

**Natural vegetation of the Carolinas:
Classification and description of
plant communities of Brunswick County, NC and vicinity**

A report prepared for the Ecosystem Enhancement Program, North Carolina Department of Environment and Natural Resources in partial fulfillments of contract D07042.

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INTRODUCTION

Brunswick County is located in the southeastern corner of North Carolina, where it forms a border with South Carolina to the southwest. To the south, the county is bordered by the Atlantic Ocean. The eastern and western lines of the county are formed by the Cape Fear and Waccamaw Rivers, respectively. A significant portion of the northern tier of Brunswick County is composed of the Green Swamp—a large expanse of upland pine savannas, flatwoods, and pocosins formed on a terrace below Lake Waccamaw. The Green Swamp drains the two major rivers of Brunswick County, the Waccamaw and Cape Fear. The diversity of plant communities throughout Brunswick County cannot be overstated. Terrestrial, riverine, and nonriverine wetland natural communities form a large proportion of the land coverage within this part of the state. Furthermore, coastal fringe or maritime vegetation occupies the landscape in the extreme southern portion of the county.

The far southeastern section of the coastal fringe zone is home to one of the largest expanses of maritime ponds in the eastern United States. Many of these ponds were formed as a result of limestone weathering—specifically the deposits being dissolved by water, and “falling through” underlying weakly consolidated marine shell deposits. These limesinks are composed of a diversity of flora, and each pond is seemingly unique from the next. This diversity of limesink communities makes it difficult to classify them into existing hierarchical bins. The relationships between plant composition and environmental variables are poorly understood in these communities, but their prominence in this county makes them ideal for developing a limesink classification scheme.

Barrier islands stretch across Brunswick County from the southeast corner at Bird Island to the southwest corner at Bald Head Island. Although no more than 2 to 3 kilometers in width, these islands provide for a diversity of maritime vegetation communities, including tidal salt marshes, hypersaline sand flats, foredunes, backdunes and interdune swales. The ever-demanding pressures of beachfront development along this section of North Carolina have resulted in rapid disappearance of these rare and unique communities.

The brownwater and blackwater alluvial communities found throughout Brunswick County are also of interest. The Cape Fear River forms the major riverine drainage outlet for eastern Brunswick County. Along the river, there is a mosaic of alluvial-influenced plant communities, such as levee and terrace forests, rich mesic slope forests, floodplain hardwood swamps, and cypress swamps. The banks of the southern section of the river are composed of brackish and salt water marshes. The majority of watersheds in the western section of Brunswick County are drained by the Waccamaw River. Flowing south from Lake Waccamaw in Columbus County, the Waccamaw River is a blackwater river that has a floodplain reminiscent of larger Piedmont – Coastal Plain brownwater rivers. A mosaic of blackwater swamps and brownwater levee communities can be found throughout the Brunswick County section of this river.

The Carolina Vegetation Survey conducted an initial inventory of natural communities within Brunswick County and surrounding areas in July 2005. In spite of numerous floristic inventories, and an understanding of the unique aggregation of Outer Coastal Plain vegetation communities, there had

never been a project designed to classify the diversity of natural communities throughout Brunswick County entire. The objectives of the study were to define and characterize the vegetation of this unique, but poorly described area of the state. Furthermore, the data captured from these plots will enable us to refine the community classification within the broader region. The goal of this report is to determine a classification structure based on the synthesis of vegetation data obtained from the July 2005 plots, and to use the resulting information to develop restoration targets for disturbed ecosystems located in this general region.

STUDY AREA AND FIELD METHODS

During July 2005, a total of 86 vegetation plots were established in and around Brunswick County, North Carolina (Figure 1). Focus locations within the study area included Military Ocean Terminal Sunny Point (MOTSU), Carolina Beach State Park, Bald Head Island, Bird Island, Zeke's Island Estuarine Research Reserve (North Island), Upper Waccamaw River swamp, Waccamaw Island savanna, Juniper Creek, Lewis Ocean Bay (in South Carolina), and The Green Swamp.

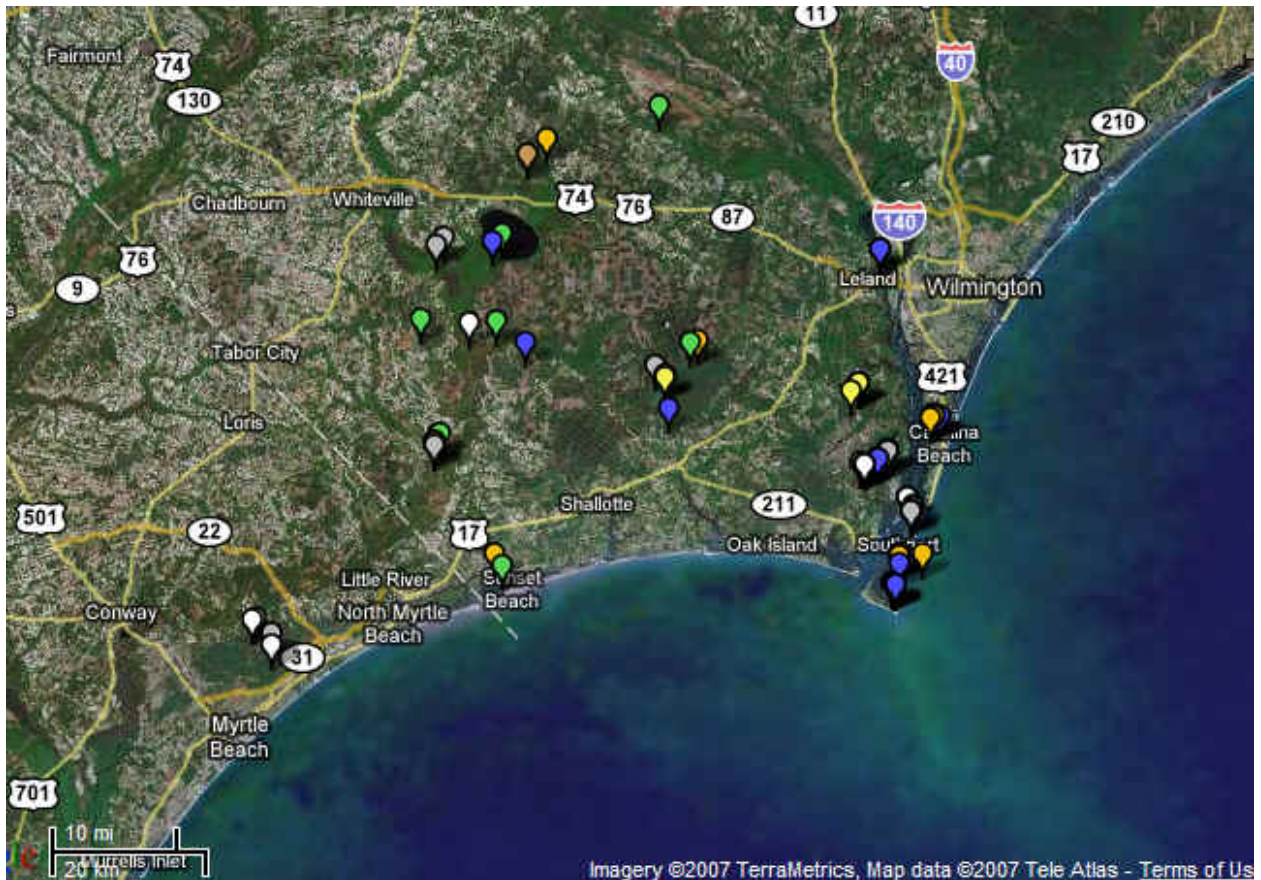


FIGURE 1. Pulse 2005b sample region and established plots: (Map courtesy of VegBank: http://vegbank.org/vegbank/views/map_userplots.jsp?latlongfile=http://www.bio.unc.edu/faculty/peet/lab/ CVS/maps/64-points.csv)

Target natural communities included brownwater and blackwater alluvial hardwood forests, upland hardwood forests, blackwater river cypress and gum swamps, pocosins, pond pine woodlands, depression wetlands, small stream systems, freshwater and brackish marshes, coastal dunes and grasslands, longleaf pine savannas, and Atlantic white cedar swamps.

Vegetation was sampled following the North Carolina Vegetation Survey protocol described in Peet et al. (1998) and data collected conformed to established and proposed federal standards (see: Jennings et al. 2007, and Federal Geographic Data Committee 2007) (<http://www.fgdc.gov/standards/projects/FGDC-standards-projects/vegetation/index.html>). Plots were subjectively located to best capture the composition of the target plant community. Each plot contained from 1 to 10 100 m² modules, the number reflecting the area of visually homogeneous vegetation available to sample. Species presence was recorded across a logarithmic sequence of subplot sizes including 0.01, 0.1, 1, 10, 100, and, where sufficient modules were sampled, 400 and 1000 m². Species cover was recorded individually for up to 4 intensively sampled modules (those containing the nested subplots), and overall cover for the plot was also recorded for species not found in intensively sampled modules. Soil samples were collected and sent to Brookside Laboratories for analysis. Soil nutrients were extracted by the Mehlich III technique. Mean soil nutrient and texture values are summarized by community in Appendix 1. Tree stems were recorded for each plot by diameter.

VEGETATION CLASSIFICATION

Plots were classified to association following the US National Vegetation Classification (NVC) standard (Grossman et al. 1998, Jennings et al. 2006) and the Carolina Vegetation Survey's "Vegetation of the Carolinas" project (<http://cvs.bio.unc.edu/vegetation.htm>). The 'association' is defined as a group of plots having similar species composition, structure, and habitat. Plot assignment was accomplished through a qualitative assessment of vegetation composition, landscape position, hydrologic regime, and soil characteristics. The associations were grouped into higher categories following the classification hierarchy developed by the "Vegetation of the Carolinas" project and include the Formation (e.g., Coastal Plain lowland evergreen forests and shrublands) and Ecological Group (e.g., White cedar forests) levels. The lowest, finest level of the classification scheme used was the NVC association.

Where possible, plots were assigned to an NVC association, identified by association name and unique CEGL identifier. Also, a degree of fit was applied to the classification scheme based on the plot's correspondence with its assigned association. The 5-level scale of fit we employ conforms to that the standards employed by the VegBank archive and the proposed US Federal standards (see Jennings et al. 2007): Excellent, Good, Fair, Poor (similar but wrong), and Bad (unambiguously wrong). In some cases it was necessary to assign a plot to more than one community because of its intermediate character. In 50 of the 86 cases (see Appendix 2), the fit was either fair or poor, suggesting a need for numerous revisions of the NVC to better represent the vegetation of this part of North Carolina. Furthermore, 6 plots (5 MOTSU limesinks and 1 *Pinus taeda* – *Quercus virginiana* Forest at Sunset Beach Woodstork Pond) could not be placed in any NVC association due to their unique vegetation composition.

For each community type to which we assigned plots, we provide a brief summary. We also provide hotlinks (with the CEG codes) to the formal descriptions of these types in the National Vegetation Classification. Where the fit is weak or poor, we briefly explain the problem. Composition is shown in detail in Appendix 3 where the prevalent species (most frequent species with the number equal to the average number of species per 100 m² plot) are listed by constancy among plots, and mean percent cover where present. Average cover class was calculated using the geometric mean of the true cover range for each cover class. Vegetation that was novel or failed to fit well in established associations of the National Vegetation Classification are summarized in Appendix 2. Botanical nomenclature follows Weakley (2006).

Our classification yielded assignments to 51 high-order community associations, from 29 Ecological Groups and 15 Formations. A community characterization is presented for each association below. Names are based on the naming system used in the U.S. National Vegetation Classification (NatureServe 2007). Names reflect species with high constancy and high cover; a “-” separates species within the same vertical strata, while a “/” separates species of different strata.

ASSOCIATIONS

I. Coastal Plain fire-maintained woodlands

A. Wet-Mesic Pine Savannas and Flatwoods

1) *Pinus palustris* / *Ilex glabra* / *Aristida stricta* Woodland (CEGL003648)

NVC Fit = Good

Plots = 064-09-0955

This is a wet flatwoods community of the Atlantic Coastal Plain, dominated by an open canopy of *Pinus palustris*. The shrub stratum is also open and composed of *Ilex glabra* and *Clethra alnifolia*. Low shrubs, such as *Vaccinium crassifolium* and *Vaccinium tenellum*, are found in high densities within the herbaceous strata. Other species include *Aristida stricta*, *Pteridium aquilinum* var. *pseudocaudatum*, *Gaylussacia frondosa*, *Dichantheium portoricense*, and *Scleria ciliate* var. *glabra*. This community type requires frequent fire to maintain longleaf pine regeneration and reduce the invasion of hydric site species, like *Pinus serotina*.

B. Dry-Mesic Pine-Oak Woodlands

1) *Pinus palustris* / *Quercus laevis* - *Quercus geminata* / *Vaccinium tenellum* / *Aristida stricta* Woodland (CEGL003589)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.688575

NVC Fit = Excellent

Plots = 064-04-0958

This xeric pine-oak dominated woodland occurs on the Outer Coastal Plain of North and South Carolina. The open canopy is dominated by a combination of *Pinus palustris*, *Quercus geminata*, and *Quercus laevis*. These scrub oaks also dominated the shrub stratum of this community type. The herbaceous stratum is dominated by grasses (*Aristida stricta* and *Arundinaria tecta*) and



ericads (*Gaylussacia dumosa* var. *dumosa*, *Lyonia mariana*, and *Vaccinium tenellum*). Other species found with high frequency in the herb stratum include *Cnidocclus stimulosus*, *Rhynchospora megalocarpa*, and *Sassafras albidum*. As evidenced by this plot, decreasing historic fire frequencies in these communities lead to codominance of scrub oak species in the canopy.

II. Coastal Plain Brownwater River Forests

A. Brown-water Swamp Forests

1) *Taxodium distichum* – *Nyssa aquatica* / *Fraxinus caroliniana* Forest (CEGL007431)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.686827

NVC Fit = Good

Plots = 064-02-0956

This backswamp community of high-quality brownwater rivers of the Atlantic Coastal Plain is typically composed of a canopy of *Taxodium distichum*, *Nyssa aquatica*, and *Acer rubrum*. This community type is semipermanently flooded, and can include a floating vegetation stratum of such species as *Spirodela polyrhiza* and *Nymphiodes aquatica*. Species found in the herbaceous stratum include *Bidens frondosa*, *Triadenum walteri*, and *Boehmeria cylindrica*. Overall, the herbs are sparse in

this community type. This plot was located along a low wet slough of the Cape Fear River in southern Bladen County. Soils in this community type are usually saturated due to river flooding.

2) *Taxodium distichum* / *Lemna minor* Forest (CEGL002420)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.683252

NVC Fit = Poor

Plots = 064-04-0963

This pond cypress saturated woodland is found along a small pond off of Governors Creek within MOTSU. The open canopy is composed solely of relatively short (<20 meter) *Taxodium ascendens*. This community type experiences a permanently flooded hydrologic regime. Floating and submerged aquatic vegetation are found throughout the plot. Species include *Lemna minor*, *Lemna trisulca*, and *Utricularia juncea*. A shrub stratum exists composed of *Cephalanthus occidentalis* and *Ilex glabra*. The herbaceous stratum is dominated by *Hydrocotyle ranunculoides*. This plot is quite unique from the NVC description for this community type. The NVC describes this community as having a monotypic canopy of *Taxodium distichum*. Furthermore, the canopy coverage is large enough to describe this community as a forest (cover values typically > 60%), but in this plot, canopy coverage is only 15%.



3) No described community type

NVC Fit = n/a

Plots = 064-08-0954

This floodplain community is found along Slap Swamp, north of Lake Waccamaw in northern Columbus County. The canopy is mixture of species typifying both brownwater swamp and blackwater forests. These include *Acer rubrum*, *Quercus laurifolia*, *Ulmus americana* var. *americana*, *Persea palustris*, *Liquidambar styraciflua*, *Taxodium ascendens*, and *Nyssa biflora*. The shrub open stratum is dominated by *Fraxinus caroliniana* and *Lyonia lucida*. The herbaceous stratum is highly diverse and includes *Carex intumescens* var. *intumescens*, *Carex lonchocarpa*, *Carex louisianica*, *Rhynchospora miliacea*, *Triadenum walteri*, and *Arundinaria gigantea*.

III. Coastal Plain blackwater river forests

A. Black-water Swamp Forests

1) *Nyssa biflora* - *Liquidambar styraciflua* / *Glyceria septentrionalis* - *Hydrocotyle ranunculoides* Forest (CEGL007743)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.685751

NVC Fit = Good

Plots = 064-03-0956

This swamp forest of the Atlantic Coastal Plain is composed of a canopy of *Nyssa biflora*, *Liquidambar styraciflua*, *Acer rubrum*, and *Fraxinus pennsylvanica*. Subcanopy associates include *Ilex opaca* var. *opaca*, *Magnolia virginiana* var. *virginiana*, and *Ulmus americana* var. *americana*. The shrub stratum is absent in this specific plot, while the herbaceous stratum is diverse. Herbaceous plants with high frequencies found on this plot include *Carex debilis*, *Carex leptalea* var. *haperi*, *Eupatorium serotinum*, *Saururus cernuus*, and *Woodwardia areolata*. Woody vines are abundant and include *Decumaria barbara*, *Mikania scandens*, *Parthenocissus quinquefolia*, *Smilax laurifolia*, and *Toxicodendron radicans* var. *radicans*. This community experiences seasonal flooding; however, standing water can occur year-round because of its topographic position in the landscape.

2) *Taxodium distichum* - *Nyssa aquatica* - *Nyssa biflora* / *Fraxinus caroliniana* / *Itea virginica* Forest (CEGL007432)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.689198

NVC Fit = Good

Plots = 064-02-0954

The canopy of this blackwater swamp forest is codominated by *Nyssa biflora* and *Taxodium ascendens*, with lesser amounts of *Taxodium distichum* and *Quercus laurifolia*. The subcanopy is composed of *Acer rubrum*, *Cyrilla racemiflora*, and *Ilex myrtifolia*. The hydrology of this community type is influenced by river overflow from adjacent blackwater, or small rivers, of the Atlantic Coastal Plain. The ground is typically permanently to semipermanently saturated, causing poor vegetative regeneration in the understory. Consequently, herbaceous diversity is very low in this community type.

3) *Nyssa aquatica* - *Nyssa biflora* Forest (CEGL007429)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.684509

NVC Fit = Good

Plots = 064-01-0963, 064-04-0966

Both *Nyssa aquatica* and *Nyssa biflora* codominate the canopy of this blackwater swamp forest. Other minor canopy and subcanopy associates include *Acer rubrum* var. *rubrum*, *Fraxinus caroliniana*, and *Ulmus americana* var. *americana*. An undescribed species of oak--*Quercus waccamawensis*--was found in plot 064-01-0963 along the upper Waccamaw River. This community occurs within intermittently flooded alluvial sites along blackwater rivers in the Atlantic and Gulf Coastal Plain. Herbaceous species richness can be high in this community type. Species found on these plots include *Carex gigantea*, *Hydrocotyle prolifera*, *Persicaria hydropiperoides*, *Saururus cernuus*, and *Proserpinaca palustris* var. *palustris*.



4) *Taxodium distichum* – *Nyssa biflora* / *Fraxinus caroliniana* / *Lyonia lucida* Forest (CEGL004733)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.686425

NVC Fit = Fair

Plots = 064-04-0955, 064-04-0967

This swamp forest association is relatively widespread along blackwater rivers of the North Carolina Coastal Plain. It is strongly influenced by the adjacent river's overbank flow. Standing water can collect in these flat, backswamps causing long periods of soil saturation. Representative tree species include *Taxodium distichum*, *Nyssa biflora*, *Fraxinus caroliniana*, *Acer rubrum* var. *rubrum*, *Liquidambar styraciflua*, and *Quercus laurifolia*.



An undescribed species of oak--*Quercus waccamawensis*--was found in plot 064-04-0967 along the upper Waccamaw River. The herb stratum is more diverse in these plots than the formal community description of the association.

B. Black-water Fringing Hardwood Forests

1) *Taxodium distichum* – *Fraxinus pennsylvanica* – *Quercus laurifolia* / *Acer rubrum* / *Saururus cernuus* Forest (CEGL007719)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.687855

NVC Fit = Fair

Plots = 064-02-0957

This Atlantic and Gulf Coastal Plain swamp –hardwood forest transition occurs in sloughs and other alluvial flats with a large percentage of silt in the soil. The canopy of this community type is composed of *Acer rubrum* var. *rubrum*, *Liquidambar styraciflua*, *Taxodium distichum*, *Quercus michauxii*, and *Nyssa biflora*. Subcanopy species found in these plots include *Ilex opaca* var. *opaca* and *Ulmus rubra*. The shrub stratum in these plots is rather sparse, while herb species diversity is moderately high. Vines such as *Smilax rotundifolia*, *Toxicodendron radicans* var. *radicans* and *Vitis rotundifolia* var. *rotundifolia* were abundant in this plot. The herbaceous stratum was diverse on this plot. The herb, *Boehmeria cylindrica* dominated much of the plot. This community type requires further investigation based on its composition in response to variable inundation frequencies throughout its range.

2) *Quercus laurifolia* – *Quercus lyrata* / *Carpinus caroliniana* – *Persea palustris* / *Vaccinium elliotii* Forest (CEGL004737)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.683664

NVC Fit = Good

Plots = 064-02-0960

This community type occurs along ridges and terraces of blackwater rivers in the Atlantic Coastal Plain of the Carolinas. Constant canopy species include *Quercus lyrata*, *Acer rubrum*, and the undescribed *Quercus waccamawensis*. The subcanopy of this community type is composed of *Fraxinus caroliniana*, *Betula nigra*, and *Carpinus caroliniana* var. *caroliniana*. The herbaceous stratum of this plot is relatively sparse.

C. Small Stream Forests

1) *Pinus taeda* - *Quercus laurifolia* - *Chamaecyparis thyoides* - (*Quercus virginiana*) / *Vaccinium elliotii* Forest (CEGL007548)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.685214

NVC Fit = Fair

Plots = 064-02-0952

This small stream forest occurs on blackwater, sandy terraces throughout the Atlantic Coast of North and South Carolina. This plot was located along Juniper Creek, a tributary of the Waccamaw River in Columbus County, NC. The canopy of this plot contains a mixture of bottomland species, including *Chamaecyparis thyoides*, *Liquidambar styraciflua*, *Nyssa biflora*, and *Taxodium distichum*. The undescribed *Quercus waccamawensis* is also found in abundance within the canopy of this plot. The shrub stratum of this community is diverse (particularly for a blackwater river community) and includes younger individuals of the above-mentioned canopy species, *Ilex cassine* var. *cassine*, *Persea palustris*, and *Cyrilla racemiflora*. The herbaceous stratum is sparse, but contains *Woodwardia virginica* and

Zephyranthes simpsonii. This plot lacks a significant amount of *Pinus taeda*, which explains the “fair” fit with the NVC described community.

2) *Nyssa biflora* - *Quercus nigra* - *Quercus laurifolia* - *Pinus taeda* / *Ilex opaca* - *Carpinus caroliniana* Forest (CEGL007350)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.684868

NVC Fit = Fair

Plots = 064-02-0955, 064-03-0953, 064-04-0959

This community type occurs along small stream zones of the Piedmont and Atlantic Coastal Plain of the southeastern US. The canopy of these forests is dominated by *Acer rubrum*, *Nyssa biflora*, *Liquidambar styraciflua*, and *Quercus laurifolia*. The undescribed *Quercus waccamawensis* is also found in abundance within the canopy of the sampled plots. Subcanopy dominants include *Cyrilla racemiflora*, *Ilex opaca* var. *opaca*, *Ilex myrtifolia*, and *Persea palustris*. Herbaceous, shrub and vine species richness values fluctuate between the plots owing to their different hydrologic regimes. Constant species



include *Osmunda regalis* var. *spectabilis*, *Smilax laurifolia*, *Vaccinium fuscum*, *Clethra alnifolia*, *Toxicodendron radicans* var. *radicans*, and *Woodwardia virginica*. The NVC recognizes the need to further examine the classification of this community association, based on the varied degree of hydrologic regimes found throughout the described range.

3) *Pinus elliotii* - *Quercus nigra* - *Chamaecyparis thyoides* / *Cyrilla racemiflora* - *Vaccinium* spp. Forest (CEGL008556)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.689079

NVC Fit = Fair

Plots = 064-03-0954, 064-04-0956

These plots are found on Waccamaw Island, in western Brunswick County, NC, but the defined community type is known only from the Styx River in Baldwin County, AL. Both of the sampled plots include *Chamaecyparis thyoides*, *Nyssa biflora*, *Quercus waccamawensis*, and *Taxodium distichum* as canopy dominants. Plot 064-04-0956 also contains a considerable amount of *Pinus elliotii* var. *elliotii* in the canopy. The subcanopy of this community is dominated by *Cyrilla racemiflora*, *Morella cerifera*, and *Fraxinus caroliniana*. The shrub stratum is composed of *Vaccinium corymbosum*, *Vaccinium elliotii*,

and *Eubotrys racemosa*. Constant herbaceous species include *Centella erecta*, *Carex glaucescens*, *Dichantheium longiligulatum*, and *Rhynchospora perplexa* var. *perplexa*.



IV. Coastal Plain lowland evergreen forests and shrublands

A. White Cedar Forests

1) *Chamaecyparis thyoides* / *Persea palustris* / *Lyonia lucida* – *Ilex coriacea* Forest (CEGL006146)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.688673

NVC Fit = Good

Plots = 064-04-0972

This community is found on flat, permanently saturated peatlands of nonriverine bottomlands of the Atlantic Coastal Plain. The canopy is dominated by *Chamaecyparis thyoides*, with lesser amounts of *Gordonia lasianthus* and *Persea palustris*. Subcanopy species include *Smilax laurifolia*, *Cyrilla racemiflora*, *Ilex cassine* var. *cassine*, *Ilex coriacea*, and *Lyonia lucida*. A moderately dense shrub stratum is composed of *Gaylussacia frondosa* and the above mentioned subcanopy species. A sparse herbaceous stratum includes *Woodwardia virginica*.



B. Pocosins

1) *Pinus serotina* / *Zenobia pulverulenta* - *Cyrilla racemiflora* - *Lyonia lucida* Wooded Shrubland (CEGL004458)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.684717

NVC Fit = Fair to Excellent

Plots = 064-06-0954, 064-09-0953, 064-09-0954

This typical high pocosin of the Atlantic Coastal Plain is composed of a very dense shrub stratum, up to 3 meters tall. Typical shrub species include *Lyonia lucida*, *Zenobia pulverulenta*, *Cyrilla racemiflora*, *Ilex coriacea*, *Ilex glabra*, and *Persea palustris*. An open canopy of *Pinus serotina*, *Taxodium ascendens*, and *Nyssa biflora* are characteristic of these plots. The presence of these latter two species explains the inconsistency between plot 064-06-0954 and the NVC description of this community type.

2) *Pinus serotina* / *Lyonia lucida* - *Ilex glabra* - (*Cyrilla racemiflora*) Shrubland (CEGL003846)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.685159

NVC Fit = Fair to Good

Plots = 064-01-0952, 064-06-0950

This typical high pocosin of the Atlantic Coastal Plain occurs on peatlands and wet mineral soils. This community is differentiated from CEGL004458 by its lack of *Zenobia pulverulenta* in the shrub stratum. The dense shrub stratum is composed of *Lyonia lucida*, *Cyrilla racemiflora*, *Ilex coriacea*, and *Smilax laurifolia*. The fair fit of plot 064-06-0950 to the NVC described community type is due to the presence of *Pinus palustris* in the canopy. This plot was found on an ecotone between the pocosin and longleaf pine savannah.

C. Pond Pine Forests and Woodlands

1) *Pinus serotina* / *Cyrilla racemiflora* - *Lyonia lucida* - *Ilex glabra* Woodland (CEGL003670)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.687404

NVC Fit = Good to Excellent

Plots = 064-02-0961, 064-04-0957

This pond pine woodland occurs over peatland communities in Carolina bays of the Atlantic Coastal Plain. The canopy of this community is fairly sparse, and is dominated by *Pinus serotina* with lesser amounts of *Gordonia lasianthus*. The shrub stratum is composed of high pocosin vegetation ranging in height from 0.5 to 3 meters. Species found in this dense thicket include *Cyrilla racemiflora*, *Lyonia lucida*, and *Smilax laurifolia*.

2) *Pinus serotina* – *Gordonia lasianthus* / *Lyonia lucida* Woodland (CEGL003671)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.689441

NVC Fit = Good

Plots = 064-01-0967, 064-03-0955

This woodland occurs along peat-filled Carolina bays within the Outer Coastal Plain of the Carolinas. The canopy is open in these areas and is co-dominated by *Pinus serotina* and *Gordonia lasianthus*. The dense shrub stratum is composed of *Ilex coriacea*, *Lyonia lucida*, *Smilax laurifolia*, *Vaccinium formosum* and *Eubotrys racemosa*. Herbaceous species are essentially absent from this association.

V. Coastal Plain ponds and marshes

A. Pond Cypress Savannas

1) *Taxodium ascendens* / *Panicum hemitomom* – *Polygala cymosa* Woodland (CEGL003733)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.687749

NVC Fit = Excellent

Plots = 064-03-0952

This seasonally flooded community type occurs over clay-based Carolina bays in the outer Coastal Plain of North Carolina. This site usually is saturated during the winter, and dries to below the soil surface by late summer. The open canopy is dominated by *Taxodium ascendens*. The herbaceous stratum is diverse and includes *Rhynchospora inundata*, *Rhynchospora tracyi*, *Centella erecta*, *Xyris jupicai* and *Drosera filiformis*.

B. Depression Pond Shrublands

1) *Dichanthelium wrightianum* - *Dichanthelium erectifolium* Herbaceous Vegetation (CEGL004105)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.684948

NVC Fit = Fair

Plots = 064-01-0960, 064-01-0961, 064-06-0952,
064-09-0961

These plots were sampled on limesinks at MOTSU. This community association is usually found on middle topographic positions of limesink ponds, and thus less influenced by saturation. Dominant species found in these plots include *Lachnanthes caroliniana*, *Centella erecta*, *Panicum virgatum*, and *Pinus taeda*. Although these plots fit with the described geomorphology of the NVC community type, they lack the nominal species necessary for accurate characterization. Limesink communities within the study area are in need of further examination to enhance the NVC understanding of Coastal Plain ponds and marshes.

2) *Panicum hemitomon* – *Eleocharis equisetoides* – *Rhynchospora inundata* Herbaceous Vegetation (CEGL004127)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.688051

NVC Fit = Fair

Plots = 064-01-0958, 064-03-0950, 064-09-0957

This community is found over outer Coastal Plain limesink ponds, usually at lower topographic positions. The only dominant species found across these plots is *Panicum hemitomon*. Other species found include *Cephalanthus occidentalis*, *Amaranthus cannabinus*, *Azolla caroliniana* (Plot 64-01-0958); *Rhynchospora inundata*, *Nymphaea odorata* ssp. *odorata* (Plot 064-03-0950); and *Lachnanthes caroliniana*, *Eriocaulon decangulare* var. *decangulare*, *Rhexia cubensis* (Plot 064-09-0957). Each sampled limesink pond in this NVC described community type had its own unique vegetation composition. There is a clear need for study of the broad range of limesink and other temporarily ponded depressions of the Carolina Coastal Plain.

C. Wooded Lake and Pond Shores

1) *Taxodium distichum* - *Taxodium ascendens* / *Panicum hemitomon* Woodland (CEGL004466)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.687764

NVC Fit = Good

Plots = 064-04-0961

This community type occurs along shorelines of blackwater, peatland lakes of the Outer Coastal Plain of North Carolina. The NVC describes this community as having an open overstory of either *Taxodium distichum* or *Taxodium ascendens*. This plot, however, is dominated by a canopy of *Pinus serotina*. Species diversity is low in this community type. *Panicum hemitomon* is found in high density throughout the plot (cover class = 6).



D. Freshwater marsh

1) *Rhynchospora alba* Saturated Herbaceous Vegetation (CEGL004463)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.686460

NVC Fit = Fair

Plots = 064-01-0951, 064-01-0953

This is a floating peat mat community of Carolina bays in the Outer Coastal Plain of North Carolina. According to the NVC, this community is dominated by *Rhynchospora alba*. This species was only found within plot 064-01-0953. Other species found in these plots include *Decodon verticillatus*, *Rhexia cubensis*, *Lyonia lucida*, *Eupatorium leucolepis*, *Rhynchospora fascicularis* var. *fascicularis*, and *Rhynchospora plumosa*.

2) *Rhynchospora (careyana, inundata)* Seasonally Flooded Herbaceous Vegetation (CEGL004132)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.689234

NVC Fit = Fair to Good

Plots = 064-01-0950, 064-06-0951, 064-06-0953
064-09-0956

This is a seasonally flooded depression community found in the Outer Coastal Plain of the southeastern US. The NVC recognizes that this association is broadly defined throughout its range, and local sampling efforts will heighten the understanding of its classification. Typically, CEGL004132 is dominated by either of the nominal *Rhynchospora* species. Plot 064-06-0951 was composed of a high diversity of species, including *Rhynchospora inundata*, *Lachnanthes caroliniana*, *Dichanthelium wrightianum*, *Rhynchospora inexpansa*, and *Xyris iridifolia*. The other plots did not fit as well into the NVC classification scheme of this community type.

E. Vernal Pools

1) *Panicum virgatum - Andropogon (capillipes, glaucopsis) - Aristida palustris* Herbaceous Vegetation (CEGL004100)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.689060

NVC Fit = Fair

Plots = 064-02-0950

This depression linesink pond of the southern Atlantic Coastal Plain is typically drier than other similar geomorphologically placed communities. This plot is dominated by graminoid species, such as *Muhlenbergia expansa* and *Schizachyrium scoparium var. scoparium*. The community nominal *Aristida palustris* is also found on this plot. The lack of dominance by drier site *Andropogon sp.* in this plot explains the lack of fit to the NVC described community type.

2) *Hypericum reductum / Aristida stricta* Dwarf-shrubland (CEGL003954)

NVC Fit = Fair

Plots = 064-02-0951

This plot was dominated by low growing shrubs (< 1.5 meters in height) and graminoid vegetation. The low shrub stratum was composed of *Hypericum tenuifolium* and *Lyonia lucida*. The herbaceous stratum was composed of *Dichanthelium portoricense*, *Panicum virgatum*, and *Juncus canadensis*. The NVC describes this xeric community type as occurring in depressional swales of southeastern North Carolina. The species composition of this plot bares little resemblance to the described species of the NVC community.

F. Wet Grass and Sedge Vegetation

1) *Typha (angustifolia, latifolia)* - (*Schoenoplectus spp.*) Eastern Herbaceous Vegetation (CEGL006153)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.685511

NVC Fit = Good

Plots = 064-01-0955

This community occurs on permanently flooded landforms, where an upper layer of muck soil overlies a mineral horizon. The dominant species on this plot is *Typha domingensis*. Associate species here include *Schoenoplectus americanus* and *Schoenoplectus tabernaemontani*. The graminoid vegetation of this community is tall, reaching upwards to 2.5 meters, and covers a significant portion of the ground (total cover = 95%).

G. MOTSU Limesinks

These limesink ponds of MOTSU are not similar at all to any existing NVC community. Each site is unique in its soil, geomorphology, and vegetation characteristics. Along with other limesink communities sampled during this Pulse event, these plots can be used to more accurately classify nonalluvial herbaceous wetlands of the Carolina Outer Coastal Plain.

1) No described community type

Plots = 064-01-0957

This plot is dominated by *Scleria muehlenbergii*, *Pluchea baccharis*, *Centella erecta*, and *Aristida palustris*. The hydrologic regime here is categorized as temporarily flooded, and the soils are very poorly drained. The plot is directly adjacent to a longleaf pine savannah.

2) No described community type

Plots = 064-01-0959

This plot occurs on the middle topographic position of the limesink pine. Directly below aspect of this plot is a water lily pond, and above an *Andropogon* dominated dry grassland. Within the plot, species include *Centella erecta*, *Dichanthelium dichotomum*, *Lachnocaulon minus*, and *Rhynchospora rariflora*.

3) No described community type

Plots = 064-04-0960

This plot occurs on the lower topographic position of the limesink pine, and has a floating aquatic vegetative component coupled with the herbaceous stratum. Dominant species found on this plot include *Rhynchospora tracyi*, *Pluchea baccharis*, *Panicum hemitomon*, *Panicum tenerum*, and *Eriocaulon compressum*.



4) No described community type

Plots = 064-09-0960

This plot occurs on the upper rim of the limesink pond, directly adjacent to a sandy, xeric longleaf pine flatwoods. A minor shrub stratum is found on this plot, composed of *Vaccinium fuscatum*. Dominant herbs include *Andropogon glaucopsis*, *Juncus scirpoides* var. *scirpoides*, and *Panicum virgatum*.

5) No described community type

Plots = 064-09-0962

This plot also occurs on the upper rim of the limesink pond. Both a substantial shrub stratum and an open canopy are found on this plot. Trees are no taller than 15 meters, and include *Ilex myrtifolia* and *Ilex cassine* var. *cassine*. The shrub stratum is composed of the aforementioned tree species, as well as *Quercus nigra*. The herbaceous stratum is composed of *Lachnanthes caroliniana*, *Litsea aestivalis*, *Polygala cymosa*, and *Panicum verrucosum*.

VI. Coastal Plain aquatic vegetation

A. Nonalluvial Floating Aquatics

1) *Nymphaea odorata* - *Nuphar lutea* ssp. *advena* - (*Nymphoides aquatica*, *Xyris smalliana*)
Herbaceous Vegetation (CEGL004326)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.687399

NVC Fit = Fair to Good

Plots = 064-01-0962, 064-03-0951, 064-04-0962,
064-09-0958

This community type occurs in deep water zones of Coastal Plain limesink ponds. The dominant species in these plots are *Nymphaea odorata* ssp. *odorata* and *Utricularia* ssp. Only plot 064-04-0962 fit well with the NVC described community. The other plots were composed of both floating aquatic species typical of this community type as well as species from other topographic positions within limesinks.



VII. Maritime subxeric forests and shrublands

A. Maritime Pine Forests and Woodlands

1) No described community type

NVC Fit = n/a

Plots = 064-03-0965

This plot is found along the Woodstork Pond in Sunset Beach, NC. The subsoil of this plot is yellow, coarse sand that drains moderately well. The canopy of this maritime forest is codominated by *Quercus virginiana* and *Pinus taeda*. The shrub stratum is composed of early seral stage hardwood regeneration. Species include *Fraxinus americana*, *Nyssa biflora*, *Sassafras albidum*, and *Carya glabra* var. *megacarpa*. The herbaceous stratum includes *Elymus virginicus* var. *virginicus*, *Desmodium paniculatum*, *Sanicula canadensis*, *Desmodium glabellum*, *Muhlenbergia capillaris*, and *Oxalis dillenii*. Vines are also important component of this plot, and species include *Gelsemium sempervirens*, *Vitis rotundifolia* var. *rotundifolia*, and *Toxicodendron radicans* var. *radicans*.

B. Maritime Oak Forests

1) *Quercus virginiana* - *Quercus hemisphaerica* - *Pinus taeda* / *Persea borbonia* Forest (CEGL007027)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.684469

NVC Fit = Fair

Plots = 064-09-0951

This community occurs along lower slopes and sand flats of the coastal fringe. They experience very little flooding, but are affected by salt spray. Species diversity in this community is typically very low. The canopy of this community type includes *Quercus virginiana*, *Morella cerifera*, and *Juniperus virginiana* var. *silicicola*. The NVC considers *Quercus hemisphaerica* and *Pinus taeda* as discriminating co-dominant canopy species. These species were not found on this plot. The vines are well developed in this community and include *Smilax bona-nox*, *Smilax laurifolia*, and *Toxicodendron radicans* var. *radicans*.

2) *Quercus virginiana* - (*Pinus taeda*) / (*Sabal minor*, *Serenoa repens*) Forest (CEGL007039)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.686346

NVC Fit = Poor

Plots = 064-09-0959

This is a maritime floodplain forest of river levees throughout the southeastern Coastal Plain. This plot is located along a levee of the Waccamaw River, south of the Green Swamp, in Columbus County, NC. The canopy of this plot is dominated by a mixture of hardwood species, including *Quercus virginiana*, *Carpinus caroliniana* var. *caroliniana*, *Ilex opaca* var. *opaca*, *Fraxinus caroliniana*, *Betula nigra*, and *Acer rubrum*. The shrub stratum included *Sabal minor*, *Vaccinium pallidum*, and *Arundinaria tecta*. Herbaceous diversity was high in this plot. Species included *Dichanthelium boreale*, *Spiranthes odorata*, *Hymenocallis crassifolia*, *Centella erecta*, *Hypoxis hirsute*, and *Carex glaucescens*. The NVC recognizes that this community is not well understood, and variability among plots could be significant to warrant establishment of new community associations. Furthermore, the range of this community is poorly described.

VIII. Maritime shrublands

A. Maritime Scrub

1) *Quercus virginiana* - (*Ilex vomitoria*) Shrubland (CEGL003833)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.685126

NVC Fit = Fair to Good

Plots = 064-04-0968, 064-04-0970

This salt-spray influenced maritime shrub community can be found throughout the Outer Coastal Plain. The NVC describes this community as being dominated by a dense shrub stratum of *Quercus virginiana*, 0.5 to 3 meters tall. Plot 064-04-0968, which is located on Bald Head Island in Brunswick County, NC, had a dense cover of *Quercus virginiana*. However, this species is absent from the adjacent plot 064-04-0970. Other codominant shrubs and vines found in this community type include *Persea borbonia*, *Smilax auriculata*, *Prunus caroliniana*, and *Ilex vomitoria*.



IX. Maritime grasslands

A. Foredune Dry Grasslands

1) *Uniola paniculata* - *Hydrocotyle bonariensis* Herbaceous Vegetation (CEGL004040)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.687367

NVC Fit = Poor to Good

Plots = 064-04-0950, 064-04-0951, 064-04-0954,
064-04-0965, 064-04-0969, 064-05-0955,
064-05-0955, 064-05-0957

This is the typical foredune grassland of the North Carolina coast. The dominant grass is *Uniola paniculata*, and other high constant species include *Oenothera humifusa*, *Trichostema species 1*, *Spartina patens* var. *patens*, and *Hydrocotyle bonariensis*. Poor and fair fit plots sampled, which include all plots except 064-04-0951, did not correspond with the NVC description of this community type because of their variable species



composition and inclusion of backduneshrub species. These species include *Smilax auriculata*, *Morella cerifera*, and *Juniperus virginiana* var. *silicicola*.

B. Backdune and interdunal dry grasslands

1) *Muhlenbergia filipes* - *Spartina patens* - *Eustachys petraea* Herbaceous Vegetation (CEGL004051)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.685395

NVC Fit = Fair

Plots = 064-02-0953, 064-04-0971, 064-09-0950

These backdune grassland plots were sampled on Bird Island, Bald Head Island, and Zeke's Island in southern Brunswick County, NC. This community type occurs on flat dunelands which occupy space between outer dunes and inland salt marsh creeks. The dominant grasses include *Spartina patens* var. *patens*, *Eustachys petraea*, and *Uniola paniculata*. The presence of sea oats in these plots is inconsistent with the NVC community description of this community type. Also, the lack of *Muhlenbergia* in the plots differentiates these plots from CEGL004051.

X. Sparse maritime vegetation

A. Sparse Beach and Dune Vegetation

1) *Vitis rotundifolia* / *Triplasis purpurea* - *Panicum amarum* - *Schizachyrium littorale* Mid-Atlantic Coastal Medano Sparse Vegetation (CEGL004397)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.685081

NVC Fit = Poor

Plots = 064-03-0963

This plot is located on the northern side of Bald Head Island, near the ocean-side dunes of East Beach. Vegetation is sparse, but includes *Spartina patens* var. *patens*, *Hydrocotyle bonariensis*, *Iva imbricata*, and *Borrchia frutescens*. The NVC describes CEGL004397 as being composed of scattered woody vines, including *Vitis rotundifolia* var. *rotundifolia*, *Vitis cinerea* var. *floridana*, *Campsis radicans*, and *Parthenocissus quinquefolia*. None of these species were found in this plot. The NVC acknowledges that



this vegetation association occupies the tallest dunes of eastern North America. Dune height for this plot, however, did not fit with the NVC description of this community type.

XI. Maritime wet shrublands

A. Swale shrublands

1) *Morella cerifera* / *Spartina patens* - (*Juncus roemerianus*) Shrubland (CEGL003839)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.685109

NVC Fit = Fair

Plots = 064-01-0965

This community type is found on interdune, wet swales of the Atlantic Coast. The soil texture is dominated by mucky sand particles from the surface to 50 cm depth. The shrub canopy on this plot is moderately open (cover value = 8%), but the NVC recognizes that this community type can also have a densely closed shrub canopy. Dominant species found in the shrub stratum of this plot include *Baccharis halimifolia*, *Vitis rotundifolia* var. *rotundifolia* var. *rotundifolia*, and *Callicarpa americana*. The herbaceous stratum is dominated by a dense closure of *Juncus roemerianus*. Other species include *Seutera angustifolia*, *Spartina patens* var. *patens*, *Physalis viscosa*, *Melothria pendula* var. *pendula*, and *Setaria parviflora*. The lack of *Morella cerifera* in the plot sets it apart from the NVC described community type.

XII. Interdune herbaceous wetlands

A. Maritime Wet Herbaceous Vegetation

1) *Spartina patens* - *Setaria parviflora* - *Hydrocotyle bonariensis* Herbaceous Vegetation (CEGL004257)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.689797

NVC Fit = Fair

Plots = 064-01-0964

This interdune community occurs in wetland depressions of barrier islands along the Atlantic and Gulf Coast of the southeastern US. The herbaceous stratum is dominated by *Spartina patens* var. *patens*. Other species found on this plot include *Juncus roemerianus*, *Uniola paniculata*, *Physalis viscosa*, and *Smilax auriculata*. The vegetation composition of this plot represents a dune ecotone between upland foredunes, scrub shrub backdunes, and wet swale shrublands.

2) *Fimbristylis castanea* - *Schoenoplectus pungens* Seasonally Flooded Herbaceous Vegetation (CEGL003790)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.688582

NVC Fit = Fair

Plots = 064-01-0966, 064-04-0952

This community type occurs on ponds, or other wetter zones of interdunes in North Carolina. According to the NVC, the vegetation is typically dominated by both *Fimbristylis castanea* and *Schoenoplectus pungens*. However, these plots lack the *Schoenoplectus*. Constant species found on these plots include *Borrichia frutescens*, *Spartina patens* var. *patens*, *Fimbristylis castanea*, *Solidago sempervirens* var. *mexicana*, *Seutera angustifolia*, and *Baccharis halimifolia*.



XIII. Shrubby tidal vegetation

A. Saline tidal shrublands

1) *Borrichia frutescens* / (*Spartina patens*, *Juncus roemerianus*) Shrubland (CEGL003924)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.687750

NVC Fit = Good

Plots = 064-03-0961, 064-09-0952

This saline shrubland community is found between drier upland sites and salt marsh flats influenced by daily tide fluctuations. Characteristic species of these two plots include *Borrichia frutescens*, *Distichlis spicata*, *Limonium carolinianum*, and *Sarcocornia pacifica*. Because of its topographic position, this community type does not experience daily flooding like the *Spartina* marsh below. Rather, these plots incur irregular or monthly flooding due to storm surge or strong tides.



2) *Baccharis halimifolia* - *Iva frutescens* - *Morella cerifera* - (*Ilex vomitoria*) Shrubland
(CEGL003920)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.685427

NVC Fit = Good

Plots = 064-03-0964

This shrub community occurs on raised ground within or edges of salt marshes along the Atlantic and Gulf Coast of the southeastern US. Typical shrubs include *Baccharis halimifolia*, *Morella cerifera*, and *Baccharis angustifolia*. Other species found within the plot include *Typha latifolia*, *Andropogon glomeratus* var. *glomeratus*, *Hydrocotyle bonariensis*, and *Spartina patens* var. *patens*.



XIV. Open salt and brackish tidal vegetation

A. Tidal Salt Marshes

1) *Spartina patens* - *Distichlis spicata* - *Juncus roemerianus* Herbaceous Vegetation
(CEGL004197)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.684204

NVC Fit = Fair

Plots = 064-04-0964

This salt marsh community occurs on higher topographic positions than adjacent, regularly flooded low salt marshes. *Spartina patens* var. *patens* is the dominant grass, but *Fimbristylis castanea* and *Distichlis spicata* form minor codominants. Other species



include *Borrchia frutescens*, *Solidago sempervirens var. mexicana*, and *Limonium carolinianum*. The NVC does not currently recognize *Fimbristylis castanea* as a codominant for this community type. This plot is located on the northern portion of Bald Head Island, in Brunswick County, NC.

2) *Spartina alterniflora* Carolinian Zone Herbaceous Vegetation (CEGL004191)

http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUId=ELEMENT_GLOBAL.2.683265

NVC Fit = Excellent

Plots = 064-03-0960

This community represents regularly flooded tidal salt marshes from Cape Hatteras, NC to the Atlantic Coast of the Florida peninsula. This community experiences long exposure to high salinity water, and according to the NVC, can tolerate long submergence. The dominant tall grass found in this community type is *Spartina alterniflora*. Species diversity in this association is usually very low. This plot also included *Limonium carolinianum* and *Sarcocornia pacifica*.



B. Hypersaline Pannes and Flats

1) *Sarcocornia perennis* - *Batis maritima* - *Distichlis spicata* Dwarf-shrubland (CEGL002278)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.688577

NVC Fit = Fair

Plots = 064-03-0962, 064-04-0953

This community type is found on hypersaline flats of the lower Atlantic and Gulf Coasts of the southeastern US. These plots are dominated by an herbaceous mat of *Distichlis spicata*. Other species include *Borrichia frutescens*, *Limonium carolinianum*, *Sarcocornia pacifica*, and *Spartina alterniflora*. This plot does not correspond well to the NVC described community due to the high density of *Distichlis spicata*.



XV. Open fresh and oligohaline vegetation

A. Oligohaline Tidal Marshes

1) *Schoenoplectus pungens* - (*Osmunda regalis* var. *spectabilis*) Herbaceous Vegetation (CEGL004189)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.685388

NVC Fit = Good

Plots = 064-01-0956

This community is found within oligohaline marshes of the Outer Coastal Plain of North Carolina. The dominant species is *Schoenoplectus americanus*, but other species include *Eleocharis sp.*, *Baccharis halimifolia*, and *Osmunda regalis* var. *spectabilis*.

2) *Typha angustifolia* - *Hibiscus moscheutos* Herbaceous Vegetation (CEGL004201)
http://www.natureserve.org/explorer/servlet/NatureServe?searchCommunityUid=ELEMENT_GLOBAL.2.683268

NVC Fit = Good

Plots = 064-01-0954

This community type is found within oligohaline and brackish tidal marshes of the eastern Atlantic Coast. The vegetation is dominated by *Typha domingensis*. Other species found in high density on this plot include *Carex hyalinolepis*, *Peltandra virginica*, *Sagittaria lancifolia* var. *media*, *Schoenoplectus americanus*, and *Schoenoplectus tabernaemontani*. The soil is a dark brown muck, dominated by clay particles. Some organic matter was also present in the sample. This plot is located on the west side of Eagle Island, along the Cape Fear River in Brunswick County, NC.

CONCLUSIONS AND FUTURE DIRECTIONS

The Brunswick County Pulse documented many poorly known or unknown vegetation types from this part of the state. The limesink vegetation in MOTSU contained many rare species and had not been previously sampled in any study. Some of the bottomlands along the Waccamaw River were completely novel, containing widely scattered Atlantic white cedar, and what appears to be an oak species (*Quercus "waccamawensis"*), closely related to laurel oak. The first record of native slash pine was also discovered during this Pulse event.

Collected plots were assigned to 51 vegetation types. In some cases the plots site well into established types, but for the most part our plots deviate from the previous descriptions suggesting a need for substantial refinement of the NVC. In particular 46 plots only marginally fit within the classification, 4 plots seemed to fit not at all, and 6 plots could not be placed in any classification scheme. Appendix 2 provides a summary table for identified groups that do not fit well into the current NVC schema. As illustrated in the above descriptions, much work is needed to refine our understanding of Maritime and Coastal Plain communities of Brunswick County. Additional plots established in the eastern portion of the state will be needed to increase our understanding of these under-sampled communities. For now, however, these current plots will provide a framework for future classification projects undertaken in the study area.

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Appendix 1: Soil Nutrient and Texture Values Summarized by Association. Specific soil variables include pH, Organic Matter (%), exchangeable cations (Ca, Mg, K, Mn; ppm), texture class (clay, silt, sand; %).

I. COASTAL PLAIN FIRE-MAINTAINED WOODLANDS		pH	Organic Matter	Calcium	Magnesium	Potassium	Manganese	Clay%	Silt%	Sand%
A. Wet-Mesic Pine Savannas and Flatwoods										
1	CEGL003648	4.0	3.5	221.5	47.5	15.5	1.0	2	4	94
B. Dry-Mesic Pine-Oak Woodlands										
1	CEGL003589	4.2	1.1	131.0	26.3	12.5	1.0	1	1	99
II. COASTAL PLAIN BROWN WATER RIVER FORESTS										
A. Brown-water Swamp Forests										
1	CEGL007431	--	--	--	--	--	--	--	--	--
2	CEGL002420	4.0	21.4	663.0	123.0	16.0	3.0	--	--	--
3	n/a	4.9	7.5	1140.3	80.8	83.5	5.3	3	23	74
III. COASTAL PLAIN BLACK WATER RIVER FORESTS										
A. Black-water Swamp Forests										
1	CEGL007743	4.9	24.1	1248.5	127.5	104.3	11.5	3	25	73
2	CEGL007432	4.2	21.9	565.3	69.8	55.8	1.3	--	--	--
3	CEGL007429	4.9	46.5	1204.8	135.3	108.1	4.1	--	--	--
4	CEGL004733	4.9	12.5	994.8	146.6	105.3	5.5	5	21	75
B. Black-water Fringing Hardwood Forests										
1	CEGL007719	4.9	22.6	1459.3	140.5	103.0	5.5	16	38	46
2	CEGL004737	4.2	7.8	365.3	57.3	56.8	1.0	1	26	72
C. Small Stream Forests										
1	CEGL007548	4.1	7.6	252.5	41.3	38.0	1.0	1	20	79
2	CEGL007350	4.1	14.1	562.3	82.7	69.4	1.0	2	29	69
3	CEGL008556	4.4	4.0	240.8	42.1	28.6	1.0	3	18	79
IV. COASTAL PLAIN LOWLAND EVERGREEN FORESTS AND SHRUBLANDS										
A. White Cedar Forests										
1	CEGL006146	3.9	86.9	158.8	57.5	30.5	1.0	--	--	--
B. Pocosins										
1	CEGL004458	4.1	9.7	144.3	40.0	28.0	1.0	5	41	54
2	CEGL003846	3.7	41.5	100.0	52.5	59.5	1.0	--	--	--
C. Pond Pine Forests and Woodlands										
1	CEGL003670	3.7	31.4	82.0	36.0	15.5	1.0	4	7	89
2	CEGL003671	3.4	83.2	185.0	94.0	76.0	1.0	--	--	--

V. COASTAL PLAIN PONDS AND MARSHES		pH	Organic Matter	Calcium	Magnesium	Potassium	Maganese	Clay%	Silt%	Sand%
A. Pond Cypress Savannas										
1	CEGL003733	4.0	1.0	99.0	23.0	6.0	1.0	4	3	94
B. Depression Pond Shrublands										
1	CEGL004105	4.7	5.9	180.0	22.0	5.0	1.0	2	8	90
2	CEGL004127	4.5	3.7	107.0	24.5	13.5	1.0	6	7	87
C. Wooded Lake and Pond Shores										
1	CEGL004466	4.8	2.5	255.0	44.0	21.0	1.0	5	16	79
D. Freshwater Marsh										
1	CEGL004463	4.6	1.0	121.0	29.0	7.0	1.0	3	3	95
2	CEGL004132	4.8	2.1	99.0	21.0	7.8	1.0	3	15	82
E. Vernal Pools										
1	CEGL004100	4.7	2.6	81.0	21.0	15.0	1.0	4	1	95
2	CEGL003954	4.4	1.0	100.0	27.0	7.0	1.0	3	2	95
F. Wet Grass and Sedge Vegetation										
1	CEGL006153	4.0	45.0	1003.0	812.0	166.0	24.0	--	--	--
G. MOTSU Lime Sinks										
1	n/a	4.9	3.4	600.0	71.0	20.0	2.0	5	16	79
2	n/a	4.4	1.8	81.0	23.0	8.0	1.0	1	4	95
3	n/a	5.0	3.1	238.0	41.0	22.0	2.0	4	9	87
4	n/a	4.3	0.6	95.0	24.0	8.0	1.0	2	4	94
5	n/a	3.9	9.3	79.5	21.0	9.5	1.0	--	--	--
VI. COASTAL PLAIN AQUATIC VEGETATION										
A. Nonalluvial Floating Aquatics										
1	CEGL004326	4.0	34.9	287.5	89.5	22.5	1.5	2	24	75
VII. MARITIME SUBXERIC FORESTS AND SHRUBLANDS										
A. Maritime Pine Forests and Woodlands										
1	n/a	5.1	3.8	847.5	106.5	38.8	13.3	2	2	96
B. Maritime Oak Forests										
1	CEGL007027	7.0	0.4	756.0	64.0	12.0	4.5	1	0	99
2	CEGL007039	4.2	6.9	384.5	54.8	51.8	1.0	3	16	81
VIII. MARITIME SHRUBLANDS										
A. Maritime Scrub										
1	CEGL003833	6.9	0.9	955.5	75.0	21.5	6.5	3	3	94
IX. MARITIME GRASSLANDS										
A. Foredune Dry Grasslands										
1	CEGL004040	7.1	0.3	1213.9	63.7	17.1	4.6	1	6	92
B. Backdune and Interdunal Dry Grasslands										
1	CEGL004051	7.3	0.4	746.1	134.8	44.3	4.3	1	1	98

X. SPARSE MARITIME VEGETATION		pH	Organic Matter	Calcium	Magnesium	Potassium	Maganese	Clay%	Silt%	Sand%
A. Sparse Beach and Dune Vegetation										
1	CEGL004397	7.9	0.1	2888.5	46.8	12.8	2.3	1	1	98
XI. MARITIME WET SHRUBLANDS										
A. Swale Shrublands										
1	CEGL003839	7.4	1.8	1708.0	138.0	33.0	5.0	1	2	97
XII. INTERDUNE HERBACEOUS WETLANDS										
A. Maritime Wet Herbaceous Vegetation										
1	CEGL004257	6.4	2.3	1636.0	175.0	37.0	4.0	1	2	98
2	CEGL003790	7.7	1.1	804.0	424.5	139.0	5.5	2	2	95
XIII. SHRUBBY TIDAL VEGETATION										
A. Saline Tidal Shrublands										
1	CEGL003924	6.8	1.4	860.5	601.9	277.9	7.3	4	2	93
2	CEGL003920	7.8	0.7	1848.0	88.0	14.5	2.0	2	1	97
XIV. OPEN SALT AND BRACKISH TIDAL VEGETATION										
A. Tidal Salt Marshes										
1	CEGL004197	7.0	0.6	2119.0	182.0	80.0	2.0	2	0	97
2	CEGL004191	6.0	0.8	3895.0	543.0	190.0	2.0	6	2	92
B. Hypersaline Pannes and Flats										
1	CEGL002278	7.0	0.9	1674.8	512.3	214.0	3.3	3	3	94
XV. OPEN FRESH AND OLIGOHALINE VEGETATION										
A. Oligohaline Tidal Marshes										
1	CEGL004189	4.7	47.0	927.0	760.0	118.0	17.0	--	--	--
2	CEGL004201	5.2	29.0	1079.0	1091.0	270.0	76.0	--	--	--

Appendix 2: Association Groups with Fair or Poor Fit

CEGL	# of Plots	NVC FIT	Reason
<i>Taxodium distichum</i> / <i>Lemna minor</i> Forest (CEGL002420)	1	Poor	Vegetation composition is different; specifically, plot's lack of <i>Taxodium distichum</i> in the canopy
<i>Taxodium distichum</i> – <i>Nyssa biflora</i> / <i>Fraxinus caroliniana</i> / <i>Lyonia lucida</i> Forest (CEGL004733)	2	Fair	Higher species diversity in the plot than community description
<i>Taxodium distichum</i> – <i>Fraxinus pennsylvanica</i> – <i>Quercus laurifolia</i> / <i>Acer rubrum</i> / <i>Saururus cernuus</i> Forest (CEGL007719)	1	Fair	Poor understanding of composition in response to differentiating inundation frequencies along Coastal Plain rivers
<i>Pinus taeda</i> - <i>Quercus laurifolia</i> - <i>Chamaecyparis thyoides</i> - (<i>Quercus virginiana</i>) / <i>Vaccinium elliotii</i> Forest (CEGL007548)	1	Fair	Vegetation composition is different; specifically, plot's lack of <i>Pinus taeda</i> in the canopy
<i>Nyssa biflora</i> - <i>Quercus nigra</i> - <i>Quercus laurifolia</i> - <i>Pinus taeda</i> / <i>Ilex opaca</i> - <i>Carpinus caroliniana</i> Forest (CEGL007350)	3	Fair	Poor understanding of composition in response to differentiating hydrologic regimes of small stream swamps
<i>Pinus elliotii</i> - <i>Quercus nigra</i> - <i>Chamaecyparis thyoides</i> / <i>Cyrilla racemiflora</i> - <i>Vaccinium spp.</i> Forest (CEGL008556)	2	Fair	Poor understanding of defined range of NVC community type
<i>Pinus serotina</i> / <i>Zenobia pulverulenta</i> - <i>Cyrilla racemiflora</i> - <i>Lyonia lucida</i> Wooded Shrubland (CEGL004458)	1	Fair	Vegetation composition is different; specifically, plot contains <i>Taxodium ascendens</i> and <i>Nyssa biflora</i> in the canopy
<i>Pinus serotina</i> / <i>Lyonia lucida</i> - <i>Ilex glabra</i> - (<i>Cyrilla racemiflora</i>) Shrubland (CEGL003846)	1	Fair	Vegetation composition is different; specifically, plot contains <i>Pinus palustris</i> in the canopy
<i>Dichantheium wrightianum</i> - <i>Dichantheium erectifolium</i> Herbaceous Vegetation (CEGL004105)	4	Fair	Vegetation composition is different; specifically, plot's lack of <i>Dichantheium wrightianum</i> and <i>Dichantheium erectifolium</i> ; furthermore, poor understanding of limesink vegetation within MOTSU
<i>Panicum hemitomom</i> – <i>Eleocharis equisetoides</i> – <i>Rhynchospora inundata</i> Herbaceous Vegetation (CEGL004127)	3	Fair	Vegetation composition is different; poor understanding of limesink vegetation
<i>Rhynchospora alba</i> Saturated Herbaceous Vegetation (CEGL004463)	2	Fair	Vegetation composition is different; specifically, plot's lack of <i>Rhynchospora alba</i>

CEGL	# of Plots	NVC FIT	Reason
<i>Rhynchospora (careyana, inundata)</i> Seasonally Flooded Herbaceous Vegetation (CEGL004132)	3	Fair	Poor understanding of this community type within the NVC
<i>Panicum virgatum - Andropogon (capillipes, glaucopsis) - Aristida palustris</i> Herbaceous Vegetation (CEGL004100)	1	Fair	Vegetation composition is different; specifically, plot's lack of <i>Andropogon sp.</i>
<i>Hypericum reductum / Aristida stricta</i> Dwarf-shrubland (CEGL003954)	1	Fair	Vegetation composition is different
<i>Nymphaea odorata - Nuphar lutea ssp. advena - (Nymphoides aquatica, Xyris smalliana)</i> Herbaceous Vegetation (CEGL004326)	3	Fair	Floristic composition is influenced by other diagnostic species from adjacent community types
<i>Quercus virginiana - Quercus hemisphaerica - Pinus taeda / Persea borbonia</i> Forest (CEGL007027)	1	Fair	Vegetation composition is different; specifically, plot's lack of <i>Quercus hemisphaerica</i> and <i>Pinus taeda</i> in the canopy
<i>Quercus virginiana - (Pinus taeda) / (Sabal minor, Serenoa repens)</i> Forest (CEGL007039)	1	Poor	Poor understanding of this community type within the NVC
<i>Quercus virginiana - (Ilex vomitoria)</i> Shrubland (CEGL003833)	1	Fair	Vegetation composition is different; specifically, plot's lack of <i>Quercus virginiana</i> in the canopy
<i>Uniola paniculata - Hydrocotyle bonariensis</i> Herbaceous Vegetation (CEGL004040)	7	Poor to Fair	Vegetation composition is different; Floristic composition is influenced by other diagnostic species from adjacent community types
<i>Muhlenbergia filipes - Spartina patens - Eustachys petraea</i> Herbaceous Vegetation (CEGL004051)	3	Fair	Vegetation composition is different; specifically, plots' lack of <i>Muhlenbergia filipes</i>
<i>Vitis rotundifolia / Triplasis purpurea - Panicum amarum - Schizachyrium littorale</i> Mid-Atlantic Coastal Medano Sparse Vegetation (CEGL004397)	1	Poor	Vegetation composition is different; specifically, plot's lack of vine stratum; topographically, the plot does not correspond with the association
<i>Morella cerifera / Spartina patens - (Juncus roemerianus)</i> Shrubland (CEGL003839)	1	Fair	Vegetation composition is different; specifically, plot's lack of <i>Morella cerifera</i>
<i>Spartina patens - Setaria parviflora - Hydrocotyle bonariensis</i> Herbaceous Vegetation (CEGL004257)	1	Fair	Vegetation composition is different; Floristic composition is influenced by other diagnostic species from adjacent community types

CEGL	# of Plots	NVC FIT	Reason
<i>Fimbristylis castanea</i> - <i>Schoenoplectus pungens</i> Seasonally Flooded Herbaceous Vegetation (CEGL003790)	2	Fair	Vegetation composition is different; specifically, plot's lack of <i>Schoenoplectus</i> <i>pungens</i>
<i>Spartina patens</i> - <i>Distichlis</i> <i>spicata</i> - <i>Juncus roemerianus</i> Herbaceous Vegetation (CEGL004197)	1	Fair	Vegetation composition is different; specifically, codominance of <i>Fimbristylis</i> <i>castanea</i> within the plot
<i>Sarcocornia perennis</i> - <i>Batis</i> <i>maritima</i> - <i>Distichlis spicata</i> Dwarf-shrubland (CEGL002278)	2	Fair	Vegetation composition is different; specifically, dominance of <i>Distichlis spicata</i> within the plots

Appendix 3: Floristic tables for Association Groups

Floristic table for Group I.A.1: *Pinus palustris* / *Ilex glabra* / *Aristida stricta* Woodland (CEGL003648)

NUMBER of PLOTS	1		
SPECIES RICHNESS	39		
SPECIES	COVER CLASS	SPECIES	COVER CLASS
<i>Vaccinium crassifolium</i>	8	<i>Morella cerifera</i>	2
<i>Clethra alnifolia</i>	6	<i>Persea palustris</i>	2
<i>Gaylussacia tomentosa</i>	6	<i>Polygala lutea</i>	2
<i>Pinus palustris</i>	6	<i>Quercus stellata</i>	2
<i>Pteridium aquilinum</i> var. <i>pseudocaudatum</i>	6	<i>Rhexia alifanus</i>	2
<i>Aristida stricta</i>	5	<i>Sanicula canadensis</i> var. <i>canadensis</i>	2
<i>Ilex glabra</i>	5	<i>Scleria ciliata</i> var. <i>glabra</i>	2
<i>Vaccinium tenellum</i>	5	<i>Solidago odora</i> var. <i>odora</i>	2
<i>Gaylussacia frondosa</i>	4	<i>Symphyotrichum walteri</i>	2
<i>Quercus elliotii</i>	3	<i>Tephrosia hispidula</i>	2
<i>Andropogon</i> sp.	2	<i>Xyris</i> sp.	2
<i>Arundinaria gigantea</i>	2	<i>Dionaea muscipula</i>	1
<i>Desmodium tenuifolium</i>	2	<i>Eriocaulon compressum</i>	1
<i>Dichanthelium portoricense</i>	2	<i>Lespedeza capitata</i>	1
<i>Dichanthelium tenue</i>	2	<i>Lobelia nuttallii</i>	1
<i>Dichanthelium wrightianum</i>	2	<i>Rhynchospora fascicularis</i> var. <i>fascicularis</i>	1
<i>Diospyros virginiana</i>	2	<i>Rhynchospora plumosa</i>	1
<i>Gelsemium sempervirens</i>	2	<i>Rhynchospora wrightiana</i>	1
<i>Lyonia mariana</i>	2	<i>Sericocarpus tortifolius</i>	1
<i>Magnolia virginiana</i> var. <i>virginiana</i>	2		

Floristic table for Group I.B.1: *Pinus palustris* / *Quercus laevis* - *Quercus geminata* / *Vaccinium tenellum* / *Aristida stricta* Woodland (CEGL003589)

NUMBER of PLOTS	1
SPECIES RICHNESS	24
SPECIES	COVER CLASS
<i>Quercus geminata</i>	7
<i>Gaylussacia dumosa</i> var. <i>dumosa</i>	6
<i>Pinus palustris</i>	6
<i>Quercus laevis</i>	6
<i>Aristida stricta</i>	5
<i>Vaccinium tenellum</i>	5
<i>Lyonia mariana</i>	4
<i>Arundinaria tecta</i>	3
<i>Carphephorus bellidifolius</i>	2
<i>Cnidoscolus stimulosus</i>	2
<i>Diospyros virginiana</i>	2
<i>Gordonia lasianthus</i>	2
<i>Morella cerifera</i>	2
<i>Rhynchospora megalocarpa</i>	2
<i>Sassafras albidum</i>	2
<i>Vaccinium crassifolium</i>	2
<i>Xyris</i> sp.	2
<i>Andropogon</i> sp.	1
<i>Clitoria mariana</i> var. <i>mariana</i>	1
<i>Crocanthemum canadense</i>	1
<i>Cuthbertia rosea</i>	1
<i>Lachnocaulon anceps</i>	1
<i>Magnolia virginiana</i> var. <i>virginiana</i>	1
<i>Scleria ciliata</i> var. <i>glabra</i>	1

Floristic table for Group II.A.1: *Taxodium distichum* – *Nyssa aquatica* / *Fraxinus caroliniana* Forest (CEGL007431)

NUMBER of PLOTS	1
SPECIES RICHNESS	21
SPECIES	COVER CLASS
<i>Nyssa aquatica</i>	8
<i>Taxodium distichum</i>	7
<i>Acer rubrum</i>	5
<i>Bidens frondosa</i>	3
<i>Alnus serrulata</i>	2
<i>Cornus foemina</i>	2
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	2
<i>Ilex opaca</i> var. <i>opaca</i>	2
<i>Itea virginica</i>	2
<i>Myriophyllum pinnatum</i>	2
<i>Pilea pumila</i>	2
<i>Tillandsia usneoides</i>	2
<i>Toxicodendron radicans</i> var. <i>radicans</i>	2
<i>Triadenum walteri</i>	2
<i>Vaccinium fuscatum</i>	2
Dicot sp.	1
Dicot sp. #2	1
<i>Eupatorium capillifolium</i>	1
<i>Nymphoides aquatica</i>	1
<i>Saururus cernuus</i>	1
<i>Spirodela polyrrhiza</i>	1

Floristic table for Group II.A.2: *Taxodium distichum* / *Lemna minor* Forest (CEGL002420)

NUMBER of PLOTS	1
SPECIES RICHNESS	16
SPECIES	COVER CLASS
Hydrocotyle ranunculoides	7
Lemna minor/trisulca	7
Taxodium ascendens	6
Utricularia cornuta/juncea/purpurea	6
Cephalanthus occidentalis	4
Ilex glabra	3
Tillandsia usneoides	3
Vaccinium fuscatum	3
Boehmeria cylindrica	2
Erechtites hieracifolia var. hieracifolia	2
Morella cerifera	2
Eupatorium capillifolium	1
Nyssa biflora	1
Oldenlandia uniflora	1
Quercus nigra	1
Triadenum walteri	1

Floristic table for Group II.A.3: No described community type

NUMBER of PLOTS		1		
SPECIES RICHNESS		64		
SPECIES	COVER CLASS	SPECIES	COVER CLASS	
<i>Acer rubrum</i>	6	<i>Hypericum hypericoides</i>	2	
<i>Quercus laurifolia</i>	6	<i>Leersia virginica</i>	2	
<i>Ulmus americana</i> var. <i>americana</i>	6	<i>Liquidambar styraciflua</i>	2	
<i>Arundinaria gigantea</i>	5	<i>Lobelia</i> sp.	2	
<i>Nyssa biflora</i>	5	<i>Ludwigia pilosa/suffruticosa</i>	2	
<i>Rhynchospora miliacea</i>	5	<i>Lyonia lucida</i>	2	
<i>Carex debilis</i>	4	<i>Mikania scandens</i>	2	
<i>Persea palustris</i>	4	<i>Mitchella repens</i>	2	
<i>Saururus cernuus</i>	4	<i>Morella cerifera</i>	2	
<i>Carex lonchocarpa</i>	3	<i>Osmunda regalis</i> var. <i>spectabilis</i>	2	
<i>Carex louisianica</i>	3	<i>Oxydendrum arboreum</i>	2	
<i>Ilex opaca</i> var. <i>opaca</i>	3	<i>Pluchea baccharis/foetida/odorata</i>	2	
<i>Parthenocissus quinquefolia</i>	3	<i>Proserpinaca palustris</i> var. <i>palustris</i>	2	
<i>Asplenium platyneuron</i>	2	<i>Quercus hemisphaerica</i>	2	
<i>Bignonia capreolata</i>	2	<i>Quercus michauxii</i>	2	
<i>Boehmeria cylindrica</i>	2	<i>Rhynchospora caduca</i>	2	
<i>Campsis radicans</i>	2	<i>Rubus argutus</i>	2	
<i>Carex alata</i>	2	<i>Sabal minor</i>	2	
<i>Carex gigantea</i>	2	<i>Sabatia brachiata</i>	2	
<i>Carex intumescens</i> var. <i>intumescens</i>	2	<i>Smilax laurifolia</i>	2	
<i>Carpinus caroliniana</i> var. <i>caroliniana</i>	2	<i>Smilax rotundifolia</i>	2	
<i>Decumaria barbara</i>	2	<i>Spiranthes odorata</i>	2	
<i>Dichanthelium commutatum</i> var. <i>commutatum</i>	2	<i>Taxodium ascendens</i>	2	
<i>Dichanthelium dichotomum</i> var. <i>dichotomum</i>	2	<i>Toxicodendron radicans</i> var. <i>radicans</i>	2	
Dicot sp.	2	<i>Triadenum walteri</i>	2	
Dicot sp. #2	2	<i>Vitis cinerea</i> var. <i>baileyana</i>	2	
<i>Eleocharis</i> sp.	2	<i>Woodwardia areolata</i>	2	
<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	2	<i>Cheilanthes lanosa</i>	1	
<i>Euonymus americanus</i>	2	<i>Eutrochium dubium</i>	1	
<i>Eupatorium capillifolium</i>	2	<i>Ilex decidua</i> var. <i>decidua</i>	1	
<i>Fraxinus caroliniana</i>	2	<i>Juncus effusus</i> ssp. <i>solutus</i>	1	
<i>Galium hispidulum/tinctarium</i>	2	<i>Juncus polycephalus</i>	1	

Floristic table for Group III.A.1: *Taxodium Nyssa biflor -Liquidambar styraciflua / Glyceria septentrionalis*
 - *Hydrocotyle ranunculoides* Forest (CEGL007743)

NUMBER of PLOTS		1	
SPECIES RICHNESS		44	
SPECIES	COVER CLASS	SPECIES	COVER CLASS
<i>Acer rubrum</i>	6	<i>Justicia ovata</i> var. <i>ovata</i>	2
<i>Nyssa biflora</i>	6	<i>Lyonia lucida</i>	2
<i>Berchemia scandens</i>	4	<i>Magnolia virginiana</i> var. <i>virginiana</i>	2
<i>Fraxinus pennsylvanica</i>	4	<i>Mikania scandens</i>	2
<i>Ilex opaca</i> var. <i>opaca</i>	4	<i>Mitchella repens</i>	2
<i>Liquidambar styraciflua</i>	4	<i>Morella caroliniensis</i>	2
<i>Carex leptalea</i> var. <i>harperi</i>	3	<i>Persea borbonia</i>	2
<i>Ilex verticillata</i>	3	<i>Quercus nigra</i>	2
<i>Smilax laurifolia</i>	3	<i>Rhynchospora miliacea</i>	2
<i>Taxodium distichum</i>	3	<i>Saururus cernuus</i>	2
<i>Toxicodendron radicans</i> var. <i>radicans</i>	3	<i>Smilax bona-nox</i>	2
<i>Ulmus americana</i> var. <i>americana</i>	3	<i>Spiranthes odorata</i>	2
<i>Akebia quinata</i>	2	<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	2
<i>Carex debilis</i>	2	<i>Woodwardia areolata</i>	2
<i>Carex lonchocarpa</i>	2	Dicot sp. #2	1
<i>Carex lupulina</i>	2	<i>Eubotrys racemosa</i>	1
<i>Centella erecta</i>	2	<i>Eupatorium compositifolium</i>	1
<i>Decumaria barbara</i>	2	<i>Ludwigia pilosa/suffruticosa</i>	1
Dicot sp.	2	<i>Lycopus rubellus</i>	1
<i>Dulichium arundinaceum</i> var. <i>arundinaceum</i>	2	<i>Parthenocissus quinquefolia</i>	1
<i>Eupatorium serotinum</i>	2	<i>Rubus argutus</i>	1
<i>Hypericum galioides</i>	2	<i>Triadenum walteri</i>	1

Floristic table for Group III.A.2: *Taxodium distichum* - *Nyssa aquatica* - *Nyssa biflora* / *Fraxinus caroliniana* / *Itea virginica* Forest (CEGL007432)

NUMBER of PLOTS	1
SPECIES RICHNESS	17
SPECIES	COVER CLASS
<i>Nyssa biflora</i>	7
<i>Taxodium ascendens</i>	6
<i>Ilex myrtifolia</i>	5
<i>Acer rubrum</i>	4
<i>Cyrilla racemiflora</i>	4
<i>Quercus laurifolia</i>	3
<i>Smilax laurifolia</i>	3
<i>Smilax rotundifolia</i>	3
<i>Taxodium distichum</i>	3
<i>Clethra alnifolia</i>	2
<i>Hymenocallis crassifolia</i>	2
<i>Ilex amelanchier</i>	2
Moss sp.	2
<i>Tillandsia usneoides</i>	2
<i>Conyza canadensis</i> var. <i>pusilla</i>	1
Dicot sp.	1
Lichen sp.	1

Floristic table for Group III.A.3: *Nyssa aquatica* - *Nyssa biflora* Forest (CEGL007429)

NUMBER of PLOTS		2			
AVERAGE RICHNESS		39			
SPECIES	CONSTANCY	AVERAGE COVER CLASS	SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Nyssa aquatica</i>	100	8	<i>Pluchea baccharis/foetida/odorata</i>	100	1
<i>Nyssa biflora</i>	100	7	<i>Carex albolutescens</i>	50	5
<i>Acer rubrum</i>	100	6	<i>Quercus "waccamawensis"</i>	50	5
<i>Ulmus americana</i> var. <i>americana</i>	100	6	<i>Fraxinus pennsylvanica</i>	50	4
<i>Fraxinus caroliniana</i>	100	5	<i>Taxodium distichum</i>	50	4
<i>Persicaria hydropiperoides</i>	100	4	<i>Clethra alnifolia</i>	50	4
<i>Carex gigantea</i>	100	4	<i>Carex alata</i>	50	2
<i>Saururus cernuus</i>	100	3	<i>Carex lupulina</i>	50	2
<i>Campsis radicans</i>	100	3	<i>Climacium americanum</i>	50	2
<i>Boehmeria cylindrica</i>	100	2	<i>Galium hispidulum/tinctorium</i>	50	2
<i>Pontederia cordata</i> var. <i>cordata</i>	100	2	<i>Hydrocotyle prolifera</i>	50	2
<i>Smilax laurifolia</i>	100	2	<i>Hymenocallis pygmaea</i>	50	2
<i>Toxicodendron radicans</i> var. <i>radicans</i>	100	2	<i>Parthenocissus quinquefolia</i>	50	2
<i>Berchemia scandens</i>	100	2	<i>Proserpinaca pectinata</i>	50	2
<i>Mikania scandens</i>	100	2	<i>Quercus nigra</i>	50	2
<i>Rhynchospora corniculata</i> var. <i>corniculata</i>	100	2	<i>Rhynchospora miliacea</i>	50	2
<i>Smilax walteri</i>	100	2	<i>Smilax rotundifolia</i>	50	2
<i>Triadenum walteri</i>	100	2	<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	50	2
<i>Dulichium arundinaceum</i> var. <i>arundinaceum</i>	100	2	<i>Cyrilla racemiflora</i>	50	2
<i>Ludwigia pilosa/suffruticosa</i>	100	1			

Floristic table for Group III.A.4: *Taxodium distichum* – *Nyssa biflora* / *Fraxinus caroliniana* / *Lyonia lucida* Forest (CEGL004733)

NUMBER of PLOTS		2
AVERAGE RICHNESS		32
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Nyssa biflora</i>	100	7
<i>Fraxinus caroliniana</i>	100	6
<i>Acer rubrum</i>	100	5
<i>Taxodium distichum</i>	100	5
<i>Eubotrys racemosa</i>	100	2
<i>Boehmeria cylindrica</i>	100	2
<i>Smilax walteri</i>	100	2
<i>Nyssa aquatica</i>	50	6
<i>Quercus "waccamawensis"</i>	50	6
<i>Ilex amelanchar</i>	50	4
<i>Ilex myrtifolia</i>	50	4
<i>Quercus laurifolia</i>	50	4
<i>Justicia ovata</i> var. <i>ovata</i>	50	4
<i>Clethra alnifolia</i>	50	3
<i>Pluchea baccharis/foetida/odorata</i>	50	3
<i>Ulmus americana</i> var. <i>americana</i>	50	3
<i>Lycopus rubellus</i>	50	2
<i>Phoradendron serotinum</i> ssp. <i>serotinum</i>	50	2
<i>Tillandsia usneoides</i>	50	2
<i>Bignonia capreolata</i>	50	2
<i>Campsis radicans</i>	50	2
<i>Decumaria barbara</i>	50	2
<i>Dulichium arundinaceum</i> var. <i>arundinaceum</i>	50	2
<i>Hymenocallis crassifolia</i>	50	2
<i>Ludwigia pilosa/suffruticosa</i>	50	2
<i>Micranthemum umbrosum</i>	50	2
<i>Mikania scandens</i>	50	2
<i>Onoclea sensibilis</i> var. <i>sensibilis</i>	50	2
<i>Osmunda regalis</i> var. <i>spectabilis</i>	50	2
<i>Panicum</i> sp.	50	2
<i>Parthenocissus quinquefolia</i>	50	2
<i>Persicaria hydropiperoides</i>	50	2

Floristic table for Group III.B.1: *Taxodium distichum* – *Fraxinus pennsylvanica* – *Quercus laurifolia* / *Acer rubrum* / *Saururus cernuus* Forest (CEGL007719)

NUMBER of PLOTS		1	
SPECIES RICHNESS		44	
SPECIES	COVER CLASS	SPECIES	COVER CLASS
<i>Acer rubrum</i>	8	<i>Populus deltoides</i> var. <i>deltoides</i>	2
<i>Boehmeria cylindrica</i>	7	<i>Rhynchospora corniculata</i> var. <i>corniculata</i>	2
<i>Ulmus rubra</i>	6	<i>Saccharum giganteum</i>	2
<i>Aesculus pavia</i> var. <i>pavia</i>	5	<i>Saururus cernuus</i>	2
<i>Nyssa biflora</i>	5	<i>Smilax rotundifolia</i>	2
<i>Quercus michauxii</i>	5	<i>Toxicodendron radicans</i> var. <i>radicans</i>	2
<i>Taxodium distichum</i>	3	<i>Vitis cinerea</i> var. <i>floridana</i>	2
<i>Triadica sebifera</i>	3	<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	2
<i>Arisaema triphyllum</i> ssp. <i>pusillum</i>	2	<i>Baccharis halimifolia</i>	1
<i>Campsis radicans</i>	2	<i>Berchemia scandens</i>	1
<i>Cyperus pseudovegetus</i>	2	<i>Bignonia capreolata</i>	1
<i>Fraxinus profunda</i>	2	<i>Commelina communis</i> var. <i>communis</i>	1
<i>Ilex opaca</i> var. <i>opaca</i>	2	<i>Conyza canadensis</i> var. <i>canadensis</i>	1
<i>Juncus coriaceous</i>	2	<i>Dichanthelium commutatum</i> var. <i>commutatum</i>	1
<i>Liquidambar styraciflua</i>	2	<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	1
Moss sp.	2	<i>Eupatorium capillifolium</i>	1
<i>Onoclea sensibilis</i> var. <i>sensibilis</i>	2	<i>Hypericum mutilum</i> var. <i>mutilum</i>	1
<i>Parthenocissus quinquefolia</i>	2	<i>Itea virginica</i>	1
<i>Persea palustris</i>	2	<i>Mikania scandens</i>	1
<i>Persicaria hydropiperoides</i>	2	<i>Pilea pumila</i>	1
<i>Phytolacca americana</i>	2	<i>Quercus</i> "waccamawensis"	1
<i>Pluchea baccharis/foetida/odorata</i>	2	<i>Ranunculus</i> sp.	1

Floristic table for Group III.B.2: *Quercus laurifolia* – *Quercus lyrata* / *Carpinus caroliniana* – *Persea palustris* / *Vaccinium elliotii* Forest (CEGL004737)

NUMBER of PLOTS		1	
SPECIES RICHNESS		38	
SPECIES	COVER CLASS	SPECIES	COVER CLASS
<i>Quercus "waccamawensis"</i>	7	<i>Ilex opaca</i> var. <i>opaca</i>	2
<i>Quercus lyrata</i>	7	<i>Mitchella repens</i>	2
<i>Acer rubrum</i>	5	<i>Persea palustris</i>	2
<i>Betula nigra</i>	5	<i>Phoradendron serotinum</i> ssp. <i>serotinum</i>	2
<i>Taxodium ascendens</i>	5	<i>Planera aquatica</i>	2
<i>Crataegus aestivalis</i>	4	<i>Pleopeltis polypodioides</i> ssp. <i>michauxiana</i>	2
Moss sp.	4	<i>Quercus phellos</i>	2
<i>Carpinus caroliniana</i> var. <i>caroliniana</i>	3	<i>Smilax rotundifolia</i>	2
<i>Campsis radicans</i>	2	<i>Smilax walteri</i>	2
<i>Carex glaucescens</i>	2	<i>Taxodium distichum</i>	2
<i>Cyrilla racemiflora</i>	2	<i>Tillandsia usneoides</i>	2
<i>Dichanthelium yadkinense</i>	2	<i>Toxicodendron radicans</i> var. <i>radicans</i>	2
<i>Diospyros virginiana</i>	2	<i>Trachelospermum difforme</i>	2
<i>Eubotrys racemosa</i>	2	<i>Vaccinium elliotii</i>	2
<i>Fraxinus caroliniana</i>	2	<i>Viola</i> sp.	2
<i>Fraxinus pennsylvanica</i>	2	Dicot sp.	2
<i>Hymenocallis crassifolia</i>	2	<i>Gelsemium sempervirens</i>	2
<i>Hypoxis hirsuta</i>	2	<i>Liquidambar styraciflua</i>	2
<i>Ilex decidua</i> var. <i>decidua</i>	2	<i>Nyssa biflora</i>	2

Floristic table for Group III.C.1: *Pinus taeda* - *Quercus laurifolia* - *Chamaecyparis thyoides* - (*Quercus virginiana*) / *Vaccinium elliotii* Forest (CEGL007548)

NUMBER of PLOTS	1
SPECIES RICHNESS	28
SPECIES	COVER CLASS
<i>Acer rubrum</i>	7
<i>Cyrilla racemiflora</i>	7
<i>Chamaecyparis thyoides</i>	6
<i>Nyssa biflora</i>	6
<i>Quercus</i> "waccamawensis"	6
<i>Ilex cassine</i> var. <i>cassine</i>	5
<i>Liquidambar styraciflua</i>	5
<i>Taxodium distichum</i>	5
<i>Persea palustris</i>	3
<i>Woodwardia virginica</i>	3
<i>Ilex amelanchier</i>	2
<i>Mitchella repens</i>	2
<i>Pinus taeda</i>	2
<i>Smilax bona-nox</i>	2
<i>Smilax laurifolia</i>	2
<i>Smilax rotundifolia</i>	2
<i>Smilax walteri</i>	2
<i>Sorghastrum nutans</i>	2
<i>Sphagnum</i> sp.	2
<i>Tillandsia usneoides</i>	2
<i>Zephyranthes simpsonii</i>	2
<i>Fraxinus caroliniana</i>	1
<i>Gelsemium sempervirens</i>	1
<i>Itea virginica</i>	1
<i>Pleopeltis polypodioides</i> ssp. <i>michauxiana</i>	1
<i>Sabatia kennedyana</i>	1
<i>Smilax glauca</i>	1
<i>Xyris</i> sp.	1

Floristic table for Group III.C.2: *Nyssa biflora* - *Quercus nigra* - *Quercus laurifolia* - *Pinus taeda* / *Ilex opaca* - *Carpinus caroliniana* Forest (CEGL007350)

NUMBER of PLOTS		3
AVERAGE RICHNESS		31
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Acer rubrum</i>	100	6
<i>Nyssa biflora</i>	100	6
<i>Liquidambar styraciflua</i>	100	6
<i>Cyrilla racemiflora</i>	100	5
<i>Smilax laurifolia</i>	100	2
<i>Osmunda regalis</i> var. <i>spectabilis</i>	100	2
<i>Quercus</i> "waccamawensis"	67	6
<i>Ilex opaca</i> var. <i>opaca</i>	67	6
<i>Ilex myrtifolia</i>	67	5
<i>Persea palustris</i>	67	4
<i>Taxodium distichum</i>	67	2
<i>Smilax walteri</i>	67	2
<i>Smilax rotundifolia</i>	67	2
<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	67	2
<i>Vaccinium fuscatum</i>	67	2
<i>Woodwardia virginica</i>	67	2
<i>Clethra alnifolia</i>	67	2
<i>Toxicodendron radicans</i> var. <i>radicans</i>	67	2
<i>Gelsemium sempervirens</i>	67	2
<i>Ilex glabra</i>	67	2
<i>Sphagnum</i> sp.	33	6
<i>Fraxinus caroliniana</i>	33	6
<i>Quercus laurifolia</i>	33	6
<i>Carex glaucescens</i>	33	4
<i>Dulichium arundinaceum</i> var. <i>arundinaceum</i>	33	4
<i>Pinus taeda</i>	33	4
<i>Carpinus caroliniana</i> var. <i>caroliniana</i>	33	3
<i>Chamaecyparis thyoides</i>	33	3
<i>Andropogon</i> sp.	33	2
<i>Fraxinus pennsylvanica</i>	33	2
<i>Iris virginica</i> var. <i>virginica</i>	33	2
<i>Lyonia lucida</i>	33	2

Floristic table for Group III.C.3: *Pinus elliottii* - *Quercus nigra* - *Chamaecyparis thyoides* / *Cyrilla racemiflora* - *Vaccinium spp.* Forest (CEGL008556)

NUMBER of PLOTS		2
AVERAGE RICHNESS		29
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Cyrilla racemiflora</i>	100	7
<i>Chamaecyparis thyoides</i>	100	7
<i>Quercus "waccamawensis"</i>	100	6
<i>Taxodium distichum</i>	100	5
<i>Morella cerifera</i>	100	5
<i>Acer rubrum</i>	100	5
<i>Ilex myrtifolia</i>	100	5
<i>Nyssa biflora</i>	100	5
<i>Pinus elliottii</i> var. <i>elliottii</i>	100	3
<i>Fraxinus caroliniana</i>	100	2
<i>Centella erecta</i>	100	2
<i>Eubotrys racemosa</i>	100	2
<i>Andropogon sp.</i>	100	2
<i>Carex glaucescens</i>	100	2
<i>Dichanthelium longiligulatum</i>	100	2
<i>Rhynchospora perplexa</i> var. <i>perplexa</i>	100	2
<i>Smilax laurifolia</i>	100	2
<i>Smilax walteri</i>	100	2
<i>Tillandsia usneoides</i>	100	2
<i>Zephyranthes atamasca</i>	50	3
<i>Vaccinium elliottii</i>	50	3
<i>Magnolia virginiana</i> var. <i>virginiana</i>	50	2
<i>Gelsemium sempervirens</i>	50	2
<i>Hypericum cistifolium</i>	50	2
<i>Osmunda regalis</i> var. <i>spectabilis</i>	50	2
<i>Saccharum giganteum</i>	50	2
<i>Vaccinium corymbosum</i>	50	2
<i>Liquidambar styraciflua</i>	50	2
<i>Mitchella repens</i>	50	2

Floristic table for Group IV.A.1: *Chamaecyparis thyoides* / *Persea palustris* / *Lyonia lucida* – *Ilex coriacea*
Forest (CEGL006146)

NUMBER of PLOTS	1
SPECIES RICHNESS	22
SPECIES	COVER CLASS
<i>Chamaecyparis thyoides</i>	7
<i>Cyrilla racemiflora</i>	7
<i>Lyonia lucida</i>	7
<i>Smilax laurifolia</i>	7
<i>Ilex cassine</i> var. <i>cassine</i>	6
<i>Gaylussacia frondosa</i>	5
<i>Gordonia lasianthus</i>	5
<i>Ilex coriacea</i>	5
<i>Persea palustris</i>	5
<i>Magnolia virginiana</i> var. <i>virginiana</i>	3
<i>Rhododendron atlanticum</i>	3
<i>Vaccinium fuscatum</i>	3
<i>Acer rubrum</i>	2
<i>Clethra alnifolia</i>	2
<i>Eubotrys racemosa</i>	2
<i>Gelsemium rankinii</i>	2
<i>Itea virginica</i>	2
<i>Lyonia ligustrina</i> var. <i>foliosiflora</i>	2
<i>Mitchella repens</i>	2
<i>Morella cerifera</i>	2
<i>Vaccinium formosum</i>	2
<i>Woodwardia virginica</i>	2

Floristic table for Group IV.B.1: *Pinus serotina* / *Zenobia pulverulenta* - *Cyrilla racemiflora* - *Lyonia lucida*
Wooded Shrubland (CEGL004458)

NUMBER of PLOTS		3
AVERAGE RICHNESS		18
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Lyonia lucida</i>	100	7
<i>Cyrilla racemiflora</i>	100	7
<i>Ilex coriacea</i>	100	6
<i>Pinus serotina</i>	100	6
<i>Smilax laurifolia</i>	100	4
<i>Ilex glabra</i>	100	4
<i>Persea palustris</i>	100	3
<i>Woodwardia virginica</i>	100	2
<i>Nyssa biflora</i>	67	6
<i>Taxodium ascendens</i>	67	5
<i>Zenobia pulverulenta</i>	67	5
<i>Clethra alnifolia</i>	67	4
<i>Sphagnum</i> sp.	67	3
<i>Magnolia virginiana</i> var. <i>virginiana</i>	67	2
<i>Aronia arbutifolia</i>	67	2
<i>Ilex myrtifolia</i>	67	2
<i>Acer rubrum</i>	67	2
<i>Gordonia lasianthus</i>	33	4

Floristic table for Group IV.B.2: *Pinus serotina* / *Lyonia lucida* - *Ilex glabra* - (*Cyrilla racemiflora*)
Shrubland (CEGL003846)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	12	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Lyonia lucida</i>	100	8
<i>Cyrilla racemiflora</i>	100	7
<i>Ilex coriacea</i>	100	6
<i>Smilax laurifolia</i>	100	5
<i>Magnolia virginiana</i> var. <i>virginiana</i>	100	4
<i>Persea palustris</i>	100	2
<i>Pinus serotina</i>	50	7
<i>Pinus palustris</i>	50	5
<i>Nyssa biflora</i>	50	3
<i>Smilax walteri</i>	50	2
<i>Woodwardia virginica</i>	50	2
<i>Zenobia pulverulenta</i>	50	2

Floristic table for Group IV.C.1: *Pinus serotina* / *Cyrilla racemiflora* - *Lyonia lucida* - *Ilex glabra* Woodland
(CEGL003670)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	13	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Cyrilla racemiflora</i>	100	8
<i>Lyonia lucida</i>	100	8
<i>Pinus serotina</i>	100	6
<i>Gordonia lasianthus</i>	100	5
<i>Smilax laurifolia</i>	100	5
<i>Woodwardia virginica</i>	100	2
<i>Persea palustris</i>	100	2
<i>Ilex coriacea</i>	50	4
<i>Zenobia pulverulenta</i>	50	3
<i>Ilex glabra</i>	50	3
<i>Chamaedaphne calyculata</i>	50	2
<i>Aronia arbutifolia</i>	50	2
<i>Pteridium aquilinum</i>	50	2

Floristic table for Group IV.C.2: *Pinus serotina* – *Gordonia lasianthus* / *Lyonia lucida* Woodland (CEGL003671)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	13	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Lyonia lucida</i>	100	8
<i>Gordonia lasianthus</i>	100	7
<i>Pinus serotina</i>	100	7
<i>Cyrilla racemiflora</i>	100	6
<i>Ilex coriacea</i>	100	4
<i>Smilax laurifolia</i>	100	4
<i>Aronia arbutifolia</i>	100	2
<i>Ilex glabra</i>	100	2
<i>Zenobia pulverulenta</i>	50	5
<i>Clethra alnifolia</i>	50	4
<i>Eubotrys racemosa</i>	50	4
<i>Nyssa biflora</i>	50	4
<i>Vaccinium formosum</i>	50	4

