus caroliniana* Forest Association. This alliance occurs in small shallow interior swamp areas where the bald cypress and tupelo are not dominant or absent in the immediate area. This alliance could not be mapped out because of the lack of distinct signatures on CIR aerial photography between the two alliances. This vegetation community also occurs in small scale sloughs, within extensive mounded terrace complexes. This alliance occurs on alluvial mineral soils with long hydroperiods (NatureServe, 2011).

One (1) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.025 ha. Twelve (12) species of woody plants (trees and shrubs) were recorded in this plot. Ten 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.001 ha. Thirty two (32) species of ground layer vegetation were recorded within these ten 1 m^2 plots. The data shows there are 18,320 woody plants per ha, comprising 32.52 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.853, Pielou's Evenness Index (J') at 0.746, and a richness value of 12 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.228, Pielou's Evenness Index (J') at 0.931, and a richness value of 32 species.

A typical plot within this alliance is portrayed in **Photo 4 Appendix E.** The overall data in the *Fraxinus caroliniana* Seasonally Flooded Forest Alliance is summarized in **Table 9**. Summary alliance data is presented in **Appendix A, Table 4 (A-D).**

Table 9: Summary of Vegetation Analyses for *Fraxinus caroliniana* Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	1
Area Sampled (ha)	0.025
Number of Species Recorded Within Plots (Richness)	12

Table 9: Summary of Vegetation Analyses for *Fraxinus caroliniana* Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Overall Species Evenness	0.746
Overall Species Diversity	1.853
Herbaceous Vegetation[2]	
Number of Sample Plots	10
Area Sampled (ha)	0.001
Number of Species Recorded Within Plots (Richness)	32
Overall Species Evenness	0.931
Overall Species Diversity	3.228

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 600 individual trees per ha, which comprise a total basal area of 29.13 m^2 per ha. The overstory stratum in this alliance is dominated by Carolina ash (*Fraxinus caroliniana*), which is composed of 360 trees per ha and contributes 11.36 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include bald cypress and Chinese tallow.

The midstory within this alliance contained an average of 400 individual trees per ha, comprising 2.07 m^2 of basal area per ha. The midstory stratum is dominated by Carolina ash, with other important species including Chinese tallow and peppervine (*Ampelopsis arborea*), respectively in order of dominance.

The shrub stratum within this alliance contained an average of 3,200 individual shrubs per ha, comprising 0.37 m^2 of basal area per ha. Buttonbush (*Cephalanthus occidentalis*) is the dominant shrub species, with Chinese tallow and peppervine as the next two ranked species within the shrub stratum for this alliance, respectively.

The data shows there is a total of 64.55 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer trailing loosestrife is the dominant species with 13.7 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are small individuals of Virginia bugleweed (*Lycopusvirginicus*), and creeping spotflower (*Acmellaopisitifolia*).

In the project area this alliance occurs in association within the *Nyssa aquatica – Taxodium distichum* Semi-Permanently Flooded Forest Alliance and the *Taxodium distichum -Nyssa aquatic /Fraxinus caroliniana* Forest association in small shallow interior swamp areas where the *Taxodium distichum* and *Nyssa aquatica* have are not dominant or absent in the immediate area. The sample plot data for this alliance does not fit within the other association of this alliance in Texas. The *Fraxinus caroliniana* Seasonally Flooded Forest occurs in isolated depressions within broad flatwoods (NatureServe, 2011) and not in floodplain swamp complexes. This alliance is a vegetation variation of the *Taxodium distichum-Nyssa aquatica /Fraxinus caroliniana* Forest association. This alliance was included in the report to show the potential for this vegetation community variation with in the project area and within the *Taxodium distichum -Nyssa aquatica /Fraxinus caroliniana* Forest association. Additional data would be needed to develop this vegetation community variation into its own association.

3.3.5 Proposed *Liquidambar styraciflua* Forest Alliance

The proposed *Liquidambar styraciflua* Forest Alliance encompasses approximately 634.78 ha (1,568.56 ac) of the project area. This alliance occurs mesic to wet areas that have had high amounts of dominant tree canopy lost due to natural disturbance. This alliance of the project area would have been classified under other deciduous hardwood alliances prior to the hurricane disturbance in 2005 (Hurricane Rita) and 2008 (Hurricane Ike). The hurricane force winds of these two storms felled much of the pine, oaks, and other hardwoods in the canopy, leaving sweetgum as the dominant species in areas. Generally in southeast Texas, *Liquidambar styraciflua* is present in a number of habitat types, but it is not a dominant species in the sense of defining a vegetation community. This alliance occurs on a wide range of soil types, from clays to deep well drained sandy soils. The hydrologic regime of this alliance can range from temporarily flooded to mesic / dry.

Fifty-one (51) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 1.2750 ha. Seventy-seven (77) species of woody plants (trees and shrubs) were recorded in these plots. Five hundred ten (510) 1 m x 1 m plots within the fifty-one 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.051 ha. One hundred ninety-one (191) species of ground layer vegetation were recorded within these five hundred ten 1 m^2 plots. The

data shows there are 8,521.60 woody plants per ha, comprising 28.99 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.824, Pielou's Evenness Index (J') at 0.650, and a richness value of 77 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.254, Pielou's Evenness Index (J') at 0.810, and a richness value of 191 species.

A typical plot within this alliance is portrayed in **Photos 5-1 and 5-2**, **Appendix E.** The overall data in the proposed *Liquidambar styraciflua* Forest Alliance is summarized in **Table 10**. Summary alliance data is presented in **Appendix A, Table 5 (A-D).**

Table 10: Summary of Vegetation Analyses for proposed *Liquidambar styraciflua* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	51
Area Sampled (ha)	1.275
Number of Species Recorded Within Plots (Richness)	77
Overall Species Evenness	0.650
Overall Species Diversity	2.824
Herbaceous Vegetation[2]	
Number of Sample Plots	510
Area Sampled (ha)	0.051
Number of Species Recorded Within Plots (Richness)	191
Overall Species Evenness	0.810
Overall Species Diversity	4.254

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 355.20 individual trees per ha, which comprise a total basal area of 26.07 m^2 per ha. The overstory stratum in this alliance is dominated by sweetgum, which is composed of 164.80 trees per ha and contributes 15.06 m^2 per ha of basal area. Blackgum is the highest ranking associate species, with an average of 34.40 trees per ha, contributing 2.64 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include American hornbeam, laurel oak, and Chinese tallow.

The midstory within this alliance contained an average of 1,192.00 individual trees per ha, comprising 4.03 m^2 of basal area per ha. The midstory stratum is dominated by American hornbeam, with other important species including sweetgum, American holly (*Ilex opaca*), and deciduous holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 6,764.80 individual shrubs per ha, comprising 0.53 m^2 of basal area per ha. Chinese tallow is the dominant species. Other important species present in the shrub layer of this alliance are American hornbeam, American holly, and yaupon holly.

The data shows there is a total of 30.30% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, poison ivy is the dominant species, with 2.68% of the total ground cover. Other important species present in the herbaceous layer of this alliance are small individuals of slender woodoats (*Chasmanthium laxum*), muscadine grape, and American hornbeam.

This alliance is similar to several other of the bottomland hardwood alliances and association in the project area. This alliance is present because of natural disturbance and is a successional forest that in time will transition to other bottomland hardwood forest alliances and or associations.

3.3.5.1 Proposed Component Associations Within the *Liquidambar styraciflua* Forest Alliance

There are no current component associations for this Alliance. The analysis of data collected at the 51 vegetation sample plots show two distinct groups within this alliance: the *Liquidambar styraciflua* Forest and the *Liquidambar styraciflua* Temporarily Flooded Forest Associations.

The *Liquidambar styraciflua* Forest would accommodate the mapping units dominated by sweetgum with dry / mesic (upper slope / mid slope) to mesic / wet (lower slope / bottomland floodplain) hydrologic conditions. The *Liquidambar styraciflua* Temporary Flooded Forest

would accommodate the mapping units with temporarily flooded wetland hydrologic conditions and associated species.

Proposed Association – Liquidambar styraciflua Forest

Liquidambar styraciflua Forest Association encompasses approximately 31.53 ha (77.91ac) of the project area. This alliance occurs on the higher elevations within the map units with more dry hydrologic regimes and associate species more commonly found in upland vegetation communities.

Forty three (43) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 1.075 ha. Sixty six (66) species of woody plants (trees and shrubs) were recorded in these plots. Four hundred thirty (430) 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.043 ha. One hundred seventy seven (177) species of ground layer vegetation were recorded within the four hundred thirty 1 m^2 plots. The data shows there are 6,720.00 woody plants per ha, comprising 27.89 m^2 per ha of basal area for all three woody strata. Proposed association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.007, Pielou's Evenness Index (J') at 0.0.718, and a richness value of 66 species. Proposed association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.202, Pielou's Evenness Index (J') at 0.812, and a richness value of 177 species.

A typical plot within this proposed association is portrayed in **Photo 5-1**, **Appendix E.** The overall data in the proposed *Liquidambar styraciflua* Forest association is summarized in **Table 11**. Summary proposed association data is presented in **Appendix A, Table 5-1 (A-D)**.

Table 11: Summary of Vegetation Analyses for the Proposed *Liquidambar styraciflua* Forest Association, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	43
Area Sampled (ha)	1.075
Number of Species Recorded Within Plots (Richness)	66

Table 11: Summary of Vegetation Analyses for the Proposed *Liquidambar styraciflua* Forest Association, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Overall Species Evenness	0.718
Overall Species Diversity	3.007
Herbaceous Vegetation[2]	
Number of Sample Plots	430
Area Sampled (ha)	0.043
Number of Species Recorded Within Plots (Richness)	177
Overall Species Evenness	0.812
Overall Species Diversity	4.202

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this proposed association indicates there are 355.24 individual trees per ha, which comprise a total basal area of 25.28 m^2 per ha. The overstory stratum in this proposed association is dominated by sweetgum, which is composed of 178.10 trees per ha, contributing 14.79 m^2 per ha of basal area. Blackgum is the highest ranking associate species, with an average of 35.24 trees per ha, contributing 2.87 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include American hornbeam, Chinese tallow, and laurel oak.

The midstory within this proposed association contained an average of 1,232.38 individual trees per ha, comprising 4.10 m^2 of basal area per ha. The midstory stratum is dominated by American hornbeam, with other important species including sweetgum, American holly, and yaupon holly, respectively in order of dominance.

The shrub stratum within this proposed association contained an average of 4,909.52 individual shrubs per ha, comprising 0.48 m^2 of basal area per ha. American hornbeam is the dominant species. Other important species present in the shrub stratum of this proposed association include Chinese tallow, American holly, and yaupon holly.

The data shows there is a total of 30.32% ground cover provided by herbaceous vegetation in this proposed association. Within the herbaceous layer, poison ivy is the dominant species with 2.77% of the total ground cover. Other important species present in the herbaceous layer of this proposed association are slender woodoats, muscadine grape, and American hornbeam.

Proposed Association - Liquidambar styraciflua Temporarily Flooded Forest

The proposed *Liquidambar styraciflua* Temporarily Flooded Forest association encompasses approximately 603.25 ha (1490.65 ac) of the project area. This association occurs on the lower landscape elevations within the map units that contain more wet hydrologic regimes and associate species more commonly found in more hydric vegetation communities.

Within the proposed *Liquidambar styraciflua* Temporarily Flooded Forest association, eight (8) 25 m x 10 m rectangular plots was sampled for woody vegetation, equaling an area of 0.2 ha. Forty one (41) species of woody plants (trees and shrubs) were recorded in these plots. Eighty (80) 1 m x 1 m plotswithin the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.008 ha. Ninety two (92) species of ground layer vegetation were recorded within the 260 1 m^2 plots. The data shows there are 17,980 woody plants per ha, comprising 34.77 m^2 per ha of basal area for all three woody strata. Proposed association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.711, Pielou's Evenness Index (J') at 0.461, and a richness value of 41 species. Proposed association vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.034, Pielou's Evenness Index (J') at 0.892, and a richness value of 92 species.

A typical plot within this proposed association is portrayed in **Photo 5-2**, **Appendix E.** The overall data in the proposed *Liquidambar styraciflua* Temporarily Flooded Forest association is summarized in **Table 12**. Summary alliance data is presented in **Appendix A, Table 5-2 (A-D)**.

Table 12:Summary of Vegetation Analyses for the Proposed *Liquidambar styraciflua* Temporarily Flooded Forest Association, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	8
Area Sampled (ha)	0.2
Number of Species Recorded Within Plots (Richness)	41
Overall Species Evenness	0.461
Overall Species Diversity	1.711
Herbaceous Vegetation[2]	

Table 12:Summary of Vegetation Analyses for the Proposed *Liquidambar styraciflua* Temporarily Flooded Forest Association, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Number of Sample Plots	80
Area Sampled (ha)	0.008
Number of Species Recorded Within Plots (Richness)	92
Overall Species Evenness	0.892
Overall Species Diversity	4.034

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this proposed association indicates there are 355 individual trees per ha, which comprise a total basal area of 30.20 m^2 per ha. The overstory stratum in this proposed association is dominated by sweetgum, which is composed of 95 trees per ha, contributing 16.50 m^2 per ha of basal area. American hornbeam is the highest ranking associate species, with an average of 55 trees per ha, contributing 1.37 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include bald cypress, American holly, and blackgum.

The midstory within this proposed association contained an average of 980 individual trees per ha, comprising 3.65 m^2 of basal area per ha. The midstory stratum is dominated by deciduous holly, with other important species including American hornbeam, Chinese tallow, and sweetgum, respectively in order of dominance.

The shrub stratum within this proposed association contained an average of 16,505 individual shrubs per ha, comprising 0.79 m^2 of basal area per ha. Chinese tallow is the dominant species. Other important species present in the shrub stratum of this proposed association include American hornbeam, deciduous holly, and sweetgum.

The data shows there is a total of 30.21% ground cover provided by herbaceous vegetation in this proposed association. Within the herbaceous layer, narrow-leaf woodoats is the dominant species with 2.81% of the total ground cover. Other important species present in the herbaceous layer of this proposed association are poison ivy, basket grass (*Oplismenus hirtellus*), and highbush blackberry.

3.3.6 *Nyssa aquatica* - (*Taxodium distichum*) Semi-permanently Flooded Forest Alliance

Nyssa aquatica - (*Taxodium distichum*)Semi-permanently Flooded Forest Alliance encompasses approximately 2,400.80 ha (5932.48 ac) of the project area. This alliance occurs within the floodplains of the Neches River, Little Pine Island Bayou, Village Creek, higher order drainages and other lower topographic elevations that would remain inundated for extended periods of time. This alliance occurs on poorly drained organic and mineral soils. This alliance is flooded at least most of the growing season and some of the swamps within this alliance remain flooded most of the all year (NatureServe, 2011).

Fifty eight (58) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 1.45 ha. Thirty four (364) species of woody plants (trees and shrubs) were recorded in these plots. Five hundred eighty (580) 1 m x 1 m plots within the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.058 ha. One hundred eighty eight (188) species of ground layer vegetation were recorded within these five hundred eighty 1 m^2 plots. The data shows there are 2,208.97 woody plants per ha, comprising 79.96 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.376, Pielou's Evenness Index (J') at 0.674, and a richness value of 34 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.019, Pielou's Evenness Index (J') at 0.768, and a richness value of 188 species.

A typical plot within this alliance is portrayed in **Photos 6-1, 6-2, and 6-3**, **Appendix E.** The overall data in the *Nyssa aquatica* - (*Taxodium distichum*) Semi-permanently Flooded Forest Alliance is summarized in **Table 13**. Summary alliance data is presented in **Appendix A, Table 6 (A-D)**.

Table 13: Summary of Vegetation Analyses for the Proposed *Nyssa aquatica* - (*Taxodium distichum*) Semi-permanently Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	58
Area Sampled (ha)	1.45
Number of Species Recorded Within Plots (Richness)	34

Table 13: Summary of Vegetation Analyses for the Proposed *Nyssa aquatica* - (*Taxodium distichum*) Semi-permanently Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Overall Species Evenness	0.674
Overall Species Diversity	2.376
Herbaceous Vegetation[2]	
Number of Sample Plots	580
Area Sampled (ha)	0.058
Number of Species Recorded Within Plots (Richness)	188
Overall Species Evenness	0.768
Overall Species Diversity	4.019

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 810.34 individual trees per ha, which comprise a total basal area of 79.06 m^2 per ha. The overstory stratum in this alliance is dominated by tupelo *(Nyssa aquatica),* which is composed of 413.10 trees per ha and contributes 47.12 m^2 per ha of basal area. Bald cypressis the highest ranking associate species, with an average of 323.49 trees per ha, contributing 29.42 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Carolina ash, Chinese tallow, and Drummond's red maple (*Acer rubrum* var. *drummondii*).

The midstory within this alliance contained an average of 495.86 individual trees per ha, comprising 2.29 m^2 of basal area per ha. The midstory stratum is dominated by Carolina ash, with other important species including tupelo, Chinese tallow, and Drummond's red maple, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 810.03 individual shrubs per ha, comprising 0.08 m^2 of basal area per ha. Chinese tallow was the dominant species. Other important species include green ash, buttonbush, and Carolina ash, respectively in order of dominance.

The data shows there is a total of 17.86 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, lesser water sprangles (*Salvinia minima*) was the dominant species, constituting 3.93 % of the total ground cover in the alliance. Other important

species present in the herbaceous layer of this alliance include alligator weed (*Alternanthera philoxeroides*), common cut grass (*Zizaniopsis miliacea*), and horned beakrush (*Rhynchospora corniculata*), respectively in order of dominance.

This alliance is analogous to several other alliances which occur within the project area. These alliances include the *Taxodium distichum* Semi-permanently Flooded Forest Alliance, the *Taxodium distichum - Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance and the *Taxodium distichum* Tidal Woodland Alliance. This alliance contains a significant (dominant) portion of *Nyssa aquatica* and the *Taxodium distichum* Semi-permanently Flooded Forest Alliance lacks a significant portion of *Nyssa aquatica*. The *Taxodium distichum* Semi-permanently Flooded Forest Alliance accommodates *Taxodium distichum* vegetation communities generally outside the range of *Nyssa aquatica* and as stated above, those swamps without significant portion of *Nyssa aquatica.*The *Taxodium distichum - Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance accommodates cypress/tupelo swamps with seasonally flooded hydroperiods, which is shorter that the semi-permanently flooded types. The *Taxodium distichum* Tidal Woodland Alliance is a tidally influenced *Taxodium distichum* dominated woodland vegetation community. Woodlands have less than 60% canopy cover, where forested vegetation communities have greater than 60 % canopy cover.

3.3.6.1 Component Associations Within the *Nyssa aquatica* - (*Taxodium distichum*) Semi-permanently Flooded Forest Alliance

Three existing component associations for this Alliance occur in the project area. These associations are *Nyssa aquatica* Forest, *Taxodium distichum-Nyssa Aquatica*/*Fraxinus caroliniana* Forest, and *Taxodium distichum* - (*Nyssa aquatica*) / *Forestiera acuminata - Planera aquatica* Forest. The *Nyssa aquatica* Forest is the most common component association within this alliance, all three associations can occur intermingling within the same area. In most situations, the aerial signatures between these three associations are difficult to differentiate. Map unit classification was accomplished with vegetation sample plot data when possible and then with qualitative wetland assessment plot data and transition transect data, when necessary.

When data showed more than one of these associations were present, then the association was mapped with the prevalent data.

***Association - Nyssa aquatica* Forest**

The Nyssa aquatica Forest association encompasses approximately 1,760.86 ha (86.26 ac) of the project area. This association occurs within the floodplains of the Neches River, Little Pine Island Bayou, Village Creek, and lower topographic elevations that would remain inundated for extended periods of time. This association occurs on poorly drained organic and mineral soils. This association is flooded approximately 100 % of years and 100 % of the growing season. Inundation can be several feet deep. This association is the most common vegetation community in this alliance.

Nineteen (19) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.475 ha. Seventeen (17) species of woody plants (trees and shrubs) were recorded in these plots. One hundred ninety (190) 1 m x 1 m plots within the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.0190 ha. One hundred seven (107) species of ground layer vegetation were recorded within these one hundred ninety 1 m^2 plots. The data shows there are 1,157.90 woody plants per ha, comprising 42.03 m^2 per ha of basal area for all three woody strata. Association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.843, Pielou's Evenness Index (J') at 0.650, and a richness value of 17 species. Association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.570, Pielou's Evenness Index (J') at 0.764, and a richness value of 107species.

A typical plot within this association is portrayed in **Photo 6-1**, **Appendix E.** The overall data in the *Nyssa aquatica* Forest is summarized in **Table 14**. Summary alliance data is presented in **Appendix A, Table 6-1 (A-D)**.

Table 14: Summary of Vegetation Analyses for the Proposed *Nyssa aquatica* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	19
Area Sampled (ha)	0.475
Number of Species Recorded Within Plots (Richness)	17
Overall Species Evenness	0.650
Overall Species Diversity	1.843
Herbaceous Vegetation[2]	
Number of Sample Plots	190
Area Sampled (ha)	0.019
Number of Species Recorded Within Plots (Richness)	107
Overall Species Evenness	0.764
Overall Species Diversity	3.570

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 551.78 individual trees per ha, which comprise a total basal area of 40.72 m^2 per ha. The overstory stratum in this alliance is dominated by tupelo, which is composed of 307.37 trees per ha and contributes 22.08 m^2 per ha of basal area. Bald cypress is the highest ranking associate species, with an average of 221.05 trees per ha, contributing 18.12 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Chinese tallow, river birch, and water hickory.

The midstory within this alliance contained an average of 227.37 individual trees per ha, comprising 1.04 m^2 of basal area per ha. The midstory stratum is dominated by tupelo, with other important species including bald cypress, Chinese tallow, and Carolina ash, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 315.79 individual shrubs per ha, comprising 0.02 m^2 of basal area per ha. Chinese tallow is the dominant species. Other important species include southern wax myrtle (*Morella cerifera*), buttonbush, and water elm (*Planera aquatica*), respectively in order of dominance.

The data shows there is a total of 72.09 % ground cover provided by herbaceous vegetation in this association. Within the herbaceous layer, lesser water sprangles is the dominant species, constituting 29.11 % of the total ground cover in the alliance. Other important species present in the herbaceous layer of this alliance include alligator weed, common cut grass, and annoyance water sprangles (*Salvinia molesta*), respectively in order of dominance.

Association - Taxodium distichum - Nyssa Aquatica / Fraxinus caroliniana Forest

The *Taxodium distichum-Nyssa Aquatica*/*Fraxinuscaroliniana* Forest association encompasses approximately 86.26 ha (213.15 ac) of the project area. This association occurs within the floodplains of the Neches River, Little Pine Island Bayou, Village Creek, and lower topographic elevations that would remain inundated for extended periods of time. This association occurs on poorly drained organic and mineral soils. This association is flooded most years and most of the growing season. Inundation can be several feet deep at times (NatureServe, 2011). This association occurs in a mosaic with the other two associations.

Twenty (20) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.5 ha. Twenty two (22) species of woody plants (trees and shrubs) were recorded in these plots. Two hundred (200) 1 m x 1 m plots within the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.02 ha. Ninety one (91) species of ground layer vegetation were recorded within these two hundred 1 m^2 plots. The data shows there are 2,508 woody plants per ha, comprising 126.55 m^2 per ha of basal area for all three woody strata. Association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.915, Pielou's Evenness Index (J') at 0.619, and a richness value of 22 species. Association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.636, Pielou's Evenness Index (J') at 0.806, and a richness value of 91 species.

A typical plot within this association is portrayed in **Photo 6-2**, **Appendix E.** The overall data in the *Taxodium distichum-Nyssa Aquatica*/*Fraxinus caroliniana* Forest is summarized in **Table 15**. Summary alliance data is presented in **Appendix A, Table 6-2 (A-D)**.

Table 15: Summary of Vegetation Analyses for the Proposed *Taxodium distichum* - *Nyssa Aquatica* / *Fraxinus caroliniana* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	20
Area Sampled (ha)	0.5
Number of Species Recorded Within Plots (Richness)	22
Overall Species Evenness	0.619
Overall Species Diversity	1.915
Herbaceous Vegetation[2]	
Number of Sample Plots	200
Area Sampled (ha)	0.02
Number of Species Recorded Within Plots (Richness)	91
Overall Species Evenness	0.806
Overall Species Diversity	3.636

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 1,258 individual trees per ha, which comprise a total basal area of 123.85 m^2 per ha. The overstory stratum in this alliance is dominated by water tupelo, which is composed of 592 trees per ha and contributes 73.90 m^2 per ha of basal area. Bald cypress is the highest ranking associate species, with an average of 588 trees per ha, contributing 47.26 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Carolina ash, Drummond's red maple, and Chinese tallow.

The midstory within this alliance contained an average of 570 individual trees per ha, comprising 2.42 m^2 of basal area per ha. The midstory stratum is dominated by Carolina ash, with other important species including Chinese tallow, tupelo, and buttonbush, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 606 individual shrubs per ha, comprising 0.06 m^2 of basal area per ha. Carolina ash was the dominant species. Other important species include buttonbush, Chinese tallow and water elm, respectively in order of dominance.

The data shows there is a total of 54.73 % ground cover provided by herbaceous vegetation in this association. Within the herbaceous layer, lesser water sprangles was the dominant species, constituting 29.30 % of the total ground cover in the alliance. Other important species present in the herbaceous layer of this alliance include alligator weed, common cut grass, and savannah panic grass (*Phanopyrum gymnocarpon*), respectively in order of dominance.

Association - Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata – Planeraaquatica Forest

The *Taxodium distichum* - (*Nyssa aquatica*) / *Forestiera acuminata – Planera aquatica* Forest association encompasses approximately 553.68 ha (1,368.16 ac) of the project area. This association occurs within the floodplains of the Neches River, Little Pine Island Bayou, Village Creek, higher order drainages, and lower topographic elevations that would remain inundated for extended periods of time. Generally within the project area this association occurs along swamp edges and other elevation that would only endure long periods of shallow inundation. This association occurs on poorly drained organic and mineral soils. This association can occur as a mosaic with the other associations in the alliance.

Nineteen (19) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.475 ha. Twenty six (26) species of woody plants (trees and shrubs) were recorded in these plots. One hundred ninety (190) 1 m x 1 m plotswithin the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.019 ha. One hundred twenty five (125) species of ground layer vegetation were recorded within these one hundred ninety 1 m^2 plots. The data shows there are 2,913.68 woody plants per ha, comprising 73.86 m^2 per ha of basal area for all three woody strata. Association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.500, Pielou's Evenness Index (J') at 0.770, and a richness value of 26 species. Association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.983, Pielou's Evenness Index (J') at 0.825, and a richness value of 125 species.

A typical plot within this association is portrayed in **Photo 6-3**, **Appendix E.** The overall data in the *Taxodium distichum* - (*Nyssa aquatica*) / *Forestiera acuminata* - *Planera aquatica* Forest is summarized in **Table 16**. Summary alliance data is presented in **Appendix A, Table 6-3 (A-D)**.

Table 16: Summary of Vegetation Analyses for the Proposed *Taxodium distichum* - *(Nyssa aquatica) / Forestiera acuminata* - *Planera aquatica* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	19
Area Sampled (ha)	0.475
Number of Species Recorded Within Plots (Richness)	26
Overall Species Evenness	0.770
Overall Species Diversity	2.500
Herbaceous Vegetation[2]	
Number of Sample Plots	190
Area Sampled (ha)	0.019
Number of Species Recorded Within Plots (Richness)	125
Overall Species Evenness	0.825
Overall Species Diversity	3.983

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 614.74 individual trees per ha, which comprise a total basal area of 70.14 m^2 per ha. The overstory stratum in this alliance is dominated by tupelo, which is composed of 330.53 trees per ha and contributes 42.55 m^2 per ha of basal area. Bald cypress is the highest ranking associate species, with an average of 164.21 trees per ha, contributing 23.30 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include water elm, Drummond's red maple, and Chinese tallow.

The midstory within this alliance contained an average of 688.42 individual trees per ha, comprising 3.28 m^2 of basal area per ha. The midstory stratum is dominated by tupelo, with other important species including Chinese tallow, Drummond's red maple, and water elm, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 1,522.11 individual shrubs per ha, comprising 0.16 m^2 of basal area per ha. Green ash was the dominant species. Other important species include Chinese tallow, Drummond's red maple, and water elm, respectively in order of dominance.

The data shows there is a total of 54.29 % ground cover provided by herbaceous vegetation in this association. Within the herbaceous layer, lesser water sprangles was the dominant species, constituting 12.18 % of the total ground cover in the alliance. Other important species present in the herbaceous layer of this alliance include alligator weed, savannah panic grass, and horned beakrush, respectively in order of dominance.

3.3.7 *Platanus occidentalis (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum*) Temporarily Flooded Forest Alliance,

The *Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance encompasses approximately 13.73 ha (33.93 ac) of the project area. Forests in this alliance occur on the fronts, terraces, and levees of small, medium and large rivers throughout the southeastern United States. Within the project area, this alliance occurs in the northern portion of the project area within the floodplains of the Neches River. These forests are dominated by sycamore (*Platanus occidentalis*) or a mixture of it with green ash, hackberry (*Celtis laevigata*), and/or silver maple (*Acer saccharinum*), and other bottomland hardwood species. Silver maple is absent from these forest in Texas. Combination of dominant species of this forest type can vary depending on geography (NatureServe, 2011).

Four (4) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.1 ha. Twenty six (26) species of woody plants (trees and shrubs) were recorded in these plots. Forty (40) 1 m x 1 m plots within the five 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.004 ha. Fifty two (52) species of ground layer vegetation were recorded within these forty 1 m^2 plots. The data shows there are 5,890.00 woody plants per ha, comprising 24.63 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.216, Pielou's Evenness

Index (J') at 0.680, and a richness value of 26 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.570, Pielou's Evenness Index (J') at 0.903, and a richness value of 52 species.

A typical plot within this alliance is portrayed in **Photo 7**, **Appendix E.** The overall data for the *Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance is summarized in **Table 17**. Summary alliance data is presented in **Appendix A, Table 7 (A-D).**

Table 17: Summary of Vegetation Analyses *Platanus occidentalis - Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	4
Area Sampled (ha)	0.1
Number of Species Recorded Within Plots (Richness)	26
Overall Species Evenness	0.680
Overall Species Diversity	2.216
Herbaceous Vegetation[2]	
Number of Sample Plots	40
Area Sampled (ha)	0.0004
Number of Species Recorded Within Plots (Richness)	52
Overall Species Evenness	0.903
Overall Species Diversity	3.570

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 260 individual trees per ha, which comprise a total basal area of 21.19 m^2 per ha. The overstory stratum in this alliance is dominated by sycamore, which is composed of 60 trees per ha, contributing 9.71 m^2 per ha of basal area. Hackberry is the highest ranking associate species, with an average of 50 trees per ha, contributing 1.99 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Chinese tallow, water hickory, and river birch.

The midstory within this alliance contained an average of 840 individual trees per ha, comprising 42.84 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other

important species including deciduous holly, Chinese privet (*Ligustrum sinense*), and American hornbeam, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 4,600 individual shrubs per ha, comprising 0.29 m^2 of basal area per ha. Sweetgum was the dominant species. Other important species present in the shrub stratum of this alliance included Chinese privet, swamp privet (*Forestiera acuminata*), and American hornbeam.

The data shows there is a total of 22.34 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, inland sea oats (*Chasmanthium latifolium*) is the dominant species, with 5.5 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are American buckwheat vine, pepper vine, and trumpet creeper.

This alliance is similar to the *Betula nigra – Platanus occidentalis* Temporarily Flooded Forest Alliance and other bottomland hardwood oak dominated alliances which occur on the project area. The difference is in the combination of dominant hardwood trees, hydroperiod, soils type, and elevation in the landscape.

3.3.7.1 Component Association Within the *Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum*) Temporarily Flooded Forest Alliance

NatureServe does not list any NVC component associations that match the vegetation plot data for this alliance that occur in southeast Texas. The vegetation plot data within each of the four plots show that *Planera occidentalis* and *Celtis laevigata* are dominant. The associate species between the four plots vary a great deal with no other clear dominant associate species. Additional data would be needed to develop an association for this alliance.

3.3.8 *Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance

The *Quercus* (*michauxii, pagoda, shumardii*) – *Liquidambar styraciflua* Temporarily Flooded Forest Alliance encompasses approximately 37.54 ha (92.77 ac) of the project area. This alliance is typically dominated by various combinations of swamp chestnut oak (*Quercus michauxii*), cherry bark oak(*Quercus pagoda*), and Shumard oak (*Quercus shumardii*), with sweetgum typically as a significant component. Areas of this alliance occur primarily in brownwater situations, and often occur on terraces in secondary bottoms. This alliance is distributed throughout the Atlantic and Gulf coastal plains and is generally found on heavy clay soils that do not flood often, but soils are usually very wet (NatureServe, 2011).

Nine (9) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.225 ha. Thirty nine (39) species of woody plants (trees and shrubs) were recorded in these plots. Ninety (90) 1 m x 1 m plots within the five 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.009 ha. Sixty eight (68) species of ground layer vegetation were recorded within these ninety 1 m^2 plots. The data shows there are 8,096 woody plants per ha, comprising 28.69 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.829, Pielou's Evenness Index (J') at 0.772, and a richness value of 39 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.683, Pielou's Evenness Index (J') at 0.873, and a richness value of 68 species.

A typical plot within this alliance is portrayed in **Photo 8**, **Appendix E.** The overall data in the *Quercus* (*michauxii, pagoda, shumardii*) – *Liquidambar styraciflua* Temporarily Flooded Forest Alliance is summarized in **Table 18**. Summary alliance data is presented in **Appendix A, Table 8 (A-D).**

Table 18: Summary of Vegetation Analyses *Quercus* (*michauxii, pagoda, shumardii*) – *Liquidambar styraciflua* Temporarily Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	9

Table 18: Summary of Vegetation Analyses *Quercus* (*michauxii, pagoda, shumardii*) – *Liquidambar styraciflua* Temporarily Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Area Sampled (ha)	0.225
Number of Species Recorded Within Plots (Richness)	39
Overall Species Evenness	0.772
Overall Species Diversity	2.829
Herbaceous Vegetation[2]	
Number of Sample Plots	90
Area Sampled (ha)	0.009
Number of Species Recorded Within Plots (Richness)	68
Overall Species Evenness	0.873
Overall Species Diversity	3.683

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 264.00 individual trees per ha, which comprise a total basal area of 23.22 m^2 per ha. The overstory stratum in this alliance is dominated by swamp chestnut oak, which is composed of 32.00 trees per ha, contributing 7.47 m^2 per ha of basal area. Water oak is the highest ranking associate species, with an average of 28 trees per ha, contributing 7.73 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include American hornbeam, sweetgum, and blackgum.

The midstory within this alliance contained an average of 1,368.00 individual trees per ha, comprising 4.57 m^2 of basal area per ha. The midstory stratum is dominated by American hornbeam, with other important species including American holly, yaupon holly, and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 6,160 individual shrubs per ha, comprising 0.51 m^2 of basal area per ha. Water oak was the dominant species. Other important species present in the shrub stratum of this alliance included yaupon holly, Chinese tallow and deciduous holly.

The data shows there is a total of 20.12% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, poison ivy is the dominant species, with 2.20% of the

total ground cover. Other important species present in the herbaceous layer of this alliance are slender woodoats, muscadine grape, and highbush blackberry.

This alliance is similar to the other bottomland hardwood oak dominated alliances that occur within the project area. The difference is in the combination of dominant oaks and other hardwood species, hydrologic regime, and elevation in the landscape. In this case, the dominant tree is *Quercus michauxii*, with *Quercus nigra* and *Liquidambar styraciflua* also being important canopy tree species.

3.3.8.1 Component Association Within the *Quercus* (*michauxii, pagoda, shumardii*) – *Liquidambar styraciflua* Temporarily Flooded Forest Alliance

NatureServe does not list any NVC component associations that match the vegetation plot data for this alliance. The *Quercus michauxii - Quercus (nigra, pagoda) – Liquidambar styraciflua – Pinus taeda* Forest, which occurs in the floodplains of small to intermediate streams in central Louisiana was considered as a component association for this alliance. The landscape position, soils and hydrology is not the same, but the vegetation is very close. The vegetation plot data has loblolly pine present, but not a significant amount. A more appropriate proposed association would be the *Quercus michauxii - Quercus nigra - Liquidambar styraciflua – Carpinus caroliniana* Forest.

Proposed Association - Quercus michauxii - Quercus nigra - Liquidambar styraciflua /Carpinus caroliniana Forest

The *Quercus michauxii - Quercus nigra - Liquidambar styraciflua – Carpinus caroliniana* Forest occurs within the floodplains on higher elevations of the Neches River. The summary and sample plot data is the same as the *Quercus* (*michauxii, pagoda, shumardii*) – *Liquidambar styraciflua* Temporarily Flooded Forest Alliance.

3.3.9 *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance

The *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance encompasses approximately 421.12 ha (1,040.6 ac) of the project area. This alliance occurs on floodplains that receive overbank flow and typically holds water much of the growing season. This alliance has a large geographical range and species composition can vary depending on location (NatureServe, 2011). Within the project area this alliance occurs on lower elevations grading in to semi-permanently flooded swamp alliances. Its landscape position is similar to the *Acer rubrum- Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance.

Fourteen (14) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.35 ha. Eighteen (43) species of woody plants (trees and shrubs) were recorded in these plots. One hundred forty (140) 1 m x 1 m plots within the fourteen 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.014 ha. One hundred twenty four (124) species of ground layer vegetation were recorded within these one hundred forty 1 m^2 plots. The data shows there are 6,505.71 woody plants per ha, comprising 29.12 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.621, Pielou's Evenness Index (J') at 0.697, and a richness value of 43 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.241, Pielou's Evenness Index (J') at 0.880, and a richness value of 124 species.

A typical plot within this alliance is portrayed in **Photo 9**, **Appendix E.** The overall data in the *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance is summarized in **Table 19**. Summary alliance data is presented in **Appendix A, Table 9 (A-D).**

Table 19: Summary of Vegetation Analyses for *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	14
Area Sampled (ha)	0.35
Number of Species Recorded Within Plots (Richness)	43
Overall Species Evenness	0.697

Table 19: Summary of Vegetation Analyses for *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson and Orange Counties, Texas, April-June 2011	
Overall Species Diversity	2.621
Herbaceous Vegetation[2]	
Number of Sample Plots	140
Area Sampled (ha)	0.014
Number of Species Recorded Within Plots (Richness)	124
Overall Species Evenness	0.880
Overall Species Diversity	4.241

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 288.57 individual trees per ha, which comprise a total basal area of 24.46 m^2 per ha. The overstory stratum in this alliance is dominated by laurel oak, which is composed of 65.71 trees per ha, contributing 6.11 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include sweetgum, willow oak (*Quercus phellos*), and swamp blackgum (*Nyssa biflora*).

The midstory within this alliance contained an average of 1254.29 individual trees per ha, comprising 3.80 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including deciduous holly, American holly, and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 4,751.43 individual shrubs per ha, comprising 0.51 m^2 of basal area per ha. Chinese tallow is the dominant species. Other important species present in the shrub layer of this alliance are small individuals of laurel oak, sweetgum, and titi (*Cyrilla racemiflora*).

The data shows there is a total of 26.11 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, poison ivy is the dominant species, with 4.2 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are trumpet vine, American hornbeam seedlings, and deciduous holly seedlings.

This alliance is similar to the other bottomland hardwood oak dominated alliances which occur on the project area. The difference is in the combination of dominant oaks and other hardwood species, hydroperiod, and position in the landscape. In this case, the dominant trees include *Quercus phellos* and *Quercus laurifolia* with *Quercus lyrata* being important canopy tree species.

3.3.9.1 Component Association Within the *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance

The association under this alliance is the *Quercus laurifolia – Quercus* (*lyrata, phellos*) *– Nyssa biflora* West Gulf Floodplain Forest. This alliance and association is one of two alliances in which overcup oak is important as a canopy species. The other alliance is the *Quercus lyrata – Carya aquatica* Seasonally Flooded Forest Alliance. The difference is the significant presence of water hickory and willow and/or laurel oaks not being present in significant portions.

Association - Quercus laurifolia – Quercus (lyrata, phellos) – Nyssa biflora West Gulf Floodplain Forest

The *Quercus laurifolia – Quercus* (*lyrata, phellos*) *– Nyssa biflora* West Gulf Floodplain Forest is the only component association for this alliance in the project area. This association occurs within the floodplains of the Neches River, Little Pine Island Bayou, and Village Creek. The summary and sample plot data is the same as the *Quercus* (*phellos, laurifolia*) Seasonally Flooded Forest Alliance.

3.3.10 *Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance

Quercus (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance encompasses approximately 956.7 ha (2,366.04 ac) of the project area. This alliance occurs in large high gradient floodplains, slightly higher elevations on ridges and terraces within the floodplain, or in small low gradient floodplains with poorly developed landforms. This alliance occurs on a range of soils but generally the soils are very acidic to mildly alkaline silt loam soils. Occurrences of

this alliance are in areas which temporarily receive floodwaters and remains inundated for only short periods (NatureServe, 2011).

Twenty two (22) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.55 ha. Sixty (60) species of woody plants (trees and shrubs) were recorded in these plots. Two hundred twenty (220) 1 m x 1 m plots within these twenty two 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.022 ha. One hundred thirty five (135) species of ground layer vegetation were recorded within these two hundred twenty 1 m^2 plots. The data shows there are 6,964 woody plants per ha, comprising 28.24 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.973, Pielou's Evenness Index (J') at 0.973, and a richness value of 60 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.272, Pielou's Evenness Index (J') at 0.871, and a richness value of 135 species.

A typical plot within this alliance is portrayed in **Photos 10-1 and 10-2**, **Appendix E.** The overall data in the *Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance is summarized in **Table 20**. Summary alliance data is presented in **Appendix A, Table 10 (A-D).**

Table 20: Summary of Vegetation Analyses for *Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance. Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	22
Area Sampled (ha)	0.55
Number of Species Recorded Within Plots (Richness)	60
Overall Species Evenness	0.973
Overall Species Diversity	2.973
Herbaceous Vegetation[2]	
Number of Sample Plots	220
Area Sampled (ha)	0.022
Number of Species Recorded Within Plots (Richness)	135
Overall Species Evenness	0.871
Overall Species Diversity	4.272

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 329.09 individual trees per ha, which comprise a total basal area of 23.45 m^2 per ha. The overstory stratum in this alliance is dominated by water oak, which is composed of 69.09 trees per ha and contributes 6.89 m^2 per ha of basal area. Sweetgum is the highest ranking co-dominant species, with an average of 49.09 trees per ha, contributing 4.58 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include willow oak, laurel oak, and American hornbeam.

The midstory within this alliance contained an average of 1,178.18 individual trees per ha, comprising 4.09 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including American hornbeam, yaupon holly, and deciduous holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 5,314 individual shrubs per ha, comprising 0.38 m^2 of basal area per ha. The shrub stratum is dominated by yaupon holly, with other important species including Chinese tallow, sweetgum, and deciduous holly, respectively in order of dominance.

The data shows there is a total of 29.2 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, Virginia creeper (*Parthenocissus quinquefolia*) is the most common species, with 2.6 % of the total ground cover. Other common species present in the herbaceous layer of this alliance are poison ivy, slender woodoats, and muscadine grape.

This vegetation alliance is similar in nature to the *Pinus taeda - Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance and the other temporarily flooded bottomland hardwood oak dominated alliances which occur on the project area. The difference is in the presence of *Pinus taeda* and the combination of dominant oaks, hydrologic regime, and position in the landscape. In this case the three co-dominant trees are *Liquidambar styraciflua*, *Quercus nigra*, and *Quercus laurifolia* with *Quercus phellos* being a high ranking associate species. The data in this alliance shows that *Liquidambar styraciflua* is a co-dominant species with the

oakspecies. This may be an effect of the hurricanes, by felling more of the oaks than the *Liquidambar styraciflua*. The data also lacks the presence of or significant amounts of *Pinus taeda*.

3.3.10.1Component AssociationsWithin the *Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance

NatureServe Explorer lists two component associations for this Alliance, which occur in the project area. These associations are *Quercus phellos – Liquidambar styraciflua* / *Ilex decidua – Carpinus caroliniana* / *Lysimachia radicans*Forest, and *Quercus nigra* - *Liquidambar styraciflua*– (*Pinus taeda*) */ Ilex opaca – Vaccinium fuscatum* / *Carex debilis* Forest.

Both associations can occur as a mosaic within the same area and with other bottomland hardwood oak dominated vegetation communities. It is difficult to discern the CIR aerial photography signatures between these associations. Map unit classification was accomplished with vegetation sample plot data, when possible, and then with qualitative wetland assessment plot data and transect transition data. When data showed more than one of these associations were present then the association was mapped with the prevalent data.

Quercus phellos – Liquidambar styraciflua / Ilex decidua – Carpinus caroliniana / Lysimachia radicans Forest

The *Quercus phellos – Liquidambar styraciflua* / *Ilex decidua – Carpinus caroliniana* / *Lysimachia radicans* Forest association encompasses approximately 491.47 ha (1,216.43 ac) of the project area. This association occurs within the floodplains of the Neches River, Little Pine Island Bayou, and Village Creek on low laying flats with soils rich in calcium and magnesium. This association also occurs in abandoned stream channels, low positions on natural levees and depressional areas on alluvial flats. This association occurs on poorly drained, slowly permeable clays and silt loams formed in alluvium. Although it is classified as temporarily flooded, this association can be flooded 1 to 2 months of the growing season with a water table within 12 inches of the surface (NaureServe, 2011). This association occurs as a mosaic with the other

association in this alliance and with the other bottomland hardwood floodplain *Quercus* spp. and *Liquidambar styraciflua* dominant alliance.

Seven (7) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.175 ha. Thirty seven (37) species of woody plants (trees and shrubs) were recorded in these plots. Seventy (70) 1 m x 1 m plots within the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.007 ha. Seventy six (76) species of ground layer vegetation were recorded within these seventy 1 m^2 plots. The data shows there are 7,702.86 woody plants per ha, comprising 28.15 m^2 per ha of basal area for all three woody strata. Association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.555, Pielou's Evenness Index (J') at 0.707, and a richness value of 37 species. Association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.902, Pielou's Evenness Index (J') at 0.901, and a richness value of 76 species.

A typical plot within this association is portrayed in **Photo 10-1**, **Appendix E.** The overall data in the *Quercus phellos – Liquidambar styraciflua* / *Ilex decidua – Carpinus caroliniana* / *Lysimachia radicans* Forest is summarized in **Table 21**. Summary alliance data is presented in **Appendix A, Table 10-1 (A-D)**.

Table 21: Summary of Vegetation Analyses for the *Quercus phellos – Liquidambar styraciflua* / *Ilex decidua – Carpinus caroliniana* / *Lysimachia radicans* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	7
Area Sampled (ha)	0.175
Number of Species Recorded Within Plots (Richness)	37
Overall Species Evenness	0.707
Overall Species Diversity	2.555
Herbaceous Vegetation	
Number of Sample Plots	190
Area Sampled (ha)	0.007
Number of Species Recorded Within Plots (Richness)	76
Overall Species Evenness	0.901
Overall Species Diversity	3.902

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 302.86 individual trees per ha, which comprise a total basal area of 24.04 m^2 per ha. The overstory stratum in this alliance is dominated by willow oak, which is composed of 80 trees per ha and contributes 10.44 m^2 per ha of basal area. Sweetgum is the highest ranking associate species, with an average of 68.57 trees per ha, contributing 6.20 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include laurel oak, Chinese tallow, and blackgum.

The midstory within this alliance contained an average of 965.71 individual trees per ha, comprising 3.52 m^2 of basal area per ha. The midstory stratum is dominated by deciduous holly, with other important species including Chinese tallow, yaupon holly, and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 6,302.86 individual shrubs per ha, comprising 0.39 m^2 of basal area per ha. Chinese tallow was the dominant species. Other important species include southern yaupon holly, deciduous holly, and sweetgum, respectively in order of dominance.

The data shows there is a total of 23.89 % ground cover provided by herbaceous vegetation in this association. Within the herbaceous layer, poison ivy was the dominant species, constituting 2.86 % of the total ground cover in the association. Other important species present in the herbaceous layer of this alliance include Virginia creeper, bushy aster (*Symphyotrichum dumosum*), and sweetgum seedlings, respectively in order of dominance.

Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Ilex opaca – Vaccinium fuscatum / Carex debilis Forest

The *Quercus nigra - Liquidambar styraciflua*– (*Pinus taeda*) */ Ilex opaca – Vaccinium fuscatum* / *Carex debilis* Forest association encompasses approximately 465.23 ha (1,149.61 ac) of the project area. This association occurs within the floodplains of the Neches River, Little Pine Island Bayou, Village Creek, and on slightly elevated, well drained, acidic sandy soils of terraces

and floodplains. This association floods occasionally for short durations, but can be affected by a shallow water table (NatureServe, 2011). This association occurs as a mosaic with the other associations in this alliance and with the other oak and sweetgum dominant alliances and associations.

Fifteen (15) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.375 ha. Fifty one (51) species of woody plants (trees and shrubs) were recorded in these plots. One hundred fifty (150) 1 m x 1 m plots within the 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.015 ha. One hundred ten (110) species of ground layer vegetation were recorded within these 1 m^2 plots. The data shows there are 6,618.67 woody plants per ha, comprising 28.29 m^2 per ha of basal area for all three woody strata. Association woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.91, Pielou's Evenness Index (J') at 0.74, and a richness value of 51 species. Association herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.142, Pielou's Evenness Index (J') at 0.881, and a richness value of 110 species.

A typical plot within this association is portrayed in **Photo 10-2**, **Appendix E.** The overall data in the *Quercus nigra - Liquidambar styraciflua* – (*Pinus taeda*) / *Ilex opaca – Vaccinium fuscatum* / *Carex debilis* Forest is summarized in **Table 22**. Summary alliance data is presented in **Appendix A, Table 10-2 (A-D)**.

Table 22: Summary of Vegetation Analyses for the Proposed *Quercus nigra - Liquidambar styraciflua* – (*Pinus taeda*) / *Ilex opaca – Vaccinium fuscatum* / *Carex debilis* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	15
Area Sampled (ha)	0.375
Number of Species Recorded Within Plots (Richness)	51
Overall Species Evenness	0.74
Overall Species Diversity	2.91
Herbaceous Vegetation[2]	
Number of Sample Plots	150
Area Sampled (ha)	0.0015
Number of Species Recorded Within Plots (Richness)	110

Table 22: Summary of Vegetation Analyses for the Proposed *Quercus nigra - Liquidambar styraciflua* – (*Pinus taeda*) / *Ilex opaca* – *Vaccinium fuscatum* / *Carex debilis* Forest, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson and Orange Counties, Texas, April-June 2011	
Overall Species Evenness	0.881
Overall Species Diversity	4.142

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.

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

The data for the overstory stratum within this alliance indicates there are 341.33 individual trees per ha, which comprise a total basal area of 23.18 m^2 per ha. The overstory stratum in this alliance is dominated by water oak, which is composed of 101.33 trees per ha and contributes 10.10 m^2 per ha of basal area. Sweetgum is the highest ranking associate species, with an average of 40 trees per ha, contributing 3.8 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include American hornbeam, laurel oak, and loblolly pine, respectively in order of dominance.

The midstory within this alliance contained an average of 1,277.33 individual trees per ha, comprising 4.33 m^2 of basal area per ha. The midstory stratum is dominated by American hornbeam, with other important species including yaupon holly, Chinese tallow, and water oak, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 4,853.33 individual shrubs per ha, comprising 0.38 m^2 of basal area per ha. Yaupon holly is the dominant species. Other important species include Chinese tallow, highbush blackberry, and sweetgum, respectively in order of dominance.

The data shows there is a total of 31.68 % ground cover provided by herbaceous vegetation in this association. Within the herbaceous layer, narrow-leaf woodoats was the dominant species, constituting 2.97 % of the total ground cover in the alliance. Other important species present in the herbaceous layer of this alliance include Virginia creeper, muscadine grape, and inland sea oats, respectively in order of dominance.

3.3.11 *Quercus alba - (Quercus nigra)* Forest Alliance

The *Quercus alba-* (*Quercus nigra*) Forest Alliance encompasses approximately 2.86 ha (7.06 ac) of the project area. This alliance occurs in mesic to dry/mesic areas on acidic to circumneutral (around pH 7) soils in variety of sites, including sandy swamp islands, slopes, and ridge tops and other fire sheltered areas (NatureServe, 2011). This alliance is located in the peripheral upland areas of the project area.

Three (3) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.075 ha. Sixteen (16) species of woody plants (trees and shrubs) were recorded in these plots. Thirty (30) 1 m x 1 m plots within three 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.003 ha. Twelve (12) species of ground layer vegetation were recorded within these thirty 1 m^2 plots. The data shows there are 8,453.33 woody plants per ha, comprising 22.14 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.387, Pielou's Evenness Index (J') at 0.5, and a richness value of 16 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.063, Pielou's Evenness Index (J') at 0.83, and a richness value of 12 species.

A typical plot within this alliance is portrayed in **Photo 11**, **Appendix E.** The overall data in the *Quercus alba*-(*Quercus nigra*) Forest Alliance is summarized in **Table 23**. Summary alliance data is presented in **Appendix A, Table 11 (A-D).**

Table 23: Summary of Vegetation Analyses for *Quercus alba*-(*Quercus nigra*)Forest Alliance Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	3
Area Sampled (ha)	0.075
Number of Species Recorded Within Plots (Richness)	16
Overall Species Evenness	0.5
Overall Species Diversity	1.387
Herbaceous Vegetation[2]	
Number of Sample Plots	30
Area Sampled (ha)	0.003

Table 23: Summary of Vegetation Analyses for *Quercus alba*-(*Quercus nigra*)Forest Alliance Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Number of Species Recorded Within Plots (Richness)	12
Overall Species Evenness	0.83
Overall Species Diversity	2.063

[1] Woody vegetation was sampled in 10 m X 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 360 individual trees per ha, which comprise a total basal area of 15.79 m^2 per ha. The overstory stratum in this alliance is dominated by Darlington oak (*Quercus hemisphaerica*), which is composed of 200 trees per ha, contributing 10.67 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include eastern hop hornbeam (*Ostrya virginiana*), loblolly pine, and white ash (*Fraxinus americana*).

The midstory within this alliance contained an average of 1,973.33 individual trees per ha, comprising 5.34 m^2 of basal area per ha. The midstory stratum is dominated by yaupon holly, with other important species including black cherry (*Prunus serotina*), red bay (*Persea palustris*), and muscadine grape, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 5,733.33 individual shrubs per ha, comprising 0.65 m^2 of basal area per ha. Yaupon holly is the dominant species. Other important species present in the shrub layer of this alliance are black cherry, red bay, and American beautyberry.

The data shows there is a total of 7.83 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, yaupon holly (seedlings) is the dominant species, with 3% of the total ground cover. Other important species present in the herbaceous layer of this alliance are small individuals of black cherry, American beautyberry, and muscadine grape.

This vegetation alliance is similar in nature to the *Pinus taeda - Quercus* (*alba, falcata, stellata*) Forest Alliance and the other upland hardwood oak dominated alliances which occur on the

project area. The difference is in the lack of a significant amount of loblolly pine and the combination of dominant oaks and position in the landscape.

3.3.11.1 Component Association Within the *Quercus alba*-(*Quercus nigra*) Forest Alliance

Darlington's oak (*Quercus hemisphaerica*) is the dominant canopy species, which classifies this vegetation community in the*Quercus alba – Quercus hemisphaerica / Prunus caroliniana – Persea borbonia – Viburnum acerifolium* Forest association. Sample plot data does not match association diagnostic species exactly, mostly lacking white oak (*Quercus alba*). The lack of white oak in the plot data could be from hurricane tree fall and/or timber management practices.

Quercus alba – Quercus hemisphaerica / Prunus caroliniana – Persea borbonia – Viburnum acerifolium Forest

The *Quercus alba – Quercus hemisphaerica* / *Prunus caroliniana – Persea borbonia – Viburnum acerifolium*Forest is the only association of this alliance in the project area. Vegetation plot data that was dominated by *Quercus hemisphaerica* was placed in this association. Other occurrences of this association was originally described from the Sam Houston National Forest, which is on the southwestern periphery of many common mesic species of the southeastern U.S. and just outside the range of many important species in related mesic forest just to the east (NatureServe, 2011). The presence of the association in the project area may be an example of the more southern occurrences for this association.

The summery information and sample plot data is the same as the *Quercus alba*-(*Quercus nigra*) Forest Alliance.

3.3.12 *Quercus lyrata – (Carya aquatica*) Seasonally Flooded Forest Alliance

The *Quercus lyrata – (Carya aquatica)* Seasonally Flooded Forest Alliance encompasses approximately 187.03 ha (462.17 ac) of the project area. This alliance occurs in the northern portion of the project area on the floodplains of the Neches River. This alliance is subject to

frequent, shallow flooding which can extend well into the growing season. This alliance occurs on heavy clay soils on low, wet, seasonally flooded floodplains, shallow sloughs with relatively little water flow, and in depressions. Soils on which this alliance arises include level to closely level soils that formed in alluvium on poorly drained floodplains. These soils are deep, fine to very fine textured (clays) and have excessive moisture during the growing season (NatureServe, 2011).

Four (4) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.1 ha. Nineteen (19) species of woody plants (trees and shrubs) were recorded in these plots. Forty (40) 1 m x 1 m plots within the four 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.004 ha. Fifty-six (56) species of ground layer vegetation were recorded within these forty 1 m^2 plots. The data shows there are 3,270.00 woody plants per ha, comprising 25.79 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.922, Pielou's Evenness Index (J') at 0.653, and a richness value of 19 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.604, Pielou's Evenness Index (J') at 0.895, and a richness value of 56 species.

A typical plot within this alliance is portrayed in **Photo 12**, **Appendix E.** The overall data in the *Quercus lyrata* – (*Carya aquatica*) Seasonally Flooded Forest Alliance is summarized in **Table 24**. Summary alliance data is presented in **Appendix A, Table 12 (A-D).**

Table 24: Summary of Vegetation Analyses for *Quercus lyrata – (Carya aquatica)* Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	4
Area Sampled (ha)	0.1
Number of Species Recorded Within Plots (Richness)	19
Overall Species Evenness	0.653
Overall Species Diversity	1.922
Herbaceous Vegetation[2]	
Number of Sample Plots	40
Area Sampled (ha)	0.004

Table 24: Summary of Vegetation Analyses for *Quercus lyrata – (Carya aquatica)* Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Number of Species Recorded Within Plots (Richness)	56
Overall Species Evenness	0.895
Overall Species Diversity	3.604

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 260.00 individual trees per ha, which comprise a total basal area of 21.71 m^2 per ha. The overstory stratum in this alliance is dominated by overcup oak, which is composed of 40.00 trees per ha, contributing 11.00 m^2 per ha of basal area. Water hickory is the highest ranking associate species, with an average of 60.00 trees per ha, contributing 3.68 m2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include American elm (*Ulmus americana*), Chinese tallow, and sweetgum.

The midstory within this alliance contained an average of 1,030.00 individual trees per ha, comprising 3.69 m^2 of basal area per ha. The midstory stratum is dominated by deciduous holly, with other important species including Chinese tallow, blackgum, and American holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 1,800individual shrubs per ha, comprising 0.17 m^2 of basal area per ha. Chinese tallow was the dominant species. Other important species present in the shrub stratum of this alliance included sweetgum, deciduous holly and American elm.

The data shows there is a total of 23.01% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, common trumpetcreeper is the dominant species, with 2.95% of the total ground cover. Other important species present in the herbaceous layer of this alliance are American buckwheatvine, American hornbeam, and deciduous holly.

This alliance is similar to the other bottomland hardwood oak dominated alliances which occur on the project area. The difference is in the combination of dominant canopy trees, hydroperiod,

and position in the landscape. In this case, the dominant trees include overcup oak and water hickory being important canopy tree species.

3.3.12.1Component Association Within the *Quercus lyrat*a – (*Carya aquatica*) Seasonally Flooded Forest Alliance

The association under this alliance is the *Quercus lyrata – Carya aquatica* Forest. This alliance and association is one of two where overcup oak is important as a dominant or co-dominant species. The other classification is the *Quercus laurifolia – Quercus* (*lyrata, phellos*) *– Nyssa biflora* West Gulf Floodplain Forest. The difference between the two is the significant presence of water hickory (*Carya aquatica*) and willow and/or laurel oaks not being present in significant portions. Another association was considered for this data which was the *Quercus lyrata - Carya aquatica* - (*Quercus texana*) / *Forestiera acuminata* Forest. The data was not classified as this alliance because nutall or Texas red oak (*Quercus texana*) was not identified in any plot data and is presumed to be absent from the project area.

Quercus lyrata – Carya aquatica Forest

Quercus lyrata – Carya aquatica Forest is the only association of this alliance in the project area. The summary information and sample plot data is the same as the *Quercus lyrata – (Carya aquatica)* Seasonally Flooded Forest Alliance data.

3.3.13 *Quercus nigra* Forest Alliance

The *Quercus nigra* Forest Alliance encompasses approximately 25.56 ha (63.17 ac) of the project area. This alliance is comprised of upland forests dominated or co-dominated by water oak. In some cases, this vegetation community existed previously as a more diverse canopy, which has been influenced by fire suppression and/or natural disturbance. Forests in this alliance occur on mesic or dry-mesic sites, especially on loamy or other fine-textured soils. The midstory/shrub stratum is dense, without fire (NatureServe, 2011).

Four (4) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.1 ha. Twenty-three (23) species of woody plants (trees and shrubs) were recorded in these plots. Forty (40) 1 m x 1 m plots within the four 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.004 ha. Thirty (30) species of ground layer vegetation were recorded within these forty 1 m^2 plots. The data shows there are 3,590.00 woody plants per ha, comprising 15.16 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.416, Pielou's Evenness Index (J') at 0.771, and a richness value of 23 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.058, Pielou's Evenness Index (J') at 0.899, and a richness value of 30 species.

A typical plot within this alliance is portrayed in **Photo 13**, **Appendix E.** The overall data in the *Quercus nigra* Forest Alliance is summarized in **Table 25**. Summary alliance data is presented in **Appendix A, Table 13 (A-D).**

Table 25: Summary of Vegetation Analyses for *Quercus nigra* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	4
Area Sampled (ha)	0.1
Number of Species Recorded Within Plots (Richness)	23
Overall Species Evenness	0.771
Overall Species Diversity	2.416
Herbaceous Vegetation[2]	
Number of Sample Plots	30
Area Sampled (ha)	0.004
Number of Species Recorded Within Plots (Richness)	30
Overall Species Evenness	0.899
Overall Species Diversity	3.058

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 250 individual trees per ha, which comprise a total basal area of 8.57 m^2 per ha. The overstory stratum in this alliance is dominated by water oak, which is composed of 130.00 trees per ha, contributing 6.05 m^2 per ha of basal area. Sweetgum is the highest ranking associate species, with an average of 50.00 trees

per ha, contributing 0.83 m2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include loblolly pine, American hornbeam, and Chinese tallow.

The midstory within this alliance contained an average of 580 individual trees per ha, comprising 1.91 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including American hornbeam, water oak, and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 400 individual shrubs per ha, comprising 0.11 m^2 of basal area per ha. Yaupon holly was the dominant species. Other important species present in the shrub stratum of this alliance included two-wing silverbell (*Halesia diptera*), American beautyberry, and muscadine grape.

The data shows there is a total of 16.89% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, slender woodoats is the dominant species, with 2.95% of the total ground cover. Other important species present in the herbaceous layer of this alliance are longleaf woodoats (*Chasmanthium sessiliflorum*), poison ivy, and muscadine grape.

This vegetation alliance is similar in nature to the *Quercus alba – Quercus nigra* Forest Alliance and the other upland hardwood oak dominated alliances which occur on the project area. The difference is in the combination of dominant oaks and associate species. Both alliances have similar hydrologic regimes, landscape positions and thrive in fire sheltered situations. This alliance may be an earlier successional stage of the *Quercus alba – Quercus nigra* Forest Alliance, which have many of the same associate species but greater diversity. This alliance differs from the *Quercus nigra - Liquidambar styraciflua –* (*Pinus taeda*) */ Ilex opaca – Vaccinium fuscatum* / *Carex debilis* Forest association by its hydrologic regime, which is dry mesic to mesic.

3.3.13.1 Proposed Associations Within the *Quercus nigra* Forest Alliance

There are noreported component associations for this Alliance. The analysis of data collected at the four vegetation sample plots show that *Quercus nigra*is consistently a dominant species in

the canopy stratum and *Liquidambar styraciflua* is co-dominant or present, and *Pinus taeda* is present in some of the plot data. *Chasmanthium laxum* is a grass species that is dominant or present at significant levels in the herbaceous plot data. A proposed association for this alliance would be *Quercus nigra - Liquidambar styraciflua*– (*Pinus taeda)* / *Chasmanthium laxum* Forest.

Proposed Association - Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum Forest

Quercus nigra - Liquidambar styraciflua– (*Pinus taeda)* / *Chasmanthium laxum* Forest is the only component association for alliance within the project area. The summary and sample plot data is the same as the *Quercus nigra* Forest Alliance data.

3.3.14 *Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance

The *Taxodium distichum - Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance encompasses approximately 38.47 ha (95.05 ac) of the project area. This alliance encompasses floodplain forests, with seasonally flooded hydrology where surface water is present through the growing season in most years. During some years the surface water level may fall below ground level by the end of the growing season. The midstory, shrub and herbaceous layers of this alliance range from sparse to moderate depending on the amount and duration of recent flooding (NatureServe, 2011).

Three (3) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.075 ha. Eighteen (18) species of woody plants (trees and shrubs) were recorded in these plots. Thirty (30) 1 m x 1 m plots within the three 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.003 ha. Thirty-five (35) species of ground layer vegetation were recorded within these thirty 1 m^2 plots. The data shows there are 8,480.00 woody plants per ha, comprising 49.86 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.156, Pielou's Evenness Index (J') at 0.746, and a richness value of 18 species. Alliance herbaceous vegetation

analysis indices include Shannon-Weaver's Diversity Index (H') at 3.124, Pielou's Evenness Index (J') at 0.879, and a richness value of 35 species.

A typical plot within this alliance is portrayed in **Photo 14**, **Appendix E.** The overall data in the *Taxodium distichum - Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance is summarized in **Table 26**. Summary alliance data is presented in **Appendix A, Table 14 (A-D).**

Table 26: Summary of Vegetation Analyses for *Taxodium distichum - Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	3
Area Sampled (ha)	0.075
Number of Species Recorded Within Plots (Richness)	18
Overall Species Evenness	0.746
Overall Species Diversity	2.156
Herbaceous Vegetation[2]	
Number of Sample Plots	30
Area Sampled (ha)	0.003
Number of Species Recorded Within Plots (Richness)	35
Overall Species Evenness	0.879
Overall Species Diversity	3.124

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 440 individual trees per ha, which comprise a total basal area of 46.50 m^2 per ha. The overstory stratum in this alliance is dominated by swamp blackgum, which is composed of 160 trees per ha, contributing 29.76 m^2 per ha of basal area. Bald cypress is the highest ranking associate species, with an average of 200.00 trees per ha, contributing 14.88 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Chinese tallow, water tupelo, and laurel oak.

The midstory within this alliance contained an average of 920 individual trees per ha, comprising 4.36 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including Carolina ash, water tupelo, and Drummond's red maple, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 6,000individual shrubs per ha, comprising 0.38 m^2 of basal area per ha. American buckwheatvine was the dominant species. Other important species present in the shrub stratum of this alliance included Carolina ash and Chinese tallow.

The data shows there is a total of 36.10% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, savannah panic grass is the dominant species, with 14.33% of the total ground cover. Other important species present in the herbaceous layer of this alliance are horned beakrush, American buckwheatvine, and Chinese tallow.

This alliance is analogous to several other alliances which occur within the project area. These alliances include the *Nyssa aquatica* - *Taxodium distichum* Semi-permanently Flooded Forest Alliance and the *Taxodium distichum* Semi-permanently Flooded Forest Alliance. The *Taxodium distichum* - *Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance accommodates cypress/tupelo swamps with seasonally flooded hydroperiods, which is shorter in duration than the semi-permanently flooded hydrological regimes. The data for this alliance contains a significant (dominant) portion of *Nyssa biflora* and *Taxodium distichum* which corresponds to this classification.

3.3.14.1 Proposed Associations Within the *Taxodium distichum* - *Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance

NatureServe does not report a NVC association for this alliance occurring in Texas that would correspond to the sample plot data. The analysis of data collected at the three vegetation sample plots show that *Taxodium distichum* and *Nyssa biflora* are consistently dominant species in the canopy stratum. *Phanopyrum gymnocarpon*is a grass species that is dominant or present at significant levels in the herbaceous plot data. A proposed association for this alliance would be *Taxodium distichum* - *Nyssa biflora* / *Phanopyrum gymnocarpon* Forest.

Proposed Association - Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon Forest

Taxodium distichum - Nyssa biflora / *Phanopyrum gymnocarpon* Forest is the only component association for alliance within the project area. The summery and sample plot data is the same as the *Taxodium distichum - Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance data.

3.3.15 *Taxodium distichum* Semi-permanently Flooded Forest Alliance

The *Taxodium distichum* Semi-permanently Flooded Forest Alliance encompasses approximately 117.32 ha (289.91 ac) of the project area. These swamp forests are dominated by bald cypress, generally greater than 75%, often with a monospecific canopy; however, hardwoods may be present. There is a sparse subcanopy of young trees and tall shrubs. The shrub and herbaceous layers are very sparse and frequently limited to tree bases and downed logs.Stands of this alliance are found in alluvial plains, ponds, lakes, and backwaters. Areas of this alliance are typically flooded for much of the year with surface water of up to 3 meters in depth. The water may be stagnant or flowing. Soils are deep, poorly drained mucks or peats (NatureServe, 2011).

Sixteen (16) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.4 ha. Thirty-four (34) species of woody plants (trees and shrubs) were recorded in these plots. One hundred sixty (160) 1 m x 1 m plots within the sixteen 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.016 ha. One hundred forty-seven (147) species of ground layer vegetation were recorded within these one hundred sixty 1 m^2 plots. The data shows there are 6,015 woody plants per ha, comprising 45.07 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.828, Pielou's Evenness Index (J') at 0.518, and a richness value of 34 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.25, Pielou's Evenness Index (J') at 0.856, and a richness value of 143 species.

A typical plot within this alliance is portrayed in **Photo 15**, **Appendix E.** The overall data in the *Taxodium distichum* Semi-permanently Flooded Forest Alliance is summarized in **Table 27**. Summary alliance data is presented in **Appendix A, Table 15 (A-D).**

Table 27: Summary of Vegetation Analyses for *Taxodium distichum* Semi-permanently Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	16
Area Sampled (ha)	0.4
Number of Species Recorded Within Plots (Richness)	34
Overall Species Evenness	0.518
Overall Species Diversity	1.828
Herbaceous Vegetation[2]	
Number of Sample Plots	160
Area Sampled (ha)	0.016
Number of Species Recorded Within Plots (Richness)	143
Overall Species Evenness	0.856
Overall Species Diversity	4.25

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 430 individual trees per ha, which comprise a total basal area of 55.20 m^2 per ha. The overstory stratum in this alliance is dominated by bald cypress, which is composed of 227.50 trees per ha, contributing 47.88 m^2 per ha of basal area. Chinese tallow is the highest ranking associate species, with an average of 72.50 trees per ha, contributing 1.681 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Drummond's red maple, American, and water elm.

The midstory within this alliance contained an average of 1,610 individual trees per ha, comprising 4.36 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including bald cypress, common buttonbush, and Carolina ash, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 3,625 individual shrubs per ha, comprising 0.28 m^2 of basal area per ha. Chinese tallow was the dominant species. Other

important species present in the shrub stratum of this alliance included bald cypress, common buttonbush, and highbush blackberry.

The data shows there is a total of 49.11 % ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, alligator weed is the dominant species, with 6.87 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are lesser water sprangles, swamp smartweed (*Polygonum hydropiperoides*), and savannah panic grass.

This alliance is related to several other alliances which occur within the project area. These alliances include the *Nyssa aquatica* - *Taxodium distichum* Semi-permanently Flooded Forest Alliance, *Taxodium distichum* - *Nyssa* (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance, and the *Taxodium distichum* Tidal Woodland Alliance. The *Taxodium distichum* Semi-permanently Flooded Forest Alliance accommodates swamps in the project area with long duration hydroperiods, and without a significant presence of *Nyssa aquatica* or *Nyssa biflora*.

3.3.15.1 Component Association Within the *Taxodium distichum* Semi-permanently Flooded Forest Alliance

The association under this alliance is the *Taxodium distichum* / *Lemna minor* Forest. This association covers the *Taxodium distichum* dominant vegetation communities with floating, submerged and rooted aquatic species. Duckweed (*Lemna minor*) is not present in the plot data but other floating species area present, along with a sparse midstory and shrub layer.

Taxodium distichum / Lemna minor Forest

Taxodium distichum / *Lemna minor* Forest is the only association of this alliance in the project area. The summary information and sample plot data is the same as the *Taxodium distichum* Semi-permanently Flooded Forest Alliance.

3.3.16 *Triadica sebifera* Forest Alliance

The *Triadica sebifera* Forest Alliance, encompasses approximately 2.50 ha (6.18 ac) of the project area. Exotic-dominated upland forests of this type often developed on old fields, dredge spoil, or other disturbed sites. Specifically within the project area this alliance occurs is forest gaps and habitat edges. Several of the vegetation sample plots are dominated by this species, when possible map units were classified by other data, if possible. There were some map units that could not be classified into any other alliance or association because of the pervasiveness of the *Triadica sebifera* present. Understory and herb layers are often poorly developed. This tree was introduced into the lower Gulf Coastal Plain as an ornamental and is spreading. It can overtake native vegetation types to become the strong dominant (NatureServe, 2011).

Four (4) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.1 ha. Twenty-five (25) species of woody plants (trees and shrubs) were recorded in these plots. Forty (40) 1 m x 1 m plots within the four 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.004 ha. Fifty-five (55) species of ground layer vegetation were recorded within the forty 1 m^2 plots. The data shows there are 6,620 woody plants per ha, comprising 19.65 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.665, Pielou's Evenness Index (J') at 0.828, and a richness value of 25 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.627, Pielou's Evenness Index (J') at 0.905, and a richness value of 55 species.

A typical plot within this alliance is portrayed in **Photo 16**, **Appendix E**. The overall data in the *Triadica sebifera* Seasonally Flooded Forest Alliance Forest is summarized in **Table 28**. Summary alliance data is presented in **Appendix A, Table 16 (A-D).**

Table 28: Summary of Vegetation Analyses *Triadica sebifera* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jefferson, Jasper, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	4
Area Sampled (ha)	0.1

Table 28: Summary of Vegetation Analyses *Triadica sebifera* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jefferson, Jasper, and Orange Counties, Texas, April-June 2011	
Number of Species Recorded Within Plots (Richness)	25
Overall Species Evenness	0.828
Overall Species Diversity	2.665
Herbaceous Vegetation[2]	
Number of Sample Plots	40
Area Sampled (ha)	0.004
Number of Species Recorded Within Plots (Richness)	55
Overall Species Evenness	0.905
Overall Species Diversity	3.627

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 370individual trees per ha, which comprise a total basal area of 14.30 m^2 per ha. The overstory stratum in this alliance is dominated by Chinese tallow, which is composed of 190.00 trees per ha, contributing 5.65 m^2 per ha of basal area. Sweetgum is the highest ranking associate species, with an average of 60.00 trees per ha, contributing 4.31 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, loblolly pine, American hornbeam, and red oak *(Quercus falcata*).

The midstory within this alliance contained an average of 1,350 individual trees per ha, comprising 4.72 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including American hornbeam, blackgum, and American holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 4,700individual shrubs per ha, comprising 0.40 m^2 of basal area per ha. The shrub stratum is dominated by common sweetleaf (*Symplocos tinctoria*), with other important species including sweetgum, American holly, and yaupon holly, respectively in order of dominance.

The data shows there is a total of 26.85% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, poison ivy is the dominant species, with 7.50% of the

total ground cover. Other important species present in the herbaceous layer of this alliance are Chinese tallow, mock strawberry (*Potentilla indica*), and highbush blackberry.

This alliance is unique in relation to all the other vegetation communities, except for the *Triadica sebifera* Seasonally Flooded Forest Alliance and other disturbance related vegetation communities. Both of these alliances are the result of the spread of the exotic species, Chinese tallow. This species can invade natural vegetation communities and out-compete most other species to become a strong dominant species or to form a monoculture stand of Chinese tallow. This species is becoming established in other vegetation communities in forest gaps and edges. NatureServe does not report any NVC associations under this alliance.

3.3.17 *Triadica sebifera* Seasonally Flooded Forest Alliance

The *Triadica sebifera* Seasonally Flooded Forest Alliance, encompasses approximately 63.47 ha (156.83 ac) of the project area. This alliance is comprised of seasonally flooded forests dominated by the exotic and invasive *Triadica sebifera*. This tree was introduced into the lower Gulf Coastal Plain as an ornamental and is spreading. It can overtake native vegetation types to become the strong dominant (NatureServe, 2011). Specifically within the project area, this alliance occurs is forest gaps and habitat edges. Several of the vegetation sample plots are dominated by this species map units were classified by other data, if possible. There were some mapped units that could not be classified into any other alliance or association because of the pervasiveness of the *Triadica sebifera* present.

Thirty-one (31) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.775 ha. Fifty-four (54) species of woody plants (trees and shrubs) were recorded in these plots. Three hundred ten (310) 1 m x 1 m plots within the thirty-one 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.031 ha. One hundred eighty-seven (187) species of ground layer vegetation were recorded within the three hundred ten 1 m^2 plots. The data shows there are 7,592.23 woody plants per ha, comprising 30.55 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.490, Pielou's Evenness Index (J') at 0.624, and a richness value of 54 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's

Diversity Index (H') at 4.511, Pielou's Evenness Index (J') at 0.862, and a richness value of 187 species.

A typical plot within this alliance is portrayed in **Photo 17**, **Appendix E.** The overall data in the *Triadica sebifera* Seasonally Flooded Forest Alliance Forest is summarized in **Table 29**. Summary alliance data is presented in **Appendix A, Table 17 (A-D).**

Table 29: Summary of Vegetation Analyses *Triadica sebifera* Seasonally Flooded Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	31
Area Sampled (ha)	0.775
Number of Species Recorded Within Plots (Richness)	54
Overall Species Evenness	0.624
Overall Species Diversity	2.490
Herbaceous Vegetation[2]	
Number of Sample Plots	310
Area Sampled (ha)	0.031
Number of Species Recorded Within Plots (Richness)	187
Overall Species Evenness	0.862
Overall Species Diversity	4.511

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 427.10 individual trees per ha, which comprise a total basal area of 20.83 m^2 per ha. The overstory stratum in this alliance is dominated by Chinese tallow, which is composed of 240trees per ha, contributing 13.26 m^2 per ha of basal area. Sweetgum is the highest ranking associate species, with an average of 34.84 trees per ha, contributing 1.51 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, water hickory, American hornbeam, and Drummond's red maple.

The midstory within this alliance contained an average of 2,086.45 individual trees per ha, comprising 7.97 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including deciduous holly, American hornbeam, and American holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 4,758.71 individual shrubs per ha, comprising 0.62 m^2 of basal area per ha. The shrub stratum is dominated by Chinese tallow, with other important species including dwarf palmetto (*Sabal minor*), sweetgum, and deciduous holly, respectively in order of dominance.

The data shows there is a total of 39.73% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, slender woodoats is the dominant species, with 3.76% of the total ground cover. Other important species present in the herbaceous layer of this alliance are common savannah panic grass, American buckwheatvine, and Chinese tallow.

This alliance is unique in relation to all the other vegetation communities, except for the *Triadica sebifera* Forest Alliance and other disturbance related vegetation communities. As stated before, both of these alliances are the result of the spread of the exotic species Chinese tallow. This species can invade natural vegetation communities and out-compete most other species to become a strong dominant species or to form a monoculture stand of Chinese tallow. This species is also established in other vegetation communities in forest gaps and edges. NatureServe does not report any NVC associations under this alliance.

3.3.18 *Pinus taeda – Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance

The *Pinus taeda – Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance, encompasses approximately 27.83 ha (68.77 ac) of the project area. This alliance covers mixed loblolly pine - hardwood forests of primarily blackwater rivers of the southeastern coastal plain and related small stream floodplains west of the Mississippi River. Stands are dominated by loblolly pine with any combination of laurel oak, water oak, and/or *Quercus phellos*, with *Liquidambar styraciflua*. Some stands could originate as *Pinus taeda* plantations, with subsequent ingrowth of hardwoods (NatureServe, 2011). This alliance occurs in areas increasing in elevation from bottomland hardwoods and swamp to naturalized planted pine vegetation communities. This forest alliance occurs on a range of different soils. This alliance will occasionally flood for short durations.

Three (3) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.075 ha. Twenty-six (26) species of woody plants (trees and shrubs) were recorded in these plots. Thirty (30) 1 m x 1 m plots within the three 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.003 ha. Thirty-two (32) species of ground layer vegetation were recorded within the thirty 1 m^2 plots. The data shows there are 6,346.67 woody plants per ha, comprising 26.74 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.778, Pielou's Evenness Index (J') at 0.852, and a richness value of 26 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.007, Pielou's Evenness Index (J') at 0.868, and a richness value of 32 species.

A typical plot within this alliance is portrayed in **Photo 18**, **Appendix E.** The overall data in the *Pinus taeda – Quercus (phellos, nigra, laurifolia)* Forest Alliance is summarized in **Table 30**. Summary alliance data is presented in **Appendix A, Table 18 (A-D).**

Table 30: Summary of Vegetation Analyses *Pinus taeda – Quercus (phellos, nigra, laurifolia)* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	3
Area Sampled (ha)	0.075
Number of Species Recorded Within Plots (Richness)	26
Overall Species Evenness	0.852
Overall Species Diversity	2.778
Herbaceous Vegetation[2]	
Number of Sample Plots	30
Area Sampled (ha)	0.003
Number of Species Recorded Within Plots (Richness)	32
Overall Species Evenness	0.868
Overall Species Diversity	3.007

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 360.00 individual trees per ha, which comprise a total basal area of 21.13 m^2 per ha. The overstory stratum in this alliance is dominated by loblolly pine, which is composed of 146.67 trees per ha, contributing

11.36 m^2 per ha of basal area. Laurel oak is the highest ranking associate species, with an average of 93.33 trees per ha, contributing 5.72 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include Chinese tallow, water oak, and sweetgum.

The midstory within this alliance contained an average of 1,026.67 individual trees per ha, comprising 4.95 m^2 of basal area per ha. The midstory stratum is dominated by Chinese tallow, with other important species including sweetgum, Laurel oak, and loblolly pine, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 4,800 individual shrubs per ha, comprising 0.52 m^2 of basal area per ha. The shrub stratum is dominated by muscadine grape, with other important species including American snowbell (*Styrax americana*), yaupon holly, and southern dewberry (*Rubus trivialis*), respectively in order of dominance.

The data shows there is a total of 16.73% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, common trumpetcreeper is the dominant species, with 4.18% of the total ground cover. Other important species present in the herbaceous layer of this alliance are poison ivy, muscadine grape, and southern dewberry.

This alliance is similar to its deciduous equivalent the *Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance, which lacks a significant portion of *Pinus taeda*. NatureServe does not report an association for this alliance occurring in Texas. There were only three vegetation sample plots classified in this alliance. This could be because of the loss of pines from natural disturbance from hurricanes, or it is naturally a rare community in the project area.

The vegetation plot data for this alliance shows that *Pinus taeda* is dominant in all the plots with *Quercus laurifolia* being co-dominant in two of the plots and significantly present in the other and *Quercus nigra*is co-dominant other sample plot. The rest of the associate species showed no

clear dominance or constant presence within the vegetation plot data. More data is necessary to develop an association classification for this vegetation community within the project area.

3.3.19 *Pinus taeda – Quercus (alba, falcata, stellata)* Forest Alliance

The *Pinus taeda – Quercus (alba, falcata, stellata)* Forest Alliance, encompasses approximately 30.66 ha (75.77 ac) of the project area. The canopy is dominated by *Pinus taeda* with some combination of the nominal oaks. More mesic examples tend to be co-dominated by *Quercus alba*, while dry to dry-mesic examples are usually co-dominated by *Quercus falcata*. These forests can occur naturally on fire-protected areas such as topographically isolated hilltops, mid to lower slopes, protected ravines, broad flats and second bottoms. In some cases, they are successional forests on broad uplands following clearing or alteration of natural forests (NatureServe, 2011).

Six (6) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.15 ha. Thirty-five (35) species of woody plants (trees and shrubs) were recorded in these plots. Sixty (60) 1 m x 1 m plots within the six 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.006 ha. Forty-two (42) species of ground layer vegetation were recorded within the sixty 1 m^2 plots. The data shows there are 9,080 woody plants per ha, comprising 35.53 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.486, Pielou's Evenness Index (J') at 0.699, and a richness value of 35 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.230, Pielou's Evenness Index (J') at 0.864, and a richness value of 42 species.

A typical plot within this alliance is portrayed in **Photo 19**, **Appendix E.** The overall data in the *Pinus taeda – Quercus (alba, falcata, stellata)* Forest Alliance is summarized in **Table 31**. Summary alliance data is presented in **Appendix A, Table 19 (A-D).**

Table 31: Summary of Vegetation Analyses *Pinus taeda – Quercus (alba, falcata, stellata)* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	6
Area Sampled (ha)	0.15
Number of Species Recorded Within Plots (Richness)	35
Overall Species Evenness	0.699
Overall Species Diversity	2.486
Herbaceous Vegetation[2]	
Number of Sample Plots	60
Area Sampled (ha)	0.006
Number of Species Recorded Within Plots (Richness)	42
Overall Species Evenness	0.864
Overall Species Diversity	3.323

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 386.67 individual trees per ha, which comprise a total basal area of 30.15 m^2 per ha. The overstory stratum in this alliance is dominated by loblolly pine, which is composed of 133.33 trees per ha, contributing 10.89 m^2 per ha of basal area. Red oak is the highest ranking associate species, with an average of 26.67 trees per ha, contributing 5.55 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include sweetgum, water oak, and Durant's oak.

The midstory within this alliance contained an average of 1,540 individual trees per ha, comprising 4.30 m^2 of basal area per ha. The midstory stratum is dominated by yaupon holly, with other important species including sweetgum, loblolly pine, and water oak, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 6,820 individual shrubs per ha, comprising 0.65 m^2 of basal area per ha. The shrub stratum is dominated by yaupon holly, with other important species including American holly, water oak, and laurel cherry (*Prunus caroliniana*), respectively in order of dominance.

The data shows there is a total of 12.2% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, yaupon holly is the dominant species, with 2.41% of the

total ground cover. Other important species present in the herbaceous layer of this alliance are common trumpetcreeper, poison ivy, and slender woodoats.

This alliance is similar to its deciduous equivalent the *Quercus (alba, falcata, stellata)* Forest Alliance, which lack a significant portion of *Pinus taeda*.

3.3.19.1Component Association Within the *Pinus taeda – Quercus (alba, falcata, stellata)* Forest Alliance

There is no association for this alliance occurring in Texas that would match the vegetation plot data. There are two alliances that do occur in Texas with *Pinus taeda* and *Quercus falcata* present, but they are dry to dry-mesic associations in which the associate species do not match. As well, there are six species of oaks including the potential co-dominant species that are present in the vegetation plot data. This group of oaks occur from dry mesic to wet conditions. A proposed association for this alliance on the project area could be *Pinus taeda – Quercus* spp. Forest.

Proposed Associations Pinus taeda – Quercus spp. Forest

Pinus taeda – Quercus spp. Forest is the only association of this alliance in the project area. The summary information and sample plot data is the same as the *Pinus taeda – Quercus (alba, falcata, stellata)* Forest Alliance.

3.3.20 Proposed *Ilex opaca – Carpinus caroliniana* Forest Alliance

The proposed *Ilex opaca / Carpinus caroliniana* Forest Alliance encompasses approximately 28.92 ha (71.46 ac) of the project area. The mapping units classified as the proposed *Ilex opaca-Carpinus caroliniana* Forest Alliance would have been classified under other deciduous hardwood alliances prior to natural disturbances from recent hurricanes. Winds from these storms felled much of the pine, oaks and other hardwoods in the canopy, leaving American holly and American hornbeam as the dominant species. Generally in southeast Texas, these species are present in a number of habitat types, but they are not dominant canopy species. These

species typically occur in the midstory of moist, rich hardwood forest often bordering swamps and streams with a broad tolerance for soil composition, pH, and sunlight.

Twelve (12) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.3 ha. Thirty-four (34) species of woody plants (trees and shrubs) were recorded in these plots. One hundred twenty (120) 1 m x 1 m plots within the twelve 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.012 ha. Eighty-three (83) species of ground layer vegetation were recorded within these one hundred twenty 1 m^2 plots. The data shows there are 9,266.67 woody plants per ha, comprising 21.88 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.593, Pielou's Evenness Index (J') at 0.735, and a richness value of 34 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.691, Pielou's Evenness Index (J') at 0.835, and a richness value of 83 species.

A typical plot within this alliance is portrayed in **Photo 20**, **Appendix E.** The overall data in the proposed *Ilex opaca - Carpinus caroliniana* Forest Alliance is summarized in **Table 32**. Summary alliance data is presented in **Appendix A, Table 20 (A-D).**

Table 32: Summary of Vegetation Analyses for proposed *Ilex opaca - Carpinus caroliniana* Forest Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	12
Area Sampled (ha)	0.3
Number of Species Recorded Within Plots (Richness)	34
Overall Species Evenness	0.735
Overall Species Diversity	2.593
Herbaceous Vegetation[2]	
Number of Sample Plots	120
Area Sampled (ha)	0.012
Number of Species Recorded Within Plots (Richness)	83
Overall Species Evenness	0.835
Overall Species Diversity	3.691

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 393.33 individual trees per ha, which comprise a total basal area of 21.88 m^2 per ha. The overstory stratum in this alliance is dominated by American holly, which is composed of 203.33 trees per ha and contributes 17.20 m^2 per ha of basal area. American hornbeam is the highest ranking associate species, with an average of 60 trees per ha, contributing 1.40 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include blackgum, sweetgum, and water oak.

The midstory within this alliance contained an average of 1,200 individual trees per ha, comprising 3.52 m^2 of basal area per ha. The midstory stratum is dominated by American holly, with other important species including yaupon holly, American hornbeam, and deciduous holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 7,180 individual shrubs per ha, comprising 0.59 m^2 of basal area per ha. Chinese tallow is the dominant species. Other important species present in the shrub layer of this alliance are yaupon holly, American hornbeam, and sweetgum.

The data shows there is a total of 25.99% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, poison ivy is the dominant species, with 5.30 % of the total ground cover. Other important species present in the herbaceous layer of this alliance are Virginia creeper, young American holly seedlings, and muscadine grape.

This alliance is similar to several other of the bottomland hardwood alliances and associations in the project area. This alliance is present because of natural disturbance and is a successional forest that in time will transition to other bottomland hardwood forest alliances over time.

3.3.20.1 Component Association Within the *Ilex opaca – Carpinus caroliniana* Forest Alliance

There are not any associations for this alliance occurring in Texas that would match the vegetation plot data. Within the vegetation plot data *Ilex opaca* and *Carpinus caroliniana* are consistently dominant or co-dominant and *Liquidambar styraciflua* and *Nyssa sylvatica* are dominant associate species or consistently present in the vegetation plot data. A proposed association for this alliance on the project area could be *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua – Nyssa sylvatica* Forest.

Proposed Association - Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua – Nyssa sylvatica Forest

Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica Forest is the only association of this alliance in the project area. The summary information and sample plot data is the same as the *Ilex opaca – Carpinus caroliniana* Forest Alliance.

3.3.21 *Taxodium distichum* Tidal Woodland Alliance

The *Taxodium distichum* Tidal Woodland Alliance, encompasses approximately 227.40 ha (561.93 ac) of the project area. This alliance contains irregularly flooded tidal woodland marshes that are dominated by tall graminoids or forbs with an open canopy of *Taxodium distichum, Nyssa biflora, Liquidambar styraciflua*, and *Acer rubrum*. This alliance occurs in the southern portion of the project area adjacent to Long Lake Bayou and the lower portion of Ten Mile Bayou. These two drainages, as well as the Neches River south of the LNVA salt water barrier dam, are tidally influenced (per com. Dennis Becker, LNVA, 2011). Because of the tidal influence in these woodlands, they are very productive and the herbaceous layer is diverse and dense (NatureServe, 2011). The swamps and marshes adjacent to the two drainages do receive tidal waters. Tidal influence decreases inland away from these drainages, which results in vegetation community changes within this large complex of swamps, marshes, and low ridges.

Twelve (12) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.3 ha. Thirteen (13) species of woody plants (trees and shrubs) were recorded in these plots. One hundred twenty (120) 1 m x 1 m plots within the twelve 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.012 ha. Sixty-two (62) species of ground layer vegetation were recorded within the one hundred twenty 1 m^2 plots. The data shows there are 1,290 woody plants per ha, comprising 14.53 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.631, Pielou's Evenness Index (J') at 0.636, and a richness value of 13 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.304, Pielou's Evenness Index (J') at 0.801, and a richness value of 62 species.

A typical plot within this alliance is portrayed in **Photo 21**, **Appendix E.** The overall data in the *Taxodium distichum* Tidal Woodland Alliance is summarized in **Table 33**. Summary alliance data is presented in **Appendix A, Table 21(A-D).**

Table 33: Summary of Vegetation Analyses *Taxodium distichum* Tidal Woodland Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	12
Area Sampled (ha)	0.3
Number of Species Recorded Within Plots (Richness)	13
Overall Species Evenness	0.636
Overall Species Diversity	1.631
Herbaceous Vegetation[2]	
Number of Sample Plots	120
Area Sampled (ha)	0.012
Number of Species Recorded Within Plots (Richness)	62
Overall Species Evenness	0.801
Overall Species Diversity	3.304

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 193.33 individual trees per ha, which comprise a total basal area of 13.52 m^2 per ha. The overstory stratum in this alliance is dominated by bald cypress, which is composed of 190 trees per ha and contributes

13.35 m^2 per ha of basal area. Water tupelo is the only other overstory stratum species, which is composed of 3.33 trees per ha, contributing 0.17 m^2 per ha of basal area.

The midstory within this alliance contained an average of 273.33 individual trees per ha, comprising 0.74 m^2 of basal area per ha. The midstory stratum is dominated by bald cypress, with other important species including Chinese tallow, Drummond's red maple, and water elm, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 766.67 individual shrubs per ha, comprising 0.13 m^2 of basal area per ha. The shrub stratum is dominated by bald cypress, with other important species including Drummond's red maple, black willow (*Salix nigra*), and common buttonbush, respectively in order of dominance.

The data shows there is a total of 66.04% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, alligator weed is the dominant species, with 24.15% of the total ground cover. Other important species present in the herbaceous layer of this alliance are giant cutgrass, thread-leaf mock-bishop weed (*Ptilimnium capillaceum*), and common salvinia.

These tidal vegetation communities transition into other swamp alliances and associations, most notably the *Nyssa aquatica – Taxodium distichum* Semi-permanently Flooded Forest Alliance and its component associations. This alliance occurs in a mosaic with the *Zizaniopsis miliacea* Tidal Herbaceous Alliance, along with the other marsh vegetation communities, and the *Nyssa aquatica – Taxodium distichum* Semi-permanently Flooded Forest Alliance.

3.3.21.1 Proposed Association Within the *Taxodium distichum* Tidal Woodland Alliance

There is no association for this alliance occurring in Texas. Based on the vegetation sample plot data, wetland assessment plot data, transect transition data and field observations, a single association could be developed as occurring in the project area. The association is the *Taxodium distichum* / *Alternanthera philoxeroides- Zizaniopsis miliacea* Woodland, since *Taxodium*

Distichum is the most dominant tree, the tree density is low and *Alternanthera philoxeroides* and *Zizaniopsis miliacea* are the most common ground cover species present and are co-dominant species in the herbaceous layer of most of the vegetation plot data collected. In areas where the density of trees is very low and in the adjacent open marsh areas, *Zizaniopsis miliacea* out-competes the *Alternanthera philoxeroides* and is dominant. Conversely, when the tree canopy cover is higher and in many of the forested swamp areas, *Alternanthera philoxeroides* becomes the dominant ground cover species.

Proposed Association - Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea Tidal Woodland

Taxodium distichum / *Alternanthera philoxeroides- Zizaniopsis miliacea* Woodland is the only association of this alliance in the project area. Association description and plot data is the same as for the alliance.

3.3.22 *Arundinaria gigantea* Temporarily Flooded Shrubland Alliance

The *Arundinaria gigantea* Temporarily Flooded Shrubland Alliance, encompasses approximately 0.26 ha (0.64 ac) of the project area. Stands of *Arundinaria gigantea* occur on alluvial and loess soils often affiliated with bottomland hardwood forest vegetation. Historically, it was best developed in streamside flats and alluvial floodplains on ridges and terraces where it was protected from prolonged inundation (NatureServe, 2011). A single mapping unit within the project area has been classified as this alliance.

One (1) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.025 ha. One (1) species of woody plant (trees and shrubs) was recorded in this plot. Ten (10) 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.0010 ha. Thirty-six (36) species of ground layer vegetation were recorded within the ten 1 m^2 plots. The data shows there are 31,600 woody plants per ha, comprising 1.47 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 0.000, Pielou's Evenness Index (J') at 0.000, and a richness value of 1 species. Alliance herbaceous vegetation analysis indices include Shannon-

Weaver's Diversity Index (H') at 3.279, Pielou's Evenness Index (J') at 0.915, and a richness value of 36 species.

A typical plot within this alliance is portrayed in **Photo 22**, **Appendix E.** The overall data in the *Arundinaria gigantea* Temporarily Flooded Shrubland Alliance is summarized in**Table 34**. Summary alliance data is presented in **Appendix A, Table 22 (C-D).**

Table 34: Summary of Vegetation Analyses *Arundinaria gigantea* Temporarily Flooded Shrubland Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	1
Area Sampled (ha)	0.025
Number of Species Recorded Within Plots (Richness)	1
Overall Species Evenness	0.000
Overall Species Diversity	0.000
Herbaceous Vegetation[2]	
Number of Sample Plots	10
Area Sampled (ha)	0.001
Number of Species Recorded Within Plots (Richness)	36
Overall Species Evenness	0.915
Overall Species Diversity	3.279

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The overstory and midstory stratum were not represented in this alliance.

The shrub stratum within this alliance contained an average of 31,600 individual shrubs per ha, comprising 1.47 m^2 of basal area per ha. The shrub stratum, as measured in the one woody vegetation plot, is comprised entirely of giant cane (*Arundinaria gigantea*).

The data shows there is a total of 74.50% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, giant cane is the dominant species, with 18.00% of the total ground cover. Other important species present in the herbaceous layer of this alliance are giant ragweed (*Ambrosia trifida*), southern dewberry, and common ragweed (*Ambrosia artemisifolia*).

This alliance is unique within the project area. The single mapping unit is adjacent to an existing power transmission line right of way. This area was once disturbed and may be mowed or maintained which may be the reason for the lack of trees in the area. NatureServe does not report any NVC associations under this alliance. Additional data would be needed to develop an association classification for this vegetation community.

3.3.23 *Cephalanthus occidentalis* Semi-permanently Flooded Shrubland Alliance

The *Cephalanthus occidentalis* Semi-permanently Flooded Shrubland Alliance, encompasses approximately 16.39 ha (40.51 ac) of the project area. This alliance contains semi-permanently flooded stands dominated by *Cephalanthus occidentalis*. Stands vary from dense, tall-shrub thickets to open shrublands, where canopy cover may reach 25%. This shrubland vegetation occupies shallow water depressions, oxbow ponds, sinkhole ponds, and backwater sloughs of stream and river floodplains throughout swampy forested areas. Inundation is usually continuous throughout the year, but these sites can become dry in mid or late summer or during periods of prolonged drought. Soils can vary in texture from clays to sands, with organic horizons overlying these soils (NatureServe, 2011).

Two (2) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.05 ha. Three (3) species of woody plants (trees and shrubs) were recorded in these plots. Twenty (20) 1 m x 1 m plots within the two 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.002 ha. Twenty-eight (28) species of ground layer vegetation were recorded within the twenty 1 m^2 plots. The data shows there are an average of 3,060 woody plants per ha, comprising 2.04 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 0.678, Pielou's Evenness Index (J') at 0.617, and a richness value of 3 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.939, Pielou's Evenness Index (J') at 0.882, and a richness value of 28 species.

A typical plot within this alliance is portrayed in **Photo 23**, **Appendix E.** The overall data in the *Cephalanthus occidentalis* Semi-permanently Flooded Shrubland Alliance is summarized in **Table 35**. Summary alliance data is presented in **Appendix A, Table 23 (B-D).**

Table 35: Summary of Vegetation Analyses *Cephalanthus occidentalis Semi-permanently* Flooded Shrubland Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	2
Area Sampled (ha)	0.05
Number of Species Recorded Within Plots (Richness)	3
Overall Species Evenness	0.617
Overall Species Diversity	0.678
Herbaceous Vegetation[2]	
Number of Sample Plots	20
Area Sampled (ha)	0.002
Number of Species Recorded Within Plots (Richness)	28
Overall Species Evenness	0.882
Overall Species Diversity	2.939

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The overstory stratum was not represented in this alliance.

The midstory within this alliance contained an average of 500 individual trees per ha, comprising 1.27 m^2 of basal area per ha. The midstory stratum is dominated by common buttonbush and the only other species present is Chinese tallow.

The shrub stratum within this alliance contained an average of 2,400 individual shrubs per ha, comprising 0.58 m^2 of basal area per ha. The shrub stratum is dominated by common buttonbush and the only other species present is Chinese tallow.

The data shows there is a total of 57.38% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, creeping rush (*Juncus repens*) is the dominant species, with 20.50% of the total ground cover. Other important species present in the herbaceous layer of this alliance are honed beakrush, giant cutgrass, and ovate false fiddle-leaf (*Hydrolea ovata*).

This alliance is related to the other alliances and associations with semi-permanently flooded hydrology small inclusions of this alliance may be present within the *Nyssa aquatica – Taxodium distichum* Semi-permanently Flooded Forest Alliance and the *Taxodium distichum* Semi-permanently Flooded Forest Alliance. These areas would include small pockets within the larger swamp complex where the presence of *Cephalanthus occidentalis* is significant and the levels of *Nyssa aquatica* and *Taxodium distichum* decrease significantly.

3.3.23.1Component AssociationWithin the *Cephalanthus occidentalis* Semi-permanently Flooded Shrubland Alliance

The association that matches the vegetation plot data for this alliance is the *Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland. This association corresponds to areas that are considerably dominated by *Cephalanthus occidentalis* with the near absence of trees. Floristically the ground cover species of this association can vary from year to year depending on the hydrology (NatureServe, 2011).

Association - Cephalanthus occidentalis / Carex spp. - Lemna spp. Southern Shrubland

Cephalanthus occidentalis / Carex spp. - *Lemna* spp. Southern Shrubland is the only association of this alliance in the project area. The summary information and sample plot data is the same as the *Cephalanthus occidentalis* Semi-permanently Flooded Shrubland Alliance.

3.3.24 Proposed *Ilex vomitoria* Shrubland Alliance

The *Ilex vomitoria* Shrubland Alliance encompasses approximately 1.45 ha (3.58 ac) of the project area. This alliance occurs in historically *Pinus taeda* dominant areas, where the canopy component was lost to natural and man-made disturbance. This is a successional vegetation community.

Five (5) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.125 ha. Twenty nine (29) species of woody plants (trees and shrubs) were recorded in these plots. Fifty (50) 1 m x 1 m plots within the five 250 m^2 plots were sampled for herbaceous

vegetation, equaling an area of 0.005 ha. Forty five (45) species of ground layer vegetation were recorded within these fifty 1 m^2 plots. The data shows there are 10,824.00 woody plants per ha, comprising 11.32 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.354, Pielou's Evenness Index (J') at 0.402, and a richness value of 29 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.285, Pielou's Evenness Index (J') at 0.863, and a richness value of 45 species.

A typical plot within this alliance is portrayed in **Photo 24**, **Appendix E.** The overall data in the *Ilex vomitoria* Shrubland Alliance is summarized in **Table 36**. Summary alliance data is presented in **Appendix A, Table 24 (A-D).**

Table 36: Summary of Vegetation Analyses *Ilex vomitoria* Shrubland Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	5
Area Sampled (ha)	0.125
Number of Species Recorded Within Plots (Richness)	29
Overall Species Evenness	0.402
Overall Species Diversity	1.354
Herbaceous Vegetation[2]	
Number of Sample Plots	50
Area Sampled (ha)	0.005
Number of Species Recorded Within Plots (Richness)	45
Overall Species Evenness	0.863
Overall Species Diversity	3.285

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 184individual trees per ha, which comprise a total basal area of 4.52 m^2 per ha. The overstory stratum in this alliance is dominated by yaupon holly, which is composed of 80 trees per ha, contributing 1.06 m^2 per ha of basal area. American hornbeam is the highest ranking associate species, with an average of 40 trees per ha, contributing 0.92 m^2 per ha of basal area. Other important species, listed in the order of dominance in the overstory, include redbay (*Persea borbonia*), southern magnolia (*Magnolia grandiflora*), and loblolly pine.

The midstory within this alliance contained an average of 1,656.00 individual trees per ha, comprising 5.37 m^2 of basal area per ha. The midstory stratum is dominated by yaupon holly, with other important species including sweetgum, Chinese tallow, and American holly, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 8,512individual shrubs per ha, comprising 0.97 m^2 of basal area per ha. Yaupon holly was the dominant species. Other important species present in the shrub stratum of this alliance included American beautyberry, muscadine grape, and western soapberry (*Sapindus saponaria var. drummondii*).

The data shows there is a total of 13.44% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, yaupon holly is the dominant species, with 2.45% of the total ground cover. Other important species present in the herbaceous layer of this alliance are American beautyberry, muscadine grape, and basketgrass.

The proposed *Ilex vomitoria* Shrubland Alliance is related to the other alliance and associations caused by disturbance. The vegetation community may regenerate back to pine or oak dominant upland habitat.

There is no association for this proposed alliance. The vegetation plot data within each of the five plots show that *Ilex vomitoria* is significantly dominant. The associate species between the five plots vary a great deal with no clear dominant associate species. Additional data would be needed to develop an association for this alliance within the project area.

3.3.25 *Cynodon dactylon* Herbaceous Alliance

The *Cynodon dactylon* Herbaceous Alliance encompasses approximately 0.92 ha (2.27 ac) of the project area. This alliance occurs in artificial, man-made, and maintained situations, as that are dominated by the introduced and naturalized species, Bermuda grass (*Cynodon dactylon*), including pastures, lawns, golf courses and roadsides, as well as, in natural situations. The map units of this alliance occur on narrow edge sandbars on the Neches River. This alliance can

occur within the *Paspalum notatum* Herbaceous Alliance and other open areas dominated by grassy species. This alliance can occur on a variety of soils but the project area it occurs on deep sandy soils.

Two (2) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.05 ha. Three (3) species of woody plants (trees and shrubs) were recorded in these plots. Twenty (20) 1 m x 1 m plots within the two 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.002 ha. Fifty six (56) species of ground layer vegetation were recorded within these twenty 1 m^2 plots. The data shows there are 1,060 woody plants per ha, comprising 0.15 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.045, Pielou's Evenness Index (J') at 0.951, and a richness value of 3 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.606, Pielou's Evenness Index (J') at 0.896, and a richness value of 56 species.

A typical plot within this alliance is portrayed in **Photo 25**, **Appendix E.** The overall data in the *Cynodon dactylon* Herbaceous Alliance is summarized in **Table 37**. Summary alliance data is presented in **Appendix A, Table 25 (B-D).**

Table 37: Summary of Vegetation Analyses *Cynodon dactylon* Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	2
Area Sampled (ha)	0.05
Number of Species Recorded Within Plots (Richness)	3
Overall Species Evenness	0.951
Overall Species Diversity	1.045
Herbaceous Vegetation[2]	
Number of Sample Plots	20
Area Sampled (ha)	0.002
Number of Species Recorded Within Plots (Richness)	56
Overall Species Evenness	0.896
Overall Species Diversity	3.606

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The overstory stratum was not represented in this alliance.

The midstory within this alliance contained an average of 40.00 individual trees per ha, comprising 0.03 m^2 of basal area per ha. The midstory stratum is dominated by loblolly pine, with no other species observed in this stratum.

The shrub stratum within this alliance contained an average of 1,000individual shrubs per ha, comprising 0.11 m^2 of basal area per ha. Yaupon holly was the dominant species. Other important species present in the shrub stratum of this alliance included loblolly pine, and eastern baccharis (*Baccharis halimifolia*), with no other species being observed in this strata.

The data shows there is a total of 61.25% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, Bermudagrass is the dominant species, with 18.38% of the total ground cover. Other important species present in the herbaceous layer of this alliance are rough buttonweed (*Diodia teres*), common ragweed, and hogwart (*Croton capitatus*).

This alliance is similar to the *Paspalum notatum* Herbaceous Alliance and the Mixed Herbaceous Alliance. The *Paspalum notatum* Herbaceous Alliance is dominated by the Bahia grass (*Paspalum notatum*) with a mixture of other associate grass and forb species. The Mixed Herbaceous Alliance is mixture of grass and forb species with no apparent dominant species.

NatureServe does not list any NVC associations for this alliance.

3.3.26 *Panicum virgatum* Temporarily Flooded Herbaceous Alliance

The *Panicum virgatum* Temporarily Flooded Herbaceous Alliance encompasses approximately 5.70 ha (14.08 ac) of the project area. This alliance includes vegetation communities on sandy flats on the edges of the Neches River and Village Creek that are dominated by tall grass species, most notable is red top panicgrass (*Panicum rigidulum*), dallisgrass (*Paspalum urvillei*), and coast cockspur grass (*Echinochloa walterii*) mixed with several herbaceous species. This alliance periodically floods for short durations. This alliance occurs on deep sandy soils.

Two (2) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.05 ha. No species of woody plants (trees or shrubs) were recorded in these plots. Twenty (twenty) 1 m x 1 m plots within the two 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.002 ha. Forty nine (49) species of ground layer vegetation were recorded within these twenty 1 m^2 plots. The data shows there are no woody plants per ha, comprising 0.00 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 0.000, Pielou's Evenness Index (J') at 0.000, and a richness value of 0 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.446, Pielou's Evenness Index (J') at 0.885, and a richness value of 49 species.

A typical plot within this alliance is portrayed in **Photo 26**, **Appendix D.** The overall data in the *Panicum virgatum* Temporarily Flooded Herbaceous Alliance is summarized in **Table 38**. Summary alliance data is presented in **Appendix A, Table 26 (D).**

Table 38: Summary of Vegetation Analyses *Panicum virgatum* Temporarily Flooded Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	2
Area Sampled (ha)	0.05
Number of Species Recorded Within Plots (Richness)	0
Overall Species Evenness	0.000
Overall Species Diversity	0.000
Herbaceous Vegetation[2]	
Number of Sample Plots	20
Area Sampled (ha)	0.002
Number of Species Recorded Within Plots (Richness)	49
Overall Species Evenness	0.885
Overall Species Diversity	3.446

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The overstory, midstory, and shrub strata were not represented in this alliance.

The data shows there is a total of 68.50% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, redtop panicum is the dominant species, with 13.50%

of the total ground cover. Other important species present in the herbaceous layer of this alliance are shrubby water-primrose (*Ludwigia octovalvis*), swamp smartweed, and sheathed flatsedge (*Cyperus haspan*).

This alliance occurs in association with the *Cynodon dactylon* Herbaceous Alliance and the *Betula nigra*-dominant river edge vegetation communities. This herbaceous alliance occurs on lower elevation sandy flats on the edge of the Neches River and Village Creek, where the *Cynodon dactylon* Herbaceous Alliance occurs on higher elevation sandy flats on the edge of the Neches River and Village Creek. The *Betula nigra* dominant river edge vegetation communities occur just inland of these alliances.

3.3.26.1Component Association Within the *Panicum virgatum* Temporarily Flooded Herbaceous Alliance

The component association for this alliance is the *Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation. NatureServe reports this association as occurring on sand bars of the Mississippi coastal plain, and potentially other states. In the project area of southeast Texas, *Panicum virgatum* is absent. Association description and plot data is the same as for the alliance.

Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides Herbaceous Vegetation

Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides Herbaceous Vegetation is the only association of this alliance in the project area. The summary information and sample plot data is the same as the *Panicum virgatum* Temporarily Flooded Herbaceous Alliance.

3.3.27 *Paspalum notatum* Herbaceous Alliance

The *Paspalum notatum* Herbaceous Alliance, encompasses approximately 51.05 ha (126.16 ac) of the project area. This alliance occurs in artificial, man-made, and maintained habitats that are dominated by the introduced grass Bahia grass including pastures, lawns and roadsides. The map units of this alliance include the open maintained areas of the Houseman Tract. These areas are

often mowed and the surrounding woody vegetation trimmed and/or cut. This alliance occurs on a wide variety of soils and sites in uplands of the southeastern coastal plain (NatureServe, 2011).

Seven (17) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.175 ha. Fourteen (14) species of woody plants (trees and shrubs) were recorded in these plots. Seventy (70) 1 m x 1 m plots within the seven 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.007 ha. Eighty-seven (87) species of ground layer vegetation were recorded within the seventy 1 m^2 plots. The data shows there are 1748.57 woody plants per ha, comprising 0.53 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.259, Pielou's Evenness Index (J') at 0.856, and a richness value of 14 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.773, Pielou's Evenness Index (J') at 0.845, and a richness value of 87 species.

A typical plot within this alliance is portrayed in **Photo 27**, **Appendix E.** The overall data in the *Paspalum notatum* Herbaceous Alliance is summarized in **Table 39**. Summary alliance data is presented in **Appendix A, Table 27 (A-D).**

Table 39: Summary of Vegetation Analyses *Paspalum notatum* Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	7
Area Sampled (ha)	0.175
Number of Species Recorded Within Plots (Richness)	14
Overall Species Evenness	0.856
Overall Species Diversity	2.259
Herbaceous Vegetation[2]	
Number of Sample Plots	70
Area Sampled (ha)	0.007
Number of Species Recorded Within Plots (Richness)	87
Overall Species Evenness	0.845
Overall Species Diversity	3.773

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The overstory stratum was not represented in this alliance.

The midstory within this alliance contained an average of 154.29 individual trees per ha, comprising 0.31 m^2 of basal area per ha. The midstory stratum is dominated by loblolly pine, with other important species including Chinese tallow, water oak, and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 1485.71 individual shrubs per ha, comprising 0.19 m^2 of basal area per ha. The shrub stratum is dominated by sweetgum, with other important species including highbush blackberry, water oak, and indigobush (*Amorpha fruticosa*), respectively in order of dominance.

The data shows there is a total of 65.14% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, Bahiagrass is the dominant species, with 4.43% of the total ground cover. Other important species present in the herbaceous layer of this alliance are highbush blackberry, southern dewberry, and yaupon holly.

This alliance is similar to the *Cynodon dactylon* Herbaceous Alliance and the Upland Mixed Herbaceous Alliance. The *Cynodon dactylon* Herbaceous Alliance is dominated by the Bermuda grass (*Cynodon dactylon*) with a mixture of other associate grass and forb species. The Upland Mixed Herbaceous Alliance is mixture of grass and forb species with no apparent dominant species.

NatureServe does not list any NVC associations for this alliance.

3.3.28 Proposed *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance

The *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance encompasses approximately 1.53 ha (3.79 ac) of the project area within a single mapping unit. This is a herbaceous species dominated marsh, located within an electrical transmission right of way. This alliance occurs in low-lying, seasonally flooded marsh areas of the project area, consisting mostly of small inclusions with in other woodland and marsh alliances and associations. This

marsh area is present in the project area as small inclusions within herbaceous marsh alliances and associations.

One (1) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.025 ha. Three (3) species of woody plants (trees and shrubs) were recorded in this plot. Ten (10) 1 m x 1 m plots within the 250 m^2 plot was sampled for herbaceous vegetation, equaling an area of 0.001 ha. Five (5) species of ground layer vegetation were recorded within the ten 1 m^2 plots. The data shows there are 1,240 woody plants per ha, comprising 1.91 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 0.758, Pielou's Evenness Index (J') at 0.690, and a richness value of 3 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 0.994, Pielou's Evenness Index (J') at 0.618, and a richness value of 5 species.

A typical plot within this alliance is portrayed in **Photo 28**, **Appendix E.** The overall data in the *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance is summarized in **Table 40**. Summary alliance data is presented in **Appendix A, Table 28 (A-C-D).**

Table 40: Summary of Vegetation Analyses *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	1
Area Sampled (ha)	0.025
Number of Species Recorded Within Plots (Richness)	3
Overall Species Evenness	0.690
Overall Species Diversity	0.758
Herbaceous Vegetation[2]	
Number of Sample Plots	10
Area Sampled (ha)	0.001
Number of Species Recorded Within Plots (Richness)	5
Overall Species Evenness	0.618
Overall Species Diversity	0.994

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are an average of 40 individual trees per ha, which comprise a total basal area of 1.80 m^2 per ha. The overstory stratum in this alliance is dominated by swamp blackgum, which is the only species recorded in this strata. One double-boled tree was present in the vegetation sampling plot.

The midstory stratum was not represented in this alliance.

The shrub stratum within this alliance contained an average of 1,200 individual shrubs per ha, comprising 0.11 m^2 of basal area per ha. The shrub stratum is dominated by Chinese tallow, with the only other species recorded being common buttonbush. The shrub layer consisted of one double boled Chinese tallow and two small buttonbush seedlings.

The data shows there is a total of 14.50% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, horned beakrush (*Rhynchospora corniculata*) is the dominant species, with 13.50% of the total ground cover. Other important species present in the herbaceous layer of this alliance are common buttonbush, Drummond's red maple, and smartweed.

This alliance is similar to the other freshwater seasonally to semi-permanently flooded marsh alliances, which would include the *Sagittaria lanceifolia* Semi-permanently Flooded Herbaceous Alliance.

There is no association for this proposed alliance. There was a single plot within the project area with this vegetation community. Additional plot data would be necessary to develop an association for this alliance.

3.3.29 *Zizaniopsis miliacea* Tidal Herbaceous Alliance

The *Zizaniopsis miliacea* Tidal Herbaceous Alliance, encompasses approximately 263.73 ha (651.68 ac) of the project area. This alliance occurs predominantly south of the salt water barrier and in close proximity to the Neches River and its tributaries (Long Lake Bayou and Ten Mile Creek) within the project area. This community comprises tidal marshes, often occurring as

fringe marshes, where water levels are stabilized by daily tides or other phenomena (NatureServe, 2011). Salinities can vary greatly within these marshes, ranging from low intermediate levels to upper brackish levels (per com. Dennis Becker, LNVA, 2011). Salinities levels decrease with an increase in fresh water inflow from the Neches River and Ten Mile Creek.

Seventeen (17) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.425 ha. Nine (9) species of woody plants (trees and shrubs) were recorded in these plots. One hundred seventy (170) 1 m x 1 m plots within the seventeen 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.017 ha. Sixty-five (65) species of ground layer vegetation were recorded within the one hundred seventy 1 m^2 plots. The data shows there are 632.94 woody plants per ha, comprising 3.75 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.267, Pielou's Evenness Index (J') at 0.577, and a richness value of 9 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.853, Pielou's Evenness Index (J') at 0.684, and a richness value of 65 species.

A typical plot within this alliance is portrayed in **Photo 29**, **Appendix E.** The overall data in the *Zizaniopsis miliacea* Tidal Herbaceous Alliance is summarized in **Table 41**. Summary alliance data is presented in **Appendix A, Table 29 (A-D).**

Table 41: Summary of Vegetation Analyses *Zizaniopsis miliacea* Tidal Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	17
Area Sampled (ha)	0.425
Number of Species Recorded Within Plots (Richness)	9
Overall Species Evenness	0.577
Overall Species Diversity	1.267
Herbaceous Vegetation[2]	
Number of Sample Plots	170
Area Sampled (ha)	0.017
Number of Species Recorded Within Plots (Richness)	65
Overall Species Evenness	0.684

Table 41: Summary of Vegetation Analyses *Zizaniopsis miliacea* Tidal Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Overall Species Diversity	2.853

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 56.47 individual trees per ha, which comprise a total basal area of 3.42 m^2 per ha. The overstory stratum in this alliance is dominated by bald cypress, which is composed of 42.35 trees per ha and contributes 2.91 m^2 per ha of basal area. Water tupelo is the only other overstory stratum species, which is composed of 14.12 trees per ha, contributing 0.51 m^2 per ha of basal area.

The midstory within this alliance contained an average of 94.47 individual trees per ha, comprising 0.25 m^2 of basal area per ha. The midstory stratum is dominated by bald cypress, with other important species including green ash, water elm, and southern wax myrtle, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 447.06 individual shrubs per ha, comprising 0.06 m^2 of basal area per ha. The shrub stratum is dominated by bald cypress, with other important species including Drummond's sesbania (*Sesbania drummondii*), Virginia sweetspire (*Itea virginica*), and Drummond's red maple, respectively in order of dominance.

The data shows there is a total of 65.88% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, giant cutgrass is the dominant species, with 30.25% of the total ground cover. Other important species present in the herbaceous layer of this alliance are alligator weed, thread-leaf mock-bishop's weed, and common salvinia.

The vegetation of this alliance is dominated by the herbaceous layer with giant cutgrass and alligator weed together totaling more than 50% of the total groundcover. Woody species are sparse in this alliance; the overstory, midstory, and shrub layers have sparse, scattered bald cypress.

This alliance is similar to the other tidal alliances and associations occurring in the southern most portion of the project area. Related vegetation communities would include the *Taxodium distichum* Semi-permanently Flooded Woodland Alliance, *Sagittaria lancifolia* Seasonally flooded Herbaceous Alliance, *Alternanthera philoxeroides* Semi-permanently Flooded Herbaceous Alliance, and the *Schoenoplectus californicus* Semi-permanently Flooded Herbaceous Alliance, along with their component associations. All of these vegetation communities along with the *Nyssa aquatica – Taxodium distichum* Semi-permanently Flooded Forest Alliance and its component associations can occur as a mosaic within the same area or the same mapping unit.

3.3.29.1 Component Association Within the *Zizaniopsis miliacea* Tidal Herbaceous Alliance

The component association for this alliance is the *Zizaniopsis miliacea* Tidal Herbaceous Vegetation, which accommodates all tidal herbaceous march dominated by *Zizaniopsis miliacea*.

Zizaniopsis miliacea Tidal Herbaceous Vegetation

Zizaniopsis miliacea Tidal Herbaceous Vegetation is the only associationof this alliance in the project area. The summary information and sample plot data is the same as the *Zizaniopsis miliacea* Tidal Herbaceous Alliance.

3.3.30 *Alternanthera philoxeroides* Semi-permanently Flooded Herbaceous Alliance

The *Alternanthera philoxeroides* Semi-permanently Flooded Herbaceous Alliance, encompasses approximately 33.06 ha (13.38 ac) of the project area. This alliance exists in shallow water of the upper reaches of artificial impoundments, as well as in slow-moving water of streams in the Coastal Plain (NatureServe, 2011). In the project area, this vegetation community occurs in association with the *Zizaniopsis miliacea* Tidal Herbaceous Alliance. This alliance covers those herbaceous vegetation communities where the *Alternanthera philoxeroides* average ground cover is higher than *Zizaniopsis miliacea* and other dominant species. *Alternanthera philoxeroides*is the dominant species under a more shady canopy of the swamps, but this alliance covers shaded marsh areas where it out competes the *Zizaniopsis miliacea*.

Seven (7) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.175 ha. Six (6) species of woody plants (trees and shrubs) were recorded in these plots. Seventy (70) 1 m x 1 m plots within the seven 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.0070 ha. Forty two (42) species of ground layer vegetation were recorded within the seventy 1 m^2 plots. The data shows there are 526 woody plants per ha, comprising 5.12 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.458, Pielou's Evenness Index (J') at 0.814, and a richness value of 6 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.043, Pielou's Evenness Index (J') at 0.814, and a richness value of 186 species.

A typical plot within this alliance is portrayed in **Photo 30**, **Appendix E.** The overall data in the *Alternanthera philoxeroides* Semi-permanently Flooded Herbaceous Alliance is summarized in **Table 42**. Summary alliance data is presented in **Appendix A, Table 30 (A-D).**

Table 42: Summary of Vegetation Analyses *Alternanthera philoxeroides* Semi-permanently Flooded Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	7
Area Sampled (ha)	0.175
Number of Species Recorded Within Plots (Richness)	6
Overall Species Evenness	0.814
Overall Species Diversity	1.458
Herbaceous Vegetation[2]	
Number of Sample Plots	70
Area Sampled (ha)	0.007
Number of Species Recorded Within Plots (Richness)	42
Overall Species Evenness	0.814
Overall Species Diversity	3.043

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 40 individual trees per ha, which comprise a total basal area of 4.94 m^2 per ha. The overstory stratum in this alliance is

dominated by bald cypress, which is composed of 34.29 trees per ha and contributes 3.86 m^2 per ha of basal area. Water tupelo is the only other overstory stratum species, which is composed of 5.71 trees per ha, contributing 1.08 m^2 per ha of basal area.

The midstory within this alliance contained an average of 69 individual trees per ha, comprising 0.14 m^2 of basal area per ha. The midstory stratum is dominated by bald cypress, with other important species including southern wax myrtle, green ash, and Drummond's red maple, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 400 individual shrubs per ha, comprising 0.03 m^2 of basal area per ha. The shrub stratum is dominated by Drummond's red maple, with other important species including Drummond's sesbania and green ash, respectively in order of dominance.

The data shows there is a total of 69.29% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, alligator weed is the dominant species, with 30.70% of the total ground cover. Other important species present in the herbaceous layer of this alliance are giant cutgrass, Thread-leaf mock-bishop's weed, and common arrowhead (*Sagittaria latifolia*).

This alliance is similar to the other tidal alliances and associations occurring in the southern most portion of the project area. Related vegetation communities would include the *Taxodium distichum* Semi-permanently Flooded Woodland Alliance, *Zizaniopsis miliacea* Tidal Herbaceous Alliance, *Sagittaria lancifolia* Seasonally flooded Herbaceous Alliance, and the *Schoenoplectus californicus*Semi-permanently Flooded Herbaceous Alliance along with their component associations. All of these vegetation communities along with the *Nyssa aquatica – Taxodium distichum* Semi-permanently Flooded Forest Alliance and its component associations can occur as a mosaic within the same area or the same mapping unit.

NatureServe does not report a component association for this alliance.

3.3.31 *Sagittaria lancifolia* Semi-permanently Flooded Herbaceous Alliance

Sagittaria lancifolia Semi-permanently Flooded Herbaceous Alliance, encompasses approximately 0.87 ha (0.35 ac) of the project area. This alliance consists of marshes occurring in shallow freshwater with little variation in water level dominated by *Sagittaria lancifolia* (NatureServe, 2011).

One (1) 25 m x 10 m rectangular plot was sampled for woody vegetation, equaling an area of 0.0025 ha. No species of woody plants (trees and shrubs) were recorded in this plot. Ten (10) 1 m x 1 m plots within the 250 m^2 plot were sampled for herbaceous vegetation, equaling an area of 0.001 ha. Twelve (12) species of ground layer vegetation were recorded within the ten 1 m^2 plots. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 2.237, Pielou's Evenness Index (J') at 0.900, and a richness value of 12 species.

A typical plot within this alliance is portrayed in **Photo 31**, **Appendix E.** The overall data in the *Sagittaria lancifolia* Semi-permanently Flooded Herbaceous Alliance is summarized in **Table 43**. Summary alliance data is presented in **Appendix A, Table 31 (D).**

Table 43: Summary of Vegetation Analyses *Sagitaria lancifolia* Semi-permanently Flooded Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Woody Vegetation[1]	
Number of Sample Plots	1
Area Sampled (ha)	0.025
Number of Species Recorded Within Plots (Richness)	0
Overall Species Evenness	NA
Overall Species Diversity	NA
Herbaceous Vegetation[2]	
Number of Sample Plots	10
Area Sampled (ha)	0.001
Number of Species Recorded Within Plots (Richness)	12
Overall Species Evenness	0.900
Overall Species Diversity	2.237

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.
[3] No woody vegetation was present in the sample plot, therefore species evenness and diversity values are not available

The overstory, midstory, and shrub stratum were not represented in this alliance.

The data shows there is a total of 66.5% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, lance-leaf arrowhead (*Sagittaria lancifolia*) is the dominant species, with 22.9% of the total ground cover. Other important species present in the herbaceous layer of this alliance are alligator weed, thread-leaf mock-bishop's weed, and square-culm spikerush (*Eleocharis quadrangulata*).

In the project area, this occurs in association within the alliance *Schoenoplectus californicus* Tidal Herbaceous Alliance and *Zizaniopsis miliacea* Tidal Herbaceous Alliance and is therefore not represented on the project maps. This alliance was included because a single plot was classified as this alliance. However, this alliance could not be mapped because the location of this vegetation community within the interior of the *Schoenoplectus californicus* Tidal Herbaceous Alliance and there is not a distinguishable difference in the signatures on the CIR aerial photography. The *Schoenoplectus californicus* Tidal Herbaceous Alliance was mapped because it was the larger of the two vegetation communities.

3.3.30.1Component AssociationWithin the *Sagittaria lancifolia* Semi-permanently Flooded Herbaceous Alliance

The component association for this alliance is the *Sagittaria lancifolia* Herbaceous Vegetation, which accommodates all herbaceous marsh dominated by *Sagittaria lancifolia*.

Sagittaria lancifolia Herbaceous Vegetation

Sagittaria lancifolia Herbaceous Vegetation is the only component association for this alliance in the project area. The summary information and sample plot data is the same as the *Sagittaria lancifolia* Semi-permanently Flooded Herbaceous Alliance.

3.3.32 Proposed Mixed Herbaceous Alliance

Upland Mixed Herbaceous Alliance, encompasses approximately 22.90 ha (56.58 ac) of the project area. This alliance occurs in artificial man-made and maintained habitats such as power transmission line and pipeline right of ways. These anthropogenically-created and maintained areas provide a habitat for a unique variety of dominantly herbaceous plants that would not normally exist naturally. Within this vegetation community, the species diversity is high without a clear dominant species to classify the individual vegetation plot data, so these plots were grouped together as the Mixed Herbaceous Alliance.

Eight (8) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.2 ha. Ten (10) species of woody plants (trees and shrubs) were recorded in these plots. Eighty (80) 1 m x 1 m plots within the eight 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.008 ha. One hundred eighty six (186) species of ground layer vegetation were recorded within the eighty 1 m^2 plots. The data shows there are 2,575 woody plants per ha, comprising 1.40 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 1.812, Pielou's Evenness Index (J') at 0.787, and a richness value of 10 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 4.696, Pielou's Evenness Index (J') at 0.899, and a richness value of 186 species.

A typical plot within this alliance is portrayed in **Photo 32**, **Appendix E.** The overall data in the Upland Mixed Herbaceous Alliance is summarized in **Table 44**. Summary alliance data is presented in **Appendix A, Table 32 (A-D).**

Table 44: Summary of Vegetation Analyses Mixed Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	8
Area Sampled (ha)	0.02
Number of Species Recorded Within Plots (Richness)	10
Overall Species Evenness	0.787
Overall Species Diversity	1.812

Table 44: Summary of Vegetation Analyses Mixed Herbaceous Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Herbaceous Vegetation[2]	
Number of Sample Plots	80
Area Sampled (ha)	0.008
Number of Species Recorded Within Plots (Richness)	186
Overall Species Evenness	0.899
Overall Species Diversity	4.696

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 10 individual trees per ha, which comprise a total basal area of 0.56 m^2 per ha. The overstory stratum in this alliance is dominated by loblolly pine, which is composed of 5.00 trees per ha and contributes 0.35 m^2 per ha of basal area. White oak is the only other overstory stratum species, which is composed of 5trees per ha, contributing 0.21 m^2 per ha of basal area.

The midstory within this alliance contained an average of 155 individual trees per ha, comprising 0.24 m^2 of basal area per ha. The midstory stratum is dominated by loblolly pine, with other important species including eastern baccharis and sweetgum, respectively in order of dominance.

The shrub stratum within this alliance contained an average of 2,350 individual shrubs per ha, comprising 0.55 m^2 of basal area per ha. The shrub stratum is dominated by eastern baccharis, with other important species including loblolly pine, bitternut hickory (*Caryacordiformis*), and yaupon holly, respectively in order of dominance.

The data shows there is a total of 62.18% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, trumpet creeper is the dominant species, with 7.16% of the total ground cover. Other important species present in the herbaceous layer of this alliance are common ragweed, bushy bluestem (*Andropogon glomeratus*), and yaupon holly.

In the project area, the Mixed Herbaceous Alliance occurs in man-made and maintained vegetation alliance. These areas are often mowed and the surrounding woody vegetation trimmed and/or cut.

There is no association for this proposed alliance. Within these high diversity plots, the data did not demonstrate a clear dominant species from one plot to the other. Additional plot data would be necessary to develop an association for this alliance.

3.3.33 Proposed Mixed Herbaceous Temporarily Flooded Alliance

The proposed Mixed Herbaceous Temporarily Flooded Alliance, encompasses approximately 14.59 ha (36.09 ac) of the project area. This alliance occurs in artificial man-made and maintained habitats such as electric transmission line and pipeline right of ways. These anthropogenically-created and maintained areas provide a habitat for a unique variety of dominantly herbaceous plants that would not normally exist naturally. Like the proposed Mixed Herbaceous Alliance, this vegetation community, has high species diversity without a clear dominant species to classify the individual vegetation plot data, so these plots were grouped together as the Mixed Herbaceous Temporarily Flooded Alliance.

Two (2) 25 m x 10 m rectangular plots were sampled for woody vegetation, equaling an area of 0.05 ha. Two (2) species of woody plants (trees and shrubs) were recorded in these plots. Twenty (20) 1 m x 1 m plots within the two 250 m^2 plots were sampled for herbaceous vegetation, equaling an area of 0.002 ha. Sixty four (64) species of ground layer vegetation were recorded within the twenty 1 m^2 plots. The data shows there are 820 woody plants per ha, comprising 10.03 m^2 per ha of basal area for all three woody strata. Alliance woody vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 0.115, Pielou's Evenness Index (J') at 0.165, and a richness value of 2 species. Alliance herbaceous vegetation analysis indices include Shannon-Weaver's Diversity Index (H') at 3.870, Pielou's Evenness Index (J') at 0.931, and a richness value of 64 species.

A typical plot within this alliance is portrayed in **Photo 33**, **Appendix E.** The overall data in the proposed Mixed Herbaceous Temporarily Flooded Alliance is summarized in **Table 45**. Summary alliance data is presented in **Appendix A, Table 33 (A-D).**

Table 45:Summary of Vegetation Analyses Mixed Herbaceous Temporarily Flooded Alliance, Beaumont Unit and Adjacent Lands, Big Thicket National Preserve, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011	
Woody Vegetation[1]	
Number of Sample Plots	2
Area Sampled (ha)	0.05
Number of Species Recorded Within Plots (Richness)	2
Overall Species Evenness	0.165
Overall Species Diversity	0.115
Herbaceous Vegetation[2]	
Number of Sample Plots	20
Area Sampled (ha)	0.002
Number of Species Recorded Within Plots (Richness)	64
Overall Species Evenness	0.931
Overall Species Diversity	3.870

[1] Woody vegetation was sampled in 10 m x 25 m (250 m^2) rectangular plot.
[2] Herbaceous vegetation was sampled within ten 1 m x 1 m (1 m^2) square sub-plots of the 250 m^2 rectangular plot.

The data for the overstory stratum within this alliance indicates there are 200 individual trees per ha, which comprise a total basal area of 9.95 m^2 per ha. The overstory stratum, as measured in the two (2) woody vegetation plots, in this alliance is composed entirely of by eastern baccharis, which is composed of 5.00 trees per ha and contributes 0.35 m^2 per ha of basal area.

The midstory within this alliance contained an average of 20 individual trees per ha, comprising 0.03 m^2 of basal area per ha. The midstory stratum, as measured in the two (2) woody vegetation plots, is comprised entirely of black willow (*Salix nigra*).

The shrub stratum within this alliance contained an average of 600 individual shrubs per ha, comprising 0.06 m^2 of basal area per ha. The midstory stratum, as measured in the two (2) woody vegetation plots, is comprised entirely of eastern baccharis.

The data shows there is a total of 95.85% ground cover provided by herbaceous vegetation in this alliance. Within the herbaceous layer, mountain spikerush (*Eleocharis montana*) is the dominant species, with 95.85% of the total ground cover. Other important species present in the herbaceous layer of this alliance are sand spikerush (*Eleocharis montevidensis*), open flatsedge (*Cyperus entrerianus*), and bushy bluestem.

In the project area, the Mixed Herbaceous Temporarily Flooded Alliance occurs in man-made and maintained vegetation alliance. These areas are often mowed and the surrounding woody vegetation trimmed and/or cut.

There is no association for this proposed alliance. Within these high diversity plots, the data does not demonstrate a clear dominant species from one plot to the other. Additional plot data would be necessary to develop an association for this alliance.

3.4 OTHER VEGETATION COMMUNITIES PRESENT

Within the project mapping there are several other vegetation communities that are present. The presence of these vegetation communities are based on qualitative data collected in the wetland assessment plots and transect transition data. Vegetation sample plot data was not collected for these vegetation communities. In most cases, these vegetation communities are small inclusions within a more predominant area. The following is a brief description of each of these vegetation communities based on qualitative data and NatureServe descriptions.

3.4.1 *Planera aquatica* Seasonally Flooded Forest

Within the project area, the *Planera aquatica* Seasonally Flooded Forest vegetation community occurs in association with the *Taxodium distichum*– (*Nyssa aquatica*) / *Forestiera acuminata* – *Planera aquatica* Forest association within the *Nyssa aquatica* – *Taxodium distichum* Semi-permanently Flood Forest Alliance. This vegetation community occurs in areas that are dominated by water elm (*Planera aquatica*). *Nyssa aquatica, Taxodium distichum*, and other associate swamp species are present at low levels or are absent from the area. This vegetation community is classified from a single wetland assessment plot in the southern portion of the Beaumont Island. Other small isolated areas containing similar characteristics could be present in the larger alliance and association mapping units. The potential association for this alliance is the *Planera aquatica* Semi-permanently Flooded Forest.

Stands of these short-statured forests are dominated by *Planera aquatica*. They sometimes have a scattered emergent canopy of *Taxodium distichum, Nyssa biflora, Acer rubrum, Fraxinus caroliniana, Liquidambar styraciflua, Carya aquatica*, and *Fraxinus pennsylvanica*, among others. The herbaceous layer in these forests is sparse. At least some occurrences arise in backswamps and sloughs formerly dominated by the associated swamp species, but due to rapid siltation, they experience severe hydrologic modification that results in shifts in dominance toward water elm (NatureServe, 2011). This alliance's presence on in project area is more likely because of the elevation of the area and natural vegetation variation within the swamp complex.

3.4.2 *Salix nigra* Temporarily Flooded Forest

The *Salix nigra* Temporarily Flooded Forest vegetation community occurs along the edge of the Neches River within the project area. Occurrences of this community are narrow, linear bands of vegetation on alluvial bars and river edges. NatureServe reports that this vegetation community occurs in small isolated positions on riverfront areas and front-lands of islands which are actively accreting. This is often an early-successional community, but its regeneration and survival depend on natural flooding and hydrologic regimes being maintained. This early sere vegetation community can transition to bottomland hardwood habitat (NatureServe, 2011).

This vegetation community consists of mostly *Salix nigra* and *Betula nigra*, with other associate species that includes *Quercus Lyrata, Taxodium distichum,* and *Carya aquatica* with sparse ground cover. It was identified in the project area by wetland assessment plot data and transect transition data.

3.4.3 *Eleocharis cellulosa* Herbaceous Vegetation

Within the project area, this vegetation community occurs in association with the *Zizaniopsis miliacea* Herbaceous Vegetation Alliance and the other tidally-influenced marsh vegetation communities. This vegetation community occurs in areas that are dominated or co-dominated by Gulf Coast spikerush (*Eleocharis cellulosa*) and may be a variant vegetation community of the *Zizaniopsis miliacea* Herbaceous Vegetation. This vegetation community was classified from wetland assessment plot data. Other small isolated areas containing similar characteristics could

be present in the larger *Zizaniopsis miliacea* Herbaceous Vegetation Alliance mapping units. All of the *Eleocharis cellulosa* dominant alliances and associations occur in Florida. The *Eleocharis cellulosa* Herbaceous Vegetation association that occurs in Florida is basically a mono-specific stand of this species on the banks of lakes and ponds, which does not fit the situation present in the project area (NatureServe, 2011). In the project area, it is a vegetation community within the *Zizaniopsis miliacea* Herbaceous Vegetation Alliance and the other tidally influenced marsh vegetation communities.

The community is dominated or co-dominated by *Eleocharis cellulosa*. Additional common species include cattails (*Typha* spp.), alligator weed, and common cutgrass.

3.4.4 *Schoenoplectus californicus* Tidal Herbaceous Vegetation

Within the project area, this alliance occurs in association with the *Zizaniopsis miliacea* Herbaceous Vegetation Alliance and the other tidally influenced marsh vegetation communities. This vegetation community occurs in areas that are dominated or co-dominated by California bulrush (*Schoenoplectus californicus*). This vegetation community was classified from a single wetland assessment plot in the southern portion of the project area just east of Ten Mile Creek. Other small isolated areas containing similar characteristics could be present in the larger *Zizaniopsis miliacea* Herbaceous Vegetation Alliance mapping units. The association for this alliance is the *Schoenoplectus californicus* Tidal Herbaceous Vegetation.

The community is dominated or co-dominated by *Schoenoplectus californicus*. Additional common species include sedges (*Cyperaceae*), cattails, and other coastal marsh forbs (NatureServe, 2011).

3.4.5 *Polygonum* spp. (Section *Persicaria*) Seasonally Flooded Herbaceous Alliance

Within the project area, this alliance occurs in wet depressions inland and along the Neches River. This vegetation community is dominated by multiple species of *Polygonum* spp., and within the project area the most common species is swamp smartweed. This alliance is classified from wetland assessment plot data and transect transition data. This alliance occurs in open

canopy or cypress-lined depressions. Other small, isolated areas containing similar characteristics could be present in the larger mapping units.

Floristic composition of this vegetation community can vary with geography and habitat (NatureServe, 2011). Within the project area, associate species include sedges (*Cyperaceae*), *Ludwigia* spp., and other freshwater wetland grasses and forbs common in the area.

3.4.6 *Typha latifolia* Semi-permanently Flooded Herbaceous Vegetation

Within the project area, this vegetation community occurs in association with the *Taxodium distichum* Tidal Woodland and *Zizaniopsis miliacea* Herbaceous Vegetation Alliance and the other tidally-influenced marsh vegetation communities. This vegetation community occurs in areas that are dominated or co-dominated by broadleaf cattail (*Typha latifolia*) and may be a variant vegetation community of the *Zizaniopsis miliacea* Herbaceous Vegetation. This alliance was classified from wetland assessment plot data. Other small isolated areas containing similar characteristics could be present in the larger *Zizaniopsis miliacea* Herbaceous Vegetation Alliance mapping units.

This vegetation community does not correspond to any NVC alliances or associations, except that it loosely fits into the broad ranging *Typha (angustifolia, latifolia)* - *(Schoenoplectus* spp.) Semi-permanently Flooded Herbaceous Alliance. In the project area, it is a vegetation community within the *Zizaniopsis miliacea* Herbaceous Vegetation Alliance and the other tidally-influenced marsh vegetation communities more related to these local vegetation communities within the project area than to the alliance above.

The community is dominated or co-dominated by *Typha latifolia*. Additional common species include common cutgrass and alligator weed.

4.0 DISCUSSION

4.1 MOSAIC NATURE OF THE PROJECT AREA

Areas that exhibit a combination of vegetation classes, which could not be delineated from signatures on CIR aerial photography, exist within the project area. Any mapping effort is conducted at specific scale, which is 1:24,000 for this mapping project. At this resolution, the mapping process and individual plot data results in the identification of patches that are actually not homogenous throughout (Lafon, 2012). Slight differences in elevation, hydrology, and soil allow for the blending of vegetation alliances in these areas. Tree fall from natural disturbance has also contributed to the heterogeneous nature of the project area. Most of theproject area exhibits this blending of vegetation communities to some slight degree; however, all vegetation mapping units were classified by the predominant vegetation alliance in the area.

During analysis of the individual vegetation sampling plots, the plots were included in their representative alliance and/or association for vegetation data processing purposes, even though the plot location may have been included in another alliance and classified by the predominant vegetation alliance. In many cases, individual polygons could not be established and differentiated based on CIR aerial photography, but datasets for the individual vegetation sample plots were separated out to the alliance and/or association level. The presentation of the area as the predominant alliance and/or association classifications is a more descriptive and meaningful treatment, with the caveat that there are potential small inclusions of other vegetation classifications within the predominant vegetation classification.

The project area as a whole can be described as a heterogeneous fine scale mosaic of vegetation alliances and associations. Even in the better defined polygons and alliances, there are inclusions of other vegetation associations that would not be considered apart of the dominant alliance and/or association present in the specific area. As compared to the Big Sandy Creek Unit and Turkey Creek Unit of the BTNP, the BU of the project area is much more heterogeneous, and the presence of mosaics is prevalent across the landscape.

4.2 HURRICANE DISTURBANCE/TREE FALL

Tree fall in the BU and other adjacent lands of the BTNP within the project area was a consistent problem with the vegetation classification, since the area has been affected by the passage of two major hurricanes within the last six years. The overall extent of tree fall in the area was severe enough to change the alliance classifications of vegetation communities in the project area. Six alliances are being proposed to accommodate for areas with high amounts of tree fall, which has changed the dominant species and ecological nature in the affected areas. These disturbance related alliances include:

- *Liquidambar styraciflua* Forest Alliance
- *Liquidambar styraciflua* Temporarily Flooded Forest Alliance
- *Triadica sebifera* Forest Alliance
- *Triadica sebifera* Seasonally Flooded Forest Alliance
- *Ilex opaca – Carpinus caroliniana* Forest Alliance
- *Ilex vomitoria* Shrubland Alliance

For example, areas that may have been classified as one of the lower slope or bottomland hardwood oak dominant alliances, such as the *Quercus* (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance, lost a significant amount of oaks in the canopy to the degree that the oaks are no longer the dominant species and the areas are now classified as *Liquidambar styraciflua* Temporarily Flooded Forest Alliance or *Ilex opaca* - *Carpinus caroliniana* Forest Alliance. Additionally, the tree fall, which creates gaps in the canopy, could have allowed for the establishment of the exotic species *Triadica sebifera*, which has flourished to the plot that it is the significant dominant tree in areas and the alliance would transition to the *Triadica sebifera* Seasonally Flooded Forest Alliance.

All alliances are classified using the current vegetation present (after the disturbance). The classification portrays the most current vegetation alliances and associations present in the Preserve; however, these classifications may change in the future with forest recovery and shift in dominant vegetation. Due to gap disturbances in the forest canopy, dominant associations and

alliances may change throughout the future until successional vegetation reaches a stable vegetation community.

4.3 TRIDIACA SEBIFERA PROLIFERATION AND EXOTIC SPECIES

4.3.1 *Triadica sebifera*

The presence of Chinese tallow in the project area is substantial. Vegetation data show that 245 of the 391 (63%) vegetation sample plots have Chinese tallow present in at least one of the four vegetation layers. Two *Triadica sebifera*-related alliances are included in the vegetation classification primarily due to tree fall and hurricane issues discussed previously. Nineteen (19) out of 33 alliances have this exotic species present in more than 50 % of the vegetation sampling plots. Six of the alliances have *Triadica sebifera* present in 50% or less of the vegetation sample plots classified in the alliance. *Triadica sebifera* is not present in 9 of the 33 alliances. The data from the larger alliances show greatest presence of *Triadica sebifera* in the temporarily and seasonally flooded forest and shrub alliances. This species is less established in the herbaceous and tidal alliances.

Table A in **Appendix D** lists all alliance classifications, the total number of plots in each alliance, the total number of plots with *Triadica sebifera* present in at least one of the vegetation layers, and the percentage of plots containing *Triadica sebifera* within each alliance. **Table B** in **Appendix D** lists all vegetation sample plots and the percent cover (herb layer) or basal area (woody layers) of *Triadica sebifera* in each of the strata for each of the vegetation sample plots. The NPS will be provided with a GIS attribute layer, which shows the *Triadica sebifera* data within the each individual vegetation plot data set. **Maps 1** and **2** in **Appendix D** show the occurrence and abundance of *Triadica sebifera* in the woody strata and herbaceous stratum in the vegetation plot data within the project area, respectively. Abundance is shown by the modified importance value of *Triadica sebifera* herbaceous layer and overall woody stratum vegetation plot data.

As discussed in **Section 2.2.1**, there was a modification to the sample plot placement methodology to allow for helicopter-portable drill access. This modification may have increased

the presence of *Triadica sebifera* in the vegetation plot data. One of the primary goals of vegetation plot data collection was generating baseline data to be able to assess impacts from the proposed seismic survey. The seismic survey crew surveyed seismic source points prior to data collection at the vegetation sample plots. As the seismic survey crews surveyed source points, they looked for gaps in the woody vegetation to place these source points to facilitate helicopter-portable seismic drilling equipment. When the vegetation sample plot fell in conjunction with one of these source points, the vegetation sample plot was moved to the source point location and into a forest vegetation gap. *Triadica sebifera* readily establishes in forest gaps and edges.

4.3.2 Exotic Species

In total 34 exotic species occur within the project area. The most common of these, other than Chinese tallow, include Japanese climbing fern (*Lygodium japonicum*), Japanese honeysuckle (*Lonicera japonicum*), and Chinese privet. Exotic species encountered during the vegetation assessment are listed in **Appendix B, Table B-1** and indicated with an asterisk preceding the scientific name.

Since disturbances are generally favorable to exotic species (Mooney and Drake, 1986), past vegetation and impact assessments conducted in the BTNP utilized increases in the presence of exotic species as a means of assessing 3D seismic impacts; however, an examination of exotic species may not provide a good means for assessing impacts resulting from the Rivers Edge 3D seismic survey due to the large amount of disturbance already present in the project area from hurricanes.

Blow downs, or the falling of healthy or unhealthy trees causing gaps, is a natural process and plays an essential role in forest successional dynamics. Openings created by the toppling of a single canopy tree, part of a canopy tree, or a few individuals facilitates and influences stand development in forests protected from large-scale disturbances of wind or fire (Runkle, 1982). Gaps in the overstory allow greater levels of light, available moisture, and nutrients into the area. Subsequently, the gaps are the sites which exhibit the greatest understory regeneration and recruitment.

The creation of a gap can also alter other factors that influence the regeneration process. Tree fall can cause a mound of exposed mineral soil which sometimes favors the establishment of species with mineral seedbed requirements. Perennial herbaceous species can already exist in the seedling-ground cover layer of the forest and they may simply expand as resources become more available in the gap, choking-off the establishment and recruitment of tree seedlings. No matter how it happens, the opening of the gap alters the competitive environment, temporarily increasing essential resources and accelerating the growth of some individuals, as well as providing opportunities for the introduction, propagation, and/or spread of exotic species.

An increase in exotic species within the project area is expected as a result of tree fall, as exotic species are opportunistic and often out-compete native species. It would be extremely difficult to discern increases in exotic species as a result of natural disturbance from those resulting from activities associated with Rivers Edge 3D seismic survey.

In order to determine if the potential exotic species increase within the project area is related to the seismic survey, during the post project impact assessment statistical analysis of the presence of exotic species between the pre- and post-operation data sets will be accomplished. The statistical analysis will show if the chance change in the levels of exotic species is statistically significant and determine if there is a correlation between the increase in presence of exotic species and the seismic survey. This analysis will require the re-sampling of vegetation sample plots that were not impacted by the seismic survey, which will serve as control samples along with the vegetation sample plots that were impacted by the seismic survey.

Additional data will be collected during the seismic survey in order to group sample plots in the the appropriate category for the analysis prior to the post project sampling. These categories will include: impacted plots andnon-impacted plots, impacted plotswill then be divided into plots with and without tree canopy gaps.The exact number of plots used for this analysis will be dependent on the number of plots in each category, the total number of plots impacted by the seismic survey, and the determination of which plots have tree canopy gaps. Once the total number of plots is determined, the research design can be formulated. Once the research design is complete it will be approve by NPS prior to the analysis.

4.4 DROUGHT CONDITIONS AND VEGETATION VARIABILITY

During the spring and summer 2011, southeast Texas experienced a severe drought, which could affect vegetation composition in the project area. During drought conditions, ground layer vegetation would be distressed more than woody layers, but all vegetation could be altered if the drought persisted. Several of the alliances and associations have very high diversity indices in the herbaceous layers. This could occur naturally because of forest gaps from natural disturbance or the drawn down water levels in normally inundated or saturated wetlands that allows for the germination of seeds and the establishment of pioneer vegetation. There is a potential to see a change in the diversity indices in the herbaceous layers, if the drought continues or if water levels return to normal, in the post-operational vegetation sampling data.

4.5 PREVIOUS STUDIES

During the development, implementation, and analysis phases of this vegetation mapping and assessment effort, two other published peer-reviewed studies were referenced and used to assist with the accomplishment of objectives. The following sections compare or relate these articles to the findings of this study.

4.5.1 Harcombe and Marks Study

According to *Forest Vegetation of the Big Thicket National Preserve* (Harcombe and Marks, 1979), approximately ten vegetation types potentially occur within the BTNP. These types include Sandhill Pine, Upland Pine, Upper Slope Pine Oak, Mid Slope Oak Pine, Lower Slope Hardwood Pine, Floodplain Hardwood Pine, Floodplain Hardwood, Wetland Pine Savannah, Cypress Tupelo Forest, and Wetland Baygalls. Harcombe and Marks report that only two of the ten predicted vegetation types occur in the BU: Floodplain Hardwood Forest and Cypress/Tupelo Swamp. Within the LNRCU they reported Floodplain Hardwood Forest as the sole predicted vegetation type. Two predictive vegetation types, Flatland Hardwood Forest and Lower Slope Hardwood Pine, were reported for LPI-PIBCU within the project area. At the time of Harcombe and Marks study, several portions of the project area were not a part of the BTNP. These areas

include the Village Creek Corridor Unit, other lands administered by the BTNP (the Houseman tract and the Cooks Lake tract), and the portion of the project area south of the LNVA saltwater dam.

In past vegetation mapping projects within the BTNP, Harcombe and Marks predictive vegetation classes were used as preliminary vegetation classes in order to allot and randomly place vegetation sample plots within the project area. With so few predictive vegetation classes and much of the current project area not included in the Harcombe and Marks study, these predictive vegetation classes were not used as preliminary vegetation classes for this project. Within the portion of the current project area that was covered in the Harcombe and Marks study, the current vegetation alliance and association classifications do agree with their predictive vegetation classes for the most part; however, there are some upland classifications present in the overlap area that could not be classified into one of the two predictive vegetation classes Harcombe and Marks mapped for the Beaumont Unit. These upland vegetation alliances and associations would be classified under Harcombe and Marks' predictive vegetation class as Mid Slope Oak Pine, Lower Slope Hardwood Pine, and Floodplain Hardwood Pine.

4.5.2 Brown et al. Study

An inventory of the vegetation occurring in the BU entitled *Annotated Checklist Of The Vascular Flora Of The Beaumont Unit Of The Big Thicket National Preserve, Hardin, Jefferson, And Orange Counties, Texas* (Brown et al., unpublished data) was also utilized as a valuable resource during this vegetation survey. This vegetation species list was used in the development of the species dictionary, which was used in the field to reference species names and the codes used for identification of species during data collection. This list also served as a reference guide in the field. Furthermore, this list was used to determine which species identified in the project areawere required to be collected as voucher specimens. During the course of this vegetation survey, an additional 203 vegetative species were identified as undocumented taxa for the BU, and voucher specimens were collected for each of these species during the survey period. These voucher specimens were turned over to Dr. Larry Brown for curation and annotation according to standard herbarium practices, and will be included with the BTNP herbarium collection at Texas Agricultural Experiment Station. **Appendix B Table B-2** lists the scientific and common names of each of the new voucher specimens and the counties in which they were collected.

5.0 SUMMARY

In cooperation with the NPS, vegetation mapping and analysis of the BU and adjacent lands of the BTNP was completed in November of 2011, with field work taking place in April to June of 2011. Based on the results of preliminary mapping efforts, 1,756 distinct vegetation polygons were delineated, and vegetation sampling plots were randomly placed in a portion of thepolygons in accordance with NPS accuracy protocol, resulting in 381 total sampling plots. During field efforts, an additional ten plots were added to the program to account for gaps, totaling 391 vegetation sampling plots.

From the analysis of all plots, 33NVC vegetation alliances and 25 NVC vegetation associations were identified by quantitative data analysis, an additional 6 vegetation communities were identified by qualitative data, and 41 vegetation classifications were mapped in the project area. The project area is comprised of four vegetation classes as defined by NVC (NatureServe, 2011): forest, woodland, shrubland, and herbaceous. Class Forest is represented by three subclasses: evergreen, deciduous, and mixed evergreen/deciduous. Subclass evergreen forest is represented by one alliance and two associations; subclass deciduous forest is represented by eighteen alliances and eighteen associations; and subclass mixed evergreen/deciduous forest is represented by three alliances and two associations. Class woodland is represented by one subclass: deciduous woodland, one alliance, and one association. Class shrubland is represented by two subclasses: evergreen shrubland and deciduous shrubland, with two alliances and one association. Class herbaceous is represented by two subclasses: perennial graminoid and perennial forb, and by one alliance. Perennial graminoid subclass in represented by five alliances and two associations. Perennial forb subclass in represented by four alliances and one association.

Moreover, six other vegetation communities were identified as potentially occurring as small inclusions within other alliances within the project area. These areas are vegetation communities, which were based on qualitative data (wetland assessment plots or transect data) and not quantitative data (vegetation sample plot data).

Comparison of the data resulting from this vegetation mapping and assessment effort with others conducted in the Big Sandy Creek (BSCU), Turkey Creek (TCU) and Lance Rosier Units (LRU) of the Preserve indicates that the diversity of species in the project area is higher than the other three units. In addition, the current project area exhibited the greatest number of alliances of the four units.

A large amount of data was collected and analyzed during the development of this report to facilitate an accurate assessment of vegetation present in the BU and adjacent lands of the BTNP. DESCO would like to acknowledge that the success of this project is directly attributable to the cooperation of NPS staff, Cimarex Energy Company, and Century Exploration, Houston, Inc., with DESCO's employees and subcontractors, as well as the hard work and effort extended by all those involved in field efforts and data analysis.

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APPENDIX A

SUMMARY ALLIANCE TABLES

Table 1A

Summary of Overstory Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.97	33.33	332.89	72.60	20.12	81.32	187.25	62.42
Liquidambar styraciflua	0.46	15.87	29.56	6.45	1.47	5.94	28.26	9.42
Quercus nigra	0.31	10.58	22.74	4.96	0.81	3.29	18.83	6.28
Triadica sebifera	0.25	8.47	19.89	4.34	0.52	2.12	14.93	4.98
Nyssa sylvatica	0.15	5.29	10.23	2.23	0.34	1.39	8.91	2.97
Quercus laurifolia	0.12	4.23	8.53	1.86	0.25	1.00	7.09	2.36
Ilex opaca	0.09	3.17	6.82	1.49	0.16	0.64	5.31	1.77
Carpinus caroliniana	0.09	3.17	6.25	1.36	0.14	0.56	5.10	1.70
Quercus phellos	0.06	2.12	2.84	0.62	0.13	0.52	3.26	1.09
Quercus falcata	0.06	2.12	2.84	0.62	0.12	0.50	3.23	1.08
Quercus michauxii	0.05	1.59	1.71	0.37	0.06	0.23	2.19	0.73
Quercus stellata	0.03	1.06	2.27	0.50	0.14	0.58	2.14	0.71
Quercus alba	0.03	1.06	1.14	0.25	0.14	0.55	1.86	0.62
Carya tomentosa	0.03	1.06	1.14	0.25	0.08	0.34	1.64	0.55
Persia borbonia	0.03	1.06	1.71	0.37	0.04	0.17	1.60	0.53
Sassafras albidum	0.02	0.53	1.14	0.25	0.04	0.15	0.92	0.31
Magnolia grandiflora	0.02	0.53	1.14	0.25	0.03	0.13	0.91	0.30
Tilia americana	0.02	0.53	1.14	0.25	0.03	0.11	0.89	0.30
Castanea pumila	0.02	0.53	0.57	0.12	0.04	0.15	0.81	0.27
Ulmus alata	0.02	0.53	0.57	0.12	0.01	0.06	0.71	0.24
Magnolia virginiana	0.02	0.53	0.57	0.12	0.01	0.05	0.70	0.23
Diodia virginiana	0.02	0.53	0.57	0.12	0.01	0.04	0.70	0.23
Cyrilla racemiflora	0.02	0.53	0.57	0.12	0.01	0.04	0.70	0.23
Sideroxylon lycioides	0.02	0.53	0.57	0.12	0.01	0.04	0.69	0.23

Table 1A

Summary of Overstory Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Vaccinium arboreum	0.02	0.53	0.57	0.12	0.01	0.04	0.69	0.23
Acer rubrum var. rubrum	0.02	0.53	0.57	0.12	0.01	0.03	0.69	0.23

Table 1-B

Summary of Midstory Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.80	11.11	266.96	21.36	0.77	18.44	50.92	16.97
Triadica sebifera	0.51	7.05	241.57	19.33	0.81	19.31	45.69	15.23
Liquidambar styraciflua	0.72	10.04	170.33	13.63	0.49	11.62	35.30	11.77
Pinus taeda	0.40	5.56	91.70	7.34	0.44	10.42	23.31	7.77
Quercus nigra	0.55	7.69	85.26	6.82	0.31	7.32	21.84	7.28
Ilex opaca	0.57	7.91	50.78	4.06	0.15	3.57	15.54	5.18
Carpinus caroliniana	0.29	4.06	51.72	4.14	0.28	6.79	14.99	5.00
Nyssa sylvatica	0.37	5.13	46.04	3.68	0.18	4.30	13.11	4.37
Quercus laurifolia	0.26	3.63	31.83	2.55	0.13	3.02	9.20	3.07
Quercus michauxii	0.25	3.42	13.07	1.05	0.05	1.13	5.59	1.86
Ilex decidua	0.18	2.56	19.89	1.59	0.04	0.91	5.06	1.69
Halesia diptera	0.15	2.14	13.07	1.05	0.05	1.11	4.29	1.43
Persia borbonia	0.14	1.92	9.66	0.77	0.06	1.34	4.03	1.34
Morella cerifera	0.14	1.92	10.80	0.86	0.04	0.85	3.64	1.21
Acer rubrum var. rubrum	0.12	1.71	10.80	0.86	0.03	0.81	3.38	1.13
Symplocos tinctoria	0.09	1.28	15.35	1.23	0.02	0.57	3.08	1.03
Acer rubrum var. drummondii	0.11	1.50	7.96	0.64	0.04	0.91	3.04	1.01
Vaccinium arboreum	0.12	1.71	8.53	0.68	0.02	0.45	2.84	0.95
Cyrilla racemiflora	0.08	1.07	14.21	1.14	0.02	0.54	2.74	0.91
Ulmus alata	0.08	1.07	7.39	0.59	0.03	0.64	2.30	0.77
Vitis rotundifolia	0.11	1.50	6.25	0.50	0.01	0.13	2.13	0.71
Prunus serotina	0.09	1.28	4.55	0.36	0.02	0.46	2.10	0.70
Quercus falcata	0.06	0.85	7.39	0.59	0.03	0.62	2.06	0.69

Table 1-B

Summary of Midstory Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Sassafras albidum	0.09	1.28	5.12	0.41	0.01	0.28	1.97	0.66
Quercus alba	0.06	0.85	5.12	0.41	0.02	0.51	1.78	0.59
Quercus phellos	0.08	1.07	2.84	0.23	0.01	0.19	1.48	0.49
Quercus stellata	0.05	0.64	3.41	0.27	0.02	0.48	1.39	0.46
Callicarpa americana	0.03	0.43	6.63	0.53	0.01	0.32	1.28	0.43
Quercus hemispherica	0.03	0.43	2.84	0.23	0.01	0.32	0.97	0.32
Carex corrugata	0.03	0.43	3.98	0.32	0.01	0.17	0.92	0.31
Carya tomentosa	0.03	0.43	2.27	0.18	0.01	0.15	0.76	0.25
Magnolia virginiana	0.02	0.21	2.27	0.18	0.01	0.36	0.75	0.25
Persea palustris	0.03	0.43	1.71	0.14	0.01	0.14	0.70	0.23
Ligustrum sinense	0.03	0.43	1.52	0.12	0.00	0.10	0.65	0.22
Rhus copallina	0.03	0.43	1.71	0.14	0.00	0.04	0.61	0.20
Crataegus opaca	0.03	0.43	1.14	0.09	0.00	0.07	0.59	0.20
Crataegus marshallii	0.03	0.43	1.14	0.09	0.00	0.06	0.58	0.19
Crataegus viridis	0.03	0.43	1.14	0.09	0.00	0.06	0.58	0.19
Carex caroliniana	0.02	0.21	2.27	0.18	0.01	0.15	0.55	0.18
Campsis radicans	0.03	0.43	1.14	0.09	0.00	0.02	0.54	0.18
Quercus similis	0.02	0.21	1.14	0.09	0.01	0.23	0.54	0.18
Aralia spinosa	0.03	0.43	0.76	0.06	0.00	0.02	0.51	0.17
Cornus florida	0.02	0.21	2.27	0.18	0.00	0.08	0.47	0.16
Crataegus brachyacantha	0.02	0.21	1.71	0.14	0.00	0.07	0.42	0.14
Castanea pumila	0.02	0.21	1.71	0.14	0.00	0.05	0.40	0.13
Crataegus spathulata	0.02	0.21	0.57	0.05	0.01	0.14	0.40	0.13

Table 1-B

Summary of Midstory Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Betula nigra	0.02	0.21	0.57	0.05	0.01	0.12	0.38	0.13
Carya aquatica	0.02	0.21	0.57	0.05	0.00	0.11	0.37	0.12
Vaccinium elliottii	0.02	0.21	1.14	0.09	0.00	0.06	0.36	0.12
Sideroxylon lycioides	0.02	0.21	1.14	0.09	0.00	0.03	0.34	0.11
Ilex coriacea	0.02	0.21	0.57	0.05	0.00	0.07	0.33	0.11
Fraxinus pennsylvanica	0.02	0.21	0.57	0.05	0.00	0.07	0.33	0.11
Celtis laevigata	0.02	0.21	0.57	0.05	0.00	0.06	0.32	0.11
Hamamelis virginiana	0.02	0.21	0.57	0.05	0.00	0.05	0.31	0.10
Crataegus berberifolia	0.02	0.21	0.57	0.05	0.00	0.03	0.29	0.10
Diodia virginiana	0.02	0.21	0.57	0.05	0.00	0.03	0.29	0.10
Cornus foemina	0.02	0.21	0.57	0.05	0.00	0.02	0.28	0.09
Magnolia grandiflora	0.02	0.21	0.57	0.05	0.00	0.02	0.28	0.09
Sideroxylon lanuginosa	0.02	0.21	0.57	0.05	0.00	0.02	0.28	0.09
Unknown tree	0.02	0.21	0.57	0.05	0.00	0.01	0.27	0.09
Vitis aestivalis	0.02	0.21	0.57	0.05	0.00	0.01	0.27	0.09
Frangula caroliniana	0.02	0.21	0.57	0.05	0.00	0.01	0.27	0.09

Table 1-C

Summary of Shrub Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.57	15.04	1024.63	26.52	0.13	27.42	68.98	22.99
Vitis rotundifolia	0.38	10.16	418.91	10.84	0.04	9.36	30.36	10.12
Liquidambar styraciflua	0.34	8.94	297.65	7.70	0.05	11.09	27.74	9.25
Callicarpa americana	0.23	6.10	321.33	8.32	0.04	8.89	23.30	7.77
Quercus nigra	0.20	5.28	187.95	4.86	0.02	3.62	13.76	4.59
Ilex opaca	0.26	6.91	134.52	3.48	0.01	2.89	13.28	4.43
Triadica sebifera	0.11	2.85	115.76	3.00	0.02	3.38	9.22	3.07
Symplocos tinctoria	0.05	1.22	151.57	3.92	0.02	3.62	8.76	2.92
Pinus taeda	0.14	3.66	85.45	2.21	0.01	1.59	7.46	2.49
Vaccinium elliottii	0.05	1.22	66.69	1.73	0.02	3.92	6.87	2.29
Carpinus caroliniana	0.08	2.03	84.88	2.20	0.01	1.63	5.86	1.95
Morella cerifera	0.09	2.44	54.57	1.41	0.01	1.43	5.28	1.76
Viburnum dentatum	0.09	2.44	42.44	1.10	0.01	1.04	4.58	1.53
Halesia diptera	0.06	1.63	42.44	1.10	0.01	1.50	4.23	1.41
Quercus laurifolia	0.05	1.22	48.50	1.26	0.01	1.60	4.08	1.36
Ilex decidua	0.06	1.63	42.44	1.10	0.01	1.12	3.84	1.28
Vaccinium arboreum	0.06	1.63	42.44	1.10	0.00	1.02	3.74	1.25
Acer rubrum var. drummondii	0.05	1.22	54.57	1.41	0.00	0.89	3.52	1.17
Cyrilla racemiflora	0.05	1.22	42.44	1.10	0.00	0.92	3.23	1.08
Persia borbonia	0.03	0.81	60.63	1.57	0.00	0.84	3.22	1.07
Nyssa sylvatica	0.06	1.63	24.25	0.63	0.00	0.64	2.89	0.96
Fraxinus americana	0.03	0.81	24.25	0.63	0.01	1.38	2.82	0.94
Rhus copallina	0.05	1.22	30.31	0.78	0.00	0.69	2.69	0.90
Bignonia capreolata	0.06	1.63	24.25	0.63	0.00	0.36	2.61	0.87
Styrax americana	0.03	0.81	18.19	0.47	0.01	1.32	2.61	0.87
Sebastiana fruticosa	0.05	1.22	42.44	1.10	0.00	0.18	2.50	0.83

Table 1-C

Summary of Shrub Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carex corrugata	0.02	0.41	36.38	0.94	0.00	0.94	2.29	0.76
Quercus falcata	0.05	1.22	13.26	0.34	0.00	0.52	2.08	0.69
Gelsemium sempervirens	0.02	0.41	24.25	0.63	0.00	0.97	2.00	0.67
Ilex coriacea	0.02	0.41	42.44	1.10	0.00	0.41	1.91	0.64
Smilax rotundifolia	0.03	0.81	30.31	0.78	0.00	0.25	1.85	0.62
Chionanthus virginica	0.03	0.81	18.19	0.47	0.00	0.36	1.64	0.55
Acer rubrum var. rubrum	0.03	0.81	24.25	0.63	0.00	0.18	1.62	0.54
Quercus michauxii	0.03	0.81	12.13	0.31	0.00	0.33	1.46	0.49
Sassafras albidum	0.03	0.81	18.19	0.47	0.00	0.15	1.44	0.48
Quercus hemispherica	0.03	0.81	12.13	0.31	0.00	0.25	1.38	0.46
Crataegus marshallii	0.03	0.81	12.13	0.31	0.00	0.25	1.38	0.46
Rubus argutus	0.03	0.81	18.19	0.47	0.00	0.08	1.36	0.45
Ligustrum sinense	0.02	0.41	12.13	0.31	0.00	0.51	1.23	0.41
Prunus serotina	0.02	0.41	18.19	0.47	0.00	0.13	1.00	0.33
Baccharis halimifolia	0.02	0.41	18.19	0.47	0.00	0.10	0.98	0.33
Magnolia grandiflora	0.02	0.41	6.06	0.16	0.00	0.41	0.97	0.32
Berchemia scandens	0.02	0.41	6.06	0.16	0.00	0.41	0.97	0.32
Crataegus opaca	0.02	0.41	6.06	0.16	0.00	0.41	0.97	0.32
Quercus alba	0.02	0.41	6.06	0.16	0.00	0.23	0.79	0.26
Smilax smallii	0.02	0.41	6.06	0.16	0.00	0.23	0.79	0.26
Smilax glauca	0.02	0.41	6.06	0.16	0.00	0.23	0.79	0.26
Parthenocissus quinquefolia	0.02	0.41	6.06	0.16	0.00	0.10	0.67	0.22
Ulmus americana	0.02	0.41	6.06	0.16	0.00	0.10	0.67	0.22
Crataegus brachyacantha	0.02	0.41	6.06	0.16	0.00	0.03	0.59	0.20
Carya glabra var. hirsuta	0.02	0.41	6.06	0.16	0.00	0.03	0.59	0.20
Campsis radicans	0.02	0.41	6.06	0.16	0.00	0.03	0.59	0.20
Smilax bona-nox	0.02	0.41	3.41	0.09	0.00	0.05	0.55	0.18

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Rubus argutus	0.29	2.23	0.46	11.37	13.61	4.54
Vitis rotundifolia	0.72	5.52	0.29	7.20	12.73	4.24
Ilex vomitoria	0.83	6.35	0.22	5.38	11.72	3.91
Toxicodendron radicans	0.25	1.88	0.37	9.08	10.96	3.65
Callicarpa americana	0.57	4.35	0.24	5.99	10.34	3.45
Chasmanthium laxum	0.57	4.35	0.23	5.59	9.94	3.31
Bignonia capreolata	0.51	3.88	0.07	1.82	5.70	1.90
Smilax pumila	0.17	1.29	0.13	3.35	4.64	1.55
Viburnum dentatum	0.32	2.47	0.06	1.51	3.98	1.33
Chasmanthium sessiliflorum	0.12	0.94	0.11	2.77	3.71	1.24
Pinus taeda	0.31	2.35	0.04	1.05	3.40	1.13
Rubus trivialis	0.15	1.18	0.09	2.20	3.37	1.12
Vaccinium arboreum	0.17	1.29	0.08	1.91	3.21	1.07
Smilax glauca	0.25	1.88	0.05	1.24	3.12	1.04
Dichanthelium commutatum	0.31	2.35	0.03	0.77	3.12	1.04
Unknown herbaceous	0.15	1.18	0.08	1.91	3.09	1.03
Smilax bona-nox	0.34	2.59	0.01	0.20	2.78	0.93
Ilex opaca	0.22	1.65	0.04	0.96	2.60	0.87
Liquidambar styraciflua	0.25	1.88	0.02	0.58	2.46	0.82
Quercus laurifolia	0.22	1.65	0.03	0.77	2.41	0.80
Mitchella repens	0.25	1.88	0.02	0.48	2.36	0.79
Parthenocissus quinquefolia	0.18	1.41	0.03	0.77	2.18	0.73
Solidago altissima	0.05	0.35	0.07	1.72	2.07	0.69
Scleria oligantha	0.14	1.06	0.04	0.96	2.02	0.67

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Paspalum urvillei	0.02	0.12	0.08	1.89	2.01	0.67
Quercus nigra	0.20	1.53	0.02	0.48	2.01	0.67
Eupatorium capillifolium	0.06	0.47	0.06	1.53	2.00	0.67
Persia borbonia	0.12	0.94	0.04	1.05	1.99	0.66
Gelsemium sempervirens	0.18	1.41	0.02	0.58	1.99	0.66
Gamochaeta purpurea	0.03	0.24	0.06	1.60	1.84	0.61
Schizachyrium scoparium	0.03	0.24	0.06	1.53	1.76	0.59
Hypericum hypericoides	0.12	0.94	0.03	0.76	1.70	0.57
Campsis radicans	0.17	1.29	0.02	0.39	1.68	0.56
Dichanthelium acuminatum	0.17	1.29	0.02	0.38	1.68	0.56
Lonicera japonica	0.15	1.18	0.02	0.48	1.65	0.55
Rhynchospora mixta	0.02	0.12	0.06	1.53	1.65	0.55
Lygodium japonicum	0.12	0.94	0.02	0.57	1.51	0.50
Scleria triglomerata	0.18	1.41	0.00	0.01	1.42	0.47
Ambrosia artemisiifolia	0.05	0.35	0.04	1.05	1.40	0.47
Symplocos tinctoria	0.17	1.29	0.00	0.10	1.39	0.46
Cardamine sp.	0.15	1.18	0.01	0.19	1.37	0.46
Sebastiana fruticosa	0.17	1.29	0.00	0.00	1.30	0.43
Dichanthelium scoparium	0.03	0.24	0.04	1.05	1.29	0.43
Dichanthelium boscii	0.08	0.59	0.03	0.67	1.26	0.42
Solidago sempervirens	0.03	0.24	0.04	0.96	1.19	0.40
Vaccinium elliottii	0.06	0.47	0.03	0.67	1.14	0.38
Carex corrugata	0.03	0.24	0.03	0.86	1.10	0.37
Erythrina herbacea	0.03	0.24	0.03	0.86	1.09	0.36

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Scleria reticularis	0.03	0.24	0.03	0.86	1.09	0.36
Viola sororia	0.06	0.47	0.02	0.57	1.04	0.35
Rhynchosia latifolia	0.03	0.24	0.03	0.76	1.00	0.33
Sassafras albidum	0.08	0.59	0.02	0.38	0.97	0.32
Oxalis dillenii	0.06	0.47	0.02	0.48	0.95	0.32
Morella cerifera	0.11	0.82	0.00	0.10	0.92	0.31
Quercus phellos	0.09	0.71	0.01	0.19	0.90	0.30
Ilex decidua	0.09	0.71	0.01	0.19	0.90	0.30
Eupatorium coelestinum	0.02	0.12	0.03	0.76	0.88	0.29
Triadica sebifera	0.11	0.82	0.00	0.00	0.82	0.27
Quercus michauxii	0.03	0.24	0.02	0.57	0.81	0.27
Smilax rotundifolia	0.09	0.71	0.00	0.10	0.80	0.27
Chasmanthium latifolium	0.08	0.59	0.01	0.19	0.78	0.26
Dichanthelium aciculare	0.08	0.59	0.01	0.19	0.78	0.26
Nyssa sylvatica	0.08	0.59	0.01	0.19	0.78	0.26
Acer rubrum var. rubrum	0.08	0.59	0.01	0.19	0.78	0.26
Carex blanda	0.05	0.35	0.02	0.38	0.74	0.25
Quercus falcata	0.08	0.59	0.00	0.10	0.68	0.23
Eupatorium semiserratum	0.05	0.35	0.01	0.29	0.64	0.21
Prunus serotina	0.05	0.35	0.01	0.29	0.64	0.21
Ilex coriacea	0.03	0.24	0.02	0.38	0.62	0.21
Carpinus caroliniana	0.08	0.59	0.00	0.00	0.59	0.20
Halesia diptera	0.05	0.35	0.01	0.19	0.54	0.18
Diodia virginiana	0.05	0.35	0.01	0.19	0.54	0.18

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eupatorium serotinum	0.02	0.12	0.02	0.38	0.50	0.17
Cyrilla racemiflora	0.06	0.47	0.00	0.00	0.47	0.16
Oplismenus hirtellus	0.06	0.47	0.00	0.00	0.47	0.16
Crataegus marshallii	0.05	0.35	0.00	0.10	0.45	0.15
Rhus copallina	0.03	0.24	0.01	0.19	0.43	0.14
Aralia spinosa	0.03	0.24	0.01	0.19	0.43	0.14
Verbena bracteana	0.02	0.12	0.01	0.29	0.40	0.13
Desmodium paniculatum	0.02	0.12	0.01	0.29	0.40	0.13
Passiflora lutea	0.02	0.12	0.01	0.27	0.38	0.13
Sabal minor	0.05	0.35	0.00	0.00	0.35	0.12
Smilax smallii	0.05	0.35	0.00	0.00	0.35	0.12
Pteridium aquilinum	0.03	0.24	0.00	0.10	0.33	0.11
Quercus hemispherica	0.03	0.24	0.00	0.10	0.33	0.11
Sanicula canadensis	0.03	0.24	0.00	0.10	0.33	0.11
Smilax laurifolia	0.03	0.24	0.00	0.10	0.33	0.11
Euthamia leptocephala	0.02	0.12	0.01	0.19	0.31	0.10
Helenium amarum	0.02	0.12	0.01	0.19	0.31	0.10
Sida spinosa	0.02	0.12	0.01	0.19	0.31	0.10
Carex joorii	0.03	0.24	0.00	0.00	0.24	0.08
Vaccinium corybosum	0.03	0.24	0.00	0.00	0.24	0.08
Dichanthelium dichotomum	0.03	0.24	0.00	0.00	0.24	0.08
Castanea pumila	0.03	0.24	0.00	0.00	0.24	0.08
Berchemia scandens	0.03	0.24	0.00	0.00	0.24	0.08
Carya tomentosa	0.03	0.24	0.00	0.00	0.24	0.08

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Acer rubrum var. drummondii	0.03	0.24	0.00	0.00	0.24	0.08
Baptisia alba	0.03	0.24	0.00	0.00	0.24	0.08
Pluchea foetida	0.03	0.24	0.00	0.00	0.24	0.08
Scoparia dulcis	0.03	0.24	0.00	0.00	0.24	0.08
Carex brevior	0.03	0.24	0.00	0.00	0.24	0.08
Juncus tenuis	0.02	0.12	0.00	0.10	0.21	0.07
Croton capitatus	0.02	0.12	0.00	0.10	0.21	0.07
Pyrrhopappus carolinianus	0.02	0.12	0.00	0.10	0.21	0.07
Passiflora incarnata	0.02	0.12	0.00	0.10	0.21	0.07
Elephantopus tomentosus	0.02	0.12	0.00	0.10	0.21	0.07
Strophostyles umbellata	0.02	0.12	0.00	0.10	0.21	0.07
Lysimachia radicans	0.02	0.12	0.00	0.10	0.21	0.07
Chamaesyce maculata	0.02	0.12	0.00	0.10	0.21	0.07
Limnosciadium pinnatum	0.02	0.12	0.00	0.10	0.21	0.07
Forestiera ligustrina	0.02	0.12	0.00	0.10	0.21	0.07
Chenopodium ambrosioides	0.02	0.12	0.00	0.00	0.12	0.04
Scleria sp.	0.02	0.12	0.00	0.00	0.12	0.04
Eleocharis montevidensis	0.02	0.12	0.00	0.00	0.12	0.04
Gratiola brevifolia	0.02	0.12	0.00	0.00	0.12	0.04
Eupatorium lancifolium	0.02	0.12	0.00	0.00	0.12	0.04
Iris virginica	0.02	0.12	0.00	0.00	0.12	0.04
Ligustrum sinense	0.02	0.12	0.00	0.00	0.12	0.04
Diospyros virginiana	0.02	0.12	0.00	0.00	0.12	0.04
Axonopus fissifolius	0.02	0.12	0.00	0.00	0.12	0.04

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Crataegus viridis	0.02	0.12	0.00	0.00	0.12	0.04
Lackeya multiflora	0.02	0.12	0.00	0.00	0.12	0.04
Andropogon virginicus	0.02	0.12	0.00	0.00	0.12	0.04
Persea palustris	0.02	0.12	0.00	0.00	0.12	0.04
Rhexia mariana var. mariana	0.02	0.12	0.00	0.00	0.12	0.04
Elephantopus carolinianus	0.02	0.12	0.00	0.00	0.12	0.04
Boltonia diffusa	0.02	0.12	0.00	0.00	0.12	0.04
Vernonia missurica	0.02	0.12	0.00	0.00	0.12	0.04
Lespedeza virginica	0.02	0.12	0.00	0.00	0.12	0.04
Carya glabra var. hirsuta	0.02	0.12	0.00	0.00	0.12	0.04
Cyperus retroflexus	0.02	0.12	0.00	0.00	0.12	0.04
Triadenum walterii	0.02	0.12	0.00	0.00	0.12	0.04
Carex debilis	0.02	0.12	0.00	0.00	0.12	0.04
Ardisia crenata	0.02	0.12	0.00	0.00	0.12	0.04
Cyperus sp.	0.02	0.12	0.00	0.00	0.12	0.04
Botrychium dissectum	0.02	0.12	0.00	0.00	0.12	0.04
Carex cherokeensis	0.02	0.12	0.00	0.00	0.12	0.04
Quercus alba	0.02	0.12	0.00	0.00	0.12	0.04
Carex digitalis	0.02	0.12	0.00	0.00	0.12	0.04
Ruellia caroliniensis	0.02	0.12	0.00	0.00	0.12	0.04
Carex intumescens	0.02	0.12	0.00	0.00	0.12	0.04
Podophyllum peltatum	0.02	0.12	0.00	0.00	0.12	0.04
Hamamelis virginiana	0.02	0.12	0.00	0.00	0.12	0.04
Arundinaria gigantea	0.02	0.12	0.00	0.00	0.12	0.04

Table 1D

Summary of Herbaceous Layer
Pinus taeda Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Asimina parviflora	0.02	0.12	0.00	0.00	0.12	0.04
Styrax americana	0.02	0.12	0.00	0.00	0.12	0.04
Leersia virginica	0.02	0.12	0.00	0.00	0.12	0.04
Viola palmata	0.02	0.12	0.00	0.00	0.12	0.04
Scleria sp.	0.02	0.12	0.00	0.00	0.12	0.04
Morus rubra	0.02	0.12	0.00	0.00	0.12	0.04
Potentilla indica	0.02	0.12	0.00	0.00	0.12	0.04
Ilex ambigua	0.02	0.12	0.00	0.00	0.12	0.04
Cephalanthus occidentalis	0.02	0.12	0.00	0.00	0.12	0.04
Rhynchospora caduca	0.02	0.12	0.00	0.00	0.12	0.04
Lespedeza repens	0.02	0.12	0.00	0.00	0.12	0.04
Cocculus carolinus	0.02	0.12	0.00	0.00	0.12	0.04
Magnolia grandiflora	0.02	0.12	0.00	0.00	0.12	0.04
Galactia regularis	0.02	0.12	0.00	0.00	0.12	0.04
Mitreola petiolata	0.02	0.12	0.00	0.00	0.12	0.04
Lepidium virginicum	0.02	0.12	0.00	0.00	0.12	0.04
Acmella oppositifolia var. repens	0.02	0.12	0.00	0.00	0.12	0.04
Trachelospermum difforme	0.02	0.12	0.00	0.00	0.12	0.04
Sida rhombifolia	0.02	0.12	0.00	0.00	0.12	0.04
Carex caroliniana	0.02	0.12	0.00	0.00	0.12	0.04

Table 1-1A

Summary of Overstory Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.95	33.33	305.67	71.44	20.36	78.98	183.76	61.25
Liquidambar styraciflua	0.51	18.02	34.10	7.97	2.01	7.80	33.79	11.26
Quercus nigra	0.33	11.71	26.53	6.20	1.07	4.14	22.05	7.35
Nyssa sylvatica	0.15	5.41	11.37	2.66	0.36	1.40	9.47	3.16
Triadica sebifera	0.15	5.41	8.53	1.99	0.26	1.01	8.41	2.80
Ilex opaca	0.10	3.60	8.53	1.99	0.19	0.72	6.32	2.11
Quercus stellata	0.05	1.80	3.79	0.89	0.24	0.93	3.62	1.21
Quercus falcata	0.05	1.80	2.84	0.66	0.17	0.67	3.14	1.05
Quercus alba	0.05	1.80	1.89	0.44	0.23	0.88	3.12	1.04
Quercus laurifolia	0.05	1.80	2.84	0.66	0.14	0.53	2.99	1.00
Quercus phellos	0.05	1.80	2.84	0.66	0.11	0.41	2.88	0.96
Carya tomentosa	0.05	1.80	1.89	0.44	0.14	0.54	2.78	0.93
Carpinus caroliniana	0.05	1.80	2.84	0.66	0.07	0.28	2.75	0.92
Quercus michauxii	0.05	1.80	1.89	0.44	0.08	0.33	2.57	0.86
Sassafras albidum	0.03	0.90	1.89	0.44	0.06	0.23	1.58	0.53
Persia borbonia	0.03	0.90	1.89	0.44	0.06	0.22	1.56	0.52
Magnolia grandiflora	0.03	0.90	1.89	0.44	0.05	0.21	1.55	0.52
Tilia americana	0.03	0.90	1.89	0.44	0.05	0.18	1.52	0.51
Castanea pumila	0.03	0.90	0.95	0.22	0.06	0.24	1.37	0.46
Magnolia virginiana	0.03	0.90	0.95	0.22	0.02	0.08	1.20	0.40
Diodia virginiana	0.03	0.90	0.95	0.22	0.02	0.07	1.19	0.40
Sideroxylon lycioides	0.03	0.90	0.95	0.22	0.02	0.06	1.19	0.40
Vaccinium arboreum	0.03	0.90	0.95	0.22	0.02	0.06	1.18	0.39

Table 1-1B

Summary of Midstory Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.82	11.76	338.20	29.85	0.99	26.94	68.56	22.85
Liquidambar styraciflua	0.69	9.93	150.31	13.27	0.42	11.41	34.60	11.53
Quercus nigra	0.54	7.72	95.68	8.44	0.35	9.47	25.63	8.54
Pinus taeda	0.36	5.15	96.00	8.47	0.40	10.86	24.48	8.16
Triadica sebifera	0.31	4.41	81.47	7.19	0.29	7.79	19.40	6.47
Ilex opaca	0.64	9.19	47.68	4.21	0.14	3.72	17.12	5.71
Nyssa sylvatica	0.36	5.15	48.31	4.26	0.20	5.51	14.92	4.97
Carpinus caroliniana	0.21	2.94	28.42	2.51	0.18	4.94	10.39	3.46
Halesia diptera	0.23	3.31	19.89	1.76	0.07	2.00	7.06	2.35
Ilex decidua	0.18	2.57	24.63	2.17	0.04	1.20	5.94	1.98
Persia borbonia	0.18	2.57	12.32	1.09	0.06	1.56	5.23	1.74
Vaccinium arboreum	0.21	2.94	14.21	1.25	0.03	0.85	5.05	1.68
Quercus laurifolia	0.13	1.84	13.26	1.17	0.05	1.43	4.44	1.48
Symplocos tinctoria	0.10	1.47	22.74	2.01	0.03	0.95	4.43	1.48
Quercus michauxii	0.18	2.57	9.47	0.84	0.03	0.80	4.21	1.40
Sassafras albidum	0.15	2.21	8.53	0.75	0.02	0.53	3.49	1.16
Quercus falcata	0.08	1.10	11.37	1.00	0.04	1.14	3.25	1.08
Quercus alba	0.10	1.47	8.53	0.75	0.04	0.98	3.20	1.07
Acer rubrum var. rubrum	0.10	1.47	8.53	0.75	0.03	0.74	2.96	0.99
Prunus serotina	0.10	1.47	5.68	0.50	0.03	0.74	2.71	0.90
Vitis rotundifolia	0.13	1.84	7.58	0.67	0.01	0.19	2.69	0.90
Quercus stellata	0.08	1.10	5.68	0.50	0.03	0.91	2.51	0.84
Callicarpa americana	0.05	0.74	11.05	0.98	0.02	0.61	2.32	0.77
Morella cerifera	0.10	1.47	4.74	0.42	0.01	0.34	2.23	0.74

Table 1-1B

Summary of Midstory Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ulmus alata	0.08	1.10	4.74	0.42	0.01	0.40	1.92	0.64
Quercus hemispherica	0.05	0.74	4.7366	0.42	0.0221	0.6	1.75	0.58
Carex corrugata	0.05	0.74	6.6313	0.59	0.0119	0.32	1.64	0.55
Magnolia virginiana	0.03	0.37	3.7893	0.33	0.0249	0.68	1.38	0.46
Carya tomentosa	0.05	0.74	3.7893	0.33	0.0108	0.29	1.36	0.45
Ligustrum sinense	0.05	0.74	2.5262	0.22	0.007	0.19	1.15	0.38
Rhus copallina	0.05	0.74	2.842	0.25	0.003	0.08	1.07	0.36
Crataegus viridis	0.05	0.74	1.8947	0.17	0.004	0.11	1.01	0.34
Campsis radicans	0.05	0.74	1.8947	0.17	0.0014	0.04	0.94	0.31
Aralia spinosa	0.05	0.74	1.2631	0.11	0.0013	0.04	0.88	0.29
Cornus florida	0.03	0.37	3.7893	0.33	0.0054	0.15	0.85	0.28
Crataegus brachyacantha	0.03	0.37	2.842	0.25	0.0051	0.14	0.76	0.25
Castanea pumila	0.03	0.37	2.842	0.25	0.0036	0.1	0.72	0.24
Crataegus spathulata	0.03	0.37	0.9473	0.08	0.0097	0.26	0.72	0.24
Betula nigra	0.03	0.37	0.9473	0.08	0.0083	0.22	0.68	0.23
Vaccinium elliottii	0.03	0.37	1.8947	0.17	0.0041	0.11	0.65	0.22
Sideroxylon lycioides	0.03	0.37	1.8947	0.17	0.0023	0.06	0.6	0.2
Quercus phellos	0.03	0.37	0.9473	0.08	0.0045	0.12	0.57	0.19
Hamamelis virginiana	0.03	0.37	0.9473	0.08	0.0037	0.1	0.55	0.18
Crataegus marshallii	0.03	0.37	0.9473	0.08	0.0031	0.08	0.53	0.18
Crataegus berberifolia	0.03	0.37	0.9473	0.08	0.0024	0.07	0.52	0.17
Diodia virginiana	0.03	0.37	0.9473	0.08	0.0022	0.06	0.51	0.17
Cornus foemina	0.03	0.37	0.9473	0.08	0.0016	0.04	0.5	0.17
Cyrilla racemiflora	0.03	0.37	0.9473	0.08	0.0014	0.04	0.49	0.16

Table 1-1B

Summary of Midstory Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Sideroxylon lanuginosa	0.03	0.37	0.9473	0.08	0.0013	0.04	0.49	0.16
Magnolia grandiflora	0.03	0.37	0.9473	0.08	0.0013	0.04	0.49	0.16
Unknown tree	0.03	0.37	0.9473	0.08	0.0007	0.02	0.47	0.16

Table 1-1C

Summary of Shrub Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.59	15.97	1374.26	34.59	0.19	37.07	87.63	29.21
Callicarpa americana	0.33	9.03	474.93	11.95	0.07	13.23	34.21	11.40
Vitis rotundifolia	0.33	9.03	273.78	6.89	0.03	5.75	21.67	7.22
Liquidambar styraciflua	0.26	6.94	191.99	4.83	0.03	6.90	18.68	6.23
Quercus nigra	0.23	6.25	252.62	6.36	0.02	4.76	17.37	5.79
Ilex opaca	0.28	7.64	143.36	3.61	0.02	3.36	14.61	4.87
Symplocos tinctoria	0.05	1.39	202.10	5.09	0.03	5.53	12.00	4.00
Pinus taeda	0.21	5.56	122.21	3.08	0.01	1.23	9.87	3.29
Vaccinium elliottii	0.05	1.39	40.42	1.02	0.02	4.76	7.17	2.39
Vaccinium arboreum	0.10	2.78	70.73	1.78	0.01	1.61	6.17	2.06
Halesia diptera	0.08	2.08	60.63	1.53	0.01	1.73	5.34	1.78
Persia borbonia	0.05	1.39	101.05	2.54	0.01	1.33	5.26	1.75
Rhus copallina	0.08	2.08	50.52	1.27	0.01	1.09	4.44	1.48
Triadica sebifera	0.08	2.08	51.47	1.30	0.00	0.92	4.30	1.43
Carex corrugata	0.03	0.69	60.63	1.53	0.01	1.49	3.71	1.24
Quercus falcata	0.08	2.08	22.10	0.56	0.00	0.83	3.47	1.16
Viburnum dentatum	0.08	2.08	30.31	0.76	0.00	0.40	3.25	1.08
Gelsemium sempervirens	0.03	0.69	40.42	1.02	0.01	1.53	3.24	1.08
Ilex decidua	0.05	1.39	30.31	0.76	0.00	0.56	2.72	0.91
Chionanthus virginica	0.05	1.39	30.31	0.76	0.00	0.56	2.72	0.91
Quercus hemispherica	0.05	1.39	20.21	0.51	0.00	0.40	2.30	0.77
Carpinus caroliniana	0.05	1.39	20.21	0.51	0.00	0.40	2.30	0.77
Rubus argutus	0.05	1.39	30.31	0.76	0.00	0.12	2.27	0.76
Nyssa sylvatica	0.05	1.39	20.21	0.51	0.00	0.20	2.10	0.70

Table 1-1C

Summary of Shrub Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ligustrum sinense	0.03	0.69	20.21	0.51	0.00	0.81	2.01	0.67
Prunus serotina	0.03	0.69	30.31	0.76	0.00	0.20	1.66	0.55
Baccharis halimifolia	0.03	0.69	30.31	0.76	0.00	0.16	1.62	0.54
Magnolia grandiflora	0.03	0.69	10.10	0.25	0.00	0.65	1.59	0.53
Acer rubrum var. rubrum	0.03	0.69	30.3145	0.76	0.0006	0.12	1.58	0.53
Smilax smallii	0.03	0.69	10.1048	0.25	0.0018	0.36	1.31	0.44
Smilax glauca	0.03	0.69	10.1048	0.25	0.0018	0.36	1.31	0.44
Quercus michauxii	0.03	0.69	10.1048	0.25	0.0018	0.36	1.31	0.44
Quercus alba	0.03	0.69	10.1048	0.25	0.0018	0.36	1.31	0.44
Sassafras albidum	0.03	0.69	20.2097	0.51	0.0004	0.08	1.28	0.43
Parthenocissus quinquefolia	0.03	0.69	10.1048	0.25	0.0008	0.16	1.11	0.37
Bignonia capreolata	0.03	0.69	10.1048	0.25	0.0008	0.16	1.11	0.37
Fraxinus americana	0.03	0.69	10.1048	0.25	0.0008	0.16	1.11	0.37
Morella cerifera	0.03	0.69	10.1048	0.25	0.0002	0.04	0.99	0.33
Cyrilla racemiflora	0.03	0.69	10.1048	0.25	0.0002	0.04	0.99	0.33
Crataegus brachyacantha	0.03	0.69	10.1048	0.25	0.0002	0.04	0.99	0.33
Carya glabra var. hirsuta	0.03	0.69	10.1048	0.25	0.0002	0.04	0.99	0.33
Smilax bona-nox	0.03	0.69	5.684	0.14	0.0004	0.08	0.92	0.31

Table 1-1D

Summary of Herbaceous Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Rubus argutus	0.26	1.93	0.76	11.38	13.32	4.44
Vitis rotundifolia	0.74	5.60	0.48	7.19	12.79	4.26
Ilex vomitoria	0.90	6.76	0.36	5.38	12.13	4.04
Callicarpa americana	0.67	5.02	0.40	6.00	11.02	3.67
Toxicodendron radicans	0.21	1.54	0.61	9.09	10.63	3.54
Chasmanthium laxum	0.46	3.47	0.37	5.57	9.05	3.02
Smilax pumila	0.26	1.93	0.22	3.35	5.28	1.76
Bignonia capreolata	0.38	2.90	0.12	1.82	4.71	1.57
Chasmanthium sessiliflorum	0.15	1.16	0.19	2.78	3.94	1.31
Vaccinium arboreum	0.23	1.74	0.13	1.91	3.65	1.22
Viburnum dentatum	0.28	2.12	0.10	1.51	3.64	1.21
Pinus taeda	0.33	2.51	0.07	1.05	3.56	1.19
Unknown herbaceous	0.21	1.54	0.13	1.91	3.46	1.15
Rubus trivialis	0.15	1.16	0.15	2.20	3.36	1.12
Smilax glauca	0.26	1.93	0.08	1.24	3.17	1.06
Dichanthelium commutatum	0.28	2.12	0.05	0.77	2.89	0.96
Quercus nigra	0.31	2.32	0.03	0.48	2.80	0.93
Mitchella repens	0.28	2.12	0.03	0.48	2.61	0.87
Ilex opaca	0.21	1.54	0.06	0.96	2.50	0.83
Solidago altissima	0.08	0.58	0.12	1.72	2.30	0.77
Gelsemium sempervirens	0.21	1.54	0.04	0.58	2.12	0.71
Liquidambar styraciflua	0.21	1.54	0.04	0.58	2.12	0.71
Parthenocissus quinquefolia	0.18	1.35	0.05	0.77	2.12	0.71
Eupatorium capillifolium	0.08	0.58	0.10	1.53	2.11	0.70

Table 1-1D

Summary of Herbaceous Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Paspalum urvillei	0.03	0.19	0.13	1.89	2.09	0.70
Persia borbonia	0.13	0.97	0.07	1.05	2.02	0.67
Gamochaeta purpurea	0.05	0.39	0.11	1.61	1.99	0.66
Smilax bona-nox	0.23	1.74	0.013	0.19	1.93	0.64
Dichanthelium acuminatum	0.21	1.54	0.0257	0.38	1.93	0.64
Quercus laurifolia	0.15	1.16	0.0513	0.77	1.92	0.64
Schizachyrium scoparium	0.05	0.39	0.1026	1.53	1.92	0.64
Scleria oligantha	0.1	0.77	0.0642	0.96	1.73	0.58
Rhynchospora mixta	0.03	0.19	0.1026	1.53	1.72	0.57
Symplocos tinctoria	0.21	1.54	0.0068	0.1	1.65	0.55
Lonicera japonica	0.15	1.16	0.0321	0.48	1.64	0.55
Dichanthelium boscii	0.13	0.97	0.0449	0.67	1.64	0.55
Hypericum hypericoides	0.1	0.77	0.0513	0.77	1.54	0.51
Ambrosia artemisiifolia	0.05	0.39	0.0705	1.05	1.44	0.48
Lygodium japonicum	0.1	0.77	0.0385	0.57	1.35	0.45
Oxalis dillenii	0.1	0.77	0.0321	0.48	1.25	0.42
Carex corrugata	0.05	0.39	0.0577	0.86	1.25	0.42
Scleria reticularis	0.05	0.39	0.0577	0.86	1.25	0.42
Erythrina herbacea	0.05	0.39	0.0577	0.86	1.25	0.42
Dichanthelium scoparium	0.03	0.19	0.0705	1.05	1.25	0.42
Scleria triglomerata	0.15	1.16	0.0003	0	1.16	0.39
Sebastiana fruticosa	0.15	1.16	0.0002	0	1.16	0.39
Campsis radicans	0.1	0.77	0.0257	0.38	1.16	0.39
Sassafras albidum	0.1	0.77	0.0257	0.38	1.16	0.39

Table 1-1D

Summary of Herbaceous Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Solidago sempervirens	0.03	0.19	0.0641	0.96	1.15	0.38
Vaccinium elliottii	0.05	0.39	0.0449	0.67	1.06	0.35
Triadica sebifera	0.13	0.97	0.0001	0	0.97	0.32
Dichanthelium aciculare	0.1	0.77	0.0129	0.19	0.96	0.32
Cardamine sp.	0.1	0.77	0.0128	0.19	0.96	0.32
Acer rubrum var. rubrum	0.1	0.77	0.0128	0.19	0.96	0.32
Ilex decidua	0.1	0.77	0.0128	0.19	0.96	0.32
Viola sororia	0.05	0.39	0.0385	0.57	0.96	0.32
Rhynchosia latifolia	0.03	0.19	0.0513	0.77	0.96	0.32
Eupatorium coelestinum	0.03	0.19	0.0513	0.77	0.96	0.32
Morella cerifera	0.1	0.77	0.0064	0.1	0.87	0.29
Prunus serotina	0.08	0.58	0.0193	0.29	0.87	0.29
Halesia diptera	0.08	0.58	0.0128	0.19	0.77	0.26
Quercus phellos	0.08	0.58	0.0128	0.19	0.77	0.26
Quercus michauxii	0.03	0.19	0.0385	0.57	0.77	0.26
Quercus falcata	0.08	0.58	0.0064	0.1	0.67	0.22
Rhus copallina	0.05	0.39	0.0129	0.19	0.58	0.19
Aralia spinosa	0.05	0.39	0.0128	0.19	0.58	0.19
Diodia virginiana	0.05	0.39	0.0128	0.19	0.58	0.19
Chasmanthium latifolium	0.05	0.39	0.0128	0.19	0.58	0.19
Nyssa sylvatica	0.05	0.39	0.0128	0.19	0.58	0.19
Carex blanda	0.03	0.19	0.0256	0.38	0.58	0.19
Eupatorium serotinum	0.03	0.19	0.0256	0.38	0.58	0.19
Ilex coriacea	0.03	0.19	0.0256	0.38	0.58	0.19

Table 1-1D

Summary of Herbaceous Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Pteridium aquilinum	0.05	0.39	0.0065	0.1	0.48	0.16
Quercus hemispherica	0.05	0.39	0.0065	0.1	0.48	0.16
Smilax rotundifolia	0.05	0.39	0.0064	0.1	0.48	0.16
Crataegus marshallii	0.05	0.39	0.0064	0.1	0.48	0.16
Smilax laurifolia	0.05	0.39	0.0064	0.1	0.48	0.16
Eupatorium semiserratum	0.03	0.19	0.0192	0.29	0.48	0.16
Verbena bracteana	0.03	0.19	0.0192	0.29	0.48	0.16
Desmodium paniculatum	0.03	0.19	0.0192	0.29	0.48	0.16
Passiflora lutea	0.03	0.19	0.0179	0.27	0.46	0.15
Vaccinium corybosum	0.05	0.39	0.0002	0	0.39	0.13
Carpinus caroliniana	0.05	0.39	0.0001	0	0.39	0.13
Oplismenus hirtellus	0.05	0.39	0	0	0.39	0.13
Castanea pumila	0.05	0.39	0	0	0.39	0.13
Carya tomentosa	0.05	0.39	0	0	0.39	0.13
Sida spinosa	0.03	0.19	0.0128	0.19	0.38	0.13
Euthamia leptocephala	0.03	0.19	0.0128	0.19	0.38	0.13
Helenium amarum	0.03	0.19	0.0128	0.19	0.38	0.13
Chamaesyce maculata	0.03	0.19	0.0064	0.1	0.29	0.1
Limnosciadium pinnatum	0.03	0.19	0.0064	0.1	0.29	0.1
Strophostyles umbellata	0.03	0.19	0.0064	0.1	0.29	0.1
Lysimachia radicans	0.03	0.19	0.0064	0.1	0.29	0.1
Juncus tenuis	0.03	0.19	0.0064	0.1	0.29	0.1
Croton capitatus	0.03	0.19	0.0064	0.1	0.29	0.1
Pyrrhopappus carolinianus	0.03	0.19	0.0064	0.1	0.29	0.1

Table 1-1D

Summary of Herbaceous Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Passiflora incarnata	0.03	0.19	0.0064	0.1	0.29	0.1
Elephantopus tomentosus	0.03	0.19	0.0064	0.1	0.29	0.1
Sanicula canadensis	0.03	0.19	0.0064	0.1	0.29	0.1
Forestiera ligustrina	0.03	0.19	0.0064	0.1	0.29	0.1
Chenopodium ambrosioides	0.03	0.19	0.0002	0	0.2	0.07
Scleria sp.	0.03	0.19	0.0001	0	0.19	0.06
Smilax smallii	0.03	0.19	0	0	0.19	0.06
Ligustrum sinense	0.03	0.19	0	0	0.19	0.06
Dichanthelium dichotomum	0.03	0.19	0	0	0.19	0.06
Diospyros virginiana	0.03	0.19	0	0	0.19	0.06
Axonopus fissifolius	0.03	0.19	0	0	0.19	0.06
Andropogon virginicus	0.03	0.19	0	0	0.19	0.06
Persea palustris	0.03	0.19	0	0	0.19	0.06
Cyperus sp.	0.03	0.19	0	0	0.19	0.06
Elephantopus carolinianus	0.03	0.19	0	0	0.19	0.06
Lespedeza virginica	0.03	0.19	0	0	0.19	0.06
Vernonia missurica	0.03	0.19	0	0	0.19	0.06
Cyperus retroflexus	0.03	0.19	0	0	0.19	0.06
Carya glabra var. hirsuta	0.03	0.19	0	0	0.19	0.06
Ilex ambigua	0.03	0.19	0	0	0.19	0.06
Trachelospermum difforme	0.03	0.19	0	0	0.19	0.06
Leersia virginica	0.03	0.19	0	0	0.19	0.06
Hamamelis virginiana	0.03	0.19	0	0	0.19	0.06
Carex caroliniana	0.03	0.19	0	0	0.19	0.06

Table 1-1D

Summary of Herbaceous Layer
Pinus taeda Alliance
Proposed: *Pinus taeda* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Scoparia dulcis	0.03	0.19	0	0	0.19	0.06
Lespedeza repens	0.03	0.19	0	0	0.19	0.06
Botrychium dissectum	0.03	0.19	0	0	0.19	0.06
Carex cherokeensis	0.03	0.19	0	0	0.19	0.06
Carex digitalis	0.03	0.19	0	0	0.19	0.06
Sabal minor	0.03	0.19	0	0	0.19	0.06
Quercus alba	0.03	0.19	0	0	0.19	0.06
Magnolia grandiflora	0.03	0.19	0	0	0.19	0.06
Berchemia scandens	0.03	0.19	0	0	0.19	0.06
Ruellia caroliniensis	0.03	0.19	0	0	0.19	0.06
Cocculus carolinus	0.03	0.19	0	0	0.19	0.06
Lepidium virginicum	0.03	0.19	0	0	0.19	0.06
Sida rhombifolia	0.03	0.19	0	0	0.19	0.06
Carex brevior	0.03	0.19	0	0	0.19	0.06
Podophyllum peltatum	0.03	0.19	0	0	0.19	0.06
Galactia regularis	0.03	0.19	0	0	0.19	0.06
Morus rubra	0.03	0.19	0	0	0.19	0.06
Acmella oppositifolia var. repens	0.03	0.19	0	0	0.19	0.06
Potentilla indica	0.03	0.19	0	0	0.19	0.06

Table 1-2A

Summary of Overstory Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	1.00	33.33	404.62	74.08	19.75	85.21	192.63	64.21
Triadica sebifera	0.38	12.82	40.00	7.32	0.92	3.97	24.11	8.04
Liquidambar styraciflua	0.38	12.82	24.62	4.51	0.66	2.83	20.16	6.72
Quercus nigra	0.27	8.97	18.46	3.38	0.43	1.87	14.22	4.74
Quercus laurifolia	0.23	7.69	18.46	3.38	0.42	1.79	12.86	4.29
Carpinus caroliniana	0.15	5.13	12.31	2.25	0.24	1.02	8.40	2.80
Nyssa sylvatica	0.15	5.13	9.23	1.69	0.32	1.36	8.18	2.73
Ilex opaca	0.08	2.56	4.62	0.85	0.12	0.51	3.92	1.31
Quercus phellos	0.08	2.56	3.08	0.56	0.16	0.71	3.84	1.28
Quercus falcata	0.08	2.56	3.08	0.56	0.05	0.21	3.33	1.11
Ulmus alata	0.04	1.28	1.54	0.28	0.04	0.16	1.72	0.57
Cyrilla racemiflora	0.04	1.28	1.54	0.28	0.03	0.11	1.68	0.56
Persia borbonia	0.04	1.28	1.54	0.28	0.02	0.09	1.65	0.55
Acer rubrum var. rubrum	0.04	1.28	1.54	0.28	0.02	0.09	1.65	0.55
Quercus michauxii	0.04	1.28	1.54	0.28	0.02	0.08	1.65	0.55

Table 1-2B

Summary of Midstory Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.81	10.71	521.54	33.83	1.59	32.10	76.64	25.55
Liquidambar styraciflua	0.73	9.69	209.23	13.57	0.56	11.33	34.60	11.53
Ilex vomitoria	0.77	10.20	172.31	11.18	0.45	9.00	30.38	10.13
Pinus taeda	0.46	6.12	92.31	5.99	0.49	9.94	22.05	7.35
Carpinus caroliniana	0.42	5.61	93.85	6.09	0.44	8.84	20.54	6.85
Quercus nigra	0.58	7.65	75.38	4.89	0.25	4.94	17.48	5.83
Quercus laurifolia	0.46	6.12	64.62	4.19	0.24	4.79	15.11	5.04
Ilex opaca	0.46	6.12	60.00	3.89	0.17	3.39	13.41	4.47
Nyssa sylvatica	0.38	5.10	46.15	2.99	0.15	2.96	11.06	3.69
Quercus michauxii	0.35	4.59	20.00	1.30	0.07	1.50	7.39	2.46
Acer rubrum var. drummondii	0.27	3.57	21.54	1.40	0.10	1.91	6.88	2.29
Cyrilla racemiflora	0.15	2.04	36.92	2.40	0.05	1.09	5.53	1.84
Morella cerifera	0.19	2.55	21.54	1.40	0.07	1.42	5.37	1.79
Ilex decidua	0.19	2.55	13.85	0.90	0.03	0.59	4.04	1.35
Acer rubrum var. rubrum	0.15	2.04	15.38	1.00	0.04	0.89	3.93	1.31
Ulmus alata	0.08	1.02	12.31	0.80	0.05	0.91	2.73	0.91
Quercus phellos	0.15	2.04	6.15	0.40	0.01	0.26	2.70	0.90
Persia borbonia	0.08	1.02	6.15	0.40	0.05	1.08	2.50	0.83
Persea palustris	0.08	1.02	4.62	0.30	0.01	0.30	1.62	0.54
Liquidambar styraciflua	0.04	0.51	7.69	0.50	0.03	0.53	1.54	0.51
Symplocos tinctoria	0.08	1.02	4.62	0.30	0.01	0.16	1.48	0.49
Vitis rotundifolia	0.08	1.02	4.62	0.30	0.00	0.07	1.39	0.46
Crataegus opaca	0.08	1.02	3.08	0.20	0.01	0.15	1.37	0.46
Prunus serotina	0.08	1.02	3.08	0.20	0.01	0.15	1.37	0.46

Table 1-2B

Summary of Midstory Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carex caroliniana	0.04	0.51	6.15	0.40	0.02	0.32	1.23	0.41
Quercus similis	0.04	0.51	3.0769	0.2	0.0244	0.49	1.2	0.4
Halesia diptera	0.04	0.51	3.0769	0.2	0.0063	0.13	0.84	0.28
Carya aquatica	0.04	0.51	1.54	0.10	0.01	0.22	0.83	0.28
Ilex coriacea	0.04	0.51	1.54	0.10	0.01	0.16	0.77	0.26
Fraxinus pennsylvanica	0.04	0.51	1.54	0.10	0.01	0.15	0.76	0.25
Celtis laevigata	0.04	0.51	1.54	0.10	0.01	0.14	0.75	0.25
Crataegus marshallii	0.04	0.51	1.54	0.10	0.00	0.03	0.64	0.21
Quercus falcata	0.04	0.51	1.54	0.10	0.00	0.03	0.64	0.21
Vitis aestivalis	0.04	0.51	1.54	0.10	0.00	0.02	0.63	0.21
Frangula caroliniana	0.04	0.51	1.54	0.10	0.00	0.02	0.63	0.21

Table 1-2C

Summary of Shrub Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Vitis rotundifolia	0.46	11.76	646.15	17.21	0.07	15.53	44.50	14.83
Liquidambar styraciflua	0.46	11.76	463.08	12.33	0.08	18.27	42.36	14.12
Ilex vomitoria	0.54	13.73	507.69	13.52	0.05	10.91	38.15	12.72
Triadica sebifera	0.15	3.92	215.38	5.74	0.03	7.59	17.25	5.75
Morella cerifera	0.19	4.90	123.08	3.28	0.02	3.80	11.98	3.99
Carpinus caroliniana	0.12	2.94	184.62	4.92	0.02	3.73	11.58	3.86
Ilex opaca	0.23	5.88	123.08	3.28	0.01	2.07	11.23	3.74
Quercus laurifolia	0.12	2.94	123.08	3.28	0.02	4.35	10.57	3.52
Acer rubrum var. drummondii	0.12	2.94	138.46	3.69	0.01	2.42	9.04	3.01
Quercus nigra	0.15	3.92	92.31	2.46	0.01	1.66	8.04	2.68
Cyrilla racemiflora	0.08	1.96	92.31	2.46	0.01	2.42	6.83	2.28
Styrax americana	0.08	1.96	46.15	1.23	0.02	3.59	6.78	2.26
Viburnum dentatum	0.12	2.94	61.54	1.64	0.01	2.14	6.72	2.24
Vaccinium elliottii	0.04	0.98	107.69	2.87	0.01	2.49	6.33	2.11
Sebastiana fruticosa	0.12	2.94	107.69	2.87	0.00	0.48	6.29	2.10
Callicarpa americana	0.08	1.96	92.31	2.46	0.01	1.45	5.87	1.96
Ilex decidua	0.08	1.96	61.54	1.64	0.01	2.07	5.67	1.89
Fraxinus americana	0.04	0.98	46.15	1.23	0.02	3.45	5.66	1.89
Ilex coriacea	0.04	0.98	107.69	2.87	0.00	1.10	4.95	1.65
Bignonia capreolata	0.12	2.94	46.15	1.23	0.00	0.69	4.86	1.62
Smilax rotundifolia	0.08	1.96	76.92	2.05	0.00	0.69	4.70	1.57
Nyssa sylvatica	0.08	1.96	30.77	0.82	0.01	1.38	4.16	1.39
Pinus taeda	0.04	0.98	30.77	0.82	0.01	2.21	4.01	1.34
Crataegus marshallii	0.08	1.96	30.77	0.82	0.00	0.69	3.47	1.16

Table 1-2C

Summary of Shrub Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Symplocos tinctoria	0.04	0.98	76.92	2.05	0.00	0.35	3.37	1.12
Berchemia scandens	0.04	0.98	15.38	0.41	0.00	1.10	2.49	0.83
Halesia diptera	0.04	0.98	15.38	0.41	0.00	1.10	2.49	0.83
Crataegus opaca	0.04	0.98	15.38	0.41	0.00	1.10	2.49	0.83
Acer rubrum var. rubrum	0.04	0.98	15.3846	0.41	0.0012	0.28	1.67	0.56
Ulmus americana	0.04	0.98	15.3846	0.41	0.0012	0.28	1.67	0.56
Sassafras albidum	0.04	0.98	15.3846	0.41	0.0012	0.28	1.67	0.56
Quercus michauxii	0.04	0.98	15.3846	0.41	0.0012	0.28	1.67	0.56
Campsis radicans	0.04	0.98	15.3846	0.41	0.0003	0.07	1.46	0.49

Table 1-2D

Summary of Herbaceous Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium laxum	0.73	5.71	3.08	19.96	25.66	8.55
Vitis rotundifolia	0.69	5.41	2.17	14.07	19.48	6.49
Ilex vomitoria	0.73	5.71	0.74	4.80	10.51	3.50
Bignonia capreolata	0.69	5.41	0.71	4.61	10.02	3.34
Smilax bona-nox	0.50	3.90	0.47	3.07	6.97	2.32
Callicarpa americana	0.42	3.30	0.38	2.46	5.76	1.92
Rubus argutus	0.35	2.70	0.44	2.88	5.58	1.86
Campsis radicans	0.27	2.10	0.51	3.32	5.42	1.81
Toxicodendron radicans	0.31	2.40	0.42	2.73	5.13	1.71
Viburnum dentatum	0.38	3.00	0.27	1.75	4.75	1.58
Carex joorii	0.08	0.60	0.57	3.66	4.27	1.42
Cyrilla racemiflora	0.15	1.20	0.38	2.49	3.69	1.23
Quercus laurifolia	0.31	2.40	0.18	1.20	3.60	1.20
Sebastiana fruticosa	0.19	1.50	0.31	1.98	3.48	1.16
Dichanthelium commutatum	0.35	2.70	0.12	0.75	3.45	1.15
Scleria triglomerata	0.23	1.80	0.25	1.61	3.41	1.14
Liquidambar styraciflua	0.31	2.40	0.14	0.93	3.34	1.11
Ilex opaca	0.23	1.80	0.23	1.50	3.30	1.10
Pinus taeda	0.27	2.10	0.13	0.87	2.97	0.99
Scleria oligantha	0.19	1.50	0.17	1.12	2.62	0.87
Smilax glauca	0.23	1.80	0.13	0.81	2.61	0.87
Parthenocissus quinquefolia	0.19	1.50	0.15	1.00	2.50	0.83
Cardamine sp.	0.23	1.80	0.11	0.69	2.49	0.83
Rubus trivialis	0.15	1.20	0.18	1.20	2.40	0.80

Table 1-2D

Summary of Herbaceous Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Gelsemium sempervirens	0.15	1.20	0.16	1.06	2.26	0.75
Mitchella repens	0.19	1.50	0.11	0.69	2.19	0.73
Lygodium japonicum	0.15	1.20	0.14	0.89	2.09	0.70
Chasmanthium latifolium	0.12	0.90	0.16	1.06	1.96	0.65
Carpinus caroliniana	0.12	0.90	0.13	0.87	1.77	0.59
Smilax rotundifolia	0.15	1.20	0.08	0.51	1.71	0.57
Lonicera japonica	0.15	1.20	0.07	0.44	1.64	0.55
Persia borbonia	0.12	0.90	0.11	0.69	1.59	0.53
Carex blanda	0.08	0.60	0.13	0.87	1.47	0.49
Sabal minor	0.08	0.60	0.13	0.86	1.46	0.49
Hypericum hypericoides	0.15	1.20	0.04	0.25	1.45	0.48
Nyssa sylvatica	0.12	0.90	0.08	0.50	1.40	0.47
Symplocos tinctoria	0.12	0.90	0.06	0.41	1.31	0.44
Quercus phellos	0.12	0.90	0.06	0.37	1.27	0.42
Dichanthelium acuminatum	0.12	0.90	0.06	0.37	1.27	0.42
Eupatorium semiserratum	0.08	0.60	0.09	0.56	1.16	0.39
Morella cerifera	0.12	0.90	0.04	0.25	1.15	0.38
Vaccinium arboreum	0.08	0.60	0.08	0.50	1.10	0.37
Vaccinium elliottii	0.08	0.60	0.07	0.44	1.04	0.35
Oplismenus hirtellus	0.08	0.60	0.06	0.37	0.97	0.32
Eleocharis montevidensis	0.04	0.30	0.10	0.64	0.94	0.31
Triadica sebifera	0.08	0.60	0.05	0.31	0.91	0.30
Smilax smallii	0.08	0.60	0.05	0.31	0.91	0.30
Acer rubrum var. drummondii	0.08	0.60	0.05	0.31	0.91	0.30

Table 1-2D

Summary of Herbaceous Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viola sororia	0.08	0.60	0.05	0.31	0.91	0.30
Baptisia alba	0.08	0.60	0.04	0.25	0.85	0.28
Unknown herbaceous	0.08	0.60	0.04	0.25	0.85	0.28
Pluchea foetida	0.08	0.60	0.04	0.25	0.85	0.28
Chasmanthium sessiliflorum	0.08	0.60	0.03	0.19	0.79	0.26
Smilax pumila	0.04	0.30	0.07	0.44	0.74	0.25
Ilex coriacea	0.04	0.30	0.07	0.44	0.74	0.25
Ilex decidua	0.08	0.60	0.02	0.12	0.73	0.24
Quercus falcata	0.08	0.60	0.02	0.12	0.73	0.24
Gratiola brevifolia	0.04	0.30	0.06	0.37	0.67	0.22
Eupatorium lancifolium	0.04	0.30	0.06	0.36	0.66	0.22
Iris virginica	0.04	0.30	0.05	0.31	0.61	0.20
Eupatorium capillifolium	0.04	0.30	0.04	0.25	0.55	0.18
Lackeya multiflora	0.04	0.30	0.04	0.25	0.55	0.18
Berchemia scandens	0.04	0.30	0.04	0.25	0.55	0.18
Crataegus viridis	0.04	0.30	0.04	0.25	0.55	0.18
Rhexia mariana var. mariana	0.04	0.30	0.03	0.19	0.49	0.16
Dichanthelium dichotomum	0.04	0.30	0.03	0.19	0.49	0.16
Crataegus marshallii	0.04	0.30	0.03	0.19	0.49	0.16
Dichanthelium scoparium	0.04	0.30	0.02	0.12	0.42	0.14
Dichanthelium aciculare	0.04	0.30	0.02	0.12	0.42	0.14
Ardisia crenata	0.04	0.30	0.02	0.12	0.42	0.14
Boltonia diffusa	0.04	0.30	0.02	0.12	0.42	0.14
Quercus nigra	0.04	0.30	0.02	0.12	0.42	0.14

Table 1-2D

Summary of Herbaceous Layer
Pinus taeda Alliance
Pinus taeda Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Triadenum walterii	0.04	0.30	0.02	0.12	0.42	0.14
Carex debilis	0.04	0.30	0.02	0.12	0.42	0.14
Sassafras albidum	0.04	0.30	0.01	0.06	0.36	0.12
Rhynchospora caduca	0.04	0.30	0.01	0.06	0.36	0.12
Diodia virginiana	0.04	0.30	0.01	0.06	0.36	0.12
Rhynchosia latifolia	0.04	0.30	0.01	0.06	0.36	0.12
Arundinaria gigantea	0.04	0.30	0.01	0.06	0.36	0.12
Sanicula canadensis	0.04	0.30	0.01	0.06	0.36	0.12
Quercus michauxii	0.04	0.30	0.01	0.06	0.36	0.12
Scleria sp.	0.04	0.30	0.01	0.06	0.36	0.12
Cephalanthus occidentalis	0.04	0.30	0.01	0.06	0.36	0.12
Ambrosia artemisiifolia	0.04	0.30	0.01	0.06	0.36	0.12
Mitreola petiolata	0.04	0.30	0.01	0.06	0.36	0.12
Carex brevior	0.04	0.30	0.01	0.06	0.36	0.12
Styrax americana	0.04	0.30	0.01	0.06	0.36	0.12
Scoparia dulcis	0.04	0.30	0.01	0.06	0.36	0.12
Solidago sempervirens	0.04	0.30	0.01	0.06	0.36	0.12
Carex intumescens	0.04	0.30	0.01	0.06	0.36	0.12
Viola palmata	0.04	0.30	0.01	0.06	0.36	0.12
Acer rubrum var. rubrum	0.04	0.30	0.01	0.06	0.36	0.12
Asimina parviflora	0.04	0.30	0.01	0.06	0.36	0.12

Table 2A

Summary of Overstory Layer
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance
Proposed: Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Acer rubrum var. drummondii	0.69	14.52	83.0769	22.69	4.3015	24.28	61.48	20.49
Triadica sebifera	0.69	14.52	55.3846	15.13	1.8368	10.37	40.01	13.34
Fraxinus pennsylvanica	0.46	9.68	43.0769	11.76	1.7387	9.81	31.26	10.42
Liquidambar styraciflua	0.31	6.45	27.6923	7.56	0.9283	5.24	19.25	6.42
Taxodium distichum	0.15	3.23	9.2308	2.52	2.0547	11.6	17.34	5.78
Carya aquatica	0.23	4.84	12.3077	3.36	1.4987	8.46	16.66	5.55
Quercus lyrata	0.23	4.84	12.3077	3.36	1.3264	7.49	15.69	5.23
Acer rubrum var. rubrum	0.15	3.23	27.6923	7.56	0.7655	4.32	15.11	5.04
Planera aquatica	0.15	3.23	18.4615	5.04	0.429	2.42	10.69	3.56
Quercus nigra	0.23	4.84	9.2308	2.52	0.2912	1.64	9	3
Nyssa sylvatica	0.15	3.23	9.2308	2.52	0.3806	2.15	7.89	2.63
Quercus laurifolia	0.15	3.23	6.1538	1.68	0.4273	2.41	7.32	2.44
Carya cordiformis	0.15	3.23	6.1538	1.68	0.3438	1.94	6.85	2.28
Ulmus americana	0.15	3.23	6.1538	1.68	0.2207	1.25	6.15	2.05
Fraxinus caroliniana	0.08	1.61	9.2308	2.52	0.3255	1.84	5.97	1.99
Carpinus caroliniana	0.15	3.23	6.1538	1.68	0.1294	0.73	5.64	1.88
Nyssa biflora	0.15	3.23	6.1538	1.68	0.1092	0.62	5.52	1.84
Salix nigra	0.08	1.61	3.0769	0.84	0.3046	1.72	4.17	1.39
Carya glabra var. hirsuta	0.08	1.61	3.0769	0.84	0.0783	0.44	2.9	0.97
Ulmus crassifolia	0.08	1.61	3.0769	0.84	0.0718	0.41	2.86	0.95
Diospyros virginiana	0.08	1.61	3.0769	0.84	0.0698	0.39	2.85	0.95
Diodia virginiana	0.08	1.61	3.0769	0.84	0.044	0.25	2.7	0.9
Ilex opaca	0.08	1.61	3.0769	0.84	0.0408	0.23	2.68	0.89

Table 2B

Summary of Midstory Layer
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex decidua	0.85	12.79	215.38	23.89	1.01	25.45	62.13	20.71
Triadica sebifera	0.69	10.47	138.46	15.36	0.54	13.61	39.43	13.14
Acer rubrum var. drummondii	0.77	11.63	104.62	11.60	0.60	15.08	38.31	12.77
Fraxinus pennsylvanica	0.38	5.81	123.08	13.65	0.63	15.89	35.35	11.78
Liquidambar styraciflua	0.38	5.81	52.31	5.80	0.21	5.28	16.89	5.63
Carpinus caroliniana	0.31	4.65	27.69	3.07	0.15	3.77	11.50	3.83
Campsis radicans	0.31	4.65	43.08	4.78	0.03	0.87	10.30	3.43
Acer rubrum var. rubrum	0.15	2.33	27.69	3.07	0.11	2.70	8.10	2.70
Vitis rotundifolia	0.23	3.49	21.54	2.39	0.03	0.80	6.68	2.23
Nyssa sylvatica	0.23	3.49	12.31	1.37	0.05	1.33	6.18	2.06
Quercus laurifolia	0.23	3.49	12.31	1.37	0.03	0.88	5.73	1.91
Carya aquatica	0.23	3.49	9.23	1.02	0.04	1.03	5.54	1.85
'Diodia virginiana	0.08	1.16	15.38	1.71	0.09	2.24	5.11	1.70
Planera aquatica	0.15	2.33	6.15	0.68	0.06	1.57	4.58	1.53
Cornus foemina	0.15	2.33	9.23	1.02	0.04	1.05	4.40	1.47
Ulmus americana	0.15	2.33	9.23	1.02	0.03	0.67	4.02	1.34
Betula nigra	0.15	2.33	6.15	0.68	0.02	0.60	3.61	1.20
Fraxinus caroliniana	0.08	1.16	6.15	0.68	0.06	1.42	3.26	1.09
Viburnum dentatum	0.08	1.16	9.23	1.02	0.02	0.60	2.79	0.93
Crataegus marshallii	0.08	1.16	6.15	0.68	0.04	0.88	2.73	0.91
Crataegus opaca	0.08	1.16	6.15	0.68	0.03	0.84	2.68	0.89
Taxodium distichum	0.08	1.16	9.23	1.02	0.01	0.33	2.52	0.84
Quercus similis	0.08	1.16	3.08	0.34	0.03	0.74	2.24	0.75
Quercus phellos	0.08	1.16	3.08	0.34	0.03	0.67	2.18	0.73

Table 2B

Summary of Midstory Layer
***Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus americana	0.08	1.16	3.08	0.34	0.02	0.39	1.89	0.63
Vitis cinerea	0.08	1.16	3.08	0.34	0.01	0.30	1.80	0.60
Ilex opaca	0.08	1.16	3.08	0.34	0.01	0.26	1.76	0.59
Carya glabra var. hirsuta	0.08	1.16	3.08	0.34	0.01	0.25	1.76	0.59
Styrax americana	0.08	1.16	3.08	0.34	0.01	0.25	1.75	0.58
Styrax grandifolia	0.08	1.16	3.08	0.34	0.01	0.14	1.64	0.55
Cephalanthus occidentalis	0.08	1.16	3.08	0.34	0.00	0.07	1.57	0.52
Vitis palmata	0.08	1.16	3.0769	0.34	0.0022	0.05	1.56	0.52

Table 2C

Summary of Shrub Layer
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance
Proposed: Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.54	11.86	2187.69	35.67	0.21	41.69	89.22	29.74
Viburnum dentatum	0.15	3.39	461.54	7.53	0.08	16.73	27.65	9.22
Acer rubrum var. drummondii	0.54	11.86	338.46	5.52	0.05	9.56	26.94	8.98
Carpinus caroliniana	0.23	5.08	430.77	7.02	0.04	7.33	19.44	6.48
Ampelopsis arborea	0.23	5.08	523.08	8.53	0.01	2.56	16.18	5.39
Liquidambar styraciflua	0.31	6.78	338.46	5.52	0.02	3.42	15.72	5.24
Ilex decidua	0.31	6.78	338.46	5.52	0.02	3.18	15.47	5.16
Campsis radicans	0.23	5.08	184.62	3.01	0.01	1.47	9.56	3.19
Fraxinus pennsylvanica	0.15	3.39	276.92	4.52	0.01	1.10	9.00	3.00
Betula nigra	0.15	3.39	64.62	1.05	0.02	4.23	8.67	2.89
Quercus laurifolia	0.23	5.08	92.31	1.51	0.01	1.22	7.81	2.60
Brunnichia ovata	0.15	3.39	184.62	3.01	0.01	1.10	7.50	2.50
Acer rubrum	0.15	3.39	92.31	1.51	0.01	1.59	6.48	2.16
Vitis cinerea	0.15	3.39	61.54	1.00	0.00	0.61	5.00	1.67
Ulmus americana	0.15	3.39	61.54	1.00	0.00	0.24	4.64	1.55
Diospyros vriginiana	0.15	3.39	61.54	1.00	0.00	0.24	4.64	1.55
Quercus phellos	0.08	1.69	95.38	1.56	0.00	0.76	4.01	1.34
Cornus foemina	0.08	1.69	30.77	0.50	0.01	1.71	3.91	1.30
Chionanthus virginica	0.08	1.69	92.31	1.51	0.00	0.37	3.57	1.19
Wisteria frutescens	0.08	1.69	61.54	1.00	0.00	0.24	2.94	0.98
Vitis rotundifolia	0.08	1.69	30.77	0.50	0.00	0.17	2.37	0.79
Styrax americana	0.08	1.69	30.77	0.50	0.00	0.12	2.32	0.77
Cephalanthis occidentalis	0.08	1.69	30.77	0.50	0.00	0.12	2.32	0.77
Toxicodendron radicans	0.08	1.69	30.77	0.50	0.00	0.12	2.32	0.77

Table 2C

Summary of Shrub Layer
***Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**
***Proposed: Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest**

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa sylvanica	0.08	1.69	30.77	0.50	0.00	0.12	2.32	0.77

Table 2D

Summary of Herbaceous Layer
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Lysimachia radicans	0.71	2.92	2.52	9.23	12.16	4.05
Brunnichia ovata	0.93	3.80	1.52	5.57	9.37	3.12
Triadica sebifera	0.93	3.80	1.00	3.66	7.46	2.49
Toxicodendron radicans	0.57	2.34	1.39	5.10	7.44	2.48
Acer rubrum var. drummondii	0.86	3.51	1.00	3.66	7.17	2.39
Chasmanthium latifolium	0.43	1.75	1.41	5.17	6.92	2.31
Campsis radicans	0.64	2.63	1.08	3.94	6.57	2.19
Liquidambar styraciflua	0.71	2.92	0.89	3.27	6.19	2.06
Ilex decidua	0.57	2.34	1.00	3.66	6.00	2.00
Ampelopsis arborea	0.50	2.05	0.82	3.01	5.05	1.68
Commelina virginica	0.57	2.34	0.54	1.99	4.33	1.44
Dichanthelium dichotomum	0.43	1.75	0.51	1.86	3.61	1.20
Fraxinus pennsylvanica	0.43	1.75	0.50	1.83	3.59	1.20
Saccharum baldwinii	0.14	0.58	0.79	2.88	3.46	1.15
Symphyotrichum dumosum	0.29	1.17	0.54	1.96	3.13	1.04
Tradescantia ohioensis	0.43	1.75	0.36	1.31	3.06	1.02
Mikania scandens	0.43	1.75	0.34	1.24	3.00	1.00
Ilex opaca	0.50	2.05	0.25	0.92	2.96	0.99
Viburnum dentatum	0.36	1.46	0.39	1.44	2.90	0.97
Vitis rotundifolia	0.43	1.75	0.30	1.11	2.87	0.96
Viola sororia var. missouriensis	0.29	1.17	0.45	1.63	2.80	0.93
Unknown herbaceous	0.36	1.46	0.36	1.31	2.77	0.92
Polygonum hydropiperoides	0.29	1.17	0.41	1.49	2.66	0.89
Carpinus caroliniana	0.36	1.46	0.30	1.11	2.57	0.86

Table 2D

Summary of Herbaceous Layer
***Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viola sororia	0.29	1.17	0.38	1.37	2.54	0.85
Viola palmata	0.14	0.58	0.50	1.83	2.42	0.81
Planera aquatica	0.21	0.88	0.36	1.31	2.19	0.73
Acer rubrum var. rubrum	0.21	0.88	0.32	1.18	2.05	0.68
Dichanthelium commutatum	0.36	1.46	0.14	0.52	1.99	0.66
Galium aparine	0.29	1.17	0.21	0.78	1.95	0.65
Hypericum hypericoides	0.36	1.46	0.09	0.33	1.79	0.60
Quercus laurifolia	0.29	1.17	0.16	0.59	1.76	0.59
Vernonia missurica	0.29	1.17	0.16	0.59	1.76	0.59
Rubus argutus	0.21	0.88	0.21	0.77	1.65	0.55
Hydrilla verticellata	0.07	0.29	0.36	1.31	1.60	0.53
Rhynchospora corniculata	0.14	0.58	0.25	0.92	1.50	0.50
Ulmus rubra	0.14	0.58	0.25	0.92	1.50	0.50
Cardamine sp.	0.21	0.88	0.14	0.52	1.40	0.47
Parthenocissus quinquefolia	0.21	0.88	0.14	0.52	1.40	0.47
Conoclinium coelestinum	0.21	0.88	0.13	0.46	1.33	0.44
Rubus trivialis	0.21	0.88	0.13	0.46	1.33	0.44
Leersia hexandra	0.21	0.88	0.11	0.39	1.27	0.42
Cornus foemina	0.21	0.88	0.11	0.39	1.27	0.42
Carex sp.	0.14	0.58	0.18	0.65	1.24	0.41
Carex intumescens	0.07	0.29	0.25	0.93	1.22	0.41
Betula nigra	0.21	0.88	0.09	0.33	1.20	0.40
Dicliptera brachiata	0.14	0.58	0.16	0.59	1.17	0.39
Galium tinctorium	0.21	0.88	0.07	0.26	1.14	0.38

Table 2D

Summary of Herbaceous Layer
***Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ulmus americana	0.14	0.58	0.14	0.52	1.11	0.37
Oxalis dillenii	0.14	0.58	0.14	0.52	1.11	0.37
Acmella oppositifolia var. repens	0.14	0.58	0.13	0.46	1.04	0.35
Hypoxis curtisii	0.14	0.58	0.11	0.39	0.98	0.33
Gelsemium sempervirens	0.14	0.58	0.11	0.39	0.98	0.33
Ptilimnium capillaceum	0.14	0.58	0.09	0.33	0.91	0.30
Carex triangularis	0.14	0.58	0.09	0.33	0.91	0.30
Hydrocotyle verticillata	0.14	0.58	0.07	0.26	0.85	0.28
Clematis crispa	0.14	0.58	0.07	0.26	0.85	0.28
Quercus nigra	0.14	0.58	0.07	0.26	0.85	0.28
Ulmus alata	0.14	0.58	0.07	0.26	0.85	0.28
Ilex vomitoria	0.14	0.58	0.05	0.20	0.78	0.26
Styrax americana	0.14	0.58	0.05	0.20	0.78	0.26
Pinus taeda	0.14	0.58	0.05	0.20	0.78	0.26
Elephantopus carolinianus	0.07	0.29	0.13	0.46	0.75	0.25
Onoclea sensibilis	0.07	0.29	0.13	0.46	0.75	0.25
Dichanthelium acuminatum	0.07	0.29	0.13	0.46	0.75	0.25
Lygodium japonicum	0.14	0.58	0.04	0.13	0.72	0.24
Trachelospermum difforme	0.14	0.58	0.04	0.13	0.72	0.24
Nyssa sylvatica	0.14	0.58	0.04	0.13	0.72	0.24
Smilax walteri	0.14	0.58	0.04	0.13	0.72	0.24
Panicum anceps	0.14	0.58	0.04	0.13	0.72	0.24
Gonolobus suberosus	0.07	0.29	0.11	0.39	0.68	0.23
Phanopyrum gymnocarpon	0.07	0.29	0.11	0.39	0.68	0.23

Table 2D

Summary of Herbaceous Layer
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Axonopus fissifolius	0.07	0.29	0.11	0.39	0.68	0.23
Carex joorii	0.07	0.29	0.11	0.39	0.68	0.23
Crinum americanum	0.07	0.29	0.09	0.33	0.62	0.21
Symphyotrichum divaricatum	0.07	0.29	0.09	0.33	0.62	0.21
Aralia spinosa	0.07	0.29	0.07	0.26	0.55	0.18
Carex reniformis	0.07	0.29	0.05	0.20	0.49	0.16
Dichanthelium aciculare	0.07	0.29	0.05	0.20	0.49	0.16
Hydrocotyle umbellata	0.07	0.29	0.05	0.20	0.49	0.16
Berchemia scandens	0.07	0.29	0.05	0.20	0.49	0.16
Oplismenus hirtellus	0.07	0.29	0.05	0.20	0.49	0.16
Dichanthelium boscii	0.07	0.29	0.04	0.13	0.42	0.14
Crataegus marshallii	0.07	0.29	0.04	0.13	0.42	0.14
Justicia ovata	0.07	0.29	0.04	0.13	0.42	0.14
Lycopus virginicus	0.07	0.29	0.04	0.13	0.42	0.14
Alternanthera philoxeroides	0.07	0.29	0.04	0.13	0.42	0.14
Quercus phellos	0.07	0.29	0.04	0.13	0.42	0.14
Carex corrugata	0.07	0.29	0.04	0.13	0.42	0.14
Boehmeria cylindrica	0.07	0.29	0.04	0.13	0.42	0.14
Carex abscondita	0.07	0.29	0.02	0.07	0.36	0.12
Hymenocallis sp.	0.07	0.29	0.02	0.07	0.36	0.12
Smilax rotundifolia	0.07	0.29	0.02	0.07	0.36	0.12
Smilax bona-nox	0.07	0.29	0.02	0.07	0.36	0.12
Mitchella repens	0.07	0.29	0.02	0.07	0.36	0.12
Bignonia capreolata	0.07	0.29	0.02	0.07	0.36	0.12

Table 2D

Summary of Herbaceous Layer
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Wisteria frutescens	0.07	0.29	0.02	0.07	0.36	0.12
Triadenum walterii	0.07	0.29	0.02	0.07	0.36	0.12
Ipomoea cordatotriloba	0.07	0.29	0.02	0.07	0.36	0.12
Helenium flexuosum	0.07	0.29	0.02	0.07	0.36	0.12
Potentilla indica	0.07	0.29	0.02	0.07	0.36	0.12
Eupatorium serotinum	0.07	0.29	0.02	0.07	0.36	0.12
Carex complanata	0.07	0.29	0.02	0.07	0.36	0.12
Scleria oligantha	0.07	0.29	0.02	0.07	0.36	0.12
Dichondra carolinensis	0.07	0.29	0.02	0.07	0.36	0.12
Juncus marginatus	0.07	0.29	0.02	0.07	0.36	0.12
Krigia cespitosa	0.07	0.29	0.02	0.07	0.36	0.12
Polygonum punctatum	0.07	0.29	0.02	0.07	0.36	0.12
Arundinaria gigantea	0.07	0.29	0.02	0.07	0.36	0.12
Erechtites hieraciifolia	0.07	0.29	0.02	0.07	0.36	0.12
Carex debilis	0.07	0.29	0.02	0.07	0.36	0.12
Quercus lyrata	0.07	0.29	0.02	0.07	0.36	0.12
Eleocharis montevidensis	0.07	0.29	0.02	0.07	0.36	0.12
Taxodium distichum	0.07	0.29	0.02	0.07	0.36	0.12
Callicarpa americana	0.07	0.29	0.02	0.07	0.36	0.12
Lonicera japonica	0.07	0.29	0.02	0.07	0.36	0.12
Carya glabra var. hirsuta	0.07	0.29	0.02	0.07	0.36	0.12
Quercus hemispherica	0.07	0.29	0.02	0.07	0.36	0.12
Sanicula canadensis	0.07	0.29	0.02	0.07	0.36	0.12
Oxalis sp.	0.07	0.29	0.02	0.07	0.36	0.12

Table 2D

Summary of Herbaceous Layer
***Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**
Proposed: *Acer rubrum - Fraxinus pennsylvanica - Liquidambar styraciflua / Chasmanthium latifolia - Lysimachia radicans* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Rhexia mariana var. mariana	0.07	0.29	0.02	0.07	0.36	0.12
Ludwigia glandulosa	0.07	0.29	0.02	0.07	0.36	0.12
Polypremum procumbens	0.07	0.29	0.02	0.07	0.36	0.12
Triadeum tubulosum	0.07	0.29	0.02	0.07	0.36	0.12
Eupatorium semiserratum	0.07	0.29	0.02	0.07	0.36	0.12
Quercus falcata	0.07	0.29	0.02	0.07	0.36	0.12
Cephalanthus occidentalis	0.07	0.29	0.02	0.07	0.36	0.12
Amorpha fruticosa	0.07	0.29	0.02	0.07	0.36	0.12
Chasmanthium laxum	0.07	0.29	0.02	0.07	0.36	0.12
Elymus virginicus	0.07	0.29	0.02	0.07	0.36	0.12

Table 3A

Summary of Overstory Layer
Betula nigra - (Platanus occidentalis) Temporarily Flooded Forest Alliance
Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cyndrica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Betula nigra	1.00	33.33	40.00	33.33	5.20	42.24	108.90	36.30
Taxodium distichum	1.00	33.33	40.00	33.33	5.15	41.83	108.49	36.16
Liquidambar styraciflua	1.00	33.33	40.00	33.33	1.96	15.94	82.60	27.53

Table 3B

Summary of Midstory Layer
Betula nigra - (Platanus occidentalis) Temporarily Flooded Forest Alliance
Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cyndrica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex decidua	1.00	16.67	360.00	28.13	1.84	41.96	86.75	28.92
Triadica sebifera	1.00	16.67	480.00	37.50	1.27	28.91	83.08	27.69
Acer rubrum var. drummondii	1.00	16.67	200.00	15.63	0.73	16.53	48.82	16.27
Carpinus caroliniana	1.00	16.67	160.00	12.50	0.50	11.31	40.48	13.49
Styrax americana	1.00	16.67	40.00	3.13	0.03	0.64	20.43	6.81
Crataegus opaca	1.00	16.67	40.00	3.13	0.03	0.64	20.43	6.81

Table 3C

Summary of Shrub Layer
Betula nigra - (Platanus occidentalis) Temporarily Flooded Forest Alliance
Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cyndrica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus laurefolia	1.00	9.09	1600.00	16.00	0.10	18.06	43.15	14.38
Carpinus caroliniana	1.00	9.09	800.00	8.00	0.14	25.00	42.09	14.03
Triadica sebifera	1.00	9.09	400.00	4.00	0.13	22.22	35.31	11.77
Smilax rotundifolia	1.00	9.09	1600.00	16.00	0.04	6.94	32.04	10.68
Quercus lyrata	1.00	9.09	1600.00	16.00	0.03	5.56	30.65	10.22
Campsis radicans	1.00	9.09	1200.00	12.00	0.02	4.17	25.26	8.42
Ampelopsis arborea	1.00	9.09	800.00	8.00	0.02	2.78	19.87	6.62
Ilex decidua	1.00	9.09	800.00	8.00	0.02	2.78	19.87	6.62
Hypericum hypericoides	1.00	9.09	400.00	4.00	0.03	5.56	18.65	6.22
Quercus nigra	1.00	9.09	400.00	4.00	0.03	5.56	18.65	6.22
Crataegus opaca	1.00	9.09	400.00	4.00	0.01	1.39	14.48	4.83

Table 3D

Summary of Herbaceous Layer
Betula nigra - (Platanus occidentalis) Temporarily Flooded Forest Alliance
Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cyndrica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Smilax rotundifolia	1.00	4.55	2.75	11.78	16.32	5.44
Viburnum dentatum	1.00	4.55	2.30	9.85	14.40	4.80
Campsis radicans	1.00	4.55	2.05	8.78	13.32	4.44
Eupatorium semiserratum	1.00	4.55	2.00	8.57	13.11	4.37
Vernonia missurica	1.00	4.55	1.50	6.42	10.97	3.66
Liquidambar styraciflua	1.00	4.55	1.50	6.42	10.97	3.66
Tachelospermum difforme	1.00	4.55	1.25	5.35	9.90	3.30
Carpinus caroliniana	1.00	4.55	1.25	5.35	9.90	3.30
Dichanthelium aciculare	1.00	4.55	1.25	5.35	9.90	3.30
Steinchisma hians	1.00	4.55	1.25	5.35	9.90	3.30
Rhexia mariana	1.00	4.55	1.00	4.28	8.83	2.94
Ilex decidua	1.00	4.55	0.75	3.21	7.76	2.59
Wisteria sinensis	1.00	4.55	0.75	3.21	7.76	2.59
Symphyotrichum	1.00	4.55	0.75	3.21	7.76	2.59
Mitchella repens	1.00	4.55	0.50	2.14	6.69	2.23
Styrax americana	1.00	4.55	0.50	2.14	6.69	2.23
Brunnichia ovata	1.00	4.55	0.50	2.14	6.69	2.23
Quercus laurefolia	1.00	4.55	0.50	2.14	6.69	2.23
Carya aquatica	1.00	4.55	0.25	1.07	5.62	1.87
Quercus lyrata	1.00	4.55	0.25	1.07	5.62	1.87
Dichanthelium dommutatum	1.00	4.55	0.25	1.07	5.62	1.87
Ampelopsis arborea	1.00	4.55	0.25	1.07	5.62	1.87

Table 4A

Summary of Overstory Layer
Fraxinus caroliniana Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus caroliniana	1.00	25.00	360.00	60.00	11.36	38.99	123.99	41.33
Taxodium distichum	1.00	25.00	80.00	13.33	12.91	44.33	82.66	27.55
Triadica sebifera	1.00	25.00	120.00	20.00	3.05	10.46	55.46	18.49
Nyssa aquatica	1.00	25.00	40.00	6.67	1.81	6.21	37.88	12.63

Table 4B

Summary of Midstory Layer
Fraxinus caroliniana Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus caroliniana	1.00	16.67	200.00	50.00	1.63	78.67	145.34	48.45
Triadica sebifera	1.00	16.67	40.00	10.00	0.28	13.67	40.34	13.45
Ampelopsis arborea	1.00	16.67	40.00	10.00	0.06	3.07	29.73	9.91
Wisteria sinensis	1.00	16.67	40.00	10.00	0.04	1.86	28.52	9.51
Betula nigra	1.00	16.67	40.00	10.00	0.03	1.36	28.03	9.34
Brunnichia ovata	1.00	16.67	40.00	10.00	0.03	1.36	28.03	9.34

Table 4C

Summary of Shrub Layer
Fraxinus caroliniana Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Cephalanthis occidentalis	1.00	11.11	3200.00	18.60	0.37	29.56	59.28	19.76
Triadica sebifera	1.00	11.11	4800.00	27.91	0.14	11.32	50.34	16.78
Ampelopsis arborea	1.00	11.11	4000.00	23.26	0.19	15.09	49.46	16.49
Betula nigra	1.00	11.11	800.00	4.65	0.39	31.45	47.21	15.74
Fraxinus caroliniana	1.00	11.11	2800.00	16.28	0.10	8.18	35.57	11.86
Vitis cinerea	1.00	11.11	400.00	2.33	0.03	2.52	15.95	5.32
Mikanis scandens	1.00	11.11	400.00	2.33	0.01	0.63	14.07	4.69
Brunnichia ovata	1.00	11.11	400.00	2.33	0.01	0.63	14.07	4.69
Planera aquatica	1.00	11.11	400.00	2.33	0.01	0.63	14.07	4.69

Table 4D

Summary of Herbaceous Layer
Fraxinus Caroliniana Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Lysimachia radicans	1.00	3.12	13.70	21.19	24.32	8.11
Lycopus virginicus	1.00	3.12	6.50	10.05	13.18	4.39
Acmella oppositifolia	1.00	3.12	6.45	9.98	13.10	4.37
Galium tinctorium	1.00	3.12	5.75	8.89	12.02	4.01
Hydrocotyle umbellata	1.00	3.12	3.20	4.95	8.07	2.69
Ampelopsis arborea	1.00	3.12	3.05	4.72	7.84	2.61
Polygonum hydropiperoides	1.00	3.12	2.50	3.87	6.99	2.33
Brunnichia ovata	1.00	3.12	2.05	3.17	6.30	2.10
Chasmanthium latifolium	1.00	3.12	2.05	3.17	6.30	2.10
Ptilimnium capillaceum	1.00	3.12	2.00	3.09	6.22	2.07
Mikania scandens	1.00	3.12	1.75	2.71	5.83	1.94
Hypericum mutilum	1.00	3.12	1.70	2.63	5.75	1.92
Triadica sebifera	1.00	3.12	1.50	2.32	5.45	1.82
Phanopyrum gymnocarpon	1.00	3.12	1.50	2.32	5.45	1.82
Fraxinus caroliniana	1.00	3.12	1.25	1.93	5.06	1.69
Acer rubrum var. drummondii	1.00	3.12	1.25	1.93	5.06	1.69
Boehmeria cylindrica	1.00	3.12	1.20	1.86	4.98	1.66
Carex brevior	1.00	3.12	0.80	1.24	4.36	1.45
Ludwigia glandulosa	1.00	3.12	0.75	1.16	4.29	1.43
Alternanthera philoxeroides	1.00	3.12	0.75	1.16	4.29	1.43
Rhynchospora corniculata	1.00	3.12	0.75	1.16	4.29	1.43
Carex cherokeensis	1.00	3.12	0.60	0.93	4.05	1.35
Toxicodendron radicans	1.00	3.12	0.60	0.93	4.05	1.35

Table 4D

Summary of Herbaceous Layer
Fraxinus Caroliniana Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carex species	1.00	3.12	0.50	0.77	3.90	1.30
Sabatia campestris	1.00	3.12	0.50	0.77	3.90	1.30
Sonchus asper	1.00	3.12	0.50	0.77	3.90	1.30
Symphyotrichum dumosum	1.00	3.12	0.25	0.39	3.51	1.17
Acmella oppositifolia	1.00	3.12	0.25	0.39	3.51	1.17
Planera aquatica	1.00	3.12	0.25	0.39	3.51	1.17
Viola sororia var. missouriensis	1.00	3.12	0.25	0.39	3.51	1.17
Liquidambar styraciflua	1.00	3.12	0.25	0.39	3.51	1.17
Cyperus haspan	1.00	3.12	0.25	0.39	3.51	1.17

Table 5A

Summary of Overstory Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Liquidambar styraciflua	1.00	25.77	178.10	50.13	14.79	58.50	134.41	44.80
Nyssa sylvatica	0.52	13.50	35.24	9.92	2.87	11.36	34.77	11.59
Carpinus caroliniana	0.45	11.66	39.05	10.99	1.31	5.16	27.81	9.27
Triadica sebifera	0.26	6.75	20.00	5.63	0.75	2.96	15.34	5.11
Quercus laurifolia	0.26	6.75	12.38	3.49	1.16	4.59	14.83	4.94
Ilex opaca	0.21	5.52	15.24	4.29	0.62	2.45	12.26	4.09
Quercus nigra	0.21	5.52	9.52	2.68	0.75	2.98	11.19	3.73
Ulmus americana	0.12	3.07	6.67	1.88	0.27	1.08	6.02	2.01
Acer rubrum var. rubrum	0.12	3.07	5.71	1.61	0.22	0.86	5.54	1.85
Quercus phellos	0.07	1.84	2.86	0.80	0.66	2.60	5.24	1.75
Pinus taeda	0.07	1.84	3.81	1.07	0.50	1.98	4.90	1.63
Halesia diptera	0.10	2.45	3.81	1.07	0.08	0.32	3.85	1.28
Acer rubrum var. drummondii	0.05	1.23	3.81	1.07	0.16	0.64	2.94	0.98
Carya aquatica	0.05	1.23	2.86	0.80	0.20	0.78	2.81	0.94
Magnolia grandiflora	0.02	0.61	0.95	0.27	0.36	1.41	2.29	0.76
Celtis laevigata	0.05	1.23	1.90	0.54	0.08	0.33	2.09	0.70
Ilex decidua	0.05	1.23	1.90	0.54	0.07	0.26	2.03	0.68
Celtis laevigata var. laevigata	0.02	0.61	1.90	0.54	0.10	0.39	1.54	0.51
Fraxinus americana	0.02	0.61	0.95	0.27	0.08	0.33	1.21	0.40
Quercus alba	0.02	0.61	0.95	0.27	0.05	0.22	1.10	0.37
Persia borbonia	0.02	0.61	0.95	0.27	0.05	0.21	1.09	0.36
Carya glabra var. hirsuta	0.02	0.61	0.95	0.27	0.04	0.16	1.04	0.35
Quercus falcata	0.02	0.61	0.95	0.27	0.02	0.10	0.98	0.33
Fraxinus caroliniana	0.02	0.61	0.95	0.27	0.02	0.08	0.96	0.32

Table 5A

Summary of Overstory Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Prunus serotina	0.02	0.61	0.95	0.27	0.02	0.08	0.96	0.32
Quercus michauxii	0.02	0.61	0.95	0.27	0.02	0.07	0.95	0.32
Ulmus alata	0.02	0.61	0.95	0.27	0.01	0.06	0.94	0.31
Quercus lyrata	0.02	0.61	0.95	0.27	0.01	0.05	0.93	0.31

Table 5B

Summary of Midstory Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carpinus caroliniana	0.67	9.49	184.76	14.99	0.73	17.71	42.19	14.06
Liquidambar styraciflua	0.55	7.80	182.86	14.84	0.79	19.27	41.91	13.97
Ilex opaca	0.55	7.80	188.57	15.30	0.55	13.30	36.40	12.13
Ilex vomitoria	0.38	5.42	110.48	8.96	0.47	11.43	25.82	8.61
Ilex decidua	0.60	8.47	91.43	7.42	0.40	9.83	25.73	8.58
Triadica sebifera	0.57	8.14	127.62	10.36	0.25	6.08	24.57	8.19
Vitis rotundifolia	0.52	7.46	54.29	4.40	0.07	1.77	13.63	4.54
Quercus nigra	0.45	6.44	53.33	4.33	0.11	2.68	13.45	4.48
Nyssa sylvatica	0.33	4.75	22.86	1.85	0.10	2.52	9.12	3.04
Halesia diptera	0.26	3.73	35.24	2.86	0.09	2.18	8.77	2.92
Acer rubrum var. rubrum	0.14	2.03	15.24	1.24	0.09	2.08	5.35	1.78
Quercus laurifolia	0.19	2.71	11.43	0.93	0.04	1.05	4.69	1.56
Acer rubrum var. drummondii	0.17	2.37	10.48	0.85	0.05	1.13	4.36	1.45
Vitis aestivalis	0.17	2.37	11.43	0.93	0.02	0.52	3.82	1.27
Ligustrum sinense	0.10	1.36	16.19	1.31	0.04	0.99	3.66	1.22
Ulmus americana	0.12	1.69	6.67	0.54	0.03	0.77	3.01	1.00
Quercus phellos	0.12	1.69	7.62	0.62	0.01	0.29	2.60	0.87
Symplocos tinctoria	0.07	1.02	10.48	0.85	0.02	0.60	2.47	0.82
Vitis cinerea	0.12	1.69	6.67	0.54	0.01	0.21	2.45	0.82
Magnolia grandiflora	0.05	0.68	9.52	0.77	0.03	0.79	2.24	0.75
Morella cerifera	0.07	1.02	5.71	0.46	0.03	0.67	2.15	0.72
Viburnum dentatum	0.05	0.68	10.48	0.85	0.02	0.46	1.98	0.66
Quercus michauxii	0.10	1.36	3.81	0.31	0.01	0.24	1.91	0.64
Toxicodendron radicans	0.10	1.36	4.76	0.39	0.01	0.15	1.90	0.63
Vaccinium arboreum	0.07	1.02	5.71	0.46	0.02	0.40	1.88	0.63
Quercus alba	0.05	0.68	5.71	0.46	0.02	0.57	1.71	0.57
Aralia spinosa	0.02	0.34	9.52	0.77	0.01	0.21	1.32	0.44
Cyrilla racemiflora	0.05	0.68	3.81	0.31	0.01	0.33	1.32	0.44
Celtis laevigata	0.05	0.68	1.90	0.15	0.01	0.30	1.13	0.38

Table 5B

Summary of Midstory Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.02	0.34	3.81	0.31	0.01	0.34	0.99	0.33
Crataegus viridis	0.05	0.68	1.90	0.15	0.00	0.08	0.92	0.31
Campsis radicans	0.05	0.68	1.90	0.15	0.00	0.06	0.89	0.30
Celtis tenuifolia	0.02	0.34	1.90	0.15	0.01	0.31	0.80	0.27
Vaccinium elliottii	0.02	0.34	2.86	0.23	0.01	0.14	0.71	0.24
Crataegus brachyacantha	0.02	0.34	1.90	0.15	0.01	0.14	0.63	0.21
Fraxinus pennsylvanica	0.02	0.34	1.90	0.15	0.01	0.13	0.63	0.21
Berchemia scandens	0.02	0.34	1.90	0.15	0.00	0.07	0.57	0.19
Carex glaucescens	0.02	0.34	1.90	0.15	0.00	0.05	0.55	0.18
Ligustrum lucidum	0.02	0.34	0.95	0.08	0.00	0.07	0.49	0.16
Crataegus marshallii	0.02	0.34	0.95	0.08	0.00	0.04	0.45	0.15
Parthenocissus quinquefolia	0.02	0.34	0.95	0.08	0.00	0.02	0.43	0.14
Carya tomentosa	0.02	0.34	0.95	0.08	0.00	0.02	0.43	0.14

Table 5C

Summary of Shrub Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carpinus caroliniana	0.43	10.17	752.38	15.32	0.05	11.24	36.73	12.24
Triadica sebifera	0.38	9.04	504.76	10.28	0.06	12.72	32.05	10.68
Ilex opaca	0.26	6.21	333.33	6.79	0.06	13.35	26.36	8.79
Ilex vomitoria	0.26	6.21	400.00	8.15	0.06	11.59	25.96	8.65
Vitis rotundifolia	0.36	8.47	342.86	6.98	0.04	8.57	24.03	8.01
Quercus nigra	0.36	8.47	296.19	6.03	0.02	3.90	18.41	6.14
Ilex decidua	0.24	5.65	304.76	6.21	0.03	5.87	17.73	5.91
Rubus argutus	0.21	5.08	390.48	7.95	0.02	3.41	16.44	5.48
Ligustrum sinense	0.10	2.26	202.86	4.13	0.04	8.30	14.69	4.90
Sebastiana fruticosa	0.19	4.52	200.00	4.07	0.01	2.58	11.18	3.73
Liquidambar styraciflua	0.17	3.95	114.29	2.33	0.01	1.76	8.04	2.68
Halesia diptera	0.17	3.95	105.71	2.15	0.01	1.92	8.03	2.68
Symplocos tinctoria	0.05	1.13	123.81	2.52	0.01	2.35	6.00	2.00
Viburnum dentatum	0.10	2.26	76.19	1.55	0.01	1.33	5.14	1.71
Vitis aestivalis	0.12	2.82	47.62	0.97	0.00	0.74	4.54	1.51
Acer rubrum var. rubrum	0.07	1.69	76.19	1.55	0.00	0.74	3.99	1.33
Quercus phellos	0.07	1.69	47.62	0.97	0.00	0.63	3.29	1.10
Nyssa sylvatica	0.02	0.56	104.76	2.13	0.00	0.59	3.29	1.10
Quercus laurifolia	0.07	1.69	28.57	0.58	0.00	0.98	3.26	1.09
Smilax pumila	0.02	0.56	76.19	1.55	0.00	0.31	2.43	0.81
Aralia spinosa	0.02	0.56	47.62	0.97	0.00	0.74	2.28	0.76
Quercus alba	0.02	0.56	19.05	0.39	0.01	1.25	2.21	0.74
Sambucus nigra var. canadensis	0.02	0.56	28.57	0.58	0.00	0.90	2.05	0.68
Vaccinium arboreum	0.02	0.56	9.52	0.19	0.01	1.15	1.90	0.63

Table 5C

Summary of Shrub Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.02	0.56	47.62	0.97	0.00	0.31	1.85	0.62
Quercus falcata	0.02	0.56	28.57	0.58	0.00	0.59	1.73	0.58
Ulmus americana	0.05	1.13	19.05	0.39	0.00	0.20	1.71	0.57
Acer rubrum var. drummondii	0.05	1.13	19.05	0.39	0.00	0.08	1.60	0.53
Campsis radicans	0.05	1.13	19.05	0.39	0.00	0.08	1.60	0.53
Quercus hemispherica	0.02	0.56	9.52	0.19	0.00	0.51	1.27	0.42
Magnolia grandiflora	0.02	0.56	28.57	0.58	0.00	0.12	1.26	0.42
Rhynchospora corniculata	0.02	0.56	19.05	0.39	0.00	0.20	1.15	0.38
Cornus foemina	0.02	0.56	9.52	0.19	0.00	0.31	1.07	0.36
Sanicula canadensis	0.02	0.56	9.52	0.19	0.00	0.16	0.92	0.31
Berchemia scandens	0.02	0.56	9.52	0.19	0.00	0.16	0.92	0.31
Callicarpa americana	0.02	0.56	9.52	0.19	0.00	0.16	0.92	0.31
Carya aquatica	0.02	0.56	9.52	0.19	0.00	0.04	0.80	0.27
Baccharis halimifolia	0.02	0.56	9.52	0.19	0.00	0.04	0.80	0.27
Smilax rotundifolia	0.02	0.56	9.52	0.19	0.00	0.04	0.80	0.27
Vaccinium corybosum	0.02	0.56	9.52	0.19	0.00	0.04	0.80	0.27
Carya tomentosa	0.02	0.56	9.52	0.19	0.00	0.04	0.80	0.27

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.84	3.71	2.77	9.14	12.85	4.28
Chasmanthium laxum	0.40	1.75	1.90	6.28	8.03	2.68
Vitis rotundifolia	0.79	3.50	1.30	4.28	7.78	2.59
Carpinus caroliniana	0.74	3.30	1.25	4.11	7.41	2.47
Parthenocissus quinquefolia	0.56	2.47	1.41	4.66	7.14	2.38
Rubus argutus	0.58	2.57	1.03	3.40	5.98	1.99
Ilex decidua	0.63	2.78	0.94	3.09	5.87	1.96
Campsis radicans	0.53	2.37	1.00	3.31	5.67	1.89
Bignonia capreolata	0.65	2.88	0.77	2.53	5.42	1.81
Ilex opaca	0.60	2.68	0.72	2.36	5.04	1.68
Tradescantia ohioensis	0.53	2.37	0.76	2.51	4.88	1.63
Ilex vomitoria	0.53	2.37	0.60	1.98	4.35	1.45
Lonicera japonica	0.42	1.85	0.73	2.42	4.27	1.42
Liquidambar styraciflua	0.56	2.47	0.53	1.74	4.21	1.40
Mitchella repens	0.51	2.27	0.58	1.92	4.18	1.39
Oplismenus hirtellus	0.49	2.16	0.61	2.02	4.18	1.39
Dichanthelium commutatum	0.56	2.47	0.41	1.34	3.81	1.27
Rubus trivialis	0.30	1.34	0.74	2.45	3.79	1.26
Viola palmata	0.30	1.34	0.61	2.00	3.34	1.11
Viburnum dentatum	0.44	1.96	0.27	0.90	2.86	0.95
Potentilla indica	0.09	0.41	0.71	2.35	2.76	0.92
Sebastiana fruticosa	0.28	1.24	0.27	0.90	2.14	0.71
Acer rubrum var. rubrum	0.28	1.24	0.26	0.86	2.10	0.70
Cynodon dactylon	0.02	0.10	0.58	1.92	2.02	0.67

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sanicula canadensis	0.26	1.13	0.27	0.88	2.02	0.67
Carex sp.	0.23	1.03	0.29	0.96	1.99	0.66
Smilax bona-nox	0.30	1.34	0.17	0.56	1.89	0.63
Hypericum hypericoides	0.23	1.03	0.26	0.86	1.89	0.63
Triadica sebifera	0.30	1.34	0.15	0.50	1.84	0.61
Quercus laurifolia	0.26	1.13	0.20	0.67	1.80	0.60
Chasmanthium sessiliflorum	0.09	0.41	0.42	1.38	1.79	0.60
Nyssa sylvatica	0.30	1.34	0.13	0.44	1.78	0.59
Quercus nigra	0.23	1.03	0.21	0.69	1.72	0.57
Oxalis dillenii	0.26	1.13	0.16	0.52	1.65	0.55
Brunnichia ovata	0.21	0.93	0.20	0.67	1.60	0.53
Ampelopsis arborea	0.21	0.93	0.18	0.59	1.51	0.50
Commelina virginica	0.14	0.62	0.25	0.81	1.43	0.48
Galium aparine	0.19	0.82	0.18	0.60	1.43	0.48
Smilax glauca	0.21	0.93	0.15	0.50	1.43	0.48
Symphyotrichum dumosum	0.16	0.72	0.20	0.67	1.39	0.46
Elephantopus carolinianus	0.19	0.82	0.14	0.46	1.28	0.43
Clematis crispa	0.16	0.72	0.15	0.48	1.20	0.40
Callicarpa americana	0.19	0.82	0.11	0.36	1.19	0.40
Lygodium japonicum	0.19	0.82	0.10	0.33	1.15	0.38
Carex brevior	0.09	0.41	0.22	0.71	1.12	0.37
Trachelospermum difforme	0.16	0.72	0.12	0.38	1.10	0.37
Smilax rotundifolia	0.19	0.82	0.05	0.17	1.00	0.33
Pinus taeda	0.16	0.72	0.08	0.27	0.99	0.33

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viola sororia	0.14	0.62	0.11	0.36	0.98	0.33
Symplocos tinctoria	0.09	0.41	0.16	0.54	0.95	0.32
Lysimachia radicans	0.14	0.62	0.10	0.33	0.94	0.31
Quercus phellos	0.16	0.72	0.06	0.21	0.93	0.31
Unknown herbaceous	0.14	0.62	0.09	0.31	0.92	0.31
Cardamine sp.	0.12	0.51	0.12	0.38	0.90	0.30
Carex cherokeensis	0.07	0.31	0.17	0.56	0.87	0.29
Solidago sempervirens	0.09	0.41	0.13	0.44	0.85	0.28
Halesia diptera	0.14	0.62	0.06	0.21	0.83	0.28
Ligustrum sinense	0.12	0.51	0.09	0.31	0.82	0.27
Ulmus americana	0.14	0.62	0.06	0.19	0.81	0.27
Carex albolutescens	0.05	0.21	0.17	0.58	0.78	0.26
Acer rubrum var. drummondii	0.12	0.51	0.06	0.19	0.71	0.24
Aristolochia serpentaria	0.12	0.51	0.05	0.17	0.69	0.23
Carex debilis	0.09	0.41	0.08	0.26	0.67	0.22
Berchemia scandens	0.09	0.41	0.08	0.25	0.66	0.22
Eupatorium semiserratum	0.09	0.41	0.07	0.23	0.64	0.21
Paspalum urvillei	0.02	0.10	0.16	0.54	0.64	0.21
Dichanthelium aciculare	0.07	0.31	0.10	0.33	0.64	0.21
Dichanthelium boscii	0.05	0.21	0.12	0.40	0.61	0.20
Scleria triglomerata	0.05	0.21	0.12	0.40	0.61	0.20
Dichanthelium dichotomum	0.09	0.41	0.06	0.20	0.61	0.20
Chasmanthium latifolium	0.09	0.41	0.05	0.18	0.59	0.20
Erechtites hieraciifolia	0.07	0.31	0.08	0.25	0.56	0.19

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Yeatesia viridiflora	0.05	0.21	0.10	0.35	0.55	0.18
Vernonia missurica	0.07	0.31	0.07	0.23	0.54	0.18
Vitis cinerea	0.07	0.31	0.07	0.23	0.54	0.18
Smilax smallii	0.09	0.41	0.03	0.12	0.53	0.18
Melothria pendula	0.09	0.41	0.03	0.12	0.53	0.18
Prunella vulgaris	0.07	0.31	0.06	0.21	0.52	0.17
Gelsemium sempervirens	0.09	0.41	0.03	0.10	0.51	0.17
Ruellia caroliniensis	0.09	0.41	0.03	0.10	0.51	0.17
Sambucus nigra var. canadensis	0.07	0.31	0.05	0.17	0.48	0.16
Viola sororia var. missouriensis	0.05	0.21	0.08	0.27	0.47	0.16
Carex louisianica	0.05	0.21	0.08	0.27	0.47	0.16
Thelypteris kunthii	0.02	0.10	0.11	0.37	0.47	0.16
Carex intumescens	0.05	0.21	0.08	0.26	0.47	0.16
Polygonum glabrum	0.02	0.10	0.10	0.35	0.45	0.15
Gonolobus suberosus	0.07	0.31	0.04	0.13	0.44	0.15
Vaccinium arboreum	0.05	0.21	0.07	0.23	0.44	0.15
Carex joorii	0.05	0.21	0.07	0.23	0.44	0.15
Morella cerifera	0.07	0.31	0.03	0.12	0.42	0.14
Carex abscondita	0.02	0.10	0.09	0.31	0.41	0.14
Smilax pumila	0.05	0.21	0.06	0.20	0.41	0.14
Crataegus marshallii	0.07	0.31	0.02	0.06	0.37	0.12
Galium tinctorium	0.07	0.31	0.02	0.06	0.37	0.12
Boehmeria cylindrica	0.07	0.31	0.02	0.06	0.37	0.12
Sassafras albidum	0.07	0.31	0.02	0.06	0.37	0.12

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Osmunda regalis	0.02	0.10	0.07	0.23	0.33	0.11
Carex blanda	0.02	0.10	0.07	0.22	0.33	0.11
Scleria oligantha	0.05	0.21	0.03	0.12	0.32	0.11
Scleria sp.	0.05	0.21	0.03	0.10	0.30	0.10
Styrax americana	0.05	0.21	0.03	0.10	0.30	0.10
Teucrium canadense	0.05	0.21	0.03	0.10	0.30	0.10
Celtis laevigata var. laevigata	0.02	0.10	0.06	0.19	0.29	0.10
Conoclinium coelestinum	0.05	0.21	0.02	0.08	0.28	0.09
Andropogon glomeratus	0.02	0.10	0.05	0.17	0.27	0.09
Acalypha rhomboidea	0.05	0.21	0.02	0.06	0.26	0.09
Dichanthelium scoparium	0.05	0.21	0.02	0.06	0.26	0.09
Tradescantia hirsutiflora	0.05	0.21	0.02	0.06	0.26	0.09
Vaccinium elliottii	0.05	0.21	0.02	0.06	0.26	0.09
Carex caroliniana	0.05	0.21	0.02	0.06	0.26	0.09
Dichanthelium acuminatum	0.05	0.21	0.02	0.06	0.26	0.09
Panicum rigidulum	0.02	0.10	0.05	0.15	0.26	0.09
Saccharum baldwinii	0.02	0.10	0.05	0.15	0.26	0.09
Botrychium dissectum	0.05	0.21	0.01	0.04	0.24	0.08
Justicia ovata var. lanceolata	0.05	0.21	0.01	0.04	0.24	0.08
Carex triangularis	0.05	0.21	0.01	0.04	0.24	0.08
Cyperus sp.	0.02	0.10	0.04	0.13	0.24	0.08
Axonopus affinis	0.02	0.10	0.04	0.13	0.24	0.08
Carex complanata	0.02	0.10	0.04	0.13	0.24	0.08
Solidago altissima	0.02	0.10	0.04	0.13	0.24	0.08

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Aralia spinosa	0.02	0.10	0.03	0.12	0.22	0.07
Wisteria frutescens	0.02	0.10	0.03	0.12	0.22	0.07
Arisaema dracontium	0.02	0.10	0.03	0.10	0.21	0.07
Polygonum pensylvanicum	0.02	0.10	0.03	0.08	0.19	0.06
Passiflora lutea	0.02	0.10	0.03	0.08	0.19	0.06
Vitis aestivalis	0.02	0.10	0.02	0.08	0.18	0.06
Rhexia mariana var. mariana	0.02	0.10	0.02	0.08	0.18	0.06
Commelina erecta	0.02	0.10	0.02	0.07	0.17	0.06
Ardisia crenata	0.02	0.10	0.02	0.06	0.16	0.05
Sesbania herbacea	0.02	0.10	0.02	0.06	0.16	0.05
Steinchisma hians	0.02	0.10	0.02	0.06	0.16	0.05
Eragrostis refracta	0.02	0.10	0.02	0.06	0.16	0.05
Eupatorium serotinum	0.02	0.10	0.02	0.06	0.16	0.05
Panicum anceps	0.02	0.10	0.02	0.06	0.16	0.05
Sabal minor	0.02	0.10	0.02	0.05	0.16	0.05
Pluchea camphorata	0.02	0.10	0.01	0.04	0.14	0.05
Iris virginica	0.02	0.10	0.01	0.04	0.14	0.05
Desmodium viridiflorum	0.02	0.10	0.01	0.04	0.14	0.05
Solidago simplex	0.02	0.10	0.01	0.04	0.14	0.05
Persia borbonia	0.02	0.10	0.01	0.04	0.14	0.05
Quercus hemisphaerica	0.02	0.10	0.01	0.04	0.14	0.05
Carya aquatica	0.02	0.10	0.01	0.04	0.14	0.05
Hydrocotyle umbellata	0.02	0.10	0.01	0.04	0.14	0.05
Helenium flexuosum	0.02	0.10	0.01	0.02	0.12	0.04

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Asclepias perennis	0.02	0.10	0.01	0.02	0.12	0.04
Symphyotrichum racemosum	0.02	0.10	0.01	0.02	0.12	0.04
Quercus falcata var. pogodaefolia	0.02	0.10	0.01	0.02	0.12	0.04
Hypericum sp.	0.02	0.10	0.01	0.02	0.12	0.04
Quercus falcata	0.02	0.10	0.01	0.02	0.12	0.04
Quercus michauxii	0.02	0.10	0.01	0.02	0.12	0.04
Solidago rugosa	0.02	0.10	0.01	0.02	0.12	0.04
Rhynchospora inexpansa	0.02	0.10	0.01	0.02	0.12	0.04
Quercus similis	0.02	0.10	0.01	0.02	0.12	0.04
Eupatorium capillifolium	0.02	0.10	0.01	0.02	0.12	0.04
Prunus serotina	0.02	0.10	0.01	0.02	0.12	0.04
Celtis tenuifolia	0.02	0.10	0.01	0.02	0.12	0.04
Eupatorium lancifolium	0.02	0.10	0.01	0.02	0.12	0.04
Carya tomentosa	0.02	0.10	0.01	0.02	0.12	0.04
Prunus caroliniana	0.02	0.10	0.01	0.02	0.12	0.04
Polygonum hydropiperoides	0.02	0.10	0.01	0.02	0.12	0.04
Rhynchospora corniculata	0.02	0.10	0.01	0.02	0.12	0.04
Lactuca canadensis	0.02	0.10	0.01	0.02	0.12	0.04
Castanea pumila	0.02	0.10	0.01	0.02	0.12	0.04
Desmodium glabellum	0.02	0.10	0.01	0.02	0.12	0.04
Scutellaria integrifolia	0.02	0.10	0.01	0.02	0.12	0.04
Persea palustris	0.02	0.10	0.01	0.02	0.12	0.04
Botrychium virginianum	0.02	0.10	0.01	0.02	0.12	0.04
Ptilimnium capillaceum	0.02	0.10	0.01	0.02	0.12	0.04

Table 5D

Summary of Herbaceous Layer
Proposed: *Liquidamber styraciflua* Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Strophostyles helvola	0.02	0.10	0.01	0.02	0.12	0.04
Celtis laevigata	0.02	0.10	0.01	0.02	0.12	0.04
Smilax hispida	0.02	0.10	0.01	0.02	0.12	0.04
Crataegus viridis	0.02	0.10	0.01	0.02	0.12	0.04
Ulmus rubra	0.02	0.10	0.01	0.02	0.12	0.04
Diodia virginiana	0.02	0.10	0.01	0.02	0.12	0.04
Mikania scandens	0.02	0.10	0.01	0.02	0.12	0.04
Viola missouriensis	0.02	0.10	0.01	0.02	0.12	0.04
Dichanthelium laxiflorum	0.02	0.10	0.01	0.02	0.12	0.04

Table 5-1A

Summary of Overstory Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Liquidambar styraciflua	1.00	21.05	95.00	26.76	16.50	54.63	102.45	34.15
Carpinus caroliniana	0.62	13.16	55.00	15.49	1.37	4.53	33.18	11.06
Taxodium distichum	0.38	7.89	25.00	7.04	3.38	11.19	26.13	8.71
Ilex opaca	0.38	7.89	30.00	8.45	0.68	2.24	18.59	6.20
Nyssa sylvatica	0.25	5.26	30.00	8.45	1.41	4.68	18.39	6.13
Quercus lyrata	0.38	7.89	20.00	5.63	1.32	4.38	17.91	5.97
Acer rubrum var. drummondii	0.25	5.26	15.00	4.23	1.18	3.92	13.41	4.47
Quercus laurifolia	0.25	5.26	20.00	5.63	0.53	1.76	12.66	4.22
Fraxinus pennsylvanica	0.25	5.26	15.00	4.23	0.23	0.75	10.24	3.41
Nyssa aquatica	0.12	2.63	5.00	1.41	1.79	5.92	9.96	3.32
Quercus phellos	0.25	5.26	10.00	2.82	0.41	1.35	9.43	3.14
Triadica sebifera	0.12	2.63	10.00	2.82	0.44	1.47	6.92	2.31
Ulmus americana	0.12	2.63	10.00	2.82	0.36	1.18	6.62	2.21
Quercus similis	0.12	2.63	5.00	1.41	0.44	1.46	5.50	1.83
Carya aquatica	0.12	2.63	5.00	1.41	0.09	0.31	4.35	1.45
Planera aquatica	0.12	2.63	5.00	1.41	0.07	0.22	4.26	1.42

Table 5-1B

Summary of Midstory Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex decidua	1.00	15.38	135.00	13.78	0.59	16.03	45.19	15.06
Carpinus caroliniana	0.62	9.62	135.00	13.78	0.63	17.38	40.77	13.59
Triadica sebifera	0.62	9.62	175.00	17.86	0.44	12.08	39.55	13.18
Liquidambar styraciflua	0.38	5.77	135.00	13.78	0.59	16.05	35.59	11.86
Ilex opaca	0.38	5.77	95.00	9.69	0.34	9.26	24.72	8.24
Ilex vomitoria	0.38	5.77	50.00	5.10	0.21	5.79	16.66	5.55
Acer rubrum var. drummondii	0.38	5.77	30.00	3.06	0.21	5.72	14.55	4.85
Halesia diptera	0.25	3.85	45.00	4.59	0.10	2.72	11.16	3.72
Quercus nigra	0.25	3.85	30.00	3.06	0.13	3.62	10.53	3.51
Vitis cinerea	0.38	5.77	25.00	2.55	0.03	0.75	9.07	3.02
Vitis rotundifolia	0.38	5.77	20.00	2.04	0.03	0.91	8.72	2.91
Ligustrum sinense	0.12	1.92	35.00	3.57	0.05	1.33	6.82	2.27
Nyssa sylvatica	0.12	1.92	15.00	1.53	0.11	3.14	6.60	2.20
Vitis aestivalis	0.25	3.85	15.00	1.53	0.04	1.04	6.42	2.14
Campsis radicans	0.25	3.85	10.00	1.02	0.01	0.41	5.28	1.76
Taxodium distichum	0.12	1.92	5.00	0.51	0.05	1.30	3.73	1.24
Planera aquatica	0.12	1.92	5.00	0.51	0.04	0.97	3.40	1.13
Crataegus marshallii	0.12	1.92	5.00	0.51	0.03	0.87	3.30	1.10
Ulmus americana	0.12	1.92	5.00	0.51	0.01	0.33	2.76	0.92
Crataegus viridis	0.12	1.92	5.00	0.51	0.01	0.22	2.65	0.88
Betula nigra	0.12	1.92	5.00	0.51	0.00	0.10	2.53	0.84

Table 5-1C

Summary of Shrub Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.50	8.16	11600.00	70.28	0.38	48.55	126.99	42.33
Carpinus caroliniana	0.50	8.16	750.00	4.54	0.06	6.97	19.68	6.56
Ilex decidua	0.50	8.16	500.00	3.03	0.02	2.37	13.56	4.52
Liquidambar styraciflua	0.38	6.12	350.00	2.12	0.04	4.48	12.72	4.24
Rubus argutus	0.25	4.08	300.00	1.82	0.05	6.10	12.00	4.00
Betula nigra	0.12	2.04	300.00	1.82	0.04	5.10	8.96	2.99
Ligustrum sinense	0.25	4.08	100.00	0.61	0.02	2.99	7.68	2.56
Quercus nigra	0.38	6.12	105.00	0.64	0.01	0.66	7.42	2.47
Quercus falcata	0.12	2.04	250.00	1.51	0.03	3.24	6.79	2.26
Ilex vomitoria	0.12	2.04	150.00	0.91	0.03	3.49	6.44	2.15
Acer rubrum var. drummondii	0.25	4.08	200.00	1.21	0.01	0.87	6.16	2.05
Quercus laurifolia	0.25	4.08	100.00	0.61	0.00	0.62	5.31	1.77
Halesia diptera	0.12	2.04	100.00	0.61	0.02	2.49	5.14	1.71
Ulmus rubra	0.12	2.04	200.00	1.21	0.01	1.62	4.87	1.62
Ilex opaca	0.12	2.04	50.00	0.30	0.02	2.49	4.83	1.61
Hypericum hypericoides	0.12	2.04	250.00	1.51	0.01	1.00	4.55	1.52
Diodia virginiana	0.12	2.04	200.00	1.21	0.00	0.50	3.75	1.25
Ulmus americana	0.12	2.04	150.00	0.91	0.01	0.75	3.70	1.23
Lonicera japonica	0.12	2.04	150.00	0.91	0.01	0.75	3.70	1.23
Vitis cinerea	0.12	2.04	50.00	0.30	0.01	1.12	3.46	1.15
Vitis rotundifolia	0.12	2.04	100.00	0.61	0.00	0.62	3.27	1.09
Crataegus marshallii	0.12	2.04	50.00	0.30	0.00	0.50	2.84	0.95
Taxodium distichum	0.12	2.04	50.00	0.30	0.00	0.50	2.84	0.95
Toxicodendron radicans	0.12	2.04	50.00	0.30	0.00	0.50	2.84	0.95

Table 5-1C

Summary of Shrub Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Viburnum dentatum	0.12	2.04	50.00	0.30	0.00	0.50	2.84	0.95
Ampelopsis arborea	0.12	2.04	50.00	0.30	0.00	0.50	2.84	0.95
Quercus lyrata	0.12	2.04	50.00	0.30	0.00	0.12	2.47	0.82
Campsis radicans	0.12	2.04	50.00	0.30	0.00	0.12	2.47	0.82
Carya aquatica	0.12	2.04	50.00	0.30	0.00	0.12	2.47	0.82
Brunnichia ovata	0.12	2.04	50.00	0.30	0.00	0.12	2.47	0.82
Smilax rotundifolia	0.12	2.04	50.00	0.30	0.00	0.12	2.47	0.82
Callicarpa americana	0.12	2.04	50.00	0.30	0.00	0.12	2.47	0.82

Table 5-1D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium laxum	0.50	2.19	2.81	9.31	11.49	3.83
Toxicodendron radicans	0.75	3.28	2.20	7.28	10.56	3.52
Oplismenus hirtellus	0.62	2.73	2.31	7.65	10.39	3.46
Rubus argutus	0.62	2.73	1.96	6.47	9.21	3.07
Lonicera japonica	0.62	2.73	1.59	5.28	8.01	2.67
Campsis radicans	0.75	3.28	1.15	3.81	7.09	2.36
Dichanthelium dichotomum	0.25	1.09	1.59	5.25	6.35	2.12
Rubus trivialis	0.50	2.19	1.23	4.08	6.26	2.09
Ilex decidua	0.88	3.83	0.50	1.65	5.48	1.83
Vitis rotundifolia	0.75	3.28	0.63	2.09	5.37	1.79
Ilex vomitoria	0.62	2.73	0.53	1.76	4.49	1.50
Dichanthelium commutatum	0.50	2.19	0.66	2.19	4.38	1.46
Tradescantia ohioensis	0.50	2.19	0.56	1.86	4.05	1.35
Liquidambar styraciflua	0.50	2.19	0.56	1.86	4.05	1.35
Symphyotrichum dumosum	0.38	1.64	0.73	2.40	4.04	1.35
Viola sororia var. missouriensis	0.38	1.64	0.64	2.13	3.77	1.26
Carpinus caroliniana	0.50	2.19	0.47	1.55	3.74	1.25
Triadica sebifera	0.50	2.19	0.44	1.45	3.63	1.21
Bignonia capreolata	0.50	2.19	0.25	0.83	3.01	1.00
Carex debilis	0.25	1.09	0.54	1.78	2.87	0.96
Viola palmata	0.38	1.64	0.34	1.14	2.78	0.93
Brunnichia ovata	0.25	1.09	0.50	1.65	2.75	0.92
Unknown herbaceous	0.38	1.64	0.28	0.93	2.57	0.86
Elymus virginicus	0.12	0.55	0.53	1.76	2.30	0.77

Table 5-1D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Parthenocissus quinquefolia	0.12	0.55	0.53	1.74	2.28	0.76
Chasmanthium latifolium	0.38	1.64	0.19	0.62	2.26	0.75
Carex joorii	0.12	0.55	0.50	1.65	2.20	0.73
Smilax rotundifolia	0.38	1.64	0.16	0.52	2.16	0.72
Ilex opaca	0.25	1.09	0.28	0.93	2.02	0.67
Lysimachia radicans	0.25	1.09	0.25	0.83	1.92	0.64
Carex caroliniana	0.25	1.09	0.22	0.72	1.82	0.61
Cardamine sp.	0.25	1.09	0.19	0.62	1.71	0.57
Sanicula canadensis	0.25	1.09	0.19	0.62	1.71	0.57
Carex brevior	0.12	0.55	0.35	1.16	1.70	0.57
Pinus taeda	0.25	1.09	0.16	0.52	1.61	0.54
Acer rubrum var. drummondii	0.25	1.09	0.16	0.52	1.61	0.54
Nyssa sylvatica	0.25	1.09	0.13	0.41	1.51	0.50
Viburnum dentatum	0.25	1.09	0.09	0.31	1.40	0.47
Quercus laurifolia	0.25	1.09	0.09	0.31	1.40	0.47
Gonolobus suberosus	0.25	1.09	0.09	0.31	1.40	0.47
Vernonia missurica	0.12	0.55	0.25	0.83	1.37	0.46
Dichanthelium aciculare	0.25	1.09	0.06	0.21	1.30	0.43
Acmella oppositifolia var. repens	0.25	1.09	0.06	0.21	1.30	0.43
Acer rubrum var. rubrum	0.25	1.09	0.06	0.21	1.30	0.43
Oxalis dillenii	0.25	1.09	0.06	0.21	1.30	0.43
Ampelopsis arborea	0.12	0.55	0.19	0.62	1.17	0.39
Panicum rigidulum	0.12	0.55	0.19	0.62	1.17	0.39
Carex leavenworthii	0.12	0.55	0.19	0.62	1.17	0.39

Table 5-1D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Solidago rugosa	0.12	0.55	0.19	0.62	1.17	0.39
Ulmus americana	0.12	0.55	0.16	0.52	1.06	0.35
Diodia virginiana	0.12	0.55	0.13	0.41	0.96	0.32
Carex abscondita	0.12	0.55	0.13	0.41	0.96	0.32
Juncus effusus	0.12	0.55	0.13	0.41	0.96	0.32
Eupatorium capillifolium	0.12	0.55	0.10	0.33	0.88	0.29
Berchemia scandens	0.12	0.55	0.09	0.31	0.86	0.29
Chasmanthium laxum var. sessiliflorum	0.12	0.55	0.09	0.31	0.86	0.29
Ligustrum sinense	0.12	0.55	0.09	0.31	0.86	0.29
Carex tribuloides var. sangamonensis	0.12	0.55	0.09	0.31	0.86	0.29
Hypericum hypericoides	0.12	0.55	0.09	0.29	0.84	0.28
Mikania scandens	0.12	0.55	0.08	0.25	0.79	0.26
Commelina virginica	0.12	0.55	0.06	0.21	0.75	0.25
Elephantopus carolinianus	0.12	0.55	0.06	0.21	0.75	0.25
Conoclinium coelestinum	0.12	0.55	0.06	0.21	0.75	0.25
Dichanthelium boscii	0.12	0.55	0.06	0.21	0.75	0.25
Celtis laevigata var. laevigata	0.12	0.55	0.06	0.21	0.75	0.25
Melothria pendula	0.12	0.55	0.06	0.21	0.75	0.25
Baptisia alba	0.12	0.55	0.06	0.21	0.75	0.25
Baccharis halimifolia	0.12	0.55	0.03	0.10	0.65	0.22
Arisaema triphyllum	0.12	0.55	0.03	0.10	0.65	0.22
Vitis cinerea	0.12	0.55	0.03	0.10	0.65	0.22
Clematis crispa	0.12	0.55	0.03	0.10	0.65	0.22
Halesia diptera	0.12	0.55	0.03	0.10	0.65	0.22

Table 5-1D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Forest Alliance
Proposed: *Liquidambar straciflua* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Thelypteris kunthii	0.12	0.55	0.03	0.10	0.65	0.22
Carya aquatica	0.12	0.55	0.03	0.10	0.65	0.22
Boehmeria cylindrica	0.12	0.55	0.03	0.10	0.65	0.22
Desmodium glutinosum	0.12	0.55	0.03	0.10	0.65	0.22
Planera aquatica	0.12	0.55	0.03	0.10	0.65	0.22
Galium aparine	0.12	0.55	0.03	0.10	0.65	0.22
Smilax bona-nox	0.12	0.55	0.03	0.10	0.65	0.22
Rhexia mariana	0.12	0.55	0.03	0.10	0.65	0.22
Galium tinctorium	0.12	0.55	0.03	0.10	0.65	0.22
Carex cherokeensis	0.12	0.55	0.03	0.10	0.65	0.22
Ambrosia trifida	0.12	0.55	0.03	0.10	0.65	0.22
Castanea pumila	0.12	0.55	0.03	0.10	0.65	0.22
Strophostyles helvola	0.12	0.55	0.03	0.10	0.65	0.22
Polygonum hydropiperoides	0.12	0.55	0.03	0.10	0.65	0.22
Crataegus viridis	0.12	0.55	0.03	0.10	0.65	0.22
Trachelospermum difforme	0.12	0.55	0.03	0.10	0.65	0.22
Tridens flavus	0.12	0.55	0.03	0.10	0.65	0.22
Carex complanata	0.12	0.55	0.03	0.10	0.65	0.22
Callicarpa americana	0.12	0.55	0.03	0.10	0.65	0.22
Eupatorium semiserratum	0.12	0.55	0.03	0.10	0.65	0.22

Table 5-2A

Summary of Overstory Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Liquidambar styraciflua	1.00	24.88	164.80	46.40	15.06	57.79	129.06	43.02
Nyssa sylvatica	0.48	11.94	34.40	9.68	2.64	10.12	31.74	10.58
Carpinus caroliniana	0.48	11.94	41.60	11.71	1.32	5.05	28.70	9.57
Quercus laurifolia	0.26	6.47	13.60	3.83	1.06	4.07	14.36	4.79
Triadica sebifera	0.24	5.97	18.40	5.18	0.70	2.69	13.84	4.61
Ilex opaca	0.24	5.97	17.60	4.95	0.63	2.41	13.34	4.45
Quercus nigra	0.18	4.48	8.00	2.25	0.63	2.43	9.16	3.05
Ulmus americana	0.12	2.99	7.20	2.03	0.29	1.09	6.11	2.04
Quercus phellos	0.10	2.49	4.00	1.13	0.62	2.37	5.98	1.99
Acer rubrum var. drummondii	0.08	1.99	5.60	1.58	0.32	1.25	4.81	1.60
Taxodium distichum	0.06	1.49	4.00	1.13	0.54	2.07	4.69	1.56
Acer rubrum var. rubrum	0.10	2.49	4.80	1.35	0.18	0.70	4.54	1.51
Pinus taeda	0.06	1.49	3.20	0.90	0.42	1.62	4.01	1.34
Quercus lyrata	0.08	1.99	4.00	1.13	0.22	0.85	3.97	1.32
Halesia diptera	0.08	1.99	3.20	0.90	0.07	0.26	3.15	1.05
Carya aquatica	0.06	1.49	3.20	0.90	0.18	0.70	3.09	1.03
Magnolia grandiflora	0.02	0.50	0.80	0.23	0.30	1.15	1.87	0.62
Nyssa aquatica	0.02	0.50	0.80	0.23	0.29	1.10	1.82	0.61
Fraxinus pennsylvanica	0.04	1.00	2.40	0.68	0.04	0.14	1.81	0.60
Celtis laevigata	0.04	1.00	1.60	0.45	0.07	0.27	1.72	0.57
Ilex decidua	0.04	1.00	1.60	0.45	0.06	0.22	1.66	0.55
Celtis laevigata var. laevigata	0.02	0.50	1.60	0.45	0.08	0.32	1.26	0.42
Quercus similis	0.02	0.50	0.80	0.23	0.07	0.27	0.99	0.33
Fraxinus americana	0.02	0.50	0.80	0.23	0.07	0.27	0.99	0.33

Table 5-2A

Summary of Overstory Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus alba	0.02	0.50	0.80	0.23	0.05	0.18	0.90	0.30
Persia borbonia	0.02	0.50	0.80	0.23	0.04	0.17	0.89	0.30
Carya glabra var. hirsuta	0.02	0.50	0.80	0.23	0.03	0.13	0.85	0.28
Quercus falcata	0.02	0.50	0.80	0.23	0.02	0.08	0.80	0.27
Frangula caroliniana	0.02	0.50	0.80	0.23	0.02	0.06	0.78	0.26
Prunus serotina	0.02	0.50	0.80	0.23	0.02	0.06	0.78	0.26
Quercus michauxii	0.02	0.50	0.80	0.23	0.01	0.05	0.78	0.26
Ulmus alata	0.02	0.50	0.80	0.23	0.01	0.05	0.77	0.26
Planera aquatica	0.02	0.50	0.80	0.23	0.01	0.04	0.76	0.25

Table 5-2B

Summary of Midstory Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carpinus caroliniana	0.66	9.51	176.80	14.83	0.71	17.66	42.00	14.00
Liquidambar styraciflua	0.52	7.49	175.20	14.70	0.76	18.80	41.00	13.67
Ilex opaca	0.52	7.49	173.60	14.56	0.51	12.71	34.77	11.59
Ilex decidua	0.66	9.51	98.40	8.26	0.43	10.73	28.50	9.50
Triadica sebifera	0.58	8.36	135.20	11.34	0.28	6.95	26.65	8.88
Ilex vomitoria	0.38	5.48	100.80	8.46	0.43	10.61	24.55	8.18
Quercus nigra	0.42	6.05	49.60	4.16	0.11	2.81	13.03	4.34
Vitis rotundifolia	0.50	7.20	48.80	4.09	0.07	1.65	12.94	4.31
Halesia diptera	0.26	3.75	36.80	3.09	0.09	2.26	9.09	3.03
Nyssa sylvatica	0.30	4.32	21.60	1.81	0.11	2.61	8.74	2.91
Acer rubrum var. drummondii	0.20	2.88	13.60	1.14	0.07	1.80	5.82	1.94
Acer rubrum var. rubrum	0.12	1.73	12.80	1.07	0.07	1.78	4.58	1.53
Vitis aestivalis	0.18	2.59	12.00	1.01	0.02	0.59	4.19	1.40
Ligustrum sinense	0.10	1.44	19.20	1.61	0.04	1.04	4.09	1.36
Quercus laurifolia	0.16	2.31	9.60	0.81	0.04	0.90	4.01	1.34
Vitis cinerea	0.16	2.31	9.60	0.81	0.01	0.29	3.40	1.13
Ulmus americana	0.12	1.73	6.40	0.54	0.03	0.71	2.97	0.99
Quercus phellos	0.10	1.44	6.40	0.54	0.01	0.25	2.22	0.74
Symplocos tinctoria	0.06	0.86	8.80	0.74	0.02	0.51	2.11	0.70
Magnolia grandiflora	0.04	0.58	8.00	0.67	0.03	0.67	1.92	0.64
Morella cerifera	0.06	0.86	4.80	0.40	0.02	0.57	1.84	0.61
Viburnum dentatum	0.04	0.58	8.80	0.74	0.02	0.39	1.71	0.57
Quercus michauxii	0.08	1.15	3.20	0.27	0.01	0.21	1.63	0.54
Toxicodendron radicans	0.08	1.15	4.00	0.34	0.01	0.13	1.62	0.54
Vaccinium arboreum	0.06	0.86	4.80	0.40	0.01	0.34	1.61	0.54
Campsis radicans	0.08	1.15	3.20	0.27	0.00	0.11	1.53	0.51
Quercus alba	0.04	0.58	4.80	0.40	0.02	0.49	1.47	0.49
Crataegus viridis	0.06	0.86	2.40	0.20	0.00	0.10	1.17	0.39
Aralia spinosa	0.02	0.29	8.00	0.67	0.01	0.18	1.14	0.38

Table 5-2B

Summary of Midstory Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Cyrilla racemiflora	0.04	0.58	3.20	0.27	0.01	0.28	1.13	0.38
Celtis laevigata	0.04	0.58	1.60	0.13	0.01	0.25	0.96	0.32
Crataegus marshallii	0.04	0.58	1.60	0.13	0.01	0.16	0.87	0.29
Pinus taeda	0.02	0.29	3.20	0.27	0.01	0.29	0.85	0.28
Celtis tenuifolia	0.02	0.29	1.60	0.13	0.01	0.26	0.68	0.23
Vaccinium elliottii	0.02	0.29	2.40	0.20	0.00	0.12	0.61	0.20
Taxodium distichum	0.02	0.29	0.80	0.07	0.01	0.19	0.54	0.18
Crataegus brachyacantha	0.02	0.29	1.60	0.13	0.00	0.12	0.54	0.18
Fraxinus pennsylvanica	0.02	0.29	1.60	0.13	0.00	0.11	0.54	0.18
Planera aquatica	0.02	0.29	0.80	0.07	0.01	0.14	0.50	0.17
Berchemia scandens	0.02	0.29	1.60	0.13	0.00	0.06	0.49	0.16
Carex glaucescens	0.02	0.29	1.60	0.13	0.00	0.04	0.47	0.16
Ligustrum lucidum	0.02	0.29	0.80	0.07	0.00	0.06	0.42	0.14
Carya tomentosa	0.02	0.29	0.80	0.07	0.00	0.01	0.37	0.12
Parthenocissus quinquefolia	0.02	0.29	0.80	0.07	0.00	0.01	0.37	0.12
Betula nigra	0.02	0.29	0.80	0.07	0.00	0.01	0.37	0.12

Table 5-2C

Summary of Shrub Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.40	8.85	2280.00	33.70	0.11	21.30	63.85	21.28
Carpinus caroliniana	0.44	9.73	752.00	11.12	0.05	10.22	31.07	10.36
Ilex opaca	0.24	5.31	288.00	4.26	0.06	10.75	20.32	6.77
Ilex vomitoria	0.24	5.31	360.00	5.32	0.05	9.65	20.28	6.76
Vitis rotundifolia	0.32	7.08	304.00	4.49	0.04	6.67	18.25	6.08
Ilex decidua	0.28	6.19	336.00	4.97	0.03	5.03	16.20	5.40
Quercus nigra	0.36	7.96	265.60	3.93	0.02	3.12	15.02	5.01
Rubus argutus	0.22	4.87	376.00	5.56	0.02	4.05	14.48	4.83
Ligustrum sinense	0.12	2.65	186.40	2.76	0.04	7.03	12.44	4.15
Liquidambar styraciflua	0.20	4.42	152.00	2.25	0.01	2.41	9.08	3.03
Sebastiana fruticosa	0.16	3.54	168.00	2.48	0.01	1.97	7.99	2.66
Halesia diptera	0.16	3.54	104.80	1.55	0.01	2.06	7.15	2.38
Viburnum dentatum	0.10	2.21	72.00	1.06	0.01	1.13	4.41	1.47
Symplocos tinctoria	0.04	0.88	104.00	1.54	0.01	1.79	4.21	1.40
Quercus laurifolia	0.10	2.21	40.00	0.59	0.00	0.89	3.70	1.23
Vitis aestivalis	0.10	2.21	40.00	0.59	0.00	0.57	3.37	1.12
Quercus falcata	0.04	0.88	64.00	0.95	0.01	1.22	3.05	1.02
Acer rubrum var. rubrum	0.06	1.33	64.00	0.95	0.00	0.57	2.84	0.95
Acer rubrum var. drummondii	0.08	1.77	48.00	0.71	0.00	0.27	2.75	0.92
Quercus phellos	0.06	1.33	40.00	0.59	0.00	0.48	2.40	0.80
Betula nigra	0.02	0.44	48.00	0.71	0.01	1.22	2.37	0.79
Ulmus americana	0.06	1.33	40.00	0.59	0.00	0.33	2.25	0.75
Nyssa sylvatica	0.02	0.44	88.00	1.30	0.00	0.45	2.19	0.73
Campsis radicans	0.06	1.33	24.00	0.35	0.00	0.09	1.77	0.59

Table 5-2C

Summary of Shrub Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus alba	0.02	0.44	16.00	0.24	0.01	0.95	1.63	0.54
Smilax pumila	0.02	0.44	64.00	0.95	0.00	0.24	1.63	0.54
Aralia spinosa	0.02	0.44	40.00	0.59	0.00	0.57	1.60	0.53
Sambucus nigra var. canadensis	0.02	0.44	24.00	0.35	0.00	0.69	1.48	0.49
Vaccinium arboreum	0.02	0.44	8.00	0.12	0.00	0.87	1.43	0.48
Ulmus rubra	0.02	0.44	32.00	0.47	0.00	0.39	1.30	0.43
Hypericum hypericoides	0.02	0.44	40.00	0.59	0.00	0.24	1.27	0.42
Pinus taeda	0.02	0.44	40.00	0.59	0.00	0.24	1.27	0.42
Callicarpa americana	0.04	0.88	16.00	0.24	0.00	0.15	1.27	0.42
Carya aquatica	0.04	0.88	16.00	0.24	0.00	0.06	1.18	0.39
Smilax rotundifolia	0.04	0.88	16.00	0.24	0.00	0.06	1.18	0.39
Diodia virginiana	0.02	0.44	32.00	0.47	0.00	0.12	1.03	0.34
Lonicera japonica	0.02	0.44	24.00	0.35	0.00	0.18	0.98	0.33
Quercus hemisphaerica	0.02	0.44	8.00	0.12	0.00	0.39	0.95	0.32
Magnolia grandiflora	0.02	0.44	24.00	0.35	0.00	0.09	0.89	0.30
Vitis cinerea	0.02	0.44	8.00	0.12	0.00	0.27	0.83	0.28
Rhynchospora corniculata	0.02	0.44	16.00	0.24	0.00	0.15	0.83	0.28
Cornus foemina	0.02	0.44	8.00	0.12	0.00	0.24	0.80	0.27
Berchemia scandens	0.02	0.44	8.00	0.12	0.00	0.12	0.68	0.23
Taxodium distichum	0.02	0.44	8.00	0.12	0.00	0.12	0.68	0.23
Crataegus marshallii	0.02	0.44	8.00	0.12	0.00	0.12	0.68	0.23
Toxicodendron radicans	0.02	0.44	8.00	0.12	0.00	0.12	0.68	0.23
Ampelopsis arborea	0.02	0.44	8.00	0.12	0.00	0.12	0.68	0.23
Sanicula canadensis	0.02	0.44	8.00	0.12	0.00	0.12	0.68	0.23

Table 5-2C

Summary of Shrub Layer
Proposed: *Liquidamber styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Baccharis halimifolia	0.02	0.44	8.00	0.12	0.00	0.03	0.59	0.20
Quercus lyrata	0.02	0.44	8.00	0.12	0.00	0.03	0.59	0.20
Vaccinium corybosum	0.02	0.44	8.00	0.12	0.00	0.03	0.59	0.20
Brunnichia ovata	0.02	0.44	8.00	0.12	0.00	0.03	0.59	0.20
Carya tomentosa	0.02	0.44	8.00	0.12	0.00	0.03	0.59	0.20

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.82	3.64	2.68	8.85	12.49	4.16
Chasmanthium laxum	0.41	1.82	2.05	6.75	8.57	2.86
Vitis rotundifolia	0.78	3.47	1.19	3.94	7.40	2.47
Carpinus caroliniana	0.71	3.12	1.12	3.71	6.83	2.28
Rubus argutus	0.59	2.60	1.18	3.88	6.48	2.16
Parthenocissus quinquefolia	0.49	2.17	1.27	4.21	6.37	2.12
Campsis radicans	0.57	2.51	1.03	3.38	5.90	1.97
Ilex decidua	0.67	2.95	0.87	2.86	5.81	1.94
Oplismenus hirtellus	0.51	2.25	0.88	2.90	5.15	1.72
Bignonia capreolata	0.63	2.77	0.69	2.26	5.04	1.68
Lonicera japonica	0.45	1.99	0.87	2.86	4.86	1.62
Tradescantia ohioensis	0.53	2.34	0.73	2.41	4.75	1.58
Ilex opaca	0.55	2.43	0.65	2.14	4.56	1.52
Ilex vomitoria	0.55	2.43	0.59	1.95	4.37	1.46
Liquidambar styraciflua	0.55	2.43	0.53	1.76	4.19	1.40
Rubus trivialis	0.33	1.47	0.82	2.70	4.18	1.39
Dichanthelium commutatum	0.55	2.43	0.45	1.48	3.90	1.30
Mitchella repens	0.43	1.91	0.49	1.62	3.52	1.17
Viola palmata	0.31	1.39	0.56	1.86	3.25	1.08
Viburnum dentatum	0.41	1.82	0.25	0.81	2.63	0.88
Potentilla indica	0.08	0.35	0.60	1.98	2.33	0.78
Triadica sebifera	0.33	1.47	0.20	0.65	2.12	0.71
Acer rubrum var. rubrum	0.27	1.21	0.23	0.76	1.97	0.66
Sanicula canadensis	0.25	1.13	0.25	0.84	1.97	0.66

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Symphyotrichum dumosum	0.20	0.87	0.28	0.94	1.80	0.60
Sebastiana fruticosa	0.24	1.04	0.23	0.76	1.80	0.60
Brunnichia ovata	0.22	0.95	0.25	0.83	1.78	0.59
Quercus laurifolia	0.25	1.13	0.19	0.61	1.74	0.58
Nyssa sylvatica	0.29	1.30	0.13	0.44	1.74	0.58
Hypericum hypericoides	0.22	0.95	0.23	0.77	1.72	0.57
Cynodon dactylon	0.02	0.09	0.49	1.62	1.70	0.57
Smilax bona-nox	0.27	1.21	0.15	0.49	1.70	0.57
Carex sp.	0.20	0.87	0.25	0.81	1.68	0.56
Oxalis dillenii	0.25	1.13	0.14	0.47	1.60	0.53
Chasmanthium sessiliflorum	0.08	0.35	0.35	1.16	1.51	0.50
Dichanthelium dichotomum	0.12	0.52	0.30	0.99	1.51	0.50
Ampelopsis arborea	0.20	0.87	0.18	0.59	1.46	0.49
Quercus nigra	0.20	0.87	0.18	0.58	1.45	0.48
Commelina virginica	0.14	0.61	0.22	0.72	1.32	0.44
Galium aparine	0.18	0.78	0.16	0.52	1.30	0.43
Carex brevior	0.10	0.43	0.24	0.78	1.21	0.40
Elephantopus carolinianus	0.18	0.78	0.13	0.42	1.20	0.40
Smilax glauca	0.18	0.78	0.13	0.42	1.20	0.40
Unknown herbaceous	0.18	0.78	0.12	0.40	1.18	0.39
Smilax rotundifolia	0.22	0.95	0.07	0.23	1.18	0.39
Clematis crispa	0.16	0.69	0.13	0.42	1.11	0.37
Callicarpa americana	0.18	0.78	0.10	0.32	1.10	0.37
Lysimachia radicans	0.16	0.69	0.12	0.40	1.10	0.37

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Pinus taeda	0.18	0.78	0.09	0.31	1.09	0.36
Trachelospermum difforme	0.16	0.69	0.10	0.34	1.03	0.34
Cardamine sp.	0.14	0.61	0.13	0.42	1.03	0.34
Carex debilis	0.12	0.52	0.15	0.50	1.01	0.34
Viola sororia var. missouriensis	0.10	0.43	0.17	0.56	0.99	0.33
Lygodium japonicum	0.16	0.69	0.08	0.28	0.97	0.32
Chasmanthium latifolium	0.14	0.61	0.08	0.25	0.86	0.29
Acer rubrum var. drummondii	0.14	0.61	0.07	0.24	0.85	0.28
Ulmus americana	0.14	0.61	0.07	0.24	0.85	0.28
Carex cherokeensis	0.08	0.35	0.15	0.49	0.84	0.28
Ligustrum sinense	0.12	0.52	0.09	0.31	0.83	0.28
Viola sororia	0.12	0.52	0.09	0.31	0.83	0.28
Halesia diptera	0.14	0.61	0.06	0.19	0.80	0.27
Symplocos tinctoria	0.08	0.35	0.14	0.45	0.80	0.27
Quercus phellos	0.14	0.61	0.05	0.18	0.78	0.26
Dichanthelium aciculare	0.10	0.43	0.09	0.31	0.74	0.25
Solidago sempervirens	0.08	0.35	0.11	0.37	0.72	0.24
Carex joorii	0.06	0.26	0.14	0.45	0.71	0.24
Berchemia scandens	0.10	0.43	0.08	0.26	0.69	0.23
Vernonia missurica	0.08	0.35	0.10	0.32	0.67	0.22
Carex albolutescens	0.04	0.17	0.15	0.49	0.66	0.22
Eupatorium semiserratum	0.10	0.43	0.06	0.21	0.64	0.21
Dichanthelium boscii	0.06	0.26	0.11	0.37	0.63	0.21
Gonolobus suberosus	0.10	0.43	0.05	0.16	0.60	0.20

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Aristolochia serpentaria	0.10	0.43	0.04	0.15	0.58	0.19
Melothria pendula	0.10	0.43	0.04	0.13	0.56	0.19
Vitis cinerea	0.08	0.35	0.06	0.21	0.56	0.19
Paspalum urvillei	0.02	0.09	0.14	0.45	0.54	0.18
Scleria triglomerata	0.04	0.17	0.10	0.34	0.51	0.17
Carex caroliniana	0.08	0.35	0.05	0.16	0.51	0.17
Thelypteris kunthii	0.04	0.17	0.10	0.33	0.50	0.17
Carex abscondita	0.04	0.17	0.10	0.32	0.50	0.17
Erechtites hieraciifolia	0.06	0.26	0.06	0.21	0.47	0.16
Yeatesia viridiflora	0.04	0.17	0.09	0.29	0.46	0.15
Smilax smallii	0.08	0.35	0.03	0.10	0.44	0.15
Prunella vulgaris	0.06	0.26	0.05	0.18	0.44	0.15
Gelsemium sempervirens	0.08	0.35	0.02	0.08	0.43	0.14
Ruellia caroliniensis	0.08	0.35	0.02	0.08	0.43	0.14
Galium tinctorium	0.08	0.35	0.02	0.06	0.41	0.14
Boehmeria cylindrica	0.08	0.35	0.02	0.06	0.41	0.14
Sambucus nigra var. canadensis	0.06	0.26	0.04	0.15	0.41	0.14
Panicum rigidulum	0.04	0.17	0.07	0.23	0.40	0.13
Carex louisianica	0.04	0.17	0.07	0.23	0.40	0.13
Carex intumescens	0.04	0.17	0.07	0.22	0.39	0.13
Polygonum glabrum	0.02	0.09	0.09	0.29	0.38	0.13
Vaccinium arboreum	0.04	0.17	0.06	0.19	0.37	0.12
Celtis laevigata var. laevigata	0.04	0.17	0.06	0.19	0.37	0.12
Elymus virginicus	0.02	0.09	0.08	0.28	0.36	0.12

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Conoclinium coelestinum	0.06	0.26	0.03	0.10	0.36	0.12
Morella cerifera	0.06	0.26	0.03	0.10	0.36	0.12
Smilax pumila	0.04	0.17	0.05	0.17	0.34	0.11
Crataegus marshallii	0.06	0.26	0.01	0.05	0.31	0.10
Sassafras albidum	0.06	0.26	0.01	0.05	0.31	0.10
Carex complanata	0.04	0.17	0.04	0.13	0.30	0.10
Solidago rugosa	0.04	0.17	0.03	0.11	0.29	0.10
Osmunda regalis	0.02	0.09	0.06	0.19	0.28	0.09
Carex blanda	0.02	0.09	0.06	0.19	0.27	0.09
Scleria oligantha	0.04	0.17	0.03	0.10	0.27	0.09
Scleria sp.	0.04	0.17	0.02	0.08	0.25	0.08
Diodia virginiana	0.04	0.17	0.02	0.08	0.25	0.08
Teucrium canadense	0.04	0.17	0.02	0.08	0.25	0.08
Styrax americana	0.04	0.17	0.02	0.08	0.25	0.08
Eupatorium capillifolium	0.04	0.17	0.02	0.07	0.24	0.08
Andropogon glomeratus	0.02	0.09	0.04	0.14	0.23	0.08
Mikania scandens	0.04	0.17	0.02	0.06	0.23	0.08
Vaccinium elliottii	0.04	0.17	0.01	0.05	0.22	0.07
Carya aquatica	0.04	0.17	0.01	0.05	0.22	0.07
Dichanthelium acuminatum	0.04	0.17	0.01	0.05	0.22	0.07
Acalypha rhomboidea	0.04	0.17	0.01	0.05	0.22	0.07
Dichanthelium scoparium	0.04	0.17	0.01	0.05	0.22	0.07
Tradescantia hirsutiflora	0.04	0.17	0.01	0.05	0.22	0.07
Saccharum baldwinii	0.02	0.09	0.04	0.13	0.22	0.07

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Castanea pumila	0.04	0.17	0.01	0.03	0.21	0.07
Crataegus viridis	0.04	0.17	0.01	0.03	0.21	0.07
Justicia ovata var. lanceolata	0.04	0.17	0.01	0.03	0.21	0.07
Strophostyles helvola	0.04	0.17	0.01	0.03	0.21	0.07
Botrychium dissectum	0.04	0.17	0.01	0.03	0.21	0.07
Carex triangularis	0.04	0.17	0.01	0.03	0.21	0.07
Polygonum hydropiperoides	0.04	0.17	0.01	0.03	0.21	0.07
Acmella oppositifolia var. repens	0.04	0.17	0.01	0.03	0.21	0.07
Axonopus affinis	0.02	0.09	0.03	0.11	0.20	0.07
Cyperus sp.	0.02	0.09	0.03	0.11	0.20	0.07
Solidago altissima	0.02	0.09	0.03	0.11	0.20	0.07
Carex leavenworthii	0.02	0.09	0.03	0.10	0.18	0.06
Wisteria frutescens	0.02	0.09	0.03	0.10	0.18	0.06
Aralia spinosa	0.02	0.09	0.03	0.10	0.18	0.06
Arisaema dracontium	0.02	0.09	0.03	0.09	0.17	0.06
Polygonum pensylvanicum	0.02	0.09	0.02	0.07	0.16	0.05
Passiflora lutea	0.02	0.09	0.02	0.07	0.16	0.05
Vitis aestivalis	0.02	0.09	0.02	0.06	0.15	0.05
Juncus effusus	0.02	0.09	0.02	0.06	0.15	0.05
Rhexia mariana var. mariana	0.02	0.09	0.02	0.06	0.15	0.05
Commelina erecta	0.02	0.09	0.02	0.06	0.14	0.05
Ardisia crenata	0.02	0.09	0.01	0.05	0.14	0.05
Sesbania herbacea	0.02	0.09	0.01	0.05	0.14	0.05
Eragrostis refracta	0.02	0.09	0.01	0.05	0.14	0.05

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carex tribuloides var. sangamonensis	0.02	0.09	0.01	0.05	0.14	0.05
Panicum anceps	0.02	0.09	0.01	0.05	0.14	0.05
Steinchisma hians	0.02	0.09	0.01	0.05	0.14	0.05
Eupatorium serotinum	0.02	0.09	0.01	0.05	0.14	0.05
Chasmanthium laxum var. sessiliflorum	0.02	0.09	0.01	0.05	0.14	0.05
Sabal minor	0.02	0.09	0.01	0.05	0.13	0.04
Desmodium viridiflorum	0.02	0.09	0.01	0.03	0.12	0.04
Iris virginica	0.02	0.09	0.01	0.03	0.12	0.04
Pluchea camphorata	0.02	0.09	0.01	0.03	0.12	0.04
Solidago simplex	0.02	0.09	0.01	0.03	0.12	0.04
Hydrocotyle umbellata	0.02	0.09	0.01	0.03	0.12	0.04
Persia borbonia	0.02	0.09	0.01	0.03	0.12	0.04
Quercus hemisphaerica	0.02	0.09	0.01	0.03	0.12	0.04
Baptisia alba	0.02	0.09	0.01	0.03	0.12	0.04
Prunus caroliniana	0.02	0.09	0.00	0.02	0.10	0.03
Desmodium glabellum	0.02	0.09	0.00	0.02	0.10	0.03
Helenium flexuosum	0.02	0.09	0.00	0.02	0.10	0.03
Carya tomentosa	0.02	0.09	0.00	0.02	0.10	0.03
Scutellaria integrifolia	0.02	0.09	0.00	0.02	0.10	0.03
Hypericum sp.	0.02	0.09	0.00	0.02	0.10	0.03
Ulmus rubra	0.02	0.09	0.00	0.02	0.10	0.03
Persea palustris	0.02	0.09	0.00	0.02	0.10	0.03
Symphyotrichum racemosum	0.02	0.09	0.00	0.02	0.10	0.03
Ptilimnium capillaceum	0.02	0.09	0.00	0.02	0.10	0.03

Table 5-2D

Summary of Herbaceous Layer
Proposed: *Liquidambar styraciflua* Alliance
Proposed: *Liquidambar styraciflua Temporarily* Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Rhynchospora inexpansa	0.02	0.09	0.00	0.02	0.10	0.03
Quercus michauxii	0.02	0.09	0.00	0.02	0.10	0.03
Quercus falcata var. pogodaefolia	0.02	0.09	0.00	0.02	0.10	0.03
Asclepias perennis	0.02	0.09	0.00	0.02	0.10	0.03
Quercus falcata	0.02	0.09	0.00	0.02	0.10	0.03
Quercus similis	0.02	0.09	0.00	0.02	0.10	0.03
Eupatorium lancifolium	0.02	0.09	0.00	0.02	0.10	0.03
Viola missouriensis	0.02	0.09	0.00	0.02	0.10	0.03
Dichanthelium laxiflorum	0.02	0.09	0.00	0.02	0.10	0.03
Rhynchospora corniculata	0.02	0.09	0.00	0.02	0.10	0.03
Botrychium virginianum	0.02	0.09	0.00	0.02	0.10	0.03
Celtis laevigata	0.02	0.09	0.00	0.02	0.10	0.03
Prunus serotina	0.02	0.09	0.00	0.02	0.10	0.03
Baccharis halimifolia	0.02	0.09	0.00	0.02	0.10	0.03
Planera aquatica	0.02	0.09	0.00	0.02	0.10	0.03
Celtis tenuifolia	0.02	0.09	0.00	0.02	0.10	0.03
Desmodium glutinosum	0.02	0.09	0.00	0.02	0.10	0.03
Rhexia mariana	0.02	0.09	0.00	0.02	0.10	0.03
Arisaema triphyllum	0.02	0.09	0.00	0.02	0.10	0.03
Smilax hispida	0.02	0.09	0.00	0.02	0.10	0.03
Ambrosia trifida	0.02	0.09	0.00	0.02	0.10	0.03
Tridens flavus	0.02	0.09	0.00	0.02	0.10	0.03
Lactuca canadensis	0.02	0.09	0.00	0.02	0.10	0.03

Table 6A

Summary of Overstory Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa aquatica	0.88	31.87	413.10	50.98	47.12	59.60	142.45	47.48
Taxodium distichum	0.84	30.62	323.45	39.91	29.42	37.21	107.75	35.92
Fraxinus caroliniana	0.24	8.75	22.76	2.81	0.56	0.71	12.27	4.09
Triadica sebifera	0.17	6.25	9.66	1.19	0.23	0.29	7.73	2.58
Acer rubrum var. drummondii	0.14	5.00	7.59	0.94	0.36	0.46	6.39	2.13
Planera aquatica	0.12	4.37	9.66	1.19	0.26	0.33	5.90	1.97
Carya aquatica	0.07	2.50	4.83	0.60	0.20	0.26	3.35	1.12
Betula nigra	0.05	1.87	4.83	0.60	0.09	0.12	2.59	0.86
Fraxinus pennsylvanica	0.03	1.25	4.83	0.60	0.10	0.12	1.97	0.66
Quercus lyrata	0.03	1.25	2.07	0.26	0.18	0.22	1.73	0.58
Quercus laurifolia	0.03	1.25	1.38	0.17	0.14	0.18	1.60	0.53
Liquidambar styraciflua	0.03	1.25	1.38	0.17	0.09	0.11	1.53	0.51
Ulmus crassifolia	0.02	0.62	1.38	0.17	0.07	0.09	0.89	0.30
Gleditsia aquatica	0.02	0.62	0.69	0.09	0.12	0.15	0.86	0.29
Ulmus americana	0.02	0.62	0.69	0.09	0.07	0.09	0.80	0.27
Nyssa biflora	0.02	0.62	0.69	0.09	0.01	0.02	0.73	0.24
Ostrya virginiana	0.02	0.62	0.69	0.09	0.01	0.01	0.72	0.24
Nyssa sylvatica	0.02	0.62	0.69	0.09	0.01	0.01	0.72	0.24

Table 6B

Summary of Midstory Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus caroliniana	0.41	13.33	128.97	26.01	0.67	29.32	68.66	22.89
Nyssa aquatica	0.45	14.44	101.38	20.45	0.60	26.03	60.92	20.31
Triadica sebifera	0.50	16.11	89.66	18.08	0.25	11.14	45.33	15.11
Acer rubrum var. drummondii	0.31	10.00	46.21	9.32	0.14	6.31	25.62	8.54
Planera aquatica	0.28	8.89	23.45	4.73	0.16	6.90	20.52	6.84
Cephalanthus occidentalis	0.29	9.44	30.34	6.12	0.11	4.85	20.42	6.81
Taxodium distichum	0.29	9.44	24.14	4.87	0.11	4.70	19.02	6.34
Fraxinus pennsylvanica	0.14	4.44	22.76	4.59	0.11	5.01	14.05	4.68
Ilex decidua	0.05	1.67	5.52	1.11	0.03	1.40	4.18	1.39
Campsis radicans	0.07	2.22	2.76	0.56	0.00	0.19	2.97	0.99
Betula nigra	0.03	1.11	4.14	0.83	0.02	0.96	2.91	0.97
Quercus laurifolia	0.05	1.67	2.76	0.56	0.01	0.52	2.74	0.91
Ulmus crassifolia	0.02	0.56	3.45	0.70	0.02	0.89	2.14	0.71
Crataegus opaca	0.03	1.11	1.38	0.28	0.02	0.68	2.07	0.69
Forestiera acuminata	0.03	1.11	2.07	0.42	0.01	0.42	1.95	0.65
Liquidambar styraciflua	0.03	1.11	2.07	0.42	0.00	0.09	1.62	0.54
Vitis cinerea	0.03	1.11	1.38	0.28	0.00	0.04	1.43	0.48
Quercus lyrata	0.02	0.56	0.69	0.14	0.01	0.29	0.98	0.33
Salix nigra	0.02	0.56	1.38	0.28	0.00	0.11	0.95	0.32
Nyssa biflora	0.02	0.56	0.69	0.14	0.00	0.09	0.78	0.26
Wisteria frutescens	0.02	0.56	0.69	0.14	0.00	0.05	0.74	0.25

Table 6C

Summary of Shrub Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.16	14.06	172.41	21.26	0.02	20.43	55.75	18.58
Fraxinus pennsylvanica	0.09	7.81	82.76	10.20	0.02	22.35	40.37	13.46
Cephalanthus occidentalis	0.12	10.94	103.45	12.76	0.01	10.30	34.00	11.33
Fraxinus caroliniana	0.10	9.38	84.83	10.46	0.01	11.19	31.03	10.34
Planera aquatica	0.14	12.50	82.76	10.20	0.01	6.64	29.34	9.78
Acer rubrum var. drummondii	0.10	9.38	56.55	6.97	0.01	8.59	24.94	8.31
Brunnichia ovata	0.03	3.13	34.48	4.25	0.00	3.67	11.04	3.68
Baccharis halimifolia	0.03	3.13	13.79	1.70	0.00	5.06	9.89	3.30
Taxodium distichum	0.07	6.25	21.38	2.64	0.00	0.54	9.43	3.14
Smilax rotundifolia	0.02	1.56	41.38	5.10	0.00	1.05	7.71	2.57
Morella cerifera	0.02	1.56	13.79	1.70	0.00	3.67	6.93	2.31
Ulmus americana	0.03	3.13	13.79	1.70	0.00	1.05	5.87	1.96
Liquidambar styraciflua	0.03	3.13	13.79	1.70	0.00	0.52	5.35	1.78
Quercus lyrata	0.03	3.13	13.79	1.70	0.00	0.35	5.17	1.72
Mikania scandens	0.02	1.56	20.69	2.55	0.00	0.52	4.64	1.55
Toxicodendron radicans	0.02	1.56	6.90	0.85	0.00	1.22	3.64	1.21
Nyssa aquatica	0.02	1.56	6.90	0.85	0.00	0.70	3.11	1.04
Campsis radicans	0.02	1.56	6.90	0.85	0.00	0.70	3.11	1.04
Forestiera acuminata	0.02	1.56	6.90	0.85	0.00	0.70	3.11	1.04
Itea virginica	0.02	1.56	6.90	0.85	0.00	0.39	2.81	0.94
Salix nigra	0.02	1.56	6.90	0.85	0.00	0.35	2.76	0.92

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Salvinia minima	0.53	4.38	3.93	22.03	26.41	8.80
Alternanthera philoxeroides	0.84	6.92	3.14	17.58	24.50	8.17
Phanopyrum gymnocarpon	0.33	2.68	1.87	10.45	13.14	4.38
Rhynchospora corniculata	0.34	2.82	1.73	9.69	12.51	4.17
Polygonum hydropiperoides	0.33	2.68	0.50	2.78	5.46	1.82
Zizaniopsis miliacea	0.31	2.54	0.48	2.71	5.25	1.75
Cyperus virens	0.21	1.69	0.53	2.95	4.64	1.55
Brunnichia ovata	0.22	1.84	0.44	2.44	4.28	1.43
Saururus cernuus	0.24	1.98	0.29	1.60	3.58	1.19
Triadica sebifera	0.24	1.98	0.21	1.17	3.14	1.05
Taxodium distichum	0.28	2.26	0.11	0.61	2.87	0.96
Ptilimnium capillaceum	0.21	1.69	0.21	1.16	2.85	0.95
Boehmeria cylindrica	0.16	1.27	0.20	1.12	2.39	0.80
Crinum americanum	0.19	1.55	0.14	0.76	2.32	0.77
Mikania scandens	0.16	1.27	0.18	1.02	2.29	0.76
Lycopus virginicus	0.17	1.41	0.09	0.52	1.93	0.64
Hydrocotyle ranunculoides	0.21	1.69	0.03	0.15	1.85	0.62
Acer rubrum var. drummondii	0.17	1.41	0.07	0.42	1.83	0.61
Cyperus haspan	0.16	1.27	0.07	0.41	1.68	0.56
Bidens laevis	0.07	0.56	0.20	1.11	1.68	0.56
Symphyotrichum divaricatum	0.02	0.14	0.27	1.53	1.67	0.56
Triadenum walterii	0.14	1.13	0.10	0.54	1.67	0.56
Viola sororia	0.07	0.56	0.18	1.01	1.58	0.53
Lemna aequinoctialis	0.17	1.41	0.02	0.13	1.55	0.52

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sacciolepis striata	0.10	0.85	0.11	0.63	1.47	0.49
Fraxinus caroliniana	0.16	1.27	0.03	0.17	1.44	0.48
Cephalanthus occidentalis	0.12	0.99	0.08	0.44	1.42	0.47
Bacopa monnieri	0.02	0.14	0.23	1.28	1.42	0.47
Unknown herbaceous	0.16	1.27	0.03	0.15	1.42	0.47
Eupatorium capillifolium	0.16	1.27	0.02	0.10	1.37	0.46
Symphyotrichum dumosum	0.12	0.99	0.06	0.35	1.34	0.45
Pluchea camphorata	0.14	1.13	0.02	0.12	1.25	0.42
Toxicodendron radicans	0.10	0.85	0.06	0.33	1.18	0.39
Iris virginica	0.10	0.85	0.05	0.27	1.12	0.37
Justicia ovata	0.12	0.99	0.02	0.10	1.09	0.36
Nyssa aquatica	0.12	0.99	0.01	0.05	1.04	0.35
Hygrophila lacustris	0.07	0.56	0.08	0.47	1.03	0.34
Juncus effusus	0.07	0.56	0.08	0.46	1.02	0.34
Itea virginica	0.10	0.85	0.03	0.17	1.02	0.34
Campsis radicans	0.09	0.71	0.05	0.29	1.00	0.33
Commelina virginica	0.05	0.42	0.10	0.55	0.97	0.32
Carex louisianica	0.07	0.56	0.07	0.39	0.96	0.32
Ludwigia repens	0.03	0.28	0.10	0.58	0.86	0.29
Liquidambar styraciflua	0.09	0.71	0.03	0.15	0.85	0.28
Ilex decidua	0.09	0.71	0.03	0.15	0.85	0.28
Pontederia cordata	0.09	0.71	0.02	0.12	0.83	0.28
Planera aquatica	0.09	0.71	0.02	0.12	0.83	0.28
Osmunda regalis	0.07	0.56	0.04	0.25	0.81	0.27

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Typha latifolia	0.09	0.71	0.01	0.08	0.79	0.26
Acer rubrum var. rubrum	0.07	0.56	0.04	0.22	0.78	0.26
Ilex opaca	0.09	0.71	0.01	0.07	0.78	0.26
Vernonia baldwinii	0.03	0.28	0.08	0.45	0.73	0.24
Dicliptera brachiata	0.05	0.42	0.05	0.30	0.72	0.24
Utricularia gibba	0.09	0.71	0.00	0.01	0.72	0.24
Dichanthelium aciculare	0.05	0.42	0.05	0.29	0.71	0.24
Wolfiella gladiata	0.07	0.56	0.03	0.15	0.71	0.24
Leersia lenticularis	0.05	0.42	0.05	0.27	0.69	0.23
Ulmus americana	0.07	0.56	0.02	0.12	0.69	0.23
Polygonum hydropiper	0.05	0.42	0.04	0.24	0.67	0.22
Echinodorus cordifolius	0.05	0.42	0.04	0.24	0.67	0.22
Hibiscus laevis	0.05	0.42	0.04	0.22	0.64	0.21
Lygodium japonicum	0.07	0.56	0.01	0.05	0.61	0.20
Carex sp.	0.02	0.14	0.08	0.46	0.60	0.20
Chasmanthium latifolium	0.07	0.56	0.00	0.02	0.59	0.20
Eleocharis montana	0.02	0.14	0.08	0.43	0.58	0.19
Sagittaria latifolia	0.07	0.56	0.00	0.01	0.58	0.19
Cyperus sp.	0.03	0.28	0.05	0.29	0.57	0.19
Smilax walteri	0.07	0.56	0.00	0.00	0.57	0.19
Leersia oryzoides	0.07	0.56	0.00	0.00	0.57	0.19
Smilax bona-nox	0.05	0.42	0.02	0.12	0.54	0.18
Hydrocotyle umbellata	0.05	0.42	0.01	0.07	0.50	0.17
Ampelopsis arborea	0.05	0.42	0.01	0.07	0.50	0.17

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Commelina diffusa	0.02	0.14	0.06	0.31	0.46	0.15
Carex albolutescens	0.03	0.28	0.03	0.17	0.45	0.15
Viburnum dentatum	0.05	0.42	0.00	0.02	0.45	0.15
Ludwigia palustris	0.05	0.42	0.00	0.01	0.43	0.14
Fimbristylis miliacea	0.02	0.14	0.05	0.29	0.43	0.14
Proserpinaca pectinata	0.05	0.42	0.00	0.00	0.43	0.14
Ludwigia leptocarpa	0.05	0.42	0.00	0.00	0.42	0.14
Styrax americana	0.03	0.28	0.03	0.14	0.42	0.14
Ambrosia artemisiifolia	0.02	0.14	0.05	0.26	0.40	0.13
Alternanthera sessilis	0.02	0.14	0.04	0.22	0.36	0.12
Boltonia diffusa	0.03	0.28	0.01	0.07	0.35	0.12
Quercus lyrata	0.03	0.28	0.01	0.05	0.33	0.11
Smilax rotundifolia	0.03	0.28	0.01	0.05	0.33	0.11
Hypericum mutilum	0.03	0.28	0.01	0.05	0.33	0.11
Leersia hexandra	0.03	0.28	0.01	0.05	0.33	0.11
Salvinia molesta	0.03	0.28	0.01	0.04	0.32	0.11
Justicia ovata var. lanceolata	0.02	0.14	0.03	0.17	0.31	0.10
Panicum heimtomon	0.02	0.14	0.03	0.17	0.31	0.10
Potentilla indica	0.03	0.28	0.00	0.03	0.31	0.10
Viola palmata	0.03	0.28	0.00	0.03	0.31	0.10
Dichanthelium scoparium	0.03	0.28	0.00	0.02	0.31	0.10
Micranthemum umbrosum	0.03	0.28	0.00	0.02	0.31	0.10
Typha domingensis	0.03	0.28	0.00	0.02	0.31	0.10
Carpinus caroliniana	0.03	0.28	0.00	0.02	0.31	0.10

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Vitis cinerea	0.03	0.28	0.00	0.02	0.31	0.10
Galium aparine	0.03	0.28	0.00	0.02	0.31	0.10
Tradescantia ohioensis	0.03	0.28	0.00	0.02	0.31	0.10
Habenaria repens	0.03	0.28	0.00	0.02	0.31	0.10
Sagittaria platyphylla	0.03	0.28	0.00	0.02	0.31	0.10
Acmella oppositifolia var. repens	0.03	0.28	0.00	0.02	0.31	0.10
Vitis rotundifolia	0.03	0.28	0.00	0.02	0.31	0.10
Onoclea sensibilis	0.03	0.28	0.00	0.01	0.30	0.10
Kosteletzkya virginica	0.03	0.28	0.00	0.01	0.29	0.10
Polygonum punctatum	0.03	0.28	0.00	0.01	0.29	0.10
Wolffia columbiana	0.03	0.28	0.00	0.00	0.29	0.10
Ludwigia octovalvis	0.02	0.14	0.03	0.14	0.29	0.10
Chasmanthium laxum	0.02	0.14	0.03	0.14	0.29	0.10
Hymenocallis liriosme	0.03	0.28	0.00	0.00	0.28	0.09
Limnobium spongia	0.03	0.28	0.00	0.00	0.28	0.09
Polygonum glabrum	0.03	0.28	0.00	0.00	0.28	0.09
Azolla caroliniana	0.03	0.28	0.00	0.00	0.28	0.09
Acalypha rhomboidea	0.03	0.28	0.00	0.00	0.28	0.09
Ilex vomitoria	0.03	0.28	0.00	0.00	0.28	0.09
Proserpinaca palustris	0.03	0.28	0.00	0.00	0.28	0.09
Sesbania drummondii	0.03	0.28	0.00	0.00	0.28	0.09
Parthenocissus quinquefolia	0.03	0.28	0.00	0.00	0.28	0.09
Rubus trivialis	0.03	0.28	0.00	0.00	0.28	0.09
Baccharis halimifolia	0.03	0.28	0.00	0.00	0.28	0.09

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Hypoxis curtisii	0.02	0.14	0.02	0.13	0.27	0.09
Leersia virginica	0.02	0.14	0.02	0.12	0.26	0.09
Iva annua	0.02	0.14	0.02	0.10	0.24	0.08
Cardamine sp.	0.02	0.14	0.02	0.10	0.24	0.08
Berchemia scandens	0.02	0.14	0.01	0.08	0.22	0.07
Lysimachia radicans	0.02	0.14	0.01	0.07	0.21	0.07
Justicia americana	0.02	0.14	0.01	0.07	0.21	0.07
Paspalum vaginatum	0.02	0.14	0.01	0.07	0.21	0.07
Polygonum pensylvanicum	0.02	0.14	0.01	0.07	0.21	0.07
Diodia virginiana	0.02	0.14	0.01	0.05	0.19	0.06
Elymus virginicus	0.02	0.14	0.01	0.05	0.19	0.06
Ipomoea sagittata	0.02	0.14	0.01	0.05	0.19	0.06
Dichanthelium dichotomum	0.02	0.14	0.01	0.05	0.19	0.06
Spiranthes odorata	0.02	0.14	0.01	0.05	0.19	0.06
Pinus taeda	0.02	0.14	0.01	0.05	0.19	0.06
Wisteria frutescens	0.02	0.14	0.01	0.05	0.19	0.06
Solidago altissima	0.02	0.14	0.01	0.05	0.19	0.06
Panicum virgatum	0.02	0.14	0.01	0.05	0.19	0.06
Amorpha fruticosa	0.02	0.14	0.00	0.02	0.17	0.06
Myriophyllum aquaticum	0.02	0.14	0.00	0.02	0.17	0.06
Cornus foemina	0.02	0.14	0.00	0.02	0.17	0.06
Mitchella repens	0.02	0.14	0.00	0.02	0.17	0.06
Viola villosa	0.02	0.14	0.00	0.02	0.17	0.06
Carex glaucescens	0.02	0.14	0.00	0.02	0.17	0.06

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Fraxinus pennsylvanica	0.02	0.14	0.00	0.02	0.17	0.06
Eupatorium lancifolium	0.02	0.14	0.00	0.02	0.17	0.06
Quercus falcata	0.02	0.14	0.00	0.02	0.17	0.06
Lactuca canadensis	0.02	0.14	0.00	0.02	0.17	0.06
Eichhornia crassipes	0.02	0.14	0.00	0.01	0.15	0.05
Carex lupulina	0.02	0.14	0.00	0.00	0.15	0.05
Hypericum drummondii	0.02	0.14	0.00	0.00	0.14	0.05
Sagittaria lancifolia	0.02	0.14	0.00	0.00	0.14	0.05
Cyrilla racemiflora	0.02	0.14	0.00	0.00	0.14	0.05
Hydrilla verticellata	0.02	0.14	0.00	0.00	0.14	0.05
Scoparia dulcis	0.02	0.14	0.00	0.00	0.14	0.05
Carex lurida	0.02	0.14	0.00	0.00	0.14	0.05
Cyperus pseudovegetus	0.02	0.14	0.00	0.00	0.14	0.05
Conoclinium coelestinum	0.02	0.14	0.00	0.00	0.14	0.05
Carex crus-corvi	0.02	0.14	0.00	0.00	0.14	0.05
Erechtites hieraciifolia	0.02	0.14	0.00	0.00	0.14	0.05
Ludwigia sp.	0.02	0.14	0.00	0.00	0.14	0.05
Chasmanthium sessiliflorum	0.02	0.14	0.00	0.00	0.14	0.05
Eupatorium serotinum	0.02	0.14	0.00	0.00	0.14	0.05
Carex joorii	0.02	0.14	0.00	0.00	0.14	0.05
Vernonia missurica	0.02	0.14	0.00	0.00	0.14	0.05
Asclepias perennis	0.02	0.14	0.00	0.00	0.14	0.05
Symplocos tinctoria	0.02	0.14	0.00	0.00	0.14	0.05
Vitis aestivalis	0.02	0.14	0.00	0.00	0.14	0.05

Table 6D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sabal minor	0.02	0.14	0.00	0.00	0.14	0.05
Betula nigra	0.02	0.14	0.00	0.00	0.14	0.05
Ligustrum sinense	0.02	0.14	0.00	0.00	0.14	0.05
Hymenocallis caroliniana	0.02	0.14	0.00	0.00	0.14	0.05
Sagittaria graminea	0.02	0.14	0.00	0.00	0.14	0.05
Gamochaeta purpurea	0.02	0.14	0.00	0.00	0.14	0.05
Ruellia caroliniensis	0.02	0.14	0.00	0.00	0.14	0.05
Ostrya virginiana	0.02	0.14	0.00	0.00	0.14	0.05
Carex leavenworthii	0.02	0.14	0.00	0.00	0.14	0.05
Vitis palmata	0.02	0.14	0.00	0.00	0.14	0.05
Ludwigia alternifolia	0.02	0.14	0.00	0.00	0.14	0.05
Tillandsia usneoides	0.02	0.14	0.00	0.00	0.14	0.05
Forestiera acuminata	0.02	0.14	0.00	0.00	0.14	0.05
Cyperus esculentus	0.02	0.14	0.00	0.00	0.14	0.05
Quercus laurifolia	0.02	0.14	0.00	0.00	0.14	0.05
Ulmus crassifolia	0.02	0.14	0.00	0.00	0.14	0.05
Cyperus odoratus	0.02	0.14	0.00	0.00	0.14	0.05
Phytolacca americana	0.02	0.14	0.00	0.00	0.14	0.05
Sesbania herbacea	0.02	0.14	0.00	0.00	0.14	0.05
Ludwigia glandulosa	0.02	0.14	0.00	0.00	0.14	0.05

Table 6-1A

Summary of Overstory Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.11	22.22	126.32	40.00	0.00	18.75	80.97	26.99
Morella cerifera	0.05	11.11	42.11	13.33	0.01	43.75	68.19	22.73
Cephalanthis occidentalis	0.11	22.22	63.16	20.00	0.00	20.83	63.06	21.02
Planera aquatica	0.05	11.11	21.05	6.67	0.00	8.33	26.11	8.70
Fraxinus pennsylvanica	0.05	11.11	21.05	6.67	0.00	4.17	21.94	7.31
Quercus lyrata	0.05	11.11	21.05	6.67	0.00	2.08	19.86	6.62
Taxodium distichum	0.05	11.11	21.05	6.67	0.00	2.08	19.86	6.62

Table 6-1B

Summary of Midstory Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa aquatica	0.42	22.22	94.74	41.67	0.55	52.57	116.46	38.82
Taxodium distichum	0.37	19.44	33.68	14.81	0.12	11.84	46.10	15.37
Triadica sebifera	0.32	16.67	35.79	15.74	0.11	10.44	42.84	14.28
Fraxinus caroliniana	0.05	2.78	23.16	10.19	0.11	10.56	23.52	7.84
Fraxinus pennsylvanica	0.16	8.33	6.32	2.78	0.03	2.74	13.85	4.62
Acer rebrum v. drummondii	0.11	5.56	8.42	3.70	0.02	2.10	11.36	3.79
Betula nigra	0.05	2.78	6.32	2.78	0.03	3.22	8.77	2.92
Cephalanthus occidentalis	0.11	5.56	4.21	1.85	0.00	0.29	7.69	2.56
Quercus lyrata	0.05	2.78	2.11	0.93	0.02	1.92	5.62	1.87
Planera aquatica	0.05	2.78	2.11	0.93	0.02	1.75	5.45	1.82
Salix nigra	0.05	2.78	4.21	1.85	0.01	0.76	5.39	1.80
Crataegus opaca	0.05	2.78	2.11	0.93	0.01	1.01	4.72	1.57
Quercus laurifolia	0.05	2.78	2.11	0.93	0.01	0.67	4.37	1.46
Vitis cinerea	0.05	2.78	2.11	0.93	0.00	0.14	3.85	1.28

Table 6-1C

Summary of Shrub Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa aquatica	1.00	45.24	307.37	55.73	22.08	54.22	155.18	51.73
Taxodium distichum	0.89	40.48	221.05	40.08	18.12	44.49	125.05	41.68
Triadica sebifera	0.11	4.76	6.32	1.15	0.09	0.23	6.13	2.04
Betula nigra	0.05	2.38	6.32	1.15	0.12	0.30	3.82	1.27
Carya aquatica	0.05	2.38	4.21	0.76	0.22	0.53	3.67	1.22
Fraxinus caroliniana	0.05	2.38	4.21	0.76	0.06	0.15	3.29	1.10
Ostrya virginiana	0.05	2.38	2.11	0.38	0.03	0.09	2.85	0.95

Table 6-1D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Salvinia minima	0.74	6.42	29.11	40.38	46.81	15.60
Alternanthera philoxeroides	0.95	8.26	12.65	17.55	25.80	8.60
Zizaniopsis miliacea	0.47	4.13	8.42	11.68	15.81	5.27
Salvinia molesta	0.05	0.46	3.65	5.06	5.52	1.84
Lemna aequinoctialis	0.37	3.21	1.08	1.50	4.71	1.57
Hydrocotyle ranunculoides	0.32	2.75	0.55	0.77	3.52	1.17
Lycopus virginicus	0.16	1.38	1.54	2.13	3.51	1.17
Rhynchospora corniculata	0.26	2.29	0.74	1.02	3.32	1.11
Phanopyrum gymnocarpon	0.16	1.38	1.11	1.53	2.91	0.97
Cyperus virens	0.26	2.29	0.23	0.32	2.62	0.87
Kosteletzkya virginica	0.11	0.92	1.09	1.51	2.43	0.81
Polygonum hydropiperoides	0.21	1.83	0.39	0.55	2.38	0.79
Brunnichia ovata	0.21	1.83	0.27	0.37	2.20	0.73
Taxodium distichum	0.21	1.83	0.22	0.31	2.15	0.72
Ptilimnium capillaceum	0.21	1.83	0.21	0.29	2.13	0.71
Typha latifolia	0.21	1.83	0.20	0.27	2.11	0.70
Polygonum punctatum	0.11	0.92	0.76	1.06	1.98	0.66
Cyperus haspan	0.21	1.83	0.09	0.13	1.96	0.65
Onoclea sensibilis	0.05	0.46	1.03	1.42	1.88	0.63
Sacciolepis striata	0.16	1.38	0.29	0.40	1.78	0.59
Saururus cernuus	0.16	1.38	0.24	0.33	1.70	0.57
Pluchea camphorata	0.16	1.38	0.21	0.29	1.67	0.56
Wolfiella gladiata	0.16	1.38	0.17	0.24	1.61	0.54
Eupatorium capillifolium	0.16	1.38	0.11	0.15	1.52	0.51

Table 6-1D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Acer rubrum var. drummondii	0.16	1.38	0.09	0.13	1.50	0.50
Wolffia columbiana	0.11	0.92	0.39	0.55	1.46	0.49
Ludwigia palustris	0.11	0.92	0.36	0.49	1.41	0.47
Boehmeria cylindrica	0.05	0.46	0.67	0.93	1.39	0.46
Bidens laevis	0.11	0.92	0.33	0.46	1.37	0.46
Eichhornia crassipes	0.05	0.46	0.58	0.80	1.26	0.42
Limnobium spongia	0.11	0.92	0.16	0.22	1.14	0.38
Proserpinaca pectinata	0.11	0.92	0.13	0.18	1.10	0.37
Pontederia cordata	0.11	0.92	0.11	0.15	1.06	0.35
Carex louisianica	0.11	0.92	0.09	0.13	1.05	0.35
Commelina virginica	0.05	0.46	0.42	0.58	1.04	0.35
Cephalanthus occidentalis	0.11	0.92	0.07	0.09	1.01	0.34
Proserpinaca palustris	0.11	0.92	0.05	0.07	0.99	0.33
Triadica sebifera	0.11	0.92	0.05	0.07	0.99	0.33
Unknown herbaceous	0.11	0.92	0.04	0.05	0.97	0.32
Sesbania drummondii	0.11	0.92	0.04	0.05	0.97	0.32
Symphyotrichum dumosum	0.11	0.92	0.04	0.05	0.97	0.32
Triadenum walterii	0.11	0.92	0.04	0.05	0.97	0.32
Justicia ovata	0.11	0.92	0.04	0.05	0.97	0.32
Chasmanthium latifolium	0.11	0.92	0.04	0.05	0.97	0.32
Nyssa aquatica	0.11	0.92	0.03	0.04	0.95	0.32
Ludwigia leptocarpa	0.11	0.92	0.03	0.04	0.95	0.32
Sagittaria latifolia	0.05	0.46	0.36	0.49	0.95	0.32
Hypericum drummondii	0.05	0.46	0.33	0.46	0.92	0.31

Table 6-1D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sagittaria lancifolia	0.05	0.46	0.30	0.42	0.88	0.29
Cyrilla racemiflora	0.05	0.46	0.24	0.33	0.79	0.26
Leersia oryzoides	0.05	0.46	0.22	0.31	0.77	0.26
Hydrocotyle umbellata	0.05	0.46	0.20	0.28	0.74	0.25
Hygrophila lacustris	0.05	0.46	0.14	0.20	0.66	0.22
Crinum americanum	0.05	0.46	0.13	0.18	0.64	0.21
Scoparia dulcis	0.05	0.46	0.12	0.16	0.62	0.21
Carex lurida	0.05	0.46	0.11	0.15	0.60	0.20
Juncus effusus	0.05	0.46	0.11	0.15	0.60	0.20
Dicliptera brachiata	0.05	0.46	0.11	0.15	0.60	0.20
Ampelopsis arborea	0.05	0.46	0.09	0.13	0.59	0.20
Conoclinium coelestinum	0.05	0.46	0.08	0.11	0.57	0.19
Dichanthelium scoparium	0.05	0.46	0.08	0.11	0.57	0.19
Osmunda regalis	0.05	0.46	0.08	0.11	0.57	0.19
Carex crus-corvi	0.05	0.46	0.08	0.11	0.57	0.19
Lygodium japonicum	0.05	0.46	0.07	0.09	0.55	0.18
Azolla caroliniana	0.05	0.46	0.05	0.07	0.53	0.18
Viola sororia	0.05	0.46	0.05	0.07	0.53	0.18
Erechtites hieraciifolia	0.05	0.46	0.05	0.07	0.53	0.18
Typha domingensis	0.05	0.46	0.05	0.07	0.53	0.18
Chasmanthium sessiliflorum	0.05	0.46	0.05	0.07	0.53	0.18
Carpinus caroliniana	0.05	0.46	0.05	0.07	0.53	0.18
Micranthemum umbrosum	0.05	0.46	0.05	0.07	0.53	0.18
Liquidambar styraciflua	0.05	0.46	0.05	0.07	0.53	0.18

Table 6-1D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Utricularia gibba	0.05	0.46	0.04	0.05	0.51	0.17
Fraxinus caroliniana	0.05	0.46	0.04	0.05	0.51	0.17
Carex joorii	0.05	0.46	0.04	0.05	0.51	0.17
Smilax walteri	0.05	0.46	0.03	0.04	0.50	0.17
Habenaria repens	0.05	0.46	0.03	0.04	0.50	0.17
Planera aquatica	0.05	0.46	0.03	0.04	0.50	0.17
Itea virginica	0.05	0.46	0.03	0.04	0.50	0.17
Hibiscus laevis	0.05	0.46	0.03	0.04	0.50	0.17
Toxicodendron radicans	0.05	0.46	0.03	0.04	0.50	0.17
Hymenocallis caroliniana	0.05	0.46	0.03	0.04	0.50	0.17
Ulmus americana	0.05	0.46	0.03	0.04	0.50	0.17
Sabal minor	0.05	0.46	0.03	0.04	0.50	0.17
Rubus trivialis	0.05	0.46	0.03	0.04	0.50	0.17
Mikania scandens	0.05	0.46	0.03	0.04	0.50	0.17
Vernonia missurica	0.05	0.46	0.03	0.04	0.50	0.17
Acmella oppositifolia var. repens	0.05	0.46	0.01	0.02	0.48	0.16
Sagittaria platyphylla	0.05	0.46	0.01	0.02	0.48	0.16
Tillandsia usneoides	0.05	0.46	0.01	0.02	0.48	0.16
Sesbania herbacea	0.05	0.46	0.01	0.02	0.48	0.16
Cyperus odoratus	0.05	0.46	0.01	0.02	0.48	0.16
Echinodorus cordifolius	0.05	0.46	0.01	0.02	0.48	0.16
Carex albolutescens	0.05	0.46	0.01	0.02	0.48	0.16
Smilax rotundifolia	0.05	0.46	0.01	0.02	0.48	0.16
Carex leavenworthii	0.05	0.46	0.01	0.02	0.48	0.16

Table 6-1D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Nyssa aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ludwigia glandulosa	0.05	0.46	0.01	0.02	0.48	0.16
Dichanthelium aciculare	0.05	0.46	0.01	0.02	0.48	0.16
Acer rubrum var. rubrum	0.05	0.46	0.01	0.02	0.48	0.16
Quercus laurifolia	0.05	0.46	0.01	0.02	0.48	0.16
Ruellia caroliniensis	0.05	0.46	0.01	0.02	0.48	0.16
Phytolacca americana	0.05	0.46	0.01	0.02	0.48	0.16
Vitis palmata	0.05	0.46	0.01	0.02	0.48	0.16
Cyperus esculentus	0.05	0.46	0.01	0.02	0.48	0.16
Gamochaeta purpurea	0.05	0.46	0.01	0.02	0.48	0.16
Baccharis halimifolia	0.05	0.46	0.01	0.02	0.48	0.16
Ostrya virginiana	0.05	0.46	0.01	0.02	0.48	0.16

Table 6-2A

Summary of Overstory Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa aquatica	0.95	33.33	592.00	47.06	73.90	59.67	140.06	46.69
Taxodium distichum	0.85	29.82	588.00	46.74	47.26	38.16	114.73	38.24
Fraxinus caroliniana	0.45	15.79	44.00	3.50	1.22	0.98	20.27	6.76
Acer rubrum var. drummondii	0.15	5.26	8.00	0.64	0.31	0.25	6.15	2.05
Triadica sebifera	0.15	5.26	8.00	0.64	0.17	0.13	6.03	2.01
Betula nigra	0.05	1.75	6.00	0.48	0.12	0.09	2.32	0.77
Ulmus crassifolia	0.05	1.75	4.00	0.32	0.21	0.17	2.24	0.75
Quercus laurifolia	0.05	1.75	2.00	0.16	0.36	0.29	2.21	0.74
Ulmus americana	0.05	1.75	2.00	0.16	0.22	0.17	2.09	0.70
Carya aquatica	0.05	1.75	2.00	0.16	0.06	0.05	1.96	0.65
Nyssa sylvatica	0.05	1.75	2.00	0.16	0.03	0.02	1.93	0.64

Table 6-2B

Summary of Midstory Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus caroliniana	0.90	26.09	276.00	48.42	1.49	61.25	135.76	45.25
Triadica sebifera	0.50	14.49	114.00	20.00	0.29	11.78	46.27	15.42
Nyssa aquatica	0.55	15.94	66.00	11.58	0.30	12.42	39.94	13.31
Cephalanthus occidentalis	0.45	13.04	36.00	6.32	0.07	2.83	22.19	7.40
Acer rubrum var. drummondii	0.30	8.70	22.00	3.86	0.05	2.07	14.62	4.87
Planera aquatica	0.30	8.70	16.00	2.81	0.06	2.66	14.16	4.72
Taxodium distichum	0.20	5.80	12.00	2.11	0.03	1.19	9.09	3.03
Ulmus crassifolia	0.05	1.45	10.00	1.75	0.06	2.43	5.64	1.88
Ilex decidua	0.05	1.45	8.00	1.40	0.05	1.90	4.75	1.58
Betula nigra	0.05	1.45	6.00	1.05	0.03	1.32	3.82	1.27
Campsis radicans	0.05	1.45	2.00	0.35	0.00	0.10	1.90	0.63
Vitis cinerea	0.05	1.45	2.00	0.35	0.00	0.06	1.86	0.62

Table 6-2C

Summary of Shrub Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus caroliniana	0.25	27.78	226.00	37.29	0.02	37.56	102.63	34.21
Cephalanthus occidentalis	0.10	11.11	120.00	19.80	0.01	19.42	50.33	16.78
Triadica sebifera	0.10	11.11	80.00	13.20	0.01	23.43	47.75	15.92
Planera aquatica	0.10	11.11	40.00	6.60	0.00	5.36	23.07	7.69
Toxicodendron radicans	0.05	5.56	20.00	3.30	0.00	4.69	13.54	4.51
Brunnichia ovata	0.05	5.56	20.00	3.30	0.00	3.35	12.20	4.07
Campsis radicans	0.05	5.56	20.00	3.30	0.00	2.68	11.53	3.84
Itea virginica	0.05	5.56	20.00	3.30	0.00	1.51	10.36	3.45
Liquidambar styraciflua	0.05	5.56	20.00	3.30	0.00	0.67	9.53	3.18
Taxodium distichum	0.05	5.56	20.00	3.30	0.00	0.67	9.53	3.18
Quercus lyrata	0.05	5.56	20.00	3.30	0.00	0.67	9.53	3.18

Table 6-2D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Salvinia minima	0.55	5.29	29.30	53.53	58.81	19.60
Alternanthera philoxeroides	0.75	7.21	5.34	9.75	16.96	5.65
Zizaniopsis miliacea	0.20	1.92	4.02	7.34	9.26	3.09
Phanopyrum gymnocarpon	0.25	2.40	1.97	3.59	6.00	2.00
Polygonum hydropiperoides	0.40	3.85	0.55	1.00	4.85	1.62
Crinum americanum	0.30	2.88	0.64	1.17	4.05	1.35
Saururus cernuus	0.30	2.88	0.53	0.96	3.84	1.28
Utricularia gibba	0.20	1.92	0.98	1.78	3.70	1.23
Lycopus virginicus	0.20	1.92	0.74	1.34	3.27	1.09
Rhynchospora corniculata	0.25	2.40	0.25	0.46	2.86	0.95
Taxodium distichum	0.25	2.40	0.23	0.41	2.81	0.94
Fraxinus caroliniana	0.25	2.40	0.21	0.39	2.79	0.93
Sagittaria latifolia	0.15	1.44	0.63	1.14	2.58	0.86
Hygrophila lacustris	0.10	0.96	0.86	1.58	2.54	0.85
Itea virginica	0.15	1.44	0.51	0.92	2.37	0.79
Brunnichia ovata	0.15	1.44	0.40	0.73	2.17	0.72
Triadenum walterii	0.15	1.44	0.38	0.69	2.13	0.71
Smilax walteri	0.15	1.44	0.26	0.47	1.91	0.64
Boehmeria cylindrica	0.15	1.44	0.24	0.43	1.88	0.63
Hydrocotyle ranunculoides	0.15	1.44	0.21	0.39	1.83	0.61
Triadica sebifera	0.15	1.44	0.20	0.37	1.81	0.60
Iris virginica	0.15	1.44	0.19	0.35	1.79	0.60
Nyssa aquatica	0.15	1.44	0.14	0.25	1.69	0.56
Justicia ovata	0.15	1.44	0.13	0.24	1.68	0.56

Table 6-2D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Unknown herbaceous	0.15	1.44	0.13	0.23	1.67	0.56
Cyperus virens	0.15	1.44	0.08	0.14	1.58	0.53
Leersia oryzoides	0.15	1.44	0.06	0.11	1.56	0.52
Ptilimnium capillaceum	0.10	0.96	0.33	0.59	1.56	0.52
Osmunda regalis	0.10	0.96	0.33	0.59	1.56	0.52
Pluchea camphorata	0.15	1.44	0.05	0.09	1.53	0.51
Acer rubrum var. drummondii	0.15	1.44	0.05	0.09	1.53	0.51
Eupatorium capillifolium	0.15	1.44	0.05	0.09	1.53	0.51
Ludwigia palustris	0.05	0.48	0.51	0.94	1.42	0.47
Hymenocallis liriosme	0.10	0.96	0.23	0.41	1.37	0.46
Lemna aequinoctialis	0.10	0.96	0.19	0.34	1.30	0.43
Carex lupulina	0.05	0.48	0.42	0.76	1.24	0.41
Polygonum glabrum	0.10	0.96	0.10	0.19	1.15	0.38
Mikania scandens	0.10	0.96	0.10	0.18	1.14	0.38
Acalypha rhomboidea	0.10	0.96	0.06	0.11	1.08	0.36
Ilex vomitoria	0.10	0.96	0.05	0.09	1.05	0.35
Ilex opaca	0.10	0.96	0.05	0.09	1.05	0.35
Ilex decidua	0.10	0.96	0.05	0.09	1.05	0.35
Parthenocissus quinquefolia	0.10	0.96	0.04	0.07	1.03	0.34
Acer rubrum var. rubrum	0.10	0.96	0.04	0.07	1.03	0.34
Cephalanthus occidentalis	0.10	0.96	0.04	0.07	1.03	0.34
Campsis radicans	0.10	0.96	0.04	0.07	1.03	0.34
Lygodium japonicum	0.10	0.96	0.04	0.07	1.03	0.34
Viburnum dentatum	0.10	0.96	0.03	0.05	1.01	0.34

Table 6-2D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Proserpinaca pectinata	0.05	0.48	0.28	0.50	0.98	0.33
Potentilla indica	0.05	0.48	0.28	0.50	0.98	0.33
Carex louisianica	0.05	0.48	0.28	0.50	0.98	0.33
Onoclea sensibilis	0.05	0.48	0.25	0.46	0.94	0.31
Salvinia molesta	0.05	0.48	0.18	0.32	0.80	0.27
Hydrilla verticellata	0.05	0.48	0.15	0.27	0.75	0.25
Hibiscus laevis	0.05	0.48	0.15	0.27	0.75	0.25
Dicliptera brachiata	0.05	0.48	0.11	0.21	0.69	0.23
Cyperus pseudovegetus	0.05	0.48	0.10	0.18	0.66	0.22
Viola palmata	0.05	0.48	0.09	0.16	0.64	0.21
Planera aquatica	0.05	0.48	0.08	0.15	0.63	0.21
Bidens laevis	0.05	0.48	0.08	0.14	0.62	0.21
Liquidambar styraciflua	0.05	0.48	0.06	0.11	0.59	0.20
Vernonia baldwinii	0.05	0.48	0.06	0.11	0.59	0.20
Pontederia cordata	0.05	0.48	0.05	0.09	0.57	0.19
Ludwigia sp.	0.05	0.48	0.05	0.09	0.57	0.19
Azolla caroliniana	0.05	0.48	0.05	0.09	0.57	0.19
Polygonum hydropiper	0.05	0.48	0.05	0.09	0.57	0.19
Eupatorium serotinum	0.05	0.48	0.04	0.07	0.55	0.18
Toxicodendron radicans	0.05	0.48	0.03	0.05	0.53	0.18
Asclepias perennis	0.05	0.48	0.03	0.05	0.53	0.18
Betula nigra	0.05	0.48	0.03	0.05	0.53	0.18
Galium aparine	0.05	0.48	0.03	0.05	0.53	0.18
Vitis cinerea	0.05	0.48	0.03	0.05	0.53	0.18

Table 6-2D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sagittaria graminea	0.05	0.48	0.03	0.05	0.53	0.18
Tradescantia ohioensis	0.05	0.48	0.03	0.05	0.53	0.18
Ligustrum sinense	0.05	0.48	0.03	0.05	0.53	0.18
Viola sororia	0.05	0.48	0.03	0.05	0.53	0.18
Smilax bona-nox	0.05	0.48	0.03	0.05	0.53	0.18
Symplocos tinctoria	0.05	0.48	0.03	0.05	0.53	0.18
Chasmanthium latifolium	0.05	0.48	0.03	0.05	0.53	0.18
Vitis aestivalis	0.05	0.48	0.03	0.05	0.53	0.18
Quercus lyrata	0.05	0.48	0.03	0.05	0.53	0.18
Ulmus americana	0.05	0.48	0.01	0.02	0.50	0.17
Forestiera acuminata	0.05	0.48	0.01	0.02	0.50	0.17
Cyperus haspan	0.05	0.48	0.01	0.02	0.50	0.17
Symphyotrichum dumosum	0.05	0.48	0.01	0.02	0.50	0.17
Ludwigia alternifolia	0.05	0.48	0.01	0.02	0.50	0.17
Ludwigia leptocarpa	0.05	0.48	0.01	0.02	0.50	0.17
Ulmus crassifolia	0.05	0.48	0.01	0.02	0.50	0.17
Vitis rotundifolia	0.05	0.48	0.01	0.02	0.50	0.17
Rubus trivialis	0.05	0.48	0.01	0.02	0.50	0.17
Baccharis halimifolia	0.05	0.48	0.01	0.02	0.50	0.17

Table 6-3A

Summary of Overstory Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa aquatica	0.68	20.63	330.53	53.77	42.55	60.66	135.06	45.02
Taxodium distichum	0.89	26.98	164.21	26.71	23.28	33.19	86.89	28.96
Planera aquatica	0.37	11.11	29.47	4.79	0.80	1.14	17.04	5.68
Acer rubrum var. drummondii	0.26	7.94	14.74	2.40	0.77	1.10	11.44	3.81
Triadica sebifera	0.26	7.94	14.74	2.40	0.41	0.59	10.92	3.64
Fraxinus caroliniana	0.21	6.35	18.95	3.08	0.38	0.54	9.97	3.32
Fraxinus pennsylvanica	0.11	3.17	14.74	2.40	0.30	0.43	6.00	2.00
Carya aquatica	0.11	3.17	8.42	1.37	0.34	0.48	5.02	1.67
Quercus lyrata	0.11	3.17	6.32	1.03	0.54	0.77	4.97	1.66
Liquidambar styraciflua	0.11	3.17	4.21	0.68	0.28	0.39	4.25	1.42
Gleditsia aquatica	0.05	1.59	2.11	0.34	0.37	0.53	2.46	0.82
Betula nigra	0.05	1.59	2.11	0.34	0.04	0.06	1.99	0.66
Quercus laurifolia	0.05	1.59	2.11	0.34	0.04	0.06	1.99	0.66
Nyssa biflora	0.05	1.59	2.11	0.34	0.04	0.06	1.99	0.66

Table 6-3B

Summary of Midstory Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa aquatica	0.37	9.21	145.26	21.10	0.91	27.70	58.01	19.34
Triadica sebifera	0.68	17.11	117.89	17.13	0.33	9.92	44.15	14.72
Acer rubrum var. drummondii	0.53	13.16	109.47	15.90	0.36	10.96	40.02	13.34
Planera aquatica	0.47	11.84	52.63	7.65	0.39	11.85	31.34	10.45
Fraxinus caroliniana	0.26	6.58	80.00	11.62	0.36	11.07	29.27	9.76
Fraxinus pennsylvanica	0.26	6.58	63.16	9.17	0.32	9.78	25.53	8.51
Cephalanthus occidentalis	0.32	7.89	50.53	7.34	0.26	7.99	23.22	7.74
Taxodium distichum	0.37	9.21	29.47	4.28	0.18	5.52	19.01	6.34
Ilex decidua	0.11	2.63	8.42	1.22	0.05	1.51	5.36	1.79
Campsis radicans	0.16	3.95	6.32	0.92	0.01	0.31	5.18	1.73
Quercus laurifolia	0.11	2.63	6.32	0.92	0.03	0.90	4.45	1.48
Forestiera acuminata	0.11	2.63	6.32	0.92	0.03	0.90	4.44	1.48
Liquidambar styraciflua	0.11	2.63	6.32	0.92	0.01	0.19	3.74	1.25
Crataegus opaca	0.05	1.32	2.11	0.31	0.04	1.13	2.75	0.92
Nyssa biflora	0.05	1.32	2.11	0.31	0.01	0.18	1.80	0.60
Wisteria frutescens	0.05	1.32	2.11	0.31	0.00	0.10	1.72	0.57

Table 6-3C

Summary of Shrub Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Fraxinus pennsylvanica	0.21	10.81	231.58	15.21	0.05	33.57	59.60	19.87
Triadica sebifera	0.26	13.51	315.79	20.75	0.03	19.45	53.71	17.90
Acer rubrum var. drummondii	0.32	16.22	172.63	11.34	0.02	13.11	40.67	13.56
Planera aquatica	0.26	13.51	189.47	12.45	0.01	6.93	32.89	10.96
Cephalanthus occidentalis	0.16	8.11	126.32	8.30	0.01	5.33	21.74	7.25
Baccharis halimifolia	0.11	5.41	42.11	2.77	0.01	7.73	15.90	5.30
Smilax rotundifolia	0.05	2.70	126.32	8.30	0.00	1.60	12.60	4.20
Brunnichia ovata	0.05	2.70	84.21	5.53	0.01	4.26	12.50	4.17
Ulmus americana	0.11	5.41	42.11	2.77	0.00	1.60	9.77	3.26
Mikania scandens	0.05	2.70	63.16	4.15	0.00	0.80	7.65	2.55
Taxodium distichum	0.11	5.41	23.16	1.52	0.00	0.29	7.22	2.41
Fraxinus caroliniana	0.05	2.70	21.05	1.38	0.00	2.13	6.22	2.07
Forestiera acuminata	0.05	2.70	21.05	1.38	0.00	1.07	5.15	1.72
Nyssa aquatica	0.05	2.70	21.05	1.38	0.00	1.07	5.15	1.72
Salix nigra	0.05	2.70	21.05	1.38	0.00	0.53	4.62	1.54
Liquidambar styraciflua	0.05	2.70	21.05	1.38	0.00	0.53	4.62	1.54

Table 6-3D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Salvinia minima	0.32	2.13	12.18	22.44	24.57	8.19
Alternanthera philoxeroides	0.84	5.67	9.48	17.46	23.13	7.71
Phanopyrum gymnocarpon	0.58	3.90	5.68	10.47	14.37	4.79
Rhynchospora corniculata	0.53	3.55	5.28	9.72	13.26	4.42
Polygonum hydropiperoides	0.37	2.48	1.51	2.78	5.26	1.75
Brunnichia ovata	0.32	2.13	1.33	2.45	4.58	1.53
Cyperus virens	0.21	1.42	1.61	2.96	4.38	1.46
Zizaniopsis miliacea	0.26	1.77	1.41	2.59	4.36	1.45
Triadica sebifera	0.47	3.19	0.63	1.17	4.36	1.45
Saururus cernuus	0.26	1.77	0.87	1.60	3.37	1.12
Ptilimnium capillaceum	0.32	2.13	0.63	1.16	3.29	1.10
Mikania scandens	0.32	2.13	0.55	1.02	3.15	1.05
Taxodium distichum	0.37	2.48	0.33	0.61	3.09	1.03
Boehmeria cylindrica	0.26	1.77	0.61	1.11	2.89	0.96
Crinum americanum	0.21	1.42	0.41	0.76	2.17	0.72
Symphyotrichum divaricatum	0.05	0.35	0.83	1.54	1.89	0.63
Acer rubrum var. drummondii	0.21	1.42	0.23	0.42	1.84	0.61
Cyperus haspan	0.21	1.42	0.22	0.41	1.83	0.61
Symphyotrichum dumosum	0.21	1.42	0.19	0.35	1.77	0.59
Toxicodendron radicans	0.21	1.42	0.18	0.33	1.75	0.58
Viola sororia	0.11	0.71	0.55	1.02	1.73	0.58
Sacciolepis striata	0.16	1.06	0.34	0.63	1.69	0.56
Bacopa monnieri	0.05	0.35	0.70	1.28	1.64	0.55
Triadenum walterii	0.16	1.06	0.29	0.53	1.60	0.53

Table 6-3D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Unknown herbaceous	0.21	1.42	0.08	0.15	1.56	0.52
Lycopus virginicus	0.16	1.06	0.27	0.49	1.56	0.52
Juncus effusus	0.16	1.06	0.25	0.46	1.52	0.51
Cephalanthus occidentalis	0.16	1.06	0.24	0.44	1.50	0.50
Bidens laevis	0.05	0.35	0.61	1.11	1.47	0.49
Campsis radicans	0.16	1.06	0.16	0.29	1.35	0.45
Iris virginica	0.16	1.06	0.14	0.27	1.33	0.44
Leersia lenticularis	0.16	1.06	0.14	0.27	1.33	0.44
Ludwigia repens	0.11	0.71	0.32	0.58	1.29	0.43
Commelina virginica	0.11	0.71	0.29	0.54	1.25	0.42
Fraxinus caroliniana	0.16	1.06	0.09	0.17	1.23	0.41
Hydrocotyle ranunculoides	0.16	1.06	0.08	0.15	1.21	0.40
Liquidambar styraciflua	0.16	1.06	0.08	0.15	1.21	0.40
Ilex decidua	0.16	1.06	0.08	0.15	1.21	0.40
Planera aquatica	0.16	1.06	0.07	0.12	1.19	0.40
Eupatorium capillifolium	0.16	1.06	0.05	0.10	1.16	0.39
Ilex opaca	0.16	1.06	0.04	0.07	1.14	0.38
Dichanthelium aciculare	0.11	0.71	0.16	0.29	1.00	0.33
Cyperus sp.	0.11	0.71	0.16	0.29	1.00	0.33
Echinodorus cordifolius	0.11	0.71	0.13	0.24	0.95	0.32
Polygonum hydropiper	0.11	0.71	0.13	0.24	0.95	0.32
Itea virginica	0.11	0.71	0.09	0.17	0.88	0.29
Styrax americana	0.11	0.71	0.08	0.14	0.85	0.28
Smilax bona-nox	0.11	0.71	0.07	0.12	0.83	0.28

Table 6-3D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ulmus americana	0.11	0.71	0.07	0.12	0.83	0.28
Pontederia cordata	0.11	0.71	0.07	0.12	0.83	0.28
Pluchea camphorata	0.11	0.71	0.06	0.12	0.83	0.28
Carex sp.	0.05	0.35	0.25	0.46	0.82	0.27
Hygrophila lacustris	0.05	0.35	0.25	0.46	0.82	0.27
Justicia ovata	0.11	0.71	0.05	0.10	0.81	0.27
Vernonia baldwinii	0.05	0.35	0.24	0.45	0.81	0.27
Eleocharis montana	0.05	0.35	0.24	0.44	0.79	0.26
Ampelopsis arborea	0.11	0.71	0.04	0.07	0.78	0.26
Boltonia diffusa	0.11	0.71	0.04	0.07	0.78	0.26
Hydrocotyle umbellata	0.11	0.71	0.04	0.07	0.78	0.26
Leersia hexandra	0.11	0.71	0.03	0.05	0.76	0.25
Hypericum mutilum	0.11	0.71	0.03	0.05	0.76	0.25
Nyssa aquatica	0.11	0.71	0.03	0.05	0.76	0.25
Carex louisianica	0.05	0.35	0.21	0.39	0.74	0.25
Commelina diffusa	0.05	0.35	0.17	0.32	0.67	0.22
Dicliptera brachiata	0.05	0.35	0.16	0.30	0.65	0.22
Fimbristylis miliacea	0.05	0.35	0.16	0.29	0.65	0.22
Ambrosia artemisiifolia	0.05	0.35	0.14	0.26	0.62	0.21
Osmunda regalis	0.05	0.35	0.13	0.24	0.60	0.20
Acer rubrum var. rubrum	0.05	0.35	0.12	0.22	0.57	0.19
Alternanthera sessilis	0.05	0.35	0.12	0.22	0.57	0.19
Hibiscus laevis	0.05	0.35	0.12	0.22	0.57	0.19
Justicia ovata var. lanceolata	0.05	0.35	0.09	0.17	0.52	0.17

Table 6-3D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carex albolutescens	0.05	0.35	0.09	0.17	0.52	0.17
Panicum heimtomon	0.05	0.35	0.09	0.17	0.52	0.17
Ludwigia octovalvis	0.05	0.35	0.08	0.15	0.50	0.17
Wolfiella gladiata	0.05	0.35	0.08	0.15	0.50	0.17
Chasmanthium laxum	0.05	0.35	0.08	0.15	0.50	0.17
Hypoxis curtisii	0.05	0.35	0.07	0.13	0.48	0.16
Lemna aequinoctialis	0.05	0.35	0.07	0.12	0.48	0.16
Leersia virginica	0.05	0.35	0.07	0.12	0.48	0.16
Cardamine sp.	0.05	0.35	0.05	0.10	0.45	0.15
Iva annua	0.05	0.35	0.05	0.10	0.45	0.15
Berchemia scandens	0.05	0.35	0.04	0.08	0.43	0.14
Typha latifolia	0.05	0.35	0.04	0.08	0.43	0.14
Lysimachia radicans	0.05	0.35	0.04	0.07	0.43	0.14
Justicia americana	0.05	0.35	0.04	0.07	0.43	0.14
Paspalum vaginatum	0.05	0.35	0.04	0.07	0.43	0.14
Polygonum pensylvanicum	0.05	0.35	0.04	0.07	0.42	0.14
Elymus virginicus	0.05	0.35	0.03	0.05	0.40	0.13
Ipomoea sagittata	0.05	0.35	0.03	0.05	0.40	0.13
Wisteria frutescens	0.05	0.35	0.03	0.05	0.40	0.13
Panicum virgatum	0.05	0.35	0.03	0.05	0.40	0.13
Diodia virginiana	0.05	0.35	0.03	0.05	0.40	0.13
Quercus lyrata	0.05	0.35	0.03	0.05	0.40	0.13
Spiranthes odorata	0.05	0.35	0.03	0.05	0.40	0.13
Smilax rotundifolia	0.05	0.35	0.03	0.05	0.40	0.13

Table 6-3D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Pinus taeda	0.05	0.35	0.03	0.05	0.40	0.13
Dichanthelium dichotomum	0.05	0.35	0.03	0.05	0.40	0.13
Lygodium japonicum	0.05	0.35	0.03	0.05	0.40	0.13
Solidago altissima	0.05	0.35	0.03	0.05	0.40	0.13
Carex glaucescens	0.05	0.35	0.01	0.02	0.38	0.13
Dichanthelium scoparium	0.05	0.35	0.01	0.02	0.38	0.13
Typha domingensis	0.05	0.35	0.01	0.02	0.38	0.13
Habenaria repens	0.05	0.35	0.01	0.02	0.38	0.13
Micranthemum umbrosum	0.05	0.35	0.01	0.02	0.38	0.13
Sagittaria platyphylla	0.05	0.35	0.01	0.02	0.38	0.13
Acmella oppositifolia var. repens	0.05	0.35	0.01	0.02	0.38	0.13
Viola palmata	0.05	0.35	0.01	0.02	0.38	0.13
Viburnum dentatum	0.05	0.35	0.01	0.02	0.38	0.13
Chasmanthium latifolium	0.05	0.35	0.01	0.02	0.38	0.13
Myriophyllum aquaticum	0.05	0.35	0.01	0.02	0.38	0.13
Vitis cinerea	0.05	0.35	0.01	0.02	0.38	0.13
Fraxinus pennsylvanica	0.05	0.35	0.01	0.02	0.38	0.13
Mitchella repens	0.05	0.35	0.01	0.02	0.38	0.13
Carpinus caroliniana	0.05	0.35	0.01	0.02	0.38	0.13
Amorpha fruticosa	0.05	0.35	0.01	0.02	0.38	0.13
Vitis rotundifolia	0.05	0.35	0.01	0.02	0.38	0.13
Viola villosa	0.05	0.35	0.01	0.02	0.38	0.13
Eupatorium lancifolium	0.05	0.35	0.01	0.02	0.38	0.13
Quercus falcata	0.05	0.35	0.01	0.02	0.38	0.13

Table 6-3D

Summary of Herbaceous Layer
Nyssa aquatica - (Taxodiumd distichum) Semipermanently Flooded Forest Alliance
Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Tradescantia ohioensis	0.05	0.35	0.01	0.02	0.38	0.13
Galium aparine	0.05	0.35	0.01	0.02	0.38	0.13
Cornus foemina	0.05	0.35	0.01	0.02	0.38	0.13
Lactuca canadensis	0.05	0.35	0.01	0.02	0.38	0.13
Potentilla indica	0.05	0.35	0.01	0.02	0.38	0.13

Table 7A

Summary of Overstory Layer
Platanus occidentalis - (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Platanus occidentalis	0.50	14.29	60.00	23.08	9.71	45.83	83.19	27.73
Celtis laevigata	0.25	7.14	50.00	19.23	1.99	9.37	35.75	11.92
Triadica sebifera	0.50	14.29	40.00	15.38	0.98	4.62	34.29	11.43
Carya aquatica	0.50	14.29	20.00	7.69	1.42	6.72	28.69	9.56
Betula nigra	0.25	7.14	10.00	3.85	2.60	12.25	23.24	7.75
Liquidambar styraciflua	0.25	7.14	20.00	7.69	0.99	4.68	19.52	6.51
Ulmus americana	0.25	7.14	10.00	3.85	1.16	5.49	16.48	5.49
Carpinus caroliniana	0.25	7.14	20.00	7.69	0.27	1.25	16.09	5.36
Acer rubrum var. drummondii	0.25	7.14	10.00	3.85	0.99	4.69	15.68	5.23
Morus ruba	0.25	7.14	10.00	3.85	0.78	3.68	14.67	4.89
Quercus laurefolia	0.25	7.14	10.00	3.85	0.30	1.41	12.40	4.13

Table 7B

Summary of Midstory Layer
Platanus occidentalis - (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	1.00	14.29	250.00	29.76	0.79	27.68	71.72	23.91
Ilex decidua	0.50	7.14	190.00	22.62	0.76	26.74	56.51	18.84
Ligustrum sinense	0.25	3.57	80.00	9.52	0.26	9.31	22.41	7.47
Carpinus caroliniana	0.50	7.14	30.00	3.57	0.25	8.62	19.34	6.45
Diospyrus virginiana	0.50	7.14	40.00	4.76	0.20	7.01	18.91	6.30
Crataegus viridis	0.50	7.14	30.00	3.57	0.12	4.18	14.90	4.97
Liquidambar styraciflua	0.50	7.14	40.00	4.76	0.05	1.83	13.73	4.58
Vitis cinerea	0.50	7.14	30.00	3.57	0.08	2.69	13.40	4.47
Quercus laurefolia	0.50	7.14	20.00	2.38	0.06	1.97	11.49	3.83
Acer rubrum var. drummondii	0.25	3.57	30.00	3.57	0.07	2.58	9.72	3.24
Crataegus opaca	0.25	3.57	10.00	1.19	0.06	2.19	6.95	2.32
Betula nigra	0.25	3.57	20.00	2.38	0.02	0.59	6.54	2.18
Ampelopsis arborea	0.25	3.57	20.00	2.38	0.01	0.50	6.45	2.15
Platanus occidentalis	0.25	3.57	10.00	1.19	0.03	1.17	5.93	1.98
Styrax americana	0.25	3.57	10.00	1.19	0.03	1.03	5.79	1.93
Halesia diptera	0.25	3.57	10.00	1.19	0.02	0.84	5.60	1.87
Campsis radicans	0.25	3.57	10.00	1.19	0.02	0.56	5.32	1.77
Forestiera acuminata	0.25	3.57	10.00	1.19	0.02	0.53	5.29	1.76

Table 7C

Summary of Shrub Layer
Platanus occidentalis - (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Liquidambar styraciflua	0.75	20.00	1700.00	36.96	0.10	36.11	93.07	31.02
Ligustrum sinense	0.25	6.67	1400.00	30.43	0.06	22.92	60.02	20.01
Forestiera acuminata	0.25	6.67	100.00	2.17	0.06	20.14	28.98	9.66
Carpinus caroliniana	0.50	13.33	300.00	6.52	0.01	4.86	24.72	8.24
Crataegus marshallii	0.25	6.67	300.00	6.52	0.01	2.08	15.27	5.09
Ilex decidua	0.25	6.67	200.00	4.35	0.01	4.17	15.18	5.06
Quercus laurefolia	0.25	6.67	100.00	2.17	0.01	4.17	13.01	4.34
Diospyrus virginiana	0.25	6.67	100.00	2.17	0.01	2.78	11.62	3.87
Crataegus viridis	0.25	6.67	100.00	2.17	0.00	0.69	9.54	3.18
Viburnum dentatum	0.25	6.67	100.00	2.17	0.00	0.69	9.54	3.18
Acer rubrum var. drummondii	0.25	6.67	100.00	2.17	0.00	0.69	9.54	3.18
Triadica sebifera	0.25	6.67	100.00	2.17	0.00	0.69	9.54	3.18

Table 7D

Summary of Herbaceous Layer
Platanus occidentalis - (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium latifolium	0.25	1.43	5.50	24.62	26.05	8.68
Brunnichia ovata	0.75	4.29	1.69	7.55	11.84	3.95
Ampelopsis arborea	0.50	2.86	1.50	6.72	9.57	3.19
Campsis radicans	0.50	2.86	1.40	6.27	9.12	3.04
Liquidambar styraciflua	0.75	4.29	0.69	3.08	7.36	2.45
Toxicodendron radicans	0.75	4.29	0.69	3.08	7.36	2.45
Ilex decidua	0.50	2.86	0.94	4.20	7.05	2.35
Diospyros virginiana	0.50	2.86	0.75	3.36	6.21	2.07
Trachelospermum difforme	0.50	2.86	0.75	3.36	6.21	2.07
Symphyotrichum dumosum	0.50	2.86	0.50	2.24	5.10	1.70
Rubus trivialis	0.25	1.43	0.81	3.64	5.07	1.69
Polygonum glabrum	0.25	1.43	0.81	3.64	5.07	1.69
Ligustrum sinense	0.25	1.43	0.69	3.08	4.51	1.50
Commelina virginica	0.50	2.86	0.31	1.40	4.26	1.42
Ulmus americana	0.50	2.86	0.25	1.12	3.98	1.33
Lysimachia radicans	0.50	2.86	0.25	1.12	3.98	1.33
Parthenocissus quinquefolia	0.25	1.43	0.56	2.52	3.95	1.32
Chasmanthium laxum	0.50	2.86	0.19	0.84	3.70	1.23
Smilax rotundifolia	0.50	2.86	0.13	0.56	3.42	1.14
Carpinus caroliniana	0.50	2.86	0.13	0.56	3.42	1.14
Crataegus marshallii	0.25	1.43	0.44	1.96	3.39	1.13
Celtis laevigata	0.25	1.43	0.38	1.68	3.11	1.04
Dichanthelium commutatum	0.25	1.43	0.31	1.40	2.83	0.94
Bignonia capreolata	0.25	1.43	0.25	1.12	2.55	0.85

Table 7D

Summary of Herbaceous Layer
Platanus occidentalis - (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Polygonum punctatum	0.25	1.43	0.25	1.12	2.55	0.85
Hypericum hypericoides	0.25	1.43	0.19	0.84	2.27	0.76
Triadica sebifera	0.25	1.43	0.19	0.84	2.27	0.76
Unknown herbaceous	0.25	1.43	0.13	0.56	1.99	0.66
Polygonum hydropiperoides	0.25	1.43	0.13	0.56	1.99	0.66
Elephantopus carolinianus	0.25	1.43	0.13	0.56	1.99	0.66
Gelsemium sempervirens	0.25	1.43	0.13	0.56	1.99	0.66
Ilex vomitoria	0.25	1.43	0.06	0.28	1.71	0.57
Dichanthelium acuminatum	0.25	1.43	0.06	0.28	1.71	0.57
Persia borbonia	0.25	1.43	0.06	0.28	1.71	0.57
Eupatorium coelestinum	0.25	1.43	0.06	0.28	1.71	0.57
Cardamine sp.	0.25	1.43	0.06	0.28	1.71	0.57
Tradescantia ohioensis	0.25	1.43	0.06	0.28	1.71	0.57
Betula nigra	0.25	1.43	0.06	0.28	1.71	0.57
Forestiera acuminata	0.25	1.43	0.06	0.28	1.71	0.57
Vitis rotundifolia	0.25	1.43	0.06	0.28	1.71	0.57
Viola sororia var. missouriensis	0.25	1.43	0.06	0.28	1.71	0.57
Vitis aestivalis	0.25	1.43	0.06	0.28	1.71	0.57
Viburnum dentatum	0.25	1.43	0.06	0.28	1.71	0.57
Morella cerifera	0.25	1.43	0.06	0.28	1.71	0.57
Hypericum mutilum	0.25	1.43	0.06	0.28	1.71	0.57
Prunus caroliniana	0.25	1.43	0.06	0.28	1.71	0.57
Eragrostis spectabilis	0.25	1.43	0.06	0.28	1.71	0.57
Eupatorium capillifolium	0.25	1.43	0.06	0.28	1.71	0.57

Table 7D

Summary of Herbaceous Layer
Platanus occidentalis - (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eupatorium semiserratum	0.25	1.43	0.06	0.28	1.71	0.57
Vitis cinerea	0.25	1.43	0.06	0.28	1.71	0.57
Pinus taeda	0.25	1.43	0.06	0.28	1.71	0.57
Smilax smallii	0.25	1.43	0.06	0.28	1.71	0.57

Table 8D

Summary of Overstory Layer
Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua Temporarily Flooded Forest Alliance
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus michauxii	0.70	14.89	32.00	12.12	7.47	32.18	59.20	19.73
Quercus nigra	0.50	10.64	28.00	10.61	7.73	33.31	54.55	18.18
Carpinus caroliniana	0.60	12.77	44.00	16.67	0.82	3.53	32.97	10.99
Liquidambar styraciflua	0.50	10.64	36.00	13.64	1.25	5.38	29.65	9.88
Nyssa sylvatica	0.60	12.77	24.00	9.09	0.55	2.35	24.21	8.07
Ilex opaca	0.40	8.51	20.00	7.58	1.38	5.93	22.02	7.34
Triadica sebifera	0.10	2.13	16.00	6.06	0.49	2.10	10.29	3.43
Pinus taeda	0.10	2.13	8.00	3.03	0.94	4.03	9.19	3.06
Ilex decidua	0.20	4.26	8.00	3.03	0.19	0.80	8.09	2.70
Quercus falcata	0.10	2.13	4.00	1.52	0.82	3.52	7.16	2.39
Halesia diptera	0.10	2.13	8.00	3.03	0.22	0.94	6.09	2.03
Quercus laurifolia	0.10	2.13	8.00	3.03	0.11	0.48	5.63	1.88
Frangula caroliniana	0.10	2.13	4.00	1.52	0.33	1.44	5.08	1.69
Ulmus americana	0.10	2.13	4.00	1.52	0.25	1.06	4.70	1.57
Carya aquatica	0.10	2.13	4.00	1.52	0.24	1.02	4.67	1.56
Acer rubrum var. drummondii	0.10	2.13	4.00	1.52	0.22	0.93	4.58	1.53
Planera aquatica	0.10	2.13	4.00	1.52	0.13	0.54	4.18	1.39
Betula nigra	0.10	2.13	4.00	1.52	0.05	0.23	3.87	1.29
Acer rubrum var. rubrum	0.10	2.13	4.00	1.52	0.05	0.23	3.87	1.29

Table 8B

Summary of Midstory Layer
Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua Temporarily Flooded Forest Alliance
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carpinus caroliniana	0.90	10.84	332.00	24.27	1.46	31.94	67.05	22.35
Ilex opaca	0.60	7.23	188.00	13.74	0.56	12.14	33.11	11.04
Ilex vomitoria	0.50	6.02	168.00	12.28	0.51	11.09	29.40	9.80
Liquidambar styraciflua	0.80	9.64	120.00	8.77	0.45	9.76	28.17	9.39
Triadica sebifera	0.60	7.23	144.00	10.53	0.39	8.55	26.31	8.77
Ilex decidua	0.70	8.43	52.00	3.80	0.26	5.72	17.95	5.98
Nyssa sylvatica	0.70	8.43	48.00	3.51	0.24	5.15	17.09	5.70
Vitis rotundifolia	0.40	4.82	80.00	5.85	0.10	2.28	12.95	4.32
Quercus nigra	0.50	6.02	52.00	3.80	0.11	2.50	12.33	4.11
Vitis cinerea	0.40	4.82	40.00	2.92	0.08	1.65	9.39	3.13
Halesia diptera	0.30	3.61	24.00	1.75	0.12	2.68	8.05	2.68
Acer rubrum var. drummondii	0.40	4.82	16.00	1.17	0.07	1.57	7.56	2.52
Quercus michauxii	0.20	2.41	24.00	1.75	0.07	1.48	5.64	1.88
Cornus foemina	0.20	2.41	8.00	0.58	0.05	0.99	3.98	1.33
Betula nigra	0.10	1.20	24.00	1.75	0.03	0.70	3.66	1.22
Magnolia grandiflora	0.20	2.41	8.00	0.58	0.01	0.17	3.17	1.06
Crataegus marshallii	0.10	1.20	4.00	0.29	0.02	0.53	2.02	0.67
Vitis aestivalis	0.10	1.20	8.00	0.58	0.01	0.19	1.98	0.66
Sambucus nigra var. canadensis	0.10	1.20	8.00	0.58	0.01	0.19	1.98	0.66
Pinus taeda	0.10	1.20	4.00	0.29	0.01	0.21	1.71	0.57
Ulmus alata	0.10	1.20	4.00	0.29	0.01	0.17	1.67	0.56
Ulmus americana	0.10	1.20	4.00	0.29	0.01	0.14	1.64	0.55
Viburnum dentatum	0.10	1.20	4.00	0.29	0.01	0.11	1.61	0.54
Fagus grandifolia	0.10	1.20	4.00	0.29	0.00	0.08	1.58	0.53

Table 8C

Summary of Shrub Layer
Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua Temporarily Flooded Forest Alliance
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus nigra	0.50	8.33	1320.00	21.43	0.11	20.64	50.40	16.80
Ilex vomitoria	0.60	10.00	400.00	6.49	0.09	17.89	34.38	11.46
Triadica sebifera	0.60	10.00	600.00	9.74	0.06	12.08	31.82	10.61
Ilex decidua	0.40	6.67	360.00	5.84	0.06	11.93	24.44	8.15
Carpinus caroliniana	0.40	6.67	480.00	7.79	0.03	5.96	20.42	6.81
Vitis rotundifolia	0.40	6.67	440.00	7.14	0.03	5.66	19.47	6.49
Rubus argutus	0.30	5.00	640.00	10.39	0.02	3.36	18.75	6.25
Liquidambar styraciflua	0.40	6.67	200.00	3.25	0.02	3.98	13.89	4.63
Callicarpa americana	0.30	5.00	280.00	4.55	0.02	4.28	13.83	4.61
Sebastiana fruticosa	0.30	5.00	200.00	3.25	0.01	1.68	9.93	3.31
Viburnum dentatum	0.20	3.33	280.00	4.55	0.01	1.68	9.56	3.19
Campsis radicans	0.20	3.33	240.00	3.90	0.00	0.92	8.15	2.72
Rhus copallina	0.10	1.67	160.00	2.60	0.01	2.29	6.56	2.19
Ligustrum sinense	0.20	3.33	80.00	1.30	0.01	1.22	5.86	1.95
Vaccinium elliottii	0.10	1.67	40.00	0.65	0.02	3.06	5.37	1.79
Ilex opaca	0.10	1.67	80.00	1.30	0.00	0.76	3.73	1.24
Sambucus nigra var. canadensis	0.10	1.67	40.00	0.65	0.01	1.38	3.69	1.23
Acer rubrum var. drummondii	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82
Quercus michauxii	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82
Crataegus marshallii	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82
Nyssa sylvatica	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82
Quercus phellos	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82
Halesia diptera	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82
Quercus falcata	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82

Table 8C

Summary of Shrub Layer
***Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua* Temporarily Flooded Forest Alliance**
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Parthenocissus quinquefolia	0.10	1.67	40.00	0.65	0.00	0.15	2.47	0.82

Table 8D

Summary of Herbaceous Layer
Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua Temporarily Flooded Forest Alliance
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.67	3.57	2.20	10.93	14.50	4.83
Chasmanthium laxum	0.33	1.79	2.19	10.88	12.66	4.22
Vitis rotundifolia	0.89	4.76	0.86	4.28	9.04	3.01
Rubus argutus	0.67	3.57	0.94	4.69	8.26	2.75
Parthenocissus quinquefolia	0.67	3.57	0.86	4.28	7.85	2.62
Bignonia capreolata	0.67	3.57	0.83	4.14	7.71	2.57
Carpinus caroliniana	0.67	3.57	0.75	3.73	7.30	2.43
Liquidambar styraciflua	0.67	3.57	0.58	2.87	6.44	2.15
Ilex decidua	0.56	2.98	0.67	3.31	6.29	2.10
Ilex opaca	0.56	2.98	0.58	2.90	5.88	1.96
Ilex vomitoria	0.67	3.57	0.44	2.21	5.78	1.93
Quercus nigra	0.67	3.57	0.44	2.21	5.78	1.93
Campsis radicans	0.33	1.79	0.72	3.59	5.37	1.79
Tradescantia ohioensis	0.44	2.38	0.50	2.48	4.87	1.62
Viburnum dentatum	0.56	2.98	0.33	1.66	4.63	1.54
Smilax pumila	0.11	0.60	0.80	3.98	4.57	1.52
Callicarpa americana	0.44	2.38	0.37	1.85	4.23	1.41
Chasmanthium sessiliflorum	0.33	1.79	0.47	2.35	4.13	1.38
Oplismenus hirtellus	0.44	2.38	0.28	1.38	3.76	1.25
Rubus trivialis	0.33	1.79	0.39	1.93	3.72	1.24
Sebastiana fruticosa	0.33	1.79	0.36	1.77	3.55	1.18
Smilax bona-nox	0.44	2.38	0.22	1.10	3.49	1.16
Triadica sebifera	0.33	1.79	0.28	1.38	3.17	1.06
Dichanthelium commutatum	0.33	1.79	0.22	1.10	2.89	0.96

Table 8D

Summary of Herbaceous Layer
Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua Temporarily Flooded Forest Alliance
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viola sororia var. missouriensis	0.33	1.79	0.19	0.97	2.75	0.92
Lonicera japonica	0.33	1.79	0.14	0.69	2.48	0.83
Mitchella repens	0.22	1.19	0.25	1.24	2.43	0.81
Halesia diptera	0.22	1.19	0.22	1.10	2.29	0.76
Scleria sp.	0.22	1.19	0.19	0.97	2.16	0.72
Ligustrum sinense	0.22	1.19	0.19	0.94	2.13	0.71
Lygodium japonicum	0.22	1.19	0.19	0.94	2.13	0.71
Symplocos tinctoria	0.11	0.60	0.28	1.38	1.98	0.66
Vaccinium elliottii	0.22	1.19	0.14	0.69	1.88	0.63
Quercus laurifolia	0.22	1.19	0.11	0.55	1.74	0.58
Carex sp.	0.22	1.19	0.11	0.55	1.74	0.58
Nyssa sylvatica	0.22	1.19	0.08	0.41	1.60	0.53
Oxalis dillenii	0.22	1.19	0.08	0.41	1.60	0.53
Eupatorium semiserratum	0.22	1.19	0.06	0.28	1.47	0.49
Thelypteris kunthii	0.11	0.60	0.17	0.83	1.42	0.47
Brunnichia ovata	0.11	0.60	0.14	0.69	1.29	0.43
Ampelopsis arborea	0.11	0.60	0.14	0.69	1.29	0.43
Sambucus nigra var. canadensis	0.11	0.60	0.11	0.55	1.15	0.38
Eupatorium coelestinum	0.11	0.60	0.08	0.41	1.01	0.34
Cornus foemina	0.11	0.60	0.08	0.41	1.01	0.34
Sanicula canadensis	0.11	0.60	0.08	0.41	1.01	0.34
Dichanthelium laxiflorum	0.11	0.60	0.06	0.28	0.87	0.29
Acer rubrum var. drummondii	0.11	0.60	0.06	0.28	0.87	0.29
Ulmus alata	0.11	0.60	0.06	0.28	0.87	0.29

Table 8D

Summary of Herbaceous Layer
Quercus (michauxii, pagoda, shumardii) - Liquidambar styraciflua Temporarily Flooded Forest Alliance
Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ruellia caroliniensis	0.11	0.60	0.06	0.28	0.87	0.29
Viola palmata	0.11	0.60	0.06	0.28	0.87	0.29
Boehmeria cylindrica	0.11	0.60	0.03	0.14	0.73	0.24
Ostrya virginiana	0.11	0.60	0.03	0.14	0.73	0.24
Rhus copallina	0.11	0.60	0.03	0.14	0.73	0.24
Betula nigra	0.11	0.60	0.03	0.14	0.73	0.24
Taxodium distichum	0.11	0.60	0.03	0.14	0.73	0.24
Hydrocotyle verticillata	0.11	0.60	0.03	0.14	0.73	0.24
Dichanthelium boscii	0.11	0.60	0.03	0.14	0.73	0.24
Solidago altissima	0.11	0.60	0.03	0.14	0.73	0.24
Ptilimnium capillaceum	0.11	0.60	0.03	0.14	0.73	0.24
Sonchus asper	0.11	0.60	0.03	0.14	0.73	0.24
Justicia ovata var. lanceolata	0.11	0.60	0.03	0.14	0.73	0.24
Mikania scandens	0.11	0.60	0.03	0.14	0.73	0.24
Yeatesia viridiflora	0.11	0.60	0.03	0.14	0.73	0.24
Pinus taeda	0.11	0.60	0.03	0.14	0.73	0.24
Strophostyles umbellata	0.11	0.60	0.03	0.14	0.73	0.24
Elephantopus tomentosus	0.11	0.60	0.03	0.14	0.73	0.24
Chasmanthium latifolium	0.11	0.60	0.03	0.14	0.73	0.24
Planera aquatica	0.11	0.60	0.03	0.14	0.73	0.24

Table 9A

Summary of Overstory Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus laurifolia	0.71	17.86	65.71	22.77	6.11	24.97	65.60	21.87
Liquidambar styraciflua	0.71	17.86	45.71	15.84	2.70	11.02	44.72	14.91
Quercus phellos	0.21	5.36	28.57	9.90	6.92	28.28	43.54	14.51
Nyssa biflora	0.21	5.36	22.86	7.92	3.06	12.52	25.80	8.60
Triadica sebifera	0.36	8.93	20.00	6.93	1.06	4.33	20.19	6.73
Carpinus caroliniana	0.29	7.14	20.00	6.93	0.36	1.46	15.53	5.18
Acer rubrum var. drummondii	0.21	5.36	14.29	4.95	0.55	2.26	12.57	4.19
Nyssa sylvatica	0.29	7.14	11.43	3.96	0.27	1.11	12.22	4.07
Pinus taeda	0.14	3.57	14.29	4.95	0.35	1.44	9.96	3.32
Ulmus americana	0.14	3.57	8.57	2.97	0.23	0.94	7.48	2.49
Ilex decidua	0.14	3.57	5.71	1.98	0.33	1.34	6.89	2.30
Quercus lyrata	0.07	1.79	8.5714	2.97	0.4068	1.66	6.42	2.14
Quercus nigra	0.07	1.79	2.8571	0.99	0.7549	3.09	5.86	1.95
Quercus falcata	0.07	1.79	2.8571	0.99	0.5837	2.39	5.16	1.72
Taxodium distichum	0.07	1.79	5.7143	1.98	0.099	0.4	4.17	1.39
Acer rubrum var. rubrum	0.07	1.79	2.8571	0.99	0.2156	0.88	3.66	1.22
Carex corrugata	0.07	1.79	2.8571	0.99	0.1697	0.69	3.47	1.16
Quercus similis	0.07	1.79	2.8571	0.99	0.1636	0.67	3.44	1.15
Ilex opaca	0.07	1.79	2.8571	0.99	0.1347	0.55	3.33	1.11

Table 9B

Summary of Midstory Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.79	12.64	451.43	35.99	1.24	32.63	81.27	27.09
Ilex decidua	0.71	11.49	242.86	19.36	0.84	22.03	52.89	17.63
Ilex opaca	0.36	5.75	82.86	6.61	0.26	6.96	19.32	6.44
Liquidambar styraciflua	0.57	9.20	40.00	3.19	0.14	3.73	16.12	5.37
Acer rubrum var. drummondii	0.36	5.75	42.86	3.42	0.17	4.48	13.65	4.55
Carpinus caroliniana	0.29	4.60	48.57	3.87	0.19	4.94	13.41	4.47
Ilex vomitoria	0.29	4.60	31.43	2.51	0.11	2.84	9.95	3.32
Quercus nigra	0.29	4.60	45.71	3.64	0.06	1.63	9.87	3.29
Nyssa sylvatica	0.21	3.45	25.71	2.05	0.13	3.32	8.82	2.94
Crataegus opaca	0.36	5.75	14.29	1.14	0.05	1.41	8.29	2.76
Halesia diptera	0.14	2.3	40	3.19	0.0791	2.08	7.57	2.52
Cyrilla racemiflora	0.14	2.3	34.2857	2.73	0.0812	2.14	7.17	2.39
Quercus laurifolia	0.21	3.45	28.5714	2.28	0.0344	0.9	6.63	2.21
Symplocos tinctoria	0.07	1.15	17.1429	1.37	0.079	2.08	4.6	1.53
Nyssa biflora	0.07	1.15	17.1429	1.37	0.0731	1.92	4.44	1.48
Cornus foemina	0.14	2.3	5.7143	0.46	0.0635	1.67	4.42	1.47
Vitis cinerea	0.14	2.3	14.2857	1.14	0.0215	0.57	4	1.33
Vitis aestivalis	0.14	2.3	11.4286	0.91	0.0265	0.7	3.91	1.3
Pinus taeda	0.14	2.3	11.4286	0.91	0.0254	0.67	3.88	1.29
Campsis radicans	0.14	2.3	5.7143	0.46	0.0164	0.43	3.19	1.06
Ligustrum sinense	0.07	1.15	14.2857	1.14	0.0219	0.58	2.86	0.95
Fraxinus caroliniana	0.07	1.15	8.5714	0.68	0.0257	0.68	2.51	0.84
Carya aquatica	0.07	1.15	2.8571	0.23	0.0272	0.71	2.09	0.7
Acer rubrum var. rubrum	0.07	1.15	2.8571	0.23	0.0123	0.32	1.7	0.57
Vitis rotundifolia	0.07	1.15	2.8571	0.23	0.0068	0.18	1.56	0.52
Styrax americana	0.07	1.15	2.8571	0.23	0.0057	0.15	1.53	0.51
Fraxinus americana	0.07	1.15	2.8571	0.23	0.0036	0.1	1.47	0.49
Magnolia grandiflora	0.07	1.15	2.8571	0.23	0.0027	0.07	1.45	0.48
Quercus michauxii	0.07	1.15	2.8571	0.23	0.0027	0.07	1.45	0.48

Table 9C

Summary of Shrub Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.71	18.87	1431.43	30.13	0.19	37.94	86.93	28.98
Quercus laurifolia	0.29	7.55	542.86	11.43	0.07	13.17	32.14	10.71
Liquidambar styraciflua	0.36	9.43	285.71	6.01	0.03	6.26	21.70	7.23
Cyrilla racemiflora	0.14	3.77	371.43	7.82	0.05	9.77	21.36	7.12
Ilex decidua	0.29	7.55	342.86	7.22	0.03	5.60	20.36	6.79
Campsis radicans	0.29	7.55	314.29	6.61	0.03	5.05	19.21	6.40
Carpinus caroliniana	0.29	7.55	371.4286	7.82	0.0196	3.84	19.21	6.4
Viburnum dentatum	0.14	3.77	257.1429	5.41	0.0095	1.87	11.05	3.68
Baccharis halimifolia	0.07	1.89	85.7143	1.8	0.0292	5.71	9.4	3.13
Ilex vomitoria	0.14	3.77	114.2857	2.41	0.0101	1.98	8.15	2.72
Vitis rotundifolia	0.14	3.77	88.5714	1.86	0.0075	1.46	7.1	2.37
Ligustrum sinense	0.07	1.89	28.5714	0.6	0.0174	3.4	5.89	1.96
Quercus nigra	0.14	3.77	60	1.26	0.0029	0.56	5.6	1.87
Styrax americana	0.14	3.77	57.1429	1.2	0.0028	0.55	5.53	1.84
Acer rubrum var. drummondii	0.07	1.89	85.7143	1.8	0.0034	0.66	4.35	1.45
Ulmus rubra	0.07	1.89	85.7143	1.8	0.0017	0.33	4.02	1.34
Acer rubrum var. rubrum	0.07	1.89	57.1429	1.2	0.0028	0.55	3.64	1.21
Toxicodendron radicans	0.07	1.89	57.1429	1.2	0.0011	0.22	3.31	1.1
Symplocos tinctoria	0.07	1.89	28.5714	0.6	0.0022	0.44	2.93	0.98
Sebastiana fruticosa	0.07	1.89	28.5714	0.6	0.0022	0.44	2.93	0.98
Smilax bona-nox	0.07	1.89	28.5714	0.6	0.0006	0.11	2.6	0.87
Carya aquatica	0.07	1.89	28.5714	0.6	0.0006	0.11	2.6	0.87

