

U.S. Fish & Wildlife Service

Carolina Sandhills

*National Wildlife
Refuge*







This blue goose, designed by J.N. Ding Darling, has become the symbol of the National Wildlife Refuge System.

Carolina Sandhills National Wildlife Refuge (NWR) encompasses approximately 45,000 acres in northeastern South Carolina. The refuge is one of more than 500 refuges in the National Wildlife Refuge System, the world's most outstanding network of lands and waters dedicated to wildlife. This system with units in all 50 states, encompasses more than 90 million acres. These refuges protect and enhance a wide variety of habitats, ensuring the survival and welfare of America's fauna, flora, and other natural resources for the continuing benefit of the American people.



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Refuge History

In 1939 the federal government purchased land under the provisions of the Resettlement Act from willing sellers. The land was badly eroded and supported very little wildlife. Efforts began immediately to restore this damaged, barren land to a healthy, rich habitat for the plants and animals that historically occurred.

The longleaf pine/wiregrass ecosystem, the characteristic habitat of the refuge, once covered more than 90 million acres across the southeastern United States from Virginia to Texas. Natural fires that burned every two to four years shaped this unique ecosystem.



Today, only scattered patches of this ecosystem remain, totaling approximately two million acres, with most occurring on public lands. Factors contributing to the demise of this ecosystem include aggressive fire suppression efforts, clearing for agriculture and development, and conversion to other pine types. Carolina Sandhills NWR serves as a demonstration site for land management practices that preserve and enhance the diminishing longleaf pine/wiregrass ecosystem.

Refuge Habitat

The refuge lies in the Sandhills physiographic region which separates the Piedmont Plateau and the Atlantic Coastal Plain. Elevations range from 250 feet to more than 500 feet above mean sea level.

Rolling beds of deep sandy soils are host to an extensive longleaf pine forest. Longleaf pine is easily identified by its long needles and large cones. The midstory consists of scrub oaks and scattered shrubs, while wiregrass is the dominate plant in the ground layer.





One of the refuge's many ponds.

Numerous small creeks and tributaries flow through the refuge and drain into either Black Creek on the east side or Lynches River on the west side. Atlantic white cedar, pond pine, and dense stands of evergreen shrubs occur along these streams forming pocosin areas throughout the refuge. Thirty man-made lakes and ponds and 1,200 acres of old fields, forest openings, and cultivated fields contribute to the diverse habitats found on the refuge.



Green-wing teal



Wood duck

Refuge Wildlife

The refuge supports a wide variety of plants and animals including 190 species of birds, 42 species of mammals, 41 species of reptiles, and 25 species of amphibians.

Threatened and Endangered Species

An abundance of rare and uncommon wildlife species are found and protected on the refuge. Several state and federally listed threatened and endangered species occur on the refuge including the Pine Barrens treefrog, southern bald eagle, and red-cockaded woodpecker.

There are also several plant species of concern found on the refuge, including white-wicky, Well's pixie moss and three species of pitcher plants.

Bill Alexander



Hooded merganser

Migratory and Resident Birds

Several species of waterfowl use the refuge in the fall and winter, including mallards, black ducks, pintails, green-winged teal, American widgeon, ring-necked ducks, and hooded mergansers. Canada geese and wood ducks reside year round.

Bill Alexander



White-throated sparrow (middle) and great blue heron

The refuge provides stop-over or nesting habitat for many species of neo-tropical migratory birds and resident songbirds, including the prairie warbler, Bachman's sparrow, American redstart, and Kentucky warbler.

Bill Alexander



Great egrets and anhinga use refuge ponds in spring and fall. A resident population of great blue herons nests on the refuge. Common raptors include red-tailed hawks, northern harriers, and American kestrels.

Mammals

After the refuge's establishment, beaver, wild turkey and whitetail deer were restocked. The deer population has grown from an original restocking of 12 deer to a healthy population. Beaver and wild turkey populations have also made impressive recoveries. Resident mammals include raccoon, opossum, otter, fox, bobcat, fox and gray squirrel and cottontail rabbit.

Ted Borg, SCDNR



Yellow-bellied sliders

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Pine Barrens tree frog

Herpetofauna

Of the many reptile and amphibian species that occur on the refuge, the Pine Barrens treefrog is the most unique. This bright green frog inhabits boggy areas and breeds in slow moving streams. Many areas of the refuge provide the unique shrub-bog habitat required for breeding.

Red-cockaded Woodpecker

The refuge supports the largest population of the endangered red-cockaded woodpecker (RCW) on Service-owned lands.

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Red-cockaded woodpecker

RCWs serve as an indicator species of the overall health of the longleaf pine/wiregrass ecosystem. It is also referred to as a “Keystone” species, a species that characterizes the ecosystem. The needs of the RCW guide management decisions and actions.

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Installing artificial RCW cavity



Aerial view of a prescribed burn.

Unlike other woodpeckers, RCWs roost and nest in cavities in living pine trees. The RCW requires older pine trees in which to excavate cavities. These older pines are more likely to have “heart rot”, a fungal disease that softens the heart

wood of the tree, thus facilitating cavity excavation. RCWs also require large, older trees for foraging.

Such habitat is plentiful on the refuge and forest management activities, particularly in the last 40 years, have created more. Other management practices including the installation of artificial nesting cavities, population monitoring, and midstory control also contribute to recovery efforts for this species.

The refuge supports more than 140 family groups of red-cockaded woodpeckers. Their cavity trees are marked with a distinct white band. Trees occur throughout the refuge, including public recreation areas at Lake Bee and Martin’s Lake.



prescribed burn



Mechanical removal of hardwoods

Habitat Management

The refuge conducts a variety of management programs to enhance the diversity of habitats on the refuge, benefiting many wildlife species.

Prescribed Burns

An important tool used to manage the longleaf pine/wiregrass ecosystem is prescribed burning. These controlled burns mimic the natural fires that historically burned throughout this ecosystem. These fires suppress the growth of hardwood trees and shrubs, creating the open, park-like conditions preferred by the RCW and many other species native to this ecosystem. The charred appearance of burned areas is only temporary as lush grasses and forbs quickly respond to favorable growing conditions created by the burn. The refuge's prescribed fire season starts in January and generally concludes in June.

Ponds

Refuge biologists manipulate pond water levels on several refuge ponds to encourage growth of desired emergent aquatic vegetation and to control unwanted submergent vegetation. These unwanted weeds can degrade pond habitat. The process of drawing down the pools



Woodstorks

provides unique wildlife habitats as the pond transitions from full pool to mudflats and back to full pool. Wading and shore birds exploit recently exposed mudflats, feeding on invertebrates and fish. Pool draw downs begin in May through July and are staggered to meet specific management

objectives. After controlling noxious weeds, pools are returned to full level in late fall to provide habitat for waterfowl. Some pools are stocked with bream, crappie and bass to provide for recreational fishing opportunities.

Fields/Openings

Fields and wildlife openings are managed for wildlife such as quail, dove, rabbit, turkey and deer, as well as nongame birds. In early spring, strips within fields are disked to encourage native legume production. Other areas within fields are periodically mowed or burned to mimic historic disturbances that stimulate native grass production. In fall, cool season grasses such as wheat or rye are planted in strips to provide winter forage.

Nest Boxes

Blue birds, kestrels, and wood ducks use artificial nesting boxes placed near ponds and fields. These boxes supplement natural cavities and are monitored for reproduction. Refuge staff maintain the boxes to ensure their integrity.



Wildlife opening

*Red fox**Whitetail deer fawn*

Seasonal Events

The calendar of events highlights seasonal wildlife events and recreational opportunities.

January - Waterfowl concentrate on several refuge ponds, especially Martin's Lake. Bald eagles may occasionally be seen soaring over refuge fields or water areas. Hard freezes occur most frequently in January.

February - Wood ducks begin nest building in artificial boxes and natural cavities. Trailing arbutus and butterwort are among the earliest flowers to bloom. Whitetail deer begin shedding old antlers.

March - Great horned owls tend their young. Wild turkