# WHC WILDLIFE MANAGEMENT PLAN



# SOUTHERN NUCLEAR OPERATING COMPANY

# Vogtle Electric Generating Plant

## WILDLIFE MANAGEMENT PLAN

2012

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### WMP Glossary

**Four essential habitat components** – Food, water, *cover* and *space* are four elements essential to all wildlife. Every *project* must address how these components are being met for the target wildlife.

**Cover** - Cover is any place an animal can use for living space, including vegetation and other natural or replicated features such as brush piles, fallen logs, snags, and/or tree cavities.

**Space** – Space is the area required for animals to carry out their biological functions, such as reproduction, rearing young, obtaining food/water and resting.

Program - The Wildlife at Work program, encompassing all projects.

Mission - The mission is the overarching aim of a Wildlife at Work Program.

**Project** – A project is a discrete wildlife enhancement venture, meeting the four essential habitat components for target wildlife and having one or more *objectives*.

**Objective** – An objective is a broad action that must be achieved to accomplish a *project*. Usually an objective will have multiple *prescriptions*.

**Prescription** – Prescriptions are the specific management activities that must be completed to accomplish an objective. They are narrower than *objectives* and should be SMART: Specific, Measurable, Achievable, Relevant, and Time-bound.

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### SUMMARY

Southern Nuclear and Plant Vogtle are committed to managing corporate lands for the benefit of wildlife while maintaining a focus on nuclear safety. The Plant Vogtle team is comprised of office workers, foresters, environmental staff, plant staff and management. The dedicated staff at Plant Vogtle has maintained long standing species specific projects as well as entered into new long term commitments of conservation for multiple keystone species and large tracts of habitat.

### 1. Background

Southern Nuclear Operating Company has been a member of the Wildlife Habitat Council (WHC) since 1993, a standing that exemplifies its commitment to improving wildlife habitat through the enrichment of pre-existing habitat and the establishment of new habitat on the company's landholdings. Induction into the Wildlife at Work program enables the Vogtle Site to get assistance from the Wildlife Habitat Council in its efforts to improve the site's wildlife habitat. Furthermore, partnership with WHC provides Southern Nuclear with an opportunity to demonstrate responsible corporate environmental stewardship by formulating and implementing a balanced and operative wildlife management program

#### 1.1. Corporate Environmental Stewardship

Southern Nuclear is a division of Southern Company, which has a large portfolio of environmental stewardship projects including National Fish and Wildlife Federation (NFWF) managed programs Long Leaf Legacy and Power of Flight. Southern Company is a partner with WHC, National Association of Counties, EPA and NFWF to provide wetland restoration grants through the Five Star Program. Plant Vogtle has committed to the Red Cockaded Woodpecker Safe Harbor program through U.S. Fish and Wildlife and Georgia Department of Natural Resources. The Plant Vogtle land management employees have established a Long Leaf pine and Wiregrass ecosystem demonstration area on approximately 52 acres. The area is located along the road to a public boat ramp. Plant Vogtle is collaborating with Georgia Department of Natural Resources and US Fish and Wildlife to be part of the Gopher Tortoise Candidate Conservation Agreement with Assurances (CCAA) program. Plant Vogtle is currently participating in a multi-state Sandhills Ecological Restoration Project lead by Georgia Department of Natural Resources.

#### 1.2. Site Description

Plant Vogtle is located in rural Burke County, Georgia on the banks of the Savannah River. Plant Vogtle is approximately 30 miles downstream of the city of Augusta, Georgia and east of the City of Waynesboro. The site is located directly across the river from the Department of Energy Savannah River Site. The plant area is surrounded by forested properties owned and managed by Georgia Power Company. The Vogtle property is adjacent to Yuchi Wildlife Management Area.

The majority of the area managed for wildlife is sandhills habitat. Sandhills ecology consists of deep well drained sandy soils dominated by long leaf pine with sparse understory. Plant Vogtle also sits along the Savannah River. Habitat near the river is dominated by old growth hardwood trees. Approximately 50% of the total Southern Company property surrounding the power facility is managed for forestry and wildlife. The existing power facility consists of two nuclear units, two parabolic natural draft cooling towers, multiple support buildings and warehouses. The site also has an intake and discharge structure located on the Savannah River. There are two main types of projects at Plant Vogtle. Smaller employee

managed on-site projects and large scale habitat restoration projects implemented by the Land Management and Environmental Affairs departments. The employee volunteer projects are small in scope with specific goals and measurable results. The large habitat projects are part of a larger Southern Company strategy for restoration of company lands and preservation of important habitats.

Southern Company is in the process of constructing two new nuclear units on the Plant Vogtle site with planned completion and operation in the 2017 – 2018 timeframe. Fortunately the new construction has had minimal impact on the current wildlife habitat activities due to being located in areas that were not being managed for wildlife or areas that had been replanted into pine plantations following construction of the existing units. The new plant will occupy approximately 380 acres. The construction activities are encompassing an additional 500 acres. Southern Nuclear is working with local partners such as the Georgia Department of Natural Resources and the Savannah River Ecological Lab in developing a land transition plan that will provide a blueprint for converting the temporarily disturbed areas into premium wildlife habitats. These areas will be converted as they are released by the construction company back to Southern Nuclear

#### 1.2.1. Wildlife Team

The wildlife team is comprised of employees from across the plant site. Plant Vogtle's Team Leader is the site environmental specialist. General oversight and assistance comes from the Environmental Affairs organization at the corporate office. There are multiple team leaders each associated with the different site projects. There is a blue bird trail leader, a Wood Duck nesting box leader, a forestry manager, Gopher Tortoise program lead, purple martin lead, pollinator program lead and deer management lead. The wildlife team has an internal website where members can post information and pictures about their projects and communicate with other members and find resources for their projects.

#### 1.2.2. Ecological Background

Undertaking habitat enhancement projects on a corporate site adds ecological and functional value to both the immediate area and the entire ecosystem. Furthermore, connective efforts have shown greater results than isolated actions. It is important to understand the site's ecologic location and its relation to native flora and fauna. The following section provides information necessary to understand the ecological background of the land surrounding Plant Vogtle.

The U.S. Department of Agriculture (USDA) Forest Service (USFS) uses a land classification system of terrestrial ecoregions as described by Robert G. Bailey.<sup>1</sup> This classification of terrestrial ecoregions is hierarchical, and is based on elements of climate, geology, topography, and vegetation. This widely recognized system separates the United States into large domains, followed by divisions in which provinces are described. Ecoregions are a geographically based system for organizing our knowledge about ecosystems and ecosystem responses to our management. They provide a framework for prioritizing land conservation, preservation and restoration projects. The USFS National Hierarchy is a classification system that includes eight levels of nested map units of which 4 are commonly used in site habitat projects: domain, division, province, and section.

<sup>&</sup>lt;sup>1</sup> Bailey, R.G. 1995. Description of the ecoregions of the United States. 2nd edition. USDA Forest Service Miscellaneous Publication 1391. U.S. Department of Agriculture Forest Service, Washington, District of Columbia.

Plant Vogtle is part of the Southeastern Plains ecoregion province. The site is further defined as being in two Level IV Ecoregions: the Sandhills and the Southeastern Floodplains and Low Terraces. These irregular plains have a mosaic of cropland, pasture, woodland, and forest. Natural vegetation was predominantly longleaf pine, with smaller areas of oak-hickory-pine and Southern mixed forest. Streams in this area are relatively low-gradient and sandy-bottomed. The Vogtle property is primarily forest with 1800 of the 3200 acres being in either pine plantation or mixed pine-hardwood forests. The drains and river bottoms are comprised of mixed hardwood timber. All recent plantings have been longleaf pine which will be un-even aged managed on long rotations.

The forest managers actively collect information of stand age, height, growth rate, basal area, stems per acre, pine regeneration priority and timber volume estimates. Most of the timber is in an un-even age management regime. Prescribed burning will be used in the pine and pine-hardwood stands to reduce forest floor litter and herbaceous competition, decrease wildfire, insect and disease problems and to stimulate growth in the pine stands. The forest managers use both winter and growing season burns on a two to five year rotation. Some thinning will be used as a silviculture method of improving stand quality and increasing light penetration in the pine and pine-hardwood stands. Small areas have been carved out of the forest to allow for food plot planting and to create naturally regenerated grassy areas.

The wildlife team has been diligent to keep projects focused on the existing and native habitats and keystone species for this area. The longleaf pine forest supports such a large variety of species it is easy for the team to develop a wide range of projects that benefit our most abundant habitat.

### 2. Development

#### 2.1. Site Inventory

Conducting a thorough inventory of the plants and animals present at the site is a priority of the Wildlife Team, as an inventory helps the Plant Vogtle Wildlife Team members to become familiar with the plants, animals, and habitats found at the site. The wildlife inventory is an ongoing process that provides useful information to the Plant Vogtle Wildlife at Work program and any future outreach and education projects. The goal is to understand the site habitats by compiling a relatively comprehensive list of resident and transitory (including migratory) species.

As part of the Plant Vogtle license renewal process a comprehensive Threatened and Endangered Species survey was conducted on the Plant Vogtle site and associated transmission corridors. This survey was conducted in 2006 and focused only on T & E species onsite. During this survey the only state threatened plant observed was the Bay Star-vine located along the wooded bluff bordering the Savannah River. Beginning in 2008 as part of the Multi-state Sandhills Ecological Restoration project (Sandhills program) Plant Vogtle wildlife team members assisted Georgia Department of Natural Resources employees with annual vegetation, bird and reptile surveys on the plant property. The initial vegetation survey was conducted in October of 2008; the first bird survey was completed in June 2009 with the initial reptile and amphibian survey conducted later in the year. The surveys by DNR included all species identified at 10 predetermined locations. The Sandhills program is particularly interested in a few keystone species in Georgia, as seen below.

Scientific Name	Scientific Name Common Name			SWAP Priority				
Mammals		Alabama	Florida	Georgia	South Carolina			
Sylvilagus floridanus	Eastern Cottontail Rabbit		Х	Ŭ				
Sciurus niger shermani	Sherman's Fox Squirrel		Х	x	х			
Geomys pinetis pinetis	Southeastern Pocket Gopher	х	Х	x				
Podomys floridanus Florida Mouse			Х					
Ursus americanus floridanus	Florida Black Bear	Х	Х	Х				
Spilogale putorius	Spotted Skunk	Х	Х					
Mustela frenata	Long-tailed Weasel	х	х					
Birds								
Colinus virginianus	Northern Bobwhite		х	×	х			
Elanoides forficatus	Swallow-tailed Kite	х	х	x				
Ictinia mississippiensis	Mississippi Kite		х					
Falco sparverius paulus	Southeastern American Kestrel	х	х	×	х			
Columbina passerine	Common Ground-Dove		х		х			
Athene cunicularia floridana	Florida Burrowing Owl		х					
Melanerpes erythrocephalus	Red-headed Woodpecker		х					
Picoides villosus	Hairy Woodpecker		х					
Picoides borealis	Red-cockaded Woodpecker	х	х	х	х			
Colaptes auratus auratus	Northern Flicker		х					
Sitta pusilla	Brown-headed Nuthatch		х		х			
Aimophila aestivalis	Bachman's Sparrow	х	х	×	х			
Ammodramus savannarum	Grasshopper Sparrow		Х		х			
Spizella pusilla	Field Sparrow				х			
Ammodramus henslowii	Henslow's sparrow	х	Х	х	х			
Lanius ludovicianus migrans	Migrant Loggerhead Shrike		Х	х				
Dendroica discolor	Prairie Warbler				х			
Amphibians								
Ambystoma tigrinum	Tiger Salamander		Х		Х			
Ambystoma cingulatum	Flatwoods Salamander	х	Х	х	Х			
Notophthalmus perstriatus	Striped Newt		Х	х				
Pseudacris ornata	Ornate Chorus Frog		Х					
Rana capito	Gopher Frog	Х	Х	Х	Х			
Rana sevosa	Mississippi Gopher Frog	х						
Hyla andersonii	Pine Barrens Treefrog	х	Х		Х			
Pseudacris triseriata	Upland Chorus Frog				х			
Pseudobranchus striatus striatus	Broad-Striped Dwarf Siren				Х			
Reptiles								
Terrapene carolina bauri	Florida Box Turtle		Х					
Deirochelys reticularia	Chicken Turtle		Х		X			
Gopherus polyphemus	Gopher Tortoise	Х	Х	Х	x			
Sceloporus woodi	Florida Scrub Lizard		Х					
Eumeces egregius lividus	Bluetail Mole Skink		Х					
Eumeces inexpectatus	Southeastern Five-lined Skink	Х						
Neoseps reynoldsi	Sand Skink		Х					
Heterodon platirhinos	Eastern Hognose Snake		Х					

Table 2.1.1 State Wildlife Action Plan Species of Concern

Heterodon simus	Southern Hognose Snake	x	х	х	х
Drymarchon couperi	Eastern Indigo Snake	х	х	х	
Pituophis melanoleucus mugitus	Florida Pine Snake	x	х	×	х
Pituophis melanoleucus lodingi	Black Pine Snake	x			
Lampropeltis calligaster	Mole Kingsnake		х		
Lampropeltis getula getula	Eastern Kingsnake	x	х		
Lampropeltis getula holbrookii	Speckled Kingsnake	x			
Stilosoma extenuatum	Short-tailed Snake		х		
Crotalus adamanteus	Eastern Diamondback Rattlesnake	x	x	×	х
Ophisaurus mimicus	Mimic Glass Lizard	x		х	х
Ophisaurus attenuatus	Slender Glass Lizard				х
Rhineura floridana	Florida Worm-lizard			х	
Tantilla relicta	Florida Crowned Snake			х	
Micrurus fulvius	Eastern Coral Snake	x			Х
Highlighted Species found at Pla	nt Vootla				

Highlighted Species found at Plant Vogtle

#### 2.2. Timeline of Completed Activities and Future Goals

Plant Vogtle has a number of long term and short term projects that are currently underway. The long term projects include the habitat level improvement projects. The Red Cockaded Woodpecker Safe Harbor agreement is for 50 years, which began in 2007. This commitment includes 2-3 year rotational prescribed burning and understory herbicide treatment on the acreage within the project. The Gopher Tortoise Candidate Conservation Agreement with Assurances (CCAA) is a 20 year agreement. Years 1-5 are for establishing population and years 5-20 are for monitoring, fidelity and recruitment. Plant Vogtle anticipates signing this agreement in the near future as soon as details can be worked out with the Georgia Department of Natural Resources. The project will require an annual report by the Wildlife Team once translocations have occurred. Our partnership with Georgia Department of Natural Resources for the Sandhills Ecological project was over three year duration. Vegetation surveys were conducted semi-annually for three years. Avian counts are conducted annually during the breeding season. The baseline Gopher Tortoise survey which was completed as part of the CCAA will also be used for the Sandhills project.

The nest box monitoring program has four species specific projects, eastern blue birds, wood ducks, purple martins and peregrine falcon. The eastern blue bird nest box trail was established in 1993 along with the original wood duck boxes. The purple martin project was established in 2007. The peregrine falcon project was established in 2008 with installation of the nesting box

Plant Vogtle's Pollinator program consists of smaller projects across the plant site. Pollinator friendly practices were implemented into the landscaping starting in 2007. Each year the team has chosen at least one area to convert or enhance with pollinator friendly plants.

The Deer Management team has been a partner of the Wildlife team since initial certification in 1993. The Deer Management team focuses primarily on white-tailed deer and wild turkey. This team has its own internal website which contains information on food plots, sightings, habitat quality in the hunting zones and harvest records.

### 3. Implementation

#### 3.1. Mission of Plant Vogtle's Wildlife at Work program

Plant Vogtle strives to be a good steward of the land and wildlife. Through habitat restoration, improvement and protection Plant Vogtle endeavors to promote wildlife abundance, heath and quality of life.

# Project #1 Increase nesting success and adult viability of resident and migratory bird populations using Plant Vogtle lands.

**Reasoning Behind Project:** Urbanization has caused loss of habitat for all of our chosen bird species. Artificial nesting sites have long been used as a tool to promote nestling success for blue birds, purple martins and wood ducks. Plant Vogtle offers a great location for all of these species and more.

*Project's Background Information:* The nesting programs encompass the entire site. Nest boxes and other structures are placed in locations that are most beneficial to the targeted species. The projects involve numerous employees from the facility.

- Objective #1. Maintain blue bird trail success
  - **Prescriptions**: Blue bird nesting success is dependent upon the dedication of the volunteers who monitor, maintain and manage the nesting sites. The program has a leader who manages the program. The program includes training of volunteers, coordination of nest box assignments, nest box maintenance, trending of nest box success resulting in optimum box location.
  - **Essential habitat Components**: Special care is taken during location selection for these boxes so that the location provides optimum habitat for the blue birds. Choosing the right location is the key to providing shelter, food and water.
  - **Monitoring:** All nest boxes are assigned to a volunteer who monitors in accordance with the recommended practices of the NestWatch program through the Cornell Lab of Ornithology.
- **Objective #2.** Increase Wood Duck next box availability and monitoring
  - **Prescriptions**: Wood Duck nesting success is dependent upon the dedication of the volunteers who monitor, maintain and manage the nesting sites.
  - **Essential habitat Components**: Special care is taken during location selection for these boxes so that the location provides optimum habitat for the ducks. Choosing the right location is the key to providing shelter, food and water.
  - **Monitoring:** All nest boxes are assigned to a volunteer who monitors in accordance with the recommended practices.

- **Objective #3.** Increase Purple Martin nesting structures and monitoring
  - **Prescriptions**: Purple Martin nesting success is dependent upon the dedication of the volunteers who monitor, maintain and manage the nesting structures. Activity around each group of structures is observed throughout the nesting season, with nesting success documented at the end of the year when the structures are cleaned out.
  - Essential habitat Components: Plant Vogtle is a prime location for the martins; there are multiple large bodies of water and open areas for hunting. The condos are placed according to recommended guidelines to increase the nestling success and prevent predation.
  - **Monitoring:** Each of the condos have a dedicated care taker who monitors, cleans and repairs the units annually. The fledgling success and information is recorded and kept as part of the team's records.
- **Objective #4**. Provide raptor nesting and perch site
  - **Prescriptions**: A falcon nest box was erected on the roof of the turbine building, the highest accessible building on the plant site.
  - **Essential habitat Components**: Peregrine falcons are not common in areas as far south as Plant Vogtle. The falcon has wintered at the plant site since 2007. The plant site is ideal habitat for the peregrine falcon; it has a multitude of tall buildings from which to perch and hunt and a healthy population of pigeons and other prey. The nesting structure was added in fall 2008 with hopes that the falcon will attract a mate and continue to winter in the area.
  - **Monitoring:** At this time the team has one dedicated employee who monitors falcon sightings and maintains the nesting structure.

#### Project #2 Cooperative Habitat Management of native species within the Sandhills habitat.

**Reasoning Behind Project:** Only a fraction of sandhills habitat is currently planted in native species. The sandhills were historically characterized as longleaf pine savannahs. Longleaf pine ecosystems play host to numerous declining and keystone species.

**Project's Background Information:** Southern Company as a whole has a strategy to restore native species, particularly longleaf pine within the historical range, on company owned lands. The company foresters partner with the wildlife team to collaborate on habitat restoration that benefit the team and stay in-line with the company's larger goals.