Table 9D

Summary of Herbaceous Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.57	2.71	1.47	9.00	11.72	3.91
Campsis radicans	0.50	2.37	0.94	5.72	8.09	2.70
Carpinus caroliniana	0.43	2.03	0.78	4.75	6.78	2.26
Chasmanthium laxum	0.29	1.36	0.72	4.38	5.73	1.91
Ilex decidua	0.64	3.05	0.37	2.24	5.29	1.76
Ilex opaca	0.50	2.37	0.42	2.56	4.94	1.65
Dichanthelium commutatum	0.50	2.37	0.41	2.51	4.88	1.63
Triadica sebifera	0.64	3.05	0.29	1.79	4.84	1.61
Liquidambar styraciflua	0.43	2.03	0.44	2.66	4.70	1.57
Tradescantia ohioensis	0.43	2.03	0.39	2.40	4.43	1.48
Viburnum dentatum	0.36	1.69	0.45	2.73	4.42	1.47
Carex caroliniana	0.07	0.34	0.64	3.93	4.27	1.42
Vitis rotundifolia	0.43	2.03	0.31	1.91	3.94	1.31
Acer rubrum var. drummondii	0.50	2.37	0.24	1.47	3.85	1.28
Ilex vomitoria	0.43	2.03	0.28	1.69	3.73	1.24
Unknown herbaceous	0.29	1.36	0.38	2.35	3.70	1.23
Viola sororia var. missouriensis	0.29	1.36	0.36	2.18	3.54	1.18
Rubus trivialis	0.21	1.02	0.38	2.35	3.36	1.12
Brunnichia ovata	0.36	1.69	0.22	1.36	3.06	1.02
Pinus taeda	0.36	1.69	0.22	1.36	3.06	1.02
Symphyotrichum dumosum	0.36	1.69	0.18	1.09	2.79	0.93
Quercus laurifolia	0.36	1.69	0.18	1.09	2.79	0.93
Smilax rotundifolia	0.29	1.36	0.21	1.31	2.67	0.89
Panicum rigidulum	0.07	0.34	0.37	2.24	2.58	0.86

Table 9D

Summary of Herbaceous Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viola palmata	0.29	1.36	0.19	1.15	2.50	0.83
Carex intumescens	0.21	1.02	0.23	1.42	2.44	0.81
Lysimachia radicans	0.29	1.36	0.17	1.04	2.39	0.80
Smilax bona-nox	0.29	1.36	0.15	0.93	2.28	0.76
Eupatorium semiserratum	0.21	1.02	0.18	1.09	2.11	0.70
Carex joorii	0.14	0.68	0.23	1.43	2.11	0.70
Mitchella repens	0.36	1.69	0.06	0.38	2.08	0.69
Bignonia capreolata	0.29	1.36	0.12	0.71	2.07	0.69
Woodwardia areolata	0.07	0.34	0.25	1.53	1.87	0.62
Hypericum hypericoides	0.14	0.68	0.18	1.11	1.79	0.60
Parthenocissus quinquefolia	0.21	1.02	0.13	0.76	1.78	0.59
Smilax glauca	0.21	1.02	0.12	0.73	1.75	0.58
Carex cherokeensis	0.14	0.68	0.18	1.07	1.75	0.58
Rubus argutus	0.14	0.68	0.18	1.07	1.75	0.58
Cardamine sp.	0.21	1.02	0.11	0.65	1.67	0.56
Berchemia scandens	0.29	1.36	0.04	0.27	1.63	0.54
Ampelopsis arborea	0.21	1.02	0.09	0.55	1.56	0.52
Dichanthelium dichotomum	0.21	1.02	0.09	0.55	1.56	0.52
Chasmanthium latifolium	0.21	1.02	0.07	0.44	1.45	0.48
Clematis crispa	0.21	1.02	0.07	0.44	1.45	0.48
Lonicera japonica	0.14	0.68	0.13	0.76	1.44	0.48
Quercus phellos	0.21	1.02	0.05	0.33	1.34	0.45
Commelina virginica	0.21	1.02	0.05	0.33	1.34	0.45
Osmunda regalis	0.07	0.34	0.16	0.98	1.32	0.44

Table 9D

Summary of Herbaceous Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sabal minor	0.07	0.34	0.16	0.98	1.32	0.44
Scleria triglomerata	0.07	0.34	0.16	0.96	1.30	0.43
Dichanthelium acuminatum	0.21	1.02	0.04	0.27	1.29	0.43
Potentilla indica	0.21	1.02	0.04	0.22	1.24	0.41
Carex reniformis	0.07	0.34	0.14	0.87	1.21	0.40
Cyrilla racemiflora	0.14	0.68	0.08	0.48	1.16	0.39
Carex louisianica	0.14	0.68	0.07	0.44	1.11	0.37
Callicarpa americana	0.14	0.68	0.07	0.44	1.11	0.37
Vernonia missurica	0.14	0.68	0.07	0.44	1.11	0.37
Solidago altissima	0.07	0.34	0.13	0.76	1.10	0.37
Oplismenus hirtellus	0.14	0.68	0.0536	0.33	1.01	0.34
Styrax americana	0.14	0.68	0.0482	0.29	0.97	0.32
Galium tinctorium	0.14	0.68	0.0446	0.27	0.95	0.32
Nyssa sylvatica	0.14	0.68	0.0357	0.22	0.9	0.3
Elephantopus carolinianus	0.14	0.68	0.0357	0.22	0.9	0.3
Smilax laurifolia	0.14	0.68	0.0268	0.16	0.84	0.28
Cornus foemina	0.14	0.68	0.0268	0.16	0.84	0.28
Nyssa biflora	0.14	0.68	0.0268	0.16	0.84	0.28
Oxalis dillenii	0.14	0.68	0.0268	0.16	0.84	0.28
Crataegus marshallii	0.14	0.68	0.0268	0.16	0.84	0.28
Carex complanata	0.07	0.34	0.0804	0.49	0.83	0.28
Polygonum hydropiperoides	0.14	0.68	0.0179	0.11	0.79	0.26
Quercus michauxii	0.07	0.34	0.0714	0.44	0.78	0.26
Acmella oppositifolia var. repens	0.07	0.34	0.0536	0.33	0.67	0.22

Table 9D

Summary of Herbaceous Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cornus drummondii	0.07	0.34	0.0536	0.33	0.67	0.22
Baccharis halimifolia	0.07	0.34	0.0357	0.22	0.56	0.19
Carex triangularis	0.07	0.34	0.0357	0.22	0.56	0.19
Hypoxis curtisii	0.07	0.34	0.0357	0.22	0.56	0.19
Quercus nigra	0.07	0.34	0.0357	0.22	0.56	0.19
Carex sp.	0.07	0.34	0.0357	0.22	0.56	0.19
Vitis aestivalis	0.07	0.34	0.0357	0.22	0.56	0.19
Amsonia tabernaemontana	0.07	0.34	0.0357	0.22	0.56	0.19
Fraxinus caroliniana	0.07	0.34	0.0357	0.22	0.56	0.19
Symphyotrichum divaricatum	0.07	0.34	0.0268	0.16	0.5	0.17
Galium aparine	0.07	0.34	0.0268	0.16	0.5	0.17
Rhexia mariana var. mariana	0.07	0.34	0.0268	0.16	0.5	0.17
Sonchus oleraceus	0.07	0.34	0.0268	0.16	0.5	0.17
Scleria oligantha	0.07	0.34	0.0268	0.16	0.5	0.17
Leersia oryzoides	0.07	0.34	0.0179	0.11	0.45	0.15
Ulmus americana	0.07	0.34	0.0179	0.11	0.45	0.15
Saccharum baldwinii	0.07	0.34	0.0179	0.11	0.45	0.15
Eupatorium capillifolium	0.07	0.34	0.0179	0.11	0.45	0.15
Leersia lenticularis	0.07	0.34	0.0179	0.11	0.45	0.15
Carex oxylepis	0.07	0.34	0.0179	0.11	0.45	0.15
Acer rubrum var. rubrum	0.07	0.34	0.0179	0.11	0.45	0.15
Ligustrum sinense	0.07	0.34	0.0179	0.11	0.45	0.15
Eupatorium serotinum	0.07	0.34	0.0179	0.11	0.45	0.15
Smilax sp.	0.07	0.34	0.0179	0.11	0.45	0.15

Table 9D

Summary of Herbaceous Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ulmus alata	0.07	0.34	0.0179	0.11	0.45	0.15
Acalypha gracilens	0.07	0.34	0.0179	0.11	0.45	0.15
Scutellaria integrifolia	0.07	0.34	0.0179	0.11	0.45	0.15
Carya tomentosa	0.07	0.34	0.0179	0.11	0.45	0.15
Dichanthelium aciculare	0.07	0.34	0.0179	0.11	0.45	0.15
Prunus serotina	0.07	0.34	0.0179	0.11	0.45	0.15
Boehmeria cylindrica	0.07	0.34	0.0089	0.05	0.39	0.13
Tradescantia hirsutiflora	0.07	0.34	0.0089	0.05	0.39	0.13
Elephantopus tomentosus	0.07	0.34	0.0089	0.05	0.39	0.13
Halesia diptera	0.07	0.34	0.0089	0.05	0.39	0.13
Solidago sempervirens	0.07	0.34	0.0089	0.05	0.39	0.13
Fraxinus pennsylvanica	0.07	0.34	0.0089	0.05	0.39	0.13
Dichanthelium boscii	0.07	0.34	0.0089	0.05	0.39	0.13
Prunella vulgaris	0.07	0.34	0.0089	0.05	0.39	0.13
Dichanthelium laxiflorum	0.07	0.34	0.0089	0.05	0.39	0.13
Carya glabra var. hirsuta	0.07	0.34	0.0089	0.05	0.39	0.13
Erechtites hieraciifolia	0.07	0.34	0.0089	0.05	0.39	0.13
Persia borbonia	0.07	0.34	0.0089	0.05	0.39	0.13
Aristolochia serpentaria	0.07	0.34	0.0089	0.05	0.39	0.13
Sanicula canadensis	0.07	0.34	0.0089	0.05	0.39	0.13
Saururus cernuus	0.07	0.34	0.0089	0.05	0.39	0.13
Yeatesia viridiflora	0.07	0.34	0.0089	0.05	0.39	0.13
Botrychium dissectum	0.07	0.34	0.0089	0.05	0.39	0.13
Wisteria frutescens	0.07	0.34	0.0089	0.05	0.39	0.13

Table 9D

Summary of Herbaceous Layer
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance
Quercus laurifolia - Quercus (lyrata, phellos) Nyssa biflora West Gulf Floodplain Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Hypericum crus-andreae	0.07	0.34	0.0089	0.05	0.39	0.13
Trachelospermum difforme	0.07	0.34	0.0089	0.05	0.39	0.13
Conoclinium coelestinum	0.07	0.34	0.0089	0.05	0.39	0.13
Justicia ovata var. lanceolata	0.07	0.34	0.0089	0.05	0.39	0.13

Table 10A

Summary of Overstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus nigra	0.68	14.85	69.09	20.99	6.89	29.37	65.21	21.74
Liquidambar styraciflua	0.59	12.87	49.09	14.92	4.58	19.53	47.32	15.77
Quercus phellos	0.32	6.93	29.09	8.84	3.46	14.75	30.52	10.17
Quercus laurifolia	0.45	9.90	34.55	10.50	1.68	7.18	27.58	9.19
Carpinus caroliniana	0.41	8.91	38.18	11.60	0.72	3.07	23.58	7.86
Nyssa sylvatica	0.36	7.92	16.36	4.97	1.55	6.59	19.49	6.50
Pinus taeda	0.23	4.95	12.73	3.87	1.22	5.20	14.02	4.67
Triadica sebifera	0.23	4.95	18.18	5.52	0.47	2.01	12.48	4.16
Ilex opaca	0.18	3.96	10.91	3.31	0.43	1.83	9.11	3.04
Carya aquatica	0.14	2.97	7.27	2.21	0.81	3.44	8.62	2.87
Halesia diptera	0.14	2.97	7.27	2.21	0.20	0.85	6.03	2.01
Celtis laevigata	0.09	1.98	3.64	1.10	0.27	1.13	4.22	1.41
Sassafras albidum	0.09	1.98	3.64	1.10	0.10	0.41	3.49	1.16
Fraxinus pennsylvanica	0.09	1.98	3.64	1.10	0.08	0.35	3.44	1.15
Quercus similis	0.05	0.99	3.64	1.10	0.24	1.01	3.10	1.03
Quercus falcata	0.05	0.99	1.82	0.55	0.22	0.95	2.49	0.83
Fraxinus caroliniana	0.05	0.99	1.82	0.55	0.15	0.65	2.19	0.73
Parthenocissus quinquefolia	0.05	0.99	1.82	0.55	0.08	0.35	1.89	0.63
Planera aquatica	0.05	0.99	1.82	0.55	0.06	0.24	1.79	0.60
Ilex decidua	0.05	0.99	1.82	0.55	0.05	0.20	1.74	0.58
Acer rubrum var. rubrum	0.05	0.99	1.82	0.55	0.04	0.18	1.72	0.57
Quercus alba	0.05	0.99	1.82	0.55	0.04	0.16	1.70	0.57
Quercus lyrata	0.05	0.99	1.82	0.55	0.03	0.14	1.68	0.56
Acer rubrum var. drummondii	0.05	0.99	1.82	0.55	0.03	0.13	1.67	0.56

Table 10A

Summary of Overstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus michauxii	0.05	0.99	1.82	0.55	0.02	0.10	1.65	0.55
Betula nigra	0.05	0.99	1.82	0.55	0.02	0.10	1.65	0.55
Prunus serotina	0.05	0.99	1.82	0.55	0.02	0.10	1.64	0.55

Table 10B

Summary of Midstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.64	8.38	127.27	10.80	0.57	13.95	33.14	11.05
Carpinus caroliniana	0.55	7.19	143.64	12.19	0.53	13.12	32.50	10.83
Ilex vomitoria	0.59	7.78	141.82	12.04	0.47	11.55	31.37	10.46
Ilex decidua	0.59	7.78	109.09	9.26	0.42	10.30	27.34	9.11
Quercus nigra	0.36	4.79	98.18	8.33	0.39	9.52	22.64	7.55
Ilex opaca	0.55	7.19	100.00	8.49	0.25	6.09	21.76	7.25
Liquidambar styraciflua	0.50	6.59	52.73	4.48	0.19	4.75	15.81	5.27
Nyssa sylvatica	0.36	4.79	52.73	4.48	0.21	5.17	14.44	4.81
Halesia diptera	0.32	4.19	56.36	4.78	0.15	3.69	12.67	4.22
Vitis rotundifolia	0.45	5.99	32.73	2.78	0.04	0.88	9.65	3.22
Acer rubrum var. drummondii	0.23	2.99	29.09	2.47	0.11	2.78	8.24	2.75
Quercus laurifolia	0.23	2.99	27.27	2.31	0.09	2.17	7.48	2.49
Quercus phellos	0.23	2.99	18.18	1.54	0.07	1.76	6.29	2.10
Quercus michauxii	0.23	2.99	20.00	1.70	0.04	1.06	5.75	1.92
Acer rubrum var. rubrum	0.05	0.60	21.82	1.85	0.12	2.92	5.37	1.79
Crataegus viridis	0.14	1.80	23.64	2.01	0.05	1.14	4.94	1.65
Vitis aestivalis	0.18	2.40	16.36	1.39	0.03	0.68	4.46	1.49
Cyrilla racemiflora	0.05	0.60	14.55	1.23	0.06	1.49	3.33	1.11
Vitis cinerea	0.14	1.80	7.27	0.62	0.01	0.33	2.74	0.91
Persia borbonia	0.05	0.60	9.09	0.77	0.05	1.19	2.56	0.85
Pinus taeda	0.09	1.20	3.64	0.31	0.03	0.81	2.32	0.77
Ilex coriacea	0.05	0.60	7.27	0.62	0.03	0.82	2.04	0.68
Betula nigra	0.05	0.60	10.91	0.93	0.01	0.35	1.88	0.63
Celtis laevigata	0.09	1.20	3.64	0.31	0.01	0.34	1.85	0.62
Sassafras albidum	0.09	1.20	3.64	0.31	0.01	0.30	1.81	0.60
Ulmus rubra	0.09	1.20	3.64	0.31	0.01	0.20	1.71	0.57
Viburnum nudum	0.05	0.60	5.45	0.46	0.02	0.59	1.65	0.55
Viburnum dentatum	0.09	1.20	3.64	0.31	0.01	0.14	1.65	0.55
Morella cerifera	0.05	0.60	7.27	0.62	0.02	0.39	1.61	0.54

Table 10B

Summary of Midstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Prunus caroliniana	0.05	0.60	3.64	0.31	0.01	0.19	1.10	0.37
Ligustrum sinense	0.05	0.60	1.82	0.15	0.01	0.32	1.07	0.36
Crataegus opaca	0.05	0.60	3.64	0.31	0.01	0.16	1.07	0.36
Hamamelis virginiana	0.05	0.60	3.64	0.31	0.01	0.16	1.06	0.35
Prunus serotina	0.05	0.60	1.82	0.15	0.01	0.17	0.92	0.31
Carya aquatica	0.05	0.60	1.82	0.15	0.01	0.15	0.90	0.30
Persea palustris	0.05	0.60	1.82	0.15	0.00	0.09	0.84	0.28
Symplocos tinctoria	0.05	0.60	1.82	0.15	0.00	0.08	0.84	0.28
Chionanthus virginica	0.05	0.60	1.82	0.15	0.00	0.06	0.81	0.27
Ulmus americana	0.05	0.60	1.82	0.15	0.00	0.06	0.81	0.27
Vaccinium elliottii	0.05	0.60	1.82	0.15	0.00	0.04	0.79	0.26
Amorpha fruticosa	0.05	0.60	1.82	0.15	0.00	0.03	0.78	0.26

Table 10C

Summary of Shrub Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.36	7.92	727.27	13.68	0.12	30.88	52.48	17.49
Triadica sebifera	0.41	8.91	1236.36	23.26	0.07	17.50	49.67	16.56
Liquidambar styraciflua	0.36	7.92	327.27	6.16	0.03	7.86	21.94	7.31
Ilex decidua	0.36	7.92	254.55	4.79	0.03	8.98	21.69	7.23
Rubus argutus	0.18	3.96	527.27	9.92	0.02	5.80	19.68	6.56
Quercus nigra	0.32	6.93	290.91	5.47	0.01	3.28	15.68	5.23
Vitis rotundifolia	0.32	6.93	218.18	4.11	0.01	3.09	14.12	4.71
Carpinus caroliniana	0.32	6.93	201.82	3.80	0.01	1.47	12.20	4.07
Ilex opaca	0.27	5.94	109.09	2.05	0.01	3.46	11.46	3.82
Sebastiana fruticosa	0.18	3.96	90.91	1.71	0.00	1.12	6.79	2.26
Ilex coriacea	0.05	0.99	200.00	3.76	0.01	1.59	6.34	2.11
Campsis radicans	0.09	1.98	145.45	2.74	0.00	0.75	5.47	1.82
Hypericum hypericoides	0.09	1.98	127.27	2.39	0.00	0.66	5.03	1.68
Hamamelis virginiana	0.05	0.99	72.73	1.37	0.01	2.62	4.98	1.66
Acer rubrum var. rubrum	0.05	0.99	127.27	2.39	0.00	1.22	4.60	1.53
Quercus phellos	0.09	1.98	90.91	1.71	0.00	0.47	4.16	1.39
Betula nigra	0.05	0.99	72.73	1.37	0.01	1.78	4.14	1.38
Halesia diptera	0.09	1.98	54.55	1.03	0.00	1.03	4.04	1.35
Persia borbonia	0.05	0.99	36.36	0.68	0.01	2.34	4.01	1.34
Nyssa sylvatica	0.05	0.99	54.55	1.03	0.01	1.59	3.61	1.20
Quercus laurifolia	0.09	1.98	20.00	0.38	0.00	0.24	2.60	0.87
Quercus michauxii	0.09	1.98	20.00	0.38	0.00	0.13	2.49	0.83
Callicarpa americana	0.05	0.99	36.36	0.68	0.00	0.19	1.86	0.62
Taxodium distichum	0.05	0.99	36.36	0.68	0.00	0.19	1.86	0.62

Table 10C

Summary of Shrub Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Sanicula canadensis	0.05	0.99	18.18	0.34	0.00	0.37	1.71	0.57
Viburnum nudum	0.05	0.99	18.18	0.34	0.00	0.37	1.71	0.57
Vitis aestivalis	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Cyrilla racemiflora	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Vaccinium arboreum	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Ulmus americana	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Acer rubrum var. drummondii	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Quercus similis	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Crataegus marshallii	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Symplocos tinctoria	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Viburnum dentatum	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Amorpha fruticosa	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48
Pinus taeda	0.05	0.99	18.18	0.34	0.00	0.09	1.43	0.48

Table 10D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Parthenocissus quinquefolia	0.45	2.29	2.60	8.92	11.21	3.74
Toxicodendron radicans	0.59	2.97	1.72	5.88	8.86	2.95
Chasmanthium laxum	0.36	1.83	2.05	7.01	8.84	2.95
Vitis rotundifolia	0.77	3.89	1.17	4.00	7.89	2.63
Chasmanthium latifolium	0.18	0.92	1.73	5.92	6.84	2.28
Rubus argutus	0.41	2.06	1.02	3.50	5.56	1.85
Liquidambar styraciflua	0.73	3.66	0.55	1.87	5.53	1.84
Bignonia capreolata	0.41	2.06	1.00	3.41	5.47	1.82
Ilex vomitoria	0.59	2.97	0.70	2.41	5.39	1.80
Ilex coriacea	0.05	0.23	1.31	4.48	4.71	1.57
Carpinus caroliniana	0.55	2.75	0.45	1.56	4.30	1.43
Triadica sebifera	0.59	2.97	0.39	1.32	4.30	1.43
Dichanthelium commutatum	0.45	2.29	0.41	1.40	3.69	1.23
Ilex decidua	0.41	2.06	0.45	1.56	3.62	1.21
Ilex opaca	0.45	2.29	0.39	1.32	3.61	1.20
Viburnum dentatum	0.55	2.75	0.20	0.70	3.45	1.15
Smilax bona-nox	0.45	2.29	0.28	0.97	3.26	1.09
Tradescantia ohioensis	0.36	1.83	0.41	1.40	3.23	1.08
Rubus trivialis	0.32	1.60	0.47	1.61	3.21	1.07
Chasmanthium sessiliflorum	0.05	0.23	0.86	2.96	3.19	1.06
Campsis radicans	0.36	1.83	0.38	1.32	3.15	1.05
Oplismenus hirtellus	0.32	1.60	0.42	1.44	3.04	1.01
Lonicera japonica	0.23	1.14	0.51	1.75	2.90	0.97
Brunnichia ovata	0.32	1.60	0.38	1.28	2.89	0.96

Table 10D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Symphyotrichum dumosum	0.23	1.14	0.42	1.44	2.58	0.86
Acer rubrum var. drummondii	0.32	1.60	0.23	0.78	2.38	0.79
Nyssa sylvatica	0.32	1.60	0.16	0.54	2.15	0.72
Callicarpa americana	0.23	1.14	0.25	0.86	2.00	0.67
Viola sororia var. missouriensis	0.23	1.14	0.23	0.78	1.92	0.64
Lygodium japonicum	0.27	1.37	0.14	0.47	1.84	0.61
Carex joorii	0.05	0.23	0.45	1.56	1.79	0.60
Hypericum hypericoides	0.18	0.92	0.25	0.85	1.76	0.59
Potentilla indica	0.09	0.46	0.38	1.28	1.74	0.58
Unknown herbaceous	0.14	0.69	0.31	1.05	1.74	0.58
Sebastiana fruticosa	0.18	0.92	0.18	0.62	1.54	0.51
Quercus laurifolia	0.23	1.14	0.11	0.39	1.53	0.51
Quercus phellos	0.23	1.14	0.11	0.39	1.53	0.51
Smilax rotundifolia	0.23	1.14	0.10	0.35	1.49	0.50
Lysimachia radicans	0.23	1.14	0.10	0.35	1.49	0.50
Quercus nigra	0.18	0.92	0.17	0.58	1.49	0.50
Oxalis dillenii	0.14	0.69	0.23	0.78	1.46	0.49
Carex cherokeensis	0.09	0.46	0.27	0.93	1.39	0.46
Sanicula canadensis	0.14	0.69	0.18	0.62	1.31	0.44
Trachelospermum difforme	0.14	0.69	0.18	0.62	1.31	0.44
Commelina virginica	0.14	0.69	0.16	0.54	1.23	0.41
Carex reniformis	0.09	0.46	0.21	0.72	1.18	0.39
Pinus taeda	0.18	0.92	0.06	0.19	1.11	0.37
Acer rubrum var. rubrum	0.18	0.92	0.06	0.19	1.11	0.37

Table 10D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Leersia hexandra	0.09	0.46	0.18	0.62	1.08	0.36
Viola sororia	0.14	0.69	0.11	0.39	1.08	0.36
Viola palmata	0.14	0.69	0.10	0.35	1.04	0.35
Mitchella repens	0.14	0.69	0.10	0.35	1.04	0.35
Scleria triglomerata	0.09	0.46	0.15	0.51	0.96	0.32
Carex caroliniana	0.14	0.69	0.08	0.27	0.96	0.32
Smilax glauca	0.14	0.69	0.07	0.23	0.92	0.31
Polygama verticillata	0.05	0.23	0.19	0.66	0.89	0.30
Cardamine sp.	0.14	0.69	0.06	0.19	0.88	0.29
Sabal minor	0.05	0.23	0.18	0.62	0.85	0.28
Boehmeria cylindrica	0.05	0.23	0.18	0.62	0.85	0.28
Persia borbonia	0.09	0.46	0.11	0.39	0.85	0.28
Carex brevior	0.05	0.23	0.18	0.61	0.84	0.28
Carex albolutescens	0.05	0.23	0.17	0.58	0.81	0.27
Elephantopus carolinianus	0.09	0.46	0.10	0.35	0.81	0.27
Vernonia missurica	0.09	0.46	0.08	0.27	0.73	0.24
Ampelopsis arborea	0.09	0.46	0.07	0.23	0.69	0.23
Halesia diptera	0.09	0.46	0.06	0.19	0.65	0.22
Polygonum hydropiperoides	0.09	0.46	0.06	0.19	0.65	0.22
Carex debilis	0.09	0.46	0.05	0.16	0.61	0.20
Galium aparine	0.09	0.46	0.05	0.16	0.61	0.20
Carex louisianica	0.09	0.46	0.05	0.16	0.61	0.20
Dichanthelium laxiflorum	0.09	0.46	0.05	0.16	0.61	0.20
Hypericum mutilum	0.05	0.23	0.10	0.35	0.58	0.19

Table 10D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Symplocos tinctoria	0.09	0.46	0.03	0.12	0.57	0.19
Dichanthelium acuminatum	0.09	0.46	0.03	0.12	0.57	0.19
Quercus similis	0.09	0.46	0.03	0.12	0.57	0.19
Vaccinium elliottii	0.09	0.46	0.03	0.12	0.57	0.19
Berchemia scandens	0.09	0.46	0.03	0.12	0.57	0.19
Carya sp.	0.05	0.23	0.09	0.31	0.54	0.18
Saururus cernuus	0.05	0.23	0.09	0.31	0.54	0.18
Cyrilla racemiflora	0.05	0.23	0.09	0.31	0.54	0.18
Crataegus marshallii	0.09	0.46	0.02	0.08	0.54	0.18
Carex flaccosperma	0.09	0.46	0.02	0.08	0.54	0.18
Carex complanata	0.09	0.46	0.02	0.08	0.54	0.18
Galium tinctorium	0.09	0.46	0.02	0.08	0.54	0.18
Elymus virginicus	0.09	0.46	0.02	0.08	0.54	0.18
Carex debilis var. debilis	0.05	0.23	0.09	0.30	0.53	0.18
Tillandsia usneoides	0.05	0.23	0.08	0.27	0.50	0.17
Eupatorium semiserratum	0.05	0.23	0.07	0.23	0.46	0.15
Thelypteris kunthii	0.05	0.23	0.06	0.20	0.43	0.14
Pluchea camphorata	0.05	0.23	0.06	0.19	0.42	0.14
Symphyotrichum species	0.05	0.23	0.06	0.19	0.42	0.14
Ulmus americana	0.05	0.23	0.06	0.19	0.42	0.14
Mikania scandens	0.05	0.23	0.06	0.19	0.42	0.14
Betula nigra	0.05	0.23	0.06	0.19	0.42	0.14
Saccharum giganteum	0.05	0.23	0.05	0.16	0.38	0.13
Wisteria sinensis	0.05	0.23	0.05	0.16	0.38	0.13

Table 10D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Taxodium distichum	0.05	0.23	0.05	0.16	0.38	0.13
Ptilimnium capillaceum	0.05	0.23	0.03	0.12	0.35	0.12
Polygonum punctatum	0.05	0.23	0.03	0.12	0.35	0.12
Rhexia mariana	0.05	0.23	0.03	0.12	0.35	0.12
Eupatorium serotinum	0.05	0.23	0.02	0.08	0.31	0.10
Clematis crispa	0.05	0.23	0.02	0.08	0.31	0.10
Castanea pumila	0.05	0.23	0.02	0.08	0.31	0.10
Acmella oppositifolia var. repens	0.05	0.23	0.02	0.08	0.31	0.10
Carya glabra var. hirsuta	0.05	0.23	0.02	0.08	0.31	0.10
Vitis cinerea	0.05	0.23	0.02	0.08	0.31	0.10
Scleria oligantha	0.05	0.23	0.02	0.08	0.31	0.10
Vaccinium arboreum	0.05	0.23	0.02	0.08	0.31	0.10
Ligustrum sinense	0.05	0.23	0.02	0.08	0.31	0.10
Carex intumescens	0.05	0.23	0.02	0.08	0.31	0.10
Carya tomentosa	0.05	0.23	0.01	0.04	0.27	0.09
Solidago canadensis	0.05	0.23	0.01	0.04	0.27	0.09
Dichanthelium dichotomum	0.05	0.23	0.01	0.04	0.27	0.09
Sassafras albidum	0.05	0.23	0.01	0.04	0.27	0.09
Galactia regularis	0.05	0.23	0.01	0.04	0.27	0.09
Elephantopus tomentosus	0.05	0.23	0.01	0.04	0.27	0.09
Aristolochia serpentaria	0.05	0.23	0.01	0.04	0.27	0.09
Tradescantia hirsutiflora	0.05	0.23	0.01	0.04	0.27	0.09
Melothria pendula	0.05	0.23	0.01	0.04	0.27	0.09
Hydrocotyle umbellata	0.05	0.23	0.01	0.04	0.27	0.09

Table 10D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Allium canadense var. canadense	0.05	0.23	0.01	0.04	0.27	0.09
Panicum anceps	0.05	0.23	0.01	0.04	0.27	0.09
Ulmus alata	0.05	0.23	0.01	0.04	0.27	0.09
Cornus foemina	0.05	0.23	0.01	0.04	0.27	0.09
Aralia spinosa	0.05	0.23	0.01	0.04	0.27	0.09
Dichanthelium sphaerocarpon	0.05	0.23	0.01	0.04	0.27	0.09
Erechtites hieraciifolia	0.05	0.23	0.01	0.04	0.27	0.09
Nyssa aquatica	0.05	0.23	0.01	0.04	0.27	0.09
Dichanthelium scoparium	0.05	0.23	0.01	0.04	0.27	0.09
Cyperus sp.	0.05	0.23	0.01	0.04	0.27	0.09
Rhexia mariana var. mariana	0.05	0.23	0.01	0.04	0.27	0.09
Dichanthelium boscii	0.05	0.23	0.01	0.04	0.27	0.09
Conoclinium coelestinum	0.05	0.23	0.01	0.04	0.27	0.09
Planera aquatica	0.05	0.23	0.01	0.04	0.27	0.09
Teucrium canadense	0.05	0.23	0.01	0.04	0.27	0.09

Table 10-1A

Summary of Herbaceous Layer
Quercus (phellos, nigra. laurifolia) Temporarily Flooded Forest Alliance
Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus phellos	0.86	18.75	80.00	26.42	10.44	43.42	88.59	29.53
Liquidambar styraciflua	0.71	15.63	68.57	22.64	6.20	25.81	64.08	21.36
Quercus laurifolia	0.57	12.50	40.00	13.21	2.68	11.13	36.84	12.28
Triadica sebifera	0.57	12.50	34.29	11.32	0.78	3.26	27.08	9.03
Nyssa sylvatica	0.57	12.50	22.86	7.55	1.09	4.55	24.60	8.20
Carya aquatica	0.14	3.13	11.43	3.77	0.30	1.26	8.15	2.72
Celtis laevigata	0.14	3.13	5.71	1.89	0.72	2.99	8.00	2.67
Quercus falcata	0.14	3.13	5.71	1.89	0.70	2.91	7.92	2.64
Pinus taeda	0.14	3.13	5.71	1.89	0.38	1.57	6.58	2.19
Sassafras albidum	0.14	3.13	5.71	1.89	0.22	0.90	5.92	1.97
Carpinus caroliniana	0.14	3.13	5.71	1.89	0.18	0.75	5.76	1.92
Fraxinus pennsylvanica	0.14	3.13	5.71	1.89	0.13	0.54	5.55	1.85
Ilex opaca	0.14	3.13	5.71	1.89	0.12	0.48	5.49	1.83
Quercus lyrata	0.14	3.13	5.71	1.89	0.10	0.42	5.43	1.81

Table 10-1B

Summary of Midstory Layer
Quercus (phellos, nigra. laurifolia) Temporarily Flooded Forest Alliance
Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex decidua	0.86	13.95	188.57	19.53	0.71	20.14	53.62	17.87
Triadica sebifera	0.71	11.63	177.14	18.34	0.59	16.78	46.75	15.58
Ilex vomitoria	0.29	4.65	148.57	15.38	0.62	17.48	37.52	12.51
Liquidambar styraciflua	0.43	6.98	74.29	7.69	0.35	10.08	24.75	8.25
Carpinus caroliniana	0.57	9.30	62.86	6.51	0.31	8.84	24.65	8.22
Crataegus viridis	0.29	4.65	68.57	7.10	0.13	3.73	15.49	5.16
Quercus laurifolia	0.29	4.65	45.71	4.73	0.19	5.33	14.72	4.91
Ilex opaca	0.29	4.65	51.43	5.33	0.12	3.30	13.27	4.42
Quercus phellos	0.43	6.98	17.14	1.78	0.09	2.54	11.29	3.76
Quercus nigra	0.29	4.65	28.57	2.96	0.12	3.43	11.04	3.68
Acer rubrum var. drummondii	0.29	4.65	22.86	2.37	0.11	3.05	10.07	3.36
Vitis rotundifolia	0.29	4.65	17.14	1.78	0.02	0.64	7.06	2.35
Vitis aestivalis	0.14	2.33	17.14	1.78	0.03	0.93	5.04	1.68
Nyssa sylvatica	0.14	2.33	5.71	0.59	0.05	1.41	4.32	1.44
Prunus caroliniana	0.14	2.33	11.43	1.18	0.02	0.70	4.20	1.40
Carya aquatica	0.14	2.33	5.71	0.59	0.02	0.54	3.46	1.15
Sassafras albidum	0.14	2.33	5.71	0.59	0.01	0.39	3.30	1.10
Viburnum dentatum	0.14	2.33	5.71	0.59	0.01	0.27	3.19	1.06
Ulmus americana	0.14	2.33	5.71	0.59	0.01	0.20	3.12	1.04
Vitis cinerea	0.14	2.33	5.71	0.59	0.01	0.20	3.12	1.04

Table 10-1C

Summary of Shrub Layer
Quercus (phellos, nigra. laurifolia) Temporarily Flooded Forest Alliance
Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.57	8.89	2171.43	34.45	0.08	19.79	63.13	21.04
Ilex vomitoria	0.29	4.44	800.00	12.69	0.13	33.55	50.69	16.90
Ilex decidua	0.71	11.11	514.29	8.16	0.09	22.37	41.64	13.88
Liquidambar styraciflua	0.57	8.89	285.71	4.53	0.01	2.29	15.72	5.24
Ilex opaca	0.43	6.67	171.43	2.72	0.02	6.31	15.70	5.23
Campsis radicans	0.29	4.44	457.14	7.25	0.01	2.29	13.99	4.66
Hypericum hypericoides	0.29	4.44	400.00	6.35	0.01	2.01	12.80	4.27
Quercus nigra	0.43	6.67	171.43	2.72	0.01	1.72	11.11	3.70
Quercus phellos	0.29	4.44	285.71	4.53	0.01	1.43	10.41	3.47
Rubus argutus	0.29	4.44	171.43	2.72	0.00	0.86	8.02	2.67
Sebastiana fruticosa	0.14	2.22	114.29	1.81	0.01	2.58	6.62	2.21
Carpinus caroliniana	0.29	4.44	62.86	1.00	0.00	0.77	6.22	2.07
Quercus laurifolia	0.29	4.44	62.86	1.00	0.00	0.75	6.19	2.06
Taxodium distichum	0.14	2.22	114.29	1.81	0.00	0.57	4.61	1.54
Quercus similis	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Vitis rotundifolia	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Carex caroliniana	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Crataegus marshallii	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Pinus taeda	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Viburnum dentatum	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Acer rubrum var. drummondii	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Ulmus americana	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Amorpha fruticosa	0.14	2.22	57.14	0.91	0.00	0.29	3.42	1.14
Quercus michauxii	0.14	2.22	5.71	0.09	0.00	0.11	2.43	0.81

Table 10-1D

Summary of Overstory Layer
Quercus (phellos, nigra. laurifolia) Temporarily Flooded Forest Alliance
Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.71	3.45	2.86	11.99	15.44	5.15
Parthenocissus quinquefolia	0.57	2.76	2.54	10.65	13.40	4.47
Symphyotrichum dumosum	0.43	2.07	1.25	5.23	7.30	2.43
Liquidambar styraciflua	0.86	4.14	0.68	2.84	6.98	2.33
Rubus trivialis	0.57	2.76	0.83	3.47	6.23	2.08
Dichanthelium commutatum	0.57	2.76	0.68	2.84	5.60	1.87
Triadica sebifera	0.71	3.45	0.50	2.09	5.54	1.85
Campsis radicans	0.57	2.76	0.64	2.66	5.42	1.81
Hypericum hypericoides	0.43	2.07	0.74	3.11	5.18	1.73
Vitis rotundifolia	0.43	2.07	0.71	2.99	5.06	1.69
Potentilla indica	0.14	0.69	1.04	4.34	5.03	1.68
Smilax bona-nox	0.71	3.45	0.32	1.35	4.79	1.60
Ilex decidua	0.43	2.07	0.64	2.69	4.76	1.59
Trachelospermum difforme	0.43	2.07	0.57	2.39	4.46	1.49
Tradescantia ohioensis	0.57	2.76	0.39	1.64	4.40	1.47
Carex reniformis	0.29	1.38	0.66	2.78	4.16	1.39
Quercus phellos	0.57	2.76	0.29	1.20	3.95	1.32
Bignonia capreolata	0.29	1.38	0.61	2.54	3.92	1.31
Brunnichia ovata	0.43	2.07	0.32	1.35	3.41	1.14
Lysimachia radicans	0.57	2.76	0.14	0.60	3.36	1.12
Viola sororia var. missouriensis	0.29	1.38	0.46	1.94	3.32	1.11
Ilex vomitoria	0.29	1.38	0.46	1.94	3.32	1.11
Carpinus caroliniana	0.43	2.07	0.25	1.05	3.12	1.04

Table 10-1D

Summary of Overstory Layer
Quercus (phellos, nigra. laurifolia) Temporarily Flooded Forest Alliance
Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viburnum dentatum	0.43	2.07	0.25	1.05	3.12	1.04
Sabal minor	0.14	0.69	0.57	2.39	3.08	1.03
Rubus argutus	0.29	1.38	0.36	1.50	2.87	0.96
Smilax rotundifolia	0.43	2.07	0.14	0.60	2.67	0.89
Vernonia missurica	0.29	1.38	0.25	1.05	2.43	0.81
Oplismenus hirtellus	0.29	1.38	0.21	0.90	2.28	0.76
Ampelopsis arborea	0.29	1.38	0.21	0.90	2.28	0.76
Viola palmata	0.29	1.38	0.18	0.75	2.13	0.71
Acer rubrum var. drummondii	0.29	1.38	0.18	0.75	2.13	0.71
Lonicera japonica	0.29	1.38	0.14	0.60	1.98	0.66
Carex debilis var. debilis	0.14	0.69	0.28	1.17	1.86	0.62
Berchemia scandens	0.29	1.38	0.11	0.45	1.83	0.61
Elephantopus carolinianus	0.14	0.69	0.25	1.05	1.74	0.58
Oxalis dillenii	0.14	0.69	0.25	1.05	1.74	0.58
Ilex opaca	0.29	1.38	0.07	0.30	1.68	0.56
Eupatorium semiserratum	0.14	0.69	0.21	0.90	1.59	0.53
Thelypteris kunthii	0.14	0.69	0.19	0.78	1.47	0.49
Quercus laurifolia	0.14	0.69	0.18	0.75	1.44	0.48
Ulmus americana	0.14	0.69	0.18	0.75	1.44	0.48
Saccharum giganteum	0.14	0.69	0.14	0.60	1.29	0.43
Wisteria sinensis	0.14	0.69	0.14	0.60	1.29	0.43
Callicarpa americana	0.14	0.69	0.11	0.45	1.14	0.38
Chasmanthium latifolium	0.14	0.69	0.11	0.45	1.14	0.38

Table 10-1D

Summary of Overstory Layer
Quercus (phellos, nigra. laurifolia) Temporarily Flooded Forest Alliance
Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Rhexia mariana	0.14	0.69	0.11	0.45	1.14	0.38
Polygonum punctatum	0.14	0.69	0.11	0.45	1.14	0.38
Nyssa sylvatica	0.14	0.69	0.11	0.45	1.14	0.38
Clematis crispa	0.14	0.69	0.07	0.30	0.99	0.33
Vitis cinerea	0.14	0.69	0.07	0.30	0.99	0.33
Carex caroliniana	0.14	0.69	0.07	0.30	0.99	0.33
Chasmanthium laxum	0.14	0.69	0.07	0.30	0.99	0.33
Smilax glauca	0.14	0.69	0.07	0.30	0.99	0.33
Dichanthelium acuminatum	0.14	0.69	0.07	0.30	0.99	0.33
Eupatorium serotinum	0.14	0.69	0.07	0.30	0.99	0.33
Galium aparine	0.14	0.69	0.07	0.30	0.99	0.33
Tradescantia hirsutiflora	0.14	0.69	0.04	0.15	0.84	0.28
Lygodium japonicum	0.14	0.69	0.04	0.15	0.84	0.28
Acer rubrum var. rubrum	0.14	0.69	0.04	0.15	0.84	0.28
Melothria pendula	0.14	0.69	0.04	0.15	0.84	0.28
Aristolochia serpentaria	0.14	0.69	0.04	0.15	0.84	0.28
Panicum anceps	0.14	0.69	0.04	0.15	0.84	0.28
Pinus taeda	0.14	0.69	0.04	0.15	0.84	0.28
Cyperus sp.	0.14	0.69	0.04	0.15	0.84	0.28
Crataegus marshallii	0.14	0.69	0.04	0.15	0.84	0.28
Galactia regularis	0.14	0.69	0.04	0.15	0.84	0.28
Sanicula canadensis	0.14	0.69	0.04	0.15	0.84	0.28
Dichanthelium dichotomum	0.14	0.69	0.04	0.15	0.84	0.28

Table 10-1D

Summary of Overstory Layer
***Quercus (phellos, nigra. laurifolia)* Temporarily Flooded Forest Alliance**
***Quercus phellos - Liquidamber styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest**

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carex flaccosperma	0.14	0.69	0.04	0.15	0.84	0.28
Carex complanata	0.14	0.69	0.04	0.15	0.84	0.28
Nyssa aquatica	0.14	0.69	0.04	0.15	0.84	0.28
Quercus similis	0.14	0.69	0.04	0.15	0.84	0.28
Galium tinctorium	0.14	0.69	0.04	0.15	0.84	0.28
Elymus virginicus	0.14	0.69	0.04	0.15	0.84	0.28
Leersia hexandra	0.14	0.69	0.04	0.15	0.84	0.28

Table 10-2A

Summary of Overstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum / Carex deblis Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus nigra	1.00	21.74	101.33	29.69	10.10	43.58	95.01	31.67
Liquidambar styraciflua	0.53	11.59	40.00	11.72	3.82	16.49	39.80	13.27
Carpinus caroliniana	0.53	11.59	53.33	15.62	0.97	4.19	31.41	10.47
Quercus laurifolia	0.40	8.70	32.00	9.37	1.22	5.27	23.34	7.78
Pinus taeda	0.27	5.80	16.00	4.69	1.61	6.95	17.44	5.81
Nyssa sylvatica	0.27	5.80	13.33	3.91	1.76	7.58	17.28	5.76
Ilex opaca	0.20	4.35	13.33	3.91	0.58	2.49	10.74	3.58
Carya aquatica	0.13	2.90	5.33	1.56	1.04	4.50	8.96	2.99
Halesia diptera	0.20	4.35	10.67	3.12	0.29	1.26	8.73	2.91
Triadica sebifera	0.07	1.45	10.67	3.12	0.32	1.40	5.97	1.99
Quercus similis	0.07	1.45	5.33	1.56	0.35	1.50	4.51	1.50
Quercus phellos	0.07	1.45	5.33	1.56	0.20	0.87	3.88	1.29
Fraxinus caroliniana	0.07	1.45	2.67	0.78	0.22	0.96	3.19	1.06
Parthenocissus quinquefolia	0.07	1.45	2.67	0.78	0.12	0.52	2.75	0.92
Planera aquatica	0.07	1.45	2.67	0.78	0.08	0.36	2.59	0.86
Ilex decidua	0.07	1.45	2.67	0.78	0.07	0.29	2.52	0.84
Acer rubrum var. rubrum	0.07	1.45	2.67	0.78	0.06	0.26	2.49	0.83
Fraxinus pennsylvanica	0.07	1.45	2.67	0.78	0.06	0.26	2.49	0.83
Quercus alba	0.07	1.45	2.67	0.78	0.05	0.23	2.46	0.82
Celtis laevigata	0.07	1.45	2.67	0.78	0.05	0.23	2.46	0.82
Acer rubrum var. drummondii	0.07	1.45	2.67	0.78	0.04	0.19	2.42	0.81
Sassafras albidum	0.07	1.45	2.67	0.78	0.04	0.16	2.40	0.80
Quercus michauxii	0.07	1.45	2.67	0.78	0.04	0.15	2.38	0.79
Betula nigra	0.07	1.45	2.67	0.78	0.04	0.15	2.38	0.79

Table 10-2A

Summary of Overstory Layer
***Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum / Carex deblis
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Prunus serotina	0.07	1.45	2.67	0.78	0.03	0.14	2.37	0.79

Table 10-2B

Summary of Midstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum / Carex deblis Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carpinus caroliniana	0.53	6.45	181.33	14.20	0.64	14.74	35.39	11.80
Ilex vomitoria	0.73	8.87	138.67	10.86	0.40	9.30	29.03	9.68
Triadica sebifera	0.60	7.26	104.00	8.14	0.56	12.88	28.28	9.43
Quercus nigra	0.40	4.84	130.67	10.23	0.51	11.83	26.89	8.96
Ilex opaca	0.67	8.06	122.67	9.60	0.31	7.14	24.81	8.27
Nyssa sylvatica	0.47	5.65	74.67	5.85	0.29	6.60	18.09	6.03
Ilex decidua	0.47	5.65	72.00	5.64	0.28	6.57	17.85	5.95
Halesia diptera	0.47	5.65	82.67	6.47	0.22	5.09	17.21	5.74
Liquidambar styraciflua	0.53	6.45	42.67	3.34	0.12	2.72	12.52	4.17
Vitis rotundifolia	0.53	6.45	40.00	3.13	0.04	0.98	10.56	3.52
Quercus michauxii	0.33	4.03	29.33	2.30	0.06	1.46	7.79	2.60
Acer rubrum var. drummondii	0.20	2.42	32.00	2.51	0.12	2.68	7.60	2.53
Acer rubrum var. rubrum	0.07	0.81	32.00	2.51	0.17	4.02	7.33	2.44
Quercus laurifolia	0.20	2.42	18.67	1.46	0.04	0.98	4.86	1.62
Cyrilla racemiflora	0.07	0.81	21.33	1.67	0.09	2.06	4.54	1.51
Quercus phellos	0.13	1.61	18.67	1.46	0.06	1.46	4.53	1.51
Vitis aestivalis	0.20	2.42	16.00	1.25	0.03	0.58	4.25	1.42
Persia borbonia	0.07	0.81	13.33	1.04	0.07	1.64	3.49	1.16
Pinus taeda	0.13	1.61	5.33	0.42	0.05	1.12	3.15	1.05
Ilex coriacea	0.07	0.81	10.67	0.84	0.05	1.13	2.77	0.92
Vitis cinerea	0.13	1.61	8.00	0.63	0.02	0.37	2.61	0.87
Betula nigra	0.07	0.81	16.00	1.25	0.02	0.49	2.55	0.85
Celtis laevigata	0.13	1.61	5.33	0.42	0.02	0.47	2.50	0.83
Ulmus rubra	0.13	1.61	5.33	0.42	0.01	0.28	2.31	0.77

Table 10-2B

Summary of Midstory Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum / Carex deblis Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Viburnum nudum	0.07	0.81	8.00	0.63	0.04	0.82	2.25	0.75
Morella cerifera	0.07	0.81	10.67	0.84	0.02	0.54	2.18	0.73
Ligustrum sinense	0.07	0.81	2.67	0.21	0.02	0.44	1.45	0.48
Crataegus opaca	0.07	0.81	5.33	0.42	0.01	0.22	1.45	0.48
Hamamelis virginiana	0.07	0.81	5.33	0.42	0.01	0.21	1.44	0.48
Sassafras albidum	0.07	0.81	2.67	0.21	0.01	0.27	1.29	0.43
Prunus serotina	0.07	0.81	2.67	0.21	0.01	0.24	1.25	0.42
Crataegus viridis	0.07	0.81	2.67	0.21	0.01	0.16	1.17	0.39
Persea palustris	0.07	0.81	2.67	0.21	0.01	0.12	1.14	0.38
Symplocos tinctoria	0.07	0.81	2.67	0.21	0.01	0.12	1.13	0.38
Viburnum dentatum	0.07	0.81	2.67	0.21	0.00	0.09	1.11	0.37
Chionanthus virginica	0.07	0.81	2.67	0.21	0.00	0.08	1.10	0.37
Vaccinium elliottii	0.07	0.81	2.67	0.21	0.00	0.05	1.06	0.35
Amorpha fruticosa	0.07	0.81	2.67	0.21	0.00	0.04	1.06	0.35

Table 10-2C

Summary of Shrub Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum / Carex deblis Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.40	10.71	693.33	14.29	0.11	29.58	54.58	18.19
Triadica sebifera	0.33	8.93	800.00	16.48	0.06	16.39	41.80	13.93
Rubus argutus	0.13	3.57	693.33	14.29	0.03	8.19	26.05	8.68
Liquidambar styraciflua	0.27	7.14	346.67	7.14	0.04	10.56	24.84	8.28
Vitis rotundifolia	0.40	10.71	293.33	6.04	0.02	4.44	21.20	7.07
Quercus nigra	0.27	7.14	346.67	7.14	0.02	4.03	18.31	6.10
Carpinus caroliniana	0.27	7.14	240.00	4.95	0.01	1.67	13.75	4.58
Ilex decidua	0.20	5.36	133.33	2.75	0.01	2.50	10.60	3.53
Ilex coriacea	0.07	1.79	293.33	6.04	0.01	2.36	10.19	3.40
Ilex opaca	0.20	5.36	80.00	1.65	0.01	2.08	9.09	3.03
Hamamelis virginiana	0.07	1.79	106.67	2.20	0.01	3.89	7.87	2.62
Acer rubrum var. rubrum	0.07	1.79	186.67	3.85	0.01	1.81	7.44	2.48
Sebastiana fruticosa	0.20	5.36	80.00	1.65	0.00	0.42	7.42	2.47
Halesia diptera	0.13	3.57	80.00	1.65	0.01	1.53	6.75	2.25
Betula nigra	0.07	1.79	106.67	2.20	0.01	2.64	6.62	2.21
Persia borbonia	0.07	1.79	53.33	1.10	0.01	3.47	6.36	2.12
Nyssa sylvatica	0.07	1.79	80.00	1.65	0.01	2.36	5.80	1.93
Callicarpa americana	0.07	1.79	53.33	1.10	0.00	0.28	3.16	1.05
Sanicula canadensis	0.07	1.79	26.67	0.55	0.00	0.56	2.89	0.96
Viburnum nudum	0.07	1.79	26.67	0.55	0.00	0.56	2.89	0.96
Cyrilla racemiflora	0.07	1.79	26.67	0.55	0.00	0.14	2.47	0.82
Symplocos tinctoria	0.07	1.79	26.67	0.55	0.00	0.14	2.47	0.82
Vitis aestivalis	0.07	1.79	26.67	0.55	0.00	0.14	2.47	0.82
Quercus michauxii	0.07	1.79	26.67	0.55	0.00	0.14	2.47	0.82

Table 10-2C

Summary of Shrub Layer
***Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum / Carex deblis
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Vaccinium arboreum	0.07	1.79	26.67	0.55	0.00	0.14	2.47	0.82

Table 10-2D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium laxum	0.47	2.40	2.97	9.38	11.77	3.92
Parthenocissus quinquefolia	0.40	2.05	2.63	8.31	10.37	3.46
Vitis rotundifolia	0.93	4.79	1.38	4.36	9.15	3.05
Chasmanthium latifolium	0.20	1.03	2.49	7.85	8.88	2.96
Rubus argutus	0.47	2.40	1.33	4.21	6.61	2.20
Toxicodendron radicans	0.53	2.74	1.18	3.74	6.47	2.16
Ilex coriacea	0.07	0.34	1.92	6.06	6.40	2.13
Ilex vomitoria	0.73	3.77	0.82	2.58	6.34	2.11
Bignonia capreolata	0.47	2.40	1.18	3.71	6.11	2.04
Liquidambar styraciflua	0.67	3.42	0.48	1.53	4.95	1.65
Carpinus caroliniana	0.60	3.08	0.55	1.74	4.82	1.61
Ilex opaca	0.53	2.74	0.53	1.68	4.42	1.47
Chasmanthium sessiliflorum	0.07	0.34	1.27	4.00	4.34	1.45
Triadica sebifera	0.53	2.74	0.33	1.05	3.79	1.26
Viburnum dentatum	0.60	3.08	0.18	0.58	3.66	1.22
Oplismenus hirtellus	0.33	1.71	0.52	1.63	3.34	1.11
Ilex decidua	0.40	2.05	0.37	1.16	3.21	1.07
Lonicera japonica	0.20	1.03	0.68	2.16	3.18	1.06
Dichanthelium commutatum	0.40	2.05	0.28	0.89	2.95	0.98
Tradescantia ohioensis	0.27	1.37	0.42	1.32	2.69	0.90
Nyssa sylvatica	0.40	2.05	0.18	0.58	2.63	0.88
Brunnichia ovata	0.27	1.37	0.40	1.26	2.63	0.88
Smilax bona-nox	0.33	1.71	0.27	0.84	2.55	0.85
Acer rubrum var. drummondii	0.33	1.71	0.25	0.79	2.50	0.83

Table 10-2D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Unknown herbaceous	0.20	1.03	0.45	1.42	2.45	0.82
Carex joorii	0.07	0.34	0.67	2.10	2.45	0.82
Callicarpa americana	0.27	1.37	0.32	1.00	2.37	0.79
Lygodium japonicum	0.33	1.71	0.18	0.58	2.29	0.76
Sebastiana fruticosa	0.27	1.37	0.27	0.84	2.21	0.74
Campsis radicans	0.27	1.37	0.27	0.84	2.21	0.74
Quercus nigra	0.27	1.37	0.25	0.78	2.15	0.72
Rubus trivialis	0.20	1.03	0.30	0.96	1.98	0.66
Carex cherokeensis	0.13	0.68	0.40	1.26	1.95	0.65
Commelina virginica	0.20	1.03	0.23	0.74	1.76	0.59
Quercus laurifolia	0.27	1.37	0.08	0.26	1.63	0.54
Viola sororia	0.20	1.03	0.17	0.53	1.55	0.52
Mitchella repens	0.20	1.03	0.15	0.47	1.50	0.50
Sanicula canadensis	0.13	0.68	0.25	0.79	1.47	0.49
Viola sororia var. missouriensis	0.20	1.03	0.12	0.37	1.40	0.47
Scleria triglomerata	0.13	0.68	0.22	0.68	1.37	0.46
Oxalis dillenii	0.13	0.68	0.22	0.68	1.37	0.46
Cardamine sp.	0.20	1.03	0.08	0.26	1.29	0.43
Pinus taeda	0.20	1.03	0.07	0.21	1.24	0.41
Acer rubrum var. rubrum	0.20	1.03	0.07	0.21	1.24	0.41
Polygama verticillata	0.07	0.34	0.28	0.89	1.24	0.41
Persia borbonia	0.13	0.68	0.17	0.53	1.21	0.40
Boehmeria cylindrica	0.07	0.34	0.27	0.84	1.18	0.39
Carex brevior	0.07	0.34	0.26	0.83	1.17	0.39

Table 10-2D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carex albolutescens	0.07	0.34	0.25	0.79	1.13	0.38
Leersia hexandra	0.07	0.34	0.25	0.79	1.13	0.38
Polygonum hydropiperoides	0.13	0.68	0.08	0.26	0.95	0.32
Carex caroliniana	0.13	0.68	0.08	0.26	0.95	0.32
Halesia diptera	0.13	0.68	0.08	0.26	0.95	0.32
Smilax rotundifolia	0.13	0.68	0.08	0.26	0.95	0.32
Carex debilis	0.13	0.68	0.07	0.21	0.90	0.30
Carex louisianica	0.13	0.68	0.07	0.21	0.90	0.30
Smilax glauca	0.13	0.68	0.07	0.21	0.90	0.30
Dichanthelium laxiflorum	0.13	0.68	0.07	0.21	0.90	0.30
Vaccinium elliottii	0.13	0.68	0.05	0.16	0.84	0.28
Symplocos tinctoria	0.13	0.68	0.05	0.16	0.84	0.28
Hypericum mutilum	0.07	0.34	0.15	0.47	0.82	0.27
Symphyotrichum dumosum	0.13	0.68	0.03	0.11	0.79	0.26
Carya sp.	0.07	0.34	0.13	0.42	0.76	0.25
Cyrilla racemiflora	0.07	0.34	0.13	0.42	0.76	0.25
Saururus cernuus	0.07	0.34	0.13	0.42	0.76	0.25
Tillandsia usneoides	0.07	0.34	0.12	0.37	0.71	0.24
Lysimachia radicans	0.07	0.34	0.08	0.26	0.61	0.20
Symphyotrichum species	0.07	0.34	0.08	0.26	0.61	0.20
Pluchea camphorata	0.07	0.34	0.08	0.26	0.61	0.20
Mikania scandens	0.07	0.34	0.08	0.26	0.61	0.20
Betula nigra	0.07	0.34	0.08	0.26	0.61	0.20
Viola palmata	0.07	0.34	0.07	0.21	0.55	0.18

Table 10-2D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Potentilla indica	0.07	0.34	0.07	0.21	0.55	0.18
Taxodium distichum	0.07	0.34	0.07	0.21	0.55	0.18
Ptilimnium capillaceum	0.07	0.34	0.05	0.16	0.50	0.17
Carex intumescens	0.07	0.34	0.03	0.11	0.45	0.15
Vaccinium arboreum	0.07	0.34	0.03	0.11	0.45	0.15
Galium aparine	0.07	0.34	0.03	0.11	0.45	0.15
Acmella oppositifolia var. repens	0.07	0.34	0.03	0.11	0.45	0.15
Carya glabra var. hirsuta	0.07	0.34	0.03	0.11	0.45	0.15
Ligustrum sinense	0.07	0.34	0.03	0.11	0.45	0.15
Scleria oligantha	0.07	0.34	0.03	0.11	0.45	0.15
Quercus phellos	0.07	0.34	0.03	0.11	0.45	0.15
Castanea pumila	0.07	0.34	0.03	0.11	0.45	0.15
Elephantopus carolinianus	0.07	0.34	0.03	0.11	0.45	0.15
Quercus similis	0.07	0.34	0.03	0.11	0.45	0.15
Sassafras albidum	0.07	0.34	0.02	0.05	0.40	0.13
Aralia spinosa	0.07	0.34	0.02	0.05	0.40	0.13
Carya tomentosa	0.07	0.34	0.02	0.05	0.40	0.13
Dichanthelium sphaerocarpon	0.07	0.34	0.02	0.05	0.40	0.13
Dichanthelium scoparium	0.07	0.34	0.02	0.05	0.40	0.13
Carex flaccosperma	0.07	0.34	0.02	0.05	0.40	0.13
Hydrocotyle umbellata	0.07	0.34	0.02	0.05	0.40	0.13
Allium canadense var. canadense	0.07	0.34	0.02	0.05	0.40	0.13
Crataegus marshallii	0.07	0.34	0.02	0.05	0.40	0.13
Ulmus alata	0.07	0.34	0.02	0.05	0.40	0.13

Table 10-2D

Summary of Herbaceous Layer
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance
Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Ilex opaca - Viccinium fuscatum
Temporarily Flooded Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cornus foemina	0.07	0.34	0.02	0.05	0.40	0.13
Carex complanata	0.07	0.34	0.02	0.05	0.40	0.13
Hypericum hypericoides	0.07	0.34	0.02	0.05	0.40	0.13
Solidago canadensis	0.07	0.34	0.02	0.05	0.40	0.13
Erechtites hieraciifolia	0.07	0.34	0.02	0.05	0.40	0.13
Elymus virginicus	0.07	0.34	0.02	0.05	0.40	0.13
Dichanthelium acuminatum	0.07	0.34	0.02	0.05	0.40	0.13
Elephantopus tomentosus	0.07	0.34	0.02	0.05	0.40	0.13
Galium tinctorium	0.07	0.34	0.02	0.05	0.40	0.13
Rhexia mariana var. mariana	0.07	0.34	0.02	0.05	0.40	0.13
Dichanthelium boscii	0.07	0.34	0.02	0.05	0.40	0.13
Conoclinium coelestinum	0.07	0.34	0.02	0.05	0.40	0.13
Planera aquatica	0.07	0.34	0.02	0.05	0.40	0.13
Teucrium canadense	0.07	0.34	0.02	0.05	0.40	0.13

Table 11A

Summary of Overstory Layer
Quercus alba (Quercus nigra) Forest Alliance
Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus hemisphaerica	1.00	30.00	200.00	55.56	10.67	67.57	153.12	51.04
Ostrya virginiana	0.33	10.00	53.33	14.81	1.19	7.55	32.37	10.79
Pinus taeda	0.33	10.00	40.00	11.11	1.54	9.74	30.85	10.28
Quercus falcata	0.33	10.00	13.33	3.70	1.21	7.67	21.37	7.12
Fraxinus americana	0.33	10.00	13.33	3.70	0.51	3.21	16.91	5.64
Persea palustris	0.33	10.00	13.33	3.70	0.27	1.70	15.40	5.13
Prunus serotina	0.33	10.00	13.33	3.70	0.25	1.59	15.30	5.10
Carpinus caroliniana	0.33	10.00	13.33	3.70	0.15	0.97	14.67	4.89

Table 11B

Summary of Midstory Layer
Quercus alba (Quercus nigra) Forest Alliance
Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	1.00	20.00	1440.00	72.97	3.70	69.29	162.26	54.09
Prunus serotina	0.67	13.33	266.67	13.51	0.74	13.84	40.69	13.56
Persea palustris	0.67	13.33	66.67	3.38	0.15	2.72	19.43	6.48
Vitis rotundifolia	0.67	13.33	66.67	3.38	0.06	1.08	17.79	5.93
Quercus hemisphaerica	0.33	6.67	40.00	2.03	0.24	4.43	13.13	4.38
Ilex opaca	0.33	6.67	13.33	0.68	0.16	2.92	10.26	3.42
Sassafras albidum	0.33	6.67	26.67	1.35	0.09	1.72	9.73	3.24
Cornus florida	0.33	6.67	13.33	0.68	0.10	1.96	9.30	3.10
Acer rubrum var. rubrum	0.33	6.67	26.67	1.35	0.05	0.89	8.90	2.97
Vaccinium arboreum	0.33	6.67	13.33	0.68	0.06	1.15	8.49	2.83

Table 11C

Quercus alba (Quercus nigra) Forest Alliance
Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	1.00	50.00	2533.33	44.19	0.30	46.96	141.15	47.05
Prunus serotina	0.33	16.67	1066.67	18.60	0.23	35.22	70.49	23.50
Persea palustris	0.33	16.67	1866.67	32.56	0.10	15.79	65.01	21.67
Callicarpa americana	0.33	16.67	266.67	4.65	0.01	2.02	23.34	7.78

Table 11D

Summary of Herbaceous Layer
Quercus alba (Quercus nigra) Forest Alliance
Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ilex vomitoria	1.00	17.65	3.00	38.30	55.94	18.65
Prunus serotina	0.33	5.88	2.92	37.23	43.12	14.37
Callicarpa americana	0.67	11.76	0.42	5.32	17.08	5.69
Vitis rotundifolia	0.67	11.76	0.25	3.19	14.96	4.99
Quercus hemispherica	0.67	11.76	0.17	2.13	13.89	4.63
Smilax bona-nox	0.33	5.88	0.25	3.19	9.07	3.02
Persea palustris	0.33	5.88	0.25	3.19	9.07	3.02
Ostrya virginiana	0.33	5.88	0.17	2.13	8.01	2.67
Vaccinium arboreum	0.33	5.88	0.17	2.13	8.01	2.67
Gonolobus suberosus	0.33	5.88	0.08	1.06	6.95	2.32
Ilex opaca	0.33	5.88	0.08	1.06	6.95	2.32
Elephantopus carolinianus	0.33	5.88	0.08	1.06	6.95	2.32

Table 12A

Summary of Overstory Layer
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance
Quercus lyrata - Carya aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus lyrata	0.50	15.38	40.00	15.38	11.00	50.68	81.45	27.15
Carya aquatica	0.50	15.38	60.00	23.08	3.68	16.96	55.42	18.47
Ulmus americana	0.75	23.08	40.00	15.38	2.15	9.90	48.36	16.12
Triadica sebifera	0.50	15.38	40.00	15.38	0.95	4.37	35.14	11.71
Liquidambar styraciflua	0.25	7.69	30.00	11.54	2.60	11.95	31.19	10.40
Nyssa sylvatica	0.25	7.69	30.00	11.54	0.94	4.32	23.55	7.85
Acer rubrum var. drummondii	0.25	7.69	10.00	3.85	0.27	1.23	12.77	4.26
Carpinus caroliniana	0.25	7.69	10.00	3.85	0.13	0.59	12.13	4.04

Table 12B

Summary of Midstory Layer
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance
Quercus lyrata - Carya aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex decidua	1.00	15.38	270.00	26.21	1.80	48.71	90.31	30.10
Triadica sebifera	0.75	11.54	270.00	26.21	0.36	9.88	47.63	15.88
Nyssa sylvatica	1.00	15.38	70.00	6.80	0.46	12.48	34.66	11.55
Ilex opaca	0.25	3.85	140.00	13.59	0.26	7.09	24.53	8.18
Liquidambar styraciflua	0.50	7.69	70.00	6.80	0.09	2.49	16.98	5.66
Carpinus caroliniana	0.50	7.69	30.00	2.91	0.14	3.81	14.41	4.80
Ulmus americana	0.50	7.69	30.00	2.91	0.13	3.64	14.24	4.75
Frangula caroliniana	0.25	3.85	40.00	3.88	0.08	2.05	9.78	3.26
Forestiera acuminata	0.25	3.85	30.00	2.91	0.11	2.99	9.75	3.25
Carya aquatica	0.25	3.85	20.00	1.94	0.11	2.89	8.68	2.89
Crataegus opaca	0.25	3.85	20.00	1.94	0.07	1.96	7.75	2.58
Betula nigra	0.25	3.85	10.00	0.97	0.02	0.64	5.46	1.82
Cornus foemina	0.25	3.85	10.00	0.97	0.02	0.52	5.34	1.78
Halesia diptera	0.25	3.85	10.00	0.97	0.02	0.49	5.31	1.77
Vitis rotundifolia	0.25	3.85	10.00	0.97	0.01	0.34	5.16	1.72

Table 12C

Summary of Shrub Layer
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance
Quercus lyrata - Carya aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.50	25.00	1200.00	66.67	0.04	25.46	117.13	39.04
Liquidambar styraciflua	0.50	25.00	200.00	11.11	0.04	23.15	59.26	19.75
Ilex decidua	0.25	12.50	100.00	5.56	0.04	20.83	38.89	12.96
Ulmus americana	0.25	12.50	100.00	5.56	0.03	18.52	36.57	12.19
Forestiera acuminata	0.25	12.50	100.00	5.56	0.02	10.88	28.94	9.65
Vitis cinerea	0.25	12.50	100.00	5.56	0.00	1.16	19.21	6.40

Table 12D

Summary of Herbaceous Layer
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance
Quercus lyrata - Carya aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Campsis radicans	1.00	4.35	3.05	13.25	17.60	5.87
Brunnichia ovata	0.75	3.26	2.69	11.68	14.94	4.98
Carpinus caroliniana	1.00	4.35	1.50	6.52	10.87	3.62
Ilex decidua	1.00	4.35	1.19	5.16	9.51	3.17
Liquidambar styraciflua	1.00	4.35	1.19	5.16	9.51	3.17
Triadica sebifera	0.75	3.26	1.44	6.25	9.51	3.17
Toxicodendron radicans	0.75	3.26	1.13	4.89	8.15	2.72
Quercus laurifolia	0.75	3.26	0.44	1.90	5.16	1.72
Acer rubrum var. drummondii	0.50	2.17	0.69	2.99	5.16	1.72
Carex albolutescens	0.25	1.09	0.94	4.07	5.16	1.72
Vitis rotundifolia	0.50	2.17	0.50	2.17	4.35	1.45
Lysimachia radicans	0.50	2.17	0.50	2.17	4.35	1.45
Ilex opaca	0.50	2.17	0.44	1.90	4.08	1.36
Scoparia dulcis	0.25	1.09	0.63	2.72	3.80	1.27
Dichanthelium commutatum	0.50	2.17	0.31	1.36	3.53	1.18
Parthenocissus quinquefolia	0.50	2.17	0.25	1.09	3.26	1.09
Ampelopsis arborea	0.50	2.17	0.25	1.09	3.26	1.09
Vitis cinerea	0.50	2.17	0.19	0.81	2.99	1.00
Oplismenus hirtellus	0.50	2.17	0.19	0.81	2.99	1.00
Nyssa sylvatica	0.50	2.17	0.19	0.81	2.99	1.00
Ulmus americana	0.50	2.17	0.19	0.81	2.99	1.00
Mitchella repens	0.50	2.17	0.19	0.81	2.99	1.00
Trachelospermum difforme	0.25	1.09	0.44	1.90	2.99	1.00
Viola sororia var. missouriensis	0.25	1.09	0.44	1.90	2.99	1.00

Table 12D

Summary of Herbaceous Layer
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance
Quercus lyrata - Carya aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Lonicera japonica	0.50	2.17	0.13	0.54	2.72	0.91
Justicia ovata var. lanceolata	0.50	2.17	0.13	0.54	2.72	0.91
Crataegus viridis	0.50	2.17	0.13	0.54	2.72	0.91
Cornus foemina	0.50	2.17	0.13	0.54	2.72	0.91
Rhexia mariana	0.25	1.09	0.38	1.63	2.72	0.91
Ilex vomitoria	0.25	1.09	0.31	1.36	2.44	0.81
Tradescantia ohioensis	0.25	1.09	0.31	1.36	2.44	0.81
Chasmanthium laxum	0.25	1.09	0.19	0.81	1.90	0.63
Sida spinosa	0.25	1.09	0.19	0.81	1.90	0.63
Eupatorium semiserratum	0.25	1.09	0.19	0.81	1.90	0.63
Elephantopus carolinianus	0.25	1.09	0.15	0.65	1.74	0.58
Acalypha rhomboidea	0.25	1.09	0.13	0.54	1.63	0.54
Symphyotrichum dumosum	0.25	1.09	0.13	0.54	1.63	0.54
Cephalanthus occidentalis	0.25	1.09	0.13	0.54	1.63	0.54
Planera aquatica	0.25	1.09	0.13	0.54	1.63	0.54
Vernonia missurica	0.25	1.09	0.13	0.54	1.63	0.54
Amsonia tabernaemontana	0.25	1.09	0.13	0.54	1.63	0.54
Cardamine sp.	0.25	1.09	0.13	0.54	1.63	0.54
Hypericum hypericoides	0.25	1.09	0.13	0.54	1.63	0.54
Viola palmata	0.25	1.09	0.13	0.54	1.63	0.54
Acer rubrum var. rubrum	0.25	1.09	0.06	0.27	1.36	0.45
Chasmanthium latifolium	0.25	1.09	0.06	0.27	1.36	0.45
Quercus lyrata	0.25	1.09	0.06	0.27	1.36	0.45
Polygonum punctatum	0.25	1.09	0.06	0.27	1.36	0.45

Table 12D

Summary of Herbaceous Layer
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance
Quercus lyrata - Carya aquatica Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carya aquatica	0.25	1.09	0.06	0.27	1.36	0.45
Clematis crispa	0.25	1.09	0.06	0.27	1.36	0.45
Crataegus opaca	0.25	1.09	0.06	0.27	1.36	0.45
Fraxinus caroliniana	0.25	1.09	0.06	0.27	1.36	0.45
Sonchus asper	0.25	1.09	0.06	0.27	1.36	0.45
Viburnum dentatum	0.25	1.09	0.06	0.27	1.36	0.45
Halesia diptera	0.25	1.09	0.06	0.27	1.36	0.45
Rubus trivialis	0.25	1.09	0.06	0.27	1.36	0.45

Table 13A

Summary of Overstory Layer
Quercus nigra Forest Alliance
Proposed: *Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Chasmanthium laxum* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Quercus nigra	1.00	30.77	130.00	52.00	6.05	70.58	153.34	51.11
Liquidambar styraciflua	1.00	30.77	50.00	20.00	0.83	9.69	60.46	20.15
Pinus taeda	0.25	7.69	30.00	12.00	1.08	12.61	32.30	10.77
Carpinus caroliniana	0.25	7.69	10.00	4.00	0.20	2.35	14.04	4.68
Triadica sebifera	0.25	7.69	10.00	4.00	0.15	1.80	13.49	4.50
Nyssa sylvatica	0.25	7.69	10.00	4.00	0.13	1.55	13.24	4.41
Quercus stellata	0.25	7.69	10.00	4.00	0.12	1.43	13.12	4.37

Table 13B

Summary of Midstory Layer
Quercus nigra Forest Alliance
Proposed: *Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Chasmanthium laxum* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Carpinus caroliniana	0.75	9.09	580.00	34.94	1.91	34.68	78.71	26.24
Quercus nigra	1.00	12.12	310.00	18.67	1.46	26.65	57.45	19.15
Liquidambar styraciflua	1.00	12.12	150.00	9.04	0.43	7.91	29.06	9.69
Ilex vomitoria	0.75	9.09	160.00	9.64	0.47	8.61	27.34	9.11
Quercus hemispherica	0.25	3.03	70.00	4.22	0.31	5.72	12.96	4.32
Nyssa sylvatica	0.50	6.06	60.00	3.61	0.15	2.68	12.36	4.12
Ilex opaca	0.50	6.06	40.00	2.41	0.15	2.79	11.26	3.75
Vitis rotundifolia	0.50	6.06	50.00	3.01	0.04	0.64	9.72	3.24
Vaccinium corybosum	0.25	3.03	60.00	3.61	0.09	1.61	8.26	2.75
Ilex decidua	0.50	6.06	20.00	1.20	0.05	0.83	8.10	2.70
Quercus falcata	0.50	6.06	20.00	1.20	0.05	0.83	8.09	2.70
Triadica sebifera	0.25	3.03	40.00	2.41	0.13	2.31	7.75	2.58
Halesia diptera	0.25	3.03	20.00	1.20	0.09	1.69	5.93	1.98
Vaccinium arboreum	0.25	3.03	30.00	1.81	0.03	0.62	5.46	1.82
Pinus taeda	0.25	3.03	10.00	0.60	0.08	1.43	5.06	1.69
Quercus michaxii	0.25	3.03	20.00	1.20	0.02	0.36	4.59	1.53
Crataegus opaca	0.25	3.03	10.00	0.60	0.03	0.51	4.15	1.38
Carya glabra	0.25	3.03	10.00	0.60	0.01	0.13	3.76	1.25

Table 13C

Summary of Shrub Layer
Quercus nigra Forest Alliance
Proposed: *Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Chasmanthium laxum* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.50	20.00	400.00	26.67	0.11	60.44	107.11	35.70
Halesia diptera	0.50	20.00	300.00	20.00	0.03	15.38	55.38	18.46
Callicarpa americana	0.50	20.00	200.00	13.33	0.00	2.20	35.53	11.84
Vitis rotundifolia	0.25	10.00	200.00	13.33	0.01	5.49	28.83	9.61
Quercus nigra	0.25	10.00	100.00	6.67	0.02	9.89	26.56	8.85
Gelsemium sempervirens	0.25	10.00	200.00	13.33	0.00	2.20	25.53	8.51
Carpinus caroliniana	0.25	10.00	100.00	6.67	0.01	4.40	21.06	7.02

Table 13D

Summary of Herbaceous Layer
Quercus nigra Forest Alliance
Proposed: *Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Chasmanthium laxum* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium laxum	1.00	7.55	2.95	17.47	25.02	8.34
Chasmanthium sessiliflorum	0.25	1.89	3.13	18.50	20.39	6.80
Toxicodendron radicans	1.00	7.55	1.75	10.36	17.91	5.97
Vitis rotundifolia	0.75	5.66	0.94	5.55	11.21	3.74
Quercus nigra	1.00	7.55	0.56	3.33	10.88	3.63
Viburnum dentatum	0.75	5.66	0.63	3.70	9.36	3.12
Ilex vomitoria	0.50	3.77	0.69	4.07	7.84	2.61
Bignonia capreolata	0.50	3.77	0.56	3.33	7.10	2.37
Carex species	0.50	3.77	0.50	2.96	6.73	2.24
Callicarpa americana	0.50	3.77	0.50	2.96	6.73	2.24
Vaccinium corybosum	0.50	3.77	0.50	2.96	6.73	2.24
Rubus argutus	0.25	1.89	0.75	4.44	6.33	2.11
Campsis radicans	0.50	3.77	0.31	1.85	5.62	1.87
Oplismenus hirtellus	0.50	3.77	0.31	1.85	5.62	1.87
Smilax glauca	0.50	3.77	0.31	1.85	5.62	1.87
Carpinus caroliniana	0.50	3.77	0.31	1.85	5.62	1.87
Mitchella repens	0.25	1.89	0.56	3.33	5.22	1.74
Smilax rotundifolia	0.50	3.77	0.19	1.11	4.88	1.63
Smilas bona-nox	0.25	1.89	0.25	1.48	3.37	1.12
Liquidambar styraciflua	0.25	1.89	0.25	1.48	3.37	1.12
Verbesina virginica	0.25	1.89	0.25	1.48	3.37	1.12
Lonicera japonicum	0.25	1.89	0.13	0.74	2.63	0.88
Moella cerifera	0.25	1.89	0.13	0.74	2.63	0.88
Scleria oligatha	0.25	1.89	0.06	0.37	2.26	0.75

Table 13D

Summary of Herbaceous Layer
Quercus nigra Forest Alliance
Proposed: *Quercus nigra - Liquidambar styraciflua - (Pinus taeda) / Chasmanthium laxum* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Scleria species	0.25	1.89	0.06	0.37	2.26	0.75
Ligustrum sinense	0.25	1.89	0.06	0.37	2.26	0.75
Halesia diptera	0.25	1.89	0.06	0.37	2.26	0.75
Quercus phellos	0.25	1.89	0.06	0.37	2.26	0.75
Elephantopus caroliniana	0.25	1.89	0.06	0.37	2.26	0.75
Ampelopsis arborea	0.25	1.89	0.06	0.37	2.26	0.75

Table 14A

Summary of Overstory Layer
Taxodium Distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance
Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa biflora	0.67	20.00	160.00	36.36	29.76	64.00	120.36	40.12
Taxodium distichum	1.00	30.00	200.00	45.45	14.88	31.99	107.45	35.82
Triadica sebifera	0.67	20.00	26.67	6.06	0.51	1.09	27.15	9.05
Nyssa aquatica	0.33	10.00	26.67	6.06	0.62	1.34	17.40	5.80
Quercus laurifolia	0.33	10.00	13.33	3.03	0.55	1.19	14.22	4.74
Acer rubrum var. rubrum	0.33	10.00	13.33	3.03	0.18	0.38	13.41	4.47

Table 14B

Summary of Midstory Layer
Taxodium Distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance
Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	1.00	14.29	133.33	18.87	0.64	22.34	55.49	18.50
Taxodium distichum	0.67	9.52	133.33	18.87	0.66	23.03	51.42	17.14
Frangula caroliniana	0.33	4.76	53.33	7.55	0.30	10.36	22.67	7.56
Campsis radicans	0.67	9.52	53.33	7.55	0.10	3.33	20.40	6.80
Fraxinus pennsylvanica	0.33	4.76	80.00	11.32	0.12	4.24	20.32	6.77
Nyssa aquatica	0.33	4.76	53.33	7.55	0.19	6.56	18.87	6.29
Acer rubrum var. rubrum	0.33	4.76	13.33	1.89	0.29	10.04	16.69	5.56
Ilex decidua	0.33	4.76	40.00	5.66	0.14	4.86	15.28	5.09
Crataegus opaca	0.33	4.76	26.67	3.77	0.11	3.76	12.30	4.10
Forestiera acuminata	0.33	4.76	13.33	1.89	0.15	5.34	11.98	3.99
Nyssa biflora	0.33	4.76	26.67	3.77	0.03	1.19	9.73	3.24
Liquidambar styraciflua	0.33	4.76	13.33	1.89	0.07	2.34	8.99	3.00
Quercus similis	0.33	4.76	13.33	1.89	0.03	0.92	7.56	2.52
Planera aquatica	0.33	4.76	13.33	1.89	0.02	0.59	7.23	2.41
Cephalanthus occidentalis	0.33	4.76	13.33	1.89	0.01	0.45	7.10	2.37
Quercus laurifolia	0.33	4.76	13.33	1.89	0.01	0.33	6.98	2.33
Brunnichia ovata	0.33	4.76	13.33	1.89	0.01	0.33	6.98	2.33

Table 14C

Summary of Shrub Layer
Taxodium Distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance
Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Cephalanthus occidentalis	0.67	14.29	1866.67	25.88	0.08	26.64	66.81	22.27
Brunnichia ovata	0.67	14.29	1333.33	18.48	0.08	26.64	59.41	19.80
Triadica sebifera	1.00	21.43	1200.00	16.64	0.03	10.66	48.72	16.24
Ampelopsis arborea	0.33	7.14	1200.00	16.64	0.02	7.99	31.77	10.59
Frangula caroliniana	0.33	7.14	400.00	5.55	0.04	15.10	27.79	9.26
Campsis radicans	0.33	7.14	800.00	11.09	0.02	5.33	23.56	7.85
Fraxinus pennsylvanica	0.33	7.14	133.33	1.85	0.01	4.44	13.43	4.48
Nyssa biflora	0.33	7.14	133.33	1.85	0.00	0.89	9.88	3.29
Taxodium distichum	0.33	7.14	133.33	1.85	0.00	0.89	9.88	3.29
Liquidambar styraciflua	0.33	7.14	13.33	0.18	0.00	1.42	8.75	2.92

Table 14D

Summary of Herbaceous Layer
Taxodium distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance
Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Phanopyrum gymnocarpon	0.67	4.76	14.33	39.70	44.47	14.82
Rhynchospora corniculata	0.67	4.76	5.37	14.87	19.63	6.54
Brunnichia ovata	0.67	4.76	2.93	8.13	12.89	4.30
Triadica sebifera	0.67	4.76	1.98	5.49	10.26	3.42
Saururus cernuus	0.67	4.76	1.27	3.51	8.27	2.76
Galium tinctorium	0.33	2.38	1.75	4.85	7.23	2.41
Acer rubrum var. rubrum	0.67	4.76	0.42	1.15	5.92	1.97
Frangula caroliniana	0.33	2.38	1.20	3.32	5.71	1.90
Cephalanthus occidentalis	0.67	4.76	0.25	0.69	5.45	1.82
Campsis radicans	0.33	2.38	1.08	3.00	5.38	1.79
Nyssa biflora	0.33	2.38	0.75	2.08	4.46	1.49
Ludwigia alternifolia	0.33	2.38	0.68	1.89	4.27	1.42
Viola sororia var. missouriensis	0.33	2.38	0.58	1.62	4.00	1.33
Zizaniopsis miliacea	0.33	2.38	0.33	0.92	3.30	1.10
Ampelopsis arborea	0.33	2.38	0.25	0.69	3.07	1.02
Symphyotrichum dumosum	0.33	2.38	0.25	0.69	3.07	1.02
Lysimachia radicans	0.33	2.38	0.25	0.69	3.07	1.02
Ludwigia pilsoa	0.33	2.38	0.25	0.69	3.07	1.02
Carex cherokeensis	0.33	2.38	0.25	0.69	3.07	1.02
Cyperus haspan	0.33	2.38	0.25	0.69	3.07	1.02
Dichanthelium dichotomum	0.33	2.38	0.17	0.46	2.84	0.95
Lycopus virginicus	0.33	2.38	0.17	0.46	2.84	0.95
Polygonum hydropiperoides	0.33	2.38	0.17	0.46	2.84	0.95
Youngia japonica	0.33	2.38	0.17	0.46	2.84	0.95

Table 14D

Summary of Herbaceous Layer
Taxodium distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance
Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Liquidambar styraciflua	0.33	2.38	0.17	0.46	2.84	0.95
Vitis rotundifolia	0.33	2.38	0.08	0.23	2.61	0.87
Ludwigia glandulosa	0.33	2.38	0.08	0.23	2.61	0.87
Forestiera acuminata	0.33	2.38	0.08	0.23	2.61	0.87
Dichanthelium commutatum	0.33	2.38	0.08	0.23	2.61	0.87
Nyssa aquatica	0.33	2.38	0.08	0.23	2.61	0.87
Fraxinus pennsylvanica	0.33	2.38	0.08	0.23	2.61	0.87
Justicia ovata var. lanceolata	0.33	2.38	0.08	0.23	2.61	0.87
Conoclinium coelestinum	0.33	2.38	0.08	0.23	2.61	0.87
Pyrrhopappus carolinianus	0.33	2.38	0.08	0.23	2.61	0.87
Saururus cernuus	0.33	2.38	0.08	0.23	2.61	0.87

Table 15A

Summary of Overstory Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.94	39.47	227.50	52.91	46.88	84.93	177.31	59.10
Triadica sebifera	0.25	10.53	72.50	16.86	1.68	3.05	30.43	10.14
Acer rubrum var. drummondii	0.19	7.89	30.00	6.98	1.34	2.43	17.31	5.77
Ulmus americana	0.12	5.26	27.50	6.40	2.74	4.96	16.62	5.54
Planera aquatica	0.12	5.26	20.00	4.65	0.77	1.39	11.30	3.77
Carpinus caroliniana	0.12	5.26	15.00	3.49	0.26	0.47	9.22	3.07
Liquidambar styraciflua	0.12	5.26	7.50	1.74	0.49	0.89	7.90	2.63
Nyssa bifflora	0.06	2.63	7.50	1.74	0.25	0.46	4.84	1.61
Fraxinus caroliniana	0.06	2.63	5.00	1.16	0.16	0.29	4.08	1.36
Ilex opaca	0.06	2.63	5.00	1.16	0.10	0.17	3.97	1.32
Betula nigra	0.06	2.63	2.50	0.58	0.21	0.39	3.60	1.20
Nyssa aquatica	0.06	2.63	2.50	0.58	0.17	0.31	3.52	1.17
Quercus nigra	0.06	2.63	2.50	0.58	0.05	0.09	3.30	1.10
Gleditsia aquatica	0.06	2.63	2.50	0.58	0.05	0.09	3.30	1.10
Diospyros virginiana	0.06	2.63	2.50	0.58	0.05	0.09	3.30	1.10

Table 15B

Summary of Midstory Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.44	12.73	990.00	61.49	2.24	51.48	125.70	41.90
Taxodium distichum	0.50	14.55	182.50	11.34	0.64	14.79	40.67	13.56
Cephalanthus occidentalis	0.19	5.45	62.50	3.88	0.31	7.07	16.40	5.47
Frangula caroliniana	0.19	5.45	45.00	2.80	0.18	4.04	12.29	4.10
Vitis aestivalis	0.12	3.64	77.50	4.81	0.11	2.63	11.08	3.69
Planera aquatica	0.19	5.45	15.00	0.93	0.13	2.98	9.36	3.12
Carpinus caroliniana	0.06	1.82	47.50	2.95	0.19	4.40	9.17	3.06
Ilex opaca	0.12	3.64	27.50	1.71	0.08	1.77	7.11	2.37
Fraxinus pennsylvanica	0.12	3.64	17.50	1.09	0.06	1.38	6.11	2.04
Liquidambar styraciflua	0.12	3.64	15.00	0.93	0.04	0.91	5.48	1.83
Acer rubrum var. drummondii	0.12	3.64	10.00	0.62	0.05	1.19	5.45	1.82
Ilex decidua	0.12	3.64	12.50	0.78	0.04	0.92	5.33	1.78
Nyssa biflora	0.06	1.82	22.50	1.40	0.07	1.59	4.81	1.60
Nyssa aquatica	0.12	3.64	10.00	0.62	0.02	0.55	4.81	1.60
Quercus laurifolia	0.12	3.64	5.00	0.31	0.02	0.52	4.47	1.49
Quercus nigra	0.12	3.64	5.00	0.31	0.01	0.29	4.23	1.41
Ilex vomitoria	0.06	1.82	10.00	0.62	0.04	0.94	3.38	1.13
Halesia diptera	0.06	1.82	12.50	0.78	0.03	0.70	3.29	1.10
Salix nigra	0.06	1.82	5.00	0.31	0.03	0.62	2.75	0.92
Quercus lyrata	0.06	1.82	7.50	0.47	0.02	0.41	2.69	0.90
Baccharis halimifolia	0.06	1.82	7.50	0.47	0.01	0.29	2.57	0.86
Campsis radicans	0.06	1.82	7.50	0.47	0.01	0.27	2.55	0.85
Vitis cinerea	0.06	1.82	5.00	0.31	0.00	0.08	2.21	0.74
Acer rubrum var. rubrum	0.06	1.82	2.50	0.16	0.00	0.06	2.03	0.68

Table 15B

Summary of Midstory Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Vitis rotundifolia	0.06	1.82	2.50	0.16	0.00	0.06	2.03	0.68
Ulmus alata	0.06	1.82	2.50	0.16	0.00	0.04	2.01	0.67
Pinus taeda	0.06	1.82	2.50	0.16	0.00	0.04	2.01	0.67

Table 15C

Summary of Shrub Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.56	23.68	1850.00	51.03	0.17	59.44	134.16	44.72
Taxodium distichum	0.31	13.16	550.00	15.17	0.06	21.68	50.01	16.67
Cephalanthus occidentalis	0.19	7.89	425.00	11.72	0.01	5.07	24.69	8.23
Rubus argutus	0.12	5.26	200.00	5.52	0.01	3.15	13.93	4.64
Ilex decidua	0.12	5.26	75.00	2.07	0.01	2.62	9.95	3.32
Brunnichia ovata	0.12	5.26	75.00	2.07	0.00	1.57	8.91	2.97
Ilex vomitoria	0.12	5.26	50.00	1.38	0.00	1.75	8.39	2.80
Acer rubrum var. drummondii	0.12	5.26	75.00	2.07	0.00	0.52	7.86	2.62
Frangula caroliniana	0.12	5.26	50.00	1.38	0.00	0.35	6.99	2.33
Carpinus caroliniana	0.12	5.26	50.00	1.38	0.00	0.35	6.99	2.33
Liquidambar styraciflua	0.06	2.63	25.00	0.69	0.00	1.57	4.89	1.63
Callicarpa americana	0.06	2.63	50.00	1.38	0.00	0.87	4.89	1.63
Fraxinus pennsylvanica	0.06	2.63	50.00	1.38	0.00	0.35	4.36	1.45
Vitis cinerea	0.06	2.63	25.00	0.69	0.00	0.17	3.50	1.17
Campsis radicans	0.06	2.63	25.00	0.69	0.00	0.17	3.50	1.17
Planera aquatica	0.06	2.63	25.00	0.69	0.00	0.17	3.50	1.17
Baccharis halimifolia	0.06	2.63	25.00	0.69	0.00	0.17	3.50	1.17

Table 15D

Summary of Herbaceous Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Alternanthera philoxeroides	0.41	2.46	6.87	13.98	16.45	5.48
Salvinia minima	0.24	1.41	7.31	14.89	16.30	5.43
Polygonum hydropiperoides	0.53	3.17	3.12	6.35	9.52	3.17
Phanopyrum gymnocarpon	0.18	1.06	3.61	7.36	8.42	2.81
Rhynchospora corniculata	0.35	2.11	2.71	5.52	7.63	2.54
Brunnichia ovata	0.65	3.87	1.30	2.65	6.53	2.18
Triadica sebifera	0.65	3.87	1.28	2.60	6.48	2.16
Chasmanthium laxum	0.12	0.70	2.76	5.62	6.33	2.11
Zizaniopsis miliacea	0.06	0.35	1.97	4.01	4.36	1.45
Carex albolutescens	0.18	1.06	1.41	2.87	3.93	1.31
Juncus effusus	0.18	1.06	1.21	2.46	3.51	1.17
Mikania scandens	0.35	2.11	0.66	1.35	3.47	1.16
Taxodium distichum	0.41	2.46	0.38	0.78	3.24	1.08
Bidens laevis	0.12	0.70	1.07	2.19	2.89	0.96
Rubus trivialis	0.35	2.11	0.31	0.63	2.74	0.91
Chasmanthium latifolium	0.18	1.06	0.72	1.47	2.52	0.84
Liquidambar styraciflua	0.35	2.11	0.18	0.36	2.47	0.82
Ilex decidua	0.35	2.11	0.15	0.30	2.41	0.80
Campsis radicans	0.24	1.41	0.43	0.87	2.28	0.76
Typha latifolia	0.12	0.70	0.74	1.50	2.20	0.73
Rubus argutus	0.24	1.41	0.35	0.72	2.13	0.71
Cephalanthus occidentalis	0.29	1.76	0.16	0.33	2.09	0.70
Ptilimnium capillaceum	0.24	1.41	0.28	0.57	1.98	0.66
Acer rubrum var. drummondii	0.24	1.41	0.24	0.48	1.89	0.63

Table 15D

Summary of Herbaceous Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Saururus cernuus	0.24	1.41	0.21	0.42	1.83	0.61
Toxicodendron radicans	0.24	1.41	0.16	0.33	1.74	0.58
Andropogon virginicus	0.06	0.35	0.66	1.35	1.70	0.57
Cyperus haspan	0.24	1.41	0.12	0.24	1.65	0.55
Lycopus virginicus	0.18	1.06	0.25	0.51	1.57	0.52
Eupatorium capillifolium	0.18	1.06	0.25	0.51	1.57	0.52
Boehmeria cylindrica	0.18	1.06	0.18	0.36	1.42	0.47
Fraxinus caroliniana	0.18	1.06	0.16	0.33	1.39	0.46
Carex triangularis	0.12	0.70	0.32	0.66	1.36	0.45
Salvinia molesta	0.06	0.35	0.47	0.96	1.31	0.44
Ampelopsis arborea	0.18	1.06	0.12	0.24	1.30	0.43
Parthenocissus quinquefolia	0.18	1.06	0.10	0.21	1.27	0.42
Eichhornia crassipes	0.06	0.35	0.44	0.90	1.25	0.42
Dichanthelium commutatum	0.18	1.06	0.07	0.15	1.21	0.40
Ilex opaca	0.18	1.06	0.07	0.15	1.21	0.40
Andropogon glomeratus	0.06	0.35	0.41	0.84	1.19	0.40
Carex intumescens	0.06	0.35	0.38	0.78	1.13	0.38
Carex louisianica	0.12	0.70	0.16	0.33	1.03	0.34
Hydrocotyle ranunculoides	0.12	0.70	0.16	0.33	1.03	0.34
Tradescantia ohioensis	0.12	0.70	0.13	0.27	0.97	0.32
Unknown herbaceous	0.12	0.70	0.12	0.24	0.94	0.31
Ilex vomitoria	0.12	0.70	0.10	0.21	0.91	0.30
Gleditsia aquatica	0.12	0.70	0.09	0.18	0.88	0.29
Cardamine sp.	0.12	0.70	0.09	0.18	0.88	0.29

Table 15D

Summary of Herbaceous Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Carpinus caroliniana	0.12	0.70	0.07	0.15	0.85	0.28
Carex debilis	0.06	0.35	0.24	0.48	0.83	0.28
Kosteletzkya virginica	0.06	0.35	0.24	0.48	0.83	0.28
Planera aquatica	0.12	0.70	0.06	0.12	0.82	0.27
Baccharis halimifolia	0.12	0.70	0.06	0.12	0.82	0.27
Galium aparine	0.12	0.70	0.06	0.12	0.82	0.27
Pinus taeda	0.12	0.70	0.04	0.09	0.79	0.26
Cyperus odoratus	0.12	0.70	0.04	0.09	0.79	0.26
Acer rubrum var. rubrum	0.12	0.70	0.04	0.09	0.79	0.26
Hypericum hypericoides	0.12	0.70	0.04	0.09	0.79	0.26
Pluchea rosea	0.06	0.35	0.21	0.42	0.77	0.26
Hydrocotyle umbellata	0.12	0.70	0.03	0.06	0.76	0.25
Oplismenus hirtellus	0.12	0.70	0.03	0.06	0.76	0.25
Leersia hexandra	0.12	0.70	0.03	0.06	0.76	0.25
Ulmus alata	0.12	0.70	0.03	0.06	0.76	0.25
Lysimachia radicans	0.12	0.70	0.03	0.06	0.76	0.25
Lemna obscura	0.06	0.35	0.19	0.39	0.74	0.25
Echinochloa walteri	0.06	0.35	0.19	0.39	0.74	0.25
Helianthus angustifolius	0.06	0.35	0.16	0.33	0.68	0.23
Vernonia missurica	0.06	0.35	0.15	0.30	0.65	0.22
Pontederia cordata	0.06	0.35	0.11	0.23	0.58	0.19
Diodia virginiana	0.06	0.35	0.10	0.21	0.56	0.19
Eleocharis montana	0.06	0.35	0.10	0.21	0.56	0.19
Bacopa rotundifolia	0.06	0.35	0.09	0.18	0.53	0.18

Table 15D

Summary of Herbaceous Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Viola sororia	0.06	0.35	0.09	0.18	0.53	0.18
Polygonum glabrum	0.06	0.35	0.09	0.18	0.53	0.18
Solidago rugosa	0.06	0.35	0.09	0.18	0.53	0.18
Elymus virginicus	0.06	0.35	0.09	0.18	0.53	0.18
Leersia lenticularis	0.06	0.35	0.09	0.18	0.53	0.18
Carex crus-corvi	0.06	0.35	0.07	0.15	0.50	0.17
Justicia ovata var. lanceolata	0.06	0.35	0.07	0.15	0.50	0.17
Dichanthelium laxiflorum	0.06	0.35	0.06	0.12	0.47	0.16
Viola sororia var. missouriensis	0.06	0.35	0.06	0.12	0.47	0.16
Glinus radiatus	0.06	0.35	0.06	0.12	0.47	0.16
Panicum rigidulum	0.06	0.35	0.06	0.12	0.47	0.16
Centella erecta	0.06	0.35	0.06	0.12	0.47	0.16
Melothria pendula	0.06	0.35	0.06	0.12	0.47	0.16
Scutellaria integrifolia	0.06	0.35	0.06	0.12	0.47	0.16
Ligustrum japonicum	0.06	0.35	0.06	0.12	0.47	0.16
Xyris laxifolia var. iridifolia	0.06	0.35	0.06	0.12	0.47	0.16
Pluchea camphorata	0.06	0.35	0.06	0.12	0.47	0.16
Sagittaria lancifolia	0.06	0.35	0.06	0.12	0.47	0.16
Thelypteris kunthii	0.06	0.35	0.04	0.09	0.44	0.15
Fuirena breviseta	0.06	0.35	0.04	0.09	0.44	0.15
Elephantopus carolinianus	0.06	0.35	0.04	0.09	0.44	0.15
Viola palmata	0.06	0.35	0.03	0.06	0.41	0.14
Echinodorus cordifolius	0.06	0.35	0.03	0.06	0.41	0.14
Mecardonia acuminata	0.06	0.35	0.03	0.06	0.41	0.14

Table 15D

Summary of Herbaceous Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Scleria oligantha	0.06	0.35	0.03	0.06	0.41	0.14
Eclipta prostrata	0.06	0.35	0.03	0.06	0.41	0.14
Vitis rotundifolia	0.06	0.35	0.03	0.06	0.41	0.14
Potentilla indica	0.06	0.35	0.03	0.06	0.41	0.14
Stachys crenata	0.06	0.35	0.03	0.06	0.41	0.14
Sesbania drummondii	0.06	0.35	0.03	0.06	0.41	0.14
Lygodium japonicum	0.06	0.35	0.03	0.06	0.41	0.14
Ligustrum sinense	0.06	0.35	0.03	0.06	0.41	0.14
Carex microrhyncha	0.06	0.35	0.03	0.06	0.41	0.14
Dichanthelium sphaerocarpon	0.06	0.35	0.03	0.06	0.41	0.14
Asclepias perennis	0.06	0.35	0.03	0.06	0.41	0.14
Smilax bona-nox	0.06	0.35	0.01	0.03	0.38	0.13
Nyssa sylvatica	0.06	0.35	0.01	0.03	0.38	0.13
Cyperus virens	0.06	0.35	0.01	0.03	0.38	0.13
Eupatorium coelestinum	0.06	0.35	0.01	0.03	0.38	0.13
Erechtites hieraciifolia	0.06	0.35	0.01	0.03	0.38	0.13
Symphyotrichum dumosum	0.06	0.35	0.01	0.03	0.38	0.13
Saccharum baldwinii	0.06	0.35	0.01	0.03	0.38	0.13
Quercus phellos	0.06	0.35	0.01	0.03	0.38	0.13
Conoclinium coelestinum	0.06	0.35	0.01	0.03	0.38	0.13
Oxalis dillenii	0.06	0.35	0.01	0.03	0.38	0.13
Carex reniformis	0.06	0.35	0.01	0.03	0.38	0.13
Prunella vulgaris subsp. vulgaris	0.06	0.35	0.01	0.03	0.38	0.13
Ludwigia alternifolia	0.06	0.35	0.01	0.03	0.38	0.13

