MID-ATLANTIC COASTAL PLAIN
A. INTRODUCTION TO THE CD-ROM

Welcome to the Mid-Atlantic Coast Plain (MACP) Ecoregional Plan!

From late in 1996 through early 2001, staff from the NC, SC, and VA chapters and the Southeastern Regional (now Southern Resource) Office of The Nature Conservancy and the NC, SC, and VA state Natural Heritage Programs worked to develop a comprehensive conservation plan for the Mid-Atlantic Coastal Plain. Our goal was to identify a portfolio of sites that would, if conserved, probably ensure the survival of the ecoregion's native plants, animals, natural community types, and critical ecological processes. This CD-ROM is our current product.

We decided that we wanted to try something different with this plan. All of us have printed plans parked on our shelves. Extracting information from them can be cumbersome. Copying text and images is difficult or impossible. The MACP planning team decided to make our plan available in this digital format so that you, the potential user, could easily search for and find and then easily extract, edit, and use all of the information in the plan for any non-commercial purpose (defined below). Our intent is that you have two choices. You can use and work from the plan we developed, without modification, and/or you can use the data we used to make your own plan. You can subset this plan, add things to it, take things out of it, and include it in larger plans of your own. However, if you change it in any way, we ask one thing. Credit The Nature Conservancy ® (TNC) and NatureServe (formerly the Association for Biodiversity Information ®, ABI – the Natural Heritage Program network) for the raw data, and then put your own name on the conclusions and final products.

In the Logos Directory, you will find TNC and ABI logos. We ask that these be included in any publication you generate from these data, whether you are crediting TNC and Natureserve with authorship or just with providing some or all of the data you used.

If you have any questions or concerns, please contact the TNC and ABI project team leader:

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The basic organization of data on this disk is as follows:

1. ArcExplorer® Project Directory

We provide most of the data we used to make the plan in an ESRI ArcExplorer project directory. You can use ArcExplorer to look at these data in all sorts of ways. A copy of ArcExplorer 2.0 is available for download and is included on the disk in the file named ae2setup.exe (located in the map_tools/ArcExplorer Install folder). To use, first install ArcExplorer by running the ae2setup.exe. Once ArcExplorer is installed, click on the ArcExplorer project file name (MACP_1st_Iter_Plan_v2.aep) to open the project file. (Please note that ArcView project files cannot be opened in ArcExplorer and vise-versa and that this project cannot be opened in ArcExplorer 3.0). You may be prompted for the location of ArcExplorer, therefore, you might want to write down the program file location during the installation process. If you have any problems or questions, please feel free to contact Donna Lohr (mailto:dlohr@tnc.org) or John Prince (jprince@tnc.org) of The Nature Conservancy, Southern Resource Office, 919-484-7857. Users will also find an Adobe Acrobat (.pdf) file which explains ArcExplorer in the directory which ArcExplorer was installed.

You can also acquire your own copy of ArcView ® and make your own plans, draw your own conclusions, and publish your own maps with these data. Please note that an ArcView project file is also available on this CD named MACP_1st_Iter_Plan_v2.apr and MACP_Aquatics_v2.apr These files contain the same data as the ArcExplorer project files, but also includes layouts associated with data in the views. Remember: Credit TNC and NatureServe (formerly ABI) for the data, and then put your own name on the conclusions and final products.

For more information on the data used in the ArcExplorer and ArcView project files, please refer to the documents named MACP_1st_Iter_Plan_Readme.doc and MACP_Aquatics _GISReadme.doc located in the project file(s) directories on this CD.

We did not include the raw Natural Heritage Program data from the three states on this disk. Heritage data is constantly being updated, and some of it is quite sensitive (e.g., locations for species threatened by poaching). We urge you to go directly to the state Natural Heritage Program(s) for updated data and help with interpreting it. Access information is in the Appendix Files directory in the Team Members spreadsheet.

2. Main Text Files Directory

In the text directory, you will find information about how this plan was developed by TNC and Natureserve. You will also find plan and data analyses and plan results. Finally, you will find a list of things we wish we could have done this time, and that we recommend for the developers of the next version(s) of this

plan. The files are named first with the letters of the alphabet, so if you want to read them in order, like a book with appendices, read A, then B, and so on.

TNC and Natureserve will be working on updates and improvements to this plan from now on. If you see ways to contribute to these or other needed improvements, have at it. If you want to be partners in this process, let us know. If you have criticisms of what we did, PLEASE let us know. THANKS!

All text files are available both as Microsoft Word 97 ® (*.doc) files and as plain text (*.txt) files.

3. Tables Directory

In the tables directory, you will some of the data used to develop the plan and evaluations. Tables are numbered.

All tables are in Microsoft Excel 97 ® format.

Some tables are accompanied by .doc and .txt files that provide keys to the tables.

4. Maps Directory

In the figures and images directory, you will find B- and E-sized JPEG images of the TNC/Natureserve final plan. You may use, distribute, and publish these images without modification. Please cite: TNC and Natureserve, 2001, Mid-Atlantic Coastal Plain Ecoregion Plan.

5. Photographs Directory

Here, you will find JPEG images of some of the sites and some of the target species and natural communities of the MACP. You may reproduce these images as illustrations for our plan or for any plan(s) you develop.

Non-commercial purposes: If you publish any of these images, you must include the appropriate photo-credit from the photo-credits file (same directory). For the JPEG maps and for any other images where there is no photo-credit provided, please cite: TNC and Natureserve, 2001, Mid-Atlantic Coastal Plain Ecoregion Plan.

Commercial Purposes: Without prior permission from the photographer, you may not distribute, broadcast, or publish any of these images for any commercial purpose. Images without photo-credits, including the JPEG maps, may not be published for any commercial purpose.

Commercial Purposes Defined: A commercial purpose would be any use of this disk or its contents to generate a profit. That would include its use in a document that you sell

for profit or that you include in a publication that is for sale for profit. It also would include its use in any form of advertising of products or services for sale for profit. It would not include fund-raising for non-commercial and non-profit purposes.

We hope you enjoy using these data and the plan we developed from them. We also hope we can work together with you and others to implement conservation in the Mid-Atlantic Coastal Plain. Please let us know of any errors you find or of ways we could have done our work better or presented it to you in more useful ways. Finally, and most of all, thank you for your commitment to the conservation of biological and ecological diversity in the Mid-Atlantic Coastal Plain.

MID-ATLANTIC COASTAL PLAIN
B. INTRODUCTION AND PLAN OVERVIEW

The Mid-Atlantic Coastal Plain (MACP) occupies 26 million acres east of the fall line between the Piedmont and Atlantic Coastal Plain, south of the James River in Virginia and north of Charleston Harbor in South Carolina. About two thirds of this very rich ecoregion is in North Carolina. This is the land of longleaf pines and bald cypress trees; of bottomland hardwood forests and swamps; of pocosins and palmettos; of Carolina Bays and Carolina Sandhills; of the Outer Banks and some of the world's best and most active coastal dunes, sounds, and estuaries; of Red-cockaded Woodpeckers and the now-extinct Carolina Parakeet; of Venus Fly-traps and Red Wolf. Natural fires, floods, and storms are so dominant in this region that the landscape changes very quickly. Rivers routinely change their courses and emerge from their banks. The Outer Banks have been described as a "river of sand" flowing south along the continental shelf. This is an ecoregion where the xeric environments of sand dunes and ridges share ecotones with the hydric environments of sounds, pocosins, and Carolina Bays. As an ecoregion, occurring at the interfaces between continent and ocean and between tropical and temperate climates, the MACP is as ecologically dynamic as any. Natural communities move around, and new species appear on the biological horizon. The Mid-Atlantic Coastal Plain is almost a factory for the generation of new and novel species, communities, and ecological patterns and processes.

As a result, the MACP is incredibly diverse. The ecoregional planning team working on this region established goals for 561 targets (97 animal species, 224 plant species, 240 plant community types). We evaluated over 9,000 occurrences for these 561 targets! In the end, 90 sites were selected for immediate conservation planning and implementation. 28 additional, small, typically isolated sites were identified for future verification.

In the following analysis, the 28 unverified sites were included along with 90 mainly much larger sites, the assumption being that the unverified sites would be verified by Heritage staff and included in the portfolio design in the near future. Since most of the unverified sites included a single or only a few occurrences, deleting them would have made little difference in the following analysis.

For 97 animal species targets, we met or exceeded the goals for 37 species and did not meet the goals for 60 species. We did find viable occurrences for all target species. For 224 plant species targets, we met or exceeded the goals for 77 species and did not meet the goals for 147 species including 60 plant species for which there were no occurrences, or none of the occurrences were deemed viable. For 240 natural community targets, we met our goals for 142 types. There were not enough viable occurrences to meet goals for 77 types and there were no viable occurrences at all for 21 types. The following table provides proportional summaries:

	Goals Met	Goals Not Met, But Viable Occurrences Exist in the MACP	No viable occurrences are known in the MACP

Animals	38%	62%	0%
Plants	34%	39%	27%
Natural Communities	59%	32%	9%

As the table indicates, barring major preservation and restoration efforts, almost a third of the MACP's rarest plants and a tenth of its natural communities are already gone or severely degraded, and much of the rest, including almost two thirds of the MACP's rare fauna, is in very serious trouble.

The most significant threats (sources of biological and ecological stress) in the region include: global climate change and rising sea-level; altered surface hydrology and landform alteration (e.g., flood-control and hydroelectric dams, inter-basin transfers of water, drainage ditches, breached levees, artificial levees, dredged inlets and river channels, beach renourishment, and spoil deposition banks and piles); a regionally receding water table, probably resulting from both over-use and inadequate recharge; fire suppression; land fragmentation, mainly by highway development; land-use conversion (e.g., from forests to plantations, farms, golf courses, housing developments, and resorts); the invasion of exotic plants and animals; air and water pollution, mainly from agricultural activities including concentrated animal feed operations; and over-harvesting and poaching, especially of rare reptiles and carnivorous plants. It's important to note that most of these threats are highly synergistic. For example, global climate change facilitates invasions by non-native species. Land-use conversion and fragmentation inhibit our ability to reduce fire suppression and use prescribed fire as a management tool. Concentrated animal feed lots have been significant sources of water pollution. And so on and so on…

This is a dynamic and damaged region where threat abatement is extremely daunting and virtually always requires active, adaptive management of whole ecosystems and complex ecological processes. Land acquisition and boundary protection simply won't get the job done.

In order to offset these threats, big, highly interconnected, conservation projects are required – big enough to contain and accommodate natural disturbance regimes, to facilitate the movement of large animals in the ecoregion, to support the restoration and maintenance of ecological resilience, and to permit the use of tools like prescribed fire. In fact, we must plan for conservation projects in which human activities and human communities are embedded compatibly. The MACP planning team examined all viable occurrences for all targets against a background of roads and land-cover types from remotely sensed data, and attempted to build a connected network of large sites spanning both the north-south (mainly climate) and east-west (mainly oceanic influence and substrate) ecological gradients.

The MACP planning team also "back-filled" this process by including a few relatively small sites for isolated but essential occurrences of high priority targets. These sites especially are likely to require more intensive (and more expensive!) management.

The three TNC chapters identified 22 "TNC Action Sites" or sites where The Nature Conservancy is committed to take, and intends to be held accountable for, substantial conservation action within the next five years.[1] The assumption guiding the team's selection was that these action sites would definitely be included in each chapter's next round of capital fund raising, co-operative government project development, and/or co-operative land management with private and/or public owners.

As usual, when multiple partners work over a period of years on a set of sites, we ran into nomenclature problems. The Natural Heritage Programs sometimes called a site one thing, and TNC called it another. The Natural Heritage Programs sometimes recognized many small (standard) sites in the same place the planning team identified a single large one. TNC has the habit of changing site names as a result of working with other partners, and/or as the result of marketing analysis associated with fund-raising, so many of the site names have changed since the planning team identified them. This planning document uses the site names agreed to by the planning team during its planning process. For TNC Action Sites, the following table may be helpful in translating from site names in this document to current TNC and other nomenclatures (please also refer to the plan map in the Maps directory)[2]:

TNC ACTION SITES: MACP SITE NAME	**TNC LEAD**	**TNC SITE NAME**	**OTHER SITE NAMES[3]**
Chowan Sand Ridge / Blackwater River	VA	Administratively part of the Chowan Basin Program	
Piney Grove	VA	Administratively part of the Chowan Basin Program	*
Back Bay and False Cape	VA	Administratively part of the Southern Rivers Program	
Nottaway Bluff	VA	Administratively part of the Chowan Basin Program	*

[1] In 1997, before the MACP plan was completed, the TNC International Board of Governors requested a list of up to 5 sites (Phase 1 sites) that would a) certainly be included in the final list of priority sites for the ecoregion, and b) meet the criteria of high biodiversity value, high viability, uniqueness, efficiency of conservation action (multiple target occurrences), complementarity (with each other), TNC commitment. Five sites were identified: Bladen Lakes (now part of Bladen Lakes / Cape Fear), Green Sea, Roanoke River, Southeast Brunswick County, and Winyah Bay. All of the Phase I sites were included in the TNC Action Sites.

[2] All 90 sites selected by the MACP planning team are presented in table 4, Site Action Plans, using the MACP planning team's nomenclature, and identifying current and probable partners and strategies for conservation.

[3] Most of these include many, sometimes dozens, of standard Heritage sites. These often are included in nested hierarchies of Heritage standard, macro-, and mega-sites. Those that do not include multiple standard sites are indicated by an * in this column.

Green Sea	VA	Green Sea Landscape Project, administratively part of the Southern Rivers Program	Great Dismal Swamp / Green Sea Includes Currituck Mainland, North and North Landing Rivers in NC and many standard sites in both NC and VA
Nottaway River	VA	Administratively part of the Chowan Basin Program	*
Meherrin River	VA	Administratively part of the Chowan Basin Program	
Roanoke River	NC	Lower Roanoke River Landscape Project	
Alligator River / Scuppernong River / Pocosin Lakes	NC	Administratively part of the Lower Roanoke River Landscape Project	Pamlemarle Peninsula Albemarle Peninsula Includes East Dismal Swamp and many standard sites in NC
Upper Tar River	NC	Upper Tar River Landscape Project	
Van Swamp	NC	Administratively part of the Lower Roanoke River Landscape Project	*
Sandhills	NC	Sandhills Landscape Project	Includes Fort Bragg which includes many standard sites Includes the Sandhills Game Lands which includes many standard sites Includes many standard sites outside Fort Bragg and the Sandhills Game Lands
Bladen Lakes / Cape Fear	NC	Lower Cape Fear Landscape Project	Includes the Black and South Rivers and the Bladen Lakes District and many standard sites therein
Clay Bays	NC	Administratively part of the Sandhills Landscape Project	Includes many individual clay bay sites

Waccamaw River	NC	Now part of the Green Swamp / Boiling Spring Lakes Landscape Project in NC	
Southeastern Brunswick County	NC	Green Swamp / Boiling Spring Lakes Landscape Project	Now includes Waccamaw Lake, the Waccamaw River in NC and SC, and connections to Green Swamp
Great Pee Dee	SC	Administratively part of the Winyah Bay Landscape Project	
Meher Babar Woods	SC	Administratively part of the Winyah Bay Landscape Project	*
Winyah Bay	SC	Winyah Bay Landscape Project	
Scottswood Savannah	SC	Administratively part of the Sewee to Santee Landscape Project	*
Black River Near Andrews	SC	Administratively part of the Winyah Bay Landscape Project	*
Francis Marion / Bulls Bay / Santee	SC	Sewee to Santee Landscape Project	

Also note that the NC Chapter now treats the following sites as components of the Onslow Bay (or Onslow Bight) Landscape project, a landscape project that is still in its earliest planning phases and not currently a TNC Action Site:

45. Piney Island (Cedar Island)
53. Croatan (Croatan National Forest)
54. Hofmann Forest
55. Seagate Woods
57. Onslow Bay Banks
58. Rockhouse Cave
61. Camp Lejeune
62. that portion of the Northeast Cape Fear River and associated Marl Forests east of I40.
64. Holly Shelter / Angola Bay / Sandy Run

MID-ATLANTIC COASTAL PLAIN
C. ECOREGIONAL PLANNING PROCESS

Planning Process 1996 - March 1999

In the fall of 1996, the TNC Southeast Regional (now Southern Resource) Office (SRO) hosted a meeting to launch the Mid-Atlantic Coastal Plain Ecoregional Planning Process. A Core Team was created, mainly by self-selections and nominations from the group of attendees. The membership of the Core Team was subsequently ratified and empowered to represent and act on their behalves by TNC chapter directors and Heritage coordinators. During that first organizational meeting and in subsequent phone conversations, a team leader was selected and technical teams and technical team leaders were recruited for data management, plants, animals, and natural communities.[1]

The three state natural heritage programs provided copies of their data bases subset by the counties in the ecoregion to the TNC Southeastern Regional (now Southern Resource) Office (SRO) where the data were merged. This merged data base was transmitted to the North Carolina Natural Heritage Program where all subsequent tabular data analysis took place. During the process, all spatial data analyses were conducted at SRO in the Geographic Information Systems shop.

Technical teams then selected elements (species and natural communities) to target for conservation during this first round of ecoregional planning in this ecoregion. All G1[2] and G2 elements were included. G3-G5 and other G-rank elements were left to the discretion of the technical teams. Goals (numbers of viable EOs to protect) were established for each target element. The teams were charged with setting goals that would, in their best professional judgement secure the viability of the elements in the ecoregion for the foreseeable future.

Every element occurrence[3] (EO) for each target element was reviewed by the technical teams and ranked as Irreplaceable, Recommended, Viable, or Non-viable. Irreplaceable EOs were deemed viable without major restoration action and essential to meeting the goals for the elements. It was judged by the technical teams that better EOs probably do not exist in the ecoregion. EOs frequently were designated as Irreplaceable because they were judged to be both viable and necessary to represent the full geographical and/or ecological range for the element in the ecoregion.

Recommended EOs were deemed viable without intensive management, but were either (potentially) replaceable or of lesser quality than irreplaceable EOs. Recommended EOs

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[1] See the Team Members table in the Appendix file.

[2] Natural Heritage Programs rank species and community types according to their level of global endangerment. G1 types are the most severely endangered while G5 types are relatively secure. Other G-types include (but are not limited to) GX for extinct, G1G2 for not sure if it's G1 or G2, and G? for not sure if it's G1 or G5 or somewhere in between.

[3] In theory, an element occurrence is a population of a species or a good example of a community type. In practice, sometimes an EO is a sub-population. For very rare and/or very wide-ranging species, an EO may be something much different from a population or sub-population, e.g., a single, active Bald Eagle nest.

were also frequently selected to fill in behind irreplaceable EOs in developing adequate representation of the element's range in the ecoregion.

Viable EOs were of lesser quality than Recommended EOs in that they were expected to require intensive management. Viable EOs were not included in the final portfolio design until all Irreplaceable and Recommended EOs were included and the element goals were still not met. Viable EOs were not used to meet sampling goals and were not used to justify connecting sites. Viable EOs should be up-graded by management or replaced as soon as possible in the Portfolio design. Non-viable EOs were not included in the Portfolio design.

All of the I, R, and V EOs were mapped at 1:250,000 along with all Heritage sites that had been digitized in NC. When EOs were mapped outside of digitized sites (some in NC, all in VA and SC), we created pseudo-sites by having the computer generate buffers around them. The buffers applied were; 500 Meters for plant occurrences, 1,000 Meters for animal, and 2,000 Meters for natural community occurrences. These maps were generated against a background of land-cover derived from LANDSAT Thematic Mapper data.[4]

At a series of meetings of the Mid-Atlantic Coastal Plain Core Team plus technical team chairs, we drew crude polygons around every Irreplaceable EO. We included existing Heritage sites and/or computer-generated pseudo-sites in the polygons we drew. The current maps of the MACP portfolio are essentially these polygons, qualitatively edited. The enclosed areas should in no way be considered scientifically designed sites, although some of them include scientifically designed standard sites from NC Heritage. They should instead be considered regional sets of EOs and associated landscape features that now should be included in scientifically developed site designs. The boundaries can be considered to be set boundaries or hypotheses of inclusion Things inside the boundary of a single polygon should probably be included in a single site design at the appropriate scale (landscape or standard site). In the remainder of this report, these polygons or proto-sites will simply be called "sites," and their boundaries "site boundaries" recognizing that all of them still need a lot of planning work.

In the process of drawing these sites around all Irreplaceable EOs, we attempted to use the following rules:

a. We attempted to include in one site all Irreplaceable, Recommended, and Viable EOs that could reasonably be considered part of the same site by virtue of ecological inter-activity..

b. Using the background of LANDSAT data coupled with professional experience and expertise, we tried to draw polygons to include repeating patterns of

[4] LANDSAT Thematic Mapper data is remotely sensed (satellite) data with 30 meter resolution in 7 spectral bands. The data we used was from several scenes all dated in the early 1990's and had been previously interpreted and classified by the USGS/EROS Data Center under the National Land Cover Characterization project.

communities and species and ecological processes. Our goal was to define intra-functional, natural ecosystems cohering through pattern, process, and composition at the largest scale supported by the background data and our knowledge of the ecoregion. In other words, we attempted to draw rough, inclusive polygons around ecological landscapes.

c. We continuously considered the potential movements of large animals in this ecoregion and between it and other ecoregions. We included in our vision some animals that once were common in the MACP but that are now rare or absent. We considered the movements of water and sediments in the ecoregion. In other words, we attempted to define a set of landscapes that collectively would conserve the ecoregion[5] and its ecological functionality.

d. Single sites were not required to be continuous (they could be in pieces), although most were continuous.

e. Contiguous sites were not required to merge, although most did.

f. We tried to define sites as places where protection strategies might cohere, e.g., we came up with a site in Virginia that consists of several small power line rights-of-way because the natural communities and rare species were similar and all were owned by the same power company. We could imagine a single protection strategy working simultaneously for most/all of them.

Geographers would say that we developed a rule-based, graphical solution to a multivariate problem in which most of the variables were spatially distributed (e.g., the EOs themselves, landscape-level ecological patterns and processes) but not all were (e.g., the range of protection tools that are available for conservation of EOs). Others might say that a group of experts looked at a bunch of blobs on a map and gave it their best shot. Either way…

Heritage programs were then asked to review the mapped sites to determine if any needed to be dropped or added, to determine if sites needed to be lumped or split, and to determine if boundaries could be tightened up. This was done on a short schedule with existing information, and very few changes were made.

A "by-catch analysis" was performed to determine which Recommended and Viable element occurrences were included in sites. Technical teams were asked to review the sites and the by-catch analysis to determine whether goals were met for each species and to determine:

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[5] In February 2001, TNC established a Global Climate Change Task Force to evaluate potential strategies for considering this enormous threat in our planning efforts. We looked at the MACP draft maps and observed both good news and bad news. First the good news: The MACP team had included potentially continuous, very wide corridors parallel to both critical environmental gradients (north to south, piedmont to shore). The bad news: Most of TNC's conservation work has been close to the shore, and little of it has been close to the Piedmont. In the certain event of sea-level rise, many TNC preserves will be either under water or on islands.

a. if sites should be added based on Recommended and/or Viable EOs to meet unmet target goals; and

b. if sites should be placed in a separate category for high priority field investigation on the basis of inadequate information about site viability.