- Objective #1. Red cockaded Woodpecker Safe Harbor Agreement
  - **Prescriptions**: Red cockaded woodpeckers (RCW) are an endangered species throughout their range. Although no woodpeckers are known to reside on the site there are colonies located within feeding range. If these birds do use the Vogtle site as feeding grounds or if a family would choose to move onto the site the team, including management, want to provide every opportunity for success by managing the available lands in a manner consistent with their habitat requirements.
  - **Essential habitat Components:** RCWs nest in older longleaf or loblolly pine, at least 10 inch circumference, forests with 90ft<sup>2</sup> basal area per acre or less with a savannah like understory. Foraging habitat best practices include 40ft<sup>2</sup> to 80 ft<sup>2</sup> of basal are per acre with open midstory and hardwood less than 20 ft<sup>2</sup> of basal per acre. On the tracts of older forest which provide enough acreage for foraging and or possible translocation the company foresters maintain an aggressive prescribed burning, thinning and herbicide (if needed) approach to provide quality habitat for potential birds.
  - Monitoring: The RCW Safe Harbor agreement is a 50 year agreement between Southern Nuclear, Georgia Power, Georgia Department of Natural Resources and US Fish and Wildlife. Our commitments include specified thinning, rotational prescribed burning and aggressive hardwood management.
- **Objective #2** Reintroduction of Gopher Tortoises through a Candidate Conservation Agreement with Assurances
  - **Prescriptions**: The gopher tortoise is listed as a state threatened species in Georgia. The agreement will provide rescue for animals displaced by development with hopes that success of the program will lead to translocation onto other industrial properties. The gopher tortoise reintroduction project is a beneficial companion to the existing RCW Safe Harbor agreement because silviculture practices agreed to in the SHA provide the same type of habitat that is preferred by gopher tortoises. The large tracts of land available on Plant Vogtle allow for translocation of tortoises in numbers that will lead to self-sustaining populations. Other expected benefits include extending the geographic extent and genetic robustness of adjacent tortoise populations currently on the Yuchi WMA.
  - Essential habitat Components: Gopher tortoises are endemic to the sandhills habitat. Tortoises excavate long burrows in well drained sandy soils and are closely associated with longleaf pine forests. Gopher tortoises feed primarily on plants associated with open canopy forests including wiregrass, broadleaf grasses, peas/beans and fruit. Recent studies indicate that tortoises can have a large foraging and breeding range using multiple burrows within that range. The tracts of land committed for translocation of tortoises are protected from development pressures due to the company's commitment of buffer lands within the near proximity of Plant Vogtle.
  - **Monitoring:** The program includes a large commitment from Plant Vogtle and its wildlife team for monitoring, recordkeeping and management of the translocated tortoises.

• **Objective #3** Identification and relocation of the Southeastern Pocket Gophers discovered during pre-construction work for Vogtle Units 3 & 4.

#### • Prescriptions:

Three colonies of southeastern pocket gopher (*Geomys pinetis*) were discovered within two areas of upcoming land disturbance. Georgia Department of Natural Resources (DNR) lists this species as state threatened. There were no immediate conservation concerns but Southern Company recognized the ecological value of the species in the ecoregion where our project site resides. Personnel from SNC Environmental Affairs, Georgia Power, and Georgia DNR collaborated for a voluntary live trapping and relocation effort of this protected species to other suitable habitat on our site. This voluntary pilot study initiated by Southern Nuclear Company will provide essential data to DNR biologists to help further the understanding of the distribution, ecology, and future management strategies of this species.

#### • Essential habitat Components:

The pocket gophers will be relocated to suitable locations adjacent to other gopher colonies located within the existing Red Cockaded Woodpecker Safe Harbor Agreement area currently owned and operated by Georgia Power/Southern Nuclear. A small area of the topsoil at the relocation site will be scarred to facilitate gopher burrowing.

• Monitoring:

A GPS location will be taken for each location where a gopher was captured and subsequently relocated. GPS data will be provided to DNR personnel. A pedestrian survey of each of the relocation sites will be conducted once a week for four weeks. Observations made by SNC biologists on mounding activity will be provided to DNR biologists.

• **Objective #4** Identification and relocation of the Sandhills Milkvetch plants discovered during preconstruction work for V ogtle Units 3 & 4.

#### • Prescriptions:

An area populated with approximately 15 – 20 stems of sandhills milk-vetch (*Astragalus michauxii*) was discovered within an area of upcoming land disturbance. Georgia Department of Natural Resources (DNR) lists this species as state threatened. Personnel from SNC Environmental Affairs, Georgia Power, Georgia Plant Conservation Alliance (GPCA), and DNR have collaborated for a voluntary relocation effort of this protected species to other suitable habitat on our site. This voluntary relocation project initiated by Southern Nuclear will provide DNR biologists with important data regarding the relocation potential of this species to help future management strategies of this species.

#### • Essential habitat Components:

The rolling sandhills habitat common to the Vogtle site is typical habitat for these plants. The sandhills milkvetch will be relocated to a similar pine forest ecosystem within the existing Red Cockaded Woodpecker Safe Harbor Agreement area currently owned and operated by Georgia Power/Southern Nuclear.

#### • Monitoring:

A GPS location will be taken for the area where the plants were extracted and subsequently relocated. GPS data will be provided to DNR. A pedestrian survey of each of the relocation sites will be conducted once a week to determine the success of the relocation efforts. Observations made by SNC biologists will be provided to DNR biologists. Seeds will be collected from the relocated plants and sent to the Georgia Plant Conservation Alliance for propagation and study.

#### Project #3 Pollinator Program.

*Reasoning Behind Project:* Due to loss of habitat native pollinator populations have been on a steady decline.

**Project's Background Information:** Native pollinator populations have struggled due to loss of habitat, disease and pesticide use. A number of employees have been or currently are domestic beekeepers. Due to the recent devastation of domestic bees because of Colony Collapse Disorder these employees have been motivated to take action to address the loss of pollinators.

- Objective #1 Introduce native wildflower and pollen producing plants into facility's landscape plans.
   Prescriptions: There are many opportunities to improve the landscaping around the plant buildings to benefit pollinators. Plant Vogtle's pollinator program leads work diligently to get native plants with pollinator benefits worked into landscape changes when possible.
  - **Essential habitat Components**: Pollinator success is dependent upon plant selection that will provide adequate food throughout the year. Because of plant Vogtle's latitude populations of pollinators migrate through the site early in the season. The team has worked to change landscaping habits to include seasonal and year round foraging plants particularly for the migrant populations.
  - **Monitoring:** No formal monitoring exists for the pollinator program other than visual observation of pollinator use.

#### Project #4 Cooperative Habitat Management for game species.

**Reasoning Behind Project:** Hunting for white-tail deer and wild turkey is allowed at each of the Southern Nuclear's plant sites. Hunting was originally allowed in order to control deer populations that had become out of control on the large tracts of protected lands. Over time the employees have come to appreciate hunting the property as a resource for food and recreation. Hunters are some of the best conservationists, understanding the need for habitat and population management.

**Project's Background Information:** Many of our wildlife team members are avid hunters. Over time the employees which hunt have been an integral part the habitat management and forest management programs.

- **Objective #1** White tail deer population management.
  - **Prescriptions**: Active management of the site's white-tail deer is essential to maintain a healthy population. SNC sites were initially treated as wildlife sanctuaries as opposed to managed wildlife habitats. Over time this resulted in an unchecked increase of the herd size, with evidence of crop and habitat destruction from the herd and the increased possibility of disease due to the general poor health of the herd. With the assistance of state game managers SNC was able to develop a hunting program to manage the resident population. Because of laws concerning possession of weapons on nuclear plant properties bows are the only weapons allowed.
  - **Essential habitat Components:** In the southeast white tail deer forage on grasses, acorns and other shrubby plants. The open grassy areas and forests at Plant Vogtle provide ample foraging opportunity. The deer often take advantage of turkey food plots in the winter planted by the wildlife team.
  - **Monitoring:** Hunters are required to sign in and out at the checkpoint for all hunting related activities while on the site. Each take is recorded and includes, gender, antler count, weight, approximate age and location. The program also uses trail cams to monitor activity in high use areas. The deer management team has their own internal website where they post pictures, articles, personal stories and keep records.

#### • Objective #2 Wild Turkey population management.

**Prescriptions**: There have long been existing populations of wild turkey on 0 Vogtle plant lands. As part of the Southern Company strategy on reforestation and Right of Way (ROW) management, landscape improvements at Plant Vogtle have provided excellent opportunities for growth of the wild turkey population. Using resources from the National Wild Turkey Federation, Georgia Department of Natural Resources and others Plant Vogtle and Georgia Power, (property owner) have developed ROW and timber management strategies to benefit the turkey population. The National Wild Turkey Federation, Energy for Wildlife program is a comprehensive turkey management program aimed to help utilities utilize their ROW lands to be maximum benefit to turkeys and other species which use similar habitat. Southern Company, including Plant Vogtle became a charter member of the Energy for Wildlife Program in 2006. The Forestry for Wildlife Partnership Program (FWP) was formed by the Georgia Department of Natural Resources (DNR), Wildlife Resources Division (WRD) and corporate forest landowners to develop a formal, comprehensive, wildlife conservation partnership program. Georgia Power Company (GPC), a subsidiary of Southern Company and part owner of Plant Vogtle, became a FWP partner in 1999 for building wildlife conservation practices into its forest management programs and has continued to receive partnership status each year.

- Essential habitat Components: The wild turkey management strategy includes, tree thinning, prescribed burning, herbicide treatment, herbaceous or woody competition control, food plots, and integrated vegetative management. Integrated Vegetation Management (IVM) is used to control undesirable vegetation on the ROW floor. IVM is defined as "controlling vegetation by using a process that balances the use of mechanical, biological and chemical methods to establish and maintain a vegetative cover that is compatible with the environment, economically feasible and socially acceptable." The wildlife objective is to establish early succession vegetation that benefits most species game and non-game. A properly managed ROW will provide various food sources, nesting cover and protection from predators for many species of wildlife.
- **Monitoring:** Turkey hunters have the same set of requirements as deer hunters including recording any harvests. Most of the population monitoring is completed by review of the trail cameras that record activity at some of the more popular feeding areas.

### 4. Evaluation and Project Status

Project #1 Increase nesting success and adult viability of resident and migratory bird populations using Plant Vogtle lands

- Original blue bird and wood duck nest boxes were constructed in 1993. Purple Martin houses were erected in the fall of 2007. The peregrine nesting box was erected in 2008.
- The blue bird team consists of approximately 12 volunteers each year headed by Don Goodwin. Two employees oversee the purple martin structures (Darryl Huff and Mike Odom). Mike O'Meara is the team leader for the wood duck nest box program and the Peregrine activities are monitored by volunteer Rick Conti. Mike O'Meara is the team leader for the wood duck nest box program. Peregrine activities are monitored by volunteer Rick Conti. The peregrine program is modeled after guidance provided by the Electric Power Research Institute.
- There are no plantings associated with this project.
- The volunteers are provided with egg identification information to determine species. In the cases where flying squirrels have taken up residence the boxes are usually left for the squirrels and a new box is erected nearby to replace the occupied one. At this point in time we have not had any other species try to inhabit our duck box, martin houses or peregrine box.

