

**Preliminary Threatened and
Endangered Species Assessment
For East Edisto- Business Park
Charleston County, South Carolina**

December 2008

Prepared by:

Newkirk Environmental, Inc.
P.O. Box 746
Mt. Pleasant, SC 29465

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1.0 INTRODUCTION:

The following report details methodology and an assessment of survey results for a threatened and endangered species survey completed during the fall of 2008 for an approximate 381 acre tract of land located adjacent to Hwy 17A slightly west of the fork of Hwy 17A and Hwy 61 in Dorchester County, South Carolina (See Figure 1). The endangered species survey was conducted to determine the occurrence of, or potential for, animal and plant species federally listed as endangered or threatened to exist within the boundaries of the referenced site. Completion of this survey was directed by and complies with current state and federal regulations [Federal Endangered Species Act of 1973 (16 USC 1531-1543), the South Carolina Non-Game and Endangered Species Conservation Act of 1974 (58-2384), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) and the Migratory Bird Treaty Act (16 U.S.C. 703-712)].

2.0 METHODOLOGY:

The following threatened and endangered species are listed by the US Fish & Wildlife Service as occurring in, or potentially occurring, in Dorchester County, South Carolina:

Common Name	Scientific Name	Federal Status
Wood stork	<i>Mycteria americana</i>	Federally Endangered
Red-cockaded woodpecker	<i>Picoides borealis</i>	Federally Endangered
Shortnose sturgeon *	<i>Acipenser brevirostrum</i>	Federally Endangered
Canby's dropwort	<i>Oxypolis canbyi</i>	Federally Endangered
Pondberry	<i>Lindera melissifolia</i>	Federally Endangered
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Protected **

**Protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) and the Migratory Bird Treaty Act (16 U.S.C. 703-712).

Existing data from the South Carolina Department of Natural Resources (DNR) was reviewed to locate recorded occurrences of threatened and endangered species within or near the subject site.

At the time of this report, there is no documentation of any federally threatened or endangered species within or immediately adjacent to the referenced tract. As noted by DNR, their records are not assumed complete nor should they be assumed comprehensive; therefore, field surveys should be conducted for more thorough evaluations. Several of the species listed as potentially occurring in the site were eliminated from the survey based upon broad habitat requirements; these species have been indicated with an asterisk. The remaining listed species were included in the assessment.

As noted, field surveys to identify suitable habitat were conducted in the late fall of 2008. During the field surveys, plant communities and habitats were observed and noted to determine if they matched habitat types where the listed species have the potential to occur. If potential habitat was identified at the site, all species observed were, at a minimum, identified to the genus taxonomic level.

A survey for the Red-Cockaded Woodpecker was conducted using the “Guidelines for the Preparation of Biological Assessments and Evaluation for the Red-Cockaded Woodpecker”, V. Gary Henry. These guidelines include methods for identifying areas to survey as well as actual survey methods for determining the presence of the Red-Cockaded Woodpecker. The guidelines state that timber stands exhibiting any of the following criteria should be surveyed when making a determination for the occurrence of Red-Cockaded Woodpeckers. The criteria are:

- * mixed pine hardwood stands over 60 years of age
- * mixed pine and hardwood stands under 60 years of age that contain clumps of pine trees over 60 years of age
- * stands containing pine saw timber, including stands thought to be less than 60 years of age but containing scattered or clumped trees over 60 years of age
- * hardwood-pine over 60 years of age adjacent to pine and pine-hardwood over 30 years in age

3.0 HABITAT CLASSIFICATIONS:

The following is a description and classification of major habitat/community types identified within the site. Also noted is an assessment of suitability for federally listed threatened and endangered species.

3.1 Mixed Hardwood Wetland

A portion of the tract is comprised of mixed hardwood wetlands. This community possesses a mature canopy with a rather sparse understory. The overstory primarily consists of swamp gum (*Nyssa biflora*), swamp chestnut oak (*Quercus michauxii*), pignut hickory (*Carya glabra*), spruce pine (*Pinus glabra*) and sweetgum (*Liquidambar styraciflua*). The midstory is comprised of american elm (*Ulmus Americana*), american hornbeam (*Carpinus caroliniana*), and river birch (*Betula nigra*). Christmas fern (*Polystichum acrostichoides*), netted chainfern (*Woodwardia areolata*), Virginia chainfern (*Woodwardia virginica*), dwarf palmetto (*Sabal minor*), laurel-leaf greenbrier (*Smilax laurifolia*) and carex (*Carex spp.*) are present in the understory of this community. This habitat type does not provide suitable habitat for any of the species listed as potentially occurring in Dorchester County nor were any of the federally listed species observed in this community during field surveys.

3.2 Borrow Pits

There is approximately 56 acres of borrow pits located on the tract. These areas were mined for sand in the past and now have filled with standing water. This community does not provide suitable habitat for any of the species listed as potentially occurring in Dorchester County nor were any of the federally listed species observed in this community during field surveys.

3.3 Open Area

There is a small area near Hwy 17-A that contains a light scattering of loblolly pine (*Pinus taeda*), black cherry (*Prunus serotina*) and sweet gum. The herbaceous layer contains Bermuda grass (*Cynodon dactylon*), bahia grass (*Paspalum notatum*) and dog fennel (*Eupatorium capillifolium*). This community does not provide suitable habitat for any of the species listed as potentially occurring in Dorchester County nor were any of the federally listed species observed in this community during field surveys.

3.4 Pine Plantation

The majority of the tract has been maintained as loblolly pine plantation for timber production. The planted pine is being managed for mainly pulp production with the age of the stands ranging from 10 to 35 years old. A majority of the stands have over 80% canopy closure with little sunlight reaching the forest floor. The stands are interspersed with sweetgum, red maple (*Acer rubrum*) and wax myrtle (*Morella cerifera*) in the understory layers. Due to the age of the on-site trees, the regular schedule of mechanical silvicultural practices and the relative density in the pine plantation, this community does not provide suitable habitat for any of the listed species including the Red-Cockaded Woodpecker.

3.5 Isolated Depressional Wetlands/Gum Ponds

Throughout the property are several isolated depressional wetlands including true gum ponds. These wetland habitats can, for the most part, be described as circular in shape. The overstory was comprised of pond cypress (*Taxodium ascendens*), red maple (*Acer rubrum*) and swamp gum. There were two types of forest floors observed within this habitat type. Some of these isolated wetlands exhibited a sparse herbaceous layer with mostly bare ground present, while other isolated wetlands exhibited a savannah like herbaceous layer with various wetland grasses and ferns. The understory contained false nettle (*Boehmeria cylindrical*), laurel-leaf greenbrier, carex and Virginia chainfern. Some of the isolated wetlands on site containing a more open canopy and savannah-like herbaceous layer could provide suitable habitat for Canby's dropwort and Pondberry. It must be noted that neither Canby's dropwort nor Pondberry were observed during the preliminary pedestrian surveys. It is the opinion of Newkirk Environmental, Inc. that once a landuse plan is finalized for the site, it may be necessary to perform more in depth surveys of the isolated wetlands on a case by case basis depending on proposed impacts.

4.0 LISTED SPECIES AND ACKNOWLEDGED HABITATS:

The following is a brief description of each listed species included in the survey, its recognized habitat and comments regarding survey results for that species.

4.1 The Bald Eagle was delisted from the Endangered Species Act on June 28, 2007. However, the bald eagle remains protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Both federal laws prohibit the "taking" –killing, selling, or otherwise harming eagles, their nests or eggs. As a

result, Newkirk Environmental, Inc. has included this species in this report as any federal actions will likely require coordination with the US Fish and Wildlife Service and/or SCDNR.

The eagle is a very large raptor with a wingspread of nearly 7 feet. This bird is normally associated with coasts, rivers and lakes with adjacent suitable nesting habitat. Comprehensive tree-by-tree surveys for eagle nests were not conducted during this survey, however, based upon SCDNR records that are annually updated and well maintained, no eagles are known to nest in this property or within 1500 feet of this property at the time of this survey.