Deferred sites are not included on the ecoregional maps. No new sites were added, and 28 sites deferred during this step.

Final draft maps and site lists were prepared. In March 1999, protection, stewardship, and scientific staff from all four TNC offices and three Heritage offices met for two days to review all the proposed sites and to identify probable partners and strategies for each site. Table 4 Site Action Plans includes the complete list of sites, including deferred sites, and for non-deferred sites, the opinions of those present about probable conservation strategies and partners.[6]

At the March 1999 meeting, we decided to follow the following course for implementation:

a. We would publish the data and our conclusions from it in the most complete (excluding actual Heritage EOs) and flexible form available to us (hence this CD-ROM).

b. We would then distribute it widely and without reservation except for the requirement that others outside the TNC-Heritage network not revise it without taking credit for the resulting revision.

c. We would invite you, the recipient, to send us your proposed changes and improvements, and we would invite you to participate, beginning now, in ecoregional planning for the Mid-Atlantic Coastal Plain.

Changes Since March 1999

In 2000-2001, the Charles C. Mott Foundation supported a classification and inventory effort at SRO to identify critical freshwater aquatic habitats and communities in the Southeast. The products of this process became available before the publication of this CD-ROM, so we have included and incorporated them. Because these data, and indeed the process that generated them, are so new and because they have not yet been reviewed by all the participating programs, the data (e.g., site) files have not been merged with the rest of the MACP product. You can find the aquatic data files in the Aquatic directory. However, the aquatic sites have been included in the Arc-Explore directory and on the MACP maps.

[6] In some cases these strategies have already changed. If they haven't by this writing, they may very well before you get a chance to review the table, because protection strategies and coalitions of partners respond to many, many variables, some of which are quite ephemeral, e.g., availability of money, political support.

Since March 1999, a consensus has emerged that we probably will not formally engage in another round of ecoregional planning for the MACP using the comprehensive and intensive methodology we used in the first round. Instead, we will organize individual planning efforts to address specific weaknesses and/or to incorporate specific kinds of new data as appropriate, all on an essentially continuous basis. The section entitled "Opportunities and Challenges for the Future" (file name D. Opportunities and Challenges) provides a list of those as we perceive them from here.

MID-ATLANTIC COASTAL PLAIN
D. OPPORTUNITIES AND CHALLENGES FOR THE FUTURE

Rational for Changes

Ecoregional planning is supposed to be the new way The Nature Conservancy works with the Natural Heritage Programs to conduct site selection and design (Conservation by Design The Nature Conservancy, revised 9/2000). It is driven by Heritage and other ecological data. Since the data that we have is far from perfect, and since new information is becoming available all the time (e.g., new information about the probable impacts of climate change), it is critical that we treat selection and design as a permanently on-going and incremental process. Even if we had perfect data today, the resulting ecoregional (portfolio) design would be imperfect because of our limited capacity to interpret and understand these data. Therefore, we conclude this round of ecoregional planning for the Mid-Atlantic Coastal Plain by suggesting areas where we think the need for improved data is substantial and, especially, areas where we think that better data will lead to conservation plans significantly likely to result in better ecoregional conservation.

Recommendations for Improvements

1. Better incorporate aquatic and terrestrial inputs so that submerged and emergent aquatic ecosystems are evaluated together with the riparian ecosystems with which they are highly interactive.

2. Incorporate submerged and emergent marine ecosystems in the sounds, estuaries, inlets, and other near-shore marine environments.

3. Develop better, more systematic strategies for incorporating ecological processes (energy and material transfers, movements of organisms) into the preliminary selection and grouping processes.

4. Incorporate climate-change and other global change response strategies into the selection and grouping processes. This should include, at least, additional emphasis on whole landscape viability and connecting landscapes along ecological and geographical gradients, e.g., ocean-to-piedmont, latitudinal, along-shore, etc.

5. Verify all unverified (and therefore tabled) sites from this round of ecoregional planning. Unverified sites are needed to meet target goals. This is ultimately the responsibility of the Heritage Programs, but TNC should backstop as necessary to get the job done.

6. In addition to marine ecosystems and species, we identified groups of targets for which we considered information inadequate for credible ecoregional planning. These include terrestrial communities, invertebrates, non-vascular plants, and freshwater communities. The Heritage Programs should develop strategies for bringing these data, in particular, up to speed. Priorities should be: 1) classifying targets and setting

goals, 2) finding EOs for priority targets without any EOs; and 2) finding EOs for targets without enough EOs to meet goals. Again, TNC should backstop as necessary to get the job done.

7. Develop more biologically and ecologically defensible goals for targets. Justify all goals.

8. Bring all three state Heritage Programs up to the national standards for EO ranking.

9. Replace the current scorecard process with the ecoregional planning process

10. Expand technical teams to non-TNC/HP members.

11. Bring all three state Heritage Programs up to an agreed upon standard for site design, digitizing, naming, and ranking. Lose the blobs and work with real site designs. Establish a pre-determined protocol for naming sites that is a) hierarchical up to the level of landscape, b) independent of ownership, and c) independent of conservation status or management.

12. Develop and maintain an ecoregional GIS data layer of areas managed for conservation using a ranking strategy to identify levels of conservation security. Use this data layer to revisit priorities among sites.

13. Bring all three state Heritage Programs up to the national standards for distinguishing between principle EOs and sub-EOs.

14. Bring all three state Heritage Programs up to the national standards for natural community EOs (classification and ranking).

15. Develop specific strategies for functional landscapes as targets.

16. Develop specific strategies for area-sensitive species, migratory species and species that respond well to corridors in the landscape.

17. Make the transition from rare species to vulnerable (including rare) species.

<u>Recommendations for Implementation</u>

The MACP plan, no matter how strong it is, nor how well it has been formulated, or is reformulated in the future, is essentially worthless unless we continuously improve it, continuously update it, continuously refer to it, and continuously implement it – together!

Within the TNC and Heritage network, the processes of ecoregional planning and ecoregional implementation are gradually, officially replacing our traditional planning and implementation processes. By the time the ecoregional plan is in first draft for the

last ecoregion in the queue, the process of transition should be completed, and we should all be operating in the context of ecoregional plans.

Outside the rather narrowly defined TNC/Heritage network, a host of others are working on essentially the same basic conservation goals. Local land trusts, other national and regional land trusts, federal and state agencies, conservation-oriented developers and buyers, activists and advocates, and concerned citizens all have very important roles to play. Our success with our mutual conservation goals depends on our ability to serve our individual missions, values, and visions while cooperating at as many levels as possible in as many ways as possible. We hope this plan will serve as one of the contexts for that to happen in the Mid-Atlantic Coastal Plain.

The Mid-Atlantic Coastal Plain Ecoregional Plan, as developed by TNC and the Natural Heritage Programs, is only a plan, developed from the perspective of a few agencies. If it is to be worth the effort it has cost to develop and will cost to update and maintain, it must be treated as one plan among many, both persuasive and responsive to the plans of others. We suggest that agencies currently, actively pursuing nature conservation in the Mid-Atlantic Coastal Plain need a mechanism for coordinating and harmonizing (not merging!) their conservation agendas and actions so that three common-sense goals can be met:

1) No significant sites should fall through the cracks. All sites should be currently, actively getting someone's attention;

2) There should be no site-specific conflict or interference among the agencies. No sites should be in contention; and

3) Synergistic action should develop around as many specific projects as possible to better achieve common objectives. Most sites probably should be cooperative projects.

As we formulated this ecoregional plan, we did not formulate a solution to this charge. We now encourage all of the agencies to consider existing models, invent some new ones, and together find a solution to the challenge of a shared mechanism for systematically achieving the three listed goals.

MID-ATLANTIC COASTAL PLAIN
E. WHEN YOU FIND MISTAKES

Please see our comments in the file, **D. OPPORTUNITIES AND CHALLENGES**. We hope and expect that the Mid-Atlantic Coastal Plain Ecoregional Plan will be continuously updated and improved, and we hope that we can stimulate the establishment of a strategic mechanism for routinely doing so and simultaneously tracking implementation actions.

In the meantime: please send your comments, suggestions, complaints, and corrections to the TNC and ABI team leader for this iteration:

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They will be compiled and filed pending the next iteration. Then they will be incorporated.

F. ACKNOWLEDGEMENTS

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Technical team members and leaders:
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Identification of Freshwater Biodiversity Conservation Areas in the Mid Atlantic Coastal Plain ecoregion
DRAFT – 03/29/01

The freshwater portion of the Mid Atlantic Coastal Plain (MACP) ecoregional plan was developed as part of a larger body of work being conducted by the Southeast Conservation Science Center (SCSC). The Charles Stewart Mott Foundation has funded the SCSC to identify important areas for aquatic biodiversity conservation in the Southeast. The Mott Foundation's interest is focused on four river basins, the Tennessee and Cumberland River Basins, Mississippi Embayment Basin, South Atlantic Basin, and Mobile Bay Basin. This work is being conducted for two purposes; 1) to help prioritize subsequent Mott Foundation funding to TNC and other organizations for freshwater conservation and 2) to improve integration of freshwater conservation targets and sites into TNC ecoregional plans.

The SCSC team is working with active ERP teams to include resulting aquatic priorities into ecoregional plans and will make the products available to teams of finished ERP's for inclusion in any revisions or subsequent iterations. This work is being conducted in cooperation with three active teams; Cumberlands and Southern Ridge and Valley, Piedmont, and Upper East Gulf Coastal Plain. It will also cover portions of 9 additional ecoregions, including MACP.

The MACP work was done as part of the South Atlantic Basin (SAB), which encompasses the drainage area of the Albemarle Sound in Virginia and North Carolina south to the Altamaha River drainage in Georgia. The SCSC team identified aquatic species and aquatic systems conservation targets and delineated areas of importance to aquatic conservation (hereafter "aquatic sites") for the SAB as a unit and the MACP portion was clipped out for inclusion in this ecoregional plan. A small portion of the MACP in the Chesapeake Bay Basin did not receive focussed attention as part of the SAB work.

Many of the aquatic species targets incorporated in this work were also used in generation of the pre-existing MACP portfolio. In addition, we used the pre-existing portfolio sites as units (in addition to aquatic sites) to account for integration of aquatic systems targets (see below for description of methodology). As such, this work is not a distinct complement to the pre-existing portfolio sites. The aquatic sites represent several areas of overlap with the pre-existing portfolio sites and also some areas distinct from them. Thus, these sites are presented as a unified picture of the areas important for aquatic conservation in the MACP. Some of these areas are merely a more finely delineated picture of the important rivers, streams, and lakes within the previously delineated portfolio sites.

I. Aquatic Conservation Targets

Conservation by Design identifies all viable native species and communities as the elements to be represented in ecoregional portfolios of sites (TNC 2000a; 2000b). This represents the coarse filter/fine filter approach to biodiversity conservation developed by The Nature Conservancy (Noss 1987). The coarse filter is a community-level conservation strategy whereby natural community types are used as conservation targets to represent 85-90% of species and many ecological processes, without having to inventory and manage each species individually. In this prioritization work, we utilized both aquatic species targets and a physically-based classification to represent aquatic community targets as a coarse-filter.

A. Aquatic Species Targets

In this analysis we considered fishes, mussels, aquatic snails, crayfishes, and obligate aquatic amphibians and reptiles as aquatic species targets. We did not consider aquatic plants or amphibians and reptiles which live out the adult phases of their life cycle primarily on land. We developed a preliminary species target list for these taxa by requesting queries of NHP databases for all states occurring in the four basins. The preliminary lists were then reviewed by regional experts who added any species not tracked by NHP's or any newly described species and removed any species that do not occur in the four basins. In "active" ecoregions, targets were delineated in conjunction with zoology and aquatic technical teams. In "completed" ecoregions, zoology target lists were used as a starting point for development of a target list.

Target species in these taxa groups were evaluated and identified by consideration of three criteria: level of imperilment, distribution, and viability (population trends). All viable, globally rare species and subspecies (with global ranks of G1 and G2) were included as targets. In addition, many species endemic to one of the four basins or species with disjunct populations occurring in the basins were considered as targets. Regional experts also identified several declining species, which were considered as targets as well.

Overall, there were 87 aquatic species targets considered in the MACP portion of the SAB. These were comprised of 16 fishes, 20 mussels, 4 snails, 2 crayfishes, 43 insects, and 1 amphibian (see Appendix 1 for a list of conservation targets). 31 of these were incorporated as targets in the delineation of the original MACP portfolio. The additional 53 targets were added by regional experts. Most of the added species were species not tracked by Heritage programs or additional species that were known to be in decline. Most of these targets (40) were insects.

B. Aquatic Coarse Filter Targets

To identify aquatic system targets, we employed an approach similar to that developed by the Freshwater Initiative (Higgins et al. 1998) that uses a physically-based classification applied in a Geographic Information System (GIS) to represent aquatic communities. The methodology was developed for areas with limited or currently unavailable spatially-referenced information about the distribution of aquatic species and lacking data on natural aquatic assemblages. We used it in the SAB as a coarse-filter complement to the fine-filter species targets.

The community targets themselves are referred to as Aquatic Ecological Systems. Aquatic Ecological Systems (hereafter "aquatic systems") are dynamic spatial assemblages of multiple ecological communities that: 1) occur together in an aquatic landscape with similar geomorphological patterns; 2) are tied together by similar ecological processes (e.g., hydrologic and nutrient regimes, access to floodplains and other lateral environments) or environmental gradients (e.g., temperature, chemical and habitat volume); and 3) form a robust, cohesive and distinguishable unit on a hydrography map. Each system type represents a different pattern of physical settings thought to contain a distinct set of biological communities and is therefore a distinct conservation target.

We developed the classification model by consulting literature and regional experts to determine the most important physical variables that distinguish natural aquatic communities in freshwater ecosystems. In the SAB we identified stream size, gradient, hydrologic regime, water chemistry, and downstream connectivity.

To construct systems based on these factors, we used digital coverages of surficial geology, hydrography (streams layer), and elevation in a GIS. We calculated stream size using a visual basic program that first determines the flow sequence then calculates a set of attributes for each reach in the streams layer. We then used stream link (number of first order streams upstream of a reach) as a measure of stream size. Gradient of all stream reaches was calculated using the streams layer and a digital elevation model. Bedrock and surficial geology type was used as a mapped variable because it relates to water chemistry, hydrologic regime, and substrate (Table 1). For example, flow in streams draining calcareous, impervious surface materials such as chalk or marl is likely to be alkaline, be dominated by surface run-off, have little groundwater connection, and be seasonally ephemeral.

Aquatic systems were mapped in a GIS by assigning each stream reach in the hydrography layer a class of each variable and identifying the unique combinations of these variables. Five stream size classes were delineated to distinguish headwater communities from larger creek and river communities (Table 2). Three gradient classes were delineated to allow differentiation of moderate to high gradient headwaters and creeks in the sand hills from lower gradient creeks in the outer Coastal Plain (Table 2). Four downstream connectivity classes were utilized to differentiate between streams that allow direct access from anadromous fishes or other taxa that migrate among water bodies (Table 2).

Table 2. Gradient, stream size, and downstream connectivity classes used in aquatic systems classification.

Stream Size (Link)	Gradient	Downstream Connectivity
Headwater (1-10)	Low (<0.01)	Stream/River
Creek (11-100)	Moderate (0.01-0.04)	Freshwater Lake
Sm. River (101-1000)	High (>0.04)	Embayment/Estuary
Md. River (1001-2500)		Ocean
Lg. River (>2500)		

We mapped aquatic systems encompassing small streams and creeks at the scale of Natural Resource Conservation Service 14-digit watershed units. Each watershed unit was classified into a stream aquatic system class based on its geology characteristics, topography, and elevation. Larger stream and rivers aquatic systems were classified according to the characteristics of larger watershed units, usually 8- or 6-digit USGS hydrologic units. Systems maps were constructed from EPA reach file 1 by assigning the aquatic systems code from the watershed in which it falls. Aquatic system occurrences were then tracked by reach file 1 code in all analyses.

Using these methods, we identified 25 aquatic systems targets, 20 of which occur primarily in the MACP. The remaining 5 aquatic systems, which occur peripheral to MACP in the Piedmont, were included in analyses. Appendix 2 includes detailed descriptions of the 25 aquatic systems targets and their distribution within the MACP.

II. Stratification Units

We also developed stratification units to account for inclusion of aquatic targets (species and aquatic systems) in portfolio sites across their environmental range. These stratification units are known as Ecological Drainage Units (EDU's). EDU's are aggregations of broad-scale watersheds that occur in similar zoogeographic, climatic, and physiographic settings. EDU's are mapped in a GIS by aggregating the USGS 8th field Hydrologic Unit Code (HUC8) according to similarities in the patterns of these features.

The use of EDU's as stratification units serves two purposes. First, the use of EDU's for stratification of aquatic systems goals ensures consideration of regional-scale differences in aquatic species pools that are not accounted for in the classification of aquatic system targets (which are essentially stream, river, and lake types). For example, by selecting examples of a particular stream type in each EDU, we ensure inclusion of all suites of species that may occur in that stream type in different major river drainages. Second, the use of EDU's for stratification of aquatic species goals facilitates inclusion of species targets across their environmental range and in all evolutionary pathways.

We identified 10 EDU's that occur in the MACP (Table 3), 4 of which cover a majority of the ecoregion. Of the remaining 6, 4 are composed primarily of Piedmont terrain, one occurs mostly in the South Atlantic Coastal Plain, and one occurs mostly in the Chesapeake Bay Lowlands.

III. Conservation Goals

To design a portfolio of aquatic sites that includes multiple viable examples of all aquatic species and aquatic systems targets in the ecoregion (TNC 1997), the planning team developed conservation goals for the representation of each target in the portfolio. Goals for representation of both aquatic systems and aquatic species targets in portfolio sites were stratified across EDU's. Goals were assigned based on target size, distribution, and global rarity and were expressed both as a number of examples required for each EDU in which the target naturally occurs and as a overall total goal for the ecoregion (Tables 4-5).

Determining the distribution and number of occurrences to be represented in the portfolio was an informed opinion of the planning team. There is no scientific consensus on how much habitat or how many populations are necessary to conserve coarse and fine filter targets. Our goals are based on a number of factors, including threats to the element, life history of the element, stability of the occurrences, key ecological processes and disturbance regimes, and known genetic or environmental variability of the element. In almost all cases, however, little target-specific information exists and our short timeline

precluded intensive research of those factors that affect long-term viability. Therefore, our representation goals are considered initial objectives and must be tested and refined through time by monitoring and re-evaluating the status and trends of individual targets.

Goals for aquatic species targets were based upon their global rarity and their distribution in relation to the ecoregion (Table 4). All species had the goal of representation of 3 examples per EDU with the exception of widespread species and those peripheral (<10% of range in MACP) to the ecoregion. However, species with Heritage ranks of G1 or G2 and endemic species of higher ranks (those targets with > 90% of their range in the ecoregion) had the highest overall goals. Widespread species (10-15% of their range in the ecoregion) and peripherals had lower goals. Species occurring in the ecoregion as disjunct populations and those with limited range outside of the ecoregion (50-90% of range in MACP) had intermediate goals. Widespread species were assessed on a case by case basis.

The goal for aquatic systems targets was to identify one viable example of each medium and large river sized system in each EDU, two examples of each small river system, and three examples of each creek/headwater system (Table 5). Systems peripheral to MACP (i.e., systems occurring primarily in the Piedmont) had goals of one occurrence per EDU for all sizes (Table 5). There was a minimum stream/river length required for inclusion of lotic aquatic system targets. This requirement was based on the assumed requirements of the biotic components of the communities contained in the system. Thus, the minimum length is greater for large rivers than for creeks and small rivers (Table 5).

Table 4. Conservation goals for aquatic species targets in the Mid Atlantic Coastal Plain ecoregion.

Category of Target	**Total Number of Occurrences**	**Number of Occurrences by EDU**
G1 and G2, T1-T2	15	3 per EDU
Endemic G3-G5	15	3 per EDU
Widespread G3-G5	10	2 per EDU
Peripherals G3-G5	5	2 per EDU

Table 5. Conservation goals for aquatic systems targets in the Mid Atlantic Coastal Plain ecoregion.

Category of Target	**Total Number of Occurrences**	**Number of Occurrences by EDU**	**Number of Occurrences by EDU (peripheral systems)**	**Minimum Length**
Large, Medium Rivers	5	1 per EDU	1 per EDU	40 km
Small Rivers	10	2 per EDU	1 per EDU	15 km
Headwater/Creek	20	3 per EDU	1 per EDU	5 km

IV. Aquatic Portfolio Assembly Methods

Aquatic portfolio sites were identified at an experts meeting held 6-8 December 2000 at Seabrook Island, SC (see Appendix 7 for list of expert participants). At this meeting experts provided input on selection of aquatic conservation species targets, classification of aquatic systems targets, development of conservation goals, and delineation of aquatic conservation sites.

Aquatic ecoregional sites were delineated in three steps. First, at the meeting, experts identified areas supporting viable populations (i.e., occurrences) of species targets. These populations were delineated in a GIS by selecting the stream reaches (EPA reach file 1 and EPA reach file 3) known to support a viable target population. In some cases, populations were delineated as polygons where target species occur in lakes or ponds or where a species inhabits swamps and marshes and is not limited to stream channels. Reaches were identified for each target species until all viable populations were represented or until the goal was reached. Appendix 3 and 4 detail the species targets occurring in all reaches delineated by experts and the lumped aquatic sites (see below).

Second, after identifying stream reaches to represent key areas for conservation of aquatic species targets, the experts identified high quality reaches to represent aquatic systems not “captured” by the species sites and pre-existing terrestrial portfolio sites. The SCSC team assessed capture of aquatic systems targets before the experts meeting and added to the acounting any examples captured by species reaches. By including portfolio sites and reaches delineated for species targets in tracking of aquatic systems targets we

assumed that they constitute viable examples of these systems. This assumption was not independently evaluated (e.g., by GIS viability analysis). However, the same length criteria for inclusion of aquatic system targets were applied to examples occurring in portfolio sites and species reaches. As a result, there were several examples of aquatic systems captured by species reaches and previously delineated terrestrial portfolio sites that were not counted toward goals because they did not meet the minimum length requirement. Appendix 3 and 4 detail the aquatic systems targets occurring in all reaches delineated by experts, the pre-existing terrestrial portfolio sites, and the lumped aquatic sites (see below).

Third, after the meeting we assembled the fine-scale reaches and polygons representing viable occurrences of targets into aquatic portfolio sites. We assembled reaches into sites by lumping together any reaches that overlapped (i.e., the same stream reach may have been identified for multiple targets) or were directly connected. We also joined some reaches into sites by "filling gaps" with intervening stream reaches. In some cases, we kept adjacent or connecting reaches as separate sites if the targets captured in them were distinctly different in life history and/or size of stream occupied. We also maintained separation among reaches occurring in separate EDU's.

V. Achievement of Conservation Goals

Experts identified 70 stream/river reaches and lakes to represent viable occurrences of species targets. Many of these reaches represented more than one target species, and some represented more than one population of some targets. These reaches were later merged into 25 aquatic portfolio sites.

Goals were met in all EDU's for 10 of 87 species targets, and ecoregion-wide goals were met for only 2 targets (Appendix 5). Many of the targets for which goals were not met were endemic to the ecoregion or were targets for which a limited number of extant populations could be identified. Most insect species are disjunct in the MACP or have been poorly surveyed.