Table 15D

Summary of Herbaceous Layer
Taxodium distichum Semipermanently Flooded Forest Alliance
Taxodium distichum / Lemna minor Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Galium tinctorium	0.06	0.35	0.01	0.03	0.38	0.13
Polygonum hydropiper	0.06	0.35	0.01	0.03	0.38	0.13
Carex caroliniana	0.06	0.35	0.01	0.03	0.38	0.13
Vitis cinerea	0.06	0.35	0.01	0.03	0.38	0.13
Mitreola petiolata	0.06	0.35	0.01	0.03	0.38	0.13
Viburnum dentatum	0.06	0.35	0.01	0.03	0.38	0.13
Dichanthelium dichotomum	0.06	0.35	0.01	0.03	0.38	0.13
Eleocharis sp.	0.06	0.35	0.01	0.03	0.38	0.13
Symphyotrichum racemosum	0.06	0.35	0.01	0.03	0.38	0.13
Carex abscondita	0.06	0.35	0.01	0.03	0.38	0.13
Mitchella repens	0.06	0.35	0.01	0.03	0.38	0.13
Lonicera japonica	0.06	0.35	0.01	0.03	0.38	0.13
Ambrosia artemisiifolia	0.06	0.35	0.01	0.03	0.38	0.13
Axonopus affinis	0.06	0.35	0.01	0.03	0.38	0.13
Smilax smallii	0.06	0.35	0.01	0.03	0.38	0.13
Nyssa aquatica	0.06	0.35	0.01	0.03	0.38	0.13
Carex sp.	0.06	0.35	0.01	0.03	0.38	0.13
Cyclospermum leptophyllum	0.06	0.35	0.01	0.03	0.38	0.13
Azolla caroliniana	0.06	0.35	0.01	0.03	0.38	0.13
Phyla nodiflora	0.06	0.35	0.01	0.03	0.38	0.13
Rhynchosia sp.	0.06	0.35	0.01	0.03	0.38	0.13
Micranthemum umbrosum	0.06	0.35	0.01	0.03	0.38	0.13
Pluchea foetida	0.06	0.35	0.01	0.03	0.38	0.13

Table 16A

Summary of Overstory Layer
Triadica sebifera Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	1.00	25.00	190.00	51.35	5.65	39.48	115.83	38.61
Liquidambar styraciflua	1.00	25.00	60.00	16.22	4.31	30.13	71.34	23.78
Pinus taeda	0.50	12.50	30.00	8.11	1.64	11.48	32.09	10.70
Carpinus caroliniana	0.25	6.25	40.00	10.81	0.94	6.59	23.65	7.88
Quercus falcata	0.25	6.25	10.00	2.70	0.99	6.92	15.87	5.29
Ilex opaca	0.25	6.25	10.00	2.70	0.31	2.20	11.15	3.72
Halesia diptera	0.25	6.25	10.00	2.70	0.18	1.27	10.23	3.41
Crataegus brachyacantha	0.25	6.25	10.00	2.70	0.15	1.08	10.03	3.34
Ostrya virginiana	0.25	6.25	10.00	2.70	0.12	0.86	9.81	3.27

Table 16B

Summary of Midstory Layer
Triadica sebifera Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	1.00	11.11	190.00	14.07	0.90	19.08	44.27	14.76
Carpinus caroliniana	0.75	8.33	200.00	14.81	0.67	14.17	37.32	12.44
Nyssa sylvatica	1.00	11.11	170.00	12.59	0.63	13.42	37.12	12.37
Ilex opaca	1.00	11.11	170.00	12.59	0.55	11.74	35.44	11.81
Liquidambar styraciflua	0.75	8.33	110.00	8.15	0.42	8.99	25.47	8.49
Acer rubrum var. drummondii	0.25	2.78	90.00	6.67	0.28	5.87	15.31	5.10
Ilex decidua	0.25	2.78	90.00	6.67	0.18	3.73	13.17	4.39
Ilex vomitoria	0.50	5.56	30.00	2.22	0.24	5.02	12.80	4.27
Persea palustris	0.25	2.78	70.00	5.19	0.22	4.67	12.63	4.21
Symplocos tinctoria	0.25	2.78	60.00	4.44	0.19	4.08	11.30	3.77
Vitis rotundifolia	0.50	5.56	40.00	2.96	0.07	1.43	9.95	3.32
Ostrya virginiana	0.25	2.78	30.00	2.22	0.12	2.46	7.46	2.49
Crataegus brachyacantha	0.25	2.78	10.00	0.74	0.07	1.50	5.02	1.67
Quercus hemispherica	0.25	2.78	10.00	0.74	0.06	1.20	4.72	1.57
Morella cerifera	0.25	2.78	20.00	1.48	0.02	0.37	4.63	1.54
Quercus nigra	0.25	2.78	10.00	0.74	0.05	1.06	4.58	1.53
Sassafras albidum	0.25	2.78	10.00	0.74	0.02	0.34	3.86	1.29
Crataegus opaca	0.25	2.78	10.00	0.74	0.02	0.34	3.86	1.29
Vaccinium arboreum	0.25	2.78	10.00	0.74	0.01	0.22	3.74	1.25
Aralia spinosa	0.25	2.78	10.00	0.74	0.01	0.15	3.67	1.22
Cyrilla racemiflora	0.25	2.78	10.00	0.74	0.01	0.15	3.67	1.22

Table 16C

Summary of Shrub Layer
Triadica sebifera Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Symplocos tinctoria	0.25	5.88	800.00	17.02	0.15	36.27	59.18	19.73
Liquidambar styraciflua	0.25	5.88	900.00	19.15	0.04	10.29	35.33	11.78
Ilex opaca	0.75	17.65	600.00	12.77	0.02	4.41	34.82	11.61
Ilex vomitoria	0.50	11.76	500.00	10.64	0.03	7.84	30.25	10.08
Aralia spinosa	0.25	5.88	400.00	8.51	0.05	12.25	26.65	8.88
Ostrya virginiana	0.25	5.88	400.00	8.51	0.04	10.29	24.69	8.23
Morella cerifera	0.25	5.88	200.00	4.26	0.03	8.33	18.47	6.16
Vitis rotundifolia	0.25	5.88	200.00	4.26	0.02	3.92	14.06	4.69
Callicarpa americana	0.25	5.88	200.00	4.26	0.00	0.98	11.12	3.71
Carpinus caroliniana	0.25	5.88	100.00	2.13	0.01	1.96	9.97	3.32
Halesia diptera	0.25	5.88	100.00	2.13	0.01	1.96	9.97	3.32
Ilex decidua	0.25	5.88	100.00	2.13	0.00	0.49	8.50	2.83
Quercus falcata	0.25	5.88	100.00	2.13	0.00	0.49	8.50	2.83
Quercus nigra	0.25	5.88	100.00	2.13	0.00	0.49	8.50	2.83

Table 16D

Summary of Herbaceous Layer
Triadica sebifera Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	1.00	5.13	7.50	27.93	33.06	11.02
Triadica sebifera	0.75	3.85	1.56	5.82	9.67	3.22
Potentilla indica	0.25	1.28	1.88	6.98	8.27	2.76
Rubus argutus	0.75	3.85	1.18	4.38	8.22	2.74
Vitis rotundifolia	0.75	3.85	1.00	3.72	7.57	2.52
Ilex opaca	0.75	3.85	0.38	1.40	5.24	1.75
Liquidambar styraciflua	0.50	2.56	0.69	2.56	5.12	1.71
Ilex decidua	0.50	2.56	0.63	2.33	4.89	1.63
Smilax rotundifolia	0.50	2.56	0.63	2.33	4.89	1.63
Pinus taeda	0.50	2.56	0.63	2.33	4.89	1.63
Bignonia capreolata	0.50	2.56	0.63	2.33	4.89	1.63
Lonicera japonica	0.25	1.28	0.94	3.49	4.77	1.59
Chasmanthium laxum var. laxum	0.50	2.56	0.56	2.09	4.66	1.55
Parthenocissus quinquefolia	0.50	2.56	0.55	2.05	4.61	1.54
Carpinus caroliniana	0.50	2.56	0.50	1.86	4.43	1.48
Tradescantia ohioensis	0.50	2.56	0.50	1.86	4.43	1.48
Thelypteris kunthii	0.25	1.28	0.75	2.79	4.08	1.36
Carex joorii	0.25	1.28	0.69	2.56	3.84	1.28
Callicarpa americana	0.50	2.56	0.31	1.16	3.73	1.24
Smilax bona-nox	0.50	2.56	0.25	0.93	3.50	1.17
Dichanthelium aciculare	0.25	1.28	0.56	2.09	3.38	1.13
Quercus nigra	0.50	2.56	0.19	0.70	3.26	1.09
Mitchella repens	0.25	1.28	0.44	1.63	2.91	0.97

Table 16D

Summary of Herbaceous Layer
Triadica sebifera Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eupatorium semiserratum	0.25	1.28	0.31	1.16	2.45	0.82
Symplocos tinctoria	0.25	1.28	0.31	1.16	2.45	0.82
Sambucus nigra var. canadensis	0.25	1.28	0.31	1.16	2.45	0.82
Panicum dichotomiflorum	0.25	1.28	0.25	0.93	2.21	0.74
Oplismenus hirtellus	0.25	1.28	0.25	0.93	2.21	0.74
Morella cerifera	0.25	1.28	0.19	0.70	1.98	0.66
Carex reniformis	0.25	1.28	0.19	0.70	1.98	0.66
Rubus trivialis	0.25	1.28	0.19	0.70	1.98	0.66
Campsis radicans	0.25	1.28	0.13	0.47	1.75	0.58
Ostrya virginiana	0.25	1.28	0.13	0.47	1.75	0.58
Dichanthelium commutatum	0.25	1.28	0.13	0.47	1.75	0.58
Elephantopus caroliniana	0.25	1.28	0.13	0.47	1.75	0.58
Carex debilis	0.25	1.28	0.13	0.47	1.75	0.58
Dichanthelium boscii	0.25	1.28	0.13	0.47	1.75	0.58
Halesia diptera	0.25	1.28	0.13	0.47	1.75	0.58
Quercus hemispherica	0.25	1.28	0.06	0.23	1.51	0.50
Viburnum dentatum	0.25	1.28	0.06	0.23	1.51	0.50
Crataegus brachyacantha	0.25	1.28	0.06	0.23	1.51	0.50
Styrax americana	0.25	1.28	0.06	0.23	1.51	0.50
Sanicula canadensis	0.25	1.28	0.06	0.23	1.51	0.50
Scleria sp	0.25	1.28	0.06	0.23	1.51	0.50
Acer rubrum var. drummondii	0.25	1.28	0.06	0.23	1.51	0.50
Brunnichia ovata	0.25	1.28	0.06	0.23	1.51	0.50

Table 16D

Summary of Herbaceous Layer
Triadica sebifera Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Oxalis dillenii	0.25	1.28	0.06	0.23	1.51	0.50
Chasmanthium latifolium	0.25	1.28	0.06	0.23	1.51	0.50
Carex caroliniana	0.25	1.28	0.06	0.23	1.51	0.50
Mitchella repens	0.25	1.28	0.06	0.23	1.51	0.50
Sassafras albidum	0.25	1.28	0.06	0.23	1.51	0.50
Ilex vomitoria	0.25	1.28	0.06	0.23	1.51	0.50
Lysimachia radicans	0.25	1.28	0.06	0.23	1.51	0.50
Tillandsia usneoides	0.25	1.28	0.06	0.23	1.51	0.50
Sambucus nigra var. canadensis	0.25	1.28	0.06	0.23	1.51	0.50

Table 17A

Summary of Overstory Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.90	29.47	240.00	56.19	13.26	63.67	149.34	49.78
Liquidambar styraciflua	0.35	11.58	34.84	8.16	1.51	7.24	26.97	8.99
Carya aquatica	0.23	7.37	15.48	3.63	0.87	4.19	15.19	5.06
Carpinus caroliniana	0.06	2.11	40.00	9.37	0.76	3.66	15.14	5.05
Acer rubrum var. drummondii	0.16	5.26	10.32	2.42	0.40	1.93	9.61	3.20
Quercus laurifolia	0.16	5.26	6.45	1.51	0.39	1.89	8.66	2.89
Taxodium distichum	0.13	4.21	5.16	1.21	0.65	3.14	8.55	2.85
Ulmus americana	0.13	4.21	6.45	1.51	0.42	2.00	7.72	2.57
Nyssa sylvatica	0.06	2.11	14.19	3.32	0.25	1.22	6.65	2.22
Acer rubrum var. rubrum	0.13	4.21	6.45	1.51	0.16	0.78	6.50	2.17
Fraxinus caroliniana	0.13	4.21	5.16	1.21	0.21	1.01	6.43	2.14
Quercus lyrata	0.10	3.16	5.16	1.21	0.33	1.58	5.95	1.98
Ulmus rubra	0.03	1.05	12.90	3.02	0.24	1.17	5.24	1.75
Quercus similis	0.10	3.16	3.87	0.91	0.18	0.89	4.95	1.65
Planera aquatica	0.06	2.11	3.87	0.91	0.12	0.60	3.61	1.20
Quercus phellos	0.03	1.05	1.29	0.30	0.39	1.87	3.22	1.07
Nyssa aquatica	0.03	1.05	1.29	0.30	0.36	1.75	3.11	1.04
Nyssa biflora	0.06	2.11	2.58	0.60	0.05	0.22	2.93	0.98
Quercus nigra	0.06	2.11	2.58	0.60	0.04	0.21	2.92	0.97
Fraxinus pennsylvanica	0.03	1.05	3.87	0.91	0.06	0.30	2.26	0.75
Betula nigra	0.03	1.05	2.58	0.60	0.06	0.30	1.95	0.65
Carex corrugata	0.03	1.05	1.29	0.30	0.05	0.22	1.58	0.53
Ulmus alata	0.03	1.05	1.29	0.30	0.03	0.17	1.52	0.51

Table 17B

Summary of Midstory Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.97	15.08	950.97	45.58	3.64	45.62	106.27	35.42
Ilex decidua	0.61	9.55	221.94	10.64	1.07	13.38	33.56	11.19
Carpinus caroliniana	0.23	3.52	192.26	9.21	0.88	11.09	23.83	7.94
Ilex opaca	0.13	2.01	139.35	6.68	0.41	5.11	13.80	4.60
Liquidambar styraciflua	0.45	7.04	65.81	3.15	0.24	3.01	13.20	4.40
Acer rubrum var. drummondii	0.35	5.53	67.10	3.22	0.32	4.05	12.80	4.27
Acer rubrum var. rubrum	0.29	4.52	46.45	2.23	0.22	2.72	9.47	3.16
Planera aquatica	0.16	2.51	78.71	3.77	0.24	2.96	9.25	3.08
Taxodium distichum	0.32	5.03	51.61	2.47	0.08	1.06	8.55	2.85
Fraxinus caroliniana	0.26	4.02	25.81	1.24	0.10	1.28	6.54	2.18
Quercus laurifolia	0.23	3.52	27.10	1.30	0.11	1.36	6.18	2.06
Diospyros virginiana	0.13	2.01	29.68	1.42	0.09	1.10	4.54	1.51
Cephalanthus occidentalis	0.13	2.01	34.84	1.67	0.06	0.80	4.48	1.49
Crataegus viridis	0.13	2.01	11.61	0.56	0.14	1.70	4.26	1.42
Cornus foemina	0.19	3.02	7.74	0.37	0.03	0.32	3.71	1.24
Fraxinus pennsylvanica	0.16	2.51	12.90	0.62	0.04	0.50	3.63	1.21
Vitis rotundifolia	0.10	1.51	32.26	1.55	0.04	0.50	3.55	1.18
Carya aquatica	0.16	2.51	6.45	0.31	0.03	0.33	3.15	1.05
Quercus lyrata	0.16	2.51	6.45	0.31	0.02	0.22	3.04	1.01
Betula nigra	0.10	1.51	7.74	0.37	0.03	0.42	2.30	0.77
Quercus nigra	0.10	1.51	3.87	0.19	0.02	0.25	1.95	0.65
Styrax americana	0.10	1.51	6.45	0.31	0.01	0.12	1.94	0.65
Crataegus opaca	0.10	1.51	3.87	0.19	0.01	0.11	1.80	0.60
Quercus phellos	0.06	1.01	9.03	0.43	0.02	0.26	1.70	0.57

Table 17B

Summary of Midstory Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ulmus americana	0.06	1.01	2.58	0.12	0.02	0.22	1.34	0.45
Campsis radicans	0.06	1.01	5.16	0.25	0.01	0.07	1.32	0.44
Gleditsia aquatica	0.06	1.01	2.58	0.12	0.01	0.14	1.27	0.42
Nyssa sylvatica	0.06	1.01	2.58	0.12	0.01	0.10	1.23	0.41
Crataegus marshallii	0.06	1.01	2.58	0.12	0.00	0.05	1.18	0.39
Salix nigra	0.03	0.50	6.45	0.31	0.01	0.12	0.93	0.31
Cyrilla racemiflora	0.03	0.50	3.87	0.19	0.01	0.17	0.86	0.29
Forestiera acuminata	0.03	0.50	1.29	0.06	0.02	0.25	0.82	0.27
Ulmus rubra	0.03	0.50	2.58	0.12	0.01	0.10	0.73	0.24
Sideroxylon lanuginosa	0.03	0.50	1.29	0.06	0.01	0.15	0.72	0.24
Nyssa biflora	0.03	0.50	2.58	0.12	0.00	0.03	0.66	0.22
Baccharis halimifolia	0.03	0.50	2.58	0.12	0.00	0.02	0.65	0.22
Crataegus berberifolia	0.03	0.50	1.29	0.06	0.01	0.07	0.64	0.21
Ilex vomitoria	0.03	0.50	1.29	0.06	0.00	0.05	0.62	0.21
Ilex longipes	0.03	0.50	1.29	0.06	0.00	0.05	0.61	0.20
Carex corrugata	0.03	0.50	1.29	0.06	0.00	0.05	0.61	0.20
Ulmus alata	0.03	0.50	1.29	0.06	0.00	0.03	0.60	0.20
Ampelopsis arborea	0.03	0.50	1.29	0.06	0.00	0.02	0.58	0.19
Vitis aestivalis var. lincecumii	0.03	0.50	1.29	0.06	0.00	0.02	0.58	0.19
Berchemia scandens	0.03	0.50	1.29	0.06	0.00	0.01	0.58	0.19

Table 17C

Summary of Shrub Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.68	20.00	1823.23	38.31	0.20	32.17	90.49	30.16
Sabal minor	0.06	1.90	116.13	2.44	0.16	26.25	30.60	10.20
Liquidambar styraciflua	0.29	8.57	441.29	9.27	0.05	7.56	25.41	8.47
Ilex decidua	0.35	10.48	338.06	7.10	0.04	6.52	24.10	8.03
Cephalanthus occidentalis	0.10	2.86	387.10	8.13	0.04	6.57	17.56	5.85
Taxodium distichum	0.16	4.76	156.13	3.28	0.01	2.02	10.07	3.36
Brunnichia ovata	0.16	4.76	129.03	2.71	0.01	2.00	9.47	3.16
Quercus laurifolia	0.13	3.81	154.84	3.25	0.01	1.67	8.74	2.91
Carpinus caroliniana	0.10	2.86	116.13	2.44	0.01	1.71	7.01	2.34
Vitis rotundifolia	0.06	1.90	141.94	2.98	0.01	1.71	6.60	2.20
Acer rubrum var. drummondii	0.10	2.86	90.32	1.90	0.01	1.76	6.51	2.17
Campsis radicans	0.10	2.86	141.94	2.98	0.00	0.45	6.29	2.10
Crataegus viridis	0.10	2.86	51.61	1.08	0.01	2.04	5.98	1.99
Planera aquatica	0.06	1.90	90.32	1.90	0.01	1.71	5.52	1.84
Baccharis halimifolia	0.10	2.86	64.52	1.36	0.01	0.82	5.03	1.68
Carya aquatica	0.10	2.86	38.71	0.81	0.01	0.94	4.61	1.54
Acer rubrum var. rubrum	0.10	2.86	51.61	1.08	0.00	0.16	4.11	1.37
Quercus similis	0.03	0.95	77.42	1.63	0.00	0.61	3.19	1.06
Ampelopsis arborea	0.06	1.90	38.71	0.81	0.00	0.29	3.00	1.00
Ilex opaca	0.06	1.90	25.81	0.54	0.00	0.41	2.86	0.95
Styrax americana	0.03	0.95	51.61	1.08	0.00	0.61	2.65	0.88
Cornus foemina	0.06	1.90	25.81	0.54	0.00	0.08	2.53	0.84
Smilax rotundifolia	0.03	0.95	38.71	0.81	0.00	0.12	1.89	0.63
Diodia virginiana	0.03	0.95	12.90	0.27	0.00	0.65	1.88	0.63

Table 17C

Summary of Shrub Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Wisteria frutescens	0.03	0.95	25.81	0.54	0.00	0.20	1.70	0.57
Diospyros virginiana	0.03	0.95	25.81	0.54	0.00	0.20	1.70	0.57
Quercus phellos	0.03	0.95	12.90	0.27	0.00	0.37	1.59	0.53
Fraxinus pennsylvanica	0.03	0.95	12.90	0.27	0.00	0.08	1.31	0.44
Morella cerifera	0.03	0.95	12.90	0.27	0.00	0.08	1.31	0.44
Nyssa sylvatica	0.03	0.95	12.90	0.27	0.00	0.04	1.26	0.42
Frangula caroliniana	0.03	0.95	12.90	0.27	0.00	0.04	1.26	0.42
Ostrya virginiana	0.03	0.95	12.90	0.27	0.00	0.04	1.26	0.42
Crataegus marshallii	0.03	0.95	12.90	0.27	0.00	0.04	1.26	0.42
Amorpha fruticosa	0.03	0.95	12.90	0.27	0.00	0.04	1.26	0.42

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium laxum	0.35	1.57	3.76	9.46	11.03	3.68
Phanopyrum gymnocarpon	0.13	0.57	3.70	9.33	9.90	3.30
Brunnichia ovata	0.77	3.42	1.79	4.51	7.93	2.64
Triadica sebifera	0.81	3.56	1.50	3.78	7.34	2.45
Campsis radicans	0.68	2.99	1.48	3.72	6.71	2.24
Toxicodendron radicans	0.52	2.28	1.07	2.70	4.98	1.66
Symphyotrichum dumosum	0.55	2.42	0.98	2.46	4.88	1.63
Ilex decidua	0.55	2.42	0.95	2.38	4.80	1.60
Rubus trivialis	0.35	1.57	1.01	2.54	4.10	1.37
Liquidambar styraciflua	0.52	2.28	0.62	1.57	3.85	1.28
Acer rubrum var. drummondii	0.48	2.14	0.61	1.55	3.68	1.23
Dichanthelium scoparium	0.10	0.43	1.23	3.11	3.53	1.18
Polygonum hydropiperoides	0.39	1.71	0.64	1.61	3.32	1.11
Dichanthelium commutatum	0.39	1.71	0.57	1.45	3.15	1.05
Rhynchospora corniculata	0.29	1.28	0.71	1.78	3.06	1.02
Ptilimnium capillaceum	0.23	1.00	0.77	1.94	2.93	0.98
Viola palmata	0.32	1.42	0.56	1.42	2.85	0.95
Trachelospermum difforme	0.29	1.28	0.51	1.28	2.56	0.85
Hypericum hypericoides	0.42	1.85	0.27	0.68	2.53	0.84
Carex albolutescens	0.23	1.00	0.56	1.40	2.40	0.80
Vernonia missurica	0.19	0.85	0.61	1.54	2.40	0.80
Carpinus caroliniana	0.29	1.28	0.44	1.10	2.38	0.79
Alternanthera philoxeroides	0.19	0.85	0.57	1.44	2.30	0.77
Juncus effusus	0.16	0.71	0.56	1.42	2.13	0.71

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Acer rubrum var. rubrum	0.29	1.28	0.30	0.75	2.03	0.68
Galium aparine	0.19	0.85	0.46	1.17	2.02	0.67
Ampelopsis arborea	0.23	1.00	0.37	0.93	1.93	0.64
Commelina virginica	0.19	0.85	0.41	1.04	1.89	0.63
Chasmanthium latifolium	0.29	1.28	0.22	0.55	1.83	0.61
Smilax rotundifolia	0.29	1.28	0.16	0.41	1.69	0.56
Dichanthelium dichotomum	0.16	0.71	0.39	0.97	1.69	0.56
Pinus taeda	0.23	1.00	0.22	0.55	1.55	0.52
Erechtites hieraciifolia	0.13	0.57	0.37	0.93	1.50	0.50
Bignonia capreolata	0.23	1.00	0.19	0.49	1.48	0.49
Carex reniformis	0.10	0.43	0.40	1.00	1.43	0.48
Dichanthelium aciculare	0.23	1.00	0.16	0.41	1.40	0.47
Cardamine sp.	0.19	0.85	0.21	0.53	1.38	0.46
Crataegus viridis	0.16	0.71	0.26	0.65	1.36	0.45
Galium tinctorium	0.23	1.00	0.14	0.35	1.34	0.45
Planera aquatica	0.23	1.00	0.13	0.32	1.32	0.44
Tradescantia ohioensis	0.19	0.85	0.18	0.45	1.30	0.43
Eupatorium semiserratum	0.19	0.85	0.17	0.44	1.29	0.43
Carex intumescens	0.13	0.57	0.26	0.65	1.22	0.41
Baccharis halimifolia	0.10	0.43	0.31	0.79	1.21	0.40
Rubus argutus	0.16	0.71	0.19	0.47	1.18	0.39
Steinchisma hians	0.06	0.28	0.34	0.85	1.13	0.38
Saccharum giganteum	0.13	0.57	0.21	0.54	1.11	0.37
Zizaniopsis miliacea	0.06	0.28	0.33	0.82	1.11	0.37

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Crataegus marshallii	0.19	0.85	0.10	0.24	1.10	0.37
Unknown herbaceous	0.16	0.71	0.15	0.37	1.08	0.36
Saccharum baldwinii	0.06	0.28	0.31	0.79	1.08	0.36
Vitis rotundifolia	0.19	0.85	0.07	0.18	1.04	0.35
Viola sororia var. missouriensis	0.16	0.71	0.10	0.26	0.98	0.33
Dichanthelium acuminatum	0.13	0.57	0.16	0.41	0.98	0.33
Saururus cernuus	0.16	0.71	0.09	0.22	0.94	0.31
Ilex vomitoria	0.16	0.71	0.09	0.22	0.94	0.31
Fraxinus caroliniana	0.13	0.57	0.15	0.37	0.94	0.31
Panicum rigidulum	0.10	0.43	0.19	0.47	0.89	0.30
Taxodium distichum	0.10	0.43	0.19	0.47	0.89	0.30
Carex brevior	0.06	0.28	0.24	0.61	0.89	0.30
Carex louisianica	0.13	0.57	0.12	0.31	0.88	0.29
Iris virginica	0.13	0.57	0.12	0.30	0.87	0.29
Carex triangularis	0.10	0.43	0.17	0.43	0.86	0.29
Eupatorium serotinum	0.10	0.43	0.17	0.43	0.85	0.28
Justicia ovata	0.16	0.71	0.05	0.12	0.83	0.28
Lysimachia radicans	0.13	0.57	0.10	0.26	0.83	0.28
Carex tribuloides var. sangamonensis	0.03	0.14	0.27	0.68	0.82	0.27
Styrax americana	0.13	0.57	0.10	0.24	0.81	0.27
Ulmus americana	0.13	0.57	0.10	0.24	0.81	0.27
Prunella vulgaris subsp. lanceolata	0.10	0.43	0.15	0.39	0.81	0.27
Eupatorium capillifolium	0.10	0.43	0.15	0.39	0.81	0.27
Andropogon glomeratus	0.10	0.43	0.15	0.39	0.81	0.27

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Acalypha rhomboidea	0.13	0.57	0.09	0.22	0.79	0.26
Hydrocotyle umbellata	0.13	0.57	0.09	0.22	0.79	0.26
Carex cherokeensis	0.10	0.43	0.14	0.35	0.77	0.26
Clematis crispa	0.13	0.57	0.07	0.19	0.76	0.25
Viburnum dentatum	0.13	0.57	0.06	0.16	0.73	0.24
Ilex opaca	0.13	0.57	0.06	0.14	0.71	0.24
Lonicera japonica	0.13	0.57	0.06	0.14	0.71	0.24
Eupatorium coelestinum	0.06	0.28	0.16	0.41	0.69	0.23
Parthenocissus quinquefolia	0.13	0.57	0.05	0.12	0.69	0.23
Leersia virginica	0.13	0.57	0.04	0.10	0.67	0.22
Juncus repens	0.06	0.28	0.15	0.38	0.67	0.22
Lygodium japonicum	0.10	0.43	0.08	0.20	0.63	0.21
Sabal minor	0.06	0.28	0.13	0.34	0.62	0.21
Cephalanthus occidentalis	0.10	0.43	0.06	0.14	0.57	0.19
Dichanthelium laxiflorum	0.10	0.43	0.06	0.14	0.57	0.19
Elymus virginicus	0.06	0.28	0.11	0.28	0.57	0.19
Mikania scandens	0.06	0.28	0.11	0.28	0.57	0.19
Carex flaccosperma	0.10	0.43	0.05	0.12	0.55	0.18
Gelsemium sempervirens	0.10	0.43	0.04	0.10	0.53	0.18
Quercus phellos	0.10	0.43	0.03	0.08	0.51	0.17
Acalypha gracilens	0.06	0.28	0.09	0.22	0.51	0.17
Carex leptalea	0.03	0.14	0.14	0.36	0.50	0.17
Fraxinus pennsylvanica	0.10	0.43	0.02	0.06	0.49	0.16
Carya aquatica	0.10	0.43	0.02	0.06	0.49	0.16

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cyperus entrerianus	0.06	0.28	0.08	0.20	0.49	0.16
Solidago altissima	0.06	0.28	0.08	0.20	0.49	0.16
Melothria pendula	0.03	0.14	0.13	0.33	0.48	0.16
Salvinia minima	0.06	0.28	0.07	0.18	0.47	0.16
Wisteria frutescens	0.06	0.28	0.07	0.18	0.47	0.16
Rhexia mariana var. mariana	0.06	0.28	0.06	0.16	0.45	0.15
Viola missouriensis	0.06	0.28	0.06	0.16	0.45	0.15
Solidago sempervirens	0.06	0.28	0.06	0.14	0.43	0.14
Polygonum pensylvanicum	0.03	0.14	0.11	0.28	0.43	0.14
Berchemia scandens	0.06	0.28	0.05	0.12	0.41	0.14
Iva annua	0.06	0.28	0.05	0.12	0.41	0.14
Carex debilis	0.06	0.28	0.05	0.12	0.40	0.13
Carex corrugata	0.06	0.28	0.04	0.11	0.39	0.13
Dichanthelium boscii	0.06	0.28	0.04	0.10	0.39	0.13
Quercus laurifolia	0.06	0.28	0.04	0.10	0.39	0.13
Cyperus virens	0.06	0.28	0.04	0.10	0.38	0.13
Smilax smallii	0.06	0.28	0.03	0.08	0.37	0.12
Ludwigia glandulosa	0.06	0.28	0.03	0.08	0.37	0.12
Nyssa biflora	0.06	0.28	0.02	0.06	0.35	0.12
Oplismenus hirtellus	0.06	0.28	0.02	0.06	0.35	0.12
Cornus foemina	0.06	0.28	0.02	0.06	0.35	0.12
Boehmeria cylindrica	0.06	0.28	0.02	0.06	0.35	0.12
Cyperus sp.	0.03	0.14	0.08	0.20	0.35	0.12
Aristolochia serpentaria	0.06	0.28	0.02	0.04	0.33	0.11

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Salix nigra	0.06	0.28	0.02	0.04	0.33	0.11
Vitis cinerea	0.06	0.28	0.02	0.04	0.33	0.11
Carex sp.	0.06	0.28	0.02	0.04	0.33	0.11
Forestiera acuminata	0.06	0.28	0.02	0.04	0.33	0.11
Oxalis dillenii	0.06	0.28	0.02	0.04	0.33	0.11
Potentilla indica	0.06	0.28	0.02	0.04	0.33	0.11
Oxalis stricta	0.03	0.14	0.06	0.16	0.30	0.10
Sagittaria platyphylla	0.03	0.14	0.06	0.16	0.30	0.10
Leersia oryzoides	0.03	0.14	0.05	0.12	0.26	0.09
Ruellia caroliniensis	0.03	0.14	0.05	0.12	0.26	0.09
Mitchella repens	0.03	0.14	0.04	0.10	0.24	0.08
Viola sororia	0.03	0.14	0.04	0.10	0.24	0.08
Boltonia diffusa	0.03	0.14	0.04	0.10	0.24	0.08
Schizachyrium scoparium	0.03	0.14	0.04	0.10	0.24	0.08
Scleria sp.	0.03	0.14	0.03	0.08	0.22	0.07
Ludwigia alternifolia	0.03	0.14	0.02	0.06	0.20	0.07
Juncus tenuis	0.03	0.14	0.02	0.06	0.20	0.07
Elephantopus carolinianus	0.03	0.14	0.02	0.06	0.20	0.07
Carex glaucescens	0.03	0.14	0.02	0.06	0.20	0.07
Panicum anceps	0.03	0.14	0.02	0.06	0.20	0.07
Symphyotrichum divaricatum	0.03	0.14	0.02	0.06	0.20	0.07
Nyssa aquatica	0.03	0.14	0.02	0.04	0.18	0.06
Carex caroliniana	0.03	0.14	0.02	0.04	0.18	0.06
Tillandsia usneoides	0.03	0.14	0.02	0.04	0.18	0.06

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Crinum americanum	0.03	0.14	0.02	0.04	0.18	0.06
Crataegus opaca	0.03	0.14	0.02	0.04	0.18	0.06
Quercus similis	0.03	0.14	0.02	0.04	0.18	0.06
Andropogon virginicus	0.03	0.14	0.02	0.04	0.18	0.06
Smilax tamnoides	0.03	0.14	0.02	0.04	0.18	0.06
Quercus lyrata	0.03	0.14	0.02	0.04	0.18	0.06
Diospyros virginiana	0.03	0.14	0.02	0.04	0.18	0.06
Amorpha fruticosa	0.03	0.14	0.02	0.04	0.18	0.06
Vitis palmata	0.03	0.14	0.02	0.04	0.18	0.06
Smilax walteri	0.03	0.14	0.02	0.04	0.18	0.06
Gonolobus suberosus	0.03	0.14	0.02	0.04	0.18	0.06
Betula nigra	0.03	0.14	0.02	0.04	0.18	0.06
Scleria oligantha	0.03	0.14	0.02	0.04	0.18	0.06
Ilex ambigua	0.03	0.14	0.01	0.02	0.16	0.05
Conoclinium coelestinum	0.03	0.14	0.01	0.02	0.16	0.05
Dicliptera brachiata	0.03	0.14	0.01	0.02	0.16	0.05
Desmodium paniculatum	0.03	0.14	0.01	0.02	0.16	0.05
Melothria pendula	0.03	0.14	0.01	0.02	0.16	0.05
Cyrilla racemiflora	0.03	0.14	0.01	0.02	0.16	0.05
Hypoxis hirsuta	0.03	0.14	0.01	0.02	0.16	0.05
Vicia ludoviciana	0.03	0.14	0.01	0.02	0.16	0.05
Smilax glauca	0.03	0.14	0.01	0.02	0.16	0.05
Sambucus nigra var. canadensis	0.03	0.14	0.01	0.02	0.16	0.05
Axonopus affinis	0.03	0.14	0.01	0.02	0.16	0.05

Table 17D

Summary of Herbaceous Layer
Triadica sebifera Seasonally Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Mecardonia acuminata	0.03	0.14	0.01	0.02	0.16	0.05
Pluchea foetida	0.03	0.14	0.01	0.02	0.16	0.05
Sonchus oleraceus	0.03	0.14	0.01	0.02	0.16	0.05
Ulmus alata	0.03	0.14	0.01	0.02	0.16	0.05
Ulmus rubra	0.03	0.14	0.01	0.02	0.16	0.05
Pyrrhopappus carolinianus	0.03	0.14	0.01	0.02	0.16	0.05
Linum striatum	0.03	0.14	0.01	0.02	0.16	0.05
Hymenocallis caroliniana	0.03	0.14	0.01	0.02	0.16	0.05
Rhexia virginica	0.03	0.14	0.01	0.02	0.16	0.05
Cirsium carolinianum	0.03	0.14	0.01	0.02	0.16	0.05
Nyssa sylvatica	0.03	0.14	0.01	0.02	0.16	0.05
Scleria triglomerata	0.03	0.14	0.01	0.02	0.16	0.05
Crataegus berberifolia	0.03	0.14	0.01	0.02	0.16	0.05
Carex joorii	0.03	0.14	0.01	0.02	0.16	0.05
Ludwigia peploides	0.03	0.14	0.01	0.02	0.16	0.05
Smilax bona-nox	0.03	0.14	0.01	0.02	0.16	0.05
Quercus nigra	0.03	0.14	0.01	0.02	0.16	0.05
Smilax pumila	0.03	0.14	0.01	0.02	0.16	0.05
Chionanthus virginica	0.03	0.14	0.01	0.02	0.16	0.05

Table 18A

Summary of Overstory Layer
Pinus Taeda - Quercus (phellos nigra laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	1.00	25.00	146.67	40.74	11.36	53.79	119.53	39.84
Quercus laurifolia	1.00	25.00	93.33	25.93	5.72	27.06	77.99	26.00
Triadica sebifera	0.67	16.67	53.33	14.81	0.84	3.98	35.46	11.82
Quercus nigra	0.33	8.33	26.67	7.41	1.95	9.25	24.99	8.33
Liquidambar styraciflua	0.33	8.33	13.33	3.70	0.54	2.58	14.61	4.87
Quercus michauxii	0.33	8.33	13.33	3.70	0.44	2.08	14.12	4.71
Ilex opaca	0.33	8.33	13.33	3.70	0.27	1.27	13.31	4.44

Table 18B

Summary of Midstory Layer
Pinus Taeda - Quercus (phellos nigra laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	1.00	12.50	200.00	19.48	0.97	19.66	51.64	17.21
Liquidambar styraciflua	0.33	4.17	160.00	15.58	0.97	19.50	39.25	13.08
Quercus laurifolia	0.67	8.33	80.00	7.79	0.53	10.70	26.82	8.94
Pinus taeda	0.67	8.33	66.67	6.49	0.32	6.53	21.36	7.12
Diospyros virginiana	0.33	4.17	13.33	1.30	0.76	15.35	20.82	6.94
Carpinus caroliniana	0.33	4.17	66.67	6.49	0.40	8.17	18.83	6.28
Ilex opaca	0.33	4.17	66.67	6.49	0.20	4.13	14.79	4.93
Quercus nigra	0.33	4.17	66.67	6.49	0.18	3.55	14.21	4.74
Styrax americana	0.33	4.17	66.67	6.49	0.07	1.32	11.98	3.99
Acer rubrum var. rubrum	0.33	4.17	53.33	5.19	0.08	1.66	11.02	3.67
Nyssa sylvatica	0.33	4.17	26.67	2.60	0.18	3.56	10.32	3.44
Halesia diptera	0.33	4.17	26.67	2.60	0.09	1.85	8.61	2.87
Persea palustris	0.33	4.17	26.67	2.60	0.07	1.40	8.17	2.72
Ilex decidua	0.33	4.17	26.67	2.60	0.04	0.86	7.62	2.54
Ilex vomitoria	0.33	4.17	13.33	1.30	0.03	0.51	5.98	1.99
Quercus alba	0.33	4.17	13.33	1.30	0.02	0.34	5.80	1.93
Cornus florida	0.33	4.17	13.33	1.30	0.01	0.26	5.72	1.91
Campsis radicans	0.33	4.17	13.33	1.30	0.01	0.26	5.72	1.91
Symplocos tinctoria	0.33	4.17	13.33	1.30	0.01	0.21	5.68	1.89
Acer rubrum var. drummondii	0.33	4.17	13.33	1.30	0.01	0.19	5.66	1.89

Table 18C

Summary of Shrub Layer
Pinus Taeda - Quercus (phellos nigra laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Vitis rotundifolia	0.67	11.76	533.33	11.11	0.09	16.58	39.46	13.15
Styrax americana	0.33	5.88	533.33	11.11	0.10	19.10	36.09	12.03
Ilex vomitoria	0.33	5.88	533.33	11.11	0.08	15.58	32.57	10.86
Rubus trivialis	0.33	5.88	1066.67	22.22	0.02	4.02	32.12	10.71
Ilex decidua	0.33	5.88	266.67	5.56	0.08	16.08	27.52	9.17
Campsis radicans	0.67	11.76	400.00	8.33	0.02	3.52	23.62	7.87
Toxicodendron radicans	0.67	11.76	400.00	8.33	0.02	3.02	23.11	7.70
Acer rubrum var. drummondii	0.33	5.88	133.33	2.78	0.04	8.04	16.70	5.57
Cephalanthus occidentalis	0.33	5.88	133.33	2.78	0.04	8.04	16.70	5.57
Smilax rotundifolia	0.33	5.88	266.67	5.56	0.01	1.01	12.44	4.15
Liquidambar styraciflua	0.33	5.88	133.33	2.78	0.01	2.01	10.67	3.56
Triadica sebifera	0.33	5.88	133.33	2.78	0.01	2.01	10.67	3.56
Ilex opaca	0.33	5.88	133.33	2.78	0.00	0.50	9.16	3.05
Carpinus caroliniana	0.33	5.88	133.33	2.78	0.00	0.50	9.16	3.05

Table 18D

Summary of Herbaceous Layer
Pinus Taeda - Quercus (phellos nigra laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Campsis radicans	0.67	4.65	4.18	25.00	29.65	9.88
Toxicodendron radicans	1.00	6.98	2.33	13.94	20.92	6.97
Vitis rotundifolia	0.67	4.65	2.07	12.35	17.00	5.67
Rubus trivialis	0.67	4.65	1.67	9.96	14.61	4.87
Smilax bona-nox	0.67	4.65	1.00	5.98	10.63	3.54
Bignonia capreolata	0.33	2.33	1.07	6.37	8.70	2.90
Mitchella repens	0.67	4.65	0.42	2.49	7.14	2.38
Ilex decidua	0.67	4.65	0.25	1.49	6.15	2.05
Smilax rotundifolia	0.67	4.65	0.25	1.49	6.15	2.05
Ilex vomitoria	0.33	2.33	0.58	3.49	5.81	1.94
Chasmanthium laxum	0.67	4.65	0.17	1.00	5.65	1.88
Quercus nigra	0.67	4.65	0.17	1.00	5.65	1.88
Carpinus caroliniana	0.33	2.33	0.42	2.49	4.82	1.61
Rubus argutus	0.33	2.33	0.33	1.99	4.32	1.44
Quercus laurifolia	0.33	2.33	0.25	1.49	3.82	1.27
Lygodium japonicum	0.33	2.33	0.17	1.00	3.32	1.11
Pinus taeda	0.33	2.33	0.17	1.00	3.32	1.11
Morella cerifera	0.33	2.33	0.08	0.50	2.82	0.94
Parthenocissus quinquefolia	0.33	2.33	0.08	0.50	2.82	0.94
Oplismenus hirtellus	0.33	2.33	0.08	0.50	2.82	0.94
Scleria oligantha	0.33	2.33	0.08	0.50	2.82	0.94
Viburnum dentatum	0.33	2.33	0.08	0.50	2.82	0.94
Lonicera japonica	0.33	2.33	0.08	0.50	2.82	0.94
Quercus alba	0.33	2.33	0.08	0.50	2.82	0.94

Table 18D

Summary of Herbaceous Layer
Pinus Taeda - Quercus (phellos nigra laurifolia) Temporarily Flooded Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Acer rubrum var. rubrum	0.33	2.33	0.08	0.50	2.82	0.94
Symplocos tinctoria	0.33	2.33	0.08	0.50	2.82	0.94
Brunnichia ovata	0.33	2.33	0.08	0.50	2.82	0.94
Carya aquatica	0.33	2.33	0.08	0.50	2.82	0.94
Ludwigia pilsoa	0.33	2.33	0.08	0.50	2.82	0.94
Smilax glauca	0.33	2.33	0.08	0.50	2.82	0.94
Nyssa sylvatica	0.33	2.33	0.08	0.50	2.82	0.94
Styrax americana	0.33	2.33	0.08	0.50	2.82	0.94

Table 19A

Summary of Overstory Layer
Pinus taeda - Quercus (alba, falcata, stellata) Forest Alliance
Proposed: *Pinus taeda - Quercus* spp. Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.67	14.29	133.33	34.48	10.89	36.13	84.90	28.30
Quercus falcata	0.67	14.29	26.67	6.90	5.55	18.42	39.60	13.20
Liquidambar styraciflua	0.50	10.71	40.00	10.34	2.98	9.89	30.94	10.31
Quercus nigra	0.67	14.29	26.67	6.90	2.19	7.26	28.44	9.48
Quercus hemisphaerica	0.17	3.57	60.00	15.52	2.53	8.39	27.48	9.16
Quercus michauxii	0.33	7.14	26.67	6.90	1.61	5.34	19.38	6.46
Nyssa sylvatica	0.50	10.71	20.00	5.17	0.87	2.89	18.78	6.26
Quercus alba	0.33	7.14	20.00	5.17	1.58	5.23	17.55	5.85
Quercus stellata	0.17	3.57	6.67	1.72	1.34	4.43	9.72	3.24
Halesia diptera	0.17	3.57	6.67	1.72	0.19	0.63	5.92	1.97
Triadica sebifera	0.17	3.57	6.67	1.72	0.16	0.53	5.83	1.94
Carya tomentosa	0.17	3.57	6.67	1.72	0.15	0.50	5.80	1.93
Ilex opaca	0.17	3.57	6.67	1.72	0.11	0.36	5.65	1.88

Table 19B

Summary of Midstory Layer
Pinus taeda - Quercus (alba, falcata, stellata) Forest Alliance
Proposed: *Pinus taeda - Quercus* spp. Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	1.00	13.04	553.33	35.93	1.57	36.48	85.46	28.49
Liquidambar styraciflua	0.67	8.70	193.33	12.55	0.40	9.27	30.52	10.17
Pinus taeda	0.33	4.35	153.33	9.96	0.64	14.95	29.25	9.75
Quercus nigra	0.83	10.87	133.33	8.66	0.41	9.53	29.06	9.69
Ilex opaca	0.67	8.70	146.67	9.52	0.24	5.67	23.89	7.96
Quercus michauxii	0.67	8.70	33.33	2.16	0.16	3.63	14.49	4.83
Carpinus caroliniana	0.33	4.35	60.00	3.90	0.23	5.40	13.65	4.55
Persea palustris	0.33	4.35	33.33	2.16	0.08	1.91	8.42	2.81
Quercus hemisphaerica	0.33	4.35	20.00	1.30	0.12	2.70	8.35	2.78
Prunus serotina	0.17	2.17	33.33	2.16	0.06	1.43	5.77	1.92
Nyssa sylvatica	0.33	4.35	13.33	0.87	0.02	0.39	5.60	1.87
Symplocos tinctoria	0.17	2.17	26.67	1.73	0.05	1.25	5.15	1.72
Vaccinium arboreum	0.17	2.17	20.00	1.30	0.05	1.08	4.55	1.52
Ligustrum sinense	0.17	2.17	20.00	1.30	0.04	0.95	4.42	1.47
Halesia diptera	0.17	2.17	20.00	1.30	0.03	0.80	4.27	1.42
Ilex decidua	0.17	2.17	20.00	1.30	0.02	0.56	4.04	1.35
Quercus falcata	0.17	2.17	6.67	0.43	0.06	1.34	3.95	1.32
Carya tomentosa	0.17	2.17	6.67	0.43	0.05	1.22	3.83	1.28
Triadica sebifera	0.17	2.17	13.33	0.87	0.02	0.40	3.44	1.15
Vitis rotundifolia	0.17	2.17	13.33	0.87	0.01	0.22	3.26	1.09
Prunus caroliniana	0.17	2.17	6.67	0.43	0.02	0.47	3.08	1.03
Ulmus alata	0.17	2.17	6.67	0.43	0.01	0.25	2.85	0.95
Sassafras albidum	0.17	2.17	6.67	0.43	0.00	0.11	2.72	0.91

Table 19C

Summary of Shrub Layer
Pinus taeda - Quercus (alba, falcata, stellata) Forest Alliance
Proposed: *Pinus taeda - Quercus* spp. Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.83	16.67	2946.67	43.21	0.24	36.75	96.63	32.21
Ilex opaca	0.33	6.67	466.67	6.84	0.06	9.45	22.96	7.65
Quercus falcata	0.33	6.67	400.00	5.87	0.05	7.24	19.77	6.59
Prunus caroliniana	0.17	3.33	533.33	7.82	0.05	8.05	19.20	6.40
Liquidambar styraciflua	0.50	10.00	266.67	3.91	0.03	4.43	18.34	6.11
Ilex decidua	0.33	6.67	133.33	1.96	0.05	7.85	16.47	5.49
Prunus serotina	0.33	6.67	200.00	2.93	0.04	5.83	15.43	5.14
Quercus nigra	0.17	3.33	200.00	2.93	0.04	6.84	13.11	4.37
Callicarpa americana	0.17	3.33	333.33	4.89	0.03	4.02	12.24	4.08
Viburnum dentatum	0.17	3.33	200.00	2.93	0.02	2.82	9.08	3.03
Quercus alba	0.17	3.33	133.33	1.96	0.01	2.01	7.30	2.43
Ligustrum sinense	0.17	3.33	140.00	2.05	0.01	1.49	6.87	2.29
Carpinus caroliniana	0.17	3.33	200.00	2.93	0.00	0.60	6.87	2.29
Smilax smallii	0.17	3.33	133.33	1.96	0.00	0.40	5.69	1.90
Smilax bona-nox	0.17	3.33	133.33	1.96	0.00	0.40	5.69	1.90
Gelsemium sempervirens	0.17	3.33	133.33	1.96	0.00	0.40	5.69	1.90
Smilax rotundifolia	0.17	3.33	66.67	0.98	0.01	0.80	5.12	1.71
Morus rubra	0.17	3.33	66.67	0.98	0.00	0.20	4.51	1.50
Vitis rotundifolia	0.17	3.33	66.67	0.98	0.00	0.20	4.51	1.50
Crataegus marshallii	0.17	3.33	66.67	0.98	0.00	0.20	4.51	1.50

Table 19D

Summary of Herbaceous Layer
Pinus taeda - Quercus (alba, falcata, stellata) Forest Alliance
Proposed: *Pinus taeda - Quercus* spp. Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ilex vomitoria	1.00	8.57	2.41	19.74	28.31	9.44
Campsis radicans	0.17	1.43	2.08	17.08	18.51	6.17
Toxicodendron radicans	0.83	7.14	0.71	5.81	12.95	4.32
Chasmanthium laxum	0.17	1.43	1.17	9.56	10.99	3.66
Callicarpa americana	0.67	5.71	0.63	5.12	10.84	3.61
Smilax smallii	0.17	1.43	1.00	8.20	9.63	3.21
Ilex opaca	0.50	4.29	0.33	2.73	7.02	2.34
Lonicera japonica	0.50	4.29	0.33	2.73	7.02	2.34
Vitis rotundifolia	0.50	4.29	0.25	2.05	6.33	2.11
Rubus trivialis	0.50	4.29	0.21	1.71	5.99	2.00
Rubus argutus	0.33	2.86	0.25	2.05	4.91	1.64
Viburnum dentatum	0.33	2.86	0.25	2.05	4.91	1.64
Smilax pumila	0.33	2.86	0.25	2.05	4.91	1.64
Bignonia capreolata	0.33	2.86	0.21	1.71	4.56	1.52
Smilax bona-nox	0.33	2.86	0.17	1.37	4.22	1.41
Mitchella repens	0.33	2.86	0.17	1.37	4.22	1.41
Gelsemium sempervirens	0.33	2.86	0.13	1.02	3.88	1.29
Parthenocissus quinquefolia	0.33	2.86	0.08	0.68	3.54	1.18
Prunus caroliniana	0.17	1.43	0.17	1.37	2.79	0.93
Carpinus caroliniana	0.17	1.43	0.13	1.02	2.45	0.82
Smilax rotundifolia	0.17	1.43	0.13	1.02	2.45	0.82
Smilax glauca	0.17	1.43	0.13	1.02	2.45	0.82
Quercus nigra	0.17	1.43	0.08	0.68	2.11	0.70
Quercus falcata	0.17	1.43	0.08	0.68	2.11	0.70

Table 19D

Summary of Herbaceous Layer
Pinus taeda - Quercus (alba, falcata, stellata) Forest Alliance
Proposed: *Pinus taeda - Quercus* spp. Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Vaccinium elliottii	0.17	1.43	0.08	0.68	2.11	0.70
Quercus alba	0.17	1.43	0.08	0.68	2.11	0.70
Liquidambar styraciflua	0.17	1.43	0.08	0.68	2.11	0.70
Carya tomentosa	0.17	1.43	0.04	0.34	1.77	0.59
Ligustrum sinense	0.17	1.43	0.04	0.34	1.77	0.59
Quercus hemispherica	0.17	1.43	0.04	0.34	1.77	0.59
Persea palustris	0.17	1.43	0.04	0.34	1.77	0.59
Symplocos tinctoria	0.17	1.43	0.04	0.34	1.77	0.59
Ulmus alata	0.17	1.43	0.04	0.34	1.77	0.59
Plantago lanceolata	0.17	1.43	0.04	0.34	1.77	0.59
Triadica sebifera	0.17	1.43	0.04	0.34	1.77	0.59
Quercus michauxii	0.17	1.43	0.04	0.34	1.77	0.59
Oplismenus hirtellus	0.17	1.43	0.04	0.34	1.77	0.59
Brunnichia ovata	0.17	1.43	0.04	0.34	1.77	0.59
Pinus taeda	0.17	1.43	0.04	0.34	1.77	0.59
Lygodium japonicum	0.17	1.43	0.04	0.34	1.77	0.59
Dichanthelium dichotomum	0.17	1.43	0.04	0.34	1.77	0.59
Eupatorium semiserratum	0.17	1.43	0.04	0.34	1.77	0.59

Table 20A

Summary of Overstory Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex opaca	0.92	23.40	203.33	51.69	6.07	35.26	110.36	36.79
Carpinus caroliniana	0.67	17.02	60.00	15.25	1.40	8.17	40.44	13.48
Nyssa sylvatica	0.42	10.64	33.33	8.47	1.64	9.51	28.62	9.54
Liquidambar styraciflua	0.42	10.64	23.33	5.93	2.07	12.02	28.59	9.53
Quercus nigra	0.17	4.26	6.67	1.69	1.75	10.19	16.14	5.38
Triadica sebifera	0.25	6.38	16.67	4.24	0.37	2.14	12.76	4.25
Quercus michauxii	0.17	4.26	10.00	2.54	0.66	3.82	10.62	3.54
Ilex decidua	0.25	6.38	10.00	2.54	0.25	1.47	10.40	3.47
Carya aquatica	0.17	4.26	10.00	2.54	0.61	3.54	10.34	3.45
Nyssa biflora	0.08	2.13	3.33	0.85	1.26	7.35	10.33	3.44
Celtis laevigata	0.08	2.13	3.33	0.85	0.64	3.73	6.70	2.23
Ilex vomitoria	0.08	2.13	3.33	0.85	0.25	1.43	4.40	1.47
Quercus lyrata	0.08	2.13	3.33	0.85	0.14	0.84	3.82	1.27
Halesia diptera	0.08	2.13	3.33	0.85	0.05	0.30	3.27	1.09
Persia borbonia	0.08	2.13	3.33	0.85	0.04	0.24	3.21	1.07

Table 20B

Summary of Midstory Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex opaca	0.75	12.86	276.67	23.06	1.12	31.73	67.65	22.55
Ilex vomitoria	0.42	7.14	256.67	21.39	0.61	17.30	45.83	15.28
Carpinus caroliniana	0.50	8.57	186.67	15.56	0.54	15.47	39.60	13.20
Ilex decidua	0.67	11.43	110.00	9.17	0.41	11.74	32.33	10.78
Vitis rotundifolia	0.83	14.29	90.00	7.50	0.13	3.61	25.40	8.47
Triadica sebifera	0.42	7.14	63.33	5.28	0.25	7.08	19.50	6.50
Liquidambar styraciflua	0.33	5.71	93.33	7.78	0.16	4.50	17.99	6.00
Halesia diptera	0.33	5.71	30.00	2.50	0.08	2.23	10.45	3.48
Quercus nigra	0.25	4.29	26.67	2.22	0.05	1.32	7.83	2.61
Vitis cinerea	0.25	4.29	16.67	1.39	0.03	0.85	6.52	2.17
Acer rubrum var. rubrum	0.17	2.86	10.00	0.83	0.02	0.63	4.32	1.44
Fraxinus americana	0.08	1.43	3.33	0.28	0.03	0.90	2.61	0.87
Fraxinus pennsylvanica	0.08	1.43	3.33	0.28	0.02	0.67	2.38	0.79
Persea palustris	0.08	1.43	6.67	0.56	0.01	0.38	2.37	0.79
Nyssa sylvatica	0.08	1.43	3.33	0.28	0.02	0.60	2.31	0.77
Quercus michauxii	0.08	1.43	3.33	0.28	0.01	0.23	1.93	0.64
Planera aquatica	0.08	1.43	3.33	0.28	0.01	0.23	1.93	0.64
Vaccinium elliottii	0.08	1.43	3.33	0.28	0.01	0.19	1.89	0.63
Vitis aestivalis	0.08	1.43	3.33	0.28	0.00	0.09	1.80	0.60
Quercus phellos	0.08	1.43	3.33	0.28	0.00	0.09	1.80	0.60
Sanicula canadensis	0.08	1.43	3.33	0.28	0.00	0.09	1.80	0.60
Persia borbonia	0.08	1.43	3.33	0.28	0.00	0.07	1.77	0.59

Table 20C

Summary of Shrub Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	0.42	8.06	1300.00	18.11	0.08	13.61	39.78	13.26
Ilex vomitoria	0.50	9.68	666.67	9.29	0.10	17.62	36.59	12.20
Carpinus caroliniana	0.67	12.90	800.00	11.14	0.06	10.60	34.64	11.55
Liquidambar styraciflua	0.42	8.06	733.33	10.21	0.07	11.15	29.43	9.81
Ilex opaca	0.50	9.68	680.00	9.47	0.04	6.86	26.01	8.67
Vitis rotundifolia	0.58	11.29	433.33	6.04	0.03	5.13	22.46	7.49
Quercus nigra	0.50	9.68	400.00	5.57	0.04	6.92	22.16	7.39
Rubus argutus	0.17	3.23	733.33	10.21	0.03	5.80	19.24	6.41
Arundinaria gigantea	0.08	1.61	533.33	7.43	0.05	9.04	18.08	6.03
Halesia diptera	0.17	3.23	200.00	2.79	0.03	5.69	11.70	3.90
Ligustrum sinense	0.08	1.61	200.00	2.79	0.01	1.67	6.07	2.02
Callicarpa americana	0.17	3.23	66.67	0.93	0.00	0.56	4.71	1.57
Ilex decidua	0.17	3.23	66.67	0.93	0.00	0.22	4.38	1.46
Persea palustris	0.08	1.61	100.00	1.39	0.01	1.00	4.01	1.34
Parthenocissus quinquefolia	0.08	1.61	33.33	0.46	0.01	1.78	3.86	1.29
Vitis cinerea	0.08	1.61	33.33	0.46	0.01	1.00	3.08	1.03
Quercus phellos	0.08	1.61	33.33	0.46	0.00	0.45	2.52	0.84
Persia borbonia	0.08	1.61	33.33	0.46	0.00	0.45	2.52	0.84
Smilax laurifolia	0.08	1.61	33.33	0.46	0.00	0.11	2.19	0.73
Cyrilla racemiflora	0.08	1.61	33.33	0.46	0.00	0.11	2.19	0.73
Fraxinus pennsylvanica	0.08	1.61	33.33	0.46	0.00	0.11	2.19	0.73
Smilax bona-nox	0.08	1.61	33.33	0.46	0.00	0.11	2.19	0.73

Table 20D

Summary of Herbaceous Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.92	4.60	5.30	20.41	25.01	8.34
Parthenocissus quinquefolia	0.50	2.51	2.65	10.20	12.71	4.24
Ilex opaca	1.00	5.02	1.35	5.21	10.23	3.41
Vitis rotundifolia	0.83	4.18	1.30	4.99	9.17	3.06
Rubus argutus	0.58	2.93	1.52	5.84	8.77	2.92
Carpinus caroliniana	0.83	4.18	0.98	3.75	7.94	2.65
Ilex decidua	0.83	4.18	0.71	2.73	6.91	2.30
Ilex vomitoria	0.67	3.35	0.87	3.35	6.70	2.23
Liquidambar styraciflua	0.75	3.77	0.50	1.92	5.69	1.90
Sanicula canadensis	0.67	3.35	0.58	2.24	5.59	1.86
Bignonia capreolata	0.50	2.51	0.79	3.05	5.56	1.85
Oplismenus hirtellus	0.58	2.93	0.38	1.44	4.37	1.46
Tradescantia ohioensis	0.50	2.51	0.48	1.84	4.35	1.45
Oxalis dillenii	0.50	2.51	0.42	1.60	4.11	1.37
Lonicera japonica	0.50	2.51	0.31	1.20	3.71	1.24
Mitchella repens	0.42	2.09	0.38	1.44	3.54	1.18
Callicarpa americana	0.33	1.67	0.44	1.68	3.36	1.12
Halesia diptera	0.25	1.26	0.54	2.07	3.32	1.11
Ardisia crenata	0.08	0.42	0.75	2.89	3.30	1.10
Smilax bona-nox	0.42	2.09	0.19	0.72	2.81	0.94
Rubus trivialis	0.25	1.26	0.35	1.36	2.62	0.87
Dichanthelium commutatum	0.33	1.67	0.21	0.80	2.48	0.83
Viola sororia var. missouriensis	0.25	1.26	0.29	1.12	2.38	0.79
Campsis radicans	0.17	0.84	0.31	1.20	2.04	0.68

Table 20D

Summary of Herbaceous Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chasmanthium laxum	0.17	0.84	0.31	1.20	2.04	0.68
Thelypteris kunthii	0.25	1.26	0.13	0.50	1.75	0.58
Symphyotrichum dumosum	0.25	1.26	0.13	0.48	1.74	0.58
Viburnum dentatum	0.25	1.26	0.10	0.40	1.66	0.55
Potentilla indica	0.17	0.84	0.21	0.80	1.64	0.55
Viola palmata	0.17	0.84	0.21	0.80	1.64	0.55
Carex leptalea	0.08	0.42	0.31	1.20	1.62	0.54
Vitis aestivalis	0.17	0.84	0.19	0.72	1.56	0.52
Quercus nigra	0.25	1.26	0.06	0.24	1.50	0.50
Acer rubrum var. rubrum	0.17	0.84	0.17	0.64	1.48	0.49
Vernonia missurica	0.17	0.84	0.15	0.56	1.40	0.47
Unknown herbaceous	0.17	0.84	0.15	0.56	1.40	0.47
Arundinaria gigantea	0.08	0.42	0.25	0.96	1.38	0.46
Mikania scandens	0.17	0.84	0.13	0.48	1.32	0.44
Brunnichia ovata	0.17	0.84	0.10	0.40	1.24	0.41
Trachelospermum difforme	0.17	0.84	0.10	0.40	1.24	0.41
Triadica sebifera	0.17	0.84	0.08	0.32	1.16	0.39
Viola sororia	0.17	0.84	0.08	0.32	1.16	0.39
Smilax rotundifolia	0.17	0.84	0.06	0.24	1.08	0.36
Vaccinium elliottii	0.17	0.84	0.04	0.16	1.00	0.33
Quercus phellos	0.17	0.84	0.04	0.16	1.00	0.33
Ruellia caroliniensis	0.17	0.84	0.04	0.16	1.00	0.33
Gonolobus suberosus	0.17	0.84	0.04	0.16	1.00	0.33
Cornus foemina	0.17	0.84	0.04	0.16	1.00	0.33

Table 20D

Summary of Herbaceous Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Clematis crispa	0.17	0.84	0.04	0.16	1.00	0.33
Ampelopsis arborea	0.17	0.84	0.04	0.16	1.00	0.33
Dicliptera brachiata	0.08	0.42	0.10	0.40	0.82	0.27
Persea palustris	0.08	0.42	0.08	0.32	0.74	0.25
Dichanthelium boscii	0.08	0.42	0.08	0.32	0.74	0.25
Chasmanthium latifolium	0.08	0.42	0.08	0.32	0.74	0.25
Planera aquatica	0.08	0.42	0.06	0.24	0.66	0.22
Ilex longipes	0.08	0.42	0.04	0.16	0.58	0.19
Diodia virginiana	0.08	0.42	0.04	0.16	0.58	0.19
Lysimachia radicans	0.08	0.42	0.04	0.16	0.58	0.19
Carex oxylepis	0.08	0.42	0.04	0.16	0.58	0.19
Polygonum hydropiperoides	0.08	0.42	0.04	0.16	0.58	0.19
Prunella vulgaris	0.08	0.42	0.04	0.16	0.58	0.19
Smilax glauca	0.08	0.42	0.04	0.16	0.58	0.19
Melothria pendula	0.08	0.42	0.04	0.16	0.58	0.19
Symplocos tinctoria	0.08	0.42	0.04	0.16	0.58	0.19
Elephantopus carolinianus	0.08	0.42	0.02	0.08	0.50	0.17
Eupatorium capillifolium	0.08	0.42	0.02	0.08	0.50	0.17
Acalypha rhomboidea	0.08	0.42	0.02	0.08	0.50	0.17
Prunus caroliniana	0.08	0.42	0.02	0.08	0.50	0.17
Lygodium japonicum	0.08	0.42	0.02	0.08	0.50	0.17
Aristolochia serpentaria	0.08	0.42	0.02	0.08	0.50	0.17
Nyssa sylvatica	0.08	0.42	0.02	0.08	0.50	0.17
Galium aparine	0.08	0.42	0.02	0.08	0.50	0.17

Table 20D

Summary of Herbaceous Layer
Ilex opaca - Carpinus caroliniana Forest Alliance
Proposed: *Ilex opaca - Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Smilax smallii	0.08	0.42	0.02	0.08	0.50	0.17
Smilax hispida	0.08	0.42	0.02	0.08	0.50	0.17
Chasmanthium sessiliflorum	0.08	0.42	0.02	0.08	0.50	0.17
Ulmus alata	0.08	0.42	0.02	0.08	0.50	0.17
Dichanthelium species	0.08	0.42	0.02	0.08	0.50	0.17
Acer rubrum var. drummondii	0.08	0.42	0.02	0.08	0.50	0.17
Eupatorium semiserratum	0.08	0.42	0.02	0.08	0.50	0.17
Ligustrum sinense	0.08	0.42	0.02	0.08	0.50	0.17
Scleria sp.	0.08	0.42	0.02	0.08	0.50	0.17
Hypericum hypericoides	0.08	0.42	0.02	0.08	0.50	0.17
Ulmus americana	0.08	0.42	0.02	0.08	0.50	0.17

Table 21A

Summary of Overstory Layer
Taxodium distichum Tidal Woodlands
Propossed: *Taxodium distichum /Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.83	90.91	190.00	98.28	13.35	98.74	287.93	95.98
Nyssa aquatica	0.08	9.09	3.33	1.72	0.17	1.26	12.07	4.02

Table 21B

Summary of Midstory Layer
Taxodium distichum Tidal Woodlands
Propossed: *Taxodium distichum /Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.67	27.59	140.00	51.22	0.39	52.67	131.48	43.83
Triadica sebifera	0.25	10.34	23.33	8.54	0.09	11.73	30.61	10.20
Acer rubrum var. drummondii	0.25	10.34	33.33	12.20	0.04	5.77	28.31	9.44
Planera aquatica	0.25	10.34	13.33	4.88	0.05	7.13	22.35	7.45
Cephalanthus occidentalis	0.25	10.34	16.67	6.10	0.03	4.63	21.08	7.03
Salix nigra	0.25	10.34	16.67	6.10	0.02	2.90	19.34	6.45
Nyssa aquatica	0.08	3.45	10.00	3.66	0.06	8.08	15.18	5.06
Morella cerifera	0.17	6.90	10.00	3.66	0.03	4.09	14.64	4.88
Nyssa biflora	0.08	3.45	3.33	1.22	0.02	2.25	6.92	2.31
Quercus laurifolia	0.08	3.45	3.33	1.22	0.00	0.43	5.10	1.70
Fraxinus caroliniana	0.08	3.45	3.33	1.22	0.00	0.32	4.98	1.66

Table 21C

Summary of Shrub Layer
Taxodium distichum Tidal Woodlands
Propossed: *Taxodium distichum /Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.33	33.33	266.67	34.78	0.02	18.13	86.25	28.75
Acer rubrum var. drummondii	0.25	25.00	200.00	26.09	0.04	30.57	81.66	27.22
Salix nigra	0.08	8.33	133.33	17.39	0.04	29.53	55.26	18.42
Cephalanthus occidentalis	0.08	8.33	33.33	4.35	0.01	8.29	20.97	6.99
Morella cerifera	0.08	8.33	33.33	4.35	0.01	7.77	20.45	6.82
Kosteletzkya virginica	0.08	8.33	66.67	8.70	0.00	1.04	18.07	6.02
Triadica sebifera	0.08	8.33	33.33	4.35	0.01	4.66	17.34	5.78

Table 21D

Summary of Herbaceous Layer
Taxodium distichum Tidal Woodlands
Propossed: *Taxodium distichum /Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Alternanthera philoxeroides	1.00	8.05	25.15	38.08	46.13	15.38
Zizaniopsis miliacea	0.75	6.04	12.50	18.93	24.97	8.32
Ptilimnium capillaceum	0.67	5.37	3.82	5.78	11.15	3.72
Salvinia minima	0.33	2.68	5.42	8.20	10.89	3.63
Saccharum giganteum	0.25	2.01	3.35	5.08	7.09	2.36
Sacciolepis striata	0.50	4.03	0.70	1.06	5.09	1.70
Typha latifolia	0.42	3.36	1.04	1.58	4.93	1.64
Boehmeria cylindrica	0.33	2.68	1.13	1.70	4.39	1.46
Echinochloa walteri	0.08	0.67	1.92	2.90	3.57	1.19
Typha domingensis	0.33	2.68	0.48	0.73	3.42	1.14
Sagittaria lancifolia	0.25	2.01	0.80	1.21	3.22	1.07
Taxodium distichum	0.33	2.68	0.33	0.50	3.19	1.06
Rhynchospora corniculata	0.33	2.68	0.33	0.50	3.19	1.06
Juncus effusus	0.25	2.01	0.44	0.66	2.68	0.89
Carex brevior	0.17	1.34	0.85	1.29	2.64	0.88
Bidens laevis	0.25	2.01	0.29	0.44	2.46	0.82
Pontederia cordata	0.25	2.01	0.29	0.44	2.46	0.82
Phanopyrum gymnocarpon	0.25	2.01	0.29	0.44	2.45	0.82
Hibiscus laevis	0.25	2.01	0.17	0.25	2.27	0.76
Cyperus haspan	0.25	2.01	0.15	0.22	2.23	0.74
Fuirena breviseta	0.25	2.01	0.13	0.19	2.20	0.73
Eleocharis montana	0.17	1.34	0.52	0.79	2.13	0.71
Kosteletzkya virginica	0.17	1.34	0.52	0.79	2.13	0.71

Table 21D

Summary of Herbaceous Layer
Taxodium distichum Tidal Woodlands
Propossed: *Taxodium distichum /Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cyperus virens	0.25	2.01	0.06	0.09	2.11	0.70
Sagittaria latifolia	0.17	1.34	0.44	0.66	2.00	0.67
Micranthemum umbrosum	0.17	1.34	0.27	0.41	1.75	0.58
Saururus cernuus	0.08	0.67	0.71	1.07	1.74	0.58
Sphagnum sp.	0.17	1.34	0.25	0.38	1.72	0.57
Osmunda regalis	0.17	1.34	0.22	0.33	1.67	0.56
Solidago sempervirens	0.17	1.34	0.17	0.25	1.59	0.53
Boltonia diffusa	0.17	1.34	0.17	0.25	1.59	0.53
Strophostyles umbellata	0.17	1.34	0.17	0.25	1.59	0.53
Hydrocotyle verticillata	0.17	1.34	0.15	0.22	1.56	0.52
Cyperus odoratus	0.17	1.34	0.10	0.16	1.50	0.50
Mikania scandens	0.17	1.34	0.09	0.13	1.47	0.49
Acer rubrum var. drummondii	0.17	1.34	0.08	0.13	1.47	0.49
Eleocharis quadrangulata	0.17	1.34	0.06	0.09	1.44	0.48
Lycopus virginicus	0.17	1.34	0.04	0.06	1.41	0.47
Peltandra virginica	0.08	0.67	0.40	0.60	1.27	0.42
Echinodorus cordifolius	0.08	0.67	0.28	0.43	1.10	0.37
Ludwigia leptocarpa	0.08	0.67	0.23	0.35	1.02	0.34
Eichhornia crassipes	0.08	0.67	0.21	0.32	0.99	0.33
Lemna aequinoctialis	0.08	0.67	0.19	0.28	0.96	0.32
Polygonum hydropiperoides	0.08	0.67	0.18	0.28	0.95	0.32
Juncus diffusissimus	0.08	0.67	0.17	0.25	0.92	0.31
Crinum americanum	0.08	0.67	0.14	0.21	0.89	0.30

Table 21D

Summary of Herbaceous Layer
Taxodium distichum Tidal Woodlands
Propossed: *Taxodium distichum /Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Andropogon glomeratus	0.08	0.67	0.10	0.16	0.83	0.28
Unknown herbaceous	0.08	0.67	0.10	0.16	0.83	0.28
Galium tinctorium	0.08	0.67	0.08	0.13	0.80	0.27
Hydrocotyle umbellata	0.08	0.67	0.06	0.09	0.77	0.26
Carex triangularis	0.08	0.67	0.04	0.06	0.73	0.24
Sesbania drummondii	0.08	0.67	0.04	0.06	0.73	0.24
Thelypteris kunthii	0.08	0.67	0.02	0.03	0.70	0.23
Triadenum walterii	0.08	0.67	0.02	0.03	0.70	0.23
Myriophyllum sp.	0.08	0.67	0.02	0.03	0.70	0.23
Eclipta prostrata	0.08	0.67	0.02	0.03	0.70	0.23
Carex debilis	0.08	0.67	0.02	0.03	0.70	0.23
Hydrocotyle ranunculoides	0.08	0.67	0.02	0.03	0.70	0.23
Sagittaria latifolia	0.08	0.67	0.02	0.03	0.70	0.23
Dichanthelium commutatum	0.08	0.67	0.02	0.03	0.70	0.23
Proserpinaca pectinata	0.08	0.67	0.02	0.03	0.70	0.23
Polygonum punctatum	0.08	0.67	0.02	0.03	0.70	0.23
Hibiscus moscheutos var. incanus	0.08	0.67	0.02	0.03	0.70	0.23

Table 22C

Summary of Shrub Layer
Arundinaria gigantea Temporarily Flooded Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Arundinaria gigantea	1.00	100.00	31600.00	100.00	1.47	100.00	300.00	100.00

Table 22D

Summary of Herbaceous Layer
Arundinaria gigantea Temporarily Flooded Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Arundinaria gigantea	1.00	2.78	18.00	24.16	26.94	8.98
Ambrosia trifida	1.00	2.78	13.00	17.45	20.23	6.74
Rubus trivialis	1.00	2.78	12.00	16.11	18.89	6.30
Ambrosia artemisiifolia	1.00	2.78	6.25	8.39	11.17	3.72
Elymus virginicus	1.00	2.78	2.50	3.36	6.13	2.04
Vicia ludoviciana	1.00	2.78	2.25	3.02	5.80	1.93
Lygodium japonicum	1.00	2.78	2.25	3.02	5.80	1.93
Tradescantia ohioensis	1.00	2.78	1.75	2.35	5.13	1.71
Oxalis dillenii	1.00	2.78	1.75	2.35	5.13	1.71
Galium tinctorium	1.00	2.78	1.50	2.01	4.79	1.60
Dichanthelium acuminatum	1.00	2.78	1.25	1.68	4.46	1.49
Carex brevior	1.00	2.78	1.00	1.34	4.12	1.37
Iva annua	1.00	2.78	1.00	1.34	4.12	1.37
Solidago altissima	1.00	2.78	1.00	1.34	4.12	1.37
Valerianella radiata	1.00	2.78	1.00	1.34	4.12	1.37
Plantago virginica	1.00	2.78	0.75	1.01	3.78	1.26
Verbena bracteana	1.00	2.78	0.75	1.01	3.78	1.26
Carex complanata	1.00	2.78	0.75	1.01	3.78	1.26
Sisyrinchium rosulatum	1.00	2.78	0.50	0.67	3.45	1.15
Gelsemium sempervirens	1.00	2.78	0.50	0.67	3.45	1.15
Symphyotrichum divaricatum	1.00	2.78	0.50	0.67	3.45	1.15
Briza minor	1.00	2.78	0.50	0.67	3.45	1.15
Agrostis hyemalis	1.00	2.78	0.50	0.67	3.45	1.15
Carex cherokeensis	1.00	2.78	0.25	0.34	3.11	1.04

Table 22D

Summary of Herbaceous Layer
Arundinaria gigantea Temporarily Flooded Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Phalaris caroliniana	1.00	2.78	0.25	0.34	3.11	1.04
Juncus marginatus	1.00	2.78	0.25	0.34	3.11	1.04
Carex caroliniana	1.00	2.78	0.25	0.34	3.11	1.04
Gonolobus suberosus	1.00	2.78	0.25	0.34	3.11	1.04
Smilax glauca	1.00	2.78	0.25	0.34	3.11	1.04
Liquidambar styraciflua	1.00	2.78	0.25	0.34	3.11	1.04

Table 23B

Summary of Midstory Layer
Cephalanthus occidentalis Semipermanently Flooded ForestAlliance
Cephalanthus occidentalis / Carex spp. - *Lemna* spp. Southern Shrubland

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Cephalanthus occidentalis	1.00	66.67	280.00	56.00	0.43	34.11	156.78	52.26
Triadica sebifera	0.50	33.33	220.00	44.00	0.84	65.89	143.22	47.74

Table 23C

Summary of Shrub Layer
Cephalanthus occidentalis Semipermanently Flooded ForestAlliance
Cephalanthus occidentalis / Carex spp. - *Lemna* spp. Southern Shrubland

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Cephalanthus occidentalis	1.00	66.67	1600.00	66.67	0.51	88.51	221.85	73.95
Triadica sebifera	0.50	33.33	800.00	33.33	0.07	11.49	78.15	26.05

Table 23D

Summary of Herbaceous Layer
Cephalanthus occidentalis Semipermanently Flooded ForestAlliance
Cephalanthus occidentalis / Carex spp. - *Lemna* spp. Southern Shrubland

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Juncus repens	0.50	3.03	20.50	35.73	38.76	12.92
Rhynchospora corniculata	1.00	6.06	9.13	15.90	21.96	7.32
Zizaniopsis miliacea	0.50	3.03	5.88	10.24	13.27	4.42
Hydrolea ovata	0.50	3.03	5.13	8.93	11.96	3.99
Triadica sebifera	1.00	6.06	1.63	2.83	8.89	2.96
Polygonum hydropiperoides	1.00	6.06	1.25	2.18	8.24	2.75
Centella erecta	1.00	6.06	1.00	1.74	7.80	2.60
Pluchea foetida	1.00	6.06	0.88	1.53	7.59	2.53
Schizachyrium scoparium	0.50	3.03	2.25	3.92	6.95	2.32
Ludwigia glandulosa	0.50	3.03	1.88	3.27	6.30	2.10
Rhexia mariana var. mariana	0.50	3.03	1.63	2.83	5.86	1.95
Saccharum giganteum	0.50	3.03	1.25	2.18	5.21	1.74
Proserpinaca palustris	0.50	3.03	0.75	1.31	4.34	1.45
Ambrosia artemisiifolia	0.50	3.03	0.63	1.09	4.12	1.37
Ludwigia alternifolia	0.50	3.03	0.63	1.09	4.12	1.37
Steinchisma hians	0.50	3.03	0.50	0.87	3.90	1.30
Styrax americana	0.50	3.03	0.38	0.65	3.68	1.23
Diodia virginiana	0.50	3.03	0.25	0.44	3.47	1.16
Saururus cernuus	0.50	3.03	0.25	0.44	3.47	1.16
Brunnichia ovata	0.50	3.03	0.25	0.44	3.47	1.16
Diodia teres	0.50	3.03	0.25	0.44	3.47	1.16
Ludwigia pilsoa	0.50	3.03	0.25	0.44	3.47	1.16
Iris virginica	0.50	3.03	0.25	0.44	3.47	1.16
Ludwigia hirtella	0.50	3.03	0.13	0.22	3.25	1.08

Table 23D

Summary of Herbaceous Layer
Cephalanthus occidentalis Semipermanently Flooded ForestAlliance
Cephalanthus occidentalis / Carex spp. - *Lemna* spp. Southern Shrubland

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cephalanthus occidentalis	0.50	3.03	0.13	0.22	3.25	1.08
Ludwigia leptocarpa	0.50	3.03	0.13	0.22	3.25	1.08
Juncus effusus	0.50	3.03	0.13	0.22	3.25	1.08
Pinus taeda	0.50	3.03	0.13	0.22	3.25	1.08

Table 24A

Summary of Overstory Layer
Proposed: *Ilex vomitoria* Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.20	9.09	80.00	43.48	1.06	23.48	76.05	25.35
Carpinus caroliniana	0.60	27.27	40.00	21.74	0.92	20.25	69.26	23.09
Persia borbonia	0.20	9.09	16.00	8.70	0.98	21.72	39.51	13.17
Magnolia grandiflora	0.20	9.09	8.00	4.35	0.50	11.09	24.53	8.18
Pinus taeda	0.20	9.09	8.00	4.35	0.36	8.00	21.44	7.15
Halesia diptera	0.20	9.09	8.00	4.35	0.22	4.85	18.29	6.10
Liquidambar styraciflua	0.20	9.09	8.00	4.35	0.22	4.75	18.19	6.06
Ilex opaca	0.20	9.09	8.00	4.35	0.14	3.13	16.56	5.52
Ulmus alata	0.20	9.09	8.00	4.35	0.12	2.72	16.16	5.39

Table 24B

Summary of Midstory Layer
Proposed: *Ilex vomitoria* Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	1.00	15.63	1104.00	66.67	3.59	66.72	149.01	49.67
Liquidambar styraciflua	0.40	6.25	128.00	7.73	0.40	7.52	21.50	7.17
Triadica sebifera	0.40	6.25	48.00	2.90	0.11	2.04	11.19	3.73
Ilex opaca	0.40	6.25	24.00	1.45	0.18	3.44	11.14	3.71
Sapindus saponaria var. drummondii	0.20	3.13	72.00	4.35	0.18	3.43	10.90	3.63
Rhus copallina	0.40	6.25	40.00	2.42	0.11	1.98	10.65	3.55
Persia borbonia	0.20	3.13	16.00	0.97	0.31	5.82	9.91	3.30
Vitis rotundifolia	0.20	3.13	32.00	1.93	0.04	0.67	5.72	1.91
Quercus nigra	0.20	3.13	24.00	1.45	0.06	1.10	5.67	1.89
Morus rubra	0.20	3.13	24.00	1.45	0.04	0.83	5.41	1.80
Vaccinium arboreum	0.20	3.13	24.00	1.45	0.03	0.49	5.06	1.69
Carpinus caroliniana	0.20	3.13	16.00	0.97	0.04	0.68	4.77	1.59
Castanea pumila	0.20	3.13	8.00	0.48	0.05	0.85	4.46	1.49
Pinus taeda	0.20	3.13	8.00	0.48	0.04	0.75	4.36	1.45
Zanthoxylum clava-herculis	0.20	3.13	16.00	0.97	0.01	0.25	4.34	1.45
Halesia diptera	0.20	3.13	8.00	0.48	0.03	0.60	4.21	1.40
Cornus florida	0.20	3.13	8.00	0.48	0.03	0.57	4.18	1.39
Vaccinium elliotti	0.20	3.13	8.00	0.48	0.03	0.51	4.12	1.37
Magnolia grandifolia	0.20	3.13	8.00	0.48	0.02	0.45	4.06	1.35
Sassafras albidum	0.20	3.13	8.00	0.48	0.02	0.42	4.03	1.34
Hamamelis virginiana	0.20	3.13	8.00	0.48	0.02	0.40	4.01	1.34
Quercus michaxii	0.20	3.13	8.00	0.48	0.01	0.25	3.86	1.29
Aralia spinosa	0.20	3.13	8.00	0.48	0.01	0.14	3.75	1.25
Callicarpa americana	0.20	3.13	8.00	0.48	0.01	0.11	3.71	1.24

Table 24C

Summary of Shrub Layer
Proposed: *Ilex vomitoria* Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	1.00	27.78	5952.00	69.92	0.78	80.41	178.11	59.37
Callicarpa americana	0.60	16.67	720.00	8.46	0.04	3.89	29.01	9.67
Vitis rotundifolia	0.60	16.67	720.00	8.46	0.04	3.89	29.01	9.67
Sapindus saponaria v drummondii	0.20	5.56	400.00	4.70	0.07	6.80	17.06	5.69
Zanthoxylum clava-herculis	0.20	5.56	160.00	1.88	0.03	2.91	10.35	3.45
Vaccinium arboreum	0.20	5.56	160.00	1.88	0.01	0.81	8.24	2.75
Carya tomentosa	0.20	5.56	160.00	1.88	0.00	0.32	7.76	2.59
Liquidambar styraciflua	0.20	5.56	80.00	0.94	0.01	0.65	7.14	2.38
Smilax rotundifolia	0.20	5.56	80.00	0.94	0.00	0.16	6.66	2.22
Sassafras albidum	0.20	5.56	80.00	0.94	0.00	0.16	6.66	2.22

Table 24D

Summary of Herbaceous Layer
Proposed: *Ilex vomitoria* Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ilex vomitoria	1.00	7.25	2.45	18.23	25.48	8.49
Callicarpa americana	1.00	7.25	1.20	8.93	16.17	5.39
Vitis rotundifolia	0.60	4.35	0.85	6.32	10.67	3.56
Oplismenus hirtellus	0.20	1.45	1.05	7.81	9.26	3.09
Verbesina virginica	0.20	1.45	0.95	7.07	8.52	2.84
Rubus argutus	0.60	4.35	0.45	3.35	7.70	2.57
Ilex opaca	0.60	4.35	0.40	2.98	7.32	2.44
Podophyllum peltatum	0.20	1.45	0.65	4.84	6.29	2.10
Scleria triglomerata	0.40	2.90	0.39	2.90	5.80	1.93
Cocculus carolinus	0.20	1.45	0.55	4.09	5.54	1.85
Dichanthelium dichotomum	0.40	2.90	0.25	1.86	4.76	1.59
Chasmanthium laxum	0.20	1.45	0.40	2.98	4.43	1.48
Gonolobus suberosus	0.20	1.45	0.40	2.98	4.43	1.48
Smilax smallii	0.40	2.90	0.20	1.49	4.39	1.46
Dichanthelium Commutatum	0.40	2.90	0.15	1.12	4.01	1.34
Hypericum hypericoides	0.40	2.90	0.15	1.12	4.01	1.34
Quercus nigra	0.40	2.90	0.10	0.74	3.64	1.21
Campsis radicans	0.40	2.90	0.10	0.74	3.64	1.21
Cardamine species	0.40	2.90	0.10	0.74	3.64	1.21
Toxicodendron radicans	0.40	2.90	0.10	0.74	3.64	1.21
Smilax glauca	0.40	2.90	0.10	0.74	3.64	1.21
Sanicula canadensis	0.20	1.45	0.25	1.86	3.31	1.10
Dichanthelium acuminatum	0.20	1.45	0.25	1.86	3.31	1.10
Sapindus saponaria var. drummondii	0.20	1.45	0.20	1.49	2.94	0.98

Table 24D

Summary of Herbaceous Layer
Proposed: *Ilex vomitoria* Shrubland Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Scutellaria elliptica	0.20	1.45	0.20	1.49	2.94	0.98
Gelsemium sempervirens	0.20	1.45	0.20	1.49	2.94	0.98
Smilax bona-nox	0.20	1.45	0.20	1.49	2.94	0.98
Lonicera japonica	0.20	1.45	0.15	1.12	2.57	0.86
Smilax pumila	0.20	1.45	0.15	1.12	2.57	0.86
Juglins nigra	0.20	1.45	0.10	0.74	2.19	0.73
Bignonia capreolata	0.20	1.45	0.05	0.37	1.82	0.61
Cardamine species	0.20	1.45	0.05	0.37	1.82	0.61
Asplenium platyneuron	0.20	1.45	0.05	0.37	1.82	0.61
Physalis heterophyla	0.20	1.45	0.05	0.37	1.82	0.61
Mikania scandens	0.20	1.45	0.05	0.37	1.82	0.61
Rhus copallina	0.20	1.45	0.05	0.37	1.82	0.61
Diospyros virginiana	0.20	1.45	0.05	0.37	1.82	0.61
Vaccinium arboreum	0.20	1.45	0.05	0.37	1.82	0.61
Prunus caroliniana	0.20	1.45	0.05	0.37	1.82	0.61
Saururus cernuus	0.20	1.45	0.05	0.37	1.82	0.61
Chasmanthium sessiliflorum	0.20	1.45	0.05	0.37	1.82	0.61
Magnolia grandiflora	0.20	1.45	0.05	0.37	1.82	0.61
Eupatorium capillifolium	0.20	1.45	0.05	0.37	1.82	0.61
Aralia spinosa	0.20	1.45	0.05	0.37	1.82	0.61
Smilax rotundifolia	0.20	1.45	0.05	0.37	1.82	0.61

Table 25B

Summary of Midstory Layer
Cyndon dactylon Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.50	100.00	40.00	100.00	0.03	100.00	300.00	100.00

Table 25C

Summary of Shrub Layer
Cyndon dactylon Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Ilex vomitoria	0.50	33.33	400.00	40.00	0.07	64.29	137.62	45.87
Pinus taeda	0.50	33.33	400.00	40.00	0.03	28.57	101.90	33.97
Baccharis halimifolia	0.50	33.33	200.00	20.00	0.01	7.14	60.48	20.16

Table 25D

Summary of Herbaceous Layer
Cyndon dactylon Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cynodon dactylon	1.00	3.23	18.38	30.00	33.23	11.08
Diodia teres	1.00	3.23	4.33	7.06	10.29	3.43
Ampelopsis arborea	1.00	3.23	3.88	6.33	9.55	3.18
Croton capitatus	1.00	3.23	3.45	5.63	8.86	2.95
Andropogon virginicus	0.50	1.61	3.65	5.96	7.57	2.52
Paspalum notatum	0.50	1.61	3.63	5.92	7.53	2.51
Polypremum procumbens	0.50	1.61	2.88	4.69	6.31	2.10
Digitaria sanguinalis	0.50	1.61	2.75	4.49	6.10	2.03
Eupatorium capillifolium	0.50	1.61	2.63	4.29	5.90	1.97
Eupatorium semiserratum	1.00	3.23	0.60	0.98	4.21	1.40
Unknown herbaceous	1.00	3.23	0.25	0.41	3.63	1.21
Ambrosia artemisiifolia	0.50	1.61	1.13	1.84	3.45	1.15
Rhus copallina	0.50	1.61	1.00	1.63	3.25	1.08
Dichanthelium scoparium	0.50	1.61	0.88	1.43	3.04	1.01
Gamochaeta purpurea	0.50	1.61	0.88	1.43	3.04	1.01
Scoparia dulcis	0.50	1.61	0.85	1.39	3.00	1.00
Conyza canadensis	0.50	1.61	0.75	1.22	2.84	0.95
Scleria triglomerata	0.50	1.61	0.50	0.82	2.43	0.81
Bradburia pilosa	0.50	1.61	0.50	0.82	2.43	0.81
Smilax bona-nox	0.50	1.61	0.50	0.82	2.43	0.81
Baccharis halimifolia	0.50	1.61	0.50	0.82	2.43	0.81
Briza minor	0.50	1.61	0.38	0.61	2.23	0.74
Euthamia leptocephala	0.50	1.61	0.38	0.61	2.23	0.74
Croton monanthogynus	0.50	1.61	0.38	0.61	2.23	0.74

Table 25D

Summary of Herbaceous Layer
Cyndon dactylon Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Acalypha gracilens	0.50	1.61	0.38	0.61	2.23	0.74
Rubus argutus	0.50	1.61	0.38	0.61	2.23	0.74
Pinus taeda	0.50	1.61	0.38	0.61	2.23	0.74
Chamaecrista fasciculata	0.50	1.61	0.38	0.61	2.23	0.74
Eupatorium leucolepis	0.50	1.61	0.25	0.41	2.02	0.67
Diodia virginiana	0.50	1.61	0.25	0.41	2.02	0.67
Dicanthelium laxiflorum	0.50	1.61	0.25	0.41	2.02	0.67
Chamaesyce protrata	0.50	1.61	0.25	0.41	2.02	0.67
Pluchea foetida	0.50	1.61	0.25	0.41	2.02	0.67
Paspalum urvillei	0.50	1.61	0.25	0.41	2.02	0.67
Digitaria ciliaris	0.50	1.61	0.25	0.41	2.02	0.67
Oxalis dillenii	0.50	1.61	0.25	0.41	2.02	0.67
Paspalum setaceum	0.50	1.61	0.25	0.41	2.02	0.67
Campsis radicans	0.50	1.61	0.25	0.41	2.02	0.67
Rhynchospora inexpansa	0.50	1.61	0.13	0.20	1.82	0.61
Centella erecta	0.50	1.61	0.13	0.20	1.82	0.61
Salvia lyrata	0.50	1.61	0.13	0.20	1.82	0.61
Rubus trivialis	0.50	1.61	0.13	0.20	1.82	0.61
Rhexia mariana	0.50	1.61	0.13	0.20	1.82	0.61
Lespedeza stuevei	0.50	1.61	0.13	0.20	1.82	0.61
Coreopsis tinctoria	0.50	1.61	0.13	0.20	1.82	0.61
Schizachyrium scoparium	0.50	1.61	0.13	0.20	1.82	0.61
Richardia brasiliensis	0.50	1.61	0.13	0.20	1.82	0.61
Dichanthelium acuminatum	0.50	1.61	0.13	0.20	1.82	0.61

Table 25D

Summary of Herbaceous Layer
Cyndon dactylon Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.50	1.61	0.13	0.20	1.82	0.61
Dichanthelium aciculare	0.50	1.61	0.13	0.20	1.82	0.61
Trachelospermum difforme	0.50	1.61	0.13	0.20	1.82	0.61
Ilex vomitoria	0.50	1.61	0.13	0.20	1.82	0.61
Dichanthelium boscii	0.50	1.61	0.13	0.20	1.82	0.61
Gnapalium purpureum	0.50	1.61	0.13	0.20	1.82	0.61
Solidago altissima	0.50	1.61	0.13	0.20	1.82	0.61
Helenium flexuosum	0.50	1.61	0.13	0.20	1.82	0.61

Table 26D

Summary of Herbaceous Layer
Panicum virgatum Temporarily Flooded Herbaceous Alliance
Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Panicum rigidulum	1.00	3.08	13.50	19.71	22.78	7.59
Ludwigia octovalvis	1.00	3.08	7.50	10.95	14.03	4.68
Polygonum hydropiper	1.00	3.08	7.38	10.77	13.84	4.61
Cyperus haspan	1.00	3.08	5.30	7.74	10.81	3.60
Echinochloa walteri	1.00	3.08	4.75	6.93	10.01	3.34
Polypremum procumbens	1.00	3.08	4.53	6.61	9.68	3.23
Pluchea rosea	1.00	3.08	2.73	3.98	7.06	2.35
Juncus coriaceus	1.00	3.08	2.15	3.14	6.22	2.07
Cyperus odoratus	1.00	3.08	1.98	2.88	5.96	1.99
Eupatorium capillifolium	1.00	3.08	1.65	2.41	5.49	1.83
Baccharis halimifolia	1.00	3.08	1.63	2.37	5.45	1.82
Salix nigra	1.00	3.08	1.38	2.01	5.08	1.69
Boltonia diffusa	1.00	3.08	1.00	1.46	4.54	1.51
Typha latifolia	1.00	3.08	0.88	1.28	4.35	1.45
Strophostyles helvola	1.00	3.08	0.63	0.91	3.99	1.33
Hypericum mutilum	0.50	1.54	1.60	2.34	3.87	1.29
Digitaria sanguinalis	1.00	3.08	0.50	0.73	3.81	1.27
Unknown herbaceous	0.50	1.54	0.88	1.28	2.82	0.94
Eleocharis parvula	0.50	1.54	0.85	1.24	2.78	0.93
Solidago sempervirens	0.50	1.54	0.63	0.91	2.45	0.82
Alternanthera philoxeroides	0.50	1.54	0.63	0.91	2.45	0.82
Eragrostis japonica	0.50	1.54	0.63	0.91	2.45	0.82
Ludwigia repens	0.50	1.54	0.50	0.73	2.27	0.76
Cynodon dactylon	0.50	1.54	0.50	0.73	2.27	0.76

Table 26D

Summary of Herbaceous Layer
Panicum virgatum Temporarily Flooded Herbaceous Alliance
Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Proserpinaca pectinata	0.50	1.54	0.50	0.73	2.27	0.76
Ammannia coccinea	0.50	1.54	0.38	0.55	2.09	0.70
Scoparia dulcis	0.50	1.54	0.38	0.55	2.09	0.70
Ludwigia leptocarpa	0.50	1.54	0.38	0.55	2.09	0.70
Juncus validus	0.50	1.54	0.35	0.51	2.05	0.68
Ptilimnium capillaceum	0.50	1.54	0.25	0.36	1.90	0.63
Cyperus esculentus	0.50	1.54	0.25	0.36	1.90	0.63
Rhexia mariana var. mariana	0.50	1.54	0.25	0.36	1.90	0.63
Triadica sebifera	0.50	1.54	0.13	0.18	1.72	0.57
Ampelopsis arborea	0.50	1.54	0.13	0.18	1.72	0.57
Sesbania drummondii	0.50	1.54	0.13	0.18	1.72	0.57
Lycopus virginicus	0.50	1.54	0.13	0.18	1.72	0.57
Acer rubrum var. drummondii	0.50	1.54	0.13	0.18	1.72	0.57
Juncus repens	0.50	1.54	0.13	0.18	1.72	0.57
Betula nigra	0.50	1.54	0.13	0.18	1.72	0.57
Taxodium distichum	0.50	1.54	0.13	0.18	1.72	0.57
Iva annua	0.50	1.54	0.13	0.18	1.72	0.57
Rhynchospora corniculata	0.50	1.54	0.13	0.18	1.72	0.57
Eleocharis montana	0.50	1.54	0.13	0.18	1.72	0.57
Ipomoea sp.	0.50	1.54	0.13	0.18	1.72	0.57
Hibiscus laevis	0.50	1.54	0.13	0.18	1.72	0.57
Mikania scandens	0.50	1.54	0.13	0.18	1.72	0.57
Croton capitatus	0.50	1.54	0.13	0.18	1.72	0.57
Hydrocotyle umbellata	0.50	1.54	0.13	0.18	1.72	0.57

Table 26D

Summary of Herbaceous Layer
***Panicum virgatum* Temporarily Flooded Herbaceous Alliance**
***Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation**

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eragrostis ellioti	0.50	1.54	0.13	0.18	1.72	0.57

Table 27A

Summary of Overstory Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.43	15.00	205.71	11.76	0.24	44.64	71.40	23.80
Liquidambar styraciflua	0.29	10.00	348.57	19.93	0.04	7.79	37.73	12.58
Quercus nigra	0.29	10.00	308.57	17.65	0.04	7.06	34.71	11.57
Rubus argutus	0.29	10.00	285.71	16.34	0.01	1.05	27.39	9.13
Quercus hemispherica	0.29	10.00	125.71	7.19	0.01	1.91	19.10	6.37
Triadica sebifera	0.14	5.00	5.71	0.33	0.07	13.13	18.46	6.15
Cephalanthis occidentalis	0.14	5.00	57.14	3.27	0.04	7.56	15.83	5.28
Amorpha fruticosa	0.14	5.00	57.14	3.27	0.04	7.56	15.83	5.28
Baccharis halimifolia	0.14	5.00	114.29	6.54	0.01	1.05	12.59	4.20
Diospyros virginiana	0.14	5.00	57.14	3.27	0.02	3.57	11.84	3.95
Carya illinoinensis	0.14	5.00	62.86	3.59	0.01	2.63	11.22	3.74
Quercus falcata	0.14	5.00	57.14	3.27	0.01	1.10	9.37	3.12
Morella cerifera	0.14	5.00	57.14	3.27	0.00	0.42	8.69	2.90
Ulmus alata	0.14	5.00	5.71	0.33	0.00	0.53	5.85	1.95

Table 27B

Summary of Midstory Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.29	33.33	131.43	85.19	0.22	70.76	189.28	63.09
Triadica sebifera	0.14	16.67	5.71	3.70	0.07	22.56	42.93	14.31
Quercus nigra	0.14	16.67	5.71	3.70	0.01	3.18	23.55	7.85
Liquidambar styraciflua	0.14	16.67	5.71	3.70	0.01	2.20	22.57	7.52
Quercus hemispherica	0.14	16.67	5.71	3.70	0.00	1.30	21.67	7.22

Table 27C

Summary of Shrub Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Liquidambar styraciflua	0.29	14.29	342.86	23.08	0.03	18.00	55.36	18.45
Rubus argutus	0.29	14.29	285.71	19.23	0.01	2.90	36.42	12.14
Quercus nigra	0.14	7.14	285.71	19.23	0.02	9.29	35.66	11.89
Amorpha fruticosa	0.14	7.14	57.14	3.85	0.04	20.90	31.89	10.63
Cephalanthis occidentalis	0.14	7.14	57.14	3.85	0.04	20.90	31.89	10.63
Diospyros virginiana	0.14	7.14	57.14	3.85	0.02	9.87	20.86	6.95
Baccharis halimifolia	0.14	7.14	114.29	7.69	0.01	2.90	17.74	5.91
Pinus taeda	0.14	7.14	57.14	3.85	0.01	5.22	16.21	5.40
Carya illinoinensis	0.14	7.14	57.14	3.85	0.01	4.64	15.63	5.21
Quercus falcata	0.14	7.14	57.14	3.85	0.01	3.05	14.04	4.68
Morella cerifera	0.14	7.14	57.14	3.85	0.00	1.16	12.15	4.05
Querucs hemispherica	0.14	7.14	57.14	3.85	0.00	1.16	12.15	4.05

Table 27D

Summary of Herbaceous Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Paspalum notatum	1.00	4.43	39.04	59.93	64.36	21.45
Rubus argutus	0.57	2.53	2.57	3.95	6.48	2.16
Rubus trivialis	0.43	1.90	2.15	3.30	5.20	1.73
Ilex vomitoria	0.86	3.80	0.78	1.20	4.99	1.66
Digitaria sanguinalis	0.14	0.63	2.81	4.32	4.95	1.65
Carex complanata	0.71	3.16	1.00	1.54	4.70	1.57
Andropogon virginicus	0.71	3.16	0.93	1.43	4.59	1.53
Solidago altissima	0.71	3.16	0.61	0.93	4.10	1.37
Paspalum plicatulum	0.29	1.27	1.46	2.25	3.51	1.17
Strophostyles umbellata	0.57	2.53	0.46	0.71	3.24	1.08
Gelsemium sempervirens	0.57	2.53	0.46	0.71	3.24	1.08
Croton capitatus	0.29	1.27	1.29	1.97	3.24	1.08
Liquidambar styraciflua	0.57	2.53	0.29	0.44	2.97	0.99
Paspalum dilatatum	0.29	1.27	1.11	1.70	2.97	0.99
Dichanthelium acuminatum	0.57	2.53	0.25	0.38	2.92	0.97
Trachelospermum difforme	0.43	1.90	0.32	0.49	2.39	0.80
Hypericum hypericoides	0.43	1.90	0.29	0.44	2.34	0.78
Carex albolutescens	0.43	1.90	0.25	0.38	2.28	0.76
Oxalis dillenii	0.43	1.90	0.25	0.38	2.28	0.76
Clematis crispa	0.43	1.90	0.21	0.33	2.23	0.74
Pinus taeda	0.43	1.90	0.18	0.27	2.17	0.72
Ruellia caroliniensis	0.43	1.90	0.18	0.27	2.17	0.72
Rhexia mariana var. mariana	0.43	1.90	0.18	0.27	2.17	0.72