- 4.2** The **Wood Stork** is a large wading bird characterized by its featherless head and black and white markings. This species nests in colonies known as rookeries and roosts and feeds in flocks, often in association with other species of long-legged water birds. Wood storks utilize freshwater and estuarine wetlands for feeding, nesting and roosting. These sites are utilized for many years and are characterized by woody vegetation or primary cypress or swamp hummocks over open water (USFWS Ogden).

Only a few nesting sites (rookeries) are known in South Carolina, none of which are within or near the site. However, because this species covers vast areas during active foraging, it may occur over a broad region. Wood storks commonly feed throughout the estuarine marshes along the coast and are frequently observed in the surrounding areas during the summer months. Estuarine marshes and impoundments tend to be preferred foraging habitat, however, this species will also use open mature forested wetlands such as the on-site tupelo-cypress swamp. It is important to note that no woodstorks were observed during pedestrian field surveys.

- 4.3** **Red-Cockaded Woodpeckers** are small birds requiring old growth pine forest for cavity excavation, foraging and nesting. The particular habitat associated with this species requires many years to develop and is fire dependant to maintain open mid-story conditions. Due to the age of the on-site pine trees, the regular schedule of mechanical silvicultural practices and the relative subcanopy density in the pine plantation of significant age, it is unlikely that there is ideal suitable foraging or nesting habitat for the Red-Cockaded Woodpecker on-site.

4.4 Canby's dropwort is a medium sized shrub found in the coastal plain of South Carolina where it occupies pond savannahs, the shallow edges of cypress/pond pine sloughs and wet pine savannahs. These sites are characterized by open conditions with savannah like herbaceous layers and are almost always associated with a sandy loam or loam soil underlain with a clay layer. Additionally, these sites require that the groundwater regime remain stable and that the sites must be protected from adverse alterations such as ditching, dams, etc.

The white flower of this species is noted as occurring from May through August, although past surveys indicate blooming in this region occurs during late July-October. Some of the isolated wetlands on site containing a more open canopy and savannah-like herbaceous layer could provide suitable habitat for Canby's dropwort and Pondberry. It must be noted, however, that this plant species was not observed during the preliminary pedestrian surveys. It is the opinion of Newkirk Environmental, Inc. that once a landuse plan is finalized for the site, it may be necessary to perform more in depth surveys of the isolated wetlands on a case by case basis depending on proposed impacts.

4.5 Pondberry is a small fragrant shrub also found in and around small depressional wetlands and sinks with a semi-open canopy. Surveys for this species and its habitat were completed in concert with the surveys for Canby's dropwort. Some of the isolated wetlands on site containing a more open canopy and savannah-like herbaceous layer could provide suitable habitat for Pondberry. It must be noted, however, that Pondberry was not observed during the preliminary pedestrian surveys. It is the opinion of Newkirk Environmental, Inc. that once a landuse plan is finalized for the site, it may be necessary to perform more in depth surveys of the isolated wetlands on a case by case basis depending on proposed impacts.

5.0 CONCLUSION

No threatened and endangered species were observed during this survey. As noted, the on-site hardwood wetlands could potentially provide foraging and nesting habitat for wood storks, although this wetland community is not identified as special or critical habitat and is no different than thousands of acres of similar habitat spread throughout the lowcountry of South Carolina and Georgia. Assuming there are no impacts planned for the on-site hardwood wetlands, it is the opinion of Newkirk Environmental, Inc. that based upon the findings of this survey and report; proposed development of the referenced tract is not likely to cause an adverse impact to the

wood stork population of South Carolina.

Some of the isolated wetlands on site containing a more open canopy and savannah-like herbaceous layer could potentially provide suitable habitat for Canby's dropwort and Pondberry. Neither of these plant species were observed during the preliminary pedestrian surveys, however, it may be prudent to perform more in depth surveys of the isolated wetlands on a case by case basis once a detailed land use plan is developed that would quantify impacts to on-site isolated wetlands.

It should be noted that because of the transitory nature of some of the listed threatened and endangered plants and animals, it is possible that endangered species populations and locations may change over time. Therefore, any potential findings at a later date should be fully investigated. Should significant time lapse between the issuance of this report and development of the property or any other type of legal reliance, it is strongly recommended that an update of this report be completed. The definition of significant time is not absolute but would include passing of annual breeding or migratory seasons.