The nest box programs are always very popular programs with numerous volunteers. Periodically the programs are reviewed by Environmental Affairs or outside agencies to provide recommendations for changes or improvements.

There are 20 actively monitored blue bird boxes that are monitored throughout the nesting season. Some boxes had to be removed due to recent construction activities. New sites will be selected for these boxes. Annual reports for the program are included in Section 5.

The purple martin houses were not occupied their first season (2008). In 2009 all three houses were occupied. The most recent house erected in 2012 also has activity. There are a total of 4 purple martin "condos" (48 nesting structures).

Because of the remote location of the wood duck boxes they are only monitored following the nesting season. The volunteers approximate the success of fledglings, clean the box and repair as needed.

Artificial nest boxes have greatly increased the success of our chosen bird species. The nest box programs provide an excellent mechanism to get employees involved in wildlife programs. Most of Plant Vogtle's volunteers started as nest box monitors, their enjoyment of the project lead them to branch out into different projects. The blue bird box trail is one of our most visible projects constantly reminding our employees and visitors of Plant Vogtle's dedication to wildlife programs.

Upon completion of the multiple construction projects associated with the addition of two new nuclear units the team will be able to identify new locations for blue bird and wood duck boxes.

Project #2 Cooperative Habitat Management of native species within the Sandhills Habitat

- Restoration of native species within the Sandhills habitat has been an ongoing project for many years. The RCW Safe Harbor Agreement was implemented in 2007 after a year of work between SNC, Georgia Department of Natural Resources and Georgia Power Company. The Gopher Tortoise CCAA is in the final stages, awaiting approval by U.S. Fish and Wildlife. The multi-state sandhills restoration grant was approved in 2009. Background work for this project began in October 2008 with the first bird surveys completed in June 2009.
- All of the projects dedicated to restoration of native species have involved numerous Plant Vogtle volunteers, Georgia Department of Natural Resources non-game division, Georgia Forestry Commission, Georgia Power and Southern Nuclear Environmental Affairs.
- The plantings associated with this project include long leaf pine and wire grass.
- The land managers use prescribed burning, thinning, mowing and herbicide to control invasive species.

Restoration of native species within the Sandhills habitat has been an ongoing process on the Plant Vogtle lands. The initial work to restore long leaf pine and wiregrass to this area was part of a larger Southern Company initiative to restore longleaf to its native habitat on company lands. As the team began to realize improvements in forest habitat it became evident that there were expanded wildlife opportunities resulting from the changes. Improved habitat has lead to the ability to enter into the conservation agreements for RCW and gopher tortoise. Participation in the Sandhills restoration program will provide invaluable information about the diversity of plants and animals on the property. The program will also help to refine forest management to better suit Sandhills keystone species. The initial bird and vegetation survey results can be found in section 5.

The RCW Safe Harbor program and the Gopher Tortoise CCAA both require monitoring once animals are located on site. There currently are no animals on site so no monitoring information is included. The initial release of gopher tortoises at Plant Vogtle is awaiting final details of the CCAA being finalized with the Georgia Department of Natural Resources. No specific monitoring is currently in place at the site but the wildlife team is partnering with the DNR by providing the recommended monitoring of 16 tortoises that were released on the nearby Yuchi WMA in September, 2011. Another group of tortoises is scheduled to be relocated to this area in June, 2012 that will also be monitored by team members.

Three southeastern pocket gophers discovered in an area of upcoming land disturbance were trapped and relocated in March, 2010 as part of a pilot study with the Georgia DNR. Surveys were conducted once per week for four weeks looking for mounding activity, with the results of the observations provided to the DNR. One relocated animal established new mounds. The remaining two pocket gophers showed signs of activity but no new mounding. A follow-up study was performed with the University of Georgia in January, 2011 to further determine the feasibility of trapping and relocating pocket gophers. Nine pocket gophers were trapped and tagged with transmitters. Five were relocated to a fresh area, with the four remaining animals placed back in their original location to serve as a baseline. A weekly survey of the tagged gophers was performed over a 10 - 12 week period, tracking their activity and movement. All nine pocket gophers survived the trapping, tagging and relocation with one animal eventually falling prey to predation.

The data provided from these studies will provide essential information for the management and long term survival of this species.

SNC partnered with the Georgia DNR, the Fish and Wildlife Service, and the Georgia Plant Conservation Alliance in May, 2010 to develop a plan for relocating sandhills milkvetch that was discovered in the area of upcoming land disturbance. Sixty-seven stems were extracted and planted in the relocation area inside the Red Cockaded Woodpecker Safe Harbor Agreement area. GPS locations were taken for the relocated plants for future identification and follow-up study. Observations over a four week period confirmed a survival rate of 55% for the relocated plants. In July, 2010, as part of an ongoing study with the Georgia Plant Conservation Alliance (GPCA), seeds were collected from the surviving transplanted milkvetch plants. The seeds were sent to the Georgia state botanical gardens located at the University of Georgia for propagation and study by the GPCA. Additional seeds were collected and provided in June, 2011. SNC has agreed to collect additional seeds when requested by the GPCA as part of the ongoing study.

#### Project #3 Pollinator Program

- Various pollinator friendly species have been planted at the Visitor's center, most recently four butterfly bushes planted in 2011 as part of the Wildlife Team's Earth Day Celebration.
- The site environmental specialist is the lead for the pollinator team. The number of volunteers will vary depending on selected projects and activities.
- Environmental Affairs has had numerous discussions with the construction management team to highlight the benefits of using native and pollinator preferred species when planning landscaping around the new buildings and the necessity of eliminating invasive species.

Interest in pollinator programs initially began with employees who were/are domestic bee keepers and were familiar with the Colony Collapse Disorder that devastated bee populations nationwide. Interest grew as other SNC sites developed pollinator gardens. The program has gradually grown to include pollinators beyond bees. Education has been the key to employing a successful pollinator program. Armed with lists of native plants and their beneficial uses the volunteers have been able to make a difference in existing landscapes and use their influence to encourage the facilities department to follow suit.

The landscaping along the plant entrance was replaced in 2010. In keeping with the projects goal of incorporating pollinator friendly practices into plant landscaping, pollinator friendly plants were planted along the entrance, utilizing native species when possible.

Plant Vogtle conducted an Earth Day themed fund raiser for a young cancer patient that is the granddaughter of a plant employee in 2012 in which "leaves" to a tree were purchased. The Environmental Affairs group is matching the funds raised to purchase 12 - 15 Eastern Redbud trees which will be planted in her honor in the fall at the new Training Center.

#### Project #4 Cooperative Habitat Management for Game Species

- The Plant Vogtle Deer Management group has been around for many years. Coming together as a cooperative effort with the Wildlife Team occurred in 2006. Turkey hunting was approved in 2007.
- Hunting is open to all employees at the Plant site. Curtis Cullum is the lead for the Deer Management group which organizes hunters using the property and maintains the website. Carlton Chambers is the lead for maintaining food plots. Trail cameras are maintained by Mike Odom, Bob Brinkman, Curtis Cullum, and Mike Omera.
- The areas open to hunting are, for the most part, the same forested areas that are included in the sandhills restoration program and RCW safe harbor agreement. Silviculture practices in these areas are dedicated to replanting native species and eradication of invasive plant species.

Hunting programs began at SNC plant sites to control blooming populations of white tail deer. Over time as the deer population at Plant Vogtle has stabilized. A programmatic approach to hunting has lead to quality animals and a healthy population. Use of trail cams has provided valuable insight to the health of animals across the property. In rural Georgia hunting is a way of life passed down generation to generation. Employees who take advantage of the ability to hunt on company lands enjoy and appreciate the benefit. They often provide information about animals and plants and other habitat concerns to the wildlife team and land managers.

Each season a Harvest Record is generated for the deer and turkey takes. Using a combination of the harvest records, verbal and written siting reports, an assessment of the population can be provided by a Georgia Department of Natural Resources game species biologist. The most recent harvest records for white tail deer are provided in Section 5.

Communication by the Deer Management group has been one of the biggest successes of the overall Wildlife Habitat Management program at Plant Vogtle. The employees readily use the group's internal webpage for posting information and pictures, asking questions and reporting any issues. Screen shots from the group's webpage are supplied in Section 5.

Transitioning from traditional game management techniques, food plots and salt licks, has been a challenge for the group. As suggested by WHC biologist, Doug Stephens, the group is working to implement self-sustaining native grass and wildflower meadows. Initiating change to ROW management is the first step toward this improvement. This education project is aimed to increase the awareness of native plantings and their wildlife uses to the Wildlife Team and all employees in hopes that the information will be used in making landscape decisions at the facility and in backyards. These practices are being incorporated into the transition plan for the new construction areas where possible.

#### 4.1. New Projects

Although there have been no totally new projects, one of the broadest projects for Plant Vogtle, the Cooperative Habitat Management of native species within the Sandhills Habitat, was expanded to include new elements as described in the project evaluation and status section:

- Pilot study for the identification and relocation of Southeastern Pocket Gophers discovered during construction prep work for Vogtle Units 3 & 4.
- Identification and relocation of Sandhills Milkvetch discovered during construction prep work for Vogtle Units 3 & 4.
- Partnering with the Georgia DNR by monitoring gopher tortoises relocated to the nearby Yuchi WMA.

### 5. Documentation

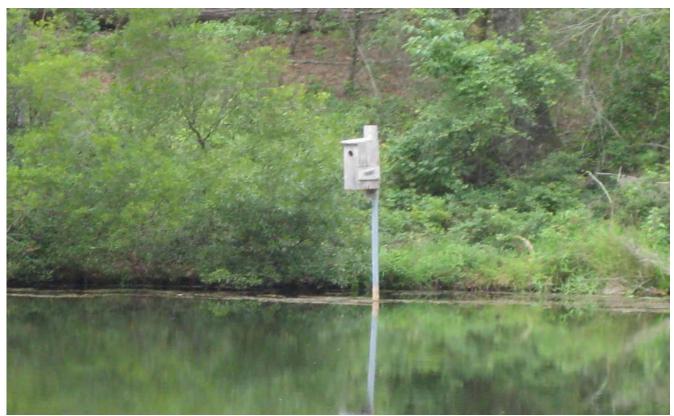
Project #1: Increase nesting success and adult viability of resident and migratory bird populations using Plant Vogtle lands



The Bluebird Trail is Plant Vogtle's longest running project. Boxes are monitored by volunteers during the nesting season.



One of four Purple Martin condos located around the plant site.



A Wood Duck box located on a pond near the Training Center.

Bird House	Number of	Number of	Inhabited by
#	Eggs	Chicks	Squirrels
1	4	4	
2			V
3	5	3	
4		6 10	
5	5	5	
6		e e	V
7	4	1	
8			V
9			V
10	0	0	
11	3	3	
12	3	2	
13	5	4	
14	10	1	
15	10	5	
16	3	3	
17	5	5	
18	4	4	
19	5	5	
20	0	0	
Totals	66	45	4

### 2012 Bluebird Nesting Results May 25, 2012

**Bluebird Monitoring Log** 

### Purple Martin Log - 2011

Date Checked	Location	Type of Units	Number of Units	Number of units used	Number of Birds	Comments
3/9/2011	Plant Wilson					Scouts arrive
5/31/2011	Plant Vogtle STP	Condo	12	~12	~24	
5/31/2011	Plant Wilson	Condo	24	~24	~48	
6/9/2011	Plant Vogtle STP	Condo	12	~12	~24	
6/23/2011	Plant Wilson	Condo	24	~24	~48	
6/23/2011	Plant Vogtle STP	Condo	12	~12	~24	
7/14/2011	Plant Wilson	Condo	24	~24	~30	Birds Apprear to be mifrating south
7/15/2011	Plant Vogtle STP	Condo	12	~12	~7	Birds Apprear to be mifrating south

### Purple Martin Monitoring Log

Plant	Hummingbirds	Songbirds	Bird winter habitat	Turkey	Bobwhite	Deer	Gopher Tortoise
Trumpetcreeper	Х					Х	
Jessamine vine	Х						
Muscadine		Х	X	Х		Х	
Chokeberry		Х	X				
Beautyberry		Х	Х		Х	Х	
American holly		х	x				
Wild roses (multiflora rose)			x	Х		Х	
Yucca	Х						
Hosta	X						
Crossvine	Х						
Trumpet honeysuckle	X						
Red columbine	Х						
Ragweed (common)		Х			Х	Х	
Partridge Pea					Х	Х	
Desmodium (Tricktrefoil)				Х	Х	Х	
Milkpea					Х		
Carolina geranium		Х			Х	Х	
Sunflower		Х			Х	Х	
Mimosa (senstive plant)		Х			Х		Х
Pokeweed		Х				Х	
Silkgrass							Х
Nightshade		Х		Х	Х	Х	
Fuzzybean (Wild bean)		Х			Х	Х	

## Native Forest Plants and Their Wildlife Uses – Plant Vogtle<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Table derived from, Miller, James H. and Karl. V. Miller *Forest Plants of the Southeast and their Wildlife Uses* (Athens: University of Georgia Press, 2005)



Employees prepare to release gopher tortoises at the Yuchi WMA.



The Gopher Tortoise relocation site is located at the Yuchi WMA near the Vogtle property. SNC is partnering with the Georgia DNR by monitoring the activity at the site.



A starter borrow is excavated at the relocation site to encourage burrowing by the relocated tortoises.



A relocated tortoise explores their new surroundings. Georgia DNR will remove the silt fence enclosure after the tortoises have had time to adapt to their new location.



A newly relocated pocket gopher is GPS located to aid in follow-up tracking.



Seeds are collected from a recently transplanted Sandhills Milkvetch to be sent to the Georgia State Botanical Gardens.

American Crow	Eastern Bluebird
American Goldfinch	Eastern Kingbird
Bachman's Sparrow	Eastern Towhee
Blue-gray Gnatcatcher	Eastern Wood-Pewee
Blue Grosbeak	Fish Crow
Blue Jay	Indigo Bunting
Brown Thrasher	Kentucky Warbler
Brown-headed Cowbird	Mourning Dove
Brown-headed Nuthatch	Northern Cardinal
Carolina Chickadee	Northern Mockingbird
Carolina Wren	Northern Parula
Cattle Egret	Ovenbird
Chimney Swift	Summer Tanager
Common Grackle	Tufted Titmouse
Common Nighthawk	Wood Duck
Common Yellowthroat	Yellow-breasted Chat

2009 Bird Survey Results

2008 Sandhills Program Vegetation Survey

2000 Sandining Program Vegetation Survey						
Bald Cypress	Smooth Aster	Giant Cane				
Flowering Dogwood	Stiff-leaved Aster	False Nettles				
Black Gum	Butterfly Weed	Cane				
Hawthorn	Clover	Stinging Nettle				
Mockernut Hickory	Purple Coneflower	Grass				
Red Maple	Dollar-weed	Wiregrass				
Blackjack Oak	Bracken Fern	broadleaf cattail				
Bluejack Oak	Cinnamon Fern	sugarcane plumegrass				
Southern Red Oak	Resurrection Fern	bushy bluestem				
Swamp Chestnut Oak	Royal Fern	slender wood oats				
Turkey Oak	Huckleberry	Crossvine				
Water Oak	Hawthorn	white snakeroot				
White Oak	Sensitive Fern	mottled trillium				
Loblolly Pine	Snakeroot	Virginia dayflower				
Longleaf Pine	Wild Indigo (gopher weed)	Water Locust				
Shortleaf Pine	Wild Ginger	American Beautyberry				
Slash Pine	Trumpet Vine	Blackberry				
Sweetgum	Christmas Fern	Pawpaw				
Sycamore	Prickly Pear	Dwarf Pawpaw				
Tuliptree	False Indigo	Sparkleberry				
Elm	Yellow Jessamine	Wild Azalea				
Tupelo Gum	Muscadine Grape	Reindeer lichen				
Black Willow	Poison Ivy	Button Bush				
Boxelder	Poison Oak	Dog-Fennel				
American Basswood	Spanish Moss	jewelweed				
American Holly	Tread Softly	Canadian Clearweed (richweed)				
American Hornbeam	Wool-Grass	Climbing Aster				
Sugar Maple	Broomsedge	bay starvine				

#### Relocation results for Sandhill Milk-vetch at Plant Vogtle Site, Burke County, GA.

On May 25, 2010, we relocated a total of 31 stems of Sandhill Milk-vetch (*Astragalus michauxii*) from two adjacent locations (N33.143, W81.782 – NAD83). These 31 stems were relocated into three (3) plots. These plots are designated Plots 1-3.

<u>Plot 1</u> (N33.15728, W081.77423) 8 stems planted in 7 locations within the plot 5/8 stems were flowering

<u>Plot 2 (N33.15747, W081.77405)</u> 14 stems planted in 11 locations within the plot 11/14 stems were flowering

<u>Plot 3 (N33.15952, W081.77163)</u> 9 stems planted in 6 locations within the plot 6/9 stems were flowering

On May 27, 2010, we relocated an additional 36 stems from one location (N33.142, W81.782). These stems were relocated into one (1) plot. This plot is designated Plot 4. <u>Plot 4</u> (N33.15741, W081.77364) 36 stems planted in 16 locations within the plot

9/36 stems were flowering 2/36 stems had seed pods

On June 6, 2010, we monitored the success of the relocated stems. <u>Plot 1</u> 6 stems were non-wilting One stem had 5 seed pods All were no longer flowering 2 stems were wilting and brown

#### <u>Plot 2</u>

3 stems were non-wilting 1 stem had 4 seed pods 2 stems had mild wilting 1 stem had 1 seed pod 1 stem was broken No stems had flowers remaining

<u>Plot 3</u> 6 stems were non-wilting 1 stem had 1 seed pod 1 stem had 5 relict flowers 1 stem had mild wilting 1 stem was brown and wilted Plot 4

12 stems were non-wilting

15 stems had mild wilting

1 stem with 3 seed pods

1 stem with 2 seed pods, but with a bent stem

1 stem with 2 relict flowers

On 7/1/2010, we again monitored the success of the relocated stems.

<u>Plot 1</u>

5 stems - 1 stem with 6 seed pods

 $\frac{\text{Plot } 2}{5 \text{ stems} - \text{two with seed pods}}$ 

<u>Plot 3</u> 5 stems – no seed pods

<u>Plot 4</u> 22 stems – no seed pods

On 7/6/2010, we collected 118 seeds from Plots 1 and 2. Seeds were mailed to the State Botanical Garden for propagation.

On 6/6/11, we monitored the regeneration of relocated stems. Many plants show signs of being browsed. We had a control burn in this area this spring.

<u>Plot 1</u>

10 stems in five locations- two stems with seed pods

<u>Plot 2</u> 5 stems in three locations – no seed pods

<u>Plot 3</u> 4 stems in four locations – three with seed pods

Plot 4 24 stems in nine locations– no seed pods

#### Project #3 Pollinator Program

The following two pages contain the news article describing the fundraiser for the young cancer patient and the planting of Eastern Redbuds at the new Plant Vogtle Training Center in her honor.

News Article





Leaves on one of nine Avery Trees at Vogtle bear the

Donations ranged from \$1 per leaf to \$100, she said. Contributors could write their own name on the leaf, or the name of someone else. One giver listed the name of his grandchild who died from leukemia, Black said.

The leaf-laden posters were given to Snuggs along with a framed photo of Vogtle, and an Earth Day gift bag filled with a headscarf and other goodies for Avery and her family.

The next Avery trees at Vogtle will be real ones. Mike Odom, a senior environmental specialist at Vogtle Units 3 and 4, said the Environmental Affairs Department will match the funds raised by names of Units 1 and 2 employees. the Avery Project to purchase real trees in honor of Avery. He expects to plant 10 to 15 redbud trees at the new Vogtle Training Center in the fall when cooler temperatures arrive.