Floristic table for Group V.A.1: *Taxodium ascendens* / *Panicum hemitomon* – *Polygala cymosa* Woodland (CEGL003733)

NUMBER of PLOTS	1
SPECIES RICHNESS	20
SPECIES	COVER CLASS
Rhynchospora tracyi	7
Taxodium ascendens	7
Rhynchospora inundata	5
Centella erecta	4
Cyrilla racemiflora	4
Panicum hemitomon	3
Polygala cymosa	3
Agalinis fasciculata	2
Andropogon sp.	2
Drosera filiformis	2
Sagittaria lancifolia var. media	2
Xyris sp.	2
Acer rubrum	1
Agalinis linifolia	1
Drosera capillaris	1
Eupatorium capillifolium	1
Ilex myrtifolia	1
Proserpinaca pectinata	1
Rhexia cubensis	1
Rhynchospora filifolia	1

Floristic table for Group V.B.1: *Dichanthelium wrightianum* - *Dichanthelium erectifolium* Herbaceous Vegetation (CEGL004105)

NUMBER of PLOTS	4	
AVERAGE RICHNESS	19	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Lachnanthes caroliniana</i>	100	6
<i>Centella erecta</i>	100	5
<i>Andropogon</i> sp.	100	3
<i>Pinus taeda</i>	75	4
<i>Panicum virgatum</i>	75	4
<i>Pinus palustris</i>	75	2
<i>Lachnocaulon minus</i>	75	2
<i>Litsea aestivalis</i>	50	2
<i>Drosera intermedia</i>	50	2
<i>Xyris</i> sp.	50	2
<i>Vaccinium arboreum</i>	50	1
<i>Dichanthelium dichotomum</i>	25	4
<i>Ilex myrtifolia</i>	25	4
<i>Lyonia mariana</i>	25	3
<i>Vaccinium fuscatum</i>	25	3
<i>Rhynchospora filifolia</i>	25	3
<i>Juncus abortivus</i>	25	2
<i>Polygala ramosa</i>	25	2
<i>Sphagnum</i> sp.	25	2

Floristic table for Group V.B.2: *Panicum hemitomon* – *Eleocharis equisetoides* – *Rhynchospora inundata*
Herbaceous Vegetation (CEGL004127)

NUMBER of PLOTS	3	
AVERAGE RICHNESS	17	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Panicum hemitomon</i>	100	9
<i>Xyris</i> sp.	67	2
<i>Proserpinaca pectinata</i>	67	2
<i>Nymphaea odorata</i> ssp. <i>odorata</i>	67	2
<i>Andropogon</i> sp.	67	2
<i>Nyssa biflora</i>	67	1
<i>Lachnanthes caroliniana</i>	33	6
<i>Amaranthus cannabinus</i>	33	6
<i>Eriocaulon decangulare</i> var. <i>decangulare</i>	33	5
<i>Sphagnum</i> sp.	33	5
<i>Cephalanthus occidentalis</i>	33	4
<i>Hydrocotyle ranunculoides</i>	33	4
<i>Rhynchospora inundata</i>	33	4
<i>Eriocaulon compressum</i>	33	4
<i>Polygala</i> sp.	33	4
<i>Salix nigra</i>	33	3
<i>Centella erecta</i>	33	3

Floristic table for Group V.C.1: *Taxodium distichum* - *Taxodium ascendens* / *Panicum hemitomon*
Woodland (CEGL004466)

NUMBER of PLOTS	1
SPECIES RICHNESS	9
SPECIES	COVER CLASS
<i>Pinus serotina</i>	7
<i>Panicum hemitomon</i>	6
<i>Liquidambar styraciflua</i>	4
<i>Ilex cassine</i> var. <i>cassine</i>	3
<i>Pluchea baccharis/foetida/odorata</i>	3
<i>Centella erecta</i>	2
<i>Eupatorium petaloideum</i>	2
<i>Leersia virginica</i>	2
<i>Lobelia</i> sp.	2

Floristic table for Group V.D.1: *Rhynchospora alba* Saturated Herbaceous Vegetation (CEGL004463)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	22	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Cyrilla racemiflora</i>	100	4
<i>Andropogon</i> sp.	100	4
<i>Decodon verticillatus</i>	50	7
<i>Rhynchospora alba</i>	50	7
<i>Sphagnum</i> sp.	50	7
<i>Rhexia cubensis</i>	50	6
<i>Lyonia lucida</i>	50	5
<i>Eupatorium leucolepis</i>	50	4
<i>Agalinis virgata</i>	50	3
<i>Hypericum</i> species 2	50	3
<i>Ludwigia pilosa/suffruticosa</i>	50	3
<i>Nymphaea odorata</i> ssp. <i>odorata</i>	50	3
<i>Pinus serotina</i>	50	3
<i>Smilax walteri</i>	50	3
<i>Triadenum virginicum</i>	50	3
<i>Oldenlandia uniflora</i>	50	2
<i>Panicea</i> sp.	50	2
<i>Panicum hemitomon</i>	50	2
<i>Pinus taeda</i>	50	2
<i>Polygala cymosa</i>	50	2
<i>Proserpinaca pectinata</i>	50	2
<i>Rhynchospora fascicularis</i> var. <i>fascicularis</i>	50	2

Floristic table for Group V.D.2: *Rhynchospora (careyana, inundata)* Seasonally Flooded Herbaceous Vegetation (CEGL004132)

NUMBER of PLOTS	4	
AVERAGE RICHNESS	20	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Dichanthelium erectifolium</i>	100	4
<i>Xyris</i> sp.	100	3
<i>Centella erecta</i>	100	3
<i>Sphagnum</i> sp.	75	6
<i>Andropogon</i> sp.	75	4
<i>Rhexia cubensis</i>	75	2
<i>Proserpinaca pectinata</i>	75	2
<i>Nymphaea odorata</i> ssp. <i>odorata</i>	50	3
<i>Lachnanthes caroliniana</i>	50	3
<i>Drosera intermedia</i>	50	2
<i>Utricularia cornuta/junceae/purpurea</i>	50	2
<i>Rhynchospora inundata</i>	50	2
<i>Lachnocaulon minus</i>	50	2
<i>Rhynchospora filifolia</i>	50	2
<i>Polygala cymosa</i>	50	2
<i>Eriocaulon compressum</i>	50	2
<i>Acer rubrum</i>	50	1
<i>Cyrilla racemiflora</i>	50	1
<i>Drosera rotundifolia</i> var. <i>rotundifolia</i>	50	1
<i>Rhynchospora corniculata</i> var. <i>corniculata</i>	25	6

Floristic table for Group V.E.1: *Panicum virgatum* - *Andropogon (capillipes, glaucopsis)* - *Aristida palustris*
Herbaceous Vegetation (CEGL004100)

NUMBER of PLOTS	1
SPECIES RICHNESS	24
SPECIES	COVER CLASS
Muhlenbergia expansa	7
Schizachyrium scoparium var. scoparium	6
Ilex cassine var. cassine	5
Centella erecta	4
Dichanthelium erectifolium	4
Rhynchospora chapmanii	4
Drosera rotundifolia var. rotundifolia	3
Rhynchospora plumosa	3
Andropogon sp.	2
Aristida palustris	2
Coreopsis falcata	2
Dichanthelium longiligulatum	2
Lycopodiella alopecuroides	2
Pinus serotina	2
Polygala cymosa	2
Acer rubrum	1
Dicot sp.	1
Hypericum tenuifolium	1
Ilex glabra	1
Nyssa biflora	1
Persea palustris	1
Pinguicula sp.	1
Sabatia difformis	1
Scleria georgiana	1

Floristic table for Group V.E.2: *Hypericum reductum* / *Aristida stricta* Dwarf-shrubland (CEGL003954)

NUMBER of PLOTS	1
SPECIES RICHNESS	11
SPECIES	COVER CLASS
Lyonia lucida	6
Dichanthelium portoricense	5
Hypericum tenuifolium	5
Andropogon sp.	3
Lichen sp.	3
Panicum virgatum	3
Cladina sp.	2
Juncus canadensis	2
Quercus laevis	1
Quercus virginiana	1
Smilax bona-nox	1

Floristic table for Group V.F.1: *Typha (angustifolia, latifolia)* - (*Schoenoplectus spp.*) Eastern Herbaceous Vegetation (CEGL006153)

NUMBER of PLOTS	1
SPECIES RICHNESS	5
SPECIES	COVER CLASS
Typha domingensis	9
Schoenoplectus americanus	5
Schoenoplectus tabernaemontani	4
Osmunda regalis var. spectabilis	2
Sagittaria lancifolia var. media	2

Floristic table for Group V.G.1: MOTSU Lime Sink #1

NUMBER of PLOTS	1
SPECIES RICHNESS	30
SPECIES	COVER CLASS
<i>Scleria muehlenbergii</i>	8
<i>Centella erecta</i>	7
<i>Aristida palustris</i>	6
<i>Pluchea baccharis/foetida/odorata</i>	6
<i>Pinus palustris</i>	5
<i>Eriocaulon decangulare</i> var. <i>decangulare</i>	4
<i>Euthamia caroliniana</i>	4
<i>Pinus taeda</i>	4
<i>Andropogon</i> sp.	3
<i>Fuirena squarrosa</i>	3
<i>Panicum</i> sp.	3
<i>Proserpinaca pectinata</i>	3
<i>Aronia arbutifolia</i>	2
<i>Dichanthelium erectifolium</i>	2
<i>Dichanthelium wrightianum</i>	2
<i>Diodia virginiana</i>	2
<i>Drosera brevifolia</i>	2
<i>Hypericum denticulatum</i>	2
<i>Ilex glabra</i>	2
<i>Leersia virginica</i>	2
<i>Lobelia nuttallii</i>	2
<i>Morella cerifera</i>	2
<i>Nyssa biflora</i>	2
<i>Panicum tenerum</i>	2
<i>Polygala cruciata</i> var. <i>cruciata</i>	2
<i>Rhexia cubensis</i>	2
<i>Rhynchospora tracyi</i>	2
<i>Toxicodendron radicans</i> var. <i>radicans</i>	2
<i>Triadenum virginicum</i>	2
<i>Baccharis halimifolia</i>	1

Floristic table for Group V.G.2: MOTSU Lime Sink #2

NUMBER of PLOTS	1
SPECIES RICHNESS	22
SPECIES	COVER CLASS
Centella erecta	7
Dichanthelium dichotomum	7
Rhynchospora rariflora	7
Lachnocaulon minus	5
Andropogon sp.	4
Drosera brevifolia	3
Lachnanthes caroliniana	3
Pinus taeda	3
Rhynchospora plumosa	3
Dichanthelium erectifolium	2
Dicot sp.	2
Eleocharis sp.	2
Euthamia caroliniana	2
Oldenlandia uniflora	2
Pinus palustris	2
Rhexia cubensis	2
Scleria muehlenbergii	2
Vaccinium tenellum	2
Xyris sp.	2
Acer rubrum	1
Lycopodiella alopecuroides	1
Vaccinium virgatum	1

Floristic table for Group V.G.3: MOTSU Lime Sink #3

NUMBER of PLOTS	1
SPECIES RICHNESS	13
SPECIES	COVER CLASS
Rhynchospora tracyi	8
Pluchea baccharis/foetida/odorata	6
Panicum tenerum	5
Eriocaulon compressum	4
Panicum hemitomon	4
Rhynchospora microcephala	4
Bacopa caroliniana	2
Centella erecta	2
Eupatorium petaloideum	2
Hypericum setosum	2
Lobelia sp.	2
Leersia virginica	1
Mitreola petiolata	1

Floristic table for Group V.G.4: MOTSU Lime Sink #4

NUMBER of PLOTS	1
SPECIES RICHNESS	31
SPECIES	COVER CLASS
<i>Centella erecta</i>	7
<i>Ludwigia pilosa/suffruticosa</i>	3
<i>Juncus scirpoides</i> var. <i>scirpoides</i>	3
<i>Panicum virgatum</i>	3
<i>Vaccinium fuscatum</i>	3
<i>Andropogon</i> sp.	2
<i>Drosera rotundifolia</i> var. <i>rotundifolia</i>	2
<i>Eupatorium capillifolium</i>	2
<i>Eupatorium leucolepis</i>	2
<i>Euthamia caroliniana</i>	2
<i>Ilex glabra</i>	2
<i>Ilex opaca</i> var. <i>opaca</i>	2
<i>Juncus bufonius</i> var. <i>bufonius</i>	2
<i>Lachnocaulon anceps</i>	2
Lichen sp.	2
<i>Lobelia nuttallii</i>	2
<i>Lyonia mariana</i>	2
<i>Oldenlandia uniflora</i>	2
<i>Pinus palustris</i>	2
<i>Pinus taeda</i>	2
<i>Polygonella polygama</i> var. <i>polygama</i>	2
<i>Quercus geminata</i>	2
<i>Rhexia cubensis</i>	2
<i>Symphotrichum dumosum</i> var. <i>dumosum</i>	2
<i>Vaccinium corymbosum</i>	2
<i>Ilex myrtifolia</i>	1
<i>Ilex vomitoria</i>	1
<i>Lachnanthes caroliniana</i>	1
<i>Lachnocaulon minus</i>	1
<i>Pityopsis graminifolia</i>	1
<i>Rhynchospora fascicularis</i> var. <i>fascicularis</i>	1

Floristic table for Group V.G.5: MOTSU Lime Sink #5

NUMBER of PLOTS	1
SPECIES RICHNESS	22
SPECIES	COVER CLASS
<i>Ilex myrtifolia</i>	6
<i>Lachnanthes caroliniana</i>	5
<i>Litsea aestivalis</i>	5
<i>Ilex cassine</i> var. <i>cassine</i>	4
<i>Panicum verrucosum</i>	4
<i>Sphagnum</i> sp.	4
<i>Polygala cymosa</i>	3
<i>Andropogon</i> sp.	2
<i>Centella erecta</i>	2
<i>Drosera intermedia</i>	2
<i>Gelsemium sempervirens</i>	2
<i>Pinus taeda</i>	2
<i>Prunus caroliniana</i>	2
<i>Quercus nigra</i>	2
<i>Rhynchospora filifolia</i>	2
<i>Vaccinium corymbosum</i>	2
<i>Eupatorium recurvans</i>	1
<i>Ilex glabra</i>	1
<i>Nyssa biflora</i>	1
<i>Panicum rigidulum</i> var. <i>condensum</i>	1
<i>Persea palustris</i>	1
<i>Viola primulifolia</i>	1

Floristic table for Group VI.A.1: *Nymphaea odorata* - *Nuphar lutea ssp. advena* - (*Nymphoides aquatica*, *Xyris smalliana*) Herbaceous Vegetation (CEGL004326)

NUMBER of PLOTS	4	
AVERAGE RICHNESS	5	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Nymphaea odorata ssp. odorata</i>	100	8
<i>Utricularia cornuta/juncea/purpurea</i>	75	6
<i>Brasenia schreberi</i>	25	4
Dicot sp.	25	2
<i>Rhynchospora inundata</i>	25	2

Floristic table for Group VII.A.1: No described community type

NUMBER of PLOTS		1	
SPECIES RICHNESS		51	
SPECIES	COVER CLASS	SPECIES	COVER CLASS
<i>Campsis radicans</i>	6	<i>Desmodium paniculatum</i>	2
<i>Parthenocissus quinquefolia</i>	6	<i>Dichanthelium oligosanthes</i> var. <i>oligosanthes</i>	2
<i>Pinus taeda</i>	6	<i>Erechtites hieracifolia</i> var. <i>hieracifolia</i>	2
<i>Toxicodendron radicans</i> var. <i>radicans</i>	6	<i>Erythrina herbacea</i>	2
<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	6	<i>Eupatorium capillifolium</i>	2
<i>Ipomoea pandurata</i>	5	<i>Festuca</i> sp.	2
<i>Quercus virginiana</i>	5	<i>Fraxinus americana</i>	2
<i>Vitis cinerea</i> var. <i>baileyana</i>	5	<i>Galactia regularis</i>	2
<i>Celtis laevigata</i>	4	<i>Hedera helix</i> var. <i>helix</i>	2
<i>Elymus virginicus</i> var. <i>virginicus</i>	4	<i>Lactuca floridana</i>	2
<i>Ilex vomitoria</i>	4	<i>Lonicera japonica</i>	2
<i>Smilax bona-nox</i>	4	<i>Magnolia virginiana</i> var. <i>virginiana</i>	2
<i>Bignonia capreolata</i>	3	<i>Morella caroliniensis</i>	2
<i>Carya glabra</i> var. <i>megacarpa</i>	3	<i>Morus rubra</i>	2
<i>Galium hispidulum</i> / <i>tinctorium</i>	3	<i>Muhlenbergia capillaris</i>	2
<i>Gelsemium sempervirens</i>	3	<i>Oxalis dillenii</i>	2
<i>Nyssa biflora</i>	3	<i>Panicum longifolium</i> var. <i>longifolium</i>	2
<i>Passiflora lutea</i> var. <i>lutea</i>	3	<i>Panicum</i> sp.	2
<i>Prunus serotina</i> var. <i>serotina</i>	3	<i>Physalis walteri</i>	2
<i>Tripsacum dactyloides</i> var. <i>dactyloides</i>	3	<i>Quercus laurifolia</i>	2
<i>Aesculus pavia</i> var. <i>pavia</i>	2	<i>Rubus trivialis</i>	2
<i>Betula nigra</i>	2	<i>Sanicula canadensis</i>	2
<i>Cnidocolus stimulosus</i>	2	<i>Sassafras albidum</i>	2
<i>Conyza canadensis</i> var. <i>canadensis</i>	2	<i>Smilax walteri</i>	2
<i>Crataegus aestivalis</i>	2	<i>Solidago altissima</i> var. <i>altissima</i>	2
<i>Desmodium glabellum</i>	2		

