

Appendix E
Biological Resources

Tables E-X through E-X provide data on biological resources in the study area.

Table E-1. Invasive Plants Potentially Occurring in the Study Area

Common Name	Scientific Name
Trees	
Tree of heaven	<i>Ailanthus altissima</i> [†]
Chinaberry	<i>Melia azedarach</i>
Princess tree/royal paulownia	<i>Paulownia tomentosa</i>
Chinese tallow tree	<i>Triadica sebifera</i>
Mimosa, silktree	<i>Albizia julibrissin</i>
Paper mulberry	<i>Broussonetia papyrifera</i>
Chinese parasol tree	<i>Firmiana simplex</i>
White mulberry	<i>Morus alba</i>
White poplar	<i>Populus alba</i>
Callery pear (Bradford pear)	<i>Pyrus calleryana</i>
Camphortree	<i>Cinnamomum camphora</i>
Sawtooth oak	<i>Quercus acutissima</i>
Chinese elm	<i>Ulmus parvifolia</i>
Shrubs	
Scotch broom, English broom	<i>Cytisus scoaprius</i>
Thorny-olive	<i>Elaeagnus pungens</i>
Autumn-olive	<i>Elaeagnus umbellata</i>
Twin color bush clover, shrub lespedeza	<i>Lespedeza bicolor</i>
Chinese privet	<i>Ligustrum sinense</i>
Japanese knotweed, fleecflower, Mexican bamboo	<i>Polygonum cuspidatum</i> (=Fallopia japonicum)
Trifoliolate orange, hardy orange	<i>Poncirus trifoliata</i>
Japanese privet, waxy-leaf privet	<i>Ligustrum japonicum</i>
Nandina, sacred bamboo	<i>Nandina domestica</i>
Multiflora rose	<i>Rosa multiflora</i>
Glossy, tall glossy privet	<i>Ligustrum lucidum</i>
European privet	<i>Ligustrum vulgare</i>
Jasmine	<i>Lonicera fragrantissima</i>
Macartney rose	<i>Rosa bracteata</i>
Jerusalem cherry	<i>Solanum pseudocapsicum</i>
Saltcedar, tamarisk, French tamarisk	<i>Tamarix ramosissima</i> , <i>T. parviflora</i> , <i>T. gallica</i> , <i>T. africana</i>
Roundleaf chastetree	<i>Vitex rotundifolia</i>
Vines	
English ivy	<i>Hedera helix</i>
Japanese climbing fern	<i>Lygodium japonicum</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Kudzu	<i>Pueraria montana</i>
Cherokee rose	<i>Rosa laevigata</i>
Chinese wisteria	<i>Wisteria sinensis</i>
Bigleaf periwinkle	<i>Vinca major</i>
Common periwinkle	<i>Vinca minor</i>
Chinese yam	<i>Dioscorea polystachya</i> (=D. oppositifolia)

Common Name	Scientific Name
Asian/oriental bittersweet	<i>Celastrus orbicalatus</i>
Yam-leaved clematis	<i>Clematis terniflora</i>
Purple crownvetch	<i>Securigera varia (=Coronilla varia)</i>
Asian/Japanese wisteria	<i>Wisteria floribunda</i>
Porcelain berry	<i>Ampelopsis brevipedunculata</i>
Grass/sedge	
Cogongrass	<i>Imperata cylindrica</i>
Nepalese browntop, japanese stilt grass	<i>Microstegium vimineum</i>
Chinese silvergrass	<i>Miscanthus sinensis</i>
Itschgrass	<i>Rottboellia cochinchinensis</i>
Johnson grass	<i>Sorghum halepense</i>
Weeping love grass	<i>Eragrostis curvula</i>
Tall fescue	<i>Festuca arundinacea</i>
Dallis grass, Dallas grass	<i>Paspalum dilatatum</i>
Bahia grass	<i>Paspalum notatum</i>
Vasey's grass, Vaseygrass	<i>Paspalum urvillei</i>
Torpedo grass, creeping panic, couch panicum	<i>Panicum repens</i>
Golden bamboo, fishpole bamboo	<i>Phyllostachys aurea</i>
Giant reed	<i>Arundo donax</i>
Pampas grass, silver pampas grass	<i>Cortaderia selloana</i>
Herbs	
Sericea, Chinese bush clover	<i>Lespedeza cuneata</i>
Wart removing herb, marsh dewflower, aneilema, Asian spiderwort	<i>Murdannia keisak</i>
Tropical soda apple	<i>Solanum viarum</i>
Nodding thistle, nodding plumeless thistle, musk thistle	<i>Carduus nutans</i>
Bull thistle	<i>Cirsium arvense</i>
Showy rattlebox	<i>Crotalaria spectabilis</i>
Queen Anne's lace/wild carrot	<i>Daucus carota</i>
Spanish gold, purple or red sesbania	<i>Sesbania punicea</i>
Coco yam, taro	<i>Colocasia esculenta</i>
Dayflower	<i>Commelina benghalensis</i>
Lilyturf	<i>Liriope muscari</i>
Witchweed	<i>Striga asiatica</i>
Ferns	
Swordfern/mariana maiden fern/Torres's fern	<i>Macrothelypteris torresiana</i>
Aquatic	
Alligatorweed	<i>Alternanthera philoxeroides</i>
Brazilian elodea	<i>Egeria densa</i>
Common reed	<i>Phragmites australis</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Giant salvinia	<i>Salvinia molesta, S. bilboa, S. herzoqii, S. auricaulata</i>
Hydrilla	<i>Hydrilla verticillata</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Slender naiad	<i>Najas minor</i>
Water chestnut	<i>Trapa natans</i>
Water hyacinth	<i>Eichhornia crassipes</i>