Table 27D

Summary of Herbaceous Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Paspalum urvillei	0.29	1.27	0.57	0.88	2.14	0.71
Vernonia missurica	0.43	1.90	0.11	0.16	2.06	0.69
Schizachyrium scoparium	0.29	1.27	0.46	0.71	1.98	0.66
Bignonia capreolata	0.29	1.27	0.32	0.49	1.76	0.59
Cynodon dactylon	0.14	0.63	0.73	1.12	1.75	0.58
Rhynchospora caduca	0.29	1.27	0.29	0.44	1.70	0.57
Ambrosia artemisiifolia	0.29	1.27	0.21	0.33	1.59	0.53
Galium aparine	0.29	1.27	0.18	0.27	1.54	0.51
Diodia virginiana	0.29	1.27	0.18	0.27	1.54	0.51
Desmodium strictum	0.29	1.27	0.11	0.16	1.43	0.48
Eragrostis refracta	0.29	1.27	0.07	0.11	1.38	0.46
Strophostyles umbellata	0.29	1.27	0.07	0.11	1.38	0.46
Dichanthelium sphaerocarpon	0.14	0.63	0.36	0.55	1.18	0.39
Euthamia leptocephala	0.14	0.63	0.32	0.49	1.13	0.38
Quercus nigra	0.14	0.63	0.29	0.44	1.07	0.36
Baptisia alba	0.14	0.63	0.29	0.44	1.07	0.36
Scleria triglomerata	0.14	0.63	0.25	0.38	1.02	0.34
Paspalum setaceum	0.14	0.63	0.21	0.33	0.96	0.32
Campsis radicans	0.14	0.63	0.17	0.26	0.90	0.30
Strophostyles helvola	0.14	0.63	0.17	0.26	0.90	0.30
Toxicodendron radicans	0.14	0.63	0.15	0.23	0.86	0.29
Ambrosia artemisiifolia	0.14	0.63	0.14	0.22	0.85	0.28
Diodia teres	0.14	0.63	0.14	0.22	0.85	0.28

Table 27D

Summary of Herbaceous Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Paspalum setaceum	0.14	0.63	0.14	0.22	0.85	0.28
Andropogon glomeratus	0.14	0.63	0.11	0.18	0.81	0.27
Bouteloua hirsuta	0.14	0.63	0.11	0.16	0.80	0.27
Carex glaucescens	0.14	0.63	0.10	0.15	0.79	0.26
Quercus alba	0.14	0.63	0.10	0.15	0.79	0.26
Prunus serotina	0.14	0.63	0.07	0.11	0.74	0.25
Unknown herbaceous	0.14	0.63	0.07	0.11	0.74	0.25
Centella erecta	0.14	0.63	0.07	0.11	0.74	0.25
Saccharum baldwinii	0.14	0.63	0.07	0.11	0.74	0.25
Wisteria frutescens	0.14	0.63	0.07	0.11	0.74	0.25
Quercus falcata	0.14	0.63	0.07	0.11	0.74	0.25
Desmodium paniculatum	0.14	0.63	0.07	0.11	0.74	0.25
Rhynchospora inexpansa	0.14	0.63	0.07	0.11	0.74	0.25
Eupatorium capillifolium	0.14	0.63	0.07	0.11	0.74	0.25
Eupatorium semiserratum	0.14	0.63	0.07	0.11	0.74	0.25
Sonchus asper	0.14	0.63	0.07	0.11	0.74	0.25
Scoparia dulcis	0.14	0.63	0.07	0.11	0.74	0.25
Galium pilosum	0.14	0.63	0.04	0.05	0.69	0.23
Symphyotrichum species	0.14	0.63	0.04	0.05	0.69	0.23
Acer rubrum var. rubrum	0.14	0.63	0.04	0.05	0.69	0.23
Gnapalium purpureum	0.14	0.63	0.04	0.05	0.69	0.23
Juncus effusus	0.14	0.63	0.04	0.05	0.69	0.23
Pityopsis graminifolia	0.14	0.63	0.04	0.05	0.69	0.23

Table 27D

Summary of Herbaceous Layer
Paspalum notatum Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Verbena bracteana	0.14	0.63	0.04	0.05	0.69	0.23
Helianthus angustifolius	0.14	0.63	0.04	0.05	0.69	0.23
Scleria sp.	0.14	0.63	0.04	0.05	0.69	0.23
Salvia lyrata	0.14	0.63	0.04	0.05	0.69	0.23
Scutellaria integrifolia	0.14	0.63	0.04	0.05	0.69	0.23
Cnidoscolus urens var. stimulosus	0.14	0.63	0.04	0.05	0.69	0.23
Carex digitalis var. macropoda	0.14	0.63	0.04	0.05	0.69	0.23
Asclepias verticillata	0.14	0.63	0.04	0.05	0.69	0.23
Dichanthelium laxiflorum	0.14	0.63	0.04	0.05	0.69	0.23
Kummerowia striata	0.14	0.63	0.04	0.05	0.69	0.23
Carex reniformis	0.14	0.63	0.04	0.05	0.69	0.23
Dichondra carolinensis	0.14	0.63	0.04	0.05	0.69	0.23
Viola palmata	0.14	0.63	0.04	0.05	0.69	0.23
Quercus hemispherica	0.14	0.63	0.04	0.05	0.69	0.23
Paspalum praecox	0.14	0.63	0.04	0.05	0.69	0.23
Briza minor	0.14	0.63	0.04	0.05	0.69	0.23
Cyperus pseudovegetus	0.14	0.63	0.04	0.05	0.69	0.23
Conyza canadensis	0.14	0.63	0.04	0.05	0.69	0.23

Table 28A

Summary of Overstory Layer
Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Nyssa biflora	1.00	100.00	40.00	100.00	1.80	100.00	300.00	100.00

Table 28C

Summary of Shrub Layer
Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Triadica sebifera	1.00	50.00	400.00	33.33	0.09	85.71	169.05	56.35
Cephalanthus occidentalis	1.00	50.00	800.00	66.67	0.02	14.29	130.95	43.65

Table 28D

Summary of Herbaceous Layer
Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Rhynchospora corniculata	1.00	20.00	13.50	93.10	113.10	37.70
Cephalanthus occidentalis	1.00	20.00	0.25	1.72	21.72	7.24
Acer rubrum var. drummondii	1.00	20.00	0.25	1.72	21.72	7.24
Polygonum hydropiperoides	1.00	20.00	0.25	1.72	21.72	7.24
Brunnichia ovata	1.00	20.00	0.25	1.72	21.72	7.24

Table 29A

Summary of Shrub Layer
Zizaniopsis miliacea Tidal Herbaceous Alliance
Zizaniopsis miliacea Tidal Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.53	75.00	42.35	75.00	2.91	85.12	235.12	78.37
Nyssa aquatica	0.18	25.00	14.12	25.00	0.51	14.88	64.88	21.63

Table 29B

Summary of Midstory Layer
Zizaniopsis miliacea Tidal Herbaceous Alliance
Zizaniopsis miliacea Tidal Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.47	72.73	80.00	82.93	0.20	81.35	237.00	79.00
Fraxinus pennsylvanica	0.06	9.09	11.76	12.20	0.03	12.69	33.98	11.33
Planera aquatica	0.06	9.09	2.35	2.44	0.01	4.49	16.02	5.34
Morella cerifera	0.06	9.09	2.35	2.44	0.00	1.47	13.00	4.33

Table 29C

Summary of Overstory Layer
Zizaniopsis miliacea Tidal Herbaceous Alliance
Zizaniopsis miliacea Tidal Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.18	37.50	235.29	52.63	0.04	64.52	154.65	51.55
Sesbania drummondii	0.18	37.50	94.12	21.05	0.00	8.06	66.62	22.21
Itea virginica	0.06	12.50	70.59	15.79	0.01	23.39	51.68	17.23
Acer rubrum var. rubrum	0.06	12.50	47.06	10.53	0.00	4.03	27.06	9.02

Table 29D

Summary of Herbaceous Layer
Zizaniopsis miliacea Tidal Herbaceous Alliance
Zizaniopsis miliacea Tidal Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Zizaniopsis miliacea	1.00	11.41	30.25	45.92	57.33	19.11
Alternanthera philoxeroides	1.00	11.41	19.63	29.80	41.21	13.74
Ptilimnium capillaceum	0.65	7.38	2.05	3.12	10.50	3.50
Salvinia minima	0.35	4.03	3.34	5.07	9.10	3.03
Typha latifolia	0.35	4.03	1.39	2.11	6.13	2.04
Typha domingensis	0.29	3.36	0.75	1.13	4.49	1.50
Juncus effusus	0.35	4.03	0.28	0.42	4.45	1.48
Sacciolepis striata	0.29	3.36	0.21	0.31	3.67	1.22
Boehmeria cylindrica	0.18	2.01	0.63	0.95	2.96	0.99
Cyperus odoratus	0.18	2.01	0.62	0.94	2.95	0.98
Hibiscus laevis	0.18	2.01	0.60	0.92	2.93	0.98
Rhynchospora corniculata	0.18	2.01	0.38	0.58	2.59	0.86
Sesbania drummondii	0.18	2.01	0.25	0.38	2.39	0.80
Dichanthelium scoparium	0.18	2.01	0.18	0.27	2.28	0.76
Kosteletzkya virginica	0.12	1.34	0.31	0.47	1.81	0.60
Ludwigia grandiflora	0.12	1.34	0.19	0.29	1.63	0.54
Eleocharis quadrangulata	0.06	0.67	0.59	0.89	1.56	0.52
Unknown herbaceous	0.12	1.34	0.14	0.22	1.56	0.52
Polygonum hydropiperoides	0.12	1.34	0.12	0.18	1.52	0.51
Eleocharis montana	0.12	1.34	0.09	0.13	1.48	0.49
Hydrocotyle ranunculoides	0.12	1.34	0.06	0.09	1.43	0.48
Cyperus virens	0.12	1.34	0.04	0.07	1.41	0.47
Juncus diffusissimus	0.06	0.67	0.44	0.67	1.34	0.45

Table 29D

Summary of Herbaceous Layer
Zizaniopsis miliacea Tidal Herbaceous Alliance
Zizaniopsis miliacea Tidal Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Andropogon glomeratus	0.06	0.67	0.37	0.56	1.23	0.41
Wolfiella gladiata	0.06	0.67	0.29	0.45	1.12	0.37
Typha angustifolia	0.06	0.67	0.26	0.40	1.07	0.36
Lemna aequinoctialis	0.06	0.67	0.19	0.29	0.96	0.32
Schizachyrium scoparium	0.06	0.67	0.16	0.25	0.92	0.31
Lobelia flaccidifolia	0.06	0.67	0.16	0.25	0.92	0.31
Ludwigia palustris	0.06	0.67	0.16	0.25	0.92	0.31
Bidens laevis	0.06	0.67	0.15	0.22	0.89	0.30
Galium tinctorium	0.06	0.67	0.14	0.21	0.89	0.30
Dichanthelium sphaerocarpon	0.06	0.67	0.13	0.20	0.87	0.29
Cyperus croceus	0.06	0.67	0.12	0.18	0.85	0.28
Lemna sp.	0.06	0.67	0.10	0.16	0.83	0.28
Eleocharis microcarpa	0.06	0.67	0.10	0.15	0.82	0.27
Leersia hexandra	0.06	0.67	0.09	0.13	0.81	0.27
Cephalanthus occidentalis	0.06	0.67	0.09	0.13	0.81	0.27
Hydrilla verticellata	0.06	0.67	0.07	0.11	0.78	0.26
Oldenlandia uniflora	0.06	0.67	0.07	0.11	0.78	0.26
Marsilea vestita	0.06	0.67	0.06	0.09	0.76	0.25
Eryngium prostratum	0.06	0.67	0.06	0.09	0.76	0.25
Taxodium distichum	0.06	0.67	0.06	0.09	0.76	0.25
Strophostyles umbellata	0.06	0.67	0.04	0.07	0.74	0.25
Cyperus acuminatus	0.06	0.67	0.04	0.07	0.74	0.25
Dichanthelium dichotomum	0.06	0.67	0.03	0.04	0.72	0.24

Table 29D

Summary of Herbaceous Layer
Zizaniopsis miliacea Tidal Herbaceous Alliance
Zizaniopsis miliacea Tidal Herbaceous Vegetation

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eleocharis minima	0.06	0.67	0.03	0.04	0.72	0.24
Carex brevior	0.06	0.67	0.03	0.04	0.72	0.24
Eleocharis cellulosa	0.06	0.67	0.03	0.04	0.72	0.24
Rhexia mariana var. mariana	0.06	0.67	0.03	0.04	0.72	0.24
Polygonum punctatum	0.06	0.67	0.03	0.04	0.72	0.24
Steinchisma hians	0.06	0.67	0.03	0.04	0.72	0.24
Micranthemum umbrosum	0.06	0.67	0.03	0.04	0.72	0.24
Carex debilis	0.06	0.67	0.01	0.02	0.69	0.23
Xyris laxifolia var. iridifolia	0.06	0.67	0.01	0.02	0.69	0.23
Echinodorus cordifolius	0.06	0.67	0.01	0.02	0.69	0.23
Carex triangularis	0.06	0.67	0.01	0.02	0.69	0.23
Cardamine sp.	0.06	0.67	0.01	0.02	0.69	0.23
Cyperus haspan	0.06	0.67	0.01	0.02	0.69	0.23
Ludwigia sp.	0.06	0.67	0.01	0.02	0.69	0.23
Juncus brachycarpus	0.06	0.67	0.01	0.02	0.69	0.23
Sonchus oleraceus	0.06	0.67	0.01	0.02	0.69	0.23
Paspalum urvillei	0.06	0.67	0.01	0.02	0.69	0.23
Fuirena breviseta	0.06	0.67	0.01	0.02	0.69	0.23
Phanopyrum gymnocarpon	0.06	0.67	0.01	0.02	0.69	0.23

Table 30A

Summary of Overstory Layer
Alternanthera philoxeroides Semipermanently Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.57	80.00	34.29	85.71	3.86	78.18	243.89	81.30
Nyssa aquatica	0.14	20.00	5.71	14.29	1.08	21.82	56.11	18.70

Table 30B

Summary of Midstory Layer
Alternanthera philoxeroides Semipermanently Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Taxodium distichum	0.43	50.00	22.86	33.33	0.06	45.00	128.33	42.78
Morella cerifera	0.14	16.67	22.86	33.33	0.03	25.41	75.41	25.14
Fraxinus pennsylvanica	0.14	16.67	17.14	25.00	0.02	14.10	55.77	18.59
Acer rubrum var. drummondii	0.14	16.67	5.71	8.33	0.02	15.49	40.49	13.50

Table 30C

Summary of Shrub Layer
Alternanthera philoxeroides Semipermanently Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Acer rubrum var. drummondii	0.29	50.00	171.43	42.86	0.01	23.33	116.19	38.73
Sesbania drummondii	0.14	25.00	171.43	42.86	0.01	36.67	104.52	34.84
Fraxinus pennsylvanica	0.14	25.00	57.14	14.29	0.01	40.00	79.29	26.43

Table 30D

Summary of Herbaceous Layer
Alternanthera philoxeroides Semipermanently Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Alternanthera philoxeroides	1.00	9.59	30.70	44.31	53.90	17.97
Zizaniopsis miliacea	0.86	8.22	7.21	10.40	18.62	6.21
Ptilimnium capillaceum	0.71	6.85	5.33	7.69	14.54	4.85
Sagittaria latifolia	0.57	5.48	5.53	7.98	13.46	4.49
Typha domingensis	0.29	2.74	2.91	4.21	6.95	2.32
Typha latifolia	0.29	2.74	1.89	2.73	5.47	1.82
Andropogon glomeratus	0.14	1.37	2.79	4.02	5.39	1.80
Schoenoplectus californicus	0.14	1.37	2.29	3.30	4.67	1.56
Rhynchospora corniculata	0.43	4.11	0.29	0.41	4.52	1.51
Saccharum giganteum	0.14	1.37	1.86	2.68	4.05	1.35
Taxodium distichum	0.29	2.74	0.75	1.08	3.82	1.27
Salvinia minima	0.29	2.74	0.64	0.93	3.67	1.22
Kosteletzkya virginica	0.29	2.74	0.64	0.92	3.66	1.22
Unknown herbaceous	0.29	2.74	0.39	0.57	3.31	1.10
Sphagnum sp.	0.14	1.37	1.29	1.86	3.23	1.08
Acer rubrum var. drummondii	0.29	2.74	0.29	0.41	3.15	1.05
Dichanthelium scoparium	0.29	2.74	0.25	0.36	3.10	1.03
Cyperus odoratus	0.29	2.74	0.14	0.21	2.95	0.98
Hibiscus laevis	0.29	2.74	0.11	0.15	2.89	0.96
Sacciolepis striata	0.29	2.74	0.07	0.10	2.84	0.95
Eleocharis montevidensis	0.14	1.37	0.59	0.85	2.22	0.74
Sagittaria lancifolia	0.14	1.37	0.57	0.82	2.19	0.73
Triadenum walterii	0.14	1.37	0.32	0.46	1.83	0.61
Azolla caroliniana	0.14	1.37	0.32	0.46	1.83	0.61

Table 30D

Summary of Herbaceous Layer
Alternanthera philoxeroides Semipermanently Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ipomoea sagittata	0.14	1.37	0.29	0.41	1.78	0.59
Salix nigra	0.14	1.37	0.25	0.36	1.73	0.58
Eleocharis quadrangulata	0.14	1.37	0.24	0.35	1.72	0.57
Lycopus virginicus	0.14	1.37	0.21	0.31	1.68	0.56
Hibiscus dasycalyx	0.14	1.37	0.15	0.22	1.59	0.53
Baccharis halimifolia	0.14	1.37	0.14	0.21	1.58	0.53
Proserpinaca pectinata	0.14	1.37	0.14	0.21	1.58	0.53
Fraxinus pennsylvanica	0.14	1.37	0.14	0.21	1.58	0.53
Juncus effusus	0.14	1.37	0.10	0.14	1.51	0.50
Lemna aequinoctialis	0.14	1.37	0.07	0.10	1.47	0.49
Panicum rigidulum	0.14	1.37	0.07	0.10	1.47	0.49
Osmunda regalis	0.14	1.37	0.07	0.10	1.47	0.49
Galium tinctorium	0.14	1.37	0.07	0.10	1.47	0.49
Polygonum hydropiperoides	0.14	1.37	0.04	0.05	1.42	0.47
Schoenoplectus americanus	0.14	1.37	0.04	0.05	1.42	0.47
Cyperus haspan	0.14	1.37	0.04	0.05	1.42	0.47
Carex brevior	0.14	1.37	0.04	0.05	1.42	0.47
Eupatorium capillifolium	0.14	1.37	0.04	0.05	1.42	0.47

Table 31D

Summary of Herbaceous Layer
Sagittaria lancifolia Semipermanently Flooded Herbaceous Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Sagittaria lancifolia	1.00	8.33	22.90	34.44	42.77	14.26
Alternanthera philoxeroides	1.00	8.33	18.80	28.27	36.60	12.20
Ptilimnium capillaceum	1.00	8.33	10.70	16.09	24.42	8.14
Eleocharis quadrangulata	1.00	8.33	6.55	9.85	18.18	6.06
Zizaniopsis miliacea	1.00	8.33	2.00	3.01	11.34	3.78
Sacciolepis striata	1.00	8.33	1.25	1.88	10.21	3.40
Rhynchospora corniculata	1.00	8.33	1.25	1.88	10.21	3.40
Schoenoplectus californicus	1.00	8.33	0.80	1.20	9.54	3.18
Typha domingensis	1.00	8.33	0.75	1.13	9.46	3.15
Typha latifolia	1.00	8.33	0.75	1.13	9.46	3.15
Polygonum hydropiperoides	1.00	8.33	0.50	0.75	9.09	3.03
Cyperus haspan	1.00	8.33	0.25	0.38	8.71	2.90

Table 32A

Summary of Overstory Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.12	50.00	5.00	50.00	0.35	63.65	163.65	54.55
Quercus alba	0.12	50.00	5.00	50.00	0.20	36.35	136.35	45.45

Table 32B

Summary of Midstory Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Pinus taeda	0.25	50.00	95.00	61.29	0.12	50.17	161.46	53.82
Baccharis halimifolia	0.12	25.00	50.00	32.26	0.10	43.05	100.30	33.43
Liquidambar styraciflua	0.12	25.00	10.00	6.45	0.02	6.79	38.24	12.75

Table 32C

Summary of Shrub Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Baccharis halimifolia	0.12	9.09	650.00	27.66	0.41	74.34	111.09	37.03
Pinus taeda	0.38	27.27	450.00	19.15	0.05	9.38	55.80	18.60
Carya cordiformis	0.12	9.09	400.00	17.02	0.06	10.62	36.73	12.24
Ilex vomitoria	0.12	9.09	500.00	21.28	0.01	2.30	32.67	10.89
Rhus copallina	0.12	9.09	100.00	4.26	0.01	1.77	15.12	5.04
Liquidambar styraciflua	0.12	9.09	100.00	4.26	0.00	0.35	13.70	4.57
Triadica sebifera	0.12	9.09	50.00	2.13	0.00	0.71	11.93	3.98
Ilex opaca	0.12	9.09	50.00	2.13	0.00	0.35	11.57	3.86
Vaccinium arboreum	0.12	9.09	50.00	2.13	0.00	0.18	11.40	3.80

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Campsis radicans	0.62	1.41	7.16	11.51	12.92	4.31
Ambrosia artemisiifolia	0.75	1.69	3.79	6.10	7.79	2.60
Andropogon glomeratus	0.50	1.13	2.69	4.32	5.45	1.82
Ptilimnium capillaceum	0.62	1.41	2.11	3.39	4.80	1.60
Rubus trivialis	0.62	1.41	2.03	3.26	4.67	1.56
Paspalum urvillei	0.75	1.69	1.85	2.97	4.67	1.56
Rhexia mariana	0.38	0.85	2.13	3.42	4.26	1.42
Dichanthelium acuminatum	0.62	1.41	1.57	2.52	3.93	1.31
Hypericum crus-andreae	0.12	0.28	2.16	3.48	3.76	1.25
Rubus argutus	0.75	1.69	1.28	2.05	3.75	1.25
Pinus taeda	0.88	1.98	0.91	1.46	3.44	1.15
Euthamia leptocephala	0.50	1.13	1.40	2.25	3.38	1.13
Paspalum notatum	0.50	1.13	1.13	1.81	2.94	0.98
Pycnanthemum albescens	0.38	0.85	1.28	2.06	2.91	0.97
Trachelospermum difforme	0.50	1.13	0.94	1.51	2.64	0.88
Berchemia scandens	0.25	0.56	1.13	1.81	2.37	0.79
Oxalis dillenii	0.75	1.69	0.38	0.60	2.30	0.77
Gelsemium sempervirens	0.50	1.13	0.69	1.11	2.24	0.75
Elymus virginicus	0.25	0.56	1.01	1.62	2.19	0.73
Eupatorium capillifolium	0.50	1.13	0.63	1.01	2.14	0.71
Andropogon virginicus	0.38	0.85	0.78	1.25	2.10	0.70
Solidago altissima	0.62	1.41	0.41	0.65	2.06	0.69
Smilax bona-nox	0.25	0.56	0.88	1.41	1.97	0.66

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Ilex vomitoria	0.25	0.56	0.85	1.37	1.93	0.64
Agrostis hyemalis	0.38	0.85	0.66	1.06	1.90	0.63
Limnosciadium pumilum	0.12	0.28	1.00	1.61	1.89	0.63
Helianthus angustifolius	0.38	0.85	0.63	1.02	1.86	0.62
Carex complanata	0.62	1.41	0.25	0.41	1.82	0.61
Centella erecta	0.50	1.13	0.38	0.60	1.73	0.58
Baptisia alba	0.12	0.28	0.88	1.41	1.69	0.56
Briza minor	0.50	1.13	0.34	0.55	1.68	0.56
Galacttia regularis	0.38	0.85	0.44	0.70	1.55	0.52
Gamochaeta purpurea	0.50	1.13	0.25	0.40	1.53	0.51
Iva annua	0.25	0.56	0.56	0.90	1.46	0.49
Diodia virginiana	0.38	0.85	0.38	0.61	1.46	0.49
Verbena bracteana	0.50	1.13	0.19	0.31	1.44	0.48
Croton capitatus	0.50	1.13	0.19	0.30	1.43	0.48
Scutellaria integrifolia	0.50	1.13	0.19	0.30	1.43	0.48
Polypremum procumbens	0.38	0.85	0.31	0.50	1.35	0.45
Juncus marginatus	0.38	0.85	0.31	0.50	1.35	0.45
Solanum carolinense	0.38	0.85	0.31	0.50	1.35	0.45
Liquidambar styraciflua	0.25	0.56	0.44	0.70	1.27	0.42
Symphyotrichum dumosum	0.38	0.85	0.25	0.41	1.26	0.42
Dichondra carolinensis	0.38	0.85	0.25	0.40	1.25	0.42
Carex sp.	0.38	0.85	0.22	0.35	1.20	0.40
Sonchus asper	0.38	0.85	0.22	0.35	1.20	0.40

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Chamaecrista fasciculata	0.38	0.85	0.22	0.35	1.20	0.40
Dichanthelium aciculare	0.25	0.56	0.38	0.61	1.18	0.39
Scleria triglomerata	0.25	0.56	0.38	0.60	1.17	0.39
Plantago virginica	0.38	0.85	0.19	0.30	1.15	0.38
Strophostyles umbellata	0.38	0.85	0.16	0.25	1.10	0.37
Carex corrugata	0.12	0.28	0.50	0.80	1.09	0.36
Carex brevior	0.38	0.85	0.13	0.20	1.05	0.35
Vulpia octoflora	0.38	0.85	0.13	0.20	1.05	0.35
Phalaris caroliniana	0.38	0.85	0.13	0.20	1.05	0.35
Eupatorium semiserratum	0.25	0.56	0.28	0.45	1.02	0.34
Linum striatum	0.25	0.56	0.28	0.45	1.02	0.34
Desmodium paniculatum	0.25	0.56	0.25	0.40	0.97	0.32
Saururus cernuus	0.25	0.56	0.25	0.40	0.97	0.32
Clematis crispa	0.25	0.56	0.25	0.40	0.97	0.32
Callicarpa americana	0.12	0.28	0.41	0.66	0.95	0.32
Solidago sempervirens	0.12	0.28	0.40	0.64	0.93	0.31
Dichanthelium sphaerocarpon	0.25	0.56	0.22	0.35	0.92	0.31
Dichanthelium scoparium	0.25	0.56	0.22	0.35	0.92	0.31
Conyza canadensis	0.25	0.56	0.22	0.35	0.92	0.31
Juncus effusus	0.25	0.56	0.22	0.35	0.92	0.31
Salvia lyrata	0.25	0.56	0.19	0.30	0.87	0.29
Scoparia dulcis	0.25	0.56	0.19	0.30	0.87	0.29
Galium tinctorium	0.25	0.56	0.16	0.25	0.82	0.27

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Geranium carolinianum	0.25	0.56	0.16	0.25	0.82	0.27
Dichanthelium dichotomum	0.25	0.56	0.16	0.25	0.82	0.27
Axonopus affinis	0.25	0.56	0.15	0.24	0.80	0.27
Potentilla indica	0.12	0.28	0.31	0.50	0.79	0.26
Oldenlandia uniflora	0.25	0.56	0.13	0.20	0.77	0.26
Prunella vulgaris subsp. Lanceolata	0.25	0.56	0.13	0.20	0.77	0.26
Lygodium japonicum	0.25	0.56	0.13	0.20	0.77	0.26
Dicanthelium laxiflorum	0.25	0.56	0.13	0.20	0.77	0.26
Pycnanthemum tenuifolium	0.25	0.56	0.10	0.17	0.73	0.24
Steinchisma hians	0.25	0.56	0.09	0.15	0.72	0.24
Juncus tenuis	0.25	0.56	0.09	0.15	0.72	0.24
Acer rubrum var. drummondii	0.25	0.56	0.09	0.15	0.72	0.24
Eleocharis montana	0.25	0.56	0.09	0.15	0.72	0.24
Rhynchospora inexpansa	0.25	0.56	0.09	0.15	0.72	0.24
Lolium perenne	0.25	0.56	0.06	0.10	0.67	0.22
Rhynchospora caduca	0.25	0.56	0.06	0.10	0.67	0.22
Eupatorium lancifolium	0.25	0.56	0.06	0.10	0.67	0.22
Unknown Herbaceous	0.25	0.56	0.06	0.10	0.67	0.22
Baccharis halimifolia	0.25	0.56	0.06	0.10	0.67	0.22
Cynodon dactylon	0.25	0.56	0.06	0.10	0.67	0.22
Hypericum gymnanthum	0.25	0.56	0.06	0.10	0.67	0.22
Pyrrhopappus pauciflorus	0.25	0.56	0.06	0.10	0.67	0.22
Smilax rotundifolia	0.12	0.28	0.22	0.35	0.63	0.21

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Coreopsis tinctoria	0.12	0.28	0.22	0.35	0.63	0.21
Scleria reticularis	0.12	0.28	0.22	0.35	0.63	0.21
Carex cherokeensis	0.12	0.28	0.22	0.35	0.63	0.21
Eupatorium coelestinum	0.25	0.56	0.03	0.05	0.62	0.21
Erythrina herbacea	0.12	0.28	0.19	0.30	0.58	0.19
Solidago rugosa	0.12	0.28	0.19	0.30	0.58	0.19
Paspalum laeve	0.12	0.28	0.17	0.27	0.55	0.18
Chrysopsis pilosa	0.12	0.28	0.16	0.25	0.53	0.18
Triodanis biflora	0.12	0.28	0.16	0.25	0.53	0.18
Carex frankii	0.12	0.28	0.13	0.20	0.48	0.16
Helenium flexuosum	0.12	0.28	0.13	0.20	0.48	0.16
Scleria sp.	0.12	0.28	0.13	0.20	0.48	0.16
Juncus brachycarpus	0.12	0.28	0.13	0.20	0.48	0.16
Cnidoscolus texanus	0.12	0.28	0.13	0.20	0.48	0.16
Pyrrhopappus carolinianus	0.12	0.28	0.13	0.20	0.48	0.16
Sida spinosa	0.12	0.28	0.13	0.20	0.48	0.16
Helianthemum carolinianum	0.12	0.28	0.13	0.20	0.48	0.16
Stylosanthes biflora	0.12	0.28	0.13	0.20	0.48	0.16
Rhynchospora mixta	0.12	0.28	0.10	0.16	0.44	0.15
Lespedeza virginica	0.12	0.28	0.09	0.15	0.43	0.14
Phalaris angusta	0.12	0.28	0.09	0.15	0.43	0.14
Hypericum mutilum	0.12	0.28	0.09	0.15	0.43	0.14
Viola lanceolata	0.12	0.28	0.09	0.15	0.43	0.14

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Asclepias verticillata	0.12	0.28	0.09	0.15	0.43	0.14
Chaerophyllum tainturieri	0.12	0.28	0.06	0.10	0.38	0.13
Wisteria frutescens	0.12	0.28	0.06	0.10	0.38	0.13
Aristida longespica	0.12	0.28	0.06	0.10	0.38	0.13
Diodia teres	0.12	0.28	0.06	0.10	0.38	0.13
Helenium amarum	0.12	0.28	0.06	0.10	0.38	0.13
Cyperus esculentus	0.12	0.28	0.06	0.10	0.38	0.13
Elephantopus carolinianus	0.12	0.28	0.06	0.10	0.38	0.13
Smilax glauca	0.12	0.28	0.06	0.10	0.38	0.13
Dichanthelium boscii	0.12	0.28	0.06	0.10	0.38	0.13
Gnapalium purpureum	0.12	0.28	0.06	0.10	0.38	0.13
Saccharum giganteum	0.12	0.28	0.06	0.10	0.38	0.13
Eleocharis tuberculosa	0.12	0.28	0.06	0.10	0.38	0.13
Oenothera laciniata	0.12	0.28	0.06	0.10	0.38	0.13
Rhynchospora corniculata	0.12	0.28	0.06	0.10	0.38	0.13
Rudbeckia hirta	0.12	0.28	0.06	0.10	0.38	0.13
Eupatorium serotinum	0.12	0.28	0.06	0.10	0.38	0.13
Taxodium distichum	0.12	0.28	0.06	0.10	0.38	0.13
Linum sulcatum	0.12	0.28	0.06	0.10	0.38	0.13
Tradescantia ohioensis	0.12	0.28	0.06	0.10	0.38	0.13
Schizachyrium scoparium	0.12	0.28	0.06	0.10	0.38	0.13
Rhexia mariana var. mariana	0.12	0.28	0.06	0.10	0.38	0.13
Verbesina virginica	0.12	0.28	0.06	0.10	0.38	0.13

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Toxicodendron radicans	0.12	0.28	0.06	0.10	0.38	0.13
Lespedeza stuevei	0.12	0.28	0.06	0.10	0.38	0.13
Ampelopsis arborea	0.12	0.28	0.03	0.06	0.34	0.11
Erechtites hieraciifolia	0.12	0.28	0.03	0.05	0.33	0.11
Vitis rotundifolia	0.12	0.28	0.03	0.05	0.33	0.11
Pluchea foetida	0.12	0.28	0.03	0.05	0.33	0.11
Ambrosia trifida	0.12	0.28	0.03	0.05	0.33	0.11
Cerastium glomeratum	0.12	0.28	0.03	0.05	0.33	0.11
Smilax walteri	0.12	0.28	0.03	0.05	0.33	0.11
Digitaria sp.	0.12	0.28	0.03	0.05	0.33	0.11
Anagallis arvensis	0.12	0.28	0.03	0.05	0.33	0.11
Quercus laurifolia	0.12	0.28	0.03	0.05	0.33	0.11
Melothira pendula	0.12	0.28	0.03	0.05	0.33	0.11
Hypericum hypericoides	0.12	0.28	0.03	0.05	0.33	0.11
Scleria oligantha	0.12	0.28	0.03	0.05	0.33	0.11
Ludwigia sp.	0.12	0.28	0.03	0.05	0.33	0.11
Ranunculus sardous	0.12	0.28	0.03	0.05	0.33	0.11
Sphenopholis obtusata	0.12	0.28	0.03	0.05	0.33	0.11
Viburnum dentatum	0.12	0.28	0.03	0.05	0.33	0.11
Mecardonia procumbens	0.12	0.28	0.03	0.05	0.33	0.11
Pluchea odorata	0.12	0.28	0.03	0.05	0.33	0.11
Plantago rhodosperma	0.12	0.28	0.03	0.05	0.33	0.11
Viola lanceolata subsp. vittata	0.12	0.28	0.03	0.05	0.33	0.11

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Solanum elaeagnifolium	0.12	0.28	0.03	0.05	0.33	0.11
Strophostyles helvola	0.12	0.28	0.03	0.05	0.33	0.11
Centaurium pulchellum	0.12	0.28	0.03	0.05	0.33	0.11
Phyla lanceolata	0.12	0.28	0.03	0.05	0.33	0.11
Acer rubrum var. rubrum	0.12	0.28	0.03	0.05	0.33	0.11
Rumex crispus	0.12	0.28	0.03	0.05	0.33	0.11
Sida rhombifolia	0.12	0.28	0.03	0.05	0.33	0.11
Pseudognaphalium obtusifolium	0.12	0.28	0.03	0.05	0.33	0.11
Sesbania vesicaria	0.12	0.28	0.03	0.05	0.33	0.11
Carex triangularis	0.12	0.28	0.03	0.05	0.33	0.11
Boltonia diffusa	0.12	0.28	0.03	0.05	0.33	0.11
Cyperus entrerianus	0.12	0.28	0.03	0.05	0.33	0.11
Ludwigia peploides	0.12	0.28	0.03	0.05	0.33	0.11
Galium aparine	0.12	0.28	0.03	0.05	0.33	0.11
Aristida sp.	0.12	0.28	0.03	0.05	0.33	0.11
Bignonia capreolata	0.12	0.28	0.03	0.05	0.33	0.11
Vernonia missurica	0.12	0.28	0.03	0.05	0.33	0.11
Dichanthelium commutatum	0.12	0.28	0.03	0.05	0.33	0.11
Bradburia pilosa	0.12	0.28	0.03	0.05	0.33	0.11
Rhynchosia latifolia	0.12	0.28	0.03	0.05	0.33	0.11
Rhus copallina	0.12	0.28	0.03	0.05	0.33	0.11
Andropogon brachystachyus	0.12	0.28	0.03	0.05	0.33	0.11
Paspalum plicatulum	0.12	0.28	0.01	0.01	0.30	0.10

Table 32D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eragrostis refracta	0.12	0.28	0.00	0.01	0.29	0.10
Lonicera japonica	0.12	0.28	0.00	0.01	0.29	0.10

Table 33A

Summary of Overstory Layer
Proposed: Mixed Herbaceous Temporarily Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Baccharis halimifolia	0.50	100.00	200.00	100.00	9.95	100.00	300.00	100.00

Table 33B

Summary of Midstory Layer
Proposed: Mixed Herbaceous Temporarily Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Salix nigra	0.50	100.00	20.00	100.00	0.03	100.00	300.00	100.00

Table 33C

Summary of Shrub Layer
Proposed: Mixed Herbaceous Temporarily Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Density (#individuals/ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	Relative Importance Value [%]
Baccharis halimifolia	0.50	100.00	600.00	100.00	0.06	100.00	300.00	100.00

Table 33D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Temporarily Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Eleocharis montevidensis	0.50	1.49	21.38	22.30	23.79	7.93
Eleocharis montana	1.00	2.99	18.25	19.04	22.03	7.34
Cyperus entrerianus	0.50	1.49	13.88	14.48	15.97	5.32
Andropogon glomeratus	0.50	1.49	5.63	5.87	7.36	2.45
Paspalum urvillei	1.00	2.99	3.25	3.39	6.38	2.13
Rhexia mariana var. mariana	0.50	1.49	3.48	3.63	5.12	1.71
Ambrosia artemisiifolia	0.50	1.49	3.35	3.50	4.99	1.66
Dichanthelium acuminatum	1.00	2.99	0.63	0.65	3.64	1.21
Sphagnum sp.	0.50	1.49	1.98	2.06	3.55	1.18
Eleocharis montividensis	0.50	1.49	1.50	1.56	3.06	1.02
Diodia virginiana	0.50	1.49	1.38	1.43	2.93	0.98
Centella erecta	0.50	1.49	1.25	1.30	2.80	0.93
Rhynchospora caduca	0.50	1.49	1.25	1.30	2.80	0.93
Ptilimnium capillaceum	0.50	1.49	1.00	1.04	2.54	0.85
Solidago altissima	0.50	1.49	1.00	1.04	2.54	0.85
Dichanthelium dichotomum	0.50	1.49	0.88	0.91	2.41	0.80
Trachelospermum difforme	0.50	1.49	0.88	0.91	2.41	0.80
Steinchisma hians	0.50	1.49	0.88	0.91	2.41	0.80
Eupatorium semiserratum	0.50	1.49	0.85	0.89	2.38	0.79
Saururus cernuus	0.50	1.49	0.75	0.78	2.28	0.76
Rubus trivialis	0.50	1.49	0.75	0.78	2.28	0.76
Dichanthelium aciculare	0.50	1.49	0.75	0.78	2.28	0.76
Ludwigia peploides	0.50	1.49	0.75	0.78	2.28	0.76

Table 33D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Temporarily Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Pluchea foetida	0.50	1.49	0.73	0.76	2.25	0.75
Mikania scandens	0.50	1.49	0.63	0.65	2.14	0.71
Hydrolea ovata	0.50	1.49	0.50	0.52	2.01	0.67
Rhynchospora corniculata	0.50	1.49	0.50	0.52	2.01	0.67
Ludwigia alternifolia	0.50	1.49	0.48	0.50	1.99	0.66
Gactia regularis	0.50	1.49	0.38	0.39	1.88	0.63
Symphyotrichum divaricatum	0.50	1.49	0.38	0.39	1.88	0.63
Juncus effusus	0.50	1.49	0.38	0.39	1.88	0.63
Ludwigia grandiflora	0.50	1.49	0.38	0.39	1.88	0.63
Croton capitatus	0.50	1.49	0.38	0.39	1.88	0.63
Galium aparine	0.50	1.49	0.25	0.26	1.75	0.58
Rhexia mariana var. mariana	0.50	1.49	0.25	0.26	1.75	0.58
Helenium flexuosum	0.50	1.49	0.25	0.26	1.75	0.58
Carex brevior	0.50	1.49	0.25	0.26	1.75	0.58
Pycnanthemum albescens	0.50	1.49	0.25	0.26	1.75	0.58
Juncus diffusissimus	0.50	1.49	0.25	0.26	1.75	0.58
Galium tinctorium	0.50	1.49	0.25	0.26	1.75	0.58
Sesbania herbacea	0.50	1.49	0.25	0.26	1.75	0.58
Symphyotrichum dumosum	0.50	1.49	0.25	0.26	1.75	0.58
Andropogon glomeratus	0.50	1.49	0.25	0.26	1.75	0.58
Eryngium prostratum	0.50	1.49	0.25	0.26	1.75	0.58
Limnosciadium pumilla	0.50	1.49	0.25	0.26	1.75	0.58
Hypericum hypericoides	0.50	1.49	0.25	0.26	1.75	0.58

Table 33D

Summary of Herbaceous Layer
Proposed: Mixed Herbaceous Temporarily Forest Alliance

Genus species	Frequency	Relative Frequency [%]	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	Modified Importance Value [%]
Cyperus acuminatus	0.50	1.49	0.13	0.13	1.62	0.54
Juncus marginatus	0.50	1.49	0.13	0.13	1.62	0.54
Hypericum mutilum	0.50	1.49	0.13	0.13	1.62	0.54
Lygodium japonicum	0.50	1.49	0.13	0.13	1.62	0.54
Agrostis hyemalis	0.50	1.49	0.13	0.13	1.62	0.54
Polygonum hydropiperoides	0.50	1.49	0.13	0.13	1.62	0.54
Acer rubrum var. rubrum	0.50	1.49	0.13	0.13	1.62	0.54
Baccharis halimifolia	0.50	1.49	0.13	0.13	1.62	0.54
Iris virginica	0.50	1.49	0.13	0.13	1.62	0.54
Linum striatum	0.50	1.49	0.13	0.13	1.62	0.54
Ludwigia glandulosa	0.50	1.49	0.13	0.13	1.62	0.54
Rumex crispus	0.50	1.49	0.13	0.13	1.62	0.54
Verbena bracteana	0.50	1.49	0.13	0.13	1.62	0.54
Ilex vomitoria	0.50	1.49	0.13	0.13	1.62	0.54
Cardamine sp.	0.50	1.49	0.13	0.13	1.62	0.54
Leersia hexandra	0.50	1.49	0.13	0.13	1.62	0.54
Cynodon dactylon	0.50	1.49	0.13	0.13	1.62	0.54
Limnosciadium pinnatum	0.50	1.49	0.13	0.13	1.62	0.54

APPENDIX B

VEGETATION SPECIES LIST

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species
Acalypha gracilens
Acalypha rhomboidea
Acer rubrum var. drummondii
Acer rubrum var. rubrum
Acmella oppositifolia
Acmella oppositifolia var. repens
Agrostis hyemalis
Allium canadense var. canadense
**Alternanthera philoxeroides*
**Alternanthera sessilis*
Ambrosia artemisiifolia
Ambrosia trifida
Ammannia coccinea
Amorpha fruticosa
Ampelopsis arborea
Amsonia tabernaemontana
**Anagallis arvensis*
Andropogon brachystachyus
Andropogon glomeratus
Andropogon virginicus
Aralia spinosa
**Ardisia crenata*
Arisaema dracontium
Arisaema triphyllum
Aristida longespica
Aristida sp.
Aristolochia serpentaria
Arundinaria gigantea
Asclepias perennis
Asclepias verticillata
Asimina parviflora
Asplenium platyneuron
Axonopus affinis
Axonopus fissifolius
Azolla caroliniana
Baccharis halimifolia
Bacopa monnieri
Bacopa rotundifolia
Baptisia alba
Berchemia scandens
Betula nigra
Bidens laevis
Bignonia capreolata

Genus species
Boltonia diffusa
Botrychium dissectum
Botrychium virginianum
Bradburia pilosa
**Briza minor*
Brunnichia ovata
Callicarpa americana
Campsis radicans
Cardamine sp.
Carex abscondita
Carex albolutescens
Carex blanda
Carex brevior
Carex caroliniana
Carex cherokeensis
Carex complanata
Carex corrugata
Carex crus-corvi
Carex debilis
Carex debilis var. debilis
Carex digitalis
Carex flaccosperma
Carex frankii
Carex glaucescens
Carex intumescens
Carex joorii
Carex leavenworthii
Carex leptalea
Carex louisianica
Carex lupulina
Carex lurida
Carex microrhyncha
Carex oxylepis
Carex reniformis
Carex sp.
Carex triangularis
Carex tribuloides var. sangamonensis
Carpinus caroliniana
Carya aquatica
Carya cordiformis
Carya glabra var. hirsuta
Carya illinoinensis
Carya sp.

* non-native genus species

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species	Genus species
Boehmeria cylindrica	*Carya tomentosa*
Castanea pumila	*Cyperus acuminatus*
Celtis laevigata	*Cyperus croceus*
Celtis laevigata var. laevigata	**Cyperus entrerianus*
Celtis tenuifolia	**Cyperus esculentus*
**Centaurium pulchellum*	*Cyperus haspan*
Centella erecta	*Cyperus odoratus*
Cephalanthus occidentalis	*Cyperus pseudovegetus*
**Cerastium glomeratum*	*Cyperus retroflexus*
Chaerophyllum tainturieri	*Cyperus sp.*
Chamaecrista fasciculata	*Cyperus virens*
Chamaesyce maculata	*Cyrilla racemiflora*
Chamaesyce protrata	*Desmodium glabellum*
Chasmanthium latifolium	*Desmodium glutinosum*
Chasmanthium laxum	*Desmodium paniculatum*
Chasmanthium laxum var. sessiliflorum	*Desmodium strictum*
Chasmanthium sessiliflorum	*Desmodium viridiflorum*
Chenopodium ambrosioides	*Dichanthelium aciculare*
Chionanthus virginica	*Dichanthelium acuminatum*
Chrysopsis pilosa	*Dichanthelium boscii*
Cirsium carolinianum	*Dichanthelium commutatum*
Clematis crispa	*Dichanthelium dichotomum*
Cnidoscolus texanus	*Dichanthelium laxiflorum*
Cnidoscolus urens var. stimulosus	*Dichanthelium scoparium*
Cocculus carolinus	*Dichanthelium species*
**Commelina diffusa*	*Dichanthelium sphaerocarpon*
Commelina erecta	*Dichondra carolinensis*
**Commelina virginica*	*Dicliptera brachiata*
Conoclinium coelestinum	*Digitaria ciliaris*
Conyza canadensis	*Digitaria sanguinalis*
Coreopsis tinctoria	*Digitaria sp.*
Cornus drummondii	*Diodia teres*
Cornus florida	*Diodia virginiana*
Cornus foemina	*Diospyros virginiana*
Crataegus berberifolia	*Echinochloa walteri*
Crataegus brachyacantha	*Echinodorus cordifolius*
Crataegus marshallii	*Eclipta prostrata*
Crataegus opaca	**Eichhornia crassipes*
Crataegus spathulata	*Eleocharis cellulosa*
Crataegus viridis	*Eleocharis microcarpa*
Crinum americanum	*Eleocharis minima*
Croton capitatus	*Eleocharis montana*
Croton monanthogynus	*Eleocharis montevidensis*
**Cyclospermum leptophyllum*	*Eleocharis parvula*

* non-native genus species

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species	Genus species
**Cynodon dactylon*	*Eleocharis quadrangulata*
Eleocharis sp.	*Helianthemum carolinianum*
Eleocharis tuberculosa	*Helianthus angustifolius*
Elephantopus carolinianus	*Hibiscus dasycalyx*
Elephantopus tomentosus	*Hibiscus laevis*
Elymus virginicus	*Hibiscus moscheutos var. incanus*
Eragrostis ellioti	*Hydrilla verticellata*
Eragrostis japonica	*Hydrocotyle ranunculoides*
Eragrostis refracta	*Hydrocotyle umbellata*
Eragrostis spectabilis	*Hydrocotyle verticillata*
Erechtites hieraciifolia	*Hydrolea ovata*
Eryngium prostratum	*Hygrophila lacustris*
Erythrina herbacea	*Hymenocallis caroliniana*
Eupatorium capillifolium	*Hymenocallis liriosme*
Eupatorium coelestinum	*Hymenocallis sp.*
Eupatorium lancifolium	*Hypericum crus-andreae*
Eupatorium leucolepis	*Hypericum drummondii*
Eupatorium semiserratum	*Hypericum gymnanthum*
Eupatorium serotinum	*Hypericum hypericoides*
Euthamia leptocephala	*Hypericum mutilum*
Fagus grandifolia	*Hypericum sp.*
**Fimbristylis miliacea*	*Hypoxis curtisii*
Forestiera acuminata	*Hypoxis hirsuta*
Forestiera ligustrina	*Ilex ambigua*
Fraxinus americana	*Ilex coriacea*
Fraxinus caroliniana	*Ilex decidua*
Fraxinus pennsylvanica	*Ilex longipes*
Fuirena breviseta	*Ilex opaca*
Galactia regularis	*Ilex vomitoria*
**Galium aparine*	*Ipomoea cordatotriloba*
Galium pilosum	*Ipomoea sagittata*
**Galium tinctorium*	*Ipomoea sp.*
Gamochaeta purpurea	*Iris virginica*
Gelsemium sempervirens	*Itea virginica*
Geranium carolinianum	*Iva annua*
Gleditsia aquatica	*Juglans nigra*
Glinus radiatus	*Juncus brachycarpus*
Gnapalium purpureum	*Juncus coriaceus*
Gonolobus suberosus	*Juncus diffusissimus*
Gratiola brevifolia	*Juncus effusus*
Habenaria repens	*Juncus marginatus*
Halesia diptera	*Juncus repens*
Hamamelis virginiana	*Juncus tenuis*
Helenium amarum	*Juncus validus*

* non-native genus species

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species	Genus species
Helenium flexuosum	*Juniperus virginiana*
Justicia americana	*Lysimachia radicans*
Justicia ovata	*Magnolia grandiflora*
Justicia ovata var. lanceolata	*Magnolia virginiana*
Kosteletzkya virginica	*Marsilea vestita*
Krigia cespitosa	*Mecardonia acuminata*
**Kummerowia striata*	*Mecardonia procumbens*
Lackeya multiflora	*Melothria pendula*
Lactuca canadensis	*Melothria pendula var. pendula*
Leersia hexandra	*Micranthemum umbrosum*
Leersia lenticularis	*Mikania scandens*
Leersia oryzoides	*Mitchella repens*
Leersia virginica	*Mitreola petiolata*
Lemna aequinoctialis	*Morella cerifera*
Lemna obscura	*Morus rubra*
Lemna species	**Myriophyllum aquaticum*
Lepidium virginicum	*Myriophyllum sp.*
Lespedeza repens	*Nyssa aquatica*
Lespedeza stuevei	*Nyssa biflora*
Lespedeza virginica	*Nyssa sylvatica*
**Ligustrum japonicum*	*Oenothera laciniata*
**Ligustrum lucidum*	*Oldenlandia uniflora*
**Ligustrum sinense*	*Onoclea sensibilis*
Limnobium spongia	*Oplismenus hirtellus*
**Limnosciadium pinnatum*	*Osmunda regalis*
Limnosciadium pumilum	*Ostrya virginiana*
Linum striatum	*Oxalis dillenii*
Linum sulcatum	*Oxalis sp.*
Liquidambar styraciflua	*Oxalis stricta*
Lobelia flaccidifolia	*Panicum anceps*
**Lolium perenne*	*Panicum heimtomon*
**Lonicera japonica*	*Panicum rigidulum*
Ludwigia alternifolia	*Panicum virgatum*
Ludwigia glandulosa	*Parthenocissus quinquefolia*
Ludwigia grandiflora	*Paspalum dilatatum*
Ludwigia hirtella	*Paspalum laeve*
Ludwigia leptocarpa	**Paspalum notatum*
Ludwigia octovalvis	*Paspalum plicatulum*
Ludwigia palustris	*Paspalum praecox*
Ludwigia peploides	*Paspalum setaceum*
Ludwigia pilsoa	**Paspalum urvillei*
Ludwigia repens	*Paspalum vaginatum*
Ludwigia sp.	*Passiflora incarnata*
Lycopus virginicus	*Passiflora lutea*

* non-native genus species

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species	Genus species
**Lygodium japonicum*	*Peltandra virginica*
Persea palustris	*Quercus alba*
Persia borbonia	*Quercus falcata*
Phalaris angusta	*Quercus pogodaefolia*
Phalaris caroliniana	*Quercus hemisphaerica*
Phanopyrum gymnocarpon	*Quercus laurifolia*
Phyla lanceolata	*Quercus lyrata*
Phyla nodiflora	*Quercus michauxii*
Physalis heterophylla	*Quercus nigra*
Phytolacca americana	*Quercus phellos*
Pinus taeda	*Quercus similis*
Pityopsis graminifolia	*Quercus stellata*
Planera aquatica	**Ranunculus sardous*
Plantago lanceolata	*Rhexia mariana*
Plantago rhodosperma	*Rhexia mariana var. mariana*
Plantago virginica	*Rhexia virginica*
Platanus occidentalis	*Rhus copallina*
Pluchea camphorata	*Rhynchosia latifolia*
Pluchea foetida	*Rhynchosia sp.*
Pluchea odorata	*Rhynchospora caduca*
Pluchea rosea	*Rhynchospora corniculata*
Podophyllum peltatum	*Rhynchospora inexpansa*
Polygama verticillata	*Rhynchospora mixta*
Polygonum glabrum	**Richardia brasiliensis*
Polygonum hydropiper	*Rubus argutus*
Polygonum hydropiperoides	*Rubus trivialis*
Polygonum pensylvanicum	*Rudbeckia hirta*
Polygonum punctatum	*Ruellia caroliniensis*
Polypremum procumbens	*Rumex crispus*
Pontederia cordata	*Sabal minor*
**Potentilla indica*	*Sabatia campestris*
Proserpinaca palustris	*Saccharum baldwinii*
Proserpinaca pectinata	*Saccharum giganteum*
Prunella vulgaris	*Sacciolepis striata*
Prunella vulgaris subsp. lanceolata	*Sagittaria graminea*
Prunella vulgaris subsp. vulgaris	*Sagittaria lancifolia*
Prunus caroliniana	*Sagittaria latifolia*
Prunus serotina	*Sagittaria platyphylla*
Pseudognaphalium obtusifolium	*Salix nigra*
Pteridium aquilinum	*Salvia lyrata*
Ptilimnium capillaceum	**Salvinia minima*
Pycnanthemum albescens	*Salvinia molesta*
Pycnanthemum tenuifolium	*Sambucus nigra var. canadensis*
Pyrrhopappus carolinianus	*Sanicula canadensis*

* non-native genus species

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species	Genus species
Pyrrhopappus pauciflorus	*Sapindus saponaria var. drummondii*
Sassafras albidum	*Steinchisma hians*
Saururus cernuus	*Strophostyles helvola*
Schizachyrium scoparium	*Strophostyles umbellata*
Schoenoplectus americanus	*Stylosanthes biflora*
Schoenoplectus californicus	*Styrax americana*
Scleria oligantha	*Styrax grandifolia*
Scleria reticularis	*Symphyotrichum divaricatum*
Scleria sp.	*Symphyotrichum dumosum*
Scleria triglomerata	*Symphyotrichum racemosum*
Scoparia dulcis	*Symphyotrichum species*
Scutellaria elliptica	*Symplocos tinctoria*
Scutellaria integrifolia	*Taxodium distichum*
Sebastiana fruticosa	*Teucrium canadense*
Sesbania drummondii	*Thelypteris kunthii*
Sesbania herbacea	*Tilia americana*
Sesbania vesicaria	*Tilia americana var. caroliniana*
Sida rhombifolia	*Tillandsia usneoides*
Sida spinosa	*Toxicodendron radicans*
Sideroxylon lanuginosa	*Trachelospermum difforme*
Sideroxylon lycioides	*Tradescantia hirsutiflora*
Sisyrinchium rosulatum	*Tradescantia ohioensis*
Smilax bona-nox	*Triadenum tubulosum*
Smilax glauca	*Triadenum walterii*
Smilax hispida	**Triadica sebifera*
Smilax laurifolia	*Tridens flavus*
Smilax pumila	*Tridens strictus*
Smilax rotundifolia	*Triodanis biflora*
Smilax smallii	*Typha angustifolia*
Smilax species	*Typha domingensis*
Smilax tamnoides	*Typha latifolia*
Smilax walteri	*Ulmus alata*
Solanum carolinense	*Ulmus americana*
Solanum elaeagnifolium	Ulmus crassifolia
Solidago altissima	*Ulmus rubra*
Solidago canadensis	*Unknown herbaceous*
Solidago rugosa	*Unknown tree*
Solidago sempervirens	*Utricularia gibba*
Solidago simplex	*Vaccinium arboreum*
**Sonchus asper*	*Vaccinium corybosum*
Sonchus oleraceus	*Vaccinium elliottii*
Sphagnum sp.	*Valerianella radiata*
Sphenopholis obtusata	*Verbena bracteana*
Spiranthes odorata	*Verbesina virginica*

* non-native genus species

Table B-1

Vascular Vegetation occurring in Vegetation Sample Plot Data in the Beaumont Unit of the BTNP, April-June 2011

Genus species	Genus species
Stachys crenata	*Vernonia baldwinii*
Vernonia missurica	
Viburnum dentatum	
Viburnum nudum	
Vicia ludoviciana	
Viola lanceolata	
Viola lanceolata subsp. vittata	
Viola missouriensis	
Viola palmata	
Viola sororia	
Viola sororia var. missouriensis	
Viola villosa	
Vitis aestivalis	
Vitis aestivalis var. lincecumii	
Vitis cinerea	
Vitis palmata	
Vitis rotundifolia	
Vulpia octoflora	
Wisteria frutescens	
Wisteria sinensis	
Wolffia columbiana	
Wolfiella gladiata	
Woodwardia areolata	
Xyris laxifolia var. iridifolia	
Yeatesia viridiflora	
**Youngia japonica*	
Zanthoxylum clava-herculis	
Zizaniopsis miliacea	

* non-native genus species

Table B-2

Collected Voucher Specimens Within the Vegetation Mapping Analysis Program of the Beaumont Unit of the BTNP Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Scientific Name	Common Name	County
Acalypha gracilens	Slender Threeseed Mercury	Hardin
Acalypha virginica	Virginia Copperleaf	Hardin
Acmella oppositifolia	Oppositeleaf Spotflower	Orange
Agrostis hyemalis	Winter Bentgrass	Orange
Alternanthera sessilis	Sessile Joyweed	Hardin
Amsonia tabernaemontana	Eastern Bluestar	Hardin
Aralia spinosa	Devil's Walkingstick	Orange
Aristolochia serpentaria	Virginia Snakeroot	Hardin
Asimina parviflora	Smallflower Pawpaw	Orange
Asplenium platyneuron	Ebony Spleenwort	Orange
Avena sativa	Common Oat	Orange
Azolla microphylla	Mosquitofern	Hardin
Bidens discoidea	Small Beggarticks	Hardin
Bidens laevis	Smooth Beggartick	Orange
Bradburia pilosa	Soft Goldenaster	Orange
Brassica rapa	Tender Green	Orange
Bromus catharticus	Rescuegrass	Orange
Cardamine bulbosa	Bulbous Bittercress	Hardin
Carex abscondita	Thicket Sedge	Orange
Carex caroliniana	Carolina Sedge	Orange
Carex complanata	Hirsute Sedge	Orange
Carex debilis	White Edge Sedge	Orange
Carex louisianica	Louisiana Sedge	Orange
Carex triangularis	Eastern Fox Sedge	Orange
Carex tribuloides	Blunt Broom Sedge	Orange
Carya cordiformis	`Bitternut Hickory	Hardin
Carya glabra	Pignut Hickory	Orange
Carya ovata	Shagbark Hickory	Orange
Castanea pumila	Chinkapin	Orange
Centella erecta	Erect Centella	Orange
Centrosema virginianum	Spurred Butterfly Pea	Orange
Chasmanthium sessiliflorum	Longleaf Woodoats	Hardin
Cephalanthus occidentalis	Common Buttonbush	Orange
Chionanthus virginicus	White Fringetree	Orange
Cinnamomum camphora	Camphortree	Orange
Cladium jamaicense	Jamaica Sawgrass	Orange
Cocculus carolinus	Carolina Coralbead	Hardin
Colocasia esculenta	Coco Yam	Orange
Cornus foemina	Stiff Dogwood	Hardin
Crataegus brachyacantha	Blueberry Hawthorn	Orange
Crataegus marshallii	Parsley Hawthorn	Orange
Crataegus spathulata	Littlehip Hawthorn	Orange
Crotalaria sagittalis	Arrowhead Rattlebox	Orange

Table B-2

Collected Voucher Specimens Within the Vegetation Mapping Analysis Program of the Beaumont Unit of the BTNP Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Scientific Name	Common Name	County
Cyperus acuminatus	Tapertip Flatsedge	Orange
Cyperus haspan	Haspan Flatsedge	Orange
Cyperus pseudovegetus	Marsh Flatsedge	Hardin
Cyperus retrorsus	Pinebarren Flatsedge	Orange
Cyperus strigosus	Strawcolored Flatsedge	Orange
Cyrilla racemiflora	Swamp Titi	Orange
Dichanthelium aciculare	Needleleaf Rosette Grass	Jasper
Dichanthelium acuminatum	Lindheimer Panicgrass	Orange
Diospyros virginiana	Common Persimmon	Orange
Dysphanis ambrosioides	Mexican Tea	Orange
Echinodorus cordifolius	Creeping Burhead	Orange
Eichhornia crassipes	Common Water Hyacinth	Orange
Eleocharis cellulosa	Gulf Coast Spikerush	Orange
Eleocharis Montana	Mountain Spikerush	Orange
Eleocharis quadrangulata	Squarestem Spikerush	Hardin
Eleocharis tuberculosa	Cone-cup Spikerush	Orange
Elephantopus tomentosus	Devil's Grandmother	Orange
Eragrostis japonica	Pond Lovegrass	Jasper
Erechtites hieraciifolia	American Burnweed	Hardin/Orange
Eryngium prostratum	Creeping Eryngo	Orange
Erythrina herbacea	Redcardinal	Orange
Eupatorium lancifolium	Lanceleaf Thoroughwort	Orange
Fraxinus pennsylvanica	Green Ash	Hardin
Fuirena breviseta	Saltmarsh Umbrella-sedge	Orange
Gamochaeta pensylvanica	Pennsylvania Everlasting	Orange
Gelsemium sempervirens	Evening Trumpetflower	Orange
Glinus radiatus	Spreading Sweetjuice	Jasper
Gonolobus suberosus	Angularfruit Milkvine	Orange
Gratiola brevifolia	Sticky Hedgehyssop	Orange
Habenaria repens	Waterspider Bog Orchid	Orange
Halesia diptera	Two-wing Silverbell	Orange
Hamamelis virginiana	American Witchhazel	Orange
Hedeoma hispida	Rough False Pennyroyal	Orange
Helenium amarum	Sneezeweed	Orange
Helenium flexuosum	Purplehead Sneezeweed	Orange
Helianthus angustifolius	Swamp Sunflower	Orange
Heteranthera limosa	Blue Mudplantain	Orange
Hibiscus laevis	Halberdleaf Rosemallow	Orange
Hibiscus moscheutos	Crimsoneyed Rosemallow	Orange
Hydrocotyle verticillata	Whorled Marshpennywort	Hardin/Orange
Hydrolea ovata	Ovate False Fiddleleaf	Orange
Hydrolea uniflora	One Flower False Fiddleleaf	Orange
Hygrophila lacustris	Gulf Swampweed	Hardin

Table B-2

Collected Voucher Specimens Within the Vegetation Mapping Analysis Program of the Beaumont Unit of the BTNP Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Scientific Name	Common Name	County
Hypericum gymnanthum	Claspingleaf St. Johnswort	Orange
Hypericum mutilum	Dwarf St. Johnswort	Orange
Hypochaeris microcephala	Smallhead Cat's Ear	Orange
Ilex ambigua	Carolina Holly	Orange
Itea virginica	Virginia Sweetspire	Orange
Juglans nigra	Black Walnut	Orange
Juncus brachycarpus	Whiteroot Rush	Orange
Juncus diffusissimus	Slimpod Rush	Orange
Juncus elliottii	Elliott's Rush	Orange
Juncus marginatus	Grassleaf Rush	Orange
Juncus repens	Lesser Creeping Rush	Orange
Juncus validus	Roundhead Rush	Orange
Krigia cespitosa	Weedy Dwarfdandelion	Orange
Lackeya multiflora	Clusterpea	Orange
Lechea mucronata	Hairy Pinweed	Orange
Leersia hexandra	Southern Cutgrass	Orange
Leersia lenticularis	Catchfly Grass	Orange
Lespedeza virginica	Slender Lespedeza	Orange
Liatris elegans	Pinkscale Blazing Star	Orange
Ligustrum lucidum	Glossy Privet	Orange
Limnobium spongia	American Spongeplant	Hardin
Limnosciadium pinnatum	Tansy Dogshade	Orange
Linum striatum	Ridged Yellowflax	Orange
Ludwigia alternifolia	Seedbox	Orange
Ludwigia glandulosa	Cylindricfruit Primrose-willow	Orange
Ludwigia grandiflora	Large-flower Primrose-willow	Orange
Ludwigia pilosa	Hairy Primrose-willow	Orange
Lysimachia radicans	Trailing Yellow Loosestrife	Hardin
Malvaviscus arboreus Cav. Var. drummondii	Waxmallow	Orange
Marsilea vestita	Hairy Waterclover	Orange
Mitreola petiolata	Lax Hornpod	Orange
Mollugo verticillata	Green Carpetweed	Orange
Nyssa sylvatica	Blackgum	Hardin
Oldenlandia boscii	Bosc's Mille Graines	Jasper
Oldenlandia uniflora	Clustered Mille Graines	Orange
Onoclea sensibilis	Sensitive Fern	Hardin
Paspalum dilatatum	Dallis Grass	Orange
Paspalum laeve	Field Paspalum	Orange
Paspalum notatum	Bahiagrass	Orange
Paspalum repens	Horsetail Paspalum	Jasper
Passiflora incarnata	Purple Passionflower	Hardin
Penthorum sedoides	Ditch Stonecrop	Hardin

Table B-2

Collected Voucher Specimens Within the Vegetation Mapping Analysis Program of the Beaumont Unit of the BTNP Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Scientific Name	Common Name	County
Persea borbonia	Redbay	Hardin/Orange
Persicaria glabra	Denseflower Knotweed	Hardin
Persicaria virginiana	Jumpseed	Orange
Phalaris caroliniana	Carolina Canarygrass	Orange
Physalis heterophylla	Clammy Grouncherry	Orange
Phytolacca americana	American Pokeweed	Hardin
Pinus taeda	Loblolly Pine	Orange
Planera aquatica	Planertree	Hardin
Pluchea camphorata	Camphor Pluchea	Hardin
Pluchea foetida	Stinking Camphorweed	Orange
Podophyllum peltatum	Mayapple	Orange
Polygonatum biflorum	Smooth Solomon's Seal	Orange
Prunella vulgaris	Common Selfheal	Orange
Prunus serotina	Black Cherry	Orange
Pycnanthemum albescens	Whiteleaf Mountainmint	Orange
Pycnanthemum tenuifolium	Narrowleaf Mountainmint	Orange
Pyrrhopappus carolinianus	Carolina Desert-chicory	Orange
Quercus velutina	Black Oak	Hardin/Orange
Ranunculus pusillus	Low Spearwort	Orange
Rhexia mariana	Maryland Meadowbeauty	Orange
Rhynchospora caduca	Anglestem Beaksedge	Orange
Rhynchospora elliottii	Elliott's Beaksedge	Orange
Rhynchospora inexpansa	Nodding Beaksedge	Orange
Rorippa sessiliflora	Stalkless Yellowcress	Hardin
Ruellia caroliniensis	Carolina Wild Petunia	Hardin
Rumex verticillatus	Swamp Dock	Orange
Sacciolepis striata	American Cupscale	Orange
Sagittaria graminea	Grassy Arrowhead	Orange
Salvia lyrata	Lyreleaf Sage	Orange
Salvinia minima	Water Spangles	Hardin
Sanicula canadensis	Canadian Blacksnakeroot	Hardin
Sapindus saponaria	Wingleaf Soapberry	Orange
Schoenoplectus pungens	Common Threesquare	Jasper
Scleria triglomerata	Whip Nutrush	Orange
Scoparia dulcis	Licorice Weed	Orange
Scutellaria integrifolia	Helmet Flower	Orange
Scutellaria ovata	Heartleaf Skullcap	Orange
Sesbania herbacea	Bigpod Sesbania	Orange
Sideroxylon lanuginosum	Gum Bully	Orange
Sideroxylon lycioides	Buckthorn Bully	Orange
Sisyrinchium rosulatum	Annual Blue-eyed Grass	Orange
Solanum ptycanthum	West Indian Nightshade	Hardin
Solidago rugosa	Wrinkleleaf Goldenrod	Orange

Table B-2

Collected Voucher Specimens Within the Vegetation Mapping Analysis Program of the Beaumont Unit of the BTNP Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Scientific Name	Common Name	County
Sphenopholis obtusata	Prairie Wedgescale	Orange
Spiranthes odorata	Lady's Tresses	Orange
Steinchisma hians	Gaping Grass	Orange
Strophostyles umbellata	Pink Fuzzybean	Orange
Styrax americana	American Snowbell	Hardin
Symphyotrichum dumosum	Rice Button Aster	Orange
Symplocos tinctoria	Common Sweetleaf	Hardin
Teucrium canadense	Canada Germander	Hardin
Thalictrum dasycarpum	Purple Meadow-rue	Orange
Tillandsia usneoides	Spanish Moss	Hardin
Tragia urens	Wavyleaf Noseburn	Hardin
Triadenum walteri	Greater Marsh St. Johnswort	Orange
Triadenum tubulosum	Lesser Marsh St. Johnswort	Hardin
Tridens strictus	Longspike Tridens	Orange
Trifolium incarnatum	Crimson Clover	Orange
Triodanis biflora	Small Venus' Looking-glass	Orange
Triticum aestivum	Common Wheat	Orange
Typha domingensis	Southern Cattail	Hardin
Typha latifolia	Broadleaf Cattail	Hardin
Utricularia gibba	Humped Bladderwort	Hardin
Vaccinium elliottii	Elliott's Blueberry	Orange
Vaccinium stamineum	Deerberry	Orange
Verbesina virginica	White Crownbeard	Orange
Vernonia gigantea	Giant Ironweed	Hardin/Orange
Viola lanceolata	Bog White Violet	Orange
Vitis aestivalis	Summer Grape	Hardin
Vitis cinerea	Graybark Grape	Orange
Vitis palmata	Catbird Grape	Orange
Vulpia octoflora	Sixweeks Fescue	Orange
Wahlenbergia marginata	Southern Rockbell	Orange
Wisteria frutescens	American Wisteria	Orange
Woodwardia virginica	Virginia Chainfern	Hardin

APPENDIX C

VEGETATION SAMPLE PLOT DATA LIST

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
008-328	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	224550.826	3973753.296
010-168	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	233001.147	3969916.915
013-326	Proposed: *Ilex vomitoria* Shrubland Alliance		234019.306	3986079.17
016-307	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	233518.219	3974650.83
016-321	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	233247.684	3975856.472
018-308	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	232489.68	3976658.599
019-172	*Triadica sebifera* Seasonally Flooded Forest Alliance		233409.946	3977315.436
020-309	*Triadica sebifera* Seasonally Flooded Forest Alliance		233586.271	3977788.535
020-320	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	232839.783	3977004.23
021-310	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	233638.372	3978609.732
021-318	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	233727.332	3980057.785
022-317	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	233702.056	3982075.686
025-273	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	233298.904	3984790.179
025-274	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	232861.477	3985137.506
026-162	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	232232.163	3985620.624
027-314	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	234543.175	3982846.979
028-283	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	235773.406	3985142.988
028-302	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	235494.031	3985388.658
029-272	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	235543.531	3984511.104
032-313	*Triadica sebifera* Forest Alliance		235618.776	3983525.293
034-315	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	235521.957	3981881.532
036-316	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	234470.254	3981505.887
037-270	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	235087.368	3979805.851
038-269	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	234382.858	3979411.473
040-271	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	234322.073	3980539.351
040-275	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		235545.553	3980561.001
041-268	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	235347.053	3977500.1
043-267	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	235047.082	3976957.753
045-266	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	234363.524	3975681.297
046-244	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	235072.786	3975326.258

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
046-248	*Triadica sebifera* Seasonally Flooded Forest Alliance		234320.046	3975057.891
047-265	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	234215.678	3974878.318
047-277	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	233829.991	3973723.977
048-213	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	235004.069	3974091.588
049-242	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	234001.634	3973499.993
049-243	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	234274.304	3972727.471
050-249	Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance		233991.323	3972183.103
050-360	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	233883.825	3972147.985
053-356	Proposed: Mixed Herbaceous Forest Alliance		233332.959	3968268.921
055-104	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	233389.395	3969170.159
057-357	Proposed: Mixed Herbaceous Forest Alliance		233503.436	3971385.303
058-102	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	233579.226	3972500.206
059-358	Proposed: Mixed Herbaceous Forest Alliance		233614.197	3973244.014
066-105	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	233840.38	3977485.244
068-103	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	233885.601	3978288.275
069-359	Proposed: Mixed Herbaceous Forest Alliance		234036.975	3980621.944
073-106	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		234287.092	3984673.771
076-170	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	228172.605	3967031.599
080-278	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	225336.63	3964094.375
081-305	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	228178.27	3964286.002
084-143	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica Forest*	227627.338	3961296.106
092-164	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	225548.386	3962219.801
093-144	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica Forest*	226205.847	3964382.196
095-146	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	230531.983	3967110.272

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
1001-059	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	251987.329	3960021.519
1005-078	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	256904.092	3962163.396
1013-077	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	259663.914	3961995.778
1015-093	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		257924.385	3962824.796
1020-084	*Triadica sebifera* Seasonally Flooded Forest Alliance		259068.468	3963107.797
1021-086	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	260732.289	3963377.997
102-145	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	229213.46	3968972
1023 1001	*Cynodon dactylon* Herbaceous Alliance		263744.545	3962007.51
1023 1002	*Panicum virgatum Temporarily* Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	264234.121	3961582.461
1029-079	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	261732.672	3963811.379
1032-098	*Triadica sebifera* Seasonally Flooded Forest Alliance		264743.191	3962454.534
1043-103	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	264306.42	3960298.07
1047-044	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	265322.284	3967980.646
1051-080	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	264845.241	3964788.78
1055-095	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	266598.798	3964679.737
1057-075	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	268204.061	3966088.188
1065-1003	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	272328.847	3965909.425
1074-074	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	270944.363	3966467.128
1077-096	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	269970.032	3967735.017

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
108-254	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	231242.154	3980280.034
1086-097	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		273267.538	3962523.699
1093-073	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	274406.805	3963670.58
1094-102	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	275878.769	3963212.171
1098-049	*Triadica sebifera* Forest Alliance		276479.468	3962451.273
1099-049	*Triadica sebifera* Seasonally Flooded Forest Alliance		275516.168	3963787.423
111-114	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	224931.03	3974904.334
112-221	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	224867.428	3974063.844
1123-045	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	266578.648	3958099.545
1124-046	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	267922.541	3954479.078
1125-001	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	266117.825	3954136.843
1129-003	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	269664.898	3955860.569
1129-024	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	270124.458	3955780.801
1130-004	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	268889.338	3957778.102
1132-057	*Triadica sebifera* Forest Alliance		267622.726	3957987.659
1135-047	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	270825.083	3953364.028
1138-100	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	269449.722	3953147.689
1142-101	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		268791.854	3954937.985
1144-099	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	265598.747	3954964.69
1145-002	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	266986.629	3954321.366
1146-055	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	269279.395	3954239.041
1152-018	*Triadica sebifera* Seasonally Flooded Forest Alliance		266618.422	3959644.306
1164-056	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	269241.807	3955815.465

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
117-257	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	226724.832	3972746.726
1180-054	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	268342.515	3952138.443
1185-092	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	268545.513	3950128.454
1186-052	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	268535.184	3949265.972
1188-072	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	269301.381	3949865.287
1192-081	*Triadica sebifera* Seasonally Flooded Forest Alliance		242459.926	3933554.929
1193-035	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	242019.829	3933425.778
1199-053	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	263483.382	3960142.027
120 223	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	227421.726	3972653.708
1205-076	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	265144.791	3961058.954
1210-008	*Paspalum notatum* Herbaceous Alliance		258889.223	3964403.917
1211-016	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	259801.929	3964045.049
1212-006	*Paspalum notatum* Herbaceous Alliance		259677.764	3964207.971
1212-025	*Paspalum notatum* Herbaceous Alliance		262322.144	3964097.635
1213-007	*Paspalum notatum* Herbaceous Alliance		262428.453	3964550.368
1214-009	Proposed: Mixed Herbaceous Forest Alliance		263315.32	3968147.619
1214-026	Proposed: Mixed Herbaceous Forest Alliance		262013.227	3967427.518
1217-014	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	258645.309	3964892.114
1218-019	*Triadica sebifera* Seasonally Flooded Forest Alliance		258074.387	3964655.638
1219-085	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	258936.884	3965629.119
122 108	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	227730.252	3972719.92
1220-020	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	257068.51	3963865.872

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
122-107	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	227534.475	3975304.46
122-110	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		226886.505	3975374.318
1224-010	*Triadica sebifera* Seasonally Flooded Forest Alliance		260513.031	3963805.424
1229-011	*Triadica sebifera* Seasonally Flooded Forest Alliance		263478.285	3964827.721
1230-012	*Triadica sebifera* Seasonally Flooded Forest Alliance		263892.196	3963672.992
1231-013	*Triadica sebifera* Seasonally Flooded Forest Alliance		264353.201	3966800.601
123-219	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	223794.567	3977217.026
1235-087	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	263829.927	3964564.257
1236-005	*Paspalum notatum* Herbaceous Alliance		264116.765	3966263.695
1246-40	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	260720.784	3966146.879
1247-51	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	261699.238	3966546.614
1249-022	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		260301.74	3967787.787
1250-023	*Cynodon dactylon* Herbaceous Alliance		262277.407	3968645.24
125-113	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	225346.637	3978436.574
1253-041	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	260761.989	3967653.957
1253-048	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	262290.112	3969040.166
1254-043	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	262954.039	3968481.158
1256-042	*Paspalum notatum* Herbaceous Alliance		263236.863	3967621.089
1259 1000	*Paspalum notatum* Herbaceous Alliance		254526.477	3962812.066
1261-058	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	255030.096	3963137.608
1263-070	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	243499.118	3944199.106
1268-015	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	260108.43	3964727
1269-050	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum Forest*	262983.253	3963547.705
1300-01	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	245890.091	3957830.959
130-127	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	226829.14	3980037.798

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Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
1308-02	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	247998.683	3956531.423
1311-003	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	248759.306	3956869.538
131-156	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	228096.195	3979433.379
1315-18	*Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance	*Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest	248832.706	3958074.786
1317-08	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	250628.891	3958604.038
1318-17	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	246560.162	3957882.188
1322-04	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	250630.416	3956056.595
1322-05	Proposed: Mixed Herbaceous Forest Alliance		253443.64	3955521.115
1322-06	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	254763.598	3956217.865
1325-09	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	251571.609	3957110.45
1329-10	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	253515.956	3956842.477
1332-012	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	256100.33	3961477.495
1333-19	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	251692.508	3957613.405
1343-16	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	256206.93	3957847.257
1344-13	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	258417.217	3959130.485
1346-22	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	257489.919	3958418.212
1349-07	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	258055.078	3958233.503
135-173	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	232354.807	3965645.336
1352-14	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	258507.351	3957975.516

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Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
1353-15	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	255389.174	3956228.575
1362-020	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	257882.323	3960874.613
1368-011	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	256341.719	3959478.395
1387-21	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	254736.141	3957874.384
152-355	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		233738.788	3964948.924
158-211	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	234701.994	3965250.494
167-100	Proposed: Mixed Herbaceous Forest Alliance		233706.789	3965093.905
167-101	*Arundinaria gigantea* Temporarily Flooded Shrubland Alliance		233125.821	3965140.477
176-239	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	234118.671	3963361.966
176-245	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	233968.089	3963886.985
181-304	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	235142.156	3962083.569
184-250	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	236105.774	3961843.472
186-238	*Triadica sebifera* Seasonally Flooded Forest Alliance		235772.9	3962243.679
186-246	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica Forest*	235090.659	3963356.979
186-251	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	235119.076	3962511.943
187-237	*Triadica sebifera* Seasonally Flooded Forest Alliance		235743.546	3961272.804
191-306	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	235510.514	3959697.935
194-236	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	235724.028	3959871.085
194-252	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	235501.926	3959230.729

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Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
195-303	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	236095.562	3958801.861
202-198	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	236210.867	3955723.51
211-230	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	237080.215	3952660.169
213-227	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	238034.682	3952501.413
215-289	*Triadica sebifera* Seasonally Flooded Forest Alliance		236918.075	3950516.447
216-290	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	237098.388	3950108.114
216-300	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	236870.726	3950831.788
217-260	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	242688.634	3953588.309
221-258	*Triadica sebifera* Seasonally Flooded Forest Alliance		241636.809	3951010.86
221-259	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	242312.026	3951608.678
222-261	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	243141.464	3953136.024
227-280	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	241850.227	3953578.791
229-255	*Triadica sebifera* Seasonally Flooded Forest Alliance		241833.005	3952514.303
237-197	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	240367.712	3949391.798
242-193	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240810.77	3965443.694
245-234	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240980.061	3965389.943
245-235	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	240020.804	3965227.228
252-206	*Triadica sebifera* Seasonally Flooded Forest Alliance		243766.382	3965339.882
259-180	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	245076.866	3967735.725
265-286	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	246672.584	3971426.178

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
265-298	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	247013.973	3971322.688
272-142	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	246278.224	3969970.047
273-253	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	247975.91	3969072.252
277-284	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	249153.374	3973240.981
277-285	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	249016.725	3972246.155
277-299	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda - Quercus* spp. Forest	249484.142	3973707.295
280-137	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	247692.584	3972761.632
283-138	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	249923.856	3971131.347
291-352	*Triadica sebifera* Forest Alliance		252071.449	3969582.906
293-181	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	251197.896	3969968.943
304-182	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	252783.76	3969187.83
307-346	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	252769.066	3968087.554
311-139	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	252971.488	3971233.755
311-140	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	254361.063	3968728.359
312-141	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	255368.654	3967393.396
321-200	*Fraxinus caroliniana* Seasonally Flooded Forest Alliance		254145.401	3970610.986
328-199	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	254350.78	3966853.093
348-224	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	237170.143	3954899.812

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
350-226	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	237653.86	3956363.4
364-194	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	239396.662	3956564.881
368-208	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	240303.279	3953409.467
373-228	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	238019.384	3960306.303
377-207	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	237813.66	3961212.356
379-196	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	238388.442	3959217.703
381-353	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	238298.55	3958038.74
387-338	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	241465.78	3955563.809
387-361	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	241828.217	3955222.802
393-229	*Triadica sebifera* Seasonally Flooded Forest Alliance		243663.701	3957046.871
394-225	*Triadica sebifera* Seasonally Flooded Forest Alliance		239828.265	3958100.521
398-337	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	242242.94	3956515.883
400-231	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240860.048	3957400.22
412-195	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	242325.664	3955515.109
414-351	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	243039.591	3958468.098
456-192	*Triadica sebifera* Seasonally Flooded Forest Alliance		240268.195	3963746.675
461-203	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	240126.114	3962549.992
480-210	*Triadica sebifera* Seasonally Flooded Forest Alliance		236304.408	3964480.997
492-202	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	242964.335	3962148.821

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
507-205	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	242903.906	3964602.417
515-204	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	243864.457	3963628.54
518-201	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	243911.937	3962241.896
526 349	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	244959.116	3960100.871
536-339	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	244411.796	3958227.718
543 350	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	245851.874	3959991.936
548-340	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	248998.57	3959600.556
551-336	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	246730.088	3962488.073
566-209	*Triadica sebifer* a Seasonally Flooded Forest Alliance		245599.113	3968143.621
573-329	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	251233.516	3968031.82
574-335	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	248424.802	3966523.219
575-348	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	246503.128	3964855.798
578-347	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	249243.753	3969712.198
591-345	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	252503.203	3966886.807
602-331	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	253038.296	3963052.653
607-341	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	251541.806	3960923.194
615-332	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	250286.474	3963128.368

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
617-333	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	249560.162	3962171.432
620-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis Temporarily Flooded Forest*	248137.206	3962326.626
626-330	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	251320.158	3964800.975
629-343	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	250313.887	3965739.295
631-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	251168.961	3967321.472
635-342	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	248466.21	3965250.032
662 186	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	245083.921	3958788.092
662-174	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest*	237047.474	3962631.91
662-175	*Triadica sebifera* Seasonally Flooded Forest Alliance		241202.653	3961453.692
662-176	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	242405.443	3960055.212
662-177	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans Forest*	247507.498	3960190.942
662-178	*Triadica sebifera* Seasonally Flooded Forest Alliance		247875.064	3964603.635
662-179	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans Forest*	248943.525	3967967.063
662-183	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	251906.313	3965473.695
662-184	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	253335.021	3964422.335
662-185	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	245065.839	3962682.775

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
662-187	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	*Proposed: Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans Forest*	250418.416	3963731.587
662-188	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	248480.531	3970042.49
662-189	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest*	238699.982	3961568.879
662-190	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	239345.457	3959973.664
662-191	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	240498.157	3959332.485
676-136	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	217139.512	3978818.973
680-123	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		216714.087	3978296.318
681-134	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	218596.531	3981068.673
682-132	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	219184.488	3980931.615
684-327	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	219493.135	3983724.864
688-165	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	219990.979	3984329.132
690-218	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	218602.134	3981534.78
698-120	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	221298.393	3982048.81
699-217	*Triadica sebifera* Seasonally Flooded Forest Alliance		220356.701	3978177.152
702-121	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		219377.887	3979169.205
702-133	*Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance	*Sagittaria lancifolia* Herbaceous Vegetation	218557.424	3979774.544
704-135	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	222667.632	3978213.358
705-118	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	220848.082	3979657.499
705-119	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	221927.138	3980449.048

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
705-122	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		217809.533	3979963.292
705-124	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	222685.371	3981660.339
708-129	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		223781.579	3980626.809
709-131	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	224464.284	3982317.525
711-128	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		225946.427	3980453.076
713-117	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	223349.416	3979490.3
714-130	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	223950.261	3979573.075
715-232	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	223337.282	3978817.242
720-155	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	227253.913	3979121.285
721-111	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		225834.002	3976921.896
721-112	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	227921.453	3978011.064
722-154	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	224660.38	3977470.131
724-220	*Triadica sebifera* Seasonally Flooded Forest Alliance		224372.592	3976114.559
726-233	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	222585.049	3985598.655
728-292	Proposed: *Ilex vomitoria* Shrubland Alliance		225843.816	3986273.637
728-293	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	224565.897	3986221.5
728-294	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	223431.828	3985977.56
728-295	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	222984.435	3985175.139
728-297	Proposed: *Ilex vomitoria* Shrubland Alliance		223423.497	3984692.901
728-301	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	224652.406	3985484.781
730-296	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	223933.82	3985210.016
732-291	Proposed: *Ilex vomitoria* Shrubland Alliance		223946.042	3988448.517

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
736-169	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	226073.562	3988100.372
738-152	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	224328.868	3987662.059
739-153	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	223626.737	3983053.891
743-214	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	226798.806	3981617.994
743-215	*Triadica sebifera* Seasonally Flooded Forest Alliance		223177.664	3980645.307
743-216	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	222414.465	3978890.002
746-324	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	230002.731	3986610.026
748-322	Proposed: *Ilex vomitoria* Shrubland Alliance		230347.019	3986411.605
749-325	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	233786.89	3982843.982
751-319	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	233557.933	3983406.278
752-150	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	230574.153	3983201.982
753-151	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	227894.886	3985987.486
754-171	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	230566.262	3978958.373
758-157	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	229413.725	3978539.696
764-149	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	232418.69	3981486.371
770-125	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	231166.769	3979836.613
770-126	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	230868.295	3981403.201
777-158	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	228620.997	3976962.546
786-160	*Triadica sebifera* Seasonally Flooded Forest Alliance		232164.554	3971634.681
790-159	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	232534.732	3973012.299
792-147	*Taxodium distichum* Tidal Woodland Alliance	*Proposed: Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	229634.995	3972508.272

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
797-167	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	233313.064	3970654.635
805-148	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	230579.131	3977000.093
805-161	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	232065.23	3968677.12
805-163	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	230058.62	3970524.66
806 166	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	227160.459	3972567.743
807-109	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	226256.494	3974607.666
807-115	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	226083.208	3975292.126
807-116	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	226450.977	3973642.03
808-222	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	228789.914	3971781.019
809-256	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	225575.892	3973336.789
811-212	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	233795.103	3968186.341
812 263	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	233904.236	3970844.823
812-262	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	234391.547	3968383.464
812-264	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	235005.294	3972520.331
812-276	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	234750.946	3973648.735
813-240	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	234587.438	3967808.369
813-241	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	233698.065	3969463.549
813-247	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	234488.978	3967105.916
813-323	*Triadica sebifera* Seasonally Flooded Forest Alliance		233636.679	3968826.745
817-311	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	234471.203	3984134.386
818-312	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	234555.733	3984054.059
825-287	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	235798.454	3953134.605
825-288	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	236307.242	3952444.286

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
829-281	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	239705.77	3952183.368
832-282	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	238184.64	3951835.609
833-354	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	241736.087	3953983.09
834-279	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	242511.996	3954997.333
900-027	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	243741.517	3952665.519
905-083	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	242365.37	3950243.142
906-028	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda - Quercus* spp. Forest	242293.637	3949884.306
911-029	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	242112.641	3948473.638
919-089	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum Forest*	242329.018	3946084.197
920-062	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	237545.542	3949365.811
929-030	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	237841.572	3947305.504
930-063	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	239232.301	3947689.531
937-082	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	242336.314	3945252.123
943-064	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240518.48	3942290.889
947-031	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	242110.95	3941495.13
949-039	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	240719.681	3942442.01
950-065	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda - Quercus* spp. Forest	240637.349	3940847.796
953-021	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	240737.482	3939475.937
954-032	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda - Quercus* spp. Forest	240136.41	3939731.109
955-066	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	241007.762	3939477.055

Table C Vegetation Sample Plot Data List

Plot ID	Alliance	Association	State Pane TX (South Central) NAD27	
			Northing	Easting
958-091	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	240995.19	3940211.6
959-017	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	242381.1	3936394.35
961-033	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum Forest*	241362.94	3937369.12
962-067	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	241747.99	3938124.93
963-036	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	242891.514	3936879.225
968-090	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	242226.178	3937607.111
973-034	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		242835.42	3935957.33
975-068	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum Forest*	241488.687	3935144.402
977-069	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	242665.166	3935644.42
978-037	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	254769.336	3965006.654
981-071	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	255598.734	3966434.618
982-038	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	255834.27	3967298.908
990-061	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	254265.122	3963635.528
993-088	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	253568.685	3961268.413
995-060	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	253614.181	3962077.204

APPENDIX D

ADDITIONAL DATA TABLES

Table D-1

Alliance and Association Identified in Beaumont Unit and Adjacent Lands, BTNP, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Alliances	Component Associations	Vegetation Hierarchy	Unique Identifier
Evergreen Forest			
Pinus taeda Forest Alliance		I.A.8.N.b	A.130
	Proposed: *Pinus taeda* Forest	I.A.8.N.b	
	Proposed: *Pinus taeda* Temporarily Flooded Forest	I.A.8.N.b	
Deciduous Forest			
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest		I.B.2.N.e	A. 316
	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	I.B.2.N.e	
Betula nigra - (*Platanus occidentalis*) Temporarily Flooded Forest Alliance		I.B.2.N.d	A.280
	Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica Forest	1.B.3.Na	CEGL007312
Fraxinus caroliniana Seasonally Flooded Forest Alliance		I.B.2.N.e	A.344
Liquidambar styraciflua Forest Alliance		I.B.2.N.a	A.234
	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	I.B.2.N.a	
	Proposed: *Liquidambar styraciflua* Forest	I.B.2.N.a	
Nyssa aquatica - (*Taxodium distichum*) Semipermanently Flooded Forest Alliance		I.B.2.N.f	A.345
	Nyssa aquatica Forest	1.B.3.Nb	CEGL002419
	Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest	1.B.3.Nb	CEGL007431
	Taxodium distichum - (*Nyssa aquatica*) / *Forestiera acuminata - Planera aquatica* Forest	1.B.3.Nb	CEGL002421

Table D-1

Alliance and Association Identified in Beaumont Unit and Adjacent Lands, BTNP, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Alliances	Component Associations	Vegetation Hierarchy	Unique Identifier
Platanus occidentalis- (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance		I.B.2.N.d	A.288
Quercus (michauxii, pagoda, shumardii)- Liquidambar styraciflua Temporarily Flooded Forest Alliance		I.B.2.N.d	A.291
	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	I.B.2.N.d	
Quercus (*phellos, laurifolia*) Seasonally Flooded Forest Alliance		I.B.2.N.e	A.327
	Quercus laurifolia - Quercus (*lyrata, phellos*) - *Nyssa biflora* West Gulf Floodplain Forest	1.B.3.N.b	CEGL003854
Quercus (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance		I.B.2.N.d	A.292
	Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachia radicans Forest	1.B.3.N.b	CEGL007370
	Quercus nigra - Liquidambar styraciflua - (*Pinus taeda*) / *Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	1.B.3.Nb	CEGL007984
Quercus alba - (*Quercus nigra*) Forest Alliance		I.B.2.N.a	A.238
	Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium Forest	1.B.1.N.a	CEGL007959
Quercus lyrata - (*Carya aquatica*) Seasonally Flooded Forest Alliance		I.B.2.N.e	A.328
	Quercus Lyrata – Carya aquatica Forest	1.B.3.N.b	CEGL007397

Table D-1

Alliance and Association Identified in Beaumont Unit and Adjacent Lands, BTNP, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Alliances	Component Associations	Vegetation Hierarchy	Unique Identifier
Quercus nigra Forest Alliance		I.B.2.N.a	A.247
	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	I.B.2.N.a	
Taxodium distichum - Nyssa (*aquatica, biflora, ogeche*) Seasonally Flooded Forest Alliance		I.B.2.N.e	A.337
	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	I.B.2.N.e	
Taxodium distichum Semipermanently Flooded Forest Alliance		I.B.2.N.f	A.234
	Taxodium distichum / Lemna minor Forest	1.B.3.N.b	CEGL002420
Triadica sebifera Forest Alliance		I.B.2.N.a	A.257
Triadica sebifera Seasonally Flooded Forest Alliance		I.B.2.N.a	A.335
Forested Mixed Evergreen and Deciduous			
Pinus taeda - Quercus (*phellos, nigra, laurifolia*) Temporarily Flooded Forest Alliance		I.C.3.N.b	A.437
Pinus taeda - Quercus (*alba, falcata, stellata*) Forest Alliance		I.C.3.N.a	A.404
	Proposed: *Pinus taeda – Quercus spp.* Forest	I.C.3.N.a	
Ilex opaca - Carpinus caroliniana Forest Alliance		I.C.3.N.a	
	Proposed: Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica Forest	I.C.3.N.a	
Woodland Deciduous			
Taxodium distichum Tidal Woodland Alliance		II.B.2.N.f	A.659
	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	II.B.2.N.f	

Table D-1

Alliance and Association Identified in Beaumont Unit and Adjacent Lands, BTNP, Hardin, Jasper, Jefferson, and Orange Counties, Texas, April-June 2011

Alliances	Component Associations	Vegetation Hierarchy	Unique Identifier
Shrubland Evergreen			
Arundinaria gigantea Temporarily Flooded Shrubland Alliance		III.A.2.N.g	A.795
Shrubland Deciduous			
Cephalanthus occidentalis Semipermanently Flooded Shrubland Alliance		III.B.2.N.f	A.1011
	Cephalanthus occidentalis / Carex spp. - Lemna spp. Southern Shrubland	2.B.6.Na	CEGL002191
Proposed: *Ilex vomitoria* Shrubland Alliance		III.C.3.N.a	
Herbaceous Perennial Grasslands			
Cynodon dactylon Herbaceous Alliance		V.A.5.N.c	A.1279
Panicum virgatum Temporarily Flooded Herbaceous Alliance		V.A.5.N.c	A.1343
	Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides Herbaceous Vegetation	V.A.5.N.c	CEGL004921
Paspalum notatum Herbaceous Alliance		V.A.5.N.c	A.1219
Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance			
Zizaniopsis miliacea Tidal Herbaceous Alliance		V.A.5.N.n	A.1485
	Zizaniopsis miliacea Tidal Herbaceous Vegetation	2.B.6.N.a	CEGL004705
Herbaceous Perennial Forbs			
Alternanthera philoxeroides Semipermanently Flooded Herbaceous Alliance		V.B.2.N.e	A.2015
Sagittaria lancifolia Semipermanently Flooded Herbaceous Alliance		V.B.1.N.c	A.1588
	Sagittaria lancifolia Herbaceous Vegetation	2.A.5.Ea	CEGL004262
Proposed: Mixed Herbaceous Alliance			
Proposed: Mixed Herbaceous Temporarily Flooded Alliance			

Appendix D-2A

Vegetation Sample Plots with Percentage of *Triadica sebifera*

Summary of Plot Totals

Alliance Totals	# of Plots w/*Triadica sebifera*	# of Plots in Alliance	% of plots with *Triadica sebifera*
Acer rubrum - Fraxinus pennsylvanica Seasonally Flooded Forest Alliance	12	13	92.00%
Alternanthera philoxeroides Semipermanently flooded herbaceous Alliance	0	8	0%
Arundinaria gigantea Temporarily Flooded Shrubland Alliance	0	0	0%
Betula nigra - (Platanus occidentalis) Temporarily Flooded Forest Alliance	0	1	0%
Cephalanthus occidentalis Semipermanently Flooded Forest Alliance	2	2	100%
Cynodon dactylon Herbaceous Alliance	0	2	0%
Fraxinus caroliniana Seasonally Flooded Forest Alliance	1	1	100%
Proposed: *Ilex vomitoria* Shrubland Alliance	2	5	40%
Ilex opaca - Carpinus caroliniana Forest Alliance	8	12	67%
Liquidambar styraciflua Forest Alliance	6	8	75%
Liquidambar styraciflua Temporarily Flooded Forest Alliance	34	43	79%
Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	31	58	53%
Panicum virgatum Temporarily Flooded Herbaceous Alliance	0	2	0%
Paspalum notatum Herbaceous Alliance	1	7	14%
Pinus taeda - Quercus (alba falcata stellata) Forest Alliance	3	6	50%
Pinus taeda - Quercus (phellos nigra laurifolia) Temporarily Flooded Forest Alliance	3	3	100%
Pinus taeda Alliance	41	65	63%
Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance	4	4	100%
Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	18	22	82%
Quercus alba (Quercus nigra) Forest Alliance	0	3	0%
Quercus lyrata- (Carya aquatica) Seasonally Flooded Forest Alliance	4	4	100%
Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua Temporarily Flooded Forest Alliance	6	9	66%
Quercus nigra Forest Alliance	2	4	50%
Quercus (phellos, laurifolia) Seasonally Flooded Forest Alliance	13	14	93%
Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance	1	1	100%
Sagittaria lancifolia Semipermanently Flooded Herbaceous Alliance	0	1	0%
Taxodium distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest Alliance	3	3	100%
Taxodium distichum Semipermanently Flooded Forest Alliance	12	16	75%
Taxodium distichum Tidal Woodlands Alliance	2	12	17%
Triadica sebifera Forest Alliance	4	4	100%
Triadica sebifera Seasonally Flooded Forest Alliance	31	31	100%
Proposed: Mixed Herbaceous Alliance	1	8	13%
Proposed: Mixed Herbaceous Temporarily Flooded Alliance	0	2	0%
Zizaniopsis miliacea Tidal Herbaceous Alliance	0	17%	0%
Overall	245	391	63%

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
195-303	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	12462	71.47	3.85	38.35	109.82	54.91
280-137	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	120	2.73	1.18	2.81	5.54	2.77
293-181	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	880	35.48	1.34	7.5	42.98	21.49
364-194	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	280	12.5	4.04	41.25	53.75	26.88
368-208	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	160	5.8	5.58	23.63	29.43	14.72
412-195	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	1680	56	0.78	2.84	58.84	29.42
507-205	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	2880	59.02	2.66	17.74	76.75	38.38
518-201	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	880	8.03	7.67	32.13	40.16	20.08
536-339	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
662-177	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	120	6.82	0.1	0.63	7.45	3.72
662-179	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	2640	40.74	1.68	7.67	48.41	24.21
662-184	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	5040	28.38	2.37	8.79	37.17	18.58
662-187	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	4280	35.2	0.37	1.54	36.74	18.37
122-110	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
680-123	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
702-121	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
705-122	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
708-129	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
711-128	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
721-111	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
167-101	*Arundinaria gigantea* Temporarily Flooded Shrubland Alliance		0	0	0	0	0	0
1315-18	*Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance	*Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest	0	0	0	0	0	0
749-325	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	1640	52.56	0.15	12.28	64.84	32.42
953-021	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	440	14.67	1.68	59.47	74.14	37.07
1023 1001	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
1250-023	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
321-200	*Fraxinus caroliniana* Seasonally Flooded Forest Alliance		8.33	4959.9999	27.07	3.4722	10.68	46.08
013-362	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
728-292	Proposed: *Ilex vomitoria* Shrubland Alliance		120	2.7	0.15	1.61	4.31	2.16
728-297	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
732-291	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
748-322	Proposed: *Ilex vomitoria* Shrubland Alliance		120	1.24	0.4	3.01	4.25	2.13
548-340	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	7680	43.54	1.01	11.07	54.6	27.3
574-335	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
615-332	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	40	2.44	0.75	3.65	6.09	3.04
617-333	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	1200	8.17	0.08	0.43	8.6	4.3
626-330	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	5640	26.21	0.38	1.05	27.26	13.63
662-185	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	800	20.62	0.02	0.28	20.9	10.45
990-061	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	120	2.31	0.18	0.62	2.93	1.46
1001-059	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1074-074	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	1120	13.53	2.33	15.56	29.09	14.54
1138-100	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1188-072	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1199-053	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	240	14.29	3.77	14.54	28.83	14.41
008-328	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
010-168	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	120	9.37	0.21	0.57	9.95	4.97
027-314	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	66920	95.38	5	24.22	119.6	59.8

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
135-173	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
328-199	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	12200	55.25	4.44	14.67	69.93	34.96
381-353	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	2960	22.29	0.3	0.63	22.92	11.46
607-341	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
993-088	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	12560	57.83	0.44	1.32	59.14	29.57
076-170	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	2.17	0.13	0.64	2.82	1.41
158-211	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	3.85	5.62	12.31	16.16	8.08
181-304	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	880	10.48	0.22	0.51	10.99	5.49
211-230	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	2160	38.57	2.36	8.25	46.82	23.41
216-300	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1040	57.78	0.5	5.9	63.68	31.84
222-261	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
242-193	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	0.52	0.8	1.72	2.24	1.12
245-234	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1400	23.33	0.61	3.66	26.99	13.49
259-180	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	3.85	7.73	25.39	29.24	14.62
277-285	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
304-182	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	520	9.29	6.09	26.76	36.05	18.02
379-196	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
398-337	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	1.29	1.34	11.17	12.46	6.23