In addition to the tree project, Vogtle employees also supported a wristband fundraiser that the Snuggs family created. Elastic wrist bands imprinted with "brAVERY" and "Isaiah 25:1 were sold for \$5 each. That effort has raised another \$1,500 to date. The text of the Scripture verse referenced is: "O Lord, you are my God; I will exalt you and praise your name, for in perfect faithfulness you have done marvelous things planned long ago."

Contributions are still coming in, said Black, who Has a donation container at her desk on the second floor of the Services Building. The brAvery wristbands are available from Michelle Boykin on

http://sotoday.southernco.com/snc/snc-home/articles/2012/2012\_0518\_avery.html[5/21/2012\_12:49:58 PM]

#### News Artide

the second floor of the Administration Building.

Snuggs, who marked his one-year anniversary at Vogtle on May 2, the day before the check presentation, said the outpouring of support from so many people who had no connection to him was a blessing to him and his family.

"Thank you from the bottom of my heart, and my family's hearts. Words really cannot express the abundance of love and concern that total strangers have shown to me and my family," Snuggs said. "That's something special. You just don't run into that everywhere -or at least I haven't in my working career."



Vogtle Units 1 and 2 Senior Secretary Bonitta Black created the Earth Day fundraiser to help Don Snuggs' family pay for Aveny's medical care.

Snuggs said Avery is doing well. Her cancer is in remission and she is undergoing radiation therapy at Children's Hospital of Alabam a as a precautionary measure against recurrence. When she is stronger, he plans to bring Avery and her parents to Plant Vogtle so they can meet the people who helped her win her fight against cancer.

Employees can keep up with Avery's status at the website caringbridge.org.visit/averysnuggs.



Some of the secretaries and administrative assistants who spearheaded the Avery Project presented Don Snuggs with \$2,906.19 that Vogtle employees donated to help pay for his granddaughter Avery's leukamia treatment. From left to right are Kathy Smith, Julie Thompson, Ann Baker, Snuggs, Bonita Black, Michelle Boykin, Rose Bell and Florrie Jackson.

#### SNC News Article

Company Information	Industry Links	Departments		Associations & Groups	Company Services
Behavioral Expectations	EPRI	Communications	Performance Improvement	AABE	Corporate Travel
Briefing Cards	EPRI Resource Center	Corporate Security	Plant Farley	ANS	FFD /Workhour Rule
Change Model	INPO	DocumentServices	Plant Hatch	APSO	Fleet Timesheet
Charitable Giving	NEI	EACRS	Plant Vogtle	IAAP	Lakeside Cafe
ive Focus Areas	NRC	Emergency Planning	Plant Vogtle 3 and 4	NA-YGN	MSDS
leet Safety Summary		Ethics and Compliance	Records Management	SNC PAC	Nuclear DATAVIEW
Joals Status	Industry News	Facility Planning	Refueling Outages	WIN	Peer Teams
VPO Weekly Principle		Financial Services	Safety and Industrial		Shared Resource Initative
eadership Forums		Fleet Access Authorization	Hygiene		Shuttle Reservation
rinciples for a Strong Iuclear Safety Culture		Information Technology	Severe Accident Management		SNC Store
rinciples for Excellence			SNC Fleet Engineering		
n Nuclear Construction		Medical /FFD Services	Supply Chain		
NC Playbook		Nuclear Development	Technical Training		
Southern Style					
Alabama Power					
Georgia Power					

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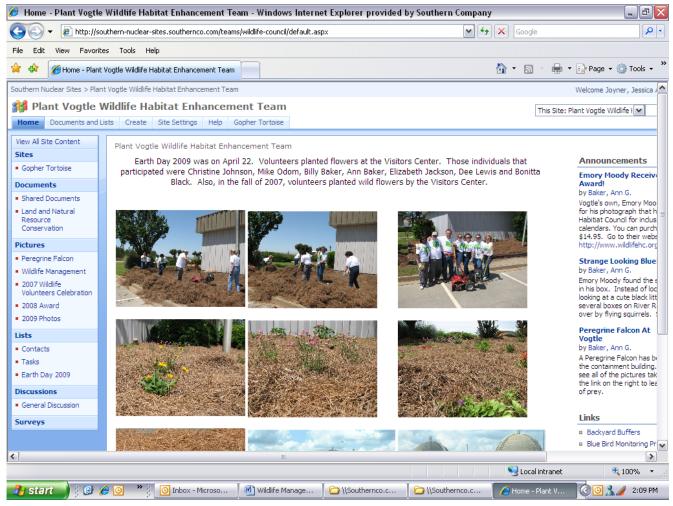
SO Today | Highlights | Jumpwords

SEASON	SEX	APPROX LBS.	APPROX AGE	POINTS
2007	DOE	80LBS	1.5	
	DOE	100LBS	2.5	
	BUCK	160LBS	3.5	8PT
	BUCK	UNKNOWN	UNKNOWN	9PT
ALC PROPERTY.	BUCK	160LBS	2.5	8PT
2008	BUCK	175LBS	2.5	9PT
	DOE	80LBS	1.5	
	DOE	100 LBS	2.5	
	DOE	100 LBS	2.5	
	DOE	90 LBS	1.5	
	BUCK	190LBS	5.5	7PT
2009	BUCK	150LBS	3.5	6PT
	BUCK	130LBS	2.5	6PT
	DOE	90LBS	1.5	
	DOE	120LBS	3.5	
	DOE	100LBS	2.5	
	DOE	110LBS	2.5	
	DOE	100LBS	2.5	
	BUCK	200LBS	4.5	9PT
2010	BUCK	170LBS	4.5	9PT
	BUCK	160LBS	3.5	SPT
	BUCK	160LBS	3.5	7PT
	BUCK	175LBS	4.5	9PT
	DOE	100LBS	3.5	16.200.8
	DOE	90LBS	2.5	
	DOE	80LBS	2.5	
	DOE	80LBS	2.5	
2011	BUCK	150LBS	3.5	7PT
	BUCK	175LBS	4.5	SPT
	BUCK	160LBS	5.5	10PT
	BUCK	100LBS	1.5	5PT
	BUCK	130LBS	1.5	6PT
	DOE	90LBS	2.5	
	DOE	90LBS	2.5	
	DOE	75LBS	1.5	
	DOE	120LBS		
	DOE	90LBS	2.5	
	DOE	90LBS	52.0°26° 10	

#### VOGTLE DEER HARVEST RECORD

#### 5.1. Websites

#### Vogtle Wildlife Team



### Deer Management Team

🏉 Home - Deer Management and Wildlife Habitat - '	Windows Internet Explorer pro	vided by Southern Company 📃 🖪 🔀
🚱 😔 👻 🙋 http://southern-nuclear-sites.southernco.com	n/teams/wildlife-council/deermgmt/defau	ilt.aspx 😧 🐓 🗙 Google 🖉 🗸
File Edit View Favorites Tools Help		
🚖 🎄 🍘 Home - Deer Management and Wildlife Habitat		🏠 🔹 🗟 👘 🖶 Page 🕶 🎯 Tools 👻
Southern Nuclear Sites > Plant Vogtle Wildlife Habitat Enhancemen	t Team > Deer Management and Wildlif	e Habitat 🛛 🕹 Welcome Joyner, Jessica A. 🔻   My Site   My Links 🔻   🔞 🛆
Home Documents and Lists Create Site Settings He		This Site: Deer Management ar
View All Site Content PICTURES		• Links •
Documents Thumbnail	Name Picture	Size http://www.wildlifehc.org/
Shared Documents	Hunting pictures	= http://www.gon.com/
Pictures	MAYBUCK2008(VOGTLE) 3072 x	
2007 CAM pics		http://www.qdma.com/
2008 CAM pics		http://www.wildlifemanagement.info/
PICTURES		<ul> <li>http://applingarchers.com</li> <li>http://southern-nuclear-sites.southernco.com/teams/wildlife-</li> </ul>
CAM VIDEOS	53	council/default.aspx
Lists		http://southern-nuclear-sites.southernco.com/teams/wildlife- council/bluebirds/default.aspx
Contacts	PICT0015 2592 x	
• Tasks		http://http://southern-nuclear-sites.southernco.com/teams/wildlife- coundi/default.asox
Discussions		http://www.mnn.com/southerncompany
General Discussion		http://www.wildlifehc.org/registry_certifiedsites/cert_sites_detail.cfm?
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Recycle Bin		<ul> <li>http://www.wildlifeseeds.com/foodplots/deer/index.html</li> </ul>
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Announcements		Shared Documents
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job supporting new wildlife. We h Turkey, Rabbits, Dove,and Quail		VOGTLE TURKEY HARVEST RECORD Cullum, J. Curtis
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## 6. Species Inventory

### Species Inventory

Trees	Common Name	Scientific Name	
	Ash	Fraxinus spp.	Х
	Eastern Red Cedar	Juniperus virginiana	
	Black Cherry	Prunus serotina	
	Chinquapin	Castanea pumila	
	Common Chokeberry	Prunus virginiana	
	Red Chokeberry	Aronia arbutifolia	
	Crabapple	Malus spp.	
	Bald Cypress	Taxodium distichum	Х
	Flowering Dogwood	Cornus florida	Х
	Winged Elm	Ulmus alata	
	Groundsel Tree	Baccharis halimifolia	
	Black Gum	Nyssa sylvatica	Х
	Hackberry	Celtis occidentalis	
	Hawthorn	Crataegus spp.	Х
	May-haw	Crataegus aestivalis	
	Mockernut Hickory	Carya tomentosa nutt	Х
	Magnolia	Magnoliaceae spp.	
	Southern Magnolia	Magnolia grandiflora	
	Red Maple	Acer rubrum	Х
	Blackjack Oak	Quercus marilandica	Х
	Bluejack Oak	Quercus incana	Х
	Chapman Oak	Quercus chapmanii	
	Cherry bark Oak	Quercus falcata	
	Laurel Oak	Quercus laurifolia	
	Live Oak	Quercus virginiana	
	Myrtle Oak	Quercus myrtifolia	
	Overcup Oak	Quercus lyrata	
	Post Oak	Quercus stellata	
	Sand Post Oak	Quercus margaretta	
	Southern Red Oak	Quercus falcata	Х
	Swamp Chestnut Oak	Quercus michauxii	Х
	Turkey Oak	Quercus laevis	Х
	Water Oak	Quercas nigra	Х
	White Oak	Quercus alba	Х
	Willow Oak	Quercus phellos	
	Ogeechee Lime	N. ogeche	
	Common Persimmon	Diosporys virginianus	
	Loblolly Pine	Pinus taeda	Х