Ecoregional representation goals were met for 10 of 25 aquatic systems targets (Appendix 6). These systems were adequately represented in every EDU in which they occur. An additional 13 system targets were not captured in sufficient numbers in at least one EDU, but were represented in the portfolio. Only 1 system target was not represented in the portfolio. Goals were not met for these systems for one of two reasons. First, that there were not enough examples to meet the goal. Second, that there were no other viable examples of some systems targets.

VI. Literature Consulted

Higgins, J., M. Lammert, M. Bryer, M. DePhilip, and D. Grossman. 1998. Freshwater conservation in the Great Lakes Basin: Development and application of an aquatic community classification framework. Great Lakes Program, The Nature Conservancy, Chicago, IL.

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The Nature Conservancy. 2000a. Conservation By Design: a framework for mission success. The Nature Conservancy, Arlington, VA.

The Nature Conservancy. 2000b. Designing a Geography of Hope: guidelines for ecoregional-based conservation in The Nature Conservancy. Second Edition. The Nature Conservancy, Arlington, VA.

MID-ATLANTIC COASTAL PLAIN
EXPLANATION OF TARGET LISTS AND ASSESSMENT TABLES

SCIENTIFIC NAME: Official Heritage Program Name (GNAME) for plants and animals. For communities, Names are a combination of GNAMEs for TNC types that were known and names from state classifications for EOs that were not classifiable using the TNC typology.

We prepared this plan just as TNC and Heritage offices were in the midst of making the transition from state-specific classes to a national classification for vegetation. Natural community mapping was highly inconsistent between the three states. Many natural community element occurrences could not be translated from system to system using the data available. As a result, the community technical team created groups within which members from multiple systems could be addressed together. For example, TIDAL CYPRESS--GUM SWAMP NC and Nyssa biflora - Nyssa aquatica - Taxodium distichum occurrences were grouped in a "Tidal Cypress Gum Group for which a target of 25 occurrences was set.

Two versions of the community table are available. The "b" version is write protected and should not be sorted by the user. In this table, the elements have been hand sorted by group membership. Do not sort table 3b.

COMMON NAME: Only provided for animals, since people more often think of animals by common names.

ELCODE: Official Heritage Program identifying code.

GOAL: Usually a number. The plant and community team used goals of ALL for the rarest and most threatened elements. The animal team set the goal to the actual number of occurrences, so there are no ALL goals for animals. The plant team had some species that were tracked in some states but not all. For these, the goal was partitioned among the states. A few stratification goals are included. A few community goals refer to I (indispensible) rated occurrences.

COUNT: Number of occurrences for this type in the final portfolio including deferred sites pending field verification.

MET: These codes explain whether and how the goal was met.

A The goal was ALL and ALL were included.
B The goal was met in the portfolio, including deferred sites.
C The goal was not met, but all the viable and better occurrences were included.
I For communities only: The community type is not mapped separately by the Heritage Programs, but it is classified by TNC and believed to be included in mapped Heritage occurrences (communities that occur as small inclusions within other, larger target communities, such as pocosin ecotones).
M The goal was not met, and more viable occurrences are available that aren't in the portfolio.
X There were no viable occurrences for the target.

Y Community elements for which analysis was deferred because they are part of groups for which the classification is not sufficiently developed, mostly aquatic communities.

n For Plants only: The target plant is not tracked by one or more of the region's heritage programs.

GRANK: Natural Heritage Programs rank target species and communities according to global rarity and endangerment. G1 is the rarest and most vulnerable. G5 is relatively common and less vulnerable. GRANKs are available for all plant and animal targets, but were not readily available for all community types.

GROUPING: For community elements only: The data we used was a mixture of community occurrences tagged to TNC associations (Capitalized and Lower Case) and ones in state classifications that could not be tagged to TNC types (ALL CAPS). Some TNC associations could not be distinguished from other TNC associations. Therefore, goals were set for groups of associations in many cases. We named these groups, and all members share the same contents in this column. Meeting of the goal was determined for the group as a whole.

ANIMAL

TARGETS

SCIENTIFIC NAME	COMMON NAME	ELCODE	GOAL	COUNT	MET	GLOBAL RANK
ACIPENSER BREVIROSTRUM	SHORTNOSE STURGEON	AFCAA01010	5	4	C	G3
AGROTIS BUCHHOLZI	A DART MOTH	IILEYKL140	12	2	C	G2
AIMOPHILA AESTIVALIS	BACHMAN'S SPARROW	ABPBX91050	5	22	B	G3
ALASMIDONTA HETERODON	DWARF WEDGEMUSSEL	IMBIV02030	12	2	C	G1G2Q
ALASMIDONTA VARICOSA	BROOK FLOATER	IMBIV02100	8	0	M	G3
AMBLYSCIRTES ALTERNATA	DUSKY ROADSIDE-SKIPPER	IILEP80210	5	6	B	G3G4
AMBYSTOMA CINGULATUM	FLATWOODS SALAMANDER	AAAAA01030	5	4	C	G2G3
AMBYSTOMA TIGRINUM	TIGER SALAMANDER	AAAAA01140	7	19	B	G5
AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW	ABPBXA0030	6	9	B	G4
AMNICOLA SP 1	WACCAMAW SNAIL	IMGASF4X10	2	2	B	G?
ATRYTONE AROGOS AROGOS	AROGOS SKIPPER	IILEP70011	5	1	C	G3G4T1T2
ATRYTONOPSIS LOAMMI	LOAMMI SKIPPER	IILEP79050	8	2	C	G2G4Q
BARRONOPSIS JEFFERSI	A FUNNEL WEB SPIDER	ILARA65010	5	1	C	G3
BOTHYNOTUS JOHNSTONI	A MIRID	IIHEM52010	5	1	C	G3
CAECIDOTEA PHREATICA	PHREATIC ISOPOD	ICMAL01300	12	0	M	G1
CANIS RUFUS	RED WOLF	AMAJA01020	3	1	M	G1
CARETTA CARETTA	LOGGERHEAD SEA TURTLE	ARAAA01010	6	29	B	G3
CHARADRIUS MELODUS	PIPING PLOVER	ABNNB03070	2	16	B	G3
CHLOROCHROA DISMALIA	DISMAL SWAMP GREEN STINK BUG	IIHEM28020	12	0	M	GU
CINCINNATIA SP 1	WACCAMAW SILTSNAIL	IMGASF9X10	1	1	B	G?
CORYNORHINUS RAFINESQUII	RAFINESQUE'S BIG-EARED BAT	AMACC08020	5	28	B	G3G4
CTENOTRACHELUS SHERMANI	A MIRID	IIHEM53010	5	1	C	G3
CYPRINELLA ZANEMA POP 2	SANTEE CHUB COASTAL POP.	AFCJB49242	10	8	M	G3T2Q
DENDROICA CERULEA	CERULEAN WARBLER	ABPBX03240	5	7	B	G4
DENDROICA VIRENS	BLACK-THROATED GREEN WARBER	ABPBX03100	5	1	Cn	G5TU
DOLANIA AMERICANA	AMERICAN SAND BURROWING MAYFLY	IIEPH02010	8	1	C	G2
ELANOIDES FORFICATUS	SWALLOW-TAILED KITE	ABNKC04010	5	5	B	G5
ELASSOMA BOEHLKEI	CAROLINA PYGMY SUNFISH	AFCQB09050	10	7	M	G2
ELIMIA CATENARIA	GRAVEL ELIMIA	IMGASK2180	8	0	M	G?
ELLIPTIO FOLLICULATA	POD LANCE	IMBIV14130	10	6	M	G2G3
ELLIPTIO LANCEOLATA	YELLOW LANCE	IMBIV14180	8	4	M	G2G3
ELLIPTIO ROANOKENSIS	ROANOKE SLABSHELL	IMBIV14240	8	5	M	G2
ELLIPTIO STEINSTANSANA	TAR RIVER SPINEYMUSSEL	IMBIV14270	12	2	C	G1
ELLIPTIO WACCAMAWENSIS	WACCAMAW SPIKE	IMBIV14280	12	3	C	G2Q
EPITHECA SPINOSA	ROBUST BASKETTAIL	IIODO29090	5	3	C	G4
ETHEOSTOMA MARIAE	PINEWOODS DARTER	AFCQC02430	10	25	B	G3
ETHEOSTOMA PERLONGUM	WACCAMAW DARTER	AFCQC02580	1	1	B	G1Q
EUPHYES BERRYI	BERRY'S SKIPPER	IILEP77070	5	2	C	G3G4
EUPHYES DUKESI	DUKE'S SKIPPER	IILEP77050	5	7	B	G3
FUNDULUS WACCAMENSIS	WACCAMAW KILLIFISH	AFCNB04200	2	2	B	G1Q
FUSCONAIA MASONI	ATLANTIC PIGTOE	IMBIV17090	8	3	M	G2
HELISOMA EUCOSMIUM	GREENFIELD RAMS-HORN	IMGASM6030	12	1	C	G1
HEMIPACHNOBIA MONOCHROMATEA	SUNDEW CUTWORM MOTH	IILEYLX020	5	1	C	G4
HEMIPACHNOBIA SUBPORPHYREA	VENUS FLYTRAP CUTWORM MOTH	IILEYLX010	12	1	C	G1
HESPERIA ATTALUS SLOSSONAE	DOTTED SKIPPER	IILEP65122	5	4	C	G3G4T3
HETERODON SIMUS	SOUTHERN HOGNOSE SNAKE	ARADB17030	8	37	B	G2
HYLA ANDERSONII	PINE BARRENS TREEFROG	AAABC02010	10	28	B	G4
INCISALIA IRUS	FROSTED ELFIN	IILEPE7040	5	6	B	G3
LAMPROPELTIS GETULA STICTICEPS	OUTER BANKS KINGSNAKE	ARADB19029	5	5	B	G5T2Q
LAMPSILIS CARIOSA	YELLOW LAMPMUSSEL	IMBIV21050	5	8	B	G3G4
LAMPSILIS CROCATA	WACCAMAW LAMPMUSSEL	IMBIV21270	8	1	C	G1Q
LAMPSILIS FULLERKATI	WACCAMAW FATMUCKET	IMBIV21080	12	1	C	G1Q
LASMIGONA DECORATA	CAROLINA HEELSPLITTER		1	0	X	G1
LASMIGONA SUBVIRIDIS	GREEN FLOATER	IMBIV22060	5	1	C	G3
LATERALLUS JAMAICENSIS	BLACK RAIL	ABNME03040	5	14	B	G4
LITHOPHANE LEMMERI	LEMMER'S PINION	IILEYFE150	5	1	C	G3G4
MELANOPLUS DECORUS	DECORATED SPUR-THROAT MELANOPLU	IIORT01320	5	2	C	G3?
MENIDIA EXTENSA	WACCAMAW SILVERSIDE	AFCND02020	1	1	B	G1
METARRANTHIS LATERITIARIA	AN INCHWORM MOTH	IILEU3C090	5	2	C	G2G4
METARRANTHIS SP 1	A NEW INCHWORM MOTH	IILEU3CX10	10	2	C	G3
MITOURA HESSELI	HESSEL'S HAIRSTREAK	IILEPE4100	5	17	B	G3G4
MYCTERIA AMERICANA	WOOD STORK	ABNGF02010	5	5	B	G4
MYOTIS AUSTRORIPARIUS	SOUTHEASTERN BAT	AMACC01030	5	4	C	G3
NECTURUS LEWISI	NEUSE RIVER WATERDOG	AAAAE01030	10	46	B	G3
NEONYMPHA MITCHELLII FRANCISCI	SAINT FRANCIS' SATYR	IILEPN3022	12	1	C	G1T1
NERODIA CYCLOPION	FLORIDA GREEN WATER SNAKE	ARADB22010	1	1	B	G5
NOTURUS FURIOSUS	CAROLINA MADTOM	AFCKA02090	10	12	B	G3
NOTURUS SP 1	BROADTAIL MADTOM		10	10	B	G2
OPHISAURUS MIMICUS	MIMIC GLASS LIZARD	ARACB02040	5	8	B	G3
ORCONECTES VIRGINIENSIS	NORTH CAROLINA SPINEY CRAYFISH	ICMAL11280	10	3	M	G3
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF0706X	10	493	B	G3
PITUOPHIS MELANOLEUCUS MELANOLEUCUS	NORTHERN PINE SNAKE	ARADB26012	5	51	B	G4T4
PLANORBELLA MAGNIFICA	MAGNIFICENT RAMS-HORN	IMGASN0090	12	2	C	G1
PLOIARIA HIRTICORNIS	AN ASSASIN BUG	IIHEM36020	5	2	C	G3
PNIRONTIS BRIMLEYI	AN ASSASIN BUG	IIHEM59020	12	1	C	G2
PROBLEMA BULENTA	RARE SKIPPER	IILEP71020	8	2	C	G2G3
PROBLEMA BYSSUS	BYSSUS SKIPPER	IILEP71010	5	7	C	G3G4
PROCAMBARUS MEDIALIS	TAR RIVER CRAYFISH	ICMAL14280	8	2	M	G2
PROCAMBARUS PLUMIMANUS	CROATAN CRAYFISH	ICMAL14300	5	11	B	G3
PROGOMPHUS BELLEI	BELLE'S SANDDRAGON	IIODO13020	5	1	C	G3
PROSTOIA HALLASI	HALLAS' BROADBACK SPRING STONEFLY		5	0	X	G2G4
PSEUDOBRANCHUS STRIATUS	DWARF SIREN	AAAAG01010	1	1	B	G5
PSEUDOPOLYDESMUS PALUDICOLOUS	A MILLIPEDE	ITUNI61020	12	2	C	G1
RANA CAPITO CAPITO	CAROLINA GOPHER FROG	AAABH01271	10	32	B	G4T3
SATYRIUM KINGI	KING'S HAIRSTREAK	IILEPD4090	5	4	C	G3G4
SEMOTILUS LUMBEE	SANDHILLS CHUB	AFCJB41030	10	32	B	G3
SIPHLOPLECTON COSTALENSE	SPEITH'S GREAT SPECKLED OLIVE MAYFLY		8	0	X	G2
SOMATOCHLORA PROVOCANS	TREETOP EMERALD	IIODO32190	5	1	C	G3
SOREX LONGIROSTRIS FISHERI	DISMAL SWAMP SOUTHEASTERN SHREW	AMABA01063	10	11	B	G5T2T3
SOREX SP 1	AN UNDESCRIBED SHREW	AMABA01350	3	3	B	G1G2Q
SPARTINIPHAGA CARTERAE	CARTER'S NOCTUID MOTH	IILEYBQ030	12	2	C	G2G3
STYGOBROMUS ARAEUS	TIDEWATER INTERSTITIAL AMIPOD	ICMAL05290	12	2	C	G2
STYGOBROMUS INDENTATUS	TIDEWATER AMPHIPOD		12	0	X	G2
TOXOLASMA PULLUS	SAVANNAH LILLIPUT	IMBIV43070	8	1	C	G2
TRIODOPSIS SOELNERI	CAPE FEAR THREETOOTH	IMGASA1350	12	4	M	G2
VILLOSA CONSTRICTA	NOTCHED RAINBOW	IMBIV47040	5	1	M	G3
VILLOSA VAUGHANIANA	CAROLINA CREEKSHELL	IMBIV47160	5	0	M	G2

PLANT

TARGETS

SCIENTIFIC NAME	ELCODE	GOAL	COUNT	MET	GLOBAL RANK	
AESCHYNOMENE VIRGINICA	PDFAB04080	ALL	4	A	G2	
AESCULUS PARVIFLORA	PDHPC01050	ALL	0	X	G2G3	
AGALINIS APHYLLA	PDSCR01020	15	43	B	G3G4	
AGRIMONIA INCISA	PDROS03040	15	4	M	G3	
ALLIUM CUTHBERTII	PMLIL020P0	15	0	Xn	G3G4	
ALLIUM SP 1	PMLIL02280	ALL	8	A	G1	
AMARANTHUS PUMILUS	PDAMA040Z0	ALL	57	A	G2	
AMORPHA GEORGIANA VAR CONFUSA	PDFAB08052	ALL	37	A	G3T2	
AMORPHA GEORGIANA VAR GEORGIANA	PDFAB08051	ALL	18	A	G3T2	
AMPHICARPUM MUEHLENBERGIANUM	PMPOA0B010	5	5	B	G4	
ANDROPOGON ARCTATUS	PMPOA0C010	15	1	C	G3	
ANDROPOGON MOHRII	PMPOA0C0D0	5	15	B	G4?	
ANEMONE CAROLINIANA	PDRAN04030	5	0	M	G5	
ARISTOLOCHIA TOMENTOSA	PDARI010J0	5	1	C	G5	
ARMORACIA LACUSTRIS	PDBRA07010	5	0	X	G4?	
ASCLEPIAS PEDICELLATA	PDASC021E0	15	41	B	G3?	
ASPLENIUM HETERORESILIENS	PPASP020J0	ALL	11	A	G2Q	
ASPLENIUM PINNATIFIDUM	PPASP02100	5	0	X	G4	
ASTRAGALUS MICHAUXII	PDFAB0F580	25 *	68	B	G3	
BALDUINA ATROPURPUREA	PDAST0Z020	ALL	2	M	G2G3	
BRACHYTHECIUM ROTAEANUM	NBMUS0Z0Q0	5	1	C	G3G4	
BUCHNERA AMERICANA	PDSCR0B010	5	1	C	G5?	
BULBOSTYLIS WAREI	PMCYP020B0	NC 3 SC	0	Xn	G3G4	
CAKILE EDENTULA SSP HARPERI *	PDBRA0F022	ALL*	0	Xn	G5T2	
CALAMOVILFA BREVIPILIS	PMPOA18020	NC3 SC:	7	Bn	G4	
CALOPOGON MULTIFLORUS	PMORC0C020	15	2	C	G3	
CAMPYLOPUS CAROLINAE	NBMUS1K040	ALL	2	A	G1	
CAMPYLOPUS OERSTEDIANUS	NBMUS1K0A0	ALL*	0	A	G1G3	
CARDAMINE LONGII	PDBRA0K0L0	15	4	C	G3Q	
CAREX BARRATTII	PMCYP031K0	15	7	C	G3G4	
CAREX CHAPMANII	PMCYP032R0	NC 9 SC	1	Cn	G3	
CAREX DECOMPOSITA	PMCYP033K0	15	9	M	G3	
CAREX LUPULIFORMIS	PMCYP037T0	15	6	C	G3G4	
CAREX LUTEA	PMCYP03K00	ALL	8	A	G1	
CAREX SOCIALIS	PMCYP03CK0	15 *	3	C	G3G4	
CAREX SP 4		ALL*	1	An	G2G3Q	
CAREX SP 6	PMCYP03K40	ALL	0	Xn	G2	
CAREX SP NOV IN ED		ALL*	0	Xn	G2?Q	
CAREX VERRUCOSA	PMCYP03ED0	NC 8 SC	6	Cn	G3G4	
CAREX WILLDENOWII VAR MEGARRHYNCHA	PMCYP03ET1	15	3	C	G5T3?	
CARYA MYRISTICIFORMIS	PDJUG01080	5	6	B	G4	
CAYAPONIA BOYKINII	PDCUC05050	15	0	Xn	G?	
CERATOPHYLLUM MURICATUM SSP AUSTRALE	PDCER01021	15	1	M	G5T?	
CHAMAECRISTA FASCICULATA VAR MACROSPERMA	PDFAB47051	ALL	3	A	G5T2	
CHASMANTHIUM NITIDUM	PMPOA1D030	15	3	C	G3?	
CHEILOLEJEUNEA MYRIANTHA	NBHEP0T070	5	1	C	G3G4	
CHELONE CUTHBERTII	PDSCR0F010	15 *	4	C	G3	
CHRYSOMA PAUCIFLOSCULOSA	PDAST2A010	5	5	B	G4G5	
COREOPSIS ROSEA	PDAST2L0T0	15	2	C	G3	
CORNUS ASPERIFOLIA	PDCOR01030	15 *	2	C	G3?	
CROTON ELLIOTTII	PDEUP0H0C0	ALL	0	Xn	G2G3	
CYLINDROCOLEA ANDERSONII	NBHEP13030	ALL	0	Xn	GH	
CYLINDROCOLEA RHIZANTHA	NBHEP13020	5	1	A	G3?	
CYPERUS GRANITOPHILUS	PMCYP061E0	15	0	Xn	G3Q	
CYPERUS LECONTEI	PMCYP061W0	5	8	B	G4?	
CYSTOPTERIS TENNESSEENSIS	PPDRY07080	5	2	C	G5	
DANTHONIA EPILIS	PMPOA200C0	15	25	B	G3?	
DESMODIUM OCHROLEUCUM	PDFAB1D100	ALL	1	A	G2G3	
DICHANTHELIUM SP 5	PMPOA241S0	NC 4 SC	1	An	G5?	
DIONAEA MUSCIPULA	PDDRO01010	25	162	B	G3	
DIOSCOREA FLORIDANA *	PDDIO01050	15 *	0	Xn	G3G4	
DIOSCOREA VILLOSA VAR. HIRTICAULIS		NC 10 S	0	Xn	G5T3Q	
DROSERA FILIFORMIS	PDDRO02040	15	6	M	G5	
ECHINODORUS PARVULUS	PMALI02050	15	13	C	G3	
ELYMUS VIRGINICUS VAR. HALOPHILA		ALL*	0	Xn	G5TU	
ERIOCAULON PARKERI	PMERI01070	15	4	C	G3	
ERIOCAULON RAVENELII	PMERI01080	ALL	0	M	G2G3	
ERIOCHLOA MICHAUXII	PMPOA2Q040	ALL	0	Xn	G2?	
ERYNGIUM AQUATICUM VAR RAVENELII	PDAPI0Z032	ALL	1	Mn	G4TUQ	