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
400-231	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1040	10.83	0.26	1.61	12.44	6.22
414-351	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	1.82	2.64	13.14	14.96	7.48
526 349	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
543 350	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1320	30	0.24	1.19	31.19	15.6
551-336	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
573-329	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
575-348	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	1.25	0.16	0.35	1.6	0.8
602-331	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240	1.39	1.2	2.68	4.07	2.03
635-342	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	840	12.28	0.04	0.12	12.4	6.2
662-188	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	160	4.04	3.92	8.66	12.7	6.35
726-233	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	5720	64.13	1.58	14.3	78.42	39.21
728-301	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	440	9.4	0.1	0.89	10.3	5.15
751-319	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
829-281	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
943-064	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	160	1.63	2.82	10.96	12.59	6.29
955-066	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	1.36	0.14	1.01	2.37	1.18
1029-079	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	440	10	1.26	4.78	14.78	7.39
1051-080	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	4.48	1.4	6.81	11.29	5.64

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1057-075	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	2.38	5.07	14.69	17.08	8.54
1077-096	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240	2.79	0.59	1.72	4.51	2.26
1093-073	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	440	10.48	0.05	0.14	10.62	5.31
1146-055	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	5760	38.2	2.14	3.25	41.45	20.72
1185-092	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	520	6.1	0.25	0.85	6.95	3.48
1186-052	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	2.3	0.01	0.02	2.33	1.16
1205-076	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1200	24.59	0.02	0.09	24.68	12.34
1263-070	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1317-08	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	3560	23.54	1.28	8.9	32.45	16.22
1343-16	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1080	36.99	0.35	1.04	38.03	19.01
1344-13	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	160	7.14	0.18	0.46	7.6	3.8
1368-011	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
026-162	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	120	4.55	1.81	3.42	7.96	3.98
084-143	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
093-144	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	40	16.67	0.25	0.54	17.21	8.61
095-146	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
112-221	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	120	7.89	13.54	70.11	78	39
122 108	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
131-156	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
176-239	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	800	33.9	2.67	6.99	40.89	20.44
184-250	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	80	4.55	0.34	0.51	5.06	2.53
186-246	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
186-251	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-236	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-252	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
245-235	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	560	10.29	1.19	1.76	12.06	6.03
272-142	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
273-253	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	1640	33.33	0.09	0.04	33.38	16.69

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
283-138	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
311-139	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	480	85.71	0.73	3.66	89.37	44.69
350-226	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
373-228	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	3760	66.67	4.1	6.92	73.58	36.79
377-207	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	40	1.23	0.05	0.12	1.35	0.68
662-174	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	240	17.65	2.09	2.55	20.19	10.1
662-176	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	280	9.72	2.26	2.01	11.74	5.87
662-183	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	2600	54.17	2.58	4.98	59.15	29.57
662-189	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-190	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	120	2.33	0.6	1.11	3.43	1.72
662-191	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	40	4	0.15	0.12	4.12	2.06
676-136	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	600	34.09	0.75	3.61	37.7	18.85

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
681-134	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	160	10.53	0.53	0.61	11.14	5.57
688-165	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0		0
690-218	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	80	6.25	0.18	0.25	6.5	3.25
698-120	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	40	2.7	0.03	0.15	2.86	1.43
705-124	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	200	21.74	0.61	5.65	27.38	13.69
736-169	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
738-152	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
743-214	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
743-216	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
746-324	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
752-150	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	1.3	0.28	0.99	2.29	1.14
753-151	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
764-149	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
770-126	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-148	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-161	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	200	3.03	0.94	1.29	4.32	2.16
805-163	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
806 166	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	320	11.76	1.06	2.19	13.95	6.98
807-109	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
807-115	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
808-222	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	1.25	0.15	0.22	1.47	0.73
813-247	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	80	2.86	0.19	0.37	3.23	1.61
937-082	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
958-091	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	160	16.67	0.2	0.74	17.4	8.7

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
959-017	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
968-090	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	2400	89.55	0.51	3.78	93.33	46.67
1219-085	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	520	34.21	0.2	0.19	34.4	17.2
1235-087	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1318-17	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1346-22	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1023 1002	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1065 1003	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1210-008	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-006	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-025	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1213-007	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1236-005	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1256-042	*Paspalum notatum* Herbaceous Alliance		40	1.89	0.49	23.65	25.53	12.77

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1259 1000	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
277-299	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
906-028	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
950-065	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
954-032	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
1123-045	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	40	0.36	0.96	2.2	2.56	1.28
1246-40	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	80	0.53	0.1	0.34	0.87	0.44
040-275	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		440	7.1	3.92	10.88	17.97	8.99
973-034	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		680	8.54	0.2	0.79	9.33	4.67
1249-022	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		200	4.1	1.42	7.82	11.92	5.96
016-307	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	1560	28.26	4.22	12.28	40.54	20.27
016-321	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	160	4.17	0.31	1.12	5.29	2.64
018-308	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	2280	28.22	6.97	25.32	53.54	26.77
020-320	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	600	30	9.56	29.63	59.63	29.82
021-310	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	560	17.72	2.1	8.29	26.01	13.01
021-318	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	600	10.79	5.25	13.95	24.74	12.37
022-317	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-273	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-274	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
028-283	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	600	11.28	5.32	18.38	29.66	14.83
029-272	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	640	12.31	1.01	3.54	15.84	7.92
034-315	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	120	2.59	0.2	0.55	3.14	1.57
036-316	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	720	24.32	6.09	20.57	44.89	22.45
038-269	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	0.57	0.01	0.02	0.59	0.29
040-271	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	600	7.94	1.89	4.79	12.73	6.36
041-268	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	3520	29.53	8.74	27.99	57.52	28.76
043-267	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
045-266	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	360	5.73	1.25	4.05	9.78	4.89
047-265	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	240	4.72	1.3	4.42	9.14	4.57
047-277	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	0.81	0.11	0.44	1.25	0.62
050-360	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	2760	19.77	3.08	14.74	34.51	17.26
081-305	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	3360	36.68	0.53	1.88	38.56	19.28
108-254	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	1.64	0.06	0.29	1.93	0.97
217-260	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
221-259	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
265-286	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
277-284	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
387-361	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-293	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-294	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
797-167	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	600	15.96	5	21.58	37.53	18.77
812 262	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	360	3.47	1.13	2.6	6.07	3.04
812-263	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	2080	35.14	4.24	13.2	48.33	24.17
812-264	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
812-276	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	1520	16.1	5.77	19.68	35.79	17.89
818-312	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	80	1.87	0.92	2.9	4.77	2.38
825-287	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
825-288	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	1.32	0.53	1.16	2.47	1.24
832-282	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
834-279	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
900-027	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
911-029	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
929-030	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
947-031	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	120	1.26	1.62	4.71	5.97	2.98
962-067	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
963-036	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
977-069	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1047-044	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1124-046	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	0.72	0.03	0.11	0.84	0.42
1125-001	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	80	1.14	2.46	7.93	9.07	4.53
1129-003	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	1.15	0.08	0.26	1.41	0.7
1129-024	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1135-047	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	0.56	0.05	0.24	0.8	0.4
1145-002	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	400	21.28	2.06	6.46	27.73	13.87
1164-056	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	120	3.41	0.94	4.51	7.92	3.96
1193-035	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1253-041	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	440	5.91	0.44	2.34	8.25	4.13
1253-048	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1254-043	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	320	3.85	3.88	11.78	15.63	7.81
1300-01	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1308-02	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	0.83	0.11	0.4	1.22	0.61
1322-06	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1349-07	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	160	3.2	2.75	8	11.2	5.6
1352-14	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1353-15	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	880	20.37	0.16	4.34	24.71	12.35
949-039	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		40	0.61	0.13	0.34	0.96	0.48
1015-093	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		280	3.32	2.61	17.09	20.41	10.2
1086-097	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		840	13.73	3.87	15.5	29.22	14.61
1142-101	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		520	20.97	0.95	4.87	25.83	12.92
028-302	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	200	4.07	0.82	3.59	7.66	3.83
191-306	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	440	11.96	0.04	0.13	12.08	6.04
202-198	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	440	7.38	0.03	0.07	7.45	3.73
227-280	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	80	1.06	1.01	3.21	4.26	2.13

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
348-224	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis Temporarily Flooded Forest*	240	1.79	1.06	7.41	9.2	4.6
387-338	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	10240	67.37	4.82	16.78	84.14	42.07
492-202	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	2040	23.08	0.15	0.3	23.38	11.69
620-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	40	4.35	0.08	0.23	4.58	2.29
629-343	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	840	9.95	0.05	0.11	10.06	5.03
631-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	1.39	1.45	8.44	9.83	4.92
728-295	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	400	3.5	0.13	0.58	4.08	2.04
754-171	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
811-212	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
817-311	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	1160	27.88	1.47	6.25	34.14	17.07
920-062	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	40	1.06	0.03	0.21	1.27	0.63
978-037	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	11600	64.59	0.25	1.16	65.75	32.87
981-071	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	160	6.35	2.19	8.62	14.97	7.48
1043-103	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	280	8.33	5.47	16.93	25.26	12.63
1220-020	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	2480	23.66	5.19	21.17	44.83	22.41
1311-003	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1322-04	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	80	1.74	0.33	1.19	2.93	1.46
1325-09	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
037-270	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
080-278	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1130-004	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1005-078	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	40	1.85	0.75	5.24	7.09	3.55
1055-095	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	200	11.11	3.45	17.33	28.44	14.22
1333-19	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	3200	76.19	0.87	4.9	81.09	40.54
1387-21	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	2840	57.72	0.51	1	58.72	29.36
265-298	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
591-345	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	120	1.91	0.27	0.9	2.81	1.41
982-038	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	2040	20.4	1.94	11.52	31.92	15.96
995-060	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	560	3.97	0.17	0.28	4.24	2.12
1013-077	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	1160	15.76	1.37	6.24	22	11
1180-054	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	400	7.35	0.07	0.39	7.74	3.87
1261-058	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	800	9.48	0.02	0.05	9.53	4.76

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1329-10	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1332-012	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
919-089	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	40	1.79	0.62	3.2	4.99	2.49
963-033	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
975-068	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
1269-050	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	160	4.21	0.51	4.64	8.85	4.42
048-213	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1400	19.66	0.55	1.93	21.59	10.8
216-290	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	40	8.33	0.11	0.35	8.69	4.34
237-197	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1920	29.63	0.83	8.24	37.87	18.93
307-346	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	80	1.65	6.53	32.07	33.72	16.86
312-141	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	80	2.7	3.62	11.27	13.97	6.99
461-203	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1920	16	0.51	1.41	17.41	8.7
515-204	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	840	19.44	0.09	0.27	19.71	9.86
578-347	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2520	23.86	0.25	1.45	25.31	12.66
662 186	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	5400	80.36	6.75	9.55	89.91	44.95

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
730-296	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	4760	43.59	5.31	29.77	73.36	36.68
930-063	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
1144-099	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2320	59.18	4.91	11.65	70.83	35.41
1247-51	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	4120	36.4	5.42	13.49	49.89	24.94
1362-020	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2320	41.43	1.01	5.28	46.71	23.36
050-249a	Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance		400	32.26	0.09	4.94	37.2	18.6
702-133	*Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance	*Sagittaria lancifolia* Herbaceous Vegetation	0	0	0	0	0	0
046-244	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	2280	31.49	2.26	3.1	34.59	17.29
049-243	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	520	6.63	0.29	0.55	7.18	3.59
311-140	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	1320	12.74	1.44	6.23	18.97	9.49
049-242	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
092-164	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
102-145	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	6600	72.69	5.74	46.09	118.78	59.39
130-127	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
176-245	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	560	35	2.43	9.88	44.88	22.44
213-227	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	24800	89.86	1.72	15.06	104.91	52.46

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
770-125	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
790-159	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1640	18.22	2.59	18.7	36.93	18.46
813-240	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
833-354	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
905-083	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	10200	74.13	2.47	16.9	91.03	45.51
1021-086	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1094-102	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1600	83.33	0.04	0.01	83.34	41.67
1211-016	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1200	14.78	0.02	0.41	15.19	7.6
1217-014	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	2600	67.71	9.7	39.25	106.96	53.48
1268-015	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1440	27.27	6.42	14.48	41.75	20.88
117-257	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
120 223	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	600	71.43	0.93	7	78.43	39.21
125-113	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
682-132	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0		0
684-327	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	40	5.56	0.04	0.19	5.75	2.87

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
705-118	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
713-117	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
714-130	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
715-232	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
722-154	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
792-147	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
813-241	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
032-313	*Triadica sebifera* Forest Alliance		600	19.74	4.42	23.13	42.87	21.43
291-352	*Triadica sebifera* Forest Alliance		360	10.59	11.82	46.07	56.66	28.33
1098-049	*Triadica sebifera* Forest Alliance		200	2.49	4.83	34.93	37.42	18.71
1132-057	*Triadica sebifera* Forest Alliance		440	3.67	5.17	25.86	29.53	14.76
019-172	*Triadica sebifera* Seasonally Flooded Forest Alliance		1960	75.38	10.62	68.44	143.83	71.91
020-309	*Triadica sebifera* Seasonally Flooded Forest Alliance		6320	85.41	7.56	44.32	129.73	64.86
046-248	*Triadica sebifera* Seasonally Flooded Forest Alliance		1640	46.59	4.41	13.74	60.33	30.17
186-238	*Triadica sebifera* Seasonally Flooded Forest Alliance		600	21.43	9.01	37.77	59.2	29.6
187-237	*Triadica sebifera* Seasonally Flooded Forest Alliance		720	34.62	13.66	36.67	71.28	35.64

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
215-289	*Triadica sebifera* Seasonally Flooded Forest Alliance		3200	88.89	5.45	20.72	109.61	54.8
221-258	*Triadica sebifera* Seasonally Flooded Forest Alliance		920	29.49	5.31	46.05	75.54	37.77
229-255	*Triadica sebifera* Seasonally Flooded Forest Alliance		1440	19.67	16.74	51.64	71.31	35.65
252-206	*Triadica sebifera* Seasonally Flooded Forest Alliance		13680	84.24	6.38	52.6	136.84	68.42
393-229	*Triadica sebifera* Seasonally Flooded Forest Alliance		7280	33.46	8.31	64.08	97.54	48.77
394-225	*Triadica sebifera* Seasonally Flooded Forest Alliance		1440	24	4.11	20.32	44.32	22.16
456-192	*Triadica sebifera* Seasonally Flooded Forest Alliance		4000	16.13	58.52	41.84	57.97	28.98
480-210	*Triadica sebifera* Seasonally Flooded Forest Alliance		1240	19.14	6.78	70.71	89.85	44.92
566-209	*Triadica sebifera* Seasonally Flooded Forest Alliance		240	3.82	6.78	40.66	44.49	22.24
662-175	*Triadica sebifera* Seasonally Flooded Forest Alliance		2080	48.6	7.36	33.86	82.46	41.23
662-178	*Triadica sebifera* Seasonally Flooded Forest Alliance		1920	13.22	8.22	45.13	58.35	29.18
699-217	*Triadica sebifera* Seasonally Flooded Forest Alliance		1600	43.48	10	61.35	104.83	52.41
724-220	*Triadica sebifera* Seasonally Flooded Forest Alliance		2040	53.68	7.69	57.06	110.75	55.37
743-215	*Triadica sebifera* Seasonally Flooded Forest Alliance		1920	41.74	16.34	73.51	115.25	57.62
786-160	*Triadica sebifera* Seasonally Flooded Forest Alliance		1280	35.56	8.69	49.2	84.75	42.38
813-323	*Triadica sebifera* Seasonally Flooded Forest Alliance		16080	95.04	158.59	95.36	190.4	95.2
1020-084	*Triadica sebifera* Seasonally Flooded Forest Alliance		5240	49.81	17.09	69.42	119.23	59.61
1032-098	*Triadica sebifera* Seasonally Flooded Forest Alliance		200	100	7.43	100	200	100

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1099-049	*Triadica sebifera* Seasonally Flooded Forest Alliance		3880	61.78	13.13	50.01	111.8	55.9
1152-018	*Triadica sebifera* Seasonally Flooded Forest Alliance		520	10.16	6.27	36.04	46.2	23.1
1192-081	*Triadica sebifera* Seasonally Flooded Forest Alliance		80	3.08	75.18	86.68	89.76	44.88
1218-019	*Triadica sebifera* Seasonally Flooded Forest Alliance		3800	74.22	17.28	88.63	162.85	81.43
1224-010	*Triadica sebifera* Seasonally Flooded Forest Alliance		2400	20.98	5.01	35.49	56.47	28.23
1229-011	*Triadica sebifera* Seasonally Flooded Forest Alliance		3480	31.41	9.83	74.72	106.12	53.06
1230-012	*Triadica sebifera* Seasonally Flooded Forest Alliance		1640	45.05	10.7	37.24	82.29	41.15
1231-013	*Triadica sebifera* Seasonally Flooded Forest Alliance		1960	41.88	5.61	33.03	74.91	37.45
053-356	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
057-357	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
059-358	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
069-359	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
167-100	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1214-009	Proposed: Mixed Herbaceous Alliance		440	5.76	0.05	0.64	6.4	3.2
1214-026	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1322-05	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
073-106	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
152-355	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
055-104	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
058-102	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
066-105	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
068-103	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2B

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Overall Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
111-114	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
122-107	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
123-219	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
704-135	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
705-119	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
709-131	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
720-155	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
721-112	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
739-153	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
758-157	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
777-158	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
807-116	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
809-256	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area
Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
195-303	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	102.5641	16.67	7.03	28.72	45.38	22.69
293-181	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	40	9.09	1.26	8.27	17.36	8.68
364-194	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	120	60	2.75	61.04	121.04	60.52
368-208	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	120	50	5.2	26.01	76.01	38.01
412-195	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	40	12.5	0.62	2.38	14.88	7.44
518-201	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	600	32.61	3.26	51.57	84.18	42.09
662-177	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
662-179	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
662-184	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	40	12.5	1.59	6.88	19.38	9.69

Table D-2C
Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area
Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
662-187	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
280-137	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	40	6.25	0.91	2.68	8.93	4.46
507-205	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	80	33.33	2.58	24.77	58.1	29.05
536-339	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	0	0	0	0	0	0
122-110	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
680-123	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
702-121	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
705-122	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
708-129	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
711-128	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
721-111	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
167-101	*Arundinaria gigantea* Temporarily Flooded Shrubland Alliance		0	0	0	0	0	0
1315-18	*Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance	*Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest	0	0	0	0	0	0
749-325	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	0	0	0	0	0	0
953-021	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	0	0	0	0	0	0
1023 1001	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
1250-023	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
321-200	*Fraxinus caroliniana* Seasonally Flooded Forest Alliance		25	120	20	3.0473	10.46	55.46
084-143	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
093-144	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
095-146	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
122 108	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
131-156	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
186-246	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
311-139	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	40	33.33	0.57	2.87	36.21	18.1
662-176	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	80	11.76	1.19	1.1	12.87	6.43
690-218	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
698-120	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
736-169	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
743-214	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
746-324	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
764-149	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
770-126	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-148	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-163	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
807-115	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
968-090	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
026-162	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	80	16.67	1.52	3.09	19.76	9.88
112-221	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	120	60	13.54	79.97	139.97	69.99
176-239	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	5.26	0.96	2.9	8.16	4.08
245-235	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	7.14	0.71	1.08	8.23	4.11
273-253	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
350-226	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
373-228	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	80	16.67	3.44	6.4	23.07	11.53
676-136	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
752-150	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
805-161	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
806 166	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
807-109	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
808-222	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
813-247	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
958-091	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
959-017	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1235-087	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1318-17	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1346-22	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
184-250	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
186-251	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-236	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-252	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
272-142	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
283-138	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
377-207	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-174	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest*	40	7.14	1.59	1.99	9.13	4.57
662-183	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-189	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-190	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	40	6.25	0.53	1.08	7.33	3.67
662-191	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
681-134	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
688-165	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
705-124	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
738-152	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area
Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
743-216	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
753-151	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
937-082	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
1219-085	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
1023 1002	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1065 1003	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1210-008	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-006	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-025	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1213-007	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1236-005	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1256-042	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1259 1000	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
277-299	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
950-065	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
1123-045	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	40	14.29	0.96	2.49	16.78	8.39
906-028	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
954-032	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
1246-40	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
040-275	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		120	23.08	1.81	6.83	29.91	14.96
973-034	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0
1249-022	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		40	10	0.71	5.49	15.49	7.75
016-307	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	3.7	0.62	2.21	5.92	2.96
016-321	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
022-317	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-273	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-274	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
034-315	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
038-269	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
040-271	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
043-267	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
047-265	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
047-277	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
217-260	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
265-286	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
277-284	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
387-361	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-293	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-294	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
797-167	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	80	13.33	1.84	10.99	24.32	12.16
812-264	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
825-288	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	10	0.53	1.35	11.35	5.68
832-282	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
834-279	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
900-027	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
929-030	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
947-031	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	6.25	1.39	4.68	10.93	5.47
962-067	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
963-036	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1047-044	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1129-003	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1129-024	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1135-047	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1193-035	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1253-048	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1254-043	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	5.88	3.23	13.77	19.66	9.83
1300-01	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1322-06	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1349-07	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	7.14	0.54	1.73	8.88	4.44
1352-14	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1353-15	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
018-308	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	5.26	0.66	4.02	9.28	4.64
020-320	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	240	50	8.71	30.92	80.92	40.46
021-310	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
021-318	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	120	20	1.99	7.15	27.15	13.58
028-283	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	240	33.33	3.82	19.83	53.16	26.58
029-272	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
036-316	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	160	40	3.62	15.17	55.17	27.59
041-268	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	5.56	0.66	3.98	9.54	4.77
045-266	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
050-360	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
081-305	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
108-254	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
221-259	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
812 262	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
812-263	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
812-276	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	5	0.53	2.68	7.68	3.84
818-312	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	12.5	0.8	2.96	15.46	7.73
825-287	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
911-029	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
977-069	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1124-046	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1125-001	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	80	8.7	2.46	9.6	18.3	9.15
1145-002	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1164-056	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	9.09	0.57	4.03	13.12	6.56
1253-041	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1308-02	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
949-039	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0
1015-093	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		80	50	1.61	15.78	65.78	32.89

Table D-2C
Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area
Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1086-097	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		80	22.22	2.3	10.97	33.19	16.59
1142-101	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0
548-340	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
574-335	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
615-332	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	40	9.09	0.75	4.42	13.51	6.76
617-333	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
626-330	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
662-185	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
990-061	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1001-059	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1074-074	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	40	12.5	1.19	14.78	27.28	13.64

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1138-100	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1188-072	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1199-053	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	120	15	2.46	11	26	13
013-326	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
728-292	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
728-297	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
732-291	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
748-322	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
008-328	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
010-168	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
027-314	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
135-173	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
328-199	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	80	16.67	3.55	13.54	30.2	15.1
381-353	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	2960	22.29	0.3	0.63	22.92	11.46
607-341	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
993-088	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
076-170	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
158-211	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	16.67	5.62	13.91	30.58	15.29
181-304	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
211-230	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
216-300	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
222-261	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
242-193	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	20	0.8	2.01	22.01	11.01
245-234	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
259-180	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	27.27	7.73	28.65	55.93	27.96
277-285	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
304-182	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	200	31.25	4.64	25.04	56.29	28.14
379-196	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
398-337	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	20	0.91	17.29	37.29	18.64
400-231	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
414-351	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	25	2.64	16.53	41.53	20.76
526 349	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
543 350	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
551-336	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
573-329	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
575-348	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
602-331	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	22.22	1.11	2.92	25.14	12.57

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
635-342	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
662-188	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	11.11	3.17	7.88	18.99	9.49
726-233	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
728-301	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
751-319	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
829-281	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
943-064	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	20	2.32	11.58	31.58	15.79
955-066	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1029-079	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	6.67	1.26	5.77	12.44	6.22
1051-080	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	8.33	1.26	8.23	16.57	8.28
1057-075	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	15.38	5.07	17.23	32.62	16.31
1077-096	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1093-073	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1146-055	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1185-092	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1186-052	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1205-076	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1263-070	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1317-08	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1343-16	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1344-13	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1368-011	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
053-356	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
057-357	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
059-358	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
069-359	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
167-100	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1214-009	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1214-026	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1322-05	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
073-106	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
152-355	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
050-249	Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance		0	0	0	0	0	0
265-298	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
591-345	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
982-038	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
995-060	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1013-077	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1180-054	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1261-058	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1329-10	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1332-012	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
048-213	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
216-290	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
237-197	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
307-346	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	80	18.18	6.53	39.26	57.44	28.72

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
312-141	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	80	20	3.62	12.63	32.63	16.32
461-203	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
515-204	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
578-347	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
662 186	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	40	33.33	0.63	1.01	34.35	17.17
730-296	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
930-063	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
1144-099	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	40	7.14	3.42	9.04	16.18	8.09
1247-51	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	40	8.33	0.62	1.91	10.24	5.12
1362-020	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
028-302	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
202-198	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
348-224	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
387-338	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
620-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
629-343	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
728-295	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
754-171	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
811-212	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
817-311	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
920-062	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1043-103	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	160	40	4.87	16.17	56.17	28.08
1311-003	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1322-04	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1325-09	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
191-306	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0
227-280	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	11.11	0.8	3.31	14.42	7.21
492-202	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0
631-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	20	1.45	11.31	31.31	15.65

Table D-2C
Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area
Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
978-037	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0
981-071	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	120	21.43	1.94	8.63	30.06	15.03
1220-020	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	20	1.3	7.02	27.02	13.51
037-270	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
080-278	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1130-004	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1005-078	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	40	16.67	0.75	8.73	25.39	12.7
1055-095	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	120	30	3.04	18.02	48.02	24.01
1333-19	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0	0	0	0	0	0
1387-21	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0	0	0	0	0	0
919-089	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	40	16.67	0.62	5.4	22.07	11.03

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
963-033	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
975-068	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
1269-050	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
702-133	*Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance	*Sagittaria lancifolia* Herbaceous Vegetation	0	0	0	0	0	0
046-244	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	40	12.5	0.91	1.33	13.83	6.92
049-243	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	0	0	0	0	0	0
311-140	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	40	11.11	0.62	3.1	14.21	7.1
049-242	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
092-164	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
102-145	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	80	33.33	1.06	25.19	58.52	29.26
130-127	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
176-245	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
213-227	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	800	40	21.03	8.87	48.87	24.44
770-125	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
790-159	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
813-240	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
833-354	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
905-083	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1021-086	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1094-102	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1211-016	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1217-014	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	240	54.55	4.01	22.02	76.56	38.28
1268-015	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	40	4	0.8	2.52	6.52	3.26
117-257	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
120 223	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
125-113	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
682-132	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
684-327	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
705-118	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
713-117	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
714-130	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
715-232	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
722-154	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	160	80	0.84	80.62	160.62	80.31
792-147	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
813-241	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
032-313	*Triadica sebifera* Forest Alliance		160	44.44	3.07	22.87	67.31	33.66
291-352	*Triadica sebifera* Forest Alliance		280	50	11.44	49.15	99.15	49.57
1098-049	*Triadica sebifera* Forest Alliance		160	66.67	4.48	56.24	122.91	61.45
1132-057	*Triadica sebifera* Forest Alliance		160	50	3.59	28.64	78.64	39.32
019-172	*Triadica sebifera* Seasonally Flooded Forest Alliance		160	80	4.51	68	148	74
020-309	*Triadica sebifera* Seasonally Flooded Forest Alliance		160	66.67	2.78	26.32	92.98	46.49
046-248	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	30	1.81	6.51	36.51	18.26
186-238	*Triadica sebifera* Seasonally Flooded Forest Alliance		280	58.33	7.51	36.57	94.91	47.45
187-237	*Triadica sebifera* Seasonally Flooded Forest Alliance		200	38.46	13.04	39.13	77.59	38.8
215-289	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
221-258	*Triadica sebifera* Seasonally Flooded Forest Alliance		160	80	3.27	50.36	130.36	65.18

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
229-255	*Triadica sebifera* Seasonally Flooded Forest Alliance		480	80	11.28	74.44	154.44	77.22
252-206	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
393-229	*Triadica sebifera* Seasonally Flooded Forest Alliance		40	100	0.8	100	200	100
394-225	*Triadica sebifera* Seasonally Flooded Forest Alliance		80	20	3.18	20.31	40.31	20.15
456-192	*Triadica sebifera* Seasonally Flooded Forest Alliance		2000	50	49.05	57.11	107.11	53.56
480-210	*Triadica sebifera* Seasonally Flooded Forest Alliance		200	100	3.55	100	200	100
566-209	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	33.33	6.3	55.89	89.23	44.61
662-175	*Triadica sebifera* Seasonally Flooded Forest Alliance		200	55.56	5.54	30.77	86.32	43.16
662-178	*Triadica sebifera* Seasonally Flooded Forest Alliance		240	54.55	5.12	57.85	112.39	56.2
699-217	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	75	5.36	61.03	136.03	68.01
724-220	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	60	1.72	25.58	85.58	42.79
743-215	*Triadica sebifera* Seasonally Flooded Forest Alliance		480	100	11.26	100	200	100
786-160	*Triadica sebifera* Seasonally Flooded Forest Alliance		280	58.33	7.54	55.85	114.19	57.09
813-323	*Triadica sebifera* Seasonally Flooded Forest Alliance		680	77.27	155.21	95.78	173.05	86.53
1020-084	*Triadica sebifera* Seasonally Flooded Forest Alliance		160	57.14	10.59	79.01	136.15	68.08
1032-098	*Triadica sebifera* Seasonally Flooded Forest Alliance		2240	23.63	8.23	50.96	74.59	37.29
1099-049	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
1152-018	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	37.5	4.96	51.88	89.38	44.69

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1192-081	*Triadica sebifera* Seasonally Flooded Forest Alliance		80	33.33	73.22	88.91	122.24	61.12
1218-019	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	60	2.69	60.17	120.17	60.08
1224-010	*Triadica sebifera* Seasonally Flooded Forest Alliance		40	100	0.62	100	200	100
1229-011	*Triadica sebifera* Seasonally Flooded Forest Alliance		240	100	4.21	100	200	100
1230-012	*Triadica sebifera* Seasonally Flooded Forest Alliance		240	66.67	6.44	36.31	102.98	51.49
1231-013	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	37.5	2.15	33.01	70.51	35.25
055-104	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
058-102	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
066-105	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
068-103	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
111-114	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
122-107	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
123-219	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
704-135	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
705-119	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
709-131	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
720-155	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
721-112	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2C

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifer* within Project Mapping Area

Summary of Overstory Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
739-153	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
758-157	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
777-158	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
807-116	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
809-256	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
195-303	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
293-181	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	40	11.11	0.05	3.98	15.09	7.55
364-194	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	120	11.11	0.83	17.51	28.62	14.31
368-208	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	40	5.56	0.38	11.13	16.69	8.34
412-195	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
518-201	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	600	32.61	3.26	51.57	84.18	42.09
662-177	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	40	4.17	0.06	1.29	5.45	2.73
662-179	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	560	58.33	1.31	33.92	92.26	46.13
662-184	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	200	31.25	0.69	22.04	53.29	26.65

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
662-187	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	160	20	0.18	4.67	24.67	12.33
280-137	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	40	2.44	0.25	3.21	5.65	2.83
507-205	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	0	0	0	0	0	0
536-339	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	0	0	0	0	0	0
122-110	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
680-123	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
702-121	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
705-122	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
708-129	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
711-128	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
721-111	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
167-101	*Arundinaria gigantea* Temporarily Flooded Shrubland Alliance		0	0	0	0	0	0
1315-18	*Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance	*Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest	16.67	480	37.5	1.2708	28.91	83.08
749-325	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	0	0	0	0	0	0
953-021	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	440	52.38	1.68	72.4	124.78	62.39
1023 1001	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
1250-023	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
321-200	*Fraxinus caroliniana* Seasonally Flooded Forest Alliance		40	10	0.28	13.67	23.67	11.84
084-143	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
093-144	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	40	100	0.25	100	200	100
095-146	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
122 108	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
131-156	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
186-246	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
311-139	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	40	100	0.15	100	200	100
662-176	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	200	21.74	1.07	24.66	46.4	23.2
690-218	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	80	33.33	0.18	16.98	50.31	25.16
698-120	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	40	25	0.03	6.24	31.24	15.62

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
736-169	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
743-214	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
746-324	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
764-149	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
770-126	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-148	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-163	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
807-115	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
968-090	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	280	70	0.38	34.93	104.93	52.47
026-162	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	4.17	0.28	8.36	12.53	6.27
112-221	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	320	88.89	1.03	64.94	153.83	76.92
176-239	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	680	48.57	1.66	37.89	86.46	43.23
245-235	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	120	30	0.46	25.75	55.75	27.87
273-253	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	33.33	0.06	21.51	54.84	27.42
350-226	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
373-228	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	80	7.14	0.08	1.62	8.77	4.38
676-136	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	200	31.25	0.68	15.44	46.69	23.35
752-150	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	5.88	0.28	14.26	20.14	10.07
805-161	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	160	21.05	0.49	12.59	33.64	16.82
806 166	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	280	20	0.61	9.19	29.19	14.6
807-109	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
808-222	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	40	5.26	0.15	3.71	8.97	4.49
813-247	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	80	10.53	0.19	4.41	14.94	7.47
958-091	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	160	36.36	0.2	10.59	46.96	23.48
959-017	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1235-087	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1318-17	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area

Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1346-22	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
184-250	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	80	15.38	0.34	29.03	44.41	22.21
186-251	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-236	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-252	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
272-142	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
283-138	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
377-207	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	40	3.03	0.05	1.01	4.04	2.02
662-174	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	200	26.32	0.5	22.05	48.36	24.18
662-183	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	1240	79.49	2.26	56.37	135.85	67.93
662-189	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-190	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	80	6.25	0.07	1.47	7.72	3.86
662-191	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	40	9.09	0.15	5.73	14.83	7.41
681-134	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	160	50	0.53	45.25	95.25	47.62
688-165	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
705-124	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	160	33.33	0.59	45.25	78.58	39.29
738-152	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area

Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
743-216	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
753-151	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
937-082	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
1219-085	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	80	13.33	0.15	3.25	16.58	8.29
1023 1002	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1065 1003	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1210-008	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-006	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-025	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1213-007	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1236-005	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1256-042	*Paspalum notatum* Herbaceous Alliance		40	5	0.49	25.74	30.74	15.37
1259 1000	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
277-299	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
950-065	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
1123-045	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
906-028	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
954-032	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
1246-40	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	80	2.5	0.1	1.23	3.73	1.86

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area

Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
040-275	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		320	16.67	2.11	24.55	41.21	20.61
973-034	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		120	27.27	0.1	5.73	33	16.5
1249-022	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		160	22.22	0.71	15.54	37.76	18.88
016-307	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	1360.0001	66.67	3.52	64.18	130.85	65.42
016-321	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	160	14.29	0.31	10.2	24.49	12.24
022-317	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-273	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-274	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
034-315	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	80	7.41	0.18	5.85	13.26	6.63
038-269	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
040-271	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	600	28.85	1.89	33.63	62.48	31.24
043-267	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
047-265	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	240	40	1.3	51.51	91.51	45.76
047-277	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	4.35	0.11	5.24	9.59	4.79
217-260	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
265-286	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
277-284	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
387-361	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-293	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-294	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
797-167	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	480	50	2.71	54.29	104.29	52.14
812-264	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
825-288	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
832-282	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
834-279	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
900-027	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
929-030	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
947-031	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	80	4.55	0.23	7.37	11.91	5.96
962-067	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
963-036	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area

Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1047-044	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1129-003	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	3.7	0.08	2.08	5.78	2.89
1129-024	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1135-047	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	1.67	0.05	0.68	2.35	1.18
1193-035	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1253-048	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1254-043	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	280	10.61	0.65	8.23	18.83	9.42
1300-01	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1322-06	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1349-07	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	5.26	0.15	5.94	11.2	5.6
1352-14	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1353-15	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
018-308	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	2120	65.43	6.16	67.25	132.69	66.34
020-320	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	360	37.5	0.85	24.68	62.18	31.09
021-310	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	560	51.85	2.1	45.83	97.68	48.84
021-318	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	480	19.05	3.25	35.45	54.49	27.25
028-283	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	320	16	1.05	13.63	29.63	14.82
029-272	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	520	27.66	0.95	20.82	48.48	24.24
036-316	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	520	39.39	2.02	40.21	79.61	39.8
041-268	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	2599.9999	68.42	7.84	61.68	130.1	65.05
045-266	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	360	69.23	1.25	86.12	155.36	77.68
050-360	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	1360.0001	55.74	2.28	40.3	96.03	48.02
081-305	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	80	11.11	0.16	5.22	16.33	8.16
108-254	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	8.33	0.06	3.19	11.52	5.76

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area

Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
221-259	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
812 262	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	360	14.29	1.13	15.95	30.24	15.12
812-263	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	1600	75.47	4.13	73.49	148.96	74.48
812-276	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	1480	55.22	5.24	65.83	121.05	60.52
818-312	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	4	0.11	2.75	6.75	3.38
825-287	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
911-029	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
977-069	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1124-046	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	2.94	0.03	0.91	3.85	1.92
1125-001	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1145-002	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	400	66.67	2.06	80.23	146.89	73.45
1164-056	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	2.22	0.35	5.45	7.67	3.83
1253-041	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	240	35.29	0.32	19.78	55.07	27.54
1308-02	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	40	4.17	0.11	3.58	7.75	3.87
949-039	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		40	7.69	0.13	6.01	13.7	6.85
1015-093	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		160	18.18	0.54	12.57	30.75	15.37

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1086-097	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		360	32.14	1.56	52.69	84.83	42.42
1142-101	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		440	52.38	0.91	48.62	101	50.5
548-340	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	240	21.43	0.34	8.9	30.33	15.17
574-335	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
615-332	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
617-333	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
626-330	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	40	1.52	0.08	1.29	2.81	1.4
662-185	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
990-061	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	80	8.7	0.14	6.44	15.13	7.57
1001-059	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1074-074	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	280	10	1.12	17.99	27.99	13.99

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1138-100	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1188-072	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1199-053	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	120	18.75	1.31	37.94	56.69	28.35
013-326	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
728-292	Proposed: *Ilex vomitoria* Shrubland Alliance		120	8.33	0.15	1.9	10.23	5.12
728-297	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
732-291	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
748-322	Proposed: *Ilex vomitoria* Shrubland Alliance		120	5.26	0.4	5.82	11.09	5.54
008-328	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
010-168	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	80	9.52	0.19	6.6	16.13	8.06
027-314	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	1080	52.94	3.14	41.64	94.58	47.29
135-173	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
328-199	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	80	12.5	0.07	3.18	15.68	7.84
381-353	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	40	9.09	0.03	1.8	10.89	5.44
607-341	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
993-088	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	120	18.75	0.11	3.59	22.34	11.17
076-170	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	5.56	0.13	4.64	10.19	5.1
158-211	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
181-304	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	13.33	0.08	5.05	18.38	9.19

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
211-230	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1120	66.67	1.98	54.58	121.25	60.62
216-300	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	520	72.22	0.31	22.59	94.81	47.41
222-261	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
242-193	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
245-234	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	200	16.13	0.56	15.45	31.58	15.79
259-180	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
277-285	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
304-182	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	280	30.43	1	29.55	59.99	29.99
379-196	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
398-337	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	3.51	0.43	7.14	10.65	5.32
400-231	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	240	25	0.24	6.43	31.43	15.71
414-351	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
526 349	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
543 350	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	13.04	0.19	4.01	17.06	8.53
551-336	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
573-329	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
575-348	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	4.17	0.16	2.82	6.98	3.49
602-331	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
635-342	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
662-188	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	15	0.76	15.52	30.52	15.26
726-233	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	600	83.33	0.79	40.37	123.7	61.85
728-301	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	4.35	0.03	0.87	5.22	2.61
751-319	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
829-281	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
943-064	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	6.45	0.49	12.47	18.92	9.46
955-066	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	5.71	0.14	3.89	9.61	4.8
1029-079	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1051-080	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	80	5.26	0.14	3.32	8.58	4.29
1057-075	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1077-096	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	200	21.74	0.57	14.01	35.74	17.87
1093-073	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	40	2.86	0.04	0.69	3.55	1.77
1146-055	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	640	72.73	1.33	54.08	126.8	63.4
1185-092	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	27.27	0.24	18.2	45.48	22.74
1186-052	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1205-076	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1263-070	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area

Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1317-08	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	280	14.58	0.4	7.83	22.41	11.21
1343-16	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	16.67	0.23	12.72	29.39	14.69
1344-13	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	120	20	0.15	9.51	29.51	14.75
1368-011	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
053-356	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
057-357	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
059-358	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
069-359	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
167-100	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1214-009	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1214-026	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1322-05	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
073-106	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
152-355	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
050-249a	Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance		0	0	0	0	0	0
265-298	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
591-345	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	40	3.12	0.23	4.8	7.92	3.96
982-038	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	720	43.9	1.58	31.37	75.27	37.64

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
995-060	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	120	15	0.14	5.51	20.51	10.26
1013-077	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	360	34.62	1.27	30	64.62	32.31
1180-054	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1261-058	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1329-10	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1332-012	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
048-213	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	200	12.82	0.5	10.43	23.26	11.63
216-290	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	40	25	0.11	16.72	41.72	20.86
237-197	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	320	24.24	0.75	19.51	43.75	21.88
307-346	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
312-141	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
461-203	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	160	9.3	0.17	4.51	13.81	6.91
515-204	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	40	11.11	0.08	5.12	16.23	8.11
578-347	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	80	14.29	0.09	3.65	17.93	8.97
662 186	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1120	75.68	5.48	67.5	143.17	71.59
730-296	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2040	83.61	4.35	73.19	156.8	78.4
930-063	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
1144-099	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	640	53.33	1.39	37.85	91.18	45.59
1247-51	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1560	66.1	4.33	66.82	132.92	66.46
1362-020	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	120	16.67	0.12	4.66	21.33	10.66
028-302	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	200	9.8	0.82	14.93	24.73	12.37

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
202-198	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
348-224	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis T*emporarily Flooded Forest	240	20.69	1.06	33.1	53.79	26.9
387-338	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	560	29.17	4.04	42.65	71.82	35.91
620-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	40	8.33	0.08	5.32	13.65	6.82
629-343	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	40	5.56	0.04	1.41	6.96	3.48
728-295	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
754-171	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
811-212	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
817-311	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	280	15.91	1.4	21.99	37.9	18.95

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
920-062	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	40	5.88	0.03	1.17	7.05	3.53
1043-103	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	80	16.67	0.58	29.67	46.34	23.17
1311-003	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1322-04	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	80	4.26	0.33	5.89	10.14	5.07
1325-09	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
191-306	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	7.14	0.03	1.19	8.33	4.17
227-280	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	2.44	0.2	3.45	5.89	2.95
492-202	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	7.69	0.03	1.13	8.82	4.41
631-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
978-037	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0
981-071	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	40	5.88	0.25	8.97	14.85	7.42
1220-020	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	1080	65.85	3.62	67.95	133.8	66.9
037-270	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
080-278	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1130-004	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1005-078	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0	0	0	0	0	0
1055-095	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	80	16.67	0.41	17.34	34.01	17
1333-19	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	320	29.63	0.69	19.09	48.72	24.36
1387-21	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	680	60.71	0.36	11.3	72.02	36.01
919-089	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
961-033	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
975-068	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
1269-050	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	160	8.7	0.51	11.04	19.73	9.87
702-133	*Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance	*Sagittaria lancifolia* Herbaceous Vegetation	0	0	0	0	0	0
046-244	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	240	26.09	1.31	30.06	56.14	28.07
049-243	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	120	20	0.26	14.47	34.47	17.24
311-140	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	40	6.67	0.35	14.32	20.99	10.49
049-242	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
092-164	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
102-145	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1520	59.38	3.52	52.84	112.21	56.11
130-127	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
176-245	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	520	54.17	2.41	59.09	113.26	56.63
213-227	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	10400	89.66	16.56	90.52	180.17	90.09
770-125	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
790-159	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	680	65.38	2.37	53.21	118.6	59.3

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
813-240	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
833-354	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
905-083	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	800	38.46	1.22	22.25	60.71	30.35
1021-086	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1094-102	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1211-016	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1217-014	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1000	83.33	4.7	88.64	171.97	85.99
1268-015	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	920	38.98	5.11	52.71	91.69	45.85
117-257	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
120 223	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	160	80	0.84	80.62	160.62	80.31
125-113	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
682-132	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
684-327	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	40	11.11	0.04	3.25	14.36	7.18
705-118	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
713-117	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
714-130	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
715-232	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
722-154	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	400	100	0.07	100	200	100
792-147	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
813-241	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
032-313	*Triadica sebifera* Forest Alliance		360	20.93	1.3	26.01	46.94	23.47
291-352	*Triadica sebifera* Forest Alliance		80	10.53	0.38	17.1	27.63	13.81
1098-049	*Triadica sebifera* Forest Alliance		40	3.03	0.35	6.46	9.49	4.75
1132-057	*Triadica sebifera* Forest Alliance		280	17.5	1.58	24.98	42.48	21.24
019-172	*Triadica sebifera* Seasonally Flooded Forest Alliance		1320	70.21	5.63	67.34	137.55	68.77
020-309	*Triadica sebifera* Seasonally Flooded Forest Alliance		1640	77.36	3.9	80.45	157.81	78.91
046-248	*Triadica sebifera* Seasonally Flooded Forest Alliance		720	50	2.52	62.18	112.18	56.09
186-238	*Triadica sebifera* Seasonally Flooded Forest Alliance		320	30.77	1.51	46.22	76.99	38.49
187-237	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	16.67	0.56	16.66	33.32	16.66
215-289	*Triadica sebifera* Seasonally Flooded Forest Alliance		280	70	0.3	29.58	99.58	49.79
221-258	*Triadica sebifera* Seasonally Flooded Forest Alliance		280	22.58	1.1	27.88	50.46	25.23

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
229-255	*Triadica sebifera* Seasonally Flooded Forest Alliance		880	23.16	4.55	31.98	55.14	27.57
252-206	*Triadica sebifera* Seasonally Flooded Forest Alliance		2680.0001	83.75	4.94	63.02	146.77	73.39
393-229	*Triadica sebifera* Seasonally Flooded Forest Alliance		2800	67.31	5.87	67.28	134.58	67.29
394-225	*Triadica sebifera* Seasonally Flooded Forest Alliance		160	21.05	0.76	21.49	42.54	21.27
456-192	*Triadica sebifera* Seasonally Flooded Forest Alliance		2000	16.67	9.47	19.6	36.27	18.14
480-210	*Triadica sebifera* Seasonally Flooded Forest Alliance		920	67.65	2.73	53.91	121.56	60.78
566-209	*Triadica sebifera* Seasonally Flooded Forest Alliance		120	8.33	0.48	9.23	17.57	8.78
662-175	*Triadica sebifera* Seasonally Flooded Forest Alliance		600	60	1.16	40.09	100.09	50.05
662-178	*Triadica sebifera* Seasonally Flooded Forest Alliance		360	27.27	1.66	26.99	54.26	27.13
699-217	*Triadica sebifera* Seasonally Flooded Forest Alliance		1080	60	4.52	66.59	126.59	63.29
724-220	*Triadica sebifera* Seasonally Flooded Forest Alliance		1760	83.02	5.45	89.55	172.57	86.29
743-215	*Triadica sebifera* Seasonally Flooded Forest Alliance		1400	85.37	5.06	89.78	175.14	87.57
786-160	*Triadica sebifera* Seasonally Flooded Forest Alliance		160	16.67	0.68	21.68	38.35	19.17
813-323	*Triadica sebifera* Seasonally Flooded Forest Alliance		440	64.71	1.72	66.98	131.69	65.84
1020-084	*Triadica sebifera* Seasonally Flooded Forest Alliance		1640	52.56	5.29	57.65	110.22	55.11
1032-098	*Triadica sebifera* Seasonally Flooded Forest Alliance		400	37.04	0.57	7.83	44.87	22.43
1099-049	*Triadica sebifera* Seasonally Flooded Forest Alliance		880	81.48	12.55	95.01	176.49	88.25
1152-018	*Triadica sebifera* Seasonally Flooded Forest Alliance		400	18.18	1.31	18.9	37.09	18.54

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1192-081	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
1218-019	*Triadica sebifera* Seasonally Flooded Forest Alliance		2240.0001	87.5	12.41	97.36	184.86	92.43
1224-010	*Triadica sebifera* Seasonally Flooded Forest Alliance		680	29.31	4.1	32.06	61.37	30.69
1229-011	*Triadica sebifera* Seasonally Flooded Forest Alliance		1240	52.54	5.45	65.63	118.17	59.08
1230-012	*Triadica sebifera* Seasonally Flooded Forest Alliance		1360.0001	55.74	3.81	36.26	91.99	46
1231-013	*Triadica sebifera* Seasonally Flooded Forest Alliance		600	28.3	2.63	29.85	58.15	29.07
055-104	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
058-102	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
066-105	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
068-103	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
111-114	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
122-107	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
123-219	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
704-135	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
705-119	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
709-131	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
720-155	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
721-112	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2D

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within the Project Mapping Area
Summary of the Midstory layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
739-153	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
758-157	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
777-158	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
807-116	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
809-256	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
195-303	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	15897.436	75.61	2.37	86.72	162.33	81.16
293-181	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	800	50	0.04	38.46	88.46	44.23
364-194	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
368-208	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
412-195	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	1640	67.21	0.17	65.95	133.16	66.58
518-201	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
662-177	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0	0	0	0	0	0
662-179	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	1600	36.36	0.26	71.74	108.1	54.05
662-184	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	4799.9999	28.57	0.09	12.63	41.2	20.6

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
662-187	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	4000.0001	37.04	0.13	20	57.04	28.52
280-137	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans Forest*	0	0	0	0	0	0
507-205	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	2800	77.78	0.08	78.99	156.77	78.38
536-339	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans* Forest	0	0	0	0	0	0
122-110	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
680-123	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
702-121	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
705-122	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
708-129	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
711-128	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
721-111	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0	0	0
167-101	*Arundinaria gigantea* Temporarily Flooded Shrubland Alliance		0	0	0	0	0	0
1315-18	*Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance	*Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest	400	4	0.13	22.22	26.22	13.11
749-325	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	1600	57.14	0.13	15.6	72.74	36.37
953-021	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	0	0	0	0	0	0
1023 1001	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
1250-023	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0	0	0
321-200	*Fraxinus caroliniana* Seasonally Flooded Forest Alliance		4799.9999	27.91	0.14	11.32	39.23	19.61
084-143	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
093-144	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
095-146	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
122 108	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
131-156	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
186-246	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
311-139	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	400	100	0.01	100	200	100
662-176	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
690-218	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
698-120	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
736-169	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
743-214	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
746-324	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
764-149	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
770-126	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-148	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
805-163	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
807-115	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0	0	0
968-090	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	2000	100	0.06	100	200	100
026-162	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
112-221	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	400	50	0.07	24.32	74.32	37.16
176-239	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
245-235	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	400	9.09	0.02	8.33	17.42	8.71
273-253	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	1600	36.04	0.03	16.26	52.3	26.15

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
350-226	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
373-228	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	3199.9999	88.89	0.38	85.96	174.85	87.43
676-136	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	400	50	0.06	47.06	97.06	48.53
752-150	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
805-161	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
806 166	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
807-109	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
808-222	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
813-247	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
958-091	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
959-017	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1235-087	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1318-17	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
1346-22	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0	0	0
184-250	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
186-251	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-236	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
194-252	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
272-142	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
283-138	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
377-207	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-174	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-183	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	1200	42.86	0.24	64.58	107.44	53.72
662-189	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-190	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
662-191	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
681-134	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
688-165	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest*	0	0	0	0	0	0
705-124	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
738-152	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
743-216	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
753-151	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
937-082	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0	0	0
1219-085	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	400	100	0.03	100	200	100
1023 1002	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1065 1003	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0	0	0
1210-008	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-006	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1212-025	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1213-007	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1236-005	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1256-042	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
1259 1000	*Paspalum notatum* Herbaceous Alliance		0	0	0	0	0	0
277-299	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
950-065	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
1123-045	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
906-028	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
954-032	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1246-40	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0	0	0
040-275	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0
973-034	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		400	5.56	0.03	11.43	16.98	8.49
1249-022	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0
016-307	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
016-321	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
022-317	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-273	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
025-274	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
034-315	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
038-269	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	40	0.99	0.01	1.23	2.22	1.11
040-271	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
043-267	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
047-265	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
047-277	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
217-260	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
265-286	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
277-284	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
387-361	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-293	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
728-294	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
797-167	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
812-264	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
825-288	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
832-282	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
834-279	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
900-027	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
929-030	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
947-031	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
962-067	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
963-036	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1047-044	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1129-003	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1129-024	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1135-047	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1193-035	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1253-048	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1254-043	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1300-01	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1322-06	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1349-07	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1352-14	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0	0	0
1353-15	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	800	28.57	0.1	39.39	67.97	33.98
018-308	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
020-320	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
021-310	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
021-318	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
028-283	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
029-272	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
036-316	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
041-268	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	800	11.76	0.2	19.38	31.14	15.57
045-266	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
050-360	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	1200	11.11	0.27	17.44	28.55	14.27
081-305	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	3199.9999	40	0.33	56.76	96.76	48.38

Table D-2E
Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
108-254	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
221-259	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
812 262	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
812-263	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	400	14.29	0.07	19.15	33.43	16.72
812-276	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
818-312	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
825-287	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
911-029	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
977-069	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1124-046	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1125-001	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1145-002	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1164-056	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1253-041	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
1308-02	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0	0	0
949-039	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1015-093	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		0	0	0	0	0	0
1086-097	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		400	9.09	0.01	1.64	10.73	5.37
1142-101	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		0	0	0	0	0	0
548-340	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	7200.0003	45	0.55	39.55	84.55	42.27
574-335	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
615-332	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
617-333	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	1200	9.09	0.08	9.26	18.35	9.18
626-330	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	5600	31.11	0.3	30.16	61.27	30.63
662-185	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	800	28.57	0.02	8.33	36.9	18.45
990-061	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1001-059	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1074-074	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	800	16.67	0.02	3.17	19.84	9.92
1138-100	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1188-072	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
1199-053	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0	0	0
013-326	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
728-292	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
728-297	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
732-291	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
748-322	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0	0	0
008-328	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
010-168	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
027-314	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	65599.999	97.04	1.74	88.76	185.8	92.9
135-173	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0
328-199	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	12000.001	57.69	0.8	56.67	114.36	57.18
381-353	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	2800	22.58	0.21	24.55	47.13	23.56
607-341	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
993-088	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	12400	60.78	0.31	55.56	116.34	58.17
076-170	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
158-211	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
181-304	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	800	11.11	0.13	31.48	42.59	21.3
211-230	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
216-300	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	50	0.16	30.77	80.77	40.38
222-261	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
242-193	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
245-234	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1200	27.27	0.05	8.45	35.72	17.86
259-180	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
277-285	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
304-182	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
379-196	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
398-337	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
400-231	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	800	9.52	0.02	3.92	13.45	6.72
414-351	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
526 349	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
543 350	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1200	37.5	0.05	27.27	64.77	32.39

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
551-336	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
573-329	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
575-348	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
602-331	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
635-342	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	800	14.29	0.02	7.69	21.98	10.99
662-188	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
726-233	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	4400	61.11	0.43	84.62	145.73	72.86
728-301	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	12.5	0.07	20.93	33.43	16.72
751-319	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
829-281	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
943-064	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
955-066	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1029-079	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	12.5	0.01	2.86	15.36	7.68
1051-080	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1057-075	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1077-096	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1093-073	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	16.67	0.01	14.29	30.95	15.48
1146-055	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	4799.9999	35.29	0.65	48.54	83.83	41.92

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1185-092	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	5.26	0.01	2.78	8.04	4.02
1186-052	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	400	2.56	0.01	0.82	3.38	1.69
1205-076	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1200	30	0.02	14.29	44.29	22.14
1263-070	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1317-08	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	3199.9999	25	0.84	51.94	76.94	38.47
1343-16	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	800	50	0.04	71.43	121.43	60.71
1344-13	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
1368-011	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0	0	0
053-356	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
057-357	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
059-358	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
069-359	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
167-100	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1214-009	Proposed: Mixed Herbaceous Alliance		400	6.25	0.03	0.92	7.17	3.59
1214-026	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
1322-05	Proposed: Mixed Herbaceous Alliance		0	0	0	0	0	0
073-106	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
152-355	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0	0	0
050-249a	Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance		400	33.33	0.09	85.71	119.05	59.52
265-298	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
591-345	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
982-038	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	1200	15	0.28	39.56	54.56	27.28
995-060	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	400	3.12	0.01	0.74	3.86	1.93
1013-077	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	800	13.33	0.1	13	26.33	13.17
1180-054	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	400	10	0.07	15.79	25.79	12.89
1261-058	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	800	15.38	0.02	2.38	17.77	8.88
1329-10	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
1332-012	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0	0	0
048-213	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1200	23.08	0.05	8.7	31.77	15.89

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
216-290	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
237-197	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1600	33.33	0.08	16.13	49.46	24.73
307-346	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
312-141	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
461-203	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1600	16.6	0.26	38.24	54.84	27.42
515-204	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	800	22.22	0.02	4.44	26.67	13.33
578-347	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2399.9999	25	0.14	36	61	30.5
662 186	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	4040.0001	83.47	0.55	93.3	176.77	88.38
730-296	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2399.9999	30	0.8	46.58	76.58	38.29
930-063	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0	0	0
1144-099	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1600	80	0.08	71.43	151.43	75.71
1247-51	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2399.9999	30	0.41	36.11	66.11	33.06

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1362-020	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	2000	45.45	0.34	71.67	117.12	58.56
028-302	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
202-198	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	400	9.09	0.01	2.33	11.42	5.71
348-224	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
387-338	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	9599.9998	75	0.74	87.04	162.04	81.02
620-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
629-343	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	800	11.11	0.02	9.09	20.2	10.1
728-295	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	400	4.17	0.13	16.49	20.66	10.33
754-171	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
811-212	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
817-311	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	800	40	0.04	50	90	45
920-062	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1043-103	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1311-003	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1322-04	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
1325-09	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0	0	0
191-306	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	400	14.08	0.01	13.51	27.6	13.8
227-280	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
492-202	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	2000	25	0.12	37.5	62.5	31.25
631-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0
978-037	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	11600	69.05	0.25	40.51	109.55	54.78
981-071	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0	0	0
1220-020	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	1200	14.29	0.16	31.82	46.1	23.05
037-270	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
080-278	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1130-004	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0	0	0
1005-078	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0	0	0	0	0	0
1055-095	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0	0	0	0	0	0

Table D-2E
Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1333-19	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	2800	100	0.13	100	200	100
1387-21	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	2000	62.5	0.05	20.69	83.19	41.59
919-089	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
961-033	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
975-068	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
1269-050	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0	0	0
702-133	*Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance	*Sagittaria lancifolia* Herbaceous Vegetation	0	0	0	0	0	0
046-244	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	2000	33.33	0.04	10.2	43.54	21.77
049-243	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	400	6.25	0.03	13.79	20.04	10.02
311-140	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	1200	12.99	0.02	8.67	21.66	10.83
049-242	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
092-164	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
102-145	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	4799.9999	80	0.18	32.39	112.39	56.2
130-127	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
176-245	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
213-227	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	10000	96.15	1.02	99.24	195.39	97.7
770-125	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
790-159	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	800	10.53	0.14	36	46.53	23.26
813-240	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
833-354	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
905-083	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	9200.0002	82.14	1.15	93.04	175.18	87.59
1021-086	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0	0	0
1094-102	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1600	100	0.04	100	200	100
1211-016	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1200	16.67	0.02	16.67	33.33	16.67
1217-014	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1200	60	0.05	19.35	79.35	39.68
1268-015	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	400	25	0.03	9.76	34.76	17.38
117-257	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
120 223	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	400	100	0.07	100	200	100
125-113	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
682-132	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
684-327	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
705-118	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
713-117	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
714-130	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
715-232	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
722-154	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
792-147	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
813-241	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0	0	0
032-313	*Triadica sebifera* Forest Alliance		0	0	0	0	0	0
291-352	*Triadica sebifera* Forest Alliance		0	0	0	0	0	0
1098-049	*Triadica sebifera* Forest Alliance		0	0	0	0	0	0
1132-057	*Triadica sebifera* Forest Alliance		0	0	0	0	0	0
019-172	*Triadica sebifera* Seasonally Flooded Forest Alliance		400	100	0.01	100	200	100
020-309	*Triadica sebifera* Seasonally Flooded Forest Alliance		4400	91.67	0.38	84.48	176.15	88.07
046-248	*Triadica sebifera* Seasonally Flooded Forest Alliance		800	50	0.07	60	110	55
186-238	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area

Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
187-237	*Triadica sebifera* Seasonally Flooded Forest Alliance		400	50	0.06	80	130	65
215-289	*Triadica sebifera* Seasonally Flooded Forest Alliance		2399.9999	100	0.42	100	200	100
221-258	*Triadica sebifera* Seasonally Flooded Forest Alliance		400	25	0.03	18.18	43.18	21.59
229-255	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
252-206	*Triadica sebifera* Seasonally Flooded Forest Alliance		10400	86.67	1.15	95.42	182.09	91.05
393-229	*Triadica sebifera* Seasonally Flooded Forest Alliance		4000.0001	25.64	0.98	50	75.64	37.82
394-225	*Triadica sebifera* Seasonally Flooded Forest Alliance		1200	25	0.16	29.58	54.58	27.29
456-192	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
480-210	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
566-209	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
662-175	*Triadica sebifera* Seasonally Flooded Forest Alliance		1200	42.86	0.19	54.55	97.4	48.7
662-178	*Triadica sebifera* Seasonally Flooded Forest Alliance		1200	9.62	0.09	10.42	20.03	10.02
699-217	*Triadica sebifera* Seasonally Flooded Forest Alliance		400	25	0.13	19.05	44.05	22.02
724-220	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
743-215	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
786-160	*Triadica sebifera* Seasonally Flooded Forest Alliance		800	40	0.02	40	80	40
813-323	*Triadica sebifera* Seasonally Flooded Forest Alliance		14800	97.37	0.71	95.74	193.11	96.56
1020-084	*Triadica sebifera* Seasonally Flooded Forest Alliance		3199.9999	49.69	0.65	51.68	101.37	50.69

Table D-2E
Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
1032-098	*Triadica sebifera* Seasonally Flooded Forest Alliance		1600	20	0.21	16.67	36.67	18.33
1099-049	*Triadica sebifera* Seasonally Flooded Forest Alliance		2920	58.87	0.1	64.71	123.58	61.79
1152-018	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
1192-081	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
1218-019	*Triadica sebifera* Seasonally Flooded Forest Alliance		1200	60	0.02	37.5	97.5	48.75
1224-010	*Triadica sebifera* Seasonally Flooded Forest Alliance		1600	18.18	0.26	44	62.18	31.09
1229-011	*Triadica sebifera* Seasonally Flooded Forest Alliance		2000	23.7	0.18	31.25	54.95	27.47
1230-012	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0	0	0
1231-013	*Triadica sebifera* Seasonally Flooded Forest Alliance		1200	60	0.38	55.81	115.81	57.91
055-104	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
058-102	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
066-105	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
068-103	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
111-114	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
122-107	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
123-219	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
704-135	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
705-119	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2E

Vegetation Sample Plots Overall Woody Stratum Basal area of *Triadica sebifera* within Project Mapping Area
Summary of Shrub Layer

Plot ID	Alliance	Association	Density (# individuals/ ha)	Relative Density [%]	Dominance (sq m/ha)	Relative Dominance [%]	Importance Value	I.V. [%]
709-131	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
720-155	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
721-112	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
739-153	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
758-157	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
777-158	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
807-116	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0
809-256	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
195-303	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0.25	0.85	0.85	0.43
293-181	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	3	25	25	12.5
364-194	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0.75	2.68	2.68	1.34
368-208	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	1.25	2.47	2.47	1.24
412-195	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0.5	2.9	2.9	1.45
518-201	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	1.25	5.17	5.17	2.58
662-177	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0.75	1.79	1.79	0.89
662-179	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0.75	2.14	2.14	1.07
662-184	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	0.75	3.82	3.82	1.91

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
662-187	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium latifolia-Lysimachia radicans* Forest	1	3.41	3.41	1.7
280-137	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans Forest*	1.75	9.64	9.64	4.82
507-205	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans Forest*	1.25	4.12	4.12	2.06
536-339	*Acer rubrum - Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance	Proposed: *Acer rubrum - Fraxinus pennsylvanica-Liquidambar styraciflua/Chasmanthium laxum-Lysimachia radicans Forest*	0	0	0	0
122-110	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
680-123	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
702-121	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
705-122	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
708-129	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
711-128	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
721-111	*Alternanthera philoxeroides* Semipermanently Flooded Herbaceous Alliance		0	0	0	0
167-101	*Arundinaria gigantea* Temporarily Flooded Shrubland Alliance		0	0	0	0
1315-18	*Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance	*Betula nigra - Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica* Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
749-325	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	3	6.82	6.82	3.41
953-021	*Cephalanthus occidentalis* Semipermanently Flooded Shrubland Alliance	*Cephalanthus occidentalis / Carex* spp. - *Lemna* spp. Southern Shrubland	0.25	0.35	0.35	0.18
1023 1001	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0
1250-023	*Cynodon dactylon* Herbaceous Alliance		0	0	0	0
321-200	*Fraxinus caroliniana* Seasonally Flooded Forest Alliance		1.5	2.32	2.32	1.16
084-143	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
093-144	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
095-146	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
122 108	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
131-156	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
186-246	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
311-139	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0.75	1.7	1.7	0.85
662-176	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
690-218	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
698-120	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
736-169	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
743-214	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
746-324	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
764-149	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
770-126	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
805-148	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
805-163	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
807-115	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0	0	0	0
968-090	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Nyssa aquatica* Forest	0.25	1.2	1.2	0.6
026-162	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	1.5	1.82	1.82	0.91
112-221	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0.5	0.84	0.84	0.42
176-239	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
245-235	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
273-253	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	7.3	20.68	20.68	10.34
350-226	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
373-228	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0.25	0.99	0.99	0.5
676-136	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
752-150	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
805-161	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
806 166	Nyssa aquatica - (Taxodium distichum) Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0.25	0.38	0.38	0.19
807-109	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
808-222	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
813-247	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
958-091	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0.25	0.38	0.38	0.19
959-017	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0.25	50	50	25
1235-087	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	1.25	3.65	3.65	1.82
1318-17	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
1346-22	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - (Nyssa aquatica) / Forestiera acuminata - Planera aquatica* Forest	0	0	0	0
184-250	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
186-251	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
194-236	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
194-252	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
272-142	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
283-138	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
377-207	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
662-174	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
662-183	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0.5	1.27	1.27	0.64
662-189	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
662-190	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
662-191	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
681-134	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
688-165	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
705-124	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
738-152	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
743-216	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
753-151	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0	0	0	0
937-082	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	0.5	10.53	10.53	5.26

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
1219-085	*Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance	*Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana* Forest	3	10.26	10.26	5.13
1023 1002	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0
1065-1003	*Panicum virgatum* Temporarily Flooded Herbaceous	*Panicum virgatum - Panicum rigidulum - Polygonum hydropiperoides* Herbaceous Vegetation	0	0	0	0
1210-008	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
1212-006	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
1212-025	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
1213-007	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
1236-005	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
1256-042	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
1259 1000	*Paspalum notatum* Herbaceous Alliance		0	0	0	0
277-299	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0
950-065	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0.25	1.37	1.37	0.68
1123-045	*Pinus taeda - Quercus (alba, falcata ,stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0
906-028	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0
954-032	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0
1246-40	*Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance	Proposed: *Pinus taeda – Quercus* spp. Forest	0	0	0	0
040-275	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		0	0	0	0
973-034	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		0	0	0	0
1249-022	*Pinus taeda - Quercus (phellos nigra laurifolia)* Temporarily Flooded Forest Alliance		0	0	0	0
016-307	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
016-321	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
022-317	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
025-273	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
025-274	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
034-315	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0.25	2.63	2.63	1.32
038-269	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
040-271	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
043-267	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
047-265	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
047-277	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
217-260	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
265-286	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
277-284	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0.25	1.82	1.82	0.91
387-361	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0.25	1.69	1.69	0.85
728-293	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
728-294	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
797-167	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
812-264	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
825-288	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
832-282	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	2.5	10.87	10.87	5.43
834-279	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
900-027	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
929-030	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
947-031	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
962-067	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0.5	1.54	1.54	0.77
963-036	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1047-044	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1129-003	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1129-024	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1135-047	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1253-048	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1254-043	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1300-01	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1322-06	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1349-07	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
1352-14	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
1353-15	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Forest	0	0	0	0
018-308	*Pinus taeda* Alliance	Proposed: *Pinus taeda T*emporarily Flooded Forest	0	0	0	0
020-320	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
021-310	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
021-318	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
028-283	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0.25	2.28	2.28	1.14
029-272	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
036-316	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
041-268	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
045-266	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
050-360	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
081-305	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
108-254	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
221-259	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
812 263	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
812-262	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
812-276	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
818-312	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
825-287	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
911-029	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
977-069	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1124-046	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1125-001	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1145-002	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1164-056	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1193-035	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1253-041	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
1308-02	*Pinus taeda* Alliance	Proposed: *Pinus taeda* Temporarily Flooded Forest	0	0	0	0
949-039	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		0	0	0	0
1015-093	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		0.75	3.92	3.92	1.96
1086-097	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum) Temporarily Flooded Forest Alliance*		0	0	0	0
1142-101	*Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance		0	0	0	0
548-340	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
574-335	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
615-332	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
617-333	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
626-330	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
662-185	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0.5	1.05	1.05	0.53
990-061	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
1001-059	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
1074-074	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
1138-100	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
1188-072	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0	0	0	0
1199-053	Proposed: *Ilex opaca - Carpinus caroliniana* Forest Alliance	Proposed: *Ilex opaca – Carpinus caroliniana - Liquidambar styraciflua - Nyssa sylvatica* Forest	0.5	1.64	1.64	0.82
013-326	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0
728-292	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0
728-297	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
732-291	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0
748-322	Proposed: *Ilex vomitoria* Shrubland Alliance		0	0	0	0
008-328	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0
010-168	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0
027-314	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	1.75	10	10	5
135-173	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0
328-199	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	1	3.01	3.01	1.5
381-353	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0	0	0	0
607-341	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0.25	1.44	1.44	0.72
993-088	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Forest	0.5	3.6	3.6	1.8
076-170	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
158-211	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
181-304	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
211-230	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1	2.86	2.86	1.43
216-300	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
222-261	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
242-193	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
245-234	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.25	0.81	0.81	0.41
259-180	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.5	1.08	1.08	0.54

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
277-285	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
304-182	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	1	3.41	3.41	1.71
379-196	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.75	1.64	1.64	0.82
398-337	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
400-231	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
414-351	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
526 349	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
543 350	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.25	0.62	0.62	0.31
551-336	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
573-329	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
575-348	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
602-331	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.25	1.1	1.1	0.55
635-342	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.5	1.55	1.55	0.77
662-188	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
726-233	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.75	1.17	1.17	0.58
728-301	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
751-319	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
829-281	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
943-064	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
955-066	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1029-079	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1051-080	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1057-075	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.25	0.72	0.72	0.36
1077-096	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1093-073	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1146-055	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1185-092	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1186-052	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1205-076	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.5	1.46	1.46	0.73
1263-070	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1317-08	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.25	0.76	0.76	0.38
1343-16	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0.25	1	1	0.5
1344-13	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
1368-011	Proposed: *Liquidambar styraciflua* Forest Alliance	Proposed: *Liquidambar styraciflua* Temporarily Flooded Forest	0	0	0	0
053-356	Proposed: Mixed Herbaceous Alliance		0	0	0	0
057-357	Proposed: Mixed Herbaceous Alliance		0	0	0	0
059-358	Proposed: Mixed Herbaceous Alliance		0	0	0	0
069-359	Proposed: Mixed Herbaceous Alliance		0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
167-100	Proposed: Mixed Herbaceous Alliance		0	0	0	0
1214-009	Proposed: Mixed Herbaceous Alliance		0	0	0	0
1214-026	Proposed: Mixed Herbaceous Alliance		0	0	0	0
1322-05	Proposed: Mixed Herbaceous Alliance		0	0	0	0
073-106	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0
152-355	Proposed: Mixed Herbaceous Temporarily Flooded Alliance		0	0	0	0
050-249	Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance		0	0	0	0
265-298	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0
591-345	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0
982-038	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0
995-060	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0.25	1.96	1.96	0.98
1013-077	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	1.75	4.96	4.96	2.48
1180-054	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
1261-058	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0.5	3.14	3.14	1.57
1329-10	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	*Proposed: Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0
1332-012	*Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua* Temporarily Flooded Forest Alliance	Proposed: *Quercus michauxii - Quercus nigra - Liquidambar styraciflua - Carpinus caroliniana* Forest	0	0	0	0
048-213	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0.25	1.66	1.66	0.83
216-290	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0
237-197	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0.25	1.86	1.86	0.93
307-346	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0
312-141	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0.25	2.44	2.44	1.22
461-203	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0.25	0.51	0.51	0.26
515-204	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0.25	0.82	0.82	0.41
578-347	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
662 186	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1.75	10.45	10.45	5.22
730-296	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0.75	3.28	3.28	1.64
930-063	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0
1144-099	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1.75	8.93	8.93	4.46
1247-51	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	0	0	0	0
1362-020	*Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance	*Quercus laurifolia - Quercus (lyrata, phellos) - Nyssa biflora* West Gulf Floodplain Forest	1.95	6.32	6.32	3.16
028-302	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0
202-198	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0.5	0.92	0.92	0.46
387-338	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0.75	3.41	3.41	1.7
620-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	1.75	4.27	4.27	2.13

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
629-343	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0.75	1.35	1.35	0.67
728-295	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0.5	3.45	3.45	1.72
754-171	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0
811-212	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0
817-311	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0.25	0.91	0.91	0.45
920-062	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0
1043-103	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	1.75	4.27	4.27	2.13
1311-003	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0
1322-04	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
1325-09	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus nigra - Liquidambar styraciflua - (Pinus taeda) /Ilex opaca - Vaccinium fuscatum / Carex debilis* Temporarily Flooded Forest	0	0	0	0
191-306	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0
227-280	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0	0	0	0
492-202	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0.25	1.11	1.11	0.55
631-344	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0.75	1.63	1.63	0.82
978-037	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0.5	2.77	2.77	1.39
981-071	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	1.25	33.33	33.33	16.67
1220-020	Quercus (phellos, nigra, laurifolia) Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachai radicans* Forest	0.75	2.73	2.73	1.37
348-224	*Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance	*Quercus phellos - Liquidambar styraciflua / Ilex decidua - Carpinus caroliniana / Lysimachia radicans* Forest	0.25	0.5	0.5	0.25

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
037-270	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0
080-278	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0
1130-004	*Quercus alba (Quercus nigra)* Forest Alliance	*Quercus alba - Quercus hemisphaerica / Prunus caroliniana - Persea borbonia - Viburnum acerifolium* Forest	0	0	0	0
1005-078	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0.75	3.14	3.14	1.57
1055-095	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	4.5	17.86	17.86	8.93
1333-19	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0	0	0	0
1387-21	*Quercus lyrata- (Carya aquatica)* Seasonally Flooded Forest Alliance	*Quercus Lyrata – Carya aquatica* Forest	0.5	2.7	2.7	1.35
919-089	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0
961-033	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0
975-068	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0
1269-050	*Quercus nigra* Forest Alliance	Proposed: *Quercus nigra - Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum* Forest	0	0	0	0
702-133	*Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance	*Sagittaria lancifolia* Herbaceous Vegetation	0	0	0	0

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
046-244	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	4	11.08	11.08	5.54
049-243	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	0	0	0	0
311-140	*Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance	Proposed: *Taxodium distichum - Nyssa biflora / Phanopyrum gymnocarpon* Forest	1.95	7.91	7.91	3.96
049-242	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0
092-164	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0
102-145	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	2.5	4.45	4.45	2.22
130-127	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0
176-245	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0
213-227	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	4.25	6.01	6.01	3
770-125	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0	0	0	0
790-159	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0.25	0.48	0.48	0.24
813-240	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0.25	0.53	0.53	0.27
833-354	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0.5	4	4	2
905-083	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1.5	2.82	2.82	1.41
1021-086	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1.25	20.83	20.83	10.42
1094-102	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	1.75	4.58	4.58	2.29

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
1211-016	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	0.25	1.04	1.04	0.52
1217-014	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	4	8.84	8.84	4.42
1268-015	*Taxodium distichum* Semipermanently Flooded Forest Alliance	*Taxodium distichum / Lemna minor* Forest	5.25	24.71	24.71	12.35
117-257	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
120 223	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
125-113	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
682-132	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
684-327	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
705-118	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
713-117	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
714-130	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
715-232	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
722-154	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
792-147	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
813-241	*Taxodium distichum* Tidal Woodland Alliance	Proposed: *Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea* Woodland	0	0	0	0
032-313	*Triadica sebifera* Forest Alliance		4.75	17.76	17.76	8.88
291-352	*Triadica sebifera* Forest Alliance		0.75	2.01	2.01	1.01
1098-049	*Triadica sebifera* Forest Alliance		0.75	2.2	2.2	1.1
1132-057	*Triadica sebifera* Forest Alliance		0	0	0	0
019-172	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.25	1.49	1.49	0.75
020-309	*Triadica sebifera* Seasonally Flooded Forest Alliance		1.25	1.89	1.89	0.95
046-248	*Triadica sebifera* Seasonally Flooded Forest Alliance		5.75	15.54	15.54	7.77
186-238	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0
187-237	*Triadica sebifera* Seasonally Flooded Forest Alliance		1.5	6.09	6.09	3.04
215-289	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0
221-258	*Triadica sebifera* Seasonally Flooded Forest Alliance		5.75	25.27	25.27	12.64
229-255	*Triadica sebifera* Seasonally Flooded Forest Alliance		2	26.67	26.67	13.33
252-206	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.25	0.76	0.76	0.38
393-229	*Triadica sebifera* Seasonally Flooded Forest Alliance		2	7.41	7.41	3.7
394-225	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.5	1.47	1.47	0.74
456-192	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.75	1.6	1.6	0.8
480-210	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0
566-209	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.75	1.82	1.82	0.91
662-175	*Triadica sebifera* Seasonally Flooded Forest Alliance		1.5	2.21	2.21	1.11
662-178	*Triadica sebifera* Seasonally Flooded Forest Alliance		4.5	10.4	10.4	5.2
699-217	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.25	0.53	0.53	0.27
724-220	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.25	0.4	0.4	0.2
743-215	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0
786-160	*Triadica sebifera* Seasonally Flooded Forest Alliance		2.75	6.24	6.24	3.12
813-323	*Triadica sebifera* Seasonally Flooded Forest Alliance		1.5	2.67	2.67	1.34
1020-084	*Triadica sebifera* Seasonally Flooded Forest Alliance		3.75	27.88	27.88	13.94
1032-098	*Triadica sebifera* Seasonally Flooded Forest Alliance		1.75	4.76	4.76	2.38
1099-049	*Triadica sebifera* Seasonally Flooded Forest Alliance		1	2.82	2.82	1.41
1152-018	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0
1192-081	*Triadica sebifera* Seasonally Flooded Forest Alliance		0.75	4.23	4.23	2.11

Table D-2F
Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area
Summary of Herbaceous Layer

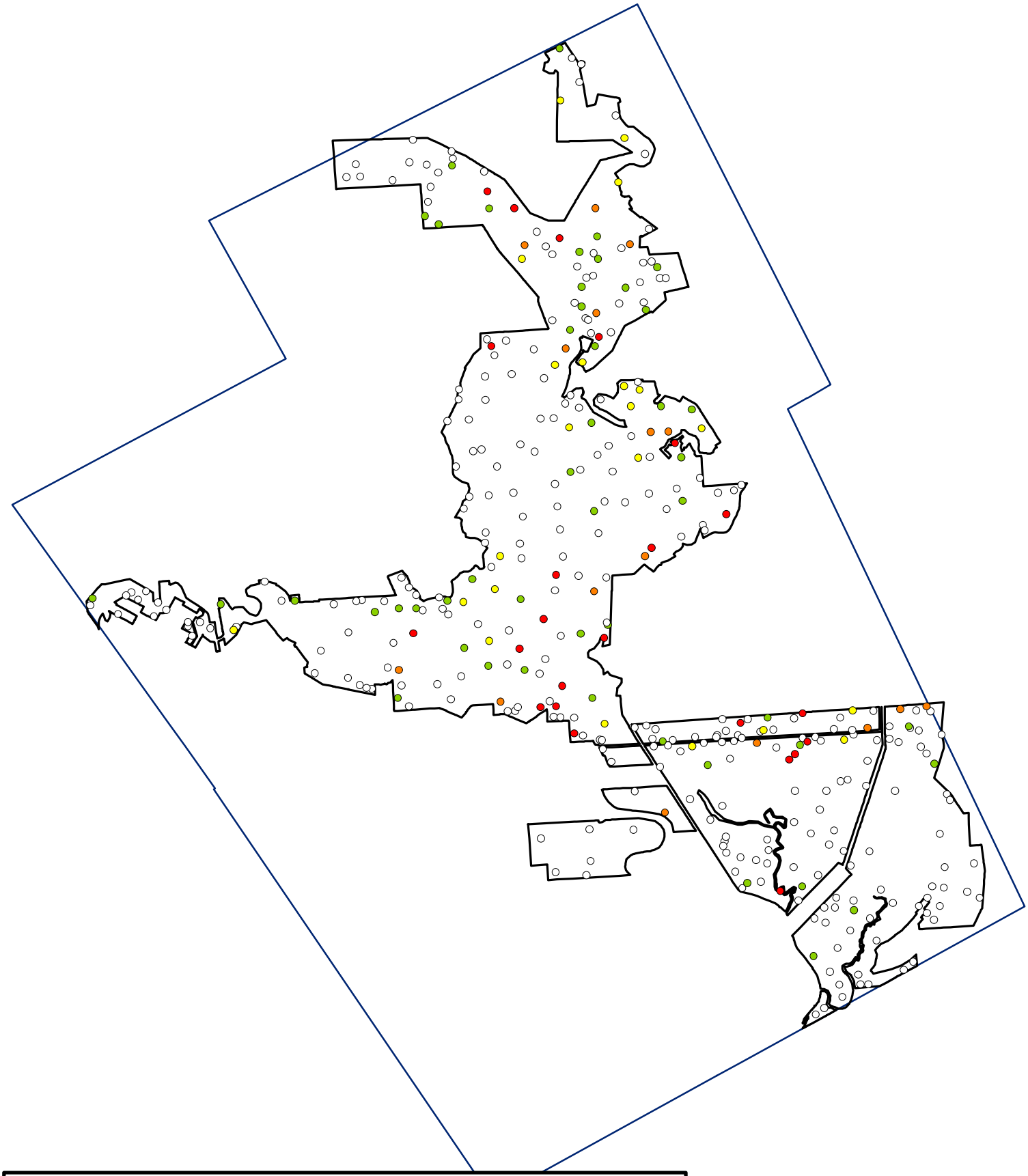
Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
1218-019	*Triadica sebifera* Seasonally Flooded Forest Alliance		2.25	3.18	3.18	1.59
1224-010	*Triadica sebifera* Seasonally Flooded Forest Alliance		2	11.59	11.59	5.8
1229-011	*Triadica sebifera* Seasonally Flooded Forest Alliance		2	5.08	5.08	2.54
1230-012	*Triadica sebifera* Seasonally Flooded Forest Alliance		1.5	7.5	7.5	3.75
1231-013	*Triadica sebifera* Seasonally Flooded Forest Alliance		0	0	0	0
055-104	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
058-102	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
066-105	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
068-103	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
111-114	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
122-107	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
123-219	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
704-135	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
705-119	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
709-131	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
720-155	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
721-112	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
739-153	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
758-157	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
777-158	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0

Table D-2F

Vegetation Sample Plots of *Triadica sebifera* in the Herbaceous Stratum within Project Mapping Area

Summary of Herbaceous Layer

Plot ID	Alliance	Association	Dominance (ground coverage %)	Relative Dominance [%]	Modified Importance Value	M.I.F. [%]
807-116	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0
809-256	*Zizaniopsis miliacea* Tidal Herbaceous Alliance	*Zizaniopsis miliacea* Tidal Herbaceous Vegetation	0	0	0	0



Appendix D: Map A

Triadica sebifera Overall IV (%)

1:97,320

Legend

Overall IV (%)

- 0.000000
- 0.000001 - 2.307000
- 2.307001 - 4.153000
- 4.153001 - 7.051000
- 7.051001 - 9.915000

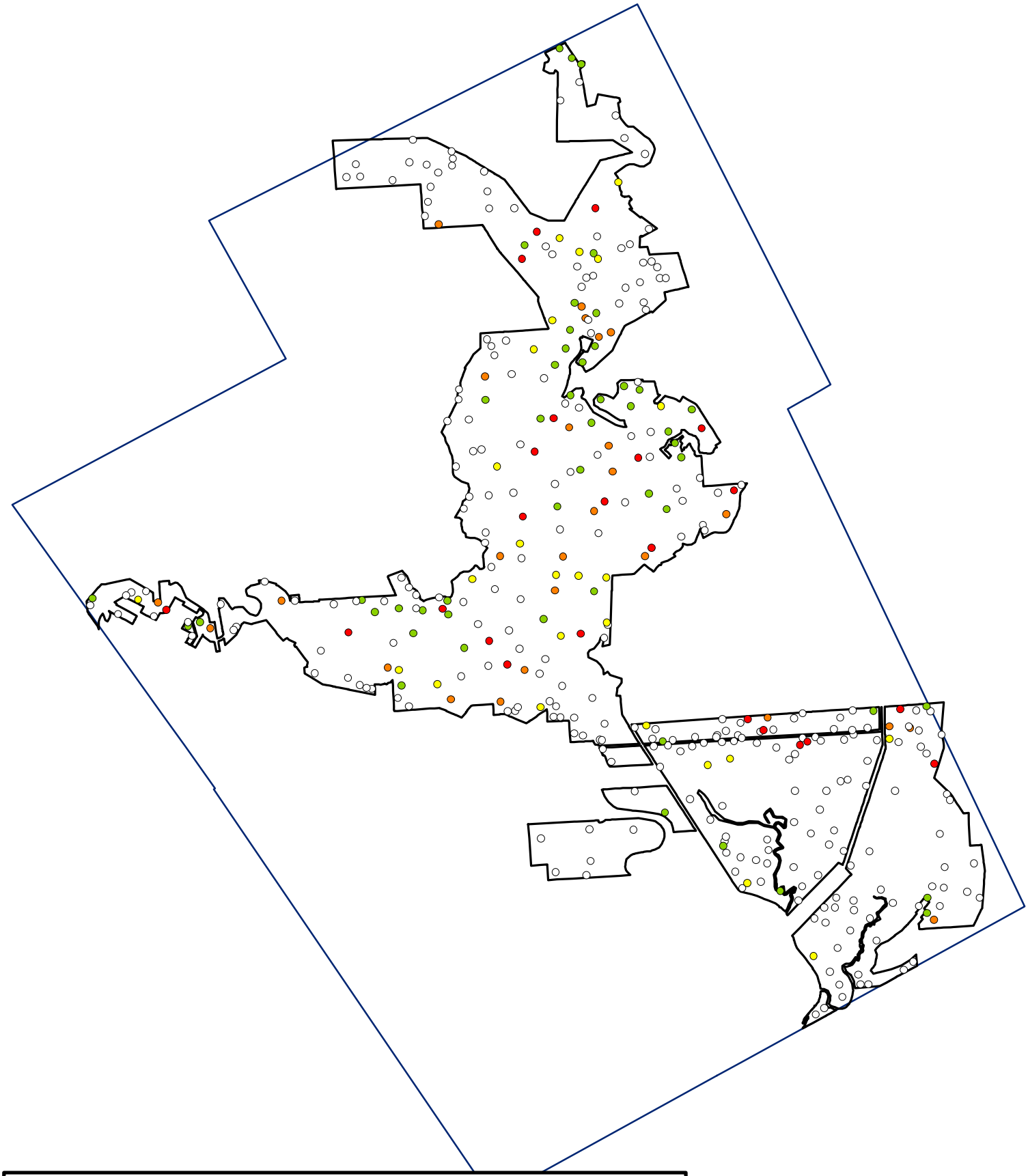
Big Thicket National Preserve Boundary

Rivers Edge 3D Project Outline

0 0.5 1 2 3 4 5 Miles

N

Map Produced By
Dixie Environmental Services Co., LP
November 9, 2011



Legend

Herb M.I.F.

- 0.000000
- 0.000001 - 2.290000
- 2.290001 - 4.200000
- 4.200001 - 6.800000
- 6.800001 - 9.800000

Big Thicket National Preserve Boundary

Rivers Edge 3D Project Outline

Appendix D: Map B

Triadica sebifera Herb M.I.F.

1:97,320

N

Map Produced By
Dixie Environmental Services Co., LP
November 9, 2011

0 0.5 1 2 3 4 5 Miles

Table D4

Summary of Overstory Layer
Alliance vs. Species Importance Value
Within the Beaumont Unit of the BTNP, Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Genus species	Non-Herbaceous Alliances																				
	***Pinus taeda* Forest Alliance**	***Ace rubrum Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**	***Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance**	***Fraxinus caroliniana* Seasonally Flooded Forest Alliance**	***Liquidambar styraciflua* Alliance**	***Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance**	***Platanus occidentalis- (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance**	***Quercus(michauxii, pagoda, shumardii)-Liquidambar styraciflua* Temporarily Flooded Forest Alliance**	***Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance**	***Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**	***Quercus alba (Quercus nigra)* Forest Alliance**	***Quercus lyrata - (Carya aquatica)* Seasonally Flooded Forest Alliance**	***Quercus nigra* Forest Alliance**	***Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance**	***Taxodium distichum* Semipermanently Flooded Forest Alliance**	***Triadica sebifera* Forest Alliance**	***Triadica sebifera* Seasonally Forest Flooded Alliance**	***Pinus taeda - Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**	***Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance**	***Ilex opaca - Carpinus caroliniana* Forest Alliance**	***Taxodium distichum* Tidal Woodlands Alliance**	***Ilex vomitoria* Shrubland Alliance**
Importance Value	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Acer rubrum var. rubrum	0.23	4.57			1.49			1.29	4.18	0.57				4.47			1.93				
Acer rubrum var. drummondii		19.57			1.58	2.13	5.23	1.53	3.64	0.56		4.26			5.77		2.04				
Baccharis halimifolia																					
Betula nigra			36.3			0.86	7.75	1.29		0.55					1.2		0.56				
Carya aquatica		5.11			1.47	1.12	9.56	1.56		2.87		18.47					3.72			3.45	
Carpinus caroliniana	1.7	1.72			9.79		5.36	10.99		7.86	4.89	4.04	4.68		3.07	7.88	3.87			13.48	23.09
Celtis laevigata	0.73				0.56		11.92			1.41										2.23	
Forestiera acuminata																					
Fraxinus caroliniana		1.81		41.33	0.26	4.09				0.73					1.36		1.83				
Fraxinus pennsylvanica		12.53			0.59	0.66				1.15							0.66				
Ilex opaca	1.77	0.82			4.38			7.34		3.04					1.32	3.72		4.44	1.88	36.79	5.52
Ilex vomitoria																				1.47	25.35

Table D4

Summary of Overstory Layer
Alliance vs. Species Importance Value
Within the Beaumont Unit of the BTNP, Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Genus species	Non-Herbaceous Alliances																				
	***Pinus taeda* Forest Alliance**	***Ace rubrum Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**	***Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance**	***Fraxinus caroliniana* Seasonally Flooded Forest Alliance**	***Liquidambar styraciflua* Alliance**	***Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance**	***Platanus occidentalis- (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance**	***Quercus(michauxii, pagoda, shumardii)-Liquidambar styraciflua* Temporarily Flooded Forest Alliance**	***Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance**	***Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**	***Quercus alba (Quercus nigra)* Forest Alliance**	***Quercus lyrata - (Carya aquatica)* Seasonally Flooded Forest Alliance**	***Quercus nigra* Forest Alliance**	***Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance**	***Taxodium distichum* Semipermanently Flooded Forest Alliance**	***Triadica sebifera* Forest Alliance**	***Triadica sebifera* Seasonally Forest Flooded Alliance**	***Pinus taeda - Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**	***Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance**	***Ilex opaca - Carpinus caroliniana* Forest Alliance**	***Taxodium distichum* Tidal Woodlands Alliance**	***Ilex vomitoria* Shrubland Alliance**
Liquidambar styraciflua	9.42	5.85	27.53		42.3	0.51	6.51	9.88	6.63	15.77		10.4	20.15		2.63	23.78	6.68	4.87	10.31	9.53		6.06
Nyssa aquatica				12.63	0.6	47.48								5.8	1.17		0.47				4.02	
Nyssa biflora		1.68				0.24			8.63					40.12	1.61		0.91			3.44		
Nyssa sylvatica	2.97	3.81			11.24	0.24		8.07		6.5		7.85	4.41				1.83		6.26	9.54		
Ostrya virginiana						0.24					10.79					3.27						
Persia borbonia	0.53																			1.07		13.17
Pinus taeda	62.42				1.31			3.06		4.67	10.28		10.77			10.7		39.84	28.3			7.15
Planera aquatica		5.66			0.25	1.91		1.39		0.6							33.76					
Platanus occidentalis							27.73															
Quercus alba	0.62				0.29					0.57									5.85			
Quercus falcata	1.08				0.26			2.39		0.83	7.12					5.29			13.2			
Quercus hemisphaerica											51.04								9.16			
Quercus laurifolia	2.36	2.24			4.71	0.53	4.13	1.88	6.85	9.19				4.74			2.29	26				
Quercus lyrata		4.18			1.3	0.58			7.01	0.56		27.15					1.48			1.27		
Quercus michauxii					0.26			19.73		0.55								4.71	6.46	3.54		
Quercus nigra	6.28	2.75			3			18.18	5.9	21.74			51.11		1.1			8.33	9.48	5.38		

Table D4

Summary of Overstory Layer
Alliance vs. Species Importance Value
Within the Beaumont Unit of the BTNP, Hardin, Jasper, Jefferson, and Orange Counties, April-June 2011

Genus species	Non-Herbaceous Alliances																					
	***Pinus taeda* Forest Alliance**	***Ace rubrum Fraxinus pennsylvanica* Seasonally Flooded Forest Alliance**	***Betula nigra - (Platanus occidentalis)* Temporarily Flooded Forest Alliance**	***Fraxinus caroliniana* Seasonally Flooded Forest Alliance**	***Liquidambar styraciflua* Alliance**	***Nyssa aquatica - (Taxodium distichum)* Semipermanently Flooded Forest Alliance**	***Platanus occidentalis- (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)* Temporarily Flooded Forest Alliance**	***Quercus(michauxii, pagoda, shumardii)-Liquidambar styraciflua* Temporarily Flooded Forest Alliance**	***Quercus (phellos, laurifolia)* Seasonally Flooded Forest Alliance**	***Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**	***Quercus alba (Quercus nigra)* Forest Alliance**	***Quercus lyrata - (Carya aquatica)* Seasonally Flooded Forest Alliance**	***Quercus nigra* Forest Alliance**	***Taxodium distichum - Nyssa (aquatica, biflora, ogeche)* Seasonally Flooded Forest Alliance**	***Taxodium distichum* Semipermanently Flooded Forest Alliance**	***Triadica sebifera* Forest Alliance**	***Triadica sebifera* Seasonally Forest Flooded Alliance**	***Pinus taeda - Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance**	***Pinus taeda - Quercus (alba, falcata, stellata)* Forest Alliance**	***Ilex opaca - Carpinus caroliniana* Forest Alliance**	***Taxodium distichum* Tidal Woodlands Alliance**	***Ilex vomitoria* Shrubland Alliance**
Quercus phellos	1.09				1.96				40.31	10.17							0.47					
Quercus stellata	0.71												4.37						3.24			
Taxodium distichum		5.33	36.16	27.55	1.54	35.92			4.92					35.82	59.1		1.84				95.98	
Triadica sebifera	4.98	12.17		18.49	4.54	2.58	11.43	3.43	7.91	4.16		11.71	4.5	9.05	10.14	38.61	29.15	11.82	1.94	4.25		
Ulmus americana					2	0.27		1.57				16.12			5.54		1.94					
Total % in each alliance on table	**97**	**90**	**100**	**100**	**96**	**99**	**90**	**94**	**96**	**94**	**84**	**100**	**100**	**100**	**94**	**93**	**95**	**100**	**96**	**95**	**100**	**80**

APPENDIX E

ALLIANCE AND ASSOCIATION PHOTOGRAPH GALLERY

Representative Photographs of Alliance Classifications



[Photo 1-1] ***Pinus taeda*** **Forest Alliance**
Proposed: ***Pinus taeda*** **Forest**



[Photo 1-2] ***Pinus taeda*** **Forest Alliance**
Proposed: ***Pinus taeda*** **Temporarily Flooded Forest**



[Photo 2] ***Acer rubrum – Fraxinus pennsylvanica*** **Seasonally Flooded Forest Alliance**
Proposed: ***Acer rubrum – Fraxinus pennsylvanica – Liquidambar styraciflua / Chasmanthium latifolium – Lysimachia*** **Radicans Forest**



[Photo 3] ***Betula nigra – (Platanus occidentalis)*** **Temporarily Flooded Forest Alliance**
Betula nigra – Platanus occidentalis / Alnus serrulata / Boehmeria cylindrica **Forest**



[Photo 4] ***Fraxinus caroliniana*** **Seasonally Flooded Forest Alliance**



[Photo 5-1] ***Liquidambar styraciflua*** **Forest Alliance**
Proposed: ***Liquidambar styraciflua*** **Forest**



[Photo 5-2] ***Liquidambar styraciflua*** **Forest Alliance**
Proposed: ***Liquidambar styraciflua*** **Temporarily Flooded Forest**



[Photo 6-1] ***Nyssa aquatica – (Taxodium distichum)*** **Semipermanently Flooded Forest Alliance**
Nyssa aquatica **Forest**



[Photo 6-2] ***Nyssa aquatica – (Taxodium distichum)*** **Semipermanently Flooded Forest Alliance**
Taxodium distichum – Nyssa aquatica / Fraxinus caroliniana **Forest**



[Photo 6-3] ***Nyssa aquatica – (Taxodium distichum)*** **Semipermanently Flooded Forest Alliance**
Taxodium distichum – (Nyssa aquatica) / Forestiera acuminata – Planera aquatica **Forest**



[Photo 7] ***Platanus occidentalis – (Fraxinus pennsylvanica, Celtis laevigata, Acer saccharinum)*** **Temporarily Flooded Forest Alliance**



[Photo 8] ***Quercus (michauxii, pagoda, shumardii) – Liquidambar styraciflua*** **Temporarily Flooded Forest Alliance**

Proposed: ***Quercus michauxii – Quercus nigra – Liquidambar styraciflua / Carpinus caroliniana*** **Forest**



[Photo 9] ***Quercus (phellos, laurifolia)*** **Seasonally Flooded Forest Alliance**
Quercus laurifolia – Quercus (lyrata, phellos) – Nyssa biflora **West Gulf Floodplain Forest**



[Photo 10-1] ***Quercus (phellos, nigra, laurifolia)*** **Temporarily Flooded Forest Alliance**
Quercus phellos – Liquidambar styraciflua / Ilex decidua – Carpinus caroliniana / Lysimachia radicans **Forest**



[Photo 10-2] ***Quercus (phellos, nigra, laurifolia)*** **Temporarily Flooded Forest Alliance**
Quercus nigra – Liquidambar styraciflua – (Pinus taeda) / Ilex opaca – Vaccinium fuscatum / Carex debilis **Temporarily Flooded Forest Association**



[Photo 11] ***Quercus alba (Quercus nigra)*** **Forest Alliance**
Quercus alba – Quercus hemisphaerica / Prunus caroliniana – Persea borbonia – Viburnum acerifolia **Forest**



[Photo 12] ***Quercus lyrata – (Carya aquatica)*** **Seasonally Flooded Forest Alliance**
Quercus lyrata – Carya aquatica **Forest**



[Photo 13] ***Quercus nigra*** **Forest Alliance**
Proposed: ***Quercus nigra – Liquidambar styraciflua – (Pinus taeda) / Chasmanthium laxum*** **Forest**



[Photo 14] ***Taxodium distichum – Nyssa (aquatica, biflora, ogeche)*** **Seasonally Forest Alliance**
Proposed: ***Taxodium distichum – Nyssa biflora / Phanopyrum gymnocarpon*** **Forest**



[Photo 15] ***Taxodium distichum*** **Semipermanently Flooded Forest Alliance**
Taxodium distichum / Lemna minor **Forest**



[Photo 16] ***Triadica sebifera*** **Forest Alliance**



[Photo 17] ***Triadica sebifera*** **Seasonally Flooded Forest Alliance**



[Photo 18] ***Pinus taeda – Quercus (phellos, nigra, laurifolia)*** **Temporarily Flooded Forest Alliance**



[Photo 19] ***Pinus taeda – Quercus (alba, falcata, stellata)*** **Forest Alliance**
Proposed: ***Pinus taeda – Quercus spp.*** **Forest**



[Photo 20] ***Ilex opaca – Carpinus caroliniana*** **Forest Alliance**
Proposed: ***Ilex opaca – Carpinus caroliniana – Liquidambar styraciflua – Nyssa sylvatica*** **Forest**



[Photo 21] ***Taxodium distichum*** **Tidal Woodland**
Proposed: ***Taxodium distichum / Alternanthera philoxeroides - Zizaniopsis miliacea*** **Tidal Woodland**



[Photo 22] ***Arundinaria gigantea*** **Temporarily Flooded Shrubland Alliance**



[Photo 23] ***Cephalanthus occidentalis*** **Semipermanently Flooded Forest Alliance**
Cephalanthus occidentalis / Carex spp. – Lemna spp**. Southern Shrubland**



[Photo 24] Proposed: *Ilex vomitoria* Shrubland Alliance



[Photo 25] *Cynodon dactylon* Herbaceous Alliance



[Photo 26] ***Panicum virgatum*** **Temporarily Flooded Herbaceous Alliance**
Panicum virgatum – Panicum rigidulum – Polygonum hydropiperoides **Herbaceous Vegetation**



[Photo 27] ***Paspalum notatum*** **Herbaceous Alliance**



[Photo 28] Proposed: *Rhynchospora corniculata* Seasonally Flooded Herbaceous Alliance



[Photo 29] *Zizaniopsis miliacea* Tidal Herbaceous Alliance
***Zizaniopsis miliacea* Tidal Herbaceous Vegetation**



[Photo 30] ***Alternanthera philoxeroides*** **Semipermanently Flooded Herbaceous Alliance**



[Photo 31] ***Sagittaria lancifolia*** **Semipermanently Flooded Herbaceous Alliance**
Sagittaria lancifolia **Herbaceous Vegetation**



[Photo 32] Proposed: Mixed Herbaceous Alliance



[Photo 33] Proposed: Mixed Herbaceous Temporarily Flooded Forest Alliance



[Photo 34] ***Eleocharis cellulosa*** **Herbaceous Vegetation**



[Photo 35] ***Schoenoplectus californicus*** **Tidal Herbaceous Vegetation**



[Photo 36] ***Typha latifolia*** **Semipermanently Flooded Herbaceous Alliance**

***Photographs are unavailable for the following three vegetation communities.**

Planera aquatica **Seasonally Flooded Forest**
Salix nigra **Temporarily Flooded Forest**
Typha latifolia **Semi-permanently Flooded Herbaceous Vegetation**

APPENDIX F

VEGETATION ALLIANCE MAPS