Longleaf Pine	Pinus palustris	Х
Shortleaf Pine	Punus echinata	Х
Slash Pine	Pinus elliottii	Х
Spruce Pine	Pinus glabra	
Red Bay	Persea borbonia	
Eastern Redbud	Cercis canadensis	
Sassafras	Sassafras albidum	
Swamp Black Gum	Nyssa biflora	
Sweetbay	Magnolia virgianiana	
Sweetgum	Liquidambar styraciflua	Х
Sycamore	Platanus occidentalis	Х
Tag Alder	Alnus serrulata	
Tuliptree	Liriodendron tulipifera	Х
Willow	Salix spp.	
Virginia Willow	Itea virginica	
Wild Plum	Prunus sp.	
Northern Red Oak	Quercus rubra	
Shumard Oak	Quercus shumardii	
Black Oak	Quercus velutina	
Hickory	Carya spp	
Yellow Poplar	Liriodendron tulipifera	
Elm	Ulmus spp	Х
Tupelo Gum	Nyssa aquatica	Х
Black Willow	Salix nigra	Х
Boxelder	Acer negundo	Х
Red Mulberry	Morus rubra	
American Basswood	Tilia glabra	Х
River Birch	Betula nigra	
Eastern Hop Hornbeam	Ostrya virginiana	
Eastern Cottonwood	Poulus deltoides	
American Holly	Ilex opaca	Х
Honey Locust	Gleditsia triacanthos	
American Beech	Fagus grandifolia	
American Hornbeam	Carpinus caroliniana	Х
Black Walnut	Julans nigra	
Sugar Maple	Acer saccharum	Х
Black Locust	Robinia pseudoacacia	
Water Locust	Gleditsia aquatica	Х
Common Name	Scientific Name	
American Beautyberry	Callicarpa americana	Х
American Snowbell	Styrax americana	
Bittersweet	Celastrus scandens	
Blackberry	Rubus sp.	х
Linchoony	Kuous sp.	~

Shrubs

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Elliot Blueberry	Vaccinium elliottii	
Highbush Blueberry	Vaccinium corymbosum	
Shiny Blueberry	Vaccinium mercenites	
Coast Pepper-Bush	Clethra alnifolia	
Common Buttonbrush	Cephalanthus occidentalis	
Common ChokeCherry	Prunus virginiana	
Trumpet Creeper	Campsis radicans	
Deerberry	Vaccinium stamineum	
Common Elderberry	Sambucus canadensis	
Fetter-Bush	Lyonia lucida	
Gopher Apple	Licania michauxii	
Hairy Fever-Tree	Pinckneya pubens	
Hoary Azalea	Rhododendron canescens	
American Holly	Ilex opaca	
Bay-gall Holly	Ilex coriacea	
Deciduous Holly	Ilex decidua	
Yaupon Holly	Ilex vomitoria	
Bush Honeysuckle	Lonicera japonica	
Trumpet Honeysuckle	Lonicera sempervirens	
Horse-Sugar	Symplocos tinctoria	
Ink-Berry	Ilex glabra	
Lilac	Syringa spp.	
Sweetbay Magnolia	Mangolia virginiana	
Ohoopee Buckthorn	Bumelia sp. (unnamed)	
Pawpaw	Asimina longifolia	>
Dwarf Pawpaw	Asimina parviflora	>
Piedmont Stagger-Bush	Lyonia mariana	
Wild Plum	Prunus americana	
Possum-Haw	Viburnum nudum	
Possumshaw	Ilex decidua	
Rusty Black-Haw	Viburnum rufotomentosum	
Rusty Lyonia	Lyonia ferruginea	
Saw Palmetto	Serenoa repens	
Sebastian Bush	Sebastiana fruticosa	
Sparkleberry	Vaccinium arboreum	)
Spicebush	Lindera benzoin	
St. John's-Wort	Hypericum sp.	
Titi	Cyrilla racemiflora	
Virginia Willow	Itea virginica	
Wax Myrtle	Myrica cerifera	
Weak-leaf Yucca	Yucca filamentosa	
Winged Sumac	Rhus copellina	
Winterberry	Ilex verticillata	

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Solomon's SealPolygonatum biflorumRed BuckeyeAesculus paviaWild HydrangeaHydrangea arborescensSweet ShrubCalycanthus floridusSandwortArenaria spp.False-Solomon's SealSmilacina racemosaSpider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDoderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Wild Yam	Dioscorea villosa
Red BuckeyeAesculus paviaWild HydrangeaHydrangea arborescensSweet ShrubCalycanthus floridusSandwortArenaria spp.False-Solomon's SealSmilacina racemosaSpider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Blood Root	Sanguinaria canadensis
Wild HydrangeaHydrangea arborescensSweet ShrubCalycanthus floridusSandwortArenaria spp.False-Solomon's SealSmilacina racemosaSpider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Solomon's Seal	Polygonatum biflorum
Sweet ShrubCalycanthus floridusSandwortArenaria spp.False-Solomon's SealSmilacina racemosaSpider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Red Buckeye	Aesculus pavia
SandwortArenaria spp.False-Solomon's SealSmilacina racemosaSpider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDoderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Wild Hydrangea	Hydrangea arborescens
False-Solomon's SealSmilacina racemosaSpider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Sweet Shrub	Calycanthus floridus
Spider WortTradescantia spp.Button BushCephalanthus occidentalisWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaSouthern jointweedGaillardia americanaAnnualsCommon NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Sandwort	Arenaria spp.
Button BushCephalanthus occidentalisButton BushSassafras albidumWhite SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameScientific NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		False-Solomon's Seal	Smilacina racemosa
White SassafrasSassafras albidumSouthern jointweedPolygonella americanaAnnualsCommon NameScientific NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Spider Wort	Tradescantia spp.
Southern jointweedPolygonella americanaAnnualsSouthern jointweedPolygonella americanaAnnual GaillardiaScientific NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Button Bush	Cephalanthus occidentalis
AnnualsCommon NameScientific NameAnnual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		White Sassafras	Sassafras albidum
Annual GaillardiaGaillardia pulchellaDicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Southern jointweed	Polygonella americana
DicerandraDicerandra linearifoliaDodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.	Annuals	Common Name	Scientific Name
DodderCuscuta sp.Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Annual Gaillardia	Gaillardia pulchella
Dog-FennelEupatorium capillifoliumDwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Dicerandra	Dicerandra linearifolia
Dwarf-DandelionKrigia sp.False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Dodder	Cuscuta sp.
False-FoxgloveAgalinis sp.Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Dog-Fennel	Eupatorium capillifolium
Lady's Wood-SorrelOxalis strictaPartridge PeaCassia fasciculataSmartweedPolygonum spp.		Dwarf-Dandelion	Krigia sp.
Partridge PeaCassia fasciculataSmartweedPolygonum spp.		False-Foxglove	Agalinis sp.
Smartweed Polygonum spp.		Lady's Wood-Sorrel	Oxalis stricta
		Partridge Pea	Cassia fasciculata
Sunflower Helianthus		Smartweed	Polygonum spp.
		Sunflower	Helianthus
Partridge PeaCassia fasciculataSmartweedPolygonum spp.		Dwarf-Dandelion False-Foxglove	Krigia sp. Agalinis sp.
Smartweed Polygonum spp.		•	
Sunflower Helianthus		Smartweed	Polygonum spp.
		Sunflower	Helianthus

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	Tickseed Sunflower	Centaurea cyanus	
	Hairy False-Foxglove	Aureolaria pectinata	
	jewelweed	Impatiens capensis	Х
	Canadian Clearweed (richweed)	Pilea pumila	Х
Perennials	Common Name	Scientific Name	
	Climbing Aster	Aster caroliniana	Х
	Smooth Aster	Aster laevis	Х
	Stiff-leaved Aster	A. linariifolius	Х
	Beardtongue	Penstemon grandifloris	
	Bee Balm	Monarda didyma	
	Bedstraw	Galium pilosum	
	Purple Bergamot	Monarda media	
	Blazing Star	Liatris graminifolia	
	Blazing Star	L. pycnostachya	
	Blazing Star	L. tenuifolia	
	Bluebell	Campanulaceae spp.	
	Boykin Cluster-Pea	Dioclea multiflora	
	Butterfly Weed	Asciepias tuberosa	Х
	Canada Milk Vetch	Astragalus canadensis	
	Cat Bells	B. perfoliata	
	Clover	Trifolium spp.	Х
	Columbine	Aquilegia coerulea	
	Purple Coneflower	Echinacea purpurea	Х
	Lance-leaved Coreopsis	Coreopsis lanceolata	
	Dollar-weed	Rhyncosia reniformis	Х
	Cutleaf Harvest-Lice	Agrimonia incisa	
	Elephant-Foot	Elephantopus tomentosus	
	Bracken Fern	Pteridium aquilinum	Х
	Cinnamon Fern	Osmunda cinnamomea	Х
	Resurrection Fern	Polypodium polypodioides	Х
	Royal Fern	Osmunda regalis	Х
	Figwort	Scrophularia spp.	
	Fireweed	Epilobium angustifolium	
	Georgia Bear-Grass	Nolina georgiana	
	Wild Geranium	Geranium maculatum	
	Fragrant Goldenrod	Euthamia tenuifolia	
	Goldenrod	Solidago spp.	
	Goat's Rue	Tephrosia virginiana	
	Huckleberry	Gaylussacia dumosa	Х
	Common Greenbrier	Smillax rotundifolia	
	Hawthorn	Crataegus spp.	Х
	Blueberry	Vaccinium	