EUPATORIUM ANOMALUM *	PDAST3P040	ALL*	0	Xn	G2G3
EUPATORIUM RESINOSUM	PDAST3P1L0	15-25*	63	B	G3
EUPATORIUM SALTUENSE		15 *	0	Xn	
FIMBRISTYLIS PERPUSILLA	PMCYP0B0F0	ALL	13	A	G2G3
FISSIDENS HALLII	NBMUS2W0H0	ALL	1	A	G2
FORESTIERA GODFREYI	PDOLE020C0	15	0	M	G3
GAYLUSSACIA TOMENTOSA	PDERI0G043	15	2	C	G?
GENTIANA AUTUMNALIS	PDGEN06070	NC 20 S	11	Bn	G3
GNAPHALIUM HELLERI VAR HELLERI	PDAST44091	15	6	C	
HELENIUM BREVIFOLIUM	PDAST4L070	15	5	C	G3G4
HELIANTHEMUM NASHII	PDCIS020B0	15	1	C	G3G4
HETERANTHERA MULTIFLORA	PMPON03050	5	2	M	G4
HYPERICUM ADPRESSUM	PDCLU03010	ALL	4	M	G2G3
HYPERICUM HARPERI *	PDCLU03010	15 *	0	Xn	G3
HYPERICUM SP. 2	PDCLU0320	ALL*	0	Xn	G2?Q
HYPOXIS RIGIDA		NC 8 SC	0	Xn	G?
ILEX BUSWELLII	PDAQU011A0	NC 6 SC	0	Xn	G?Q
ISOETES HYEMALIS	PPISO01180	ALL	0	Xn	G2G3
ISOETES PIEDMONTANA	PPISO010H0	15 *	0	X	G3
ISOETES VIRGINICA	PPISO010P0	15	0	M	G3Q
ISOTRIA MEDEOLOIDES	PMORC1F010	ALL	0	X	G2G3
JUNCUS CAESARIENSIS	PMJUN010K0	ALL	0	X	G2
JUNCUS GRISCOMII	PMJUN011B0	ALL	0	X	GHQ
KALMIA CUNEATA	PDERI0K020	25	94	B	G3
LACHNOCAULON BEYRICHIANUM	PMERI02020	ALL*	46	A	G2G3
LEJEUNEA BERMUDIANA	NBHEP1R030	5	2	M	G3G4
LEJEUNEA DIMORPHOPHYLLA	NBHEP1R0M0	ALL	1	A	G2G3
LEJEUNEA GLAUCESCENS VAR ACROGYNA		ALL	0	Xn	
LEPTOCHLOA FASCICULARIS VAR MARITIMA	PMPOA3M0A1	15	6	Mn	G5T354
LIATRIS COKERI *	PDAST5X170	NC 12 S	0	Xn	G3?
LIATRIS MICOCEPHALA	PDAST5X040	15	0	Xn	G3G4
LILAEOPSIS CAROLINENSIS	PDAPI19010	15	26	B	G3
LILIUM IRIDOLLAE	PMLIL1A080	ALL*	34	A	G1G2
LILIUM SP. 1		ALL*	0	Xn	
LINDERA MELISSIFOLIA	PDLAU07020	ALL	13	A	G2
LINDERA SUBCORIACEA	PDLAU07030	ALL	40	A	G2
LINUM FLORIDANUM VAR CHRYSOCARPUM	PDLIN020A1	NC 7 SC	3	C	G4T3?
LITSEA AESTIVALIS	PDLAU08010	15	52	B	G3
LOBELIA BOYKINII	PDCAM0E050	ALL	19	A	G2G3
LOBELIA SP. 1		ALL*	0	Xn	
LOPHIOLA AUREA	PMLIL2N010	5	8	B	G4
LUDWIGIA ALATA	PDONA0B010	NC 10 S	30	B	G3G4
LUDWIGIA LANCEOLATA	PDONA0B0A0	NC 5 SC	3	C	G3
LUDWIGIA RAVENII	PDONA0B0W0	ALL	5	A	G2?
LYCOPUS COKERI	PDLAM0X050	NC 15 S	1	Cn	G3
LYSIMACHIA ASPERULIFOLIA	PDPRI07010	25	70	B	G3
LYSIMACHIA LOOMISII *	PDPRI070F0	NC 15 S	0	Xn	G3
LYSIMACHIA RADICANS	PDPRI070P0	5	0	X	G4G5
MACBRIDEA CAROLINIANA	PDLAM0Y020	ALL	15	A	G2G3
MATELEA FLAVIDULA *	PDASC0A0C0	15 *	0	Xn	G3?
MINUARTIA GODFREYI	PDCAR0G0D0	ALL	0	M	G1
MONOTROPSIS ODORATA	PDMON04020	15 *	1	C	G3
MUHLENBERGIA BUSHII	PMPOA48090	5	2	C	G5
MUHLENBERGIA TORREYANA	PMPOA481U0	15	11	C	G3
MYRIOPHYLLUM LAXUM	PDHAL04090	15	29	B	G3
NARTHECIUM AMERICANUM	PMLIL1L010	ALL	0	X	G2
NOLINA GEORGIANA	PMAGA08060	15	2	C	G3G5
NUPHAR SAGITTIFOLIA *	PDNYM04016	ALL	0	Xn	G2
OENOTHERA RIPARIA		ALL*	0	Xn	G2?Q
OXYPOLIS CANBYI	PDAPI1L010	ALL	13	M	G2
OXYPOLIS TERNATA	PDAPI1L070	NC 18 S	1	Cn	G3
PANICUM HIRSTII	PMPOA4K150	ALL	2	A	G1
PARNASSIA CAROLINIANA	PDSAX0P020	15-25*	38	B	G3
PARNASSIA GRANDIFOLIA	PDSAX0P060	15 *	2	C	G3G4
PARONYCHIA AMERICANA	PDCAR0L010	15	0	Xn	G3?
PARTHENIUM INTEGRIFOLIUM VAR MABRYANUM *	PDAST6V065	NC 14 S	0	Xn	
PEDIOMELUM CANESCENS	PDFAB5L010	NC 7 SC	1	Cn	G3G4
PELTANDRA SAGITTIFOLIA	PMARA0E020	15	39	B	G3G4
PHASEOLUS POLYSTACHIOS VAR SINUATUS	PDFAB330D3	NC 6 SC	63	Bn	G3
PHLOX DIVARICATA SSP. LAPHAMII		15	0	Xn	

PHYSALIS LANCEOLATA *	PDSOL05570	25 *	0	Xn	G3Q
PIERIS PHILLYREIFOLIA	PDERI10020	15	5	C	G3
PLAGIOCHILA SULLIVANTII	NBHEP2M0P0	ALL*	0	Xn	G2
PLANTAGO SPARSIFLORA	PDPLN02140	ALL	10	M	G2G3
PLATANTHERA INTEGRA	PMORC1Y0C0	15	29	B	G3G4
POLYGALA HOOKERI	PDPGL020N0	15	23	B	G3
POLYGONUM GLAUCUM	PDPGN0L120	NC 10 S	5	Cn	G3
PORTULACA SMALLII	PDPOR060H0	15 *	0	X	G3
POTAMOGETON CONFERVOIDES	PMPOT03050	15	14	C	G3G4
PSILOTUM NUDUM	PPPSI01020	5	3	C	G5
PTEROGLOSSASPIS ECRISTATA	PMORC27010	ALL	7	M	G2
PTILIMNIUM COSTATUM	PDAPI1Y020	15	2	C	G3?
PTILIMNIUM SP 1	PDAPI1Y060	ALL	3	A	G2
PYCNANTHEMUM CLINOPODIOIDES	PDLAM1N030	ALL	1	An	
PYCNANTHEMUM MONOTRICHUM	PDLAM1N080	ALL	0	X	GUQ
PYCNANTHEMUM TORREI	PDLAM1N0G0	ALL	1	A	G2
PYXIDANTHERA BREVIFOLIA	PDDIA03020	ALL*	127	A	G2Q
RHEXIA ARISTOSA	PDMLS0H020	15-25*	70	B	G3
RHUS MICHAUXII	PDANA08070	ALL	27	A	G2
RHYNCHOSPORA BREVISETA	PMCYP0N040	NC 7 SC	25	Bn	G3G4
RHYNCHOSPORA CEPHALANTHA VAR ATTENUATA	PDCYP0N040	NC 7 SC	3	Cn	G5T3?
RHYNCHOSPORA CRINIPES	PMCYP0N0H0	ALL	4	A	G1
RHYNCHOSPORA DECURRENS	PMCYP0N0N0	15	10	C	G3G4
RHYNCHOSPORA GLOBULARIS VAR PINETORUM	PMCYP0N0W2	15	10	C	G5T3?
RHYNCHOSPORA HARPERI	PMCYP0N100	15	10	C	G4?
RHYNCHOSPORA LEPTOCARPA	PMCYP0N100	NC 10 S	0	Xn	G3?Q
RHYNCHOSPORA MACRA	PMCYP0N1C0	15	15	B	G3
RHYNCHOSPORA MACROSTACHYA VAR. COLPOPHILA		NC 10 V.	0	Xn	G4T3?
RHYNCHOSPORA PALLIDA	PMCYP0N1P0	NC 18 S	1	Cn	G3
RHYNCHOSPORA PERPLEXA VAR VIRGINIANA	PMCYP0N1Q2	ALL*	4	A	G5T1T2Q
RHYNCHOSPORA PLEIANTHA	PMCYP0N1R0	NC8 SC	16	Cn	G3
RHYNCHOSPORA THORNEI	PMCYP0N2B0	ALL	13	A	G1G2
RUDBECKIA HELIOPSIDIS	PDAST85070	ALL	2	A	G2
RUELLIA CAROLINIENSIS SSP CILIOSA	PDACA0J025	15	9	C	G5T?Q
RUELLIA PEDUNCULATA SSP PINETORUM	PDACA0J0G2	ALL	0	M	G5T2
SABATIA KENNEDYANA	PDGEN0F0E0	15	17	B	G3
SAGITTARIA GRAMINEA VAR CHAPMANII	PMALI04030	NC 10 S	2	Cn	G3
SAGITTARIA GRAMINEA VAR WEATHERBIANA	PMALI040A4	ALL*	0	Xn	G5T3
SAGITTARIA ISOETIFORMIS	PMALI040E0	15	11	M	G3G4
SCHISANDRA GLABRA	PDSCH01020	15 *	1	M	G3
SCHWALBEA AMERICANA	PDSCR1Q010	ALL	75	M	G2
SCIRPUS FLACCIDIFOLIUS	PMCYP0Q0N0	ALL	6	M	G2
SCLERIA RETICULARIS	PMCYP0R0K0	NC 8 SC	12	Cn	G3G4
SIDA INFLEXA	PDMAL100D0	ALL	1	A	GHQ
SIDEROXYLON TENAX	PDSPT0G020	NC 3 SC	4	Cn	G3?
SILENE OVATA	PDCAR0U180	ALL	0	X	G2
SOLANUM PSEUDOGRACILE		15	0	Xn	G?
SOLIDAGO AUSTRINA		ALL*	0	Xn	G2?Q
SOLIDAGO LEAVENWORTHII	PDAST8P0Y0	NC 3 SC	2	Cn	G3G4
SOLIDAGO PERLONGA		ALL*	0	Xn	G2?Q
SOLIDAGO PULCHRA	PDAST8P1H0	25	88	B	G3
SOLIDAGO SP 1	PDAST8P3A0	ALL	2	An	G1Q
SOLIDAGO VERNA	PDAST8P250	25	56	B	G3
SPHAGNUM CAROLINIANUM	NBMUS6Z1S0	5	3	M	G3
SPHAGNUM CYCLOPHYLLUM	NBMUS6Z090	5	0	Xn	G3
SPHAGNUM FITZGERALDII	NBMUS6Z0B0	ALL	10	A	G2G3
SPHAGNUM INUNDATUM	NBMUS6Z250	5	1	C	G3?
SPHAGNUM MACROPHYLLUM VAR FLORIDANUM	NBMUS6Z0L3	5	0	X	
SPHAGNUM MACROPHYLLUM VAR MACROPHYLLUM	NBMUS6Z0L2	5	2	C	
SPHAGNUM TORREYANUM	NBMUS6Z1E0	5	4	M	G3G4
SPIRANTHES BREVILABRIS VAR FLORIDANA	PMORC2B031	NC 6 SC	0	Xn	G3G4T?
SPIRANTHES LONGILABRIS	PMORC2B0G0	15	6	C	G3
SPOROBOLUS SP 1	PMPOA5V140	NC 20 S	6	Bn	G3
SPOROBOLUS TERETIFOLIUS	PMPOA5V0U0	ALL*	11	M	G1G2
STYLISMA PICKERINGII VAR PICKERINGII	PDCON0H052	ALL	42	M	G4T2T3
TELOSCHISTES FLAVICANS	NLLEC4W040	15	4	C	G3G4
THALIA DEALBATA	PMMAR03010	15	2	M	G3G5
THALICTRUM COOLEYI	PDRAN0M040	ALL	13	A	G1
THALICTRUM MACROSTYLUM	PDRAN0M0B0	NC 10 S	0	Xn	G3G4
THALICTRUM SUBROTUNDUM	PDRAN0M0M0	ALL	0	X	G1G2Q

THERMOPSIS MOLLIS	PDFAB3Z060	15	0	X	G4?
TOFIELDIA GLABRA	PMLIL1Y020	25	146	B	G3
TRICHOSTEMA SP 1	PDLAM220G0	ALL	17	M	G2
TRIDENS CAROLINIANUS	PMPOA65040	15 *	44	B	G3?
TRILLIUM LANCIFOLIUM	PMLIL200G0	15	0	M	G3
TRILLIUM PUSILLUM VAR PUSILLUM	PMLIL200Q2	ALL	4	A	G3T2
TRILLIUM PUSILLUM VAR VIRGINIANUM	PMLIL200Q3	ALL	8	A	G3T2
UTRICULARIA FLORIDANA	PDLNT02050	15	0	X	G3G5
UTRICULARIA RESUPINATA	PDLNT020K0	5	2	C	G4
VACCINIUM CRASSIFOLIUM SSP SEMPERVIRENS	PDERI180A2	ALL	0	M	G4G5T1
VACCINIUM MACROCARPON	PDERI180J0	5	13	B	G4
XYRIS CHAPMANII	PMXYR010T0	NC 8 SC	30	Cn	G3
XYRIS SCABRIFOLIA	PMXYR010H0	15 *	24	B	G3
ZEPHYRANTHES SP 1	PMLIL270E0	ALL*	4	M	G2?

NATURAL COMMUNITY

TARGETS

ALLIANCES AND ASSOCIATIONS ATTRIBUTED
TO THE MID-ATLANTIC COASTAL PLAIN
March 1998

I.A.4.N.a.020. QUERCUS HEMISPHAERICA FOREST ALLIANCE
CEGL007022 G2G3 Quercus hemisphaerica - Pinus taeda - (Quercus nigra) / Osmanthus americanus var. americanus / Ilex glabra Forest

I.A.4.N.a.030. QUERCUS VIRGINIANA FOREST ALLIANCE
CEGL007026 G2 Quercus virginiana - Quercus hemisphaerica - Pinus taeda - Quercus falcata / Ilex vomitoria Forest
CEGL007027 G2 Quercus virginiana - Quercus hemisphaerica - Pinus taeda / Persea borbonia Forest
CEGL006306 G1 Quercus virginiana / Myrica pensylvanica Forest
CEGL007028 G2G3 Quercus virginiana / Vaccinium arboreum - Ilex vomitoria Forest

I.A.4.N.a.050. QUERCUS VIRGINIANA - SABAL PALMETTO FOREST ALLIANCE
CEGL007032 G2 Quercus virginiana - Sabal palmetto - Juniperus virginiana var. silicicola / Persea borbonia Forest

I.A.4.N.e.010. QUERCUS VIRGINIANA TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007039 G3G4 Quercus virginiana / (Sabal minor, Serenoa repens) Forest

I.A.4.N.g.020. GORDONIA LASIANTHUS SATURATED FOREST ALLIANCE
CEGL007044 G4 Gordonia lasianthus - Magnolia virginiana - Persea palustris / Sphagnum spp. Forest

I.A.4.N.g.040. MAGNOLIA VIRGINIANA - PERSEA PALUSTRIS SATURATED FOREST ALLIANCE
CEGL007049 G3? Magnolia virginiana - Persea palustris / Lyonia lucida Forest
CEGL004635 G1 Persea palustris / Myrica cerifera Maritime Forest

I.A.4.N.g.050. SABAL PALMETTO - QUERCUS VIRGINIANA SATURATED FOREST ALLIANCE
CEGL007040 G3? Sabal palmetto - Quercus virginiana Saturated Forest

I.A.8.N.b.160. PINUS TAEDA FOREST ALLIANCE
CEGL006040 G2G3 Pinus taeda / Myrica cerifera / Vitis rotundifolia Forest

I.A.8.N.e.020. PINUS TAEDA TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007142 G4G5 Pinus taeda Temporarily Flooded Forest

I.A.8.N.f.030. PINUS TAEDA SEASONALLY FLOODED FOREST ALLIANCE
CEGL006137 G2G3 Pinus taeda / Myrica cerifera / Osmunda regalis var. spectabilis Forest

I.A.8.N.g.010. CHAMAECYPARIS THYOIDES SATURATED FOREST ALLIANCE
CEGL007563 G2 Chamaecyparis thyoides - (Liriodendron tulipifera) / Lyonia lucida Forest
CEGL006056 G2? Chamaecyparis thyoides - Pinus serotina Forest
CEGL006146 G2 Chamaecyparis thyoides / Persea palustris / Lyonia lucida - Ilex coriacea Forest

I.B.2.N.a.010. ACER BARBATUM - FRAXINUS AMERICANA - JUGLANS NIGRA FOREST ALLIANCE
CEGL004747 G3? Carya glabra - Tilia americana var. caroliniana - Acer barbatum / Trillium maculatum Forest

I.B.2.N.a.102. CARYA GLABRA - TILIA AMERICANA VAR. CAROLINIANA - CELTIS LAEVIGATA FOREST ALLIANCE
CEGL007282 G1G3 Celtis laevigata - Tilia americana var. caroliniana / Aesculus pavia Forest

I.B.2.N.a.160. FAGUS GRANDIFOLIA - QUERCUS ALBA FOREST ALLIANCE
CEGL004636 G3? Fagus grandifolia - (Liquidambar styraciflua) / Oxydendrum arboreum / Kalmia latifolia Forest
CEGL007206 G4 Fagus grandifolia - Quercus alba - Acer (barbatum, leucoderme) / Mixed Herbs Forest
CEGL007210 G4G5 Fagus grandifolia - Quercus alba - Liquidambar styraciflua / Magnolia grandiflora / Smilax pumila - Hexastylis arifolia Forest
CEGL007211 G2G3 Fagus grandifolia - Quercus nigra Forest

I.B.2.N.a.180. FAGUS GRANDIFOLIA - QUERCUS RUBRA - QUERCUS ALBA FOREST ALLIANCE
CEGL004539 G2? Fagus grandifolia - Quercus prinus - Quercus alba / Kalmia latifolia - (Rhododendron catawbiense) Forest

I.B.2.N.a.275. QUERCUS ALBA - (QUERCUS NIGRA) FOREST ALLIANCE
CEGL007224 G5? Quercus alba - Carya alba / Vaccinium elliottii Forest
CEGL007225 G4? Quercus alba - Carya glabra - Carya alba / Aesculus pavia Forest
CEGL007226 G5? Quercus alba - Carya glabra / Mixed Herbs Coastal Plain Forest
CEGL007278 G? Quercus alba - Quercus velutina - Carya alba / Cornus florida / Chimaphila maculata Forest

I.B.2.N.a.285. QUERCUS FALCATA FOREST ALLIANCE
CEGL007246 G5? Quercus stellata - Quercus falcata - Carya alba / Vaccinium spp. Coastal Plain Forest

I.B.2.N.a.300. QUERCUS LAEVIS FOREST ALLIANCE

CEGL004637 GM Quercus laevis - Quercus marilandica Forest
CEGL007251 GM Quercus laevis / Gaylussacia dumosa / Andropogon virginicus Forest
CEGL007252 GM Quercus laevis / Schizachyrium scoparium Forest

I.B.2.N.a.380. QUERCUS STELLATA - QUERCUS MARILANDICA FOREST ALLIANCE
CEGL007273 G? Quercus stellata - Quercus marilandica Forest [Provisional]

I.B.2.N.d.010. ACER NEGUNDO TEMPORARILY FLOODED FOREST ALLIANCE
CEGL004629 G? Acer negundo Temporarily Flooded Forest [Provisional]

I.B.2.N.d.110. FRAXINUS PENNSYLVANICA - ULMUS AMERICANA - CELTIS (OCCIDENTALIS, LAEVIGATA) TEMPORARILY FLOODED FOREST ALLIANCE
CEGL004740 G3G5 Celtis laevigata - Fraxinus pennsylvanica - Acer negundo / Asimina triloba / Carex grayi Forest
CEGL002427 G4G5 Fraxinus pennsylvanica - Ulmus americana - Celtis laevigata / Ilex decidua Forest

I.B.2.N.d.120. LIQUIDAMBAR STYRACIFLUA - (LIRIODENDRON TULIPIFERA, ACER RUBRUM) TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007329 G3G5 Liquidambar styraciflua - Liriodendron tulipifera / Onoclea sensibilis Forest
CEGL007330 GW Liquidambar styraciflua Temporarily Flooded Forest

I.B.2.N.d.140. PLATANUS OCCIDENTALIS - (FRAXINUS PENNSYLVANICA, CELTIS LAEVIGATA, ACER SACCHARINUM) TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007336 G3G5 Platanus occidentalis - Quercus lyrata - Acer negundo / Sabal minor Forest

I.B.2.N.d.160. POPULUS DELTOIDES TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007346 G5? Populus deltoides - Salix nigra / Mikania scandens Forest

I.B.2.N.d.210. QUERCUS (MICHAUXII, PAGODA, SHUMARDII) - LIQUIDAMBAR STYRACIFLUA TEMPORARILY FLOODED FOREST ALLIANCE
CEGL002099 G? Quercus michauxii - Quercus shumardii - Liquidambar styraciflua / Arundinaria gigantea Forest

I.B.2.N.d.250. QUERCUS (PHELLOS, NIGRA, LAURIFOLIA) TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007350 G5? Nyssa biflora - Quercus nigra - Quercus laurifolia - Pinus taeda / Ilex opaca - Carpinus caroliniana Forest
CEGL004737 G4? Quercus laurifolia - Quercus lyrata / Carpinus caroliniana - Persea palustris / Vaccinium elliottii Forest

I.B.2.N.d.270. SALIX CAROLINIANA TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007373 G? Salix caroliniana Temporarily Flooded Forest [Provisional]

I.B.2.N.e.040. CORNUS FOEMINA SEASONALLY FLOODED FOREST ALLIANCE
CEGL007384 G1? Cornus foemina / Berchemia scandens Forest

I.B.2.N.e.060. LIQUIDAMBAR STYRACIFLUA - (ACER RUBRUM) SEASONALLY FLOODED FOREST ALLIANCE
CEGL006223 G1G2 Liquidambar styraciflua - Acer rubrum - Nyssa biflora / Carex joorii Forest

I.B.2.N.e.065. LIQUIDAMBAR STYRACIFLUA - TAXODIUM DISTICHUM SEASONALLY FLOODED FOREST ALLIANCE
CEGL004481 G1 Liquidambar styraciflua / Persea palustris Forest
CEGL004424 G1? Taxodium distichum - Liquidambar styraciflua - Platanus occidentalis / Asimina triloba Forest

I.B.2.N.e.070. NYSSA (AQUATICA, BIFLORA, OGECHE) FLOODPLAIN SEASONALLY FLOODED FOREST ALLIANCE
CEGL004640 GM Nyssa biflora - (Taxodium distichum) Forest
CEGL004696 G? Nyssa biflora - Nyssa aquatica - Taxodium distichum / Saururus cernuus Forest

I.B.2.N.e.080. NYSSA (AQUATICA, BIFLORA, OGECHE) POND SEASONALLY FLOODED FOREST ALLIANCE
CEGL007434 G3G4 Nyssa biflora / Itea virginica - Cephalanthus occidentalis Depression Forest

I.B.2.N.e.090. PLANERA AQUATICA SEASONALLY FLOODED FOREST ALLIANCE
CEGL007394 G4? Planera aquatica Forest

I.B.2.N.e.098. QUERCUS LAURIFOLIA SEASONALLY FLOODED FOREST ALLIANCE
CEGL007348 G4? Quercus laurifolia / Carpinus caroliniana / Justicia ovata Forest