Floristic table for Group VII.B.1: *Quercus virginiana* - *Quercus hemisphaerica* - *Pinus taeda* / *Persea borbonia* Forest (CEGL007027)

NUMBER of PLOTS	1
SPECIES RICHNESS	10
SPECIES	COVER CLASS
Morella cerifera	7
Quercus virginiana	7
Juniperus virginiana var. silicicola	6
Smilax laurifolia	6
Hydrocotyle bonariensis	2
Ilex opaca var. opaca	2
Ilex vomitoria	2
Smilax bona-nox	2
Toxicodendron radicans var. radicans	2
Strophostyles helvula	1

Floristic table for Group VII.B.2: *Quercus virginiana* - (*Pinus taeda*) / (*Sabal minor*, *Serenoa repens*)
Forest (CEGL007039)

NUMBER of PLOTS		1	
SPECIES RICHNESS		60	
SPECIES	COVER CLASS	SPECIES	COVER CLASS
<i>Sabal minor</i>	5	<i>Scirpus cyperinus</i>	2
<i>Carex glaucescens</i>	4	<i>Smilax bona-nox</i>	2
<i>Dichantheium dichotomum</i> var. <i>dichotomum</i>	4	<i>Smilax glauca</i>	2
<i>Viola</i> sp.	3	<i>Smilax rotundifolia</i>	2
<i>Carex lupulina</i>	3	<i>Spiranthes odorata</i>	2
<i>Centella erecta</i>	3	<i>Taxodium distichum</i>	2
<i>Hypoxis hirsuta</i>	3	<i>Toxicodendron radicans</i> var. <i>radicans</i>	2
<i>Nyssa biflora</i>	3	<i>Vaccinium elliotii</i>	2
<i>Vaccinium pallidum</i>	3	<i>Asplenium platyneuron</i>	1
<i>Acer rubrum</i>	2	<i>Bignonia capreolata</i>	1
<i>Arundinaria tecta</i>	2	<i>Carex lonchocarpa</i>	1
<i>Berchemia scandens</i>	2	<i>Chasmanthium sessiliflorum</i> var. <i>sessiliflorum</i>	1
<i>Betula nigra</i>	2	<i>Eupatorium semiserratum</i>	1
<i>Campsis radicans</i>	2	<i>Gelsemium rankinii</i>	1
<i>Carpinus caroliniana</i> var. <i>caroliniana</i>	2	<i>Hypericum galioides</i>	1
<i>Conyza canadensis</i> var. <i>canadensis</i>	2	<i>Ilex decidua</i> var. <i>decidua</i>	1
<i>Crataegus aestivalis</i>	2	<i>Itea virginica</i>	1
<i>Dichantheium boreale</i>	2	<i>Justicia ovata</i> var. <i>ovata</i>	1
<i>Diospyros virginiana</i>	2	<i>Ostrya virginiana</i>	1
<i>Eupatorium capillifolium</i>	2	<i>Parthenocissus quinquefolia</i>	1
<i>Eupatorium compositifolium</i>	2	<i>Pleopeltis polypodioides</i> ssp. <i>michauxiana</i>	1
<i>Fraxinus caroliniana</i>	2	<i>Pluchea baccharis/foetida/odorata</i>	1
<i>Hymenocallis crassifolia</i>	2	<i>Quercus lyrata</i>	1
<i>Hypericum hypericoides</i>	2	<i>Quercus nigra</i>	1
<i>Ilex opaca</i> var. <i>opaca</i>	2	<i>Smilax laurifolia</i>	1
<i>Liquidambar styraciflua</i>	2	<i>Sphagnum</i> sp.	1
<i>Mikania scandens</i>	2	<i>Tillandsia usneoides</i>	1
<i>Mitchella repens</i>	2	<i>Trachelospermum difforme</i>	1
<i>Quercus virginiana</i>	2	<i>Vitis aestivalis</i> var. <i>aestivalis</i>	1
<i>Rhynchospora caduca</i>	2	<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	1

Floristic table for Group VIII.A.1: *Quercus virginiana* - (*Ilex vomitoria*) Shrubland (CEGL003833)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	12	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Persea borbonia</i>	100	6
<i>Smilax auriculata</i>	100	6
<i>Prunus caroliniana</i>	100	5
<i>Uniola paniculata</i>	100	5
<i>Parthenocissus quinquefolia</i>	100	3
<i>Commelina erecta</i> var. <i>angustifolia</i>	100	2
<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	100	2
<i>Galium hispidulum/tinctorium</i>	100	2
<i>Ilex vomitoria</i>	100	2
<i>Quercus virginiana</i>	50	7
<i>Juniperus virginiana</i> var. <i>silicicola</i>	50	4
<i>Toxicodendron radicans</i> var. <i>radicans</i>	50	3

Floristic table for Group IX.A.1: *Uniola paniculata* - *Hydrocotyle bonariensis* Herbaceous Vegetation (CEGL004040)

NUMBER of PLOTS	8	
AVERAGE RICHNESS	16	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Uniola paniculata</i>	100	7
<i>Oenothera humifusa</i>	100	2
<i>Trichostema</i> species 1	88	3
<i>Spartina patens</i> var. <i>patens</i>	75	5
<i>Smilax auriculata</i>	75	3
<i>Hydrocotyle bonariensis</i>	63	3
<i>Physalis walteri</i>	63	2
<i>Conyza canadensis</i> var. <i>pusilla</i>	63	2
<i>Morella cerifera</i>	50	4
<i>Opuntia humifusa</i> var. <i>humifusa</i>	50	2
<i>Commelina erecta</i> var. <i>angustifolia</i>	50	2
<i>Eustachys petraea</i>	50	2
<i>Croton punctatus</i>	50	2
<i>Ilex vomitoria</i>	50	1
<i>Chamaesyce polygonifolia</i>	50	1
<i>Juniperus virginiana</i> var. <i>silicicola</i>	38	4

Floristic table for Group IX.B.1: *Muhlenbergia filipes* - *Spartina patens* - *Eustachys petraea* Herbaceous Vegetation (CEGL004051)

NUMBER of PLOTS	3	
AVERAGE RICHNESS	20	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Spartina patens</i> var. <i>patens</i>	100	7
<i>Eustachys petraea</i>	100	4
<i>Uniola paniculata</i>	100	4
<i>Seutera angustifolia</i>	67	4
<i>Fimbristylis caroliniana/castanea</i>	67	3
<i>Croton punctatus</i>	67	2
<i>Opuntia humifusa</i> var. <i>humifusa</i>	67	2
<i>Smilax bona-nox</i>	67	2
<i>Morella cerifera</i>	67	2
<i>Muhlenbergia capillaris</i>	33	4
<i>Borrichia frutescens</i>	33	3
<i>Solidago sempervirens</i> var. <i>mexicana</i>	33	3
<i>Melothria pendula</i> var. <i>pendula</i>	33	3
<i>Andropogon</i> sp.	33	2
<i>Baccharis halimifolia</i>	33	2
<i>Limonium carolinianum</i>	33	2
<i>Oenothera humifusa</i>	33	2
<i>Ambrosia artemisiifolia</i>	33	2
<i>Cenchrus tribuloides</i>	33	2
<i>Cyperus strigosus</i>	33	2

Floristic table for Group X.A.1: *Vitis rotundifolia* / *Triplasis purpurea* - *Panicum amarum* - *Schizachyrium littorale* Mid-Atlantic Coastal Medano Sparse Vegetation (CEGL004397)

NUMBER of PLOTS	1
SPECIES RICHNESS	10
SPECIES	COVER CLASS
<i>Spartina patens</i> var. <i>patens</i>	4
<i>Hydrocotyle bonariensis</i>	3
<i>Iva imbricata</i>	3
<i>Borrichia frutescens</i>	2
<i>Cenchrus tribuloides</i>	2
<i>Chamaesyce polygonifolia</i>	2
<i>Conyza canadensis</i> var. <i>pusilla</i>	2
<i>Oenothera humifusa</i>	2
<i>Uniola paniculata</i>	2
<i>Eupatorium compositifolium</i>	1

Floristic table for Group XI.A.1: *Morella cerifera* / *Spartina patens* - (*Juncus roemerianus*) Shrubland (CEGL003839)

NUMBER of PLOTS	1
SPECIES RICHNESS	13
SPECIES	COVER CLASS
<i>Juncus roemerianus</i>	9
<i>Physalis viscosa</i>	6
<i>Baccharis halimifolia</i>	5
<i>Seutera angustifolia</i>	4
<i>Callicarpa americana</i>	3
<i>Vitis rotundifolia</i> var. <i>rotundifolia</i>	3
<i>Melothria pendula</i> var. <i>pendula</i>	2
<i>Setaria parviflora</i>	2
<i>Smilax auriculata</i>	2
<i>Spartina patens</i> var. <i>patens</i>	2
<i>Trichostema</i> species 1	2
<i>Ilex vomitoria</i>	1
<i>Uniola paniculata</i>	1

Floristic table for Group XII.A.1: *Spartina patens* - *Setaria parviflora* - *Hydrocotyle bonariensis*
Herbaceous Vegetation (CEGL004257)

NUMBER of PLOTS	1
SPECIES RICHNESS	11
SPECIES	COVER CLASS
<i>Spartina patens</i> var. <i>patens</i>	9
<i>Uniola paniculata</i>	4
<i>Smilax auriculata</i>	3
<i>Croton punctatus</i>	2
<i>Galium hispidulum/tinctorium</i>	2
<i>Juncus roemerianus</i>	2
<i>Melilotus albus</i>	2
<i>Parthenocissus quinquefolia</i>	2
<i>Physalis viscosa</i>	2
<i>Trichostema</i> species 1	2
<i>Ilex vomitoria</i>	1

Floristic table for Group XII.A.2: *Fimbristylis castanea* - *Schoenoplectus pungens* Seasonally Flooded
Herbaceous Vegetation (CEGL003790)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	13	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Borrichia frutescens</i>	100	7
<i>Spartina patens</i> var. <i>patens</i>	100	7
<i>Fimbristylis caroliniana/castanea</i>	100	7
<i>Solidago sempervirens</i> var. <i>mexicana</i>	100	4
<i>Seutera angustifolia</i>	100	4
<i>Baccharis halimifolia</i>	100	3
<i>Andropogon</i> sp.	100	2
<i>Baccharis angustifolia</i>	50	4
<i>Juniperus virginiana</i> var. <i>silicicola</i>	50	3
<i>Distichlis spicata</i>	50	2
<i>Ilex vomitoria</i>	50	2
<i>Lythrum lineare</i>	50	2
<i>Sabatia stellaris</i>	50	2

Floristic table for Group XIII.A.1: *Borrichia frutescens* / (*Spartina patens*, *Juncus roemerianus*) Shrubland (CEGL003924)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	7	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Borrichia frutescens</i>	100	8
<i>Distichlis spicata</i>	100	7
<i>Limonium carolinianum</i>	100	4
<i>Sarcocornia pacifica</i>	100	4
<i>Spartina alterniflora</i>	50	4
<i>Symphyotrichum tenuifolium</i>	50	2
<i>Solidago odora</i> var. <i>odora</i>	50	2

Floristic table for Group XIII.A.2: *Baccharis halimifolia* - *Iva frutescens* - *Morella cerifera* - (*Ilex vomitoria*) Shrubland (CEGL003920)

NUMBER of PLOTS	1
SPECIES RICHNESS	14
SPECIES	COVER CLASS
<i>Baccharis halimifolia</i>	7
<i>Typha latifolia</i>	7
<i>Morella cerifera</i>	6
<i>Andropogon</i> sp.	5
<i>Baccharis angustifolia</i>	5
<i>Hydrocotyle bonariensis</i>	5
<i>Mikania scandens</i>	4
<i>Spartina patens</i> var. <i>patens</i>	4
<i>Eleocharis</i> sp.	3
<i>Toxicodendron radicans</i> var. <i>radicans</i>	3
<i>Fimbristylis caroliniana/castanea</i>	2
<i>Ipomoea pandurata</i>	2
<i>Salix nigra</i>	2
<i>Solidago sempervirens</i> var. <i>mexicana</i>	1

Floristic table for Group XIV.A.1: *Spartina patens* - *Distichlis spicata* - *Juncus roemerianus* Herbaceous Vegetation (CEGL004197)

NUMBER of PLOTS	1
SPECIES RICHNESS	12
SPECIES	COVER CLASS
<i>Spartina patens</i> var. <i>patens</i>	9
<i>Borrichia frutescens</i>	6
<i>Fimbristylis caroliniana/castanea</i>	6
<i>Distichlis spicata</i>	4
<i>Solidago sempervirens</i> var. <i>mexicana</i>	4
<i>Limonium carolinianum</i>	3
<i>Baccharis angustifolia</i>	2
<i>Batis maritima</i>	2
<i>Muhlenbergia capillaris</i>	2
<i>Sabatia stellaris</i>	2
<i>Sarcocornia pacifica</i>	2
<i>Spartina alterniflora</i>	1

Floristic table for Group XIV.A.2: *Spartina alterniflora* Carolinian Zone Herbaceous Vegetation (CEGL004191)

NUMBER of PLOTS	1
SPECIES RICHNESS	3
SPECIES	COVER CLASS
<i>Spartina alterniflora</i>	9
<i>Limonium carolinianum</i>	2
<i>Sarcocornia pacifica</i>	1

Floristic table for Group XIV.B.1: *Sarcocornia perennis* - *Batis maritima* - *Distichlis spicata* Dwarf-shrubland (CEGL002278)

NUMBER of PLOTS	2	
AVERAGE RICHNESS	8	
SPECIES	CONSTANCY	AVERAGE COVER CLASS
<i>Distichlis spicata</i>	100	8
<i>Borrichia frutescens</i>	100	6
<i>Limonium carolinianum</i>	100	4
<i>Sarcocornia pacifica</i>	100	4
<i>Spartina alterniflora</i>	100	3
<i>Symphyotrichum tenuifolium</i>	100	2
<i>Fimbristylis caroliniana/castanea</i>	50	3
<i>Batis maritima</i>	50	2

Floristic table for Group XV.A.1: *Schoenoplectus pungens* - (*Osmunda regalis* var. *spectabilis*) Herbaceous Vegetation (CEGL004189)

NUMBER of PLOTS	1
SPECIES RICHNESS	8
SPECIES	COVER CLASS
<i>Schoenoplectus americanus</i>	9
<i>Eleocharis</i> sp.	7
<i>Baccharis halimifolia</i>	5
<i>Osmunda regalis</i> var. <i>spectabilis</i>	5
<i>Persicaria hydropiperoides</i>	3
<i>Pluchea baccharis/foetida/odorata</i>	2
<i>Schoenoplectus tabernaemontani</i>	2
<i>Typha domingensis</i>	2

Floristic table for Group XV.A.2: *Typha angustifolia* - *Hibiscus moscheutos* Herbaceous Vegetation (CEGL004201)

NUMBER of PLOTS	1
SPECIES RICHNESS	9
SPECIES	COVER CLASS
<i>Typha domingensis</i>	9
<i>Carex hyalinolepis</i>	8
<i>Polygonum</i> sp.	6
<i>Peltandra virginica</i>	4
<i>Sagittaria lancifolia</i> var. <i>media</i>	4
<i>Schoenoplectus americanus</i>	4
<i>Schoenoplectus tabernaemontani</i>	4
<i>Zizaniopsis miliacea</i>	2
<i>Pluchea baccharis/foetida/odorata</i>	1