Common Name	Scientific Name
Water lettuce	<i>Pistia stratiotes</i>
Water primrose	<i>Ludwigia hexapetala</i>
Ambulia	<i>Limnophila sessiliflora</i>
Miramar weed	<i>Hygrophila polysperma</i>
African oxygen weed	<i>Lagarosiphon major</i>
Arrowhead	<i>Sagittaria sagittifolia</i>
Arrow-leaved monochoria	<i>Monochora hastata</i>
Caulerpa	<i>Caulerpa taxifolia</i>
Duck-lettuce	<i>Ottelia alismoides</i>
Exotic bur reed	<i>Sparganium erectum</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Monochoria	<i>Monochoria vaginalis</i>
Mosquito fern	<i>Azolla pinnata</i>
Rooted water hyacinth	<i>Eichhornia azurea</i>
Water spinach	<i>Ipomoea aquatica</i>
Wetland nightshade	<i>Solanum tampicense</i>

Source: South Carolina Exotic Pest Council 2014; South Carolina Department of Natural Resources 2010

Note: Includes invasive plants potentially occurring in the Coastal Plain ecoregion.

Table E-2. Birds of Conservation Concern in the Study Area

Bird of Conservation Concern (BCC)	Probability of Presence
American oystercatcher (<i>Haematopus palliatus</i>)	Breeds April 15 to August 31
Bachman's sparrow (<i>Aimophila aestivalis</i>)	Breeds May 1 to September 30
Black skimmer (<i>Rynchops niger</i>)	Breeds May 20 to September 15
Clapper rail (<i>Rallus crepitans</i>)	Breeds April 10 to October 31
Eastern whip-poor-will (<i>Antrastomus vociferus</i>)	Breeds May 1 to August 20
Kentucky warbler (<i>Oporornis formosus</i>)	Breeds April 20 to August 20
King rail (<i>Rallus elegans</i>)	Breeds May 1 to September 5
Le Conte's sparrow (<i>Ammodramus leconteii</i>)	Breeds elsewhere
Least Tern (<i>Sterna antillarum</i>)	Breeds April 20 to September 10
Lesser yellowlegs (<i>Tringa flavipes</i>)	Breeds elsewhere
Nelson's sparrow (<i>Ammodramus nelsoni</i>)	Breeds elsewhere
Prairie warbler (<i>Dendroica discolor</i>)	Breeds May 1 to July 31
Prothonotary warbler (<i>Protonotaria citrea</i>)	Breeds April 1 to July 31
Red-headed woodpecker (<i>Melanerpes erythrocephalus</i>)	Breeds May 10 to September 10
Rusty blackbird (<i>Euphagus carolinus</i>)	Breeds elsewhere
Seaside sparrow (<i>Ammodramus maritimus</i>)	Breeds May 10 to August 20
Semipalmated sandpiper (<i>Calidris pusilla</i>)	Breeds elsewhere
Swallow-tailed kite (<i>Elanoides forficatus</i>)	Breeds March 10 to June 30
Willet (<i>Tringa semipalmata</i>)	Breeds April 20 to August 5
Wood thrush (<i>Hylocichla mustelina</i>)	Breeds May 10 to August 31
Source: U.S. Fish and Wildlife Service 2018	