I.B.2.N.e.100. QUERCUS LYRATA - (CARYA AQUATICA) SEASONALLY FLOODED FOREST ALLIANCE
CEGL004695 G3G4 Fraxinus pennsylvanica - Quercus laurifolia - Quercus lyrata - Carya aquatica Forest
CEGL007398 G4G5 Quercus lyrata - Carya aquatica / Ampelopsis arborea Forest
CEGL007397 G4G5 Quercus lyrata - Carya aquatica Forest
CEGL004735 G3G5 Quercus lyrata - Quercus laurifolia - Taxodium distichum / Saururus cernuus Forest

I.B.2.N.e.130. QUERCUS PHELLOS SEASONALLY FLOODED FOREST ALLIANCE
CEGL007402 G? Quercus phellos Seasonally Flooded Forest [Provisional]

I.B.2.N.e.160. SALIX NIGRA SEASONALLY FLOODED FOREST ALLIANCE
CEGL007411 GM Salix nigra / Clethra alnifolia / Nyssa aquatica Successional Forest

I.B.2.N.e.180. TAXODIUM ASCENDENS SEASONALLY FLOODED FOREST ALLIANCE
CEGL007420 G3? Taxodium ascendens / (Nyssa biflora) / Leucothoe racemosa - Cephalanthus occidentalis - Myrica cerifera Depression Forest
CEGL007418 G3? Taxodium ascendens / Ilex myrtifolia Depression Forest

I.B.2.N.e.190. TAXODIUM DISTICHUM - NYSSA (AQUATICA, BIFLORA, OGECHE) SEASONALLY FLOODED FOREST ALLIANCE
CEGL004630 G? Taxodium distichum - Nyssa (aquatica, biflora, ogeche) Seasonally Flooded Forest [Provisional]
CEGL004733 G3G4 Taxodium distichum - Nyssa biflora / Fraxinus caroliniana / Lyonia lucida Forest

I.B.2.N.f.030. NYSSA AQUATICA - (TAXODIUM DISTICHUM) SEMIPERMANENTLY FLOODED FOREST ALLIANCE
CEGL007429 G4G5 Nyssa aquatica - Nyssa biflora Forest
CEGL002419 G5? Nyssa aquatica Forest
CEGL007432 G3G5 Taxodium distichum - Nyssa aquatica - Nyssa biflora / Fraxinus caroliniana / Itea virginica Forest
CEGL007431 G5? Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana Forest

I.B.2.N.f.060. TAXODIUM DISTICHUM SEMIPERMANENTLY FLOODED FOREST ALLIANCE
CEGL002420 G5 Taxodium distichum / Lemna minor Forest

I.B.2.N.g.015. ACER RUBRUM - NYSSA SYLVATICA SATURATED FOREST ALLIANCE
CEGL004426 G3? Acer rubrum var. trilobum / Viburnum nudum var. nudum / Osmunda cinnamomea - Saururus cernuus - Impatiens capensis Forest

I.B.2.N.g.018. LIQUIDAMBAR STYRACIFLUA SATURATED FOREST ALLIANCE
CEGL004631 G? Liquidambar styraciflua - Quercus laurifolia Forest

I.B.2.N.g.020. NYSSA BIFLORA - ACER RUBRUM - (LIRIODENDRON TULIPIFERA) SATURATED FOREST ALLIANCE
CEGL004427 G2G3 Nyssa biflora - (Acer rubrum) / Ilex opaca / Leucothoe axillaris / Carex atlantica ssp. capillacea Forest
CEGL004428 G2? Nyssa biflora - Acer rubrum var. trilobum - Liriodendron tulipifera / Magnolia virginiana - Asimina triloba / Clethra alnifolia Forest
CEGL007445 GM Nyssa biflora - Acer rubrum var. trilobum / Persea palustris Forest
CEGL004679 G2? Nyssa biflora - Liquidambar styraciflua - Acer rubrum var. trilobum / Clethra alnifolia Forest
CEGL004734 G3? Nyssa biflora - Liriodendron tulipifera - Pinus (serotina, taeda) / Lyonia lucida - Ilex glabra Forest

I.B.2.N.g.030. QUERCUS LAURIFOLIA - NYSSA BIFLORA SATURATED FOREST ALLIANCE
CEGL007447 G2G3 Quercus laurifolia - Nyssa biflora / Clethra alnifolia - Leucothoe axillaris Forest

I.B.2.N.g.040. QUERCUS MICHAUXII - QUERCUS PAGODA SATURATED FOREST ALLIANCE
CEGL007316 G1 Carya cordiformis - Quercus pagoda - Quercus shumardii - Carya myristiciformis / Sabal minor - Cornus asperifolia Forest
CEGL007449 G2 Quercus michauxii - Quercus pagoda / Clethra alnifolia - Leucothoe axillaris Forest

I.B.2.N.g.050. TAXODIUM DISTICHUM - NYSSA BIFLORA - (NYSSA AQUATICA) SATURATED FOREST ALLIANCE
CEGL004646 G? Nyssa aquatica - Nyssa biflora Saturated Forest
CEGL004429 G2G3 Taxodium distichum - Nyssa biflora / Berchemia scandens - Toxicodendron radicans / Woodwardia areolata Forest

I.B.2.N.h.005. FRAXINUS PENNSYLVANICA - ACER RUBRUM - ULMUS AMERICANA TIDAL FOREST ALLIANCE
CEGL004483 G1G2 Fraxinus pennsylvanica - Ulmus americana / Myrica cerifera - Juniperus virginiana var. silicicola Forest

I.B.2.N.h.010. NYSSA BIFLORA - (NYSSA AQUATICA, TAXODIUM DISTICHUM) TIDAL FOREST ALLIANCE
CEGL004484 G? Nyssa biflora - (Nyssa aquatica, Taxodium distichum) Tidal Forest [Provisional]

I.B.2.N.h.020. SALIX NIGRA TIDAL FOREST ALLIANCE
CEGL004647 G? Salix nigra Tidal Forest [Provisional]

I.C.2.N.a.010. FAGUS GRANDIFOLIA - MAGNOLIA GRANDIFLORA FOREST ALLIANCE
CEGL007459 G2G3 Fagus grandifoila - Magnolia grandiflora / Ilex opaca - (Persea borbonia) / Mitchella repens Forest
CEGL007470 G2G3 Quercus falcata - Tilia americana var. caroliniana - Magnolia grandiflora / Ilex vomitoria Forest

I.C.2.N.a.020. QUERCUS HEMISPHAERICA - CARYA GLABRA FOREST ALLIANCE
CEGL007462 G4? Quercus hemisphaerica - Carya glabra - (Fagus grandifolia) Forest

I.C.3.N.a.130. PINUS PALUSTRIS - PINUS (ECHINATA, TAEDA) - QUERCUS (INCANA, MARGARETTIAE, FALCATA, LAEVIS) FOREST ALLIANCE
CEGL007511 G? Pinus palustris - Pinus (echinata, taeda) - Quercus (incana, margarettiae, falcata, laevis) Forest [Provisional]

I.C.3.N.a.180. PINUS TAEDA - QUERCUS (ALBA, FALCATA, STELLATA) FOREST ALLIANCE
CEGL004766 G? Pinus taeda - Quercus (alba, falcata, stellata) Forest [Provisional]
CEGL006033 G5? Pinus taeda - Quercus falcata / Vaccinium pallidum / Hexastylis arifolia Forest

I.C.3.N.a.200. PINUS TAEDA - QUERCUS NIGRA FOREST ALLIANCE
CEGL006172 G1 Pinus taeda - Quercus nigra / Gelsemium sempervirens Forest
CEGL007533 G2G3 Pinus taeda - Quercus nigra / Shrubs / Mixed Herbs Upland Forest

I.C.3.N.a.240. QUERCUS FALCATA - FAGUS GRANDIFOLIA - PINUS TAEDA FOREST ALLIANCE
CEGL007540 G1? Quercus falcata - Fagus grandifolia - Pinus taeda Forest

I.C.3.N.b.020. PINUS TAEDA - LIQUIDAMBAR STYRACIFLUA - NYSSA BIFLORA TEMPORARILY FLOODED FOREST ALLIANCE
CEGL004606 G3G5 Pinus taeda - Liquidambar styraciflua - Nyssa biflora Temporarily Flooded Forest

I.C.3.N.b.060. PINUS TAEDA - QUERCUS (PAGODA, MICHAUXII, SHUMARDII) TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007550 G? Pinus taeda - Quercus (pagoda, michauxii, shumardii) Temporarily Flooded Forest [Provisional]

I.C.3.N.b.070. PINUS TAEDA - QUERCUS (PHELLOS, NIGRA, LAURIFOLIA) TEMPORARILY FLOODED FOREST ALLIANCE
CEGL007548 G2? Pinus taeda - Quercus laurifolia - Chamaecyparis thyoides - (Quercus virginiana) / Vaccinium elliottii Forest
CEGL004736 G3G4 Pinus taeda - Quercus laurifolia / Vaccinium elliottii - Arundinaria gigantea Forest
CEGL006133 G? Pinus taeda - Quercus phellos / Chasmanthium laxum - Leersia virginica Forest

I.C.3.N.d.015. PINUS TAEDA - CHAMAECYPARIS THYOIDES - ACER RUBRUM - NYSSA BIFLORA SATURATED FOREST ALLIANCE
CEGL007558 G2G3 Pinus taeda - Chamaecyparis thyoides - Acer rubrum - Nyssa biflora / Lyonia lucida - Clethra alnifolia Forest

I.C.3.N.d.017. PINUS TAEDA - LIQUIDAMBAR STYRACIFLUA - ACER RUBRUM SATURATED FOREST ALLIANCE
CEGL004649 GM Pinus taeda - Acer rubrum - Liquidambar styraciflua / Arundinaria gigantea ssp. tecta Forest
CEGL007560 G? Pinus taeda - Liquidambar styraciflua - Acer rubrum Saturated Forest [Provisional]

I.C.3.N.e.010. PINUS TAEDA - NYSSA BIFLORA - TAXODIUM DISTICHUM TIDAL FOREST ALLIANCE
CEGL004651 G2? Pinus taeda - Nyssa biflora - Taxodium distichum / Myrica cerifera / Osmunda regalis var. spectabilis Forest

II.A.2.N.a.050. QUERCUS VIRGINIANA - JUNIPERUS VIRGINIANA - (SABAL PALMETTO) WOODLAND ALLIANCE
CEGL003525 G2? Quercus virginiana - Sabal palmetto - Juniperus virginiana var. silicicola - Zanthoxylum clava-herculis / Sideroxylon tenax Woodland

II.A.4.N.a.120. PINUS PALUSTRIS WOODLAND ALLIANCE
CEGL003569 G2G3 Pinus palustris / Amorpha herbacea var. herbacea / Aristida stricta - Sorghastrum nutans Woodland
CEGL003570 G2G3 Pinus palustris / Aristida stricta - Sorghastrum nutans - Anthaenantia villosa Woodland
CEGL003573 G1 Pinus palustris / Vaccinium elliottii - Clethra alnifolia / Aristida stricta - Panicum virgatum Woodland

II.A.4.N.a.125. PINUS PALUSTRIS - PINUS (ECHINATA, TAEDA) WOODLAND ALLIANCE
CEGL007087 G? Pinus palustris - Pinus (echinata, taeda) Woodland [Provisional]

II.A.4.N.a.130. PINUS PALUSTRIS / QUERCUS SPP. WOODLAND ALLIANCE
CEGL003577 G2 Pinus palustris - Pinus taeda / Quercus geminata - Quercus hemisphaerica - Osmanthus americanus var. americanus / Aristida stricta Woodland
CEGL003578 G2G3 Pinus palustris / Quercus incana / Aristida stricta - Sorghastrum nutans - Anthaenantia villosa Woodland
CEGL003590 G2 Pinus palustris / Quercus laevis - Quercus geminata / (Selaginella arenicola ssp. acanthonota - Stipulicida setacea - Rhynchospora megalocarpa) Woodland
CEGL003589 G2? Pinus palustris / Quercus laevis - Quercus geminata / Vaccinium tenellum / Aristida stricta Woodland
CEGL003591 G3? Pinus palustris / Quercus laevis - Quercus incana / Gaylussacia dumosa var. dumosa / Aristida stricta Woodland
CEGL003592 G1 Pinus palustris / Quercus laevis - Quercus incana / Gaylussacia dumosa var. dumosa / Schizachyrium scoparium Northern Woodland
CEGL003593 G2 Pinus palustris / Quercus laevis - Quercus incana / Gaylussacia dumosa var. dumosa / Schizachyrium scoparium South Carolina Woodland
CEGL004493 G3? Pinus palustris / Quercus laevis - Quercus margarettiae / Gaylussacia frondosa var. frondosa / Aristida stricta Woodland
CEGL003582 G2G3Q Pinus palustris / Quercus laevis / Aristida beyrichiana / Cladonia spp. Woodland
CEGL003584 G2G3 Pinus palustris / Quercus laevis / Aristida stricta / Cladonia spp. Woodland
CEGL003586 G3? Pinus palustris / Quercus laevis / Gaylussacia dumosa var. dumosa / Aristida stricta Woodland
CEGL003595 G2G3 Pinus palustris / Quercus marilandica / Gaylussacia dumosa var. dumosa / Aristida stricta Woodland
CEGL003599 G2? Pinus palustris / Quercus marilandica / Vaccinium crassifolium / Aristida stricta Woodland

II.A.4.N.a.200. PINUS TAEDA WOODLAND ALLIANCE
CEGL003619 G2? Pinus taeda - Quercus hemisphaerica / Osmanthus americanus var. americanus / Ilex glabra Woodland
CEGL003620 GM Pinus taeda / Schizachyrium scoparium Woodland

II.A.4.N.f.050. PINUS PALUSTRIS - PINUS (ELLIOTTII, SEROTINA) SATURATED WOODLAND ALLIANCE
CEGL004498 G1 Pinus palustris - Pinus serotina / Aristida palustris - Sarracenia flava Woodland
CEGL003659 G2 Pinus palustris - Pinus serotina / Ctenium aromaticum - Muhlenbergia expansa - Calamovilfa brevipilis Woodland
CEGL003658 G3 Pinus palustris - Pinus serotina / Ctenium aromaticum - Muhlenbergia expansa - Carphephorus odoratissimus Woodland
CEGL003660 G1 Pinus palustris - Pinus serotina / Ctenium aromaticum - Muhlenbergia expansa - Rhynchospora latifolia Woodland
CEGL004499 G1 Pinus palustris - Pinus serotina / Ctenium aromaticum - Scleria pauciflora - Sarracenia flava Woodland
CEGL004500 G1 Pinus palustris - Pinus serotina / Magnolia virginiana / Sporobolus teretifolius - Carex striata Woodland
CEGL003661 G1 Pinus palustris - Pinus serotina / Pleea tenuifolia - Aristida stricta Woodland
CEGL004501 G2 Pinus palustris - Pinus serotina / Sporobolus sp. 1 - Aristida stricta - Eryngium integrifolium Woodland
CEGL004502 G1 Pinus palustris - Pinus serotina / Sporobolus sp. 1 - Ctenium aromaticum - Eriocaulon decangulare var. decangulare Woodland
CEGL003663 G1 Pinus palustris - Pinus taeda - Pinus serotina / Chasmanthium laxum - Panicum virgatum Piedmont Woodland
CEGL003664 G1 Pinus palustris - Pinus taeda - Pinus serotina / Quercus marilandica / (Quercus pumila) / Aristida stricta Woodland
CEGL004495 G1 Pinus palustris / Arundinaria gigantea ssp. tecta - Liquidambar styraciflua / Andropogon glomeratus - Sarracenia minor Woodland
CEGL004496 G1 Pinus palustris / Clethra alnifolia - Gaylussacia frondosa var. frondosa - Quercus pumila / Schizachyrium scoparium Woodland
CEGL003648 G3 Pinus palustris / Ilex glabra / Aristida stricta Woodland
CEGL003647 G2 Pinus palustris / Ilex glabra Woodland
CEGL003649 G2? Pinus palustris / Leiophyllum buxifolium / Aristida stricta Woodland

II.A.4.N.f.090. PINUS SEROTINA SATURATED WOODLAND ALLIANCE
CEGL004435 G? Pinus serotina - (Liriodendron tulipifera) / Lyonia lucida - Clethra alnifolia - Ilex glabra Woodland
CEGL003671 G3? Pinus serotina - Gordonia lasianthus / Lyonia lucida Woodland
CEGL004433 G1 Pinus serotina / Arundinaria gigantea ssp. tecta Woodland
CEGL003670 G3 Pinus serotina / Cyrilla racemiflora - Lyonia lucida - Ilex glabra Woodland
CEGL004434 G2G3 Pinus serotina / Cyrilla racemiflora - Lyonia lucida - Vaccinium fuscatum Woodland
CEGL004652 G2? Pinus serotina / Ilex glabra / Woodwardia virginica Woodland
CEGL003669 G2? Pinus serotina / Myrica cerifera / Cladium mariscus ssp. jamaicense - Osmunda regalis var. spectabilis Woodland

II.A.4.N.g.010. JUNIPERUS VIRGINIANA TIDAL WOODLAND ALLIANCE
CEGL007166 G1? Juniperus virginiana var. silicicola / Myrica cerifera / Kosteletzkya virginica - Bacopa monnieri Woodland

II.B.2.N.a.100. QUERCUS LAEVIS WOODLAND ALLIANCE
CEGL003700 GM Quercus laevis / Aristida stricta - Cladonia spp. Woodland
CEGL003701 GM Quercus laevis / Schizachyrium scoparium - Aristida lanosa Woodland

II.B.2.N.b.010. PLATANUS OCCIDENTALIS - (BETULA NIGRA, SALIX SPP.) TEMPORARILY FLOODED WOODLAND ALLIANCE
CEGL003725 G? Platanus occidentalis - (Betula nigra, Salix spp.) Temporarily Flooded Woodland [Provisional]
CEGL004536 G? Salix caroliniana Woodland
CEGL003731 G? Salix nigra Woodland

II.B.2.N.c.009. SALIX NIGRA SEASONALLY FLOODED WOODLAND ALLIANCE
CEGL006348 G? Salix nigra Seasonally Flooded Woodland [Provisional]

II.B.2.N.c.010. TAXODIUM ASCENDENS SEASONALLY FLOODED WOODLAND ALLIANCE
CEGL003734 G2? Taxodium ascendens / Cyrilla racemiflora - Zenobia pulverulenta Temperate Woodland
CEGL003733 G2G3 Taxodium ascendens / Panicum hemitomon - Polygala cymosa Temperate Woodland
CEGL004441 G2? Taxodium ascendens / Woodwardia virginica Woodland

II.B.2.N.c.020. TAXODIUM DISTICHUM SEASONALLY FLOODED WOODLAND ALLIANCE
CEGL004653 G1? Taxodium distichum / Cephalanthus occidentalis / Juncus repens Woodland

II.B.2.N.d.020. TAXODIUM DISTICHUM SEMIPERMANENTLY FLOODED WOODLAND ALLIANCE
CEGL004442 G? Taxodium distichum Semipermanently Flooded Woodland

II.B.2.N.f.010. ACER RUBRUM - FRAXINUS PENNSYLVANICA TIDAL WOODLAND ALLIANCE
CEGL006287 G2G3 Acer rubrum - Fraxinus pennsylvanica - Nyssa biflora / Polygonum arifolium Woodland
CEGL004698 G2? Acer rubrum / Sambucus canadensis / Ampelopsis arborea - Sicyos angulatus Woodland

II.B.2.N.f.020. TAXODIUM DISTICHUM TIDAL WOODLAND ALLIANCE
CEGL004654 G2? Taxodium distichum / Carex hyalinolepis Woodland
CEGL004229 G?Q Taxodium distichum / Scirpus cyperinus Woodland
CEGL004231 G3? Taxodium distichum / Typha angustifolia Woodland

CEGL004655 G1Q Taxodium distichum / Zizania aquatica - Carex canescens ssp. disjuncta Woodland

II.C.2.N.a.050. QUERCUS VIRGINIANA - QUERCUS INCANA WOODLAND ALLIANCE
CEGL003750 G1G2 Quercus virginiana - Quercus incana Woodland

III.A.2.N.a.020. MYRICA CERIFERA - BACCHARIS HALIMIFOLIA SHRUBLAND ALLIANCE
CEGL003809 G3G5 Myrica cerifera - Baccharis halimifolia / Spartina patens Shrubland

III.A.2.N.c.060. QUERCUS VIRGINIANA - ILEX VOMITORIA - (MYRICA CERIFERA) SHRUBLAND ALLIANCE
CEGL003833 G3 Quercus virginiana - (Ilex vomitoria) Shrubland

III.A.2.N.g.020. LIGUSTRUM SINENSE TEMPORARILY FLOODED SHRUBLAND ALLIANCE
CEGL003837 GW Ligustrum sinense Temporarily Flooded Shrubland

III.A.2.N.h.010. MYRICA CERIFERA SEASONALLY FLOODED SHRUBLAND ALLIANCE
CEGL003840 G? Myrica cerifera / Hydrocotyle spp. Shrubland
CEGL003839 G3 Myrica cerifera / Spartina patens - (Juncus roemerianus) Shrubland

III.A.2.N.i.010. ARUNDINARIA GIGANTEA SATURATED SHRUBLAND ALLIANCE
CEGL003843 G1 Arundinaria gigantea ssp. tecta Shrubland

III.A.2.N.i.020. CYRILLA RACEMIFLORA - ILEX CORIACEA - (CLIFTONIA MONOPHYLLA) SATURATED SHRUBLAND ALLIANCE
CEGL003844 G3? Cyrilla racemiflora - Lyonia lucida Shrubland
CEGL004449 G2? Cyrilla racemiflora - Persea palustris - Magnolia virginiana Shrubland

III.A.2.N.j.010. ARUNDINARIA GIGANTEA SATURATED WOODED SHRUBLAND ALLIANCE
CEGL003851 G1 Pinus serotina / Arundinaria gigantea ssp. tecta Wooded Shrubland

III.A.2.N.j.020. LYONIA LUCIDA - ILEX GLABRA SATURATED WOODED SHRUBLAND ALLIANCE
CEGL003846 G3 Pinus serotina / Lyonia lucida - Ilex glabra - (Cyrilla racemiflora) Shrubland

III.A.2.N.l.010. MYRICA CERIFERA - ROSA PALUSTRIS TIDAL SHRUBLAND ALLIANCE
CEGL004656 G2G4 Myrica cerifera - Rosa palustris / Thelypteris palustris var. pubescens Shrubland

III.A.4.N.a.020. CERATIOLA ERICOIDES SHRUBLAND ALLIANCE
CEGL003861 G1G2 Ceratiola ericoides Northern Shrubland

III.A.4.N.e.020. TAMARIX SPP. TIDAL SHRUBLAND ALLIANCE
CEGL004918 GW Tamarix spp. - (Baccharis halimifolia) Shrubland

III.B.2.N.a.030. MYRICA PENSYLVANICA - (PRUNUS MARITIMA) SHRUBLAND ALLIANCE
CEGL003881 G2G3 Myrica pensylvanica / Diodia teres Shrubland

III.B.2.N.a.040. PUERARIA MONTANA VINE-SHRUBLAND ALLIANCE
CEGL003882 GW Pueraria montana var. lobata Vine-Shrubland

III.B.2.N.a.070. SMILAX SPP. - TOXICODENDRON RADICANS VINE-SHRUBLAND ALLIANCE
CEGL003885 G?Q Smilax auriculata - Toxicodendron radicans Vine-Shrubland

III.B.2.N.d.060. SALIX NIGRA TEMPORARILY FLOODED SHRUBLAND ALLIANCE
CEGL003901 G? Salix nigra Temporarily Flooded Shrubland [Provisional]

III.B.2.N.e.020. DECODON VERTICILLATUS SEASONALLY FLOODED SHRUBLAND ALLIANCE
CEGL003905 G4 Decodon verticillatus Seasonally Flooded Shrubland

III.B.2.N.e.040. VACCINIUM FORMOSUM - VACCINIUM FUSCATUM SEASONALLY FLOODED SHRUBLAND ALLIANCE
CEGL003907 G3? Vaccinium formosum - Vaccinium fuscatum / Sphagnum cuspidatum Shrubland

III.B.2.N.e.050. VITIS ROTUNDIFOLIA - AMPELOPSIS ARBOREA - CAMPSIS RADICANS SEASONALLY FLOODED VINE-SHRUBLAND ALLIANCE
CEGL004620 G? Vitis rotundifolia - Ampelopsis arborea - Campsis radicans Vine-Shrubland

III.B.2.N.f.010. CEPHALANTHUS OCCIDENTALIS SEMIPERMANENTLY FLOODED SHRUBLAND ALLIANCE
CEGL004456 G4 Cephalanthus occidentalis / Lemna spp. Shrubland

III.B.2.N.h.005. ALNUS (INCANA, SERRULATA) TIDAL SHRUBLAND ALLIANCE
CEGL006337 G? Alnus (incana ssp. rugosa, serrulata) - Cornus amomum Shrubland
CEGL004627 G2? Alnus serrulata / (Zizania aquatica, Zizaniopsis miliacea) Shrubland

III.B.2.N.h.010. BACCHARIS HALIMIFOLIA - IVA FRUTESCENS TIDAL SHRUBLAND ALLIANCE
CEGL003920 G4? Baccharis halimifolia - Iva frutescens - Myrica cerifera - (Ilex vomitoria) Shrubland
CEGL003921 G5 Baccharis halimifolia - Iva frutescens ssp. oraria / Spartina patens Shrubland

III.B.2.N.h.030. BORRICHIA FRUTESCENS TIDAL SHRUBLAND ALLIANCE
CEGL003924 G4 Borrichia frutescens / Spartina patens - Juncus roemerianus Shrubland

III.C.2.N.e.040. ZENOBIA PULVERULENTA - LYONIA LUCIDA - ILEX (CORIACEA, GLABRA) SATURATED SHRUBLAND ALLIANCE
CEGL003943 G2G3 Cyrilla racemiflora - Zenobia pulverulenta Shrubland
CEGL003944 G2 Ilex glabra - Lyonia lucida - Zenobia pulverulenta Shrubland

III.C.2.N.f.010. ZENOBIA PULVERULENTA - CYRILLA RACEMIFLORA WOODED SHRUBLAND ALLIANCE
CEGL004458 G2? Pinus serotina / Zenobia pulverulenta - Cyrilla racemiflora - Lyonia lucida Wooded Shrubland

IV.A.1.N.a.030. HUDSONIA TOMENTOSA DWARF-SHRUBLAND ALLIANCE
CEGL003950 G3 Hudsonia tomentosa / Panicum amarum Dwarf-shrubland

IV.A.1.N.e.010. HYPERICUM REDUCTUM TEMPORARILY FLOODED DWARF-SHRUBLAND ALLIANCE
CEGL003954 G2? Hypericum reductum / Aristida stricta Dwarf-shrubland

V.A.5.N.a.060. PHRAGMITES AUSTRALIS HERBACEOUS ALLIANCE
CEGL004019 GW Phragmites australis Herbaceous Vegetation

V.A.5.N.a.130. UNIOLA PANICULATA TEMPERATE HERBACEOUS ALLIANCE
CEGL004040 G3? Uniola paniculata - Hydrocotyle bonariensis Herbaceous Vegetation
CEGL004039 G3 Uniola paniculata - Schizachyrium scoparium ssp. littorale - Panicum amarum Herbaceous Vegetation
CEGL004038 G3Q Uniola paniculata Herbaceous Vegetation

V.A.5.N.c.010. AMMOPHILA BREVILIGULATA HERBACEOUS ALLIANCE
CEGL004043 G3G4 Ammophila breviligulata - Panicum amarum Herbaceous Vegetation

V.A.5.N.c.020. ANDROPOGON VIRGINICUS HERBACEOUS ALLIANCE
CEGL004044 GW Andropogon virginicus var. virginicus Herbaceous Vegetation

V.A.5.N.c.067. MUHLENBERGIA FILIPES HERBACEOUS ALLIANCE
CEGL004051 G3? Muhlenbergia filipes - Spartina patens - Eustachys petraea Herbaceous Vegetation

V.A.5.N.j.010. ANDROPOGON GLOMERATUS TEMPORARILY FLOODED HERBACEOUS ALLIANCE
CEGL004099 G? Andropogon glomeratus var. pumilus Herbaceous Vegetation [Provisional]

V.A.5.N.k.003. ARISTIDA PALUSTRIS - ANDROPOGON (CAPILLIPES, GLAUCOPSIS) - RHYNCHOSPORA SPP. SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004100 G2? Aristida palustris - Andropogon (capillipes, glaucopsis) Herbaceous Vegetation

V.A.5.N.k.008. CAREX HYALINOLEPIS SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004724 G1G3 Carex hyalinolepis Seasonally Flooded Herbaceous Vegetation

V.A.5.N.k.010. CAREX STRIATA SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004120 G? Carex striata var. striata Herbaceous Vegetation

V.A.5.N.k.028. DICHANTHELIUM (ERECTIFOLIUM, WRIGHTIANUM) - RHYNCHOSPORA FILIFOLIA SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004105 G2? Dichanthelium wrightianum - Dichanthelium erectifolium Herbaceous Vegetation
CEGL004131 G2? Rhynchospora filifolia - Juncus abortivus Herbaceous Vegetation

V.A.5.N.k.035. FIMBRISTYLIS CASTANEA - SCIRPUS PUNGENS SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004117 G? Fimbristylis (castanea, caroliniana) - Scirpus pungens Herbaceous Vegetation

V.A.5.N.k.046. JUNCUS EFFUSUS SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004112 G? Juncus effusus Seasonally Flooded Herbaceous Vegetation [Provisional]

V.A.5.N.k.050. LEPTOCHLOA FASCICULARIS VAR. MARITIMA SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004125 G1 Leptochloa fascicularis var. maritima - Sesuvium maritimum Herbaceous Vegetation

V.A.5.N.k.060. PANICUM HEMITOMON SEASONALLY FLOODED TEMPERATE HERBACEOUS ALLIANCE
CEGL004127 G3? Panicum hemitomon - Eleocharis equisetoides - Rhynchospora inundata Herbaceous Vegetation

V.A.5.N.k.065. PANICUM VERRUCOSUM - PANICUM RIGIDULUM - SACCHARUM BALDWINII SEASONALLY FLOODED HERBACEOUS ALLIANCE

CEGL004752 G? Panicum verrucosum - Panicum rigidulum - Saccharum baldwinii Seasonally Flooded Herbaceous Vegetation [Provisional]

V.A.5.N.k.070. PANICUM VIRGATUM SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004129 G? Panicum virgatum - Spartina patens Herbaceous Vegetation

V.A.5.N.k.100. RHYNCHOSPORA (CAREYANA, INUNDATA) SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004509 G1 Rhynchospora inundata - Eriocaulon decangulare var. decangulare - Panicum virgatum var. cubense - Muhlenbergia expansa Herbaceous Vegetation
CEGL004132 G? Rhynchospora inundata Herbaceous Vegetation [Provisional]

V.A.5.N.k.130. TYPHA DOMINGENSIS SEASONALLY FLOODED TEMPERATE HERBACEOUS ALLIANCE
CEGL004138 G2G3 Typha domingensis - Setaria magna Herbaceous Vegetation

V.A.5.N.l.005. ELEOCHARIS (ELONGATA, EQUISETOIDES) - RHYNCHOSPORA TRACYI SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004960 G? Eleocharis (elongata, equisetoides) - Rhynchospora tracyi Semipermanently Flooded Herbaceous Vegetation [Provisional]

V.A.5.N.l.010. PHRAGMITES AUSTRALIS SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004141 GW Phragmites australis Semipermanently Flooded Ruderal Herbaceous Vegetation

V.A.5.N.l.045. TYPHA (ANGUSTIFOLIA, LATIFOLIA) - (SCIRPUS SPP.) SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004150 G5 Typha latifolia Southern Herbaceous Vegetation

V.A.5.N.m.085. RHYNCHOSPORA ALBA SATURATED HERBACEOUS ALLIANCE
CEGL004463 G1? Rhynchospora alba Saturated Herbaceous Vegetation

V.A.5.N.n.010. CLADIUM MARISCUS SSP. JAMAICENSE TIDAL HERBACEOUS ALLIANCE
CEGL004178 G4? Cladium mariscus ssp. jamaicense Tidal Herbaceous Vegetation

V.A.5.N.n.030. ELEOCHARIS FALLAX - ELEOCHARIS ROSTELLATA TIDAL HERBACEOUS ALLIANCE
CEGL004628 G1 Eleocharis fallax - Eleocharis rostellata - Scirpus americanus - Sagittaria lancifolia Herbaceous Vegetation

V.A.5.N.n.040. JUNCUS ROEMERIANUS TIDAL HERBACEOUS ALLIANCE
CEGL004660 G2G3 Juncus roemerianus - (Thelypteris palustris var. pubescens) Herbaceous Vegetation
CEGL004186 G5 Juncus roemerianus Herbaceous Vegetation

V.A.5.N.n.050. PHRAGMITES AUSTRALIS TIDAL HERBACEOUS ALLIANCE
CEGL004187 GW Phragmites australis Tidal Herbaceous Vegetation

V.A.5.N.n.060. SCIRPUS PUNGENS TIDAL HERBACEOUS ALLIANCE
CEGL004189 G2G3 Scirpus pungens - (Osmunda regalis var. spectabilis) Herbaceous Vegetation

V.A.5.N.n.070. SPARTINA ALTERNIFLORA TIDAL HERBACEOUS ALLIANCE
CEGL004193 G? Spartina alterniflora - Lilaeopsis chinensis Herbaceous Vegetation
CEGL004192 G5 Spartina alterniflora / (Ascophyllum nodosum) Acadian,Virginian Zone Herbaceous Vegetation
CEGL004191 G5 Spartina alterniflora Carolinian Zone Herbaceous Vegetation

V.A.5.N.n.100. SPARTINA CYNOSUROIDES TIDAL HERBACEOUS ALLIANCE
CEGL004195 G4 Spartina cynosuroides Herbaceous Vegetation

V.A.5.N.n.110. SPARTINA PATENS - (DISTICHLIS SPICATA) TIDAL HERBACEOUS ALLIANCE
CEGL004197 G4G5 Spartina patens - Distichlis spicata - Borrichia frutescens Herbaceous Vegetation
CEGL006006 G5 Spartina patens - Distichlis spicata - Plantago maritima Herbaceous Vegetation

V.A.5.N.n.140. TYPHA (ANGUSTIFOLIA, DOMINGENSIS) TIDAL HERBACEOUS ALLIANCE
CEGL004201 G? Typha angustifolia - Hibiscus moscheutos Herbaceous Vegetation

V.A.5.N.n.150. ZIZANIA AQUATICA TIDAL HERBACEOUS ALLIANCE
CEGL004202 G4? Zizania aquatica Tidal Herbaceous Vegetation

V.A.5.N.n.160. ZIZANIOPSIS MILIACEA TIDAL HERBACEOUS ALLIANCE
CEGL004705 G3G5 Zizaniopsis miliacea Tidal Herbaceous Vegetation

V.A.6.N.m.010. SACCIOLEPIS STRIATA SEASONALLY FLOODED WOODED HERBACEOUS ALLIANCE
CEGL004222 G2? Salix caroliniana / Sacciolepis striata - Boehmeria cylindrica Wooded Herbaceous Vegetation

V.A.6.N.n.010. PANICUM HEMITOMON SEMIPERMANENTLY FLOODED WOODED HERBACEOUS ALLIANCE

CEGL004465 G1 Taxodium distichum - Taxodium ascendens / Panicum hemitomon - Sclerolepis uniflora Wooded Herbaceous Vegetation
CEGL004466 G3? Taxodium distichum / Panicum hemitomon Wooded Herbaceous Vegetation

V.A.7.N.a.010. UNIOLA PANICULATA TEMPERATE SHRUB HERBACEOUS ALLIANCE
CEGL004234 G2G3 Smilax auriculata / Uniola paniculata - Heterotheca subaxillaris - Strophostyles helvula Shrub Herbaceous Vegetation

V.A.7.N.g.010. SCHIZACHYRIUM SCOPARIUM SSP. LITTORALE SHRUB HERBACEOUS ALLIANCE
CEGL004240 G2G3 Myrica pensylvanica / Schizachyrium scoparium ssp. littorale - Eupatorium hyssopifolium Shrub Herbaceous Vegetation

V.A.7.N.o.005. CAREX STRIATA SATURATED SHRUB HERBACEOUS ALLIANCE
CEGL004165 G1 Chamaedaphne calyculata - Vaccinium macrocarpon / Carex striata var. striata - Woodwardia areolata Shrub Herbaceous Vegetation
CEGL004164 G1 Chamaedaphne calyculata / Carex striata var. striata - Sarracenia (flava, purpurea, rubra ssp. rubra) Shrub Herbaceous Vegetation
CEGL004163 G1G2 Chamaedaphne calyculata / Carex striata var. striata - Woodwardia virginica Shrub Herbaceous Vegetation

V.A.7.N.p.005. ARISTIDA STRICTA SATURATED SHRUB HERBACEOUS ALLIANCE
CEGL004467 G2? Clethra alnifolia - Toxicodendron vernix / Aristida stricta - Osmunda cinnamomea - Sarracenia spp. Shrub Herbaceous Vegetation
CEGL004468 G3? Gaylussacia frondosa - Clethra alnifolia - Arundinaria gigantea ssp. tecta / Aristida stricta - Pteridium aquilinum var. pseudocaudatum Shrub Herbaceous Vegetation

V.A.7.N.q.010. BACCHARIS ANGUSTIFOLIA SATURATED SHRUB HERBACEOUS ALLIANCE
CEGL004257 G2? Baccharis angustifolia / Spartina patens - Setaria parviflora - Hydrocotyle bonariensis Shrub Herbaceous Vegetation

V.B.2.N.b.010. AQUILEGIA CANADENSIS - ASPLENIUM (HETEROCHROUM, HETERORESILIENS) HERBACEOUS ALLIANCE
CEGL004269 G1? Aquilegia canadensis - Asplenium heteroresiliens Herbaceous Vegetation

V.B.2.N.e.010. LUDWIGIA URUGUAYENSIS SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004288 GW Ludwigia uruguayensis Herbaceous Vegetation

V.B.2.N.e.015. NELUMBO LUTEA SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004323 G3G4 Nelumbo lutea Herbaceous Vegetation

V.B.2.N.e.030. PONTEDERIA CORDATA - PELTANDRA VIRGINICA SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004291 G? Pontederia cordata - Peltandra virginica Semipermanently Flooded Herbaceous Vegetation [Provisional]

V.B.2.N.f.002. ADIANTUM CAPILLUS-VENERIS SATURATED HERBACEOUS ALLIANCE
CEGL004515 G1 Adiantum capillus-veneris / Conocephalum conicum Herbaceous Vegetation

V.B.2.N.f.030. OSMUNDA CINNAMOMEA SATURATED HERBACEOUS ALLIANCE
CEGL004294 G? Osmunda cinnamomea Herbaceous Vegetation [Provisional]

V.B.2.N.f.040. OSMUNDA REGALIS SATURATED HERBACEOUS ALLIANCE
CEGL004295 G? Osmunda regalis var. spectabilis Saturated Herbaceous Vegetation [Provisional]

V.B.2.N.g.002. AMARANTHUS CANNABINUS TIDAL HERBACEOUS ALLIANCE
CEGL006080 G3G5 Amaranthus cannabinus Herbaceous Vegetation

V.B.2.N.g.010. ERIOCAULON PARKERI TIDAL HERBACEOUS ALLIANCE
CEGL004303 G2G4 Eriocaulon parkeri Herbaceous Vegetation

V.B.2.N.g.045. SAGITTARIA SUBULATA - LIMOSELLA AUSTRALIS TIDAL HERBACEOUS ALLIANCE
CEGL004473 G? Sagittaria subulata - Limosella australis Tidal Herbaceous Vegetation

V.B.2.N.g.050. SARCOCORNIA PERENNIS - SPARTINA ALTERNIFLORA - (DISTICHLIS SPICATA) TIDAL HERBACEOUS ALLIANCE
CEGL004308 G5 Sarcocornia perennis - Salicornia spp. - Spartina alterniflora Herbaceous Vegetation
CEGL002278 G4 Sarcocornia perennis - Spartina alterniflora - Batis maritima - Distichlis spicata Herbaceous Vegetation

V.B.2.N.h.020. WOODWARDIA VIRGINICA SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004475 G2? Woodwardia virginica / Sphagnum cuspidatum Herbaceous Vegetation

V.C.1.N.b.020. HALODULE BEAUDETTEI PERMANENTLY FLOODED - TIDAL HERBACEOUS ALLIANCE
CEGL004318 G4? Halodule beaudettei Herbaceous Vegetation

V.C.2.N.a.025. HYDRILLA VERTICILLATA PERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004702 GW Hydrilla verticillata Herbaceous Vegetation

V.C.2.N.a.040. NUPHAR LUTEA PERMANENTLY FLOODED TEMPERATE HERBACEOUS ALLIANCE
CEGL004324 G5? Nuphar lutea ssp. advena Herbaceous Vegetation
CEGL004328 G3? Nuphar lutea ssp. sagittifolia Herbaceous Vegetation

V.C.2.N.a.050. NYMPHAEA ODORATA PERMANENTLY FLOODED TEMPERATE HERBACEOUS ALLIANCE
CEGL004330 G5? Nymphaea odorata Herbaceous Vegetation

V.C.2.N.a.055. NYMPHOIDES AQUATICA PERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004326 G3? Nuphar lutea ssp. advena - Nymphoides aquatica - Myriophyllum laxum Herbaceous Vegetation

V.C.2.N.a.065. POTAMOGETON SPP. - CERATOPHYLLUM SPP. - ELODEA SPP. PERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004725 G? Potamogeton spp. - Ceratophyllum spp. - Elodea spp. Permanently Flooded Herbaceous Vegetation [Provisional]

V.C.2.N.a.080. VALLISNERIA AMERICANA PERMANENTLY FLOODED HERBACEOUS ALLIANCE
CEGL004333 G3G5 Vallisneria americana Riverine Herbaceous Vegetation

V.C.2.N.b.004. CERATOPHYLLUM DEMERSUM PERMANENTLY FLOODED - TIDAL HERBACEOUS ALLIANCE
CEGL004661 G3? Ceratophyllum demersum - Utricularia macrorhiza - Nymphaea odorata Herbaceous Vegetation

V.C.2.N.b.010. RUPPIA MARITIMA PERMANENTLY FLOODED - TIDAL TEMPERATE HERBACEOUS ALLIANCE
CEGL006167 G? Ruppia maritima Acadian/Virginian Zone Herbaceous Vegetation
CEGL004335 G4G5 Ruppia maritima Carolinian Zone Herbaceous Vegetation

V.C.2.N.b.020. ZOSTERA MARINA PERMANENTLY FLOODED - TIDAL HERBACEOUS ALLIANCE
CEGL004336 G? Zostera marina Herbaceous Vegetation [Provisional]

V.D.2.N.g.010. LIPOCARPHA MICRANTHA SEASONALLY FLOODED HERBACEOUS ALLIANCE
CEGL004341 G2? Eragrostis hypnoides - Juncus repens - Lipocarpha micrantha Herbaceous Vegetation

VI.A.1.N.b.010. SPHAGNUM CUSPIDATUM SEASONALLY FLOODED NONVASCULAR ALLIANCE
CEGL004384 G2? Sphagnum cuspidatum Nonvascular Vegetation

VII.C.1.N.b.010. PARTHENOCISSUS QUINQUEFOLIA / UNIOLA PANICULATA - HUDSONIA TOMENTOSA SPARSELY VEGETATED ALLIANCE
CEGL004397 G1 Parthenocissus quinquefolia / Uniola paniculata - Hudsonia tomentosa Mid-Atlantic Coastal Meda¤o Sparse Vegetation

VII.C.2.N.a.020. CAKILE EDENTULA SPARSELY VEGETATED ALLIANCE
CEGL004400 G4G5 Cakile edentula ssp. edentula - Salsola caroliniana Sparse Vegetation
CEGL004401 G3 Cakile edentula ssp. harperi Sparse Vegetation

VII.C.2.N.d.030. SESUVIUM SPP. - ATRIPLEX SPP. - SUAEDA SPP. TIDAL SPARSELY VEGETATED ALLIANCE
CEGL004406 G3 Sesuvium portulacastrum - Atriplex spp. - Suaeda spp. Sparse Vegetation

VII.C.4.N.d.010. ISOETES RIPARIA TIDAL SPARSELY VEGETATED ALLIANCE
CEGL006058 G? Isoetes riparia Sparse Vegetation

NAME	ELCODE	GOAL	COUNT	MET	GROUPING	
Acer rubrum - Fraxinus pennsylvanica - Nyssa biflora / Poly	CEGL006287	all		X	**VA	
Acer rubrum / Sambucus canadensis / Ampelopsis arborea - Si	CEGL004698	all		X	**NC	
Acer rubrum var. trilobum / Viburnum nudum var. nudum / Osm	CEGL004426	25 for group	0	C	Low Elevation Seep group	
Acer saccharinum / Leersia lenticularis - Commelina virgini	CEGL007727	25?		X	** SC	
Adiantum capillus-veneris / Conocephalum conicum Herbaceous	CEGL004515	all	0	A	Coastal Plain Marl Outcrop group	
Alnus (incana ssp. rugosa, serrulata) - Cornus amomum Shrub	CEGL006337	4		X	** VA	
Alnus serrulata / (Zizania aquatica, Zizaniopsis miliacea)	CEGL004627	all	1	A	** SC	
Ammophila breviligulata - Panicum amarum Herbaceous Vegetat	CEGL004043	25	1	C		
Aquilegia canadensis - Asplenium heteroresiliens Herbaceous	CEGL004269	all	1	A	Coastal Plain Marl Outcrop group	
Aristida palustris - Andropogon (capillipes, glaucopsis) He	CEGL004100	all I plus 12	3	B	Small Depresssion Pond group	
Arundinaria gigantea ssp. tecta Shrubland	CEGL003843	all	6	A		
Baccharis halimifolia - Iva frutescens - Myrica cerifera -	CEGL003920	25	1	C		
Baccharis halimifolia - Iva frutescens ssp. oraria / Sparti	CEGL003921	25	3	C		
BALDCYPRESS-TUPELO SWAMP	CP0000200			I		
BASIC MESIC FOREST (COASTAL PLAIN SUBTYPE) NC	CCTER00112	40 for group	12	C	Basic Mesic Forest group	
BASIC MESIC FOREST (PIEDMONT SUBTYPE) NC	CCTER00110	40 for group	2	C	Basic Mesic Forest group	
BASIC MESIC FOREST SC	CT0001500	40 for group	1	C	Basic Mesic Forest group	
BAY FOREST NC	CCPAL00650	25 for group	9	C	Bay Forest group	
Betula nigra - Platanus occidentalis / Alnus serrulata / Bo	CEGL007312			I		
Borrichia frutescens / Spartina patens - Juncus roemerianus	CEGL003924	25	5	C		
Cakile edentula ssp. edentula - Salsola caroliniana Sparse	CEGL004400	25		X	** NC SC VA (s	
Cakile edentula ssp. harperi Sparse Vegetation	CEGL004401	deferred		X		
Carex striata var. brevis Herbaceous Vegetation	CEGL004120	all I plus 12	0	B	Small Depresssion Pond group	
Carya cordiformis - Quercus pagoda - Quercus shumardii - Ca	CEGL007316	all	0	A	Wet Marl Forest group	
Carya glabra - Tilia americana var. caroliniana - Acer barb	CEGL004747	25	1	C		
Celtis laevigata - Fraxinus pennsylvanica - Acer negundo /	CEGL004740	25	11	C		
Celtis laevigata - Tilia americana var. caroliniana / Aescu	CEGL007282	all	1	A		
Ceratophyllum demersum - Utricularia macrorhiza - Nymphaea	CEGL004661	deferred		Y		
Chamaecyparis thyoides - (Liriodendron tulipifera) / Lyonia	CEGL007563	all	20	A		
Chamaecyparis thyoides / Persea palustris / Lyonia lucida -	CEGL006146	all	26	A		
Chamaedaphne calyculata - Vaccinium macrocarpon / Carex str	CEGL004165	all	2	A		
Chamaedaphne calyculata / Carex striata var. striata - Sarr	CEGL004164	all	3	A		
Chamaedaphne calyculata / Carex striata var. striata - Wood	CEGL004163	all	10	A		
Cladium mariscus ssp. jamaicense Tidal Herbaceous Vegetatio	CEGL004178	8	19	B		
Clethra alnifolia - Toxicodendron vernix / Aristida stricta	CEGL004467	all I plus 10	1	B	Sandhill Seep group	
COASTAL PLAIN MARL OUTCROP	CCTER00270	all	9	A	Coastal Plain Marl Outcrop group	

COASTAL PLAIN SEMIPERMANENT IMPOUNDMENT	CCPAL00445	25 for group	30	B	Semipermanent Impoundment group
COASTAL PLAIN WET MEADOW	CP00005700	all I plus 10	1	B	Sandhill Seep group
Cornus foemina / Berchemia scandens Forest	CEGL007384	all	2	A	
CYPRESS SAVANNA	CCPAL00710	all I plus 10	31	B	Cypress Savanna group
Cyrilla racemiflora - Lyonia lucida Shrubland	CEGL003844	all I plus 12	0	B	Small Depresssion Pond group
Cyrilla racemiflora - Persea palustris - Magnolia virginian	CEGL004449	all	0	A	Natural Lake Shoreline group
Cyrilla racemiflora - Zenobia pulverulenta Shrubland	CEGL003943	all	13	A	
Decodon verticillatus Seasonally Flooded Shrubland	CEGL003905	8	1	C	
DEPRESSION MEADOW	CPCXX00010	all I plus 10	0	B	Cypress Savanna group
Diamorpha smallii - Minuartia glabra - Minuartia uniflora -	CEGL004344	4	0	C	
Dichanthelium wrightianum - Dichanthelium erectifolium Herb	CEGL004105	all I plus 12	0	B	Small Depresssion Pond group
DRY OAK--HICKORY FOREST	CCTER00170	8 for group of 2	9	B	Dry Oak-Hickory group
DRY-MESIC OAK--HICKORY FOREST	CCTER00175	40 for group	17	C	Dry-Mesic Oak-Hickory group
Eleocharis (elongata, equisetoides) - Rhynchospora tracyi S	CEGL004960	all I plus 12	0	B	Small Depresssion Pond group
Eleocharis fallax - Eleocharis rostellata - Scirpus america	CEGL004628	all	16	A	
Eragrostis hypnoides - Juncus repens - Lipocarpha micrantha	CEGL004341	all		X	** NC SC VA
Eriocaulon parkeri Herbaceous Vegetation	CEGL004303	deferred		Y	
Fagus grandifolia - (Liquidambar styraciflua) / Oxydendrum	CEGL004636	25 for group	0	C	Heath Bluff group
Fagus grandifolia - Quercus alba - Acer (barbatum, leucoder	CEGL007206	40 for group	3	C	Basic Mesic Forest group
Fagus grandifolia - Quercus nigra Forest	CEGL007211	40 for group	1	B	Mesic Mixed Hardwoods group
FLOODPLAIN POOL	CCPAL00490	25 for group	1	C	Floodplain Pool group
FLUVIAL TERRACE WOODLAND	CT00006300	4	1	C	
Fraxinus pennsylvanica - Quercus laurifolia - Quercus lyrat	CEGL004695	25	3	C	
Fraxinus pennsylvanica - Ulmus americana - Celtis laevigata	CEGL002427	8 for group	5	C	7730 / 2427 group
Fraxinus pennsylvanica - Ulmus americana - Quercus laurifol	CEGL007736	25 for group	0	C	7736 / 7728 7719 group
Fraxinus pennsylvanica - Ulmus americana / Myrica cerifera	CEGL004483	all		X	**
Fraxinus pennsylvanica / Leersia lenticularis - Carex lupul	CEGL007728	25 for group	0	C	7736 / 7728 7719 group
Gaylussacia frondosa - Clethra alnifolia - Arundinaria giga	CEGL004468	all I plus 10	0	B	Sandhill Seep group
Gordonia lasianthus - Magnolia virginiana - Persea palustri	CEGL007044	25	0	C	Bay Forest group
Halodule beaudettei Herbaceous Vegetation	CEGL004318	deferred		Y	
Hudsonia tomentosa / Panicum amarum Dwarf-shrubland	CEGL003950	8	4	C	
Hypericum reductum / Aristida stricta Dwarf-shrubland	CEGL003954	all		X	** NC (mesic depression/vernal pool)
Ilex glabra - Lyonia lucida - Zenobia pulverulenta Shrublan	CEGL003944	all	11	A	
INTERDUNE POND	CCPAL00760	all	11	A	Interdune Pond group
Isoetes riparia Sparse Vegetation	CEGL006058	deferred		Y	
Juncus roemerianus - Pontederia cordata Herbaceous Vegetati	CEGL004660	all	18	A	
Juncus roemerianus Herbaceous Vegetation	CEGL004186	stratify, all I plus	37	B	

Juniperus virginiana var. silicicola / Myrica cerifera / Ko	CEGL007166	all		X	** (tidal red
Leptochloa fascicularis var. maritima - Sesuvium maritimum	CEGL004125	all	0	A	Interdune Pond group
Liquidambar styraciflua - Acer rubrum - Nyssa biflora / Car	CEGL006223	all		X	** VA
Liquidambar styraciflua - Quercus laurifolia Forest	CEGL004631	25	0	C	** SC (Congaree seep)
Liquidambar styraciflua - Quercus nigra - Quercus laurifoli	CEGL007732	25 for group		C	4678 / 7732 group
Liquidambar styraciflua / Persea palustris Forest	CEGL004481	all	0	A	Natural Lake Shoreline group
Liriodendron tulipifera - Nyssa biflora / Ilex coriacea - L	CEGL004645	25	2	C	** SC (sandhill swamp)
LITTLE RIVER BLUFF	CCTER99999	all	1	A	
LITTLE RIVER SEEPAGE BANK	CCPAL99999	all	2	A	
LOW ELEVATION SEEP	CCPAL00600	25 for group	2	C	Low Elevation Seep group
Magnolia virginiana - Persea palustris / Lyonia lucida Fore	CEGL007049	25		X	** SC (sandhills region swamp)
MARITIME SWAMP FOREST NC	CCPAL007374	all	10	A	Maritime Swamp Forest group
MESIC MIXED HARDWOOD FOREST	CT00001300	40 for group	2	B	Mesic Mixed Hardwoods group
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYP	CCTER00105	40 for group	44	B	Mesic Mixed Hardwoods group
MESIC MIXED HARDWOOD FOREST (PIEDMONT SUBTYPE)	CCTER00100	40 for group	3	B	Mesic Mixed Hardwoods group
Muhlenbergia filipes - Spartina patens - Eustachys petraea	CEGL004051	25	8	C	
Myrica cerifera - Baccharis halimifolia / Spartina patens S	CEGL003809	25	8	C	
Myrica cerifera - Rosa palustris / Thelypteris palustris va	CEGL004656	25	2	C	** NC VA
Myrica cerifera / Spartina patens - (Juncus roemerianus) Sh	CEGL003839	25		X	** NC SC VA
Myrica pensylvanica / Diodia teres Shrubland	CEGL003881	all	1	A	
Myrica pensylvanica / Schizachyrium scoparium ssp. littoral	CEGL004240	all	1	A	
NATURAL LAKE SHORELINE	CCPAL00730	all	16	A	Natural Lake Shoreline group
Nuphar lutea ssp. advena - Nymphoides aquatica - Myriophyll	CEGL004326	all I plus 12	0	B	Small Depresssion Pond group
Nuphar lutea ssp. sagittifolia Herbaceous Vegetation	CEGL004328	deferred		Y	
Nyssa aquatica - Nyssa biflora Forest	CEGL007429	25 for group	0	C	4733 / 7429 group
Nyssa aquatica - Taxodium distichum - Celtis laevigata - (P	CEGL007735			I	
Nyssa aquatica Forest	CEGL002419	8 for group	2	B	7431 / 2419 / 7430 group
Nyssa biflora - (Acer rubrum) / Ilex opaca / Leucothoe axil	CEGL004427	all	1	A	
Nyssa biflora - (Nyssa aquatica, Taxodium distichum) Tidal	CEGL004484	25	3	C	
Nyssa biflora - Acer rubrum var. trilobum - Liriodendron tu	CEGL004428	all	3	A	
Nyssa biflora - Liquidambar styraciflua - Acer rubrum var.	CEGL004679	all	8	A	
Nyssa biflora - Liriodendron tulipifera - Pinus (serotina,	CEGL004734	25 for group	12	C	
Nyssa biflora - Nyssa aquatica - Taxodium distichum / Sauru	CEGL004696	25 for group	0	B	Tidal Cypress--Gum group
Nyssa biflora - Quercus nigra - Quercus laurifolia - Pinus	CEGL007350	25 total, 18 in NC	28	B	7350 / 7348 group
Nyssa biflora / Itea virginica - Cephalanthus occidentalis	CEGL007434	8	5	C	
OXBOW LAKE	CCPAL00440	deferred	5	Y	
Panicum hemitomon - Eleocharis equisetoides - Rhynchospora	CEGL004127	all I plus 12	1	B	Small Depresssion Pond group

Panicum virgatum Tidal Herbaceous Vegetation (provisional)	CEGL006150	8	2	C	
Parthenocissus quinquefolia / Uniola paniculata - Hudsonia	CEGL004397	all	3	A	
Peltandra virginica - Saururus cernuus - Carex crinita / Cl	CEGL007696	25 for group	1	C	Floodplain Pool group
Persea palustris / Myrica cerifera Maritime Forest	CEGL004635	all	3	A	
PIEDMONT/COASTAL PLAIN ACIDIC CLIFF	CCTER00235	all	4	A	
PIEDMONT/COASTAL PLAIN HEATH BLUFF	CCTER00240	25 for group	5	C	Heath Bluff group
Pinus glabra - Quercus (laurifolia, michauxii) / Carpinus c	CEGL007544	8h	1	C	** SC
Pinus palustris - Pinus serotina / Aristida palustris - Sar	CEGL004498	all		X	** SC
Pinus palustris - Pinus serotina / Ctenium aromaticum - Muh	CEGL003660	all	32	A	3660 / 4501 group
Pinus palustris - Pinus serotina / Ctenium aromaticum - Muh	CEGL003658	25	27	B	
Pinus palustris - Pinus serotina / Ctenium aromaticum - Muh	CEGL003659			I	(sandhill ecotone)
Pinus palustris - Pinus serotina / Magnolia virginiana / Sp	CEGL004500	all	8	A	4500 / 4502 group
Pinus palustris - Pinus serotina / Pleea tenuifolia - Arist	CEGL003661	all	5	A	
Pinus palustris - Pinus serotina / Sporobolus sp. 1 - Arist	CEGL004501	all	0	A	3660 / 4501 group
Pinus palustris - Pinus serotina / Sporobolus sp. 1 - Cteni	CEGL004502	all	0	A	4500 / 4502 group
Pinus palustris - Pinus taeda - Pinus serotina / Quercus ma	CEGL003664	all	6	A	
Pinus palustris - Pinus taeda / Quercus geminata - Quercus	CEGL003577	all	30	B	
Pinus palustris / Amorpha herbacea var. herbacea / Aristida	CEGL003569	all	23	A	
Pinus palustris / Aristida stricta - Sorghastrum nutans - A	CEGL003570	all	17	A	
Pinus palustris / Arundinaria gigantea ssp. tecta - Liquida	CEGL004495	all		X	** SC
Pinus palustris / Clethra alnifolia - Gaylussacia frondosa	CEGL004496	all		X	** SC
Pinus palustris / Ilex glabra / Aristida stricta Woodland	CEGL003648	25	53	B	
Pinus palustris / Ilex glabra Woodland	CEGL003647	all	7	A	
Pinus palustris / Leiophyllum buxifolium / Aristida stricta	CEGL003649	all	8	A	
Pinus palustris / Quercus incana / Aristida stricta - Sorgh	CEGL003578	all	41	A	
Pinus palustris / Quercus laevis - Quercus geminata / (Sela	CEGL003590	all	3	A	
Pinus palustris / Quercus laevis - Quercus geminata / Vacci	CEGL003589	25 -- treat as G3	9	C	
Pinus palustris / Quercus laevis - Quercus incana / Gayluss	CEGL003592	all	10	A	
Pinus palustris / Quercus laevis - Quercus incana / Gayluss	CEGL003593	all	8	A	
Pinus palustris / Quercus laevis - Quercus incana / Gayluss	CEGL003591	25 for group	15	C	4493 / 3591 group
Pinus palustris / Quercus laevis - Quercus margarettiae / G	CEGL004493	25 for group	0	C	4493 / 3591 group
Pinus palustris / Quercus laevis / Aristida stricta / Clado	CEGL003584	all	12	A	
Pinus palustris / Quercus laevis / Gaylussacia dumosa var.	CEGL003586	all I plus 4 R	76	B	
Pinus palustris / Quercus marilandica / Gaylussacia dumosa	CEGL003595	all	54	A	
Pinus palustris / Quercus marilandica / Vaccinium crassifol	CEGL003599	all	12	A	
Pinus palustris / Vaccinium elliottii - Clethra alnifolia /	CEGL003573	all	5	A	
Pinus serotina - (Liriodendron tulipifera) / Lyonia lucida	CEGL004435	all I plus 5 in SC	82	B	

Pinus serotina - Gordonia lasianthus / Lyonia lucida Woodla	CEGL003671	all I plus 20	27	B	3670 / 3671 group
Pinus serotina / Arundinaria gigantea ssp. tecta Woodland	CEGL004433	all	7	A	
Pinus serotina / Cyrilla racemiflora - Lyonia lucida - Ilex	CEGL003670	all I plus 20	75	B	3670 / 3671 group
Pinus serotina / Cyrilla racemiflora - Lyonia lucida - Vacc	CEGL004434	10 for group	0	B	Small Depression Pocosin group
Pinus serotina / Ilex glabra / Woodwardia virginica Woodlan	CEGL004652	all	4	A	
Pinus serotina / Lyonia lucida - Ilex glabra - (Cyrilla rac	CEGL003846	25	36	B	
Pinus serotina / Myrica cerifera / Cladium mariscus ssp. ja	CEGL003669	all	2	A	
Pinus serotina / Zenobia pulverulenta - Cyrilla racemiflora	CEGL004458	all	5	A	
Pinus taeda - Chamaecyparis thyoides - Acer rubrum - Nyssa	CEGL007558	all	21	A	
Pinus taeda - Liquidambar styraciflua - Nyssa biflora Tempo	CEGL004606			I	
Pinus taeda - Nyssa biflora - Taxodium distichum / Myrica c	CEGL004651	25		X	** VA
Pinus taeda - Quercus (alba, falcata, stellata) Forest [Pro	CEGL004766	40 for group	0	C	Dry-Mesic Oak-Hickory group
Pinus taeda - Quercus (pagoda, michauxii, shumardii) Tempor	CEGL007550	25	4	C	
Pinus taeda - Quercus hemisphaerica / Osmanthus americanus	CEGL003619	all	0	A	** NC (swamp island)
Pinus taeda - Quercus laurifolia - Chamaecyparis thyoides -	CEGL007548	all	3	A	
Pinus taeda - Quercus laurifolia / Vaccinium elliottii - Ar	CEGL004736	25	17	C	
Pinus taeda - Quercus nigra / Gelsemium sempervirens Forest	CEGL006172	all	2	A	
Pinus taeda - Quercus nigra / Shrubs / Mixed Herbs Upland F	CEGL007533	40 for group	2	B	Mesic Mixed Hardwoods group
Pinus taeda / Myrica cerifera / Osmunda regalis var. specta	CEGL006137	25	17	C	
Pinus taeda / Myrica cerifera / Vitis rotundifolia Forest	CEGL006040	all	0	A	6040 / 7027 group
Platanus occidentalis - Celtis laevigata - Fraxinus pennsyl	CEGL007730	8 for group	0	C	7730 / 2427 group
Populus deltoides / Acer negundo / Boehmeria cylindrica For	CEGL007731	8 for group	0	C	Populus deltoides group
POPULUS DELTOIDES LEVEE FOREST	CEGL999999	8 for group	1	C	Populus deltoides group
Potamogeton spp. - Ceratophyllum spp. - Elodea spp. Permane	CEGL004725	deferred		Y	
Quercus alba - Carya alba / Vaccinium elliottii Forest	CEGL007224	40 for group	0	C	Dry-Mesic Oak-Hickory group
Quercus alba - Carya glabra - Carya alba / Aesculus pavia F	CEGL007225	40 for group	0	C	Dry-Mesic Oak-Hickory group
Quercus alba - Carya glabra / Mixed Herbs Coastal Plain For	CEGL007226	40 for group	1	C	Dry-Mesic Oak-Hickory group
Quercus alba - Quercus velutina - Carya alba / Cornus flori	CEGL007278	40 for group	0	C	Dry-Mesic Oak-Hickory group
Quercus alba-Carya alba/Euonymus americana/Hexastylis arifolia F	CEGL006227	40 for group	1	C	Dry-Mesic Oak-Hickory group
Quercus falcata - Fagus grandifolia - Pinus taeda Forest	CEGL007540	all	7	A	
Quercus falcata - Tilia americana var. caroliniana - Magnol	CEGL007470	all	0	A	
Quercus hemisphaerica - Pinus taeda - (Quercus nigra) / Osm	CEGL007022	all	0	A	** NC SC? (swamp island)
QUERCUS LARIFOLIA - QUERCUS MICHAXII - LIQUIDAMBER S	CEGL004678	25 for group	12	C	4678 / 7732 group
Quercus laurifolia - Fraxinus pennsylvanica / Carpinus caro	CEGL007733	25	1	C	
Quercus laurifolia - Nyssa biflora / Clethra alnifolia - Le	CEGL007447	all	7	A	
Quercus laurifolia - Quercus lyrata / Carpinus caroliniana	CEGL004737	25	18	C	
Quercus laurifolia / Carpinus caroliniana / Justicia ovata	CEGL007348	25 total, 18 in NC	0	B	7350 / 7348 group

Quercus lyrata - Carya aquatica / Ampelopsis arborea Forest	CEGL007398	8 for group	0	C	7397 / 7398 group
Quercus lyrata - Carya aquatica Forest	CEGL007397	8 for group	5	C	7397 / 7398 group
Quercus lyrata - Quercus laurifolia - Taxodium distichum /	CEGL004735	25	3	C	
Quercus michauxii - Quercus pagoda / Clethra alnifolia - Le	CEGL007449	all	27	A	
Quercus michauxii / Carpinus caroliniana - Ilex opaca / Leu	CEGL007737	all	0	A	** SC (Congaree seep)
Quercus michauxii / Carpinus caroliniana - Ilex opaca / Leu	CEGL007737	25	1	C	** SC (Congaree seep)
Quercus phellos / Carex (intumescens, joorii) / Sphagnum le	CEGL007403	all		X	** SC (Congare
Quercus stellata - Quercus falcata - Carya alba / Vaccinium	CEGL007246	8 for group of 2	2	B	Dry Oak-Hickory group
Quercus virginiana - (Ilex vomitoria) Shrubland	CEGL003833	25	14	C	
Quercus virginiana - Quercus hemisphaerica - Pinus taeda -	CEGL007026	all	23	A	
Quercus virginiana - Quercus hemisphaerica - Pinus taeda /	CEGL007027	all	16	A	6040 / /7027 group
Quercus virginiana - Quercus incana Woodland	CEGL003750	all	3	A	
Quercus virginiana - Sabal palmetto - Juniperus virginiana	CEGL007032	all	13	A	
Quercus virginiana - Sabal palmetto - Juniperus virginiana	CEGL003525	all	2	A	
Quercus virginiana / Myrica pensylvanica Forest	CEGL006306	all	3	A	
Quercus virginiana / Vaccinium arboreum - Ilex vomitoria Fo	CEGL007028	all		X	** NC SC (Bald
RHODODENDRON THICKET SC	CTMPX00050	25 for group	1	C	Heath Bluff group
Rhynchospora alba Saturated Herbaceous Vegetation	CEGL004463	all I plus 12	0	B	Small Depresssion Pond group
Rhynchospora filifolia - Juncus abortivus Herbaceous Vegeta	CEGL004131	all I plus 12	0	B	Small Depresssion Pond group
Rhynchospora inundata - Eriocaulon decangulare var. decangu	CEGL004509	all I plus 12	1	B	Small Depresssion Pond group
Rhynchospora inundata Herbaceous Vegetation [Provisional]	CEGL004132	all I plus 12	0	B	Small Depresssion Pond group
Ruppia maritima Acadian/Virginian Zone Herbaceous Vegetatio	CEGL006167	deferred		Y	
Ruppia maritima Carolinian Zone Herbaceous Vegetation	CEGL004335	deferred		Y	
Saccharum baldwinii - Carex glaucescens - Rhynchospora corn	CEGL007745	all	2	A	** VA
Sagittaria subulata - Limosella australis Tidal Herbaceous	CEGL004473			I	
Salix caroliniana / Sacciolepis striata - Boehmeria cylindr	CEGL004222	all	0	A	Maritime Swamp Forest group
Salix caroliniana Temporarily Flooded Forest [Provisional]	CEGL007373			I	
Salix nigra - Fraxinus pennsylvanica Forest	CEGL007734			I	
Salix nigra Temporarily Flooded Shrubland [Provisional]	CEGL003901			I	
SAND AND MUD BAR	CCPAL00400	8	11	B	
SANDHILL SEEP	CCPAL00695	all I plus 10	90	B	Sandhill Seep group
Sarcocornia perennis - Salicornia spp. - Spartina alternifl	CEGL004308	8	8	B	
Scirpus pungens - (Osmunda regalis var. spectabilis) Herbac	CEGL004189	all	7	A	
Sesuvium portulacastrum - Atriplex spp. - Suaeda spp. Spars	CEGL004406	25		X	** NC SC VA (I
SMALL DEPRESSION POCOSIN	CCPAL00670	10 for group	24	B	Small Depression Pocosin group
SMALL DEPRESSION POND	CCPAL00720	all I plus 12	39	B	Small Depresssion Pond group
Smilax auriculata - Toxicodendron radicans Vine-Shrubland	CEGL003885			I	

Spartina alterniflora - Lilaeopsis chinensis Herbaceous Veg	CEGL004193	25	3	C	
Spartina alterniflora / (Ascophyllum nodosum) Acadian/Virgi	CEGL004192	25		X	** NC VA
Spartina alterniflora Carolinian Zone Herbaceous Vegetation	CEGL004191	25	16	C	
Spartina cynosuroides Herbaceous Vegetation	CEGL004195	25	31	B	
Spartina patens - Distichlis spicata - Borrichia frutescens	CEGL004197	25	20	C	
Spartina patens - Scirpus pungens - Solidago sempervirens H	CEGL004097	25	7	C	
Sphagnum cuspidatum Nonvascular Vegetation	CEGL004384	25 for group	0	C	Vernal Pool group
Taxodium ascendens / (Nyssa biflora) / Leucothoe racemosa -	CEGL007420	all I plus 10	8	B	Cypress Savanna group
Taxodium ascendens / Cyrilla racemiflora - Zenobia pulverul	CEGL003734	all I plus 10	2	B	Cypress Savanna group
Taxodium ascendens / Ilex myrtifolia Depression Forest	CEGL007418	all I plus 10	0	B	Cypress Savanna group
Taxodium ascendens / Panicum hemitomon - Polygala cymosa Te	CEGL003733	all I plus 10	2	B	Cypress Savanna group
Taxodium ascendens / Woodwardia virginica Woodland	CEGL004441	all I plus 12	0	B	Small Depresssion Pond group
Taxodium distichum - Fraxinus pennsylvanica - Quercus lauri	CEGL007719	25 for group	2	C	7736 / 7728 7719 group
Taxodium distichum - Liquidambar styraciflua - Platanus occ	CEGL004424	all	0	A	Natural Lake Shoreline group
Taxodium distichum - Nyssa aquatica - Acer rubrum / Saururu	CEGL007430	8 for group	1	B	7431 / 2419 / 7430 group
Taxodium distichum - Nyssa aquatica - Nyssa biflora / Fraxi	CEGL007432	25 for group	23	C	4733 / 7429 group
Taxodium distichum - Nyssa aquatica / Fraxinus caroliniana	CEGL007431	8 for group	32	B	7431 / 2419 / 7430 group
Taxodium distichum - Nyssa biflora / Berchemia scandens - T	CEGL004429	all	7	A	
Taxodium distichum - Nyssa biflora / Fraxinus caroliniana /	CEGL004733	25	22	C	
Taxodium distichum - Taxodium ascendens / Panicum hemitomon	CEGL004465	all	0	A	Natural Lake Shoreline group
Taxodium distichum / Cephalanthus occidentalis / Juncus rep	CEGL004653	all I plus 12	1	B	Small Depresssion Pond group
Taxodium distichum / Lemna minor Forest	CEGL002420	8	2	C	
Taxodium distichum / Panicum hemitomon Wooded Herbaceous Ve	CEGL004466	all	0	A	Natural Lake Shoreline group
Taxodium distichum / Typha angustifolia Woodland	CEGL004231	8 for group	0	B	4201 / 4231 group
Taxodium distichum / Zizania aquatica - Carex canescens ssp	CEGL004655	all	1	A	
Taxodium distichum Semipermanently Flooded Woodland	CEGL004442	25 for group	2	B	Semipermanent Impoundment group
TIDAL CYPRESS--GUM SWAMP NC	CCPAL00790	25 for group	39	B	Tidal Cypress--Gum group
Typha angustifolia - Hibiscus moscheutos Herbaceous Vegetat	CEGL004201	8 for group	21	B	4201 / 4231 group
Typha domingensis - Setaria magna Herbaceous Vegetation	CEGL004138	all	0	A	Interdune Pond group
UNCLASSIFIED FULLY FRESH TIDAL MARSH	CEGL999998	8	4	C	
UNCLASSIFIED NONRIVERINE SWAMP FOREST (DEPRESSION	CEGL999996	25	4	C	
Uniola paniculata - Schizachyrium scoparium ssp. littorale	CEGL004039	25	10	C	
Uniola paniculata Herbaceous Vegetation	CEGL004038	25	5	C	
Vaccinium formosum - Vaccinium fuscatum / Sphagnum cuspidat	CEGL003907	all I plus 12	0	B	Small Depresssion Pond group
Vallisneria americana Riverine Herbaceous Vegetation	CEGL004333	deferred		Y	
VERNAL POOL	CCPAL00700	25 for gorup	23	C	Vernal Pool group
Vitis rotundifolia - Ampelopsis arborea - Campsis radicans	CEGL004620			I	

WET MARL FOREST	CCPAL00610	all	2	A	Wet Marl Forest group
Woodwardia virginica / Sphagnum cuspidatum Herbaceous Veget	CEGL004475	all I plus 12	0	B	Small Depresssion Pond group
Zizania aquatica Tidal Herbaceous Vegetation	CEGL004202	8	4	C	
Zizaniopsis miliacea Tidal Herbaceous Vegetation	CEGL004705	25		X	** SC (lower Waccamaw)
Zostera marina Herbaceous Vegetation [Provisional]	CEGL004336	deferred		Y	

MID-ATLANTIC COASTAL PLAIN
KEY TO SITE ACTION PLAN TABLE

Site Name

Every reviewer of this table wanted to change many of the site names. In most cases, the names remain as assigned by the ecoregional planning ream. Some synonyms are provided for NC Action Sites in the file titled **B. INTRODUCTION AND PLAN OVERVIEW**, and some are provided in the comments column. Site names have the potential to be among the least consistent elements and most difficult challenges of keeping up with plans and actions to protect real places on the ground. In a future iteration of this plan, all the partners need to address this issue, preferably using a pre-determined protocol for naming sites that is a) hierarchical up to the level of landscape, b) independent of ownership, and c) independent of conservation status or management. It would also be good if the names had current public usage. To sort sites by name, highlight the whole table by clicking on the extreme top left button, then from the top bar of menus, choose Data, then Sort, then sort by Site Name (ascending).

Map Number

The map number is the connection between the maps and the table. If the names don't agree but the numbers do, you're looking at the right site. As mentioned above, keeping site names straight was a real nightmare.

Map numbers were assigned more-or-less from west to east and north to south, so they tend to be geographically consecutive. Thus, when the table is sorted by map number, VA sites are listed first, NC sites are mainly in the middle, and SC sites are last. To sort sites by map number, highlight the whole table by clicking on the extreme top left button, then from the top bar of menus, choose Data, then Sort, then sort by Map Number (ascending).

Lead Agency

This column contains information assigned by TNC and Heritage staff from three states and the Southern Resources Office. It is, therefore, a little TNC- and Heritage-centric. That weakness has mainly to do with limited information. There are presently no good coordinating strategies within or between the states for tracking this sort of information, so the result is ad hoc and well-intentioned and, no doubt, incomplete.

TNC distinguishes between "action sites," or sites where TNC has officially (by Board action) committed itself to take some sort of significant conservation action within the next five years, and "portfolio sites,' where TNC intended to assist others in the interim. Action status was assigned by TNC staff to sites prior to and independent of this ecoregional planning process. However, when the staffs went through the list, there were a number of sites that were not officially identified as "action sites" where it was clear

that TNC could and probably would do some major conservation work in the next five years. That is why the Lead Agency column contains entries like “TNC SC” as well as “TNC SC Action Site.”

A useful strategy is to highlight the whole table by clicking on the extreme top left button, then from the top bar of menus, choose Data, then Sort, then sort by Lead Agency (ascending) and then by Site Number (ascending). This has the effect of grouping sites by lead agency, then by geography. TNC sites are automatically sorted into “action sites” and “portfolio sites” with sites that are likely to be treated by TNC as part of the same project clustered more-or-less together.

{Potential) Partners and Comments

This column is an attempt to list current and/or potential partners for working on conservation of the site. It also attempts to provide a bit of coordination between TNC programs and landscape projects and the sites they contain. It contains fragmented, incomplete, and potentially out-of-date information provided by the staffs of TNC and Heritage Programs from 3 states and the Southern Resources Office, entirely working with good intentions and mostly working from memory. If you or your agency is a partner or a lead agency on a project, and that fact is not reflected here, we apologize. Please see the file **E. WHEN YOU FIND MISTAKES**.

In a way, incompleteness in this column is understandable and unavoidable. Any complex protection action is a whirl of actual, potential, and former protection strategies with partnerships becoming active and then inactive again sometimes within hours. Please see our comments at the end of the file, **D. OPPORTUNITIES AND CHALLENGES FOR THE FUTURE.**

Do not attempt to sort the table using this column. The results will not be useful.

SITE NAME	MAP NUMBER	LEAD AGENCY	(POTENTIAL) PARTNERS AND COMMENTS
Fort Lee	1	TNC VA	Mainly owned by the counties and the Army
Powell Creek Marsh	2	TNC VA	USFWS, James River Association land trust
College Run	3	VAHP	Entirely in Chippokes State Park (VDCR-Parks)
VA Powerline Bogs	4	TNC VA	12-13 discrete sites in conservation management by Dominion Generation
Seashore State Park	5	VAHP	VDCR-Parks. Needs dedication.
Cat Ponds	6	VAHP	Several private tracts, more inventory needed
Chowan Sand Ridge / Blackwater River	7	TNC VA Action Site	Nucleus of the Chowan Basin Program. VDCR-Parks owns 2 preserves, TNC VA owns one, Old Dominion has one dedicated, International Paper has one registered in NC, NC WRC has some in game lands, VA Dept. of Forestry owns soime. Other partners include VA Dept. of Game and Inland Fishteries. TNC VA working on land acquisition from International Paper. TNC VA will coordinate among the partners and draft a site conservation plan.
Muddy Cross Ponds	8	TNC VA	?
Piney Grove	9	TNC VA Action Site	Administratively part of Chowan Basin Program. VA Dept. of Game and Inland Fisheries manages some. TNC VA acquired some from John Hancock. More needed from JH and International Paper. Site Conservation Plan underway.
Back Bay and False Cape	10	TNC VA Action Site	Administratively part of the Southern Rivers Program. Partners include USFWS, VDCR-Parks, VA Wildlife, towns and counties.
Nottoway Bluff	11	TNC VA Action Site	Part of Chowan Basin Program. Site Conservation Plan underway.
Green Sea	12	TNC VA Action Site	Administratively part of the Southern Rivers Program. Includes Great Dismal Swamp Refuge. Partners include USFWS, VDCR-Parks, VA Wildlife, towns and counties.
Nottoway River	13	TNC VA Action Site	Part of Chowan Basin Program. Site Conservation Plan underway.
Lummis Flatwoods	14	VAHP	Dominion Generation and International Paper own.
NC Outer Banks	15	TNC NC	There are many, many potential partners: Federal -- NPS, USFWS, NOAA, DoD including the Corps of Engineers, NMFS, Coast Guard; South Atlantic Marine Fisheries Council; State -- Coastal, Marine and Parks Divisions, Wildlife Resources Agency; Universities -- UNC, NCSU, ECU, Duke. Nags Head Woods staff will explore partnerships to develop a comprehensive Site Conservation Plan.
Meherrin River	16	TNC VA Action Site	Part of Chowan Basin Program. Site Conservation Plan underway.
Chowan River Wetlands	17	TNC NC	NC WRC, Division of Forest Resources, Parks (Merchant's Mill Pond), International Paper
Roanoke River	18	TNC NC Action Site	Many partners include USFWS, Corps of Engineers, NC WRC, Plum Creek Timber, Weyerhaeuser, International Paper, Dominion Generation, Progress Energy (Carolina Power and Light), ECU, Duke University, University of MD Appalachian Lab, Roanoke River Partners, partnership for the Sounds, Counties and Towns.
Big Flatty Creek / Little Flatty Creek	19	NCHP	NCHP has registry with International Paper (originally with Champion). SCP needed. WRC potential game lands.
Minzies Pond	20	TNC NC	International Paper
Rocky Hock Swamp Forest	21	TNC NC	TNC owns, seeking partner for transfer.
Alligator River / Scuppernog River / Pocosin Lakes	22	TNC NC Action Site	Action site because it is administratively included in the Roanoke River Project. Many partners include USFWS, NC WRC, Weyerhaeuser, International Paper, NC WRC, NC DoT, Counties and Towns.
Upper Tar River	23	NE Tarheel Land Trust	Mainly an aquatic site. TNC NC, NC Coastal Land Trust, NC WRC, USFWS, USGS, Pamlico-Tar River Foundation, NC Divisions of Soil and Water Conservation, Water Quality, Water Resources, and Forestry.
Bullneck Swamp	24	NCHP	NCSU owns and will dedicate.

Middle Tar River	25	NC Coastal Land Trust	NCCLT owns one tract. ECU owns another.
Van Swamp	26	TNC NC Action Site	Core recently purchased by TNC NC for NC WRC. More land needed. Weyerhaeuser?
Bethel / Grindel Wet Hardwoods	27	NCHP	Register
Lake Mattamuskeet	28	USFWS owns	
Scranton / Pungo River	29	TNC NC	NC WRC has some at Pungo. Weyerhaeuser has most of the site.
Haw Creek Meanders / Voice of America Site A	30	NCHP	Register Weyerhaeuser portion. Ask WRC Non-game to request as surplus federal lands.
Turkey Creek	31	TNC NC	TNC owns. Viability questionable. Expand or divest.
Belvoir Carolina Bays	32	TNC NC	Ownership unknown.
Broad Creek Marshes and Forest / Pantego Wetlands	33	TNC NC	Ownership unknown.
Southern Pamlimarle Marshes and Forests	34	NCHP	Mostly owned by USFWS and NC WRC. Dedicate as possible. Is more land needed?
Lower Tar River	35	NCHP	Partnership for the Sounds, Town and County
Jackson Swamp Remnants	36	TNC NC	Ownership unknown.
Goose Creek State Park	37	NC Parks	Core is protected. Buffers needed.
Pamlico River Upland Hardwoods Cluster	38	NC Coastal Land Trust	Weyerhaeuser, Girl Scouts of America, Partnership for the Sounds
Voice of America Site B	39	NCHP	Ask WRC Non-game to request as surplus federal lands.
Goose Creek Cluster	40	TNC NC	Some in NC WRC game lands. Rest owned by Jones Island Hunt Club and Weyerhaeuser. NHP negotiating with Weyerhaeuser to register.
Sunset Lake Salamander Pond	41	NC Museum of Natural Sciences	NCHP to dedicate
Lower Neuse River	42	NC Coastal Land Trust	NCCLT owns a tract. NC WRC has some in game land. Weyerhaueser registered Cool Springs tract.
Bay City Low Pocosin	43	TNC NC	Ownership unknown.
Suffolk Scarp Bogs	44	NCHP	Owned by ??, a phosphate mining company. NCHP seeking registry. Possible mitigation site for TNC NC?
Piney Island	45	TNC NC	Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Raven Rock State Park	46	NC Parks	Core is state park. Additional park land needed.
Pamlico County Non-riverine Hardwoods	47	TNC NC	NC WRC
Dover Bay	48	NC Coastal Land Trust	TNC NC, NC WRC, Weyerhaeuser, Global TransPark.
Juniper Springs Church Natural Area	49	Triangle Land Conservancy	Some registered.
Duck Creek	50	TNC NC	Ownership unknown.
NC Sandhills	51	TNC NC Action Site	Many partners include USFWS, NC WRC, DoD (Fort Bragg, Camp McCall, Pope AFB, Army Environmental Center), NCSU, Virginia Tech, Sandhills Ecological Institute, towns and counties. Refuge planned. Highly organized site conservation planning and management activities. TNC will open office in 2001.
Trent River	52	NCHP	NC Coastal Land Trust, Croatan National Forest
Croatan	53	TNC NC	Mainly in Croatan National Forest where NHP is working on getting natural areas designated in a new forest plan. Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Hofmann Forest	54	TNC NC	About 3/5 of pocosin is intact but not registered. Old growth cypress is registered. NCHP is trying to expand registry. Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Sea Gate Woods	55	NC Coastal Land Trust	Weyerhaeuser
Cape Fear River Bluffs	56	Sandhills Area Land Trust	Ownership?

Onslow Bay Banks	57	TNC NC	Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Rockhouse Cave	58	NCHP	Register
Pondberry Bay	59	TNC NC	Canal Industries owns. NC Parks interested. Part of Lower Cape Fear Landscape Project.
Hope Mills	60	Sandhills Area Land Trust	NCHP has registered one tract.
Camp Lejeune	61	TNC NC	Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Bladen Lakes / Cape Fear	62	TNC NC Action Site	Core of Lower Cape Fear Landscape Project with partners including NC Parks, Forestry, Water Quality, and Coastal Divisions; NC WRC; NC Plant Conservation Program; NC DoT; Corps of Engineers; NC Coastal Land Trust; UNC Wilmington. Includes NE Cape Fear River and associated marl forests.
Clay Bays	63	TNC NC Action Site	Cluster of clay-based Carolina Bays in the Inner Coastal Plain. Administratively attached to NC Sandhills. Several owned by TNC. Upland habitats for herps and restoration of buffers needed.
Holly Shelter / Angola Bay / Sandy Run	64	TNC NC	Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Upper Lumber River	65	NC Parks	Lumber River Conservancy, NPS (Wild and Scenic River), NC WRC, NCHP
Alligator Bay Marshes and Forests	66	TNC NC	Eventually part of the Onslow Bay landscape project with partners including NC Coastal Federation, USFWS, NC WRC, DoD (Camp Lejeune and Cherry Point Marine Air Station), Duke University, NCSU (Hofmann forest), NC DoT, NC Coastal Land Trust.
Lower Pee Dee / Lower Lumber	67	NC Parks in NC, USFWS in SC	Lumber River Conservancy, NPS (Wild and Scenic River), NC WRC, NCHP, SCHP, TNC NC and SC, Playcard Swamp Environmental Education Center. No interstate plan or agreement in place.
Stateline Prairie Bay	68	TNC NC	TNC preserve, but more land needed.
SC Sandhills	69	TNC SC	SCHP, USFWS, SC Forestry, SC Parks, SC fish hatchery
Waccamaw	70	TNC NC Action Site	Administratively part of the Green Swamp / Boiling Spring Lakes Landscape Project with additional partners including NC Divisions of Forestry, Parks; Friends of Lake Waccamaw; Low Country Open Land Trust; Wildlife Action; SC WRC; Historic Rice Fields Association
Southeastern Brunswick County	71	TNC NC Action Site	Nucleus of the Green Swamp / Boiling Spring Lakes Landscape Project with many partners including NC Divisions of Coastal Management and Water Quality; Coastal Land Trust; ECU and UNC Wilmington; Weyerhaeuser; International Paper; Plum Creek Timber; Georgia-Pacific Corporation; South Brunswick County Water and Sewer Authority; NC Coastal Federation; USFWS, DoD (MOTSU); Corps of Engineers (esp. Lockwood's Folly); NC Plant Conservation Program; etc.
Great Pee Dee	72	TNC SC Action Site	Administrately part of the Winyah Bay Landscape Project. Additional partner is Black Creek Land Trust.
UNC Wilmington Sandhills	73	NCHP	Register or dedicate. TNC Wilmington Office to assist.
Savage Bay	74	SCHP	?
Big Pine Tree Creek	75	SCHP	SC DoT
Long Bay Islands	76	TNC NC	?
Lynchburg Savannah	77	SCHP	TNC SC
Fort Jackson	78	SCHP	DoD (Army), TNC SC
Meher Babar Woods	79	TNC SC Action Site	Administrately part of the Winyah Bay Landscape Project. Additional partner is Meher Babar.

Arcadia (formerly Grand Strand)	80	TNC SC Action Site	Administrately part of the Winyah Bay Landscape Project.
Manchester	81	SC Forestry and SC Parks own	
Congaree	82	NPS	Trust for Public Lands
Winyah Bay	83	TNC SC Action Site	Core of Winyah Bay Landscape Project. Partners include Weyerhaeuser, Coastal conservation league, Low Country Open Land Trust, Widllife Action, SC WRC, Historic Rice Fields Association, International Paper, USFWS, Westvaco.
Monkey Bay Meadow Complex	84	SCHP	?
Bennetts Bay	85	SCHP	?
Scottswood Savannah	86	TNC SC Action Site	Administratively part of the Sewee to Santee Landscape Project.
Black River near Andrews	87	TNC SC Action Site	Administratively part of the Sewee to Santee Landscape Project.
Butlers Bay	88	SCHP	?
Francis Marion / Bulls Bay / Santee	89	TNC SC Action Site	Core of Sewee to Santee Landscape Project. Partners include USFS, City of Charleston, USFWS, Army Corps, Low Country Open Land Trust, Coastal Conservation League, Ducks Unlimited
Charleston Harbor	90	Coastal Conservation League	SC Parks, City of Charleston, Army Corps, Low Country Open Land Trust
Horsepen Pocosin	tabled pending verification	NCHP	
Snow Hill Bay	tabled pending verification	NCHP	
Upper Wiccanon River Swamp	tabled pending verification	NCHP	
Chinquapin Hardwood Forest	tabled pending verification	NCHP	
Lower Indian Creek Swamp and Ravine	tabled pending verification	NCHP	
Gallberry Swamp	tabled pending verification	NCHP	
Perquimans River Cherrybark Oak Flats	tabled pending verification	NCHP	
Yeopim Creek Oak Slopes	tabled pending verification	NCHP	
Drummond Point	tabled pending verification	NCHP	
Little River	tabled pending verification	NCHP	
Contentnea Creek	tabled pending verification	NCHP	
St. Clair	tabled pending verification	NCHP	
Stantonsburg Oxbow	tabled pending verification	NCHP	
Middle Neuse River	tabled pending verification	NCHP	Triangle Land Conservancy interested.
Walnut Creek Sandhills	tabled pending verification	NCHP	
Cliffs of the Neuse State Park	tabled pending verification	NCHP	Buffer needed?
Live Oak Bay	tabled pending verification	NCHP	
Juniper Pond	tabled pending verification	NCHP	
Cedar Bay Longleaf Site	tabled pending verification	NCHP	
Sibury Pond Savannah	tabled pending verification	NCHP	
Winnie Moore Bay	tabled pending verification	SCHP	
Rosindale	tabled pending verification	SCHP	
Little Lynches River	tabled pending verification	SCHP	
Segars Mckinnon (2 sites)	tabled pending verification	SCHP	
Scapsore Swamp	tabled pending verification	SCHP	
Doghead Bay	tabled pending verification	SCHP	
Lynches River	tabled pending verification	SCHP	
Bell Meadow Pocosin	tabled pending verification	VAHP	