Rose	Rosa spp.	
Sensitive Fern	Onoclea sensibilis	Х
Fringetree	Chiananthus virginicus	
Tag Alder	Alnus serrulata	
Red Bay	Persea borbonia	
Carolina Silverbell	Halesia carolina	
Mint	Lamiaceae	
Viburaum	Viburnum spp.	
Rabbit Tobacco	Graphalium obtusifolium	
Snakeroot	Sanicula canadensis	Х
Cat Greenbrier	Smilax glauca	
Beggar Lice	Desmodium spp.	
Wild Indigo (gopher weed)	Baptisia perfoliata	Х
Flowering Euphorbia	Euphorbia corollata	
Leather Flower	Clematis spp.	
Ladies Eardrop	Brunnichia cirrhosa	
New Jersey Tea	Ceanothus americanus	
Leatherwood	Cyrilla racemiflora	
Lizard's Tail	Saururus cernuus	
Wild Ginger	Hexastylis spp.	Х
Trumpet Vine	Campsis radicans	Х
Christmas Fern	Polystichum acrostichoides	Х
Indian Potato	Apios americana	
Lespedeza	Lespedeza spp.	
Mock Orange	Philadelphus inodorus	
Wild Grape	Vitis spp.	
Climbing Hydrangea	Decumaria barbara	
Virginia Sweetspire	Itea virginica	
Supple-Jack	Berchemia scandens	
Baccharis	Baccharis spp.	
Maypops	Passiflora incarnata	
Prickly Pear	Opuntia compressa	Х
Lupine	Lupinus diffusus	
Scented Goldenrod	Solidago odora	
False Indigo	Baptisia leucantha	Х
Indian Pink	Spigelia marilandica	
Innocence	Hedyotis procumbens	
Ironweed	Veronia altissima	
Yellow Jessamine	Gelsemium sempervirens	Х
Spring Larkspur	Delphinium tricorne	
Fawn Lily	Erythonium americanum	
Lobelia	Lobelia sp.	
Milkweed	Asclepias spp.	

Muscadine GrapeVitis rotundifoliaXNeedle-RushJuncus sp.Netted Chain-FernWoodwardia areolataIndian PaintbrushCastilleja coccineaPartridge BerryMitchella repensPepper-VineAmpelopisi arboreaPineland Wild IndigoBaptisia lanceolataPinweedLechea tenuifoliaPlantainPlantago spp.Poison IvyToxicodendron radicansXPoolson IvyToxicodendron radicansXEvening PrimroseOenothera biennisXRottlesnake-MasterEryngium yuccifoliumXSaw GreenbriarSmilax bona-noxSedgeSaw GreenbriarSmilax bona-noxSedgeSkullcapScutellaria sp.SilverbellHalesia DipteraThree-way SedgeDulichium arundinaceumShooting StarDodecatheon meadiaXSummer FarewellDalea pinnataXSweet WilliamDianthus barbatusXTrailing Bean-VinePhaseolus sinuatusXRed TurtleheadChelone obliquaXVioletViola sp.XVirginia CreeperParthonosus aquinquefoliaXWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumXAlfalfaMedicago sativaXKida transperingStulta spenitaXSons Scirpus CyperinusXXSender GayfeatherEnternocisus quinquefoliaXStultapStultas punitaXShot	Swamp Milkweed	Asclepias incarnate	
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Evening PrimroseOenothera biennisRattlesnake-MasterEryngium yuccifoliumRockroseHelianthemum sp.Lyre-leaved SageSalvia lyrataSaw GreenbriarSmilax bona-noxSedgeCarex sp.SilverbellHalesia DipteraThree-way SedgeDulichium arundinaceumShooting StarDodecatheon meadiaSkullcapScutellaria sp.Slender GayfeatherLiatris gracilisSymmer FarewellDalea pinnataSweet WilliamDianthus barbatusTrailing Bean-VinePhaseolus sinuatusTrailing Morning GloryStylisma humistrataTread SoftlyCnidoscolus stimulosusVioletViola sp.Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaScitrpus cyperinusMool-GrassScirpus cyperinusAlfalfaMedicago sativaLittle BluestemAndropogen virginicusRoomsedgeAndropogen virginicusKiland CaneFestuca ovina glaucaLittle SpikegrassChasmanthium sessiliflorum	Poison Ivy		Х
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Slender GayfeatherLiatris gracilisSpanish MossTillandsia usneoidesXSummer FarewellDalea pinnataSweet WilliamDianthus barbatusThistleCirsium spp.Trailing Bean-VinePhaseolus sinuatusTrailing Morning GloryStylisma humistrataTread SoftlyCnidoscolus stimulosusXRed TurtleheadChelone obliquaVioletViola sp.Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumAlfalfaMedicago sativaLittle BluestemAndropogen virginicusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Shooting Star	Dodecatheon meadia	
Spanish MossTillandsia usneoidesXSummer FarewellDalea pinnataSweet WilliamDianthus barbatusThistleCirsium spp.Trailing Bean-VinePhaseolus sinuatusTrailing Morning GloryStylisma humistrataTread SoftlyCnidoscolus stimulosusXRed TurtleheadChelone obliquaVioletViola sp.Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumAlfalfaMedicago sativaLittle BluestemAndropogen virginicusXBroomsedgeAndropogen virginicusXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Skullcap	Scutellaria sp.	
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Sweet WilliamDianthus barbatusThistleCirsium spp.Trailing Bean-VinePhaseolus sinuatusTrailing Morning GloryStylisma humistrataTread SoftlyCnidoscolus stimulosusXRed TurtleheadChelone obliquaVioletViola sp.Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumAlfalfaMedicago sativaLittle BluestemAndropogon scopariusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Spanish Moss	Tillandsia usneoides	Х
ThistleCirsium spp.Trailing Bean-VinePhaseolus sinuatusTrailing Morning GloryStylisma humistrataTread SoftlyCnidoscolus stimulosusXRed TurtleheadChelone obliquaXVioletViola sp.XWild SarsaparillaSmilax pumilaXWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumXAlfalfaMedicago sativaXBroomsedgeAndropogen virginicusXGiant CaneFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorumX	Summer Farewell	Dalea pinnata	
Trailing Bean-VinePhaseolus sinuatusTrailing Morning GloryStylisma humistrataTread SoftlyCnidoscolus stimulosusXRed TurtleheadChelone obliquaXVioletViola sp.XVirginia CreeperParthenocissus quinquefoliaXWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumXAlfalfaMedicago sativaXLittle BluestemAndropogon scopariusXBroomsedgeAndropogen virginicusXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Sweet William	Dianthus barbatus	
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Tread SoftlyCnidoscolus stimulosusXRed TurtleheadChelone obliquaXVioletViola sp.XVirginia CreeperParthenocissus quinquefoliaXWild SarsaparillaSmilax pumilaXWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumXAlfalfaMedicago sativaXLittle BluestemAndropogon scopariusXBroomsedgeAndropogen virginicusXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Trailing Bean-Vine	Phaseolus sinuatus	
Red TurtleheadChelone obliquaVioletViola sp.Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusYankee WeedE. compositifoliumAlfalfaMedicago sativaLittle BluestemAndropogon scopariusBroomsedgeAndropogen virginicusSheep FescueFestuca ovina glaucaLong-leaf SpikegrassChasmanthium sessiliflorum	Trailing Morning Glory	Stylisma humistrata	
VioletViola sp.Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusWool-GrassScirpus cyperinusYankee WeedE. compositifoliumAlfalfaMedicago sativaLittle BluestemAndropogon scopariusBroomsedgeAndropogen virginicusXSheep FescueLong-leaf SpikegrassChasmanthium sessiliflorum	Tread Softly	Cnidoscolus stimulosus	Х
Virginia CreeperParthenocissus quinquefoliaWild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumAlfalfaMedicago sativaLittle BluestemAndropogon scopariusBroomsedgeAndropogen virginicusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Red Turtlehead	Chelone obliqua	
Wild SarsaparillaSmilax pumilaWool-GrassScirpus cyperinusXYankee WeedE. compositifoliumXAlfalfaMedicago sativaXLittle BluestemAndropogon scopariusXBroomsedgeAndropogen virginicusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Violet	Viola sp.	
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AlfalfaMedicago sativaLittle BluestemAndropogon scopariusBroomsedgeAndropogen virginicusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Wool-Grass	Scirpus cyperinus	Х
Little BluestemAndropogon scopariusBroomsedgeAndropogen virginicusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Yankee Weed	E. compositifolium	
BroomsedgeAndropogen virginicusXGiant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Alfalfa	Medicago sativa	
Giant CaneArundinaria giganteaXSheep FescueFestuca ovina glaucaXLong-leaf SpikegrassChasmanthium sessiliflorum	Little Bluestem	Andropogon scoparius	
Sheep FescueFestuca ovina glaucaLong-leaf SpikegrassChasmanthium sessiliflorum	Broomsedge	Andropogen virginicus	Х
Long-leaf Spikegrass Chasmanthium sessiliflorum	Giant Cane	Arundinaria gigantea	Х
	Sheep Fescue	Festuca ovina glauca	
	Long-leaf Spikegrass	Chasmanthium sessiliflorum	
Nettie Urtica spp.	Nettle	Urtica spp.	

False Nettles	Boehmeria cylindrica	Х
Panic Grass	Panicum scoparium	
Pineywoods Dropseed	Sporobolus junceus	
Cane	Arundinaria gigantea	Х
Stinging Nettle	Urtica spp.	Х
Yellow-Star Grass	Hypoxis spp.	
Grass	Poaceae	Х
Plume Grass	Erianthus sp.	
Switchgrass	Panicum virgatum	
Three-awn Grass	Aristida sp.	
Wiregrass	Aristida stricta	Х
Zebra grass	Miscanthus sinensis	
broadleaf cattail	Typha latifolia	Х
sugarcane plumegrass	Saccharum giganteum	Х
bushy bluestem	Andropogon glomeratus	Х
slender wood oats	Chasmanthium laxum	Х
CROSSVINE	Bignonia capreolata	Х
white snakeroot	Agertina altisima	Х
mottled trillium	Trillium maculatum	х
Virginia dayflower	Commelina virginica	Х
bay starvine	Schisandra glabra	Х