Table E-3. Species of Greatest Conservation Need in Study Area

Scientific Name	Common Name
Mammals	
<i>Condylura cristata</i>	Star-nosed mole
<i>Eptesicus fuscus</i>	Big brown bat
<i>Lasionycteris noctivagans</i>	Silver-haired bat
<i>Lasiurus borealis</i>	Red bat
<i>Lasiurus cinereus</i>	Hoary bat
<i>Lasiurus intermedius</i>	Northern yellow bat
<i>Lasiurus seminolus</i>	Seminole bat
<i>Microtus pennsylvanicus</i>	Meadow vole
<i>Mustela vison</i>	Mink
<i>Myotis austroriparius</i>	Southeastern bat
<i>Neotoma floridana</i>	Eastern woodrat
<i>Perimyotis subflavus</i>	Tri-colored bat
<i>Sciurus niger niger</i>	Southern fox squirrel
<i>Ursus americanus</i>	Black bear
Reptiles and Amphibians	
<i>Alligator mississippiensis</i>	American alligator
<i>Acris crepitans</i>	Northern cricket frog
<i>Ambystoma tigrinum</i>	Tiger salamander
<i>Apalone ferox</i>	Florida softshell turtle
<i>Apalone spinifera</i>	Spiny softshell turtle
<i>Chelydra serpentina</i>	Snapping turtle (common)
<i>Crotalus adamanteus</i>	Eastern diamondback rattlesnake
<i>Crotalus horridus</i>	Timber rattlesnake
<i>Deirochelys reticularia</i>	Chicken turtle
<i>Eurycea chamberlainii</i>	Chamberlain's dwarf salamander
<i>Gopherus polyphemus</i>	Gopher tortoise
<i>Heterodon simus</i>	Southern hognose snake
<i>Hyla avivoca</i>	Bird-voiced treefrog
<i>Kinosternon baurii</i>	Striped mud turtle
<i>Micrurus fulvius</i>	Coral snake (harlequin)
<i>Nerodia floridana</i>	Florida green watersnake
<i>Ophisaurus attenuatus</i>	Slender glass lizard
<i>Ophisaurus compressus</i>	Island glass lizard
<i>Pituophis melanoleucus</i>	Pine snake (northern)
<i>Pituophis melanoleucus mugitus</i>	Pine snake (Florida)
<i>Pseudacris feriarum</i>	Upland chorus frog
<i>Pseudemys concinna</i>	River cooter
<i>Pseudemys floridana</i>	Florida cooter
<i>Pseudobranchius striatus striatus</i>	Broad-striped dwarf siren
<i>Pseudotriton montanus flavissimus</i>	Mud salamander (Gulf Coast)
<i>Rana palustris</i>	Pickerel frog
<i>Rhadinea flavilata</i>	Pine woods snake
<i>Seminatrix pygaea</i>	Black swamp snake
<i>Terrapene carolina</i>	Eastern box turtle

Scientific Name	Common Name
<i>Trachemys scripta</i>	Yellow-bellied slider
Birds	
<i>Actitis macularia</i>	Spotted sandpiper
<i>Aimophila aestivalis</i>	Bachman's sparrow
<i>Aix sponsa</i>	Wood duck
<i>Ammodramus henslowii</i>	Henslow's sparrow
<i>Ammodramus savannarum</i>	Grasshopper sparrow
<i>Anas acuta</i>	Northern pintail
<i>Anas discors</i>	Blue-winged teal
<i>Anas fulvigula</i>	Mottled duck
<i>Anas platyrhynchos</i>	Mallard
<i>Anas rubripes</i>	American black duck
<i>Anhinga anhinga</i>	Anhinga
<i>Ardea alba</i>	Great egret
<i>Ardea Herodias</i>	Great blue heron
<i>Aythya collaris</i>	Ring-necked duck
<i>Bartramia longicauda</i>	Upland sandpiper
<i>Botaurus lentiginosus</i>	American bittern
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Buteo platypterus</i>	Broad-winged hawk
<i>Butorides virescens</i>	Green heron
<i>Calidris fuscicollis</i>	White-rumped sandpiper
<i>Calidris himantopus</i>	Stilt sandpiper
<i>Calidris melanotos</i>	Pectoral sandpiper
<i>Calidris minutilla</i>	Least sandpiper
<i>Caprimulgus carolinensis</i>	Chuck-will's-widow
<i>Caprimulgus vociferus</i>	Whip-poor-will
<i>Ceryle alcyon</i>	Belted kingfisher
<i>Chaetura pelagica</i>	Chimney swift
<i>Cistothorus platensis</i>	Sedge wren
<i>Coccyzus americanus</i>	Yellow-billed cuckoo
<i>Colinus virginianus</i>	Northern bobwhite
<i>Columbina passerine</i>	Common ground-dove
<i>Contopus virens</i>	Eastern wood-pewee
<i>Dendroica discolor</i>	Prairie warbler
<i>Dendroica pinus</i>	Pine warbler
<i>Dryocopus pileatus</i>	Pileated woodpecker
<i>Egretta caerulea</i>	Little blue heron
<i>Egretta thula</i>	Snowy egret
<i>Egretta tricolor</i>	Tricolored heron
<i>Empidonax virescens</i>	Acadian flycatcher
<i>Eudocimus albus</i>	White ibis
<i>Euphagus carolinus</i>	Rusty blackbird
<i>Falco sparverius paulus</i>	American kestrel
<i>Fulica americana</i>	American coot
<i>Gallinago gallinagodelicata</i>	Wilson's snipe

Scientific Name	Common Name
<i>Gallinula galeata</i>	Common gallinule
<i>Hylocichla mustelina</i>	Wood thrush
<i>Icteria virens</i>	Yellow-breasted chat
<i>Icterus spurius</i>	Orchard oriole
<i>Ixobrychus exilis</i>	Least bittern
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Lanius ludovicianus</i>	Loggerhead shrike
<i>Limnodromus scolopaceus</i>	Long-billed dowitcher
<i>Limnothlypis swainsonii</i>	Swainson's warbler
<i>Melanerpes carolinus</i>	Red-bellied woodpecker
<i>Melanerpes erythrocephalus</i>	Red-headed woodpecker
<i>Mniotilta varia</i>	Black-and-white warbler
<i>Nyctanassa violacea</i>	Yellow-crowned night heron
<i>Nycticorax nycticorax</i>	Black-crowned night heron
<i>Oporornis formosus</i>	Kentucky warbler
<i>Parula americana</i>	Northern parula
<i>Passerina caerulea</i>	Blue grosbeak
<i>Passerina ciris</i>	Painted bunting
<i>Passerina cyanea</i>	Indigo bunting
<i>Picoides pubescens</i>	Downy woodpecker
<i>Pipilo erythrophthalmus</i>	Eastern towhee
<i>Piranga rubra</i>	Summer tanager
<i>Platalea ajaja</i>	Roseate spoonbill
<i>Plegadis falcinellus</i>	Glossy ibis
<i>Pluvialis dominica</i>	American golden plover
<i>Podiceps auritus</i>	Horned grebe
<i>Podilymbus podiceps</i>	Pied-billed grebe
<i>Poecile carolinensis</i>	Carolina chickadee
<i>Porphyrio martinica</i>	Purple gallinule
<i>Porzana carolina</i>	Sora
<i>Progne subis</i>	Purple martin
<i>Protonotaria citrea</i>	Prothonotary warbler
<i>Rallus elegans</i>	King rail
<i>Recurvirostra americana</i>	American avocet
<i>Regulus satrapa</i>	Golden-crowned kinglet
<i>Scolopax minor</i>	American woodcock
<i>Seiurus motacilla</i>	Louisiana waterthrush
<i>Setophaga dominica</i>	Yellow-throated warbler
<i>Setophaga virens waynei</i>	Black-throated green warbler (Wayne's)
<i>Sitta pusilla</i>	Brown-headed nuthatch
<i>Spiza americana</i>	Dickcissel
<i>Spizella pusilla</i>	Field sparrow
<i>Sturnella magna</i>	Eastern meadowlark
<i>Thryothorus ludovicianus</i>	Carolina wren
<i>Toxostoma rufum</i>	Brown thrasher
<i>Tryngites subruficollis</i>	Buff-breasted sandpiper

Scientific Name	Common Name
<i>Tyrannus tyrannus</i>	Eastern kingbird
<i>Tyto alba</i>	Barn owl
<i>Vireo flavifrons</i>	Yellow-throated vireo
<i>Vireo griseus</i>	White-eyed vireo
<i>Wilsonia citrina</i>	Hooded Warbler
Insects	
<i>Acanthametropus pecatonica</i>	"A mayfly"
<i>Atrytone arogos</i>	Arogos skipper
<i>Dolania americana</i>	American sand burrowing mayfly
<i>Dorymyrmex bureni</i>	"A pyramid ant"
<i>Dorymyrmex medeis</i>	"A pyramid ant"
<i>Euphyes bimacula</i>	Two-spotted skipper
<i>Homoeoneuria dolani</i>	"A mayfly"
<i>Mycotrupes retusus</i>	Sandhills earth boring scarab beetle
<i>Rhadinoceraea zigadenusae</i>	Zigadenus sawfly
<i>Siphonurus decorus</i>	"A mayfly"
<i>Somatochlora calverti</i>	Calvert's emerald
<i>Taeniopteryx robiniae</i>	Savannah willowfly
<i>Toxorhynchites rutilus rutilus</i>	"An elephant (tree hole mosquito)"
<i>Toxorhynchites rutilus septentionalis</i>	"An elephant (tree hole mosquito)"

Source: South Carolina Department of Natural Resources 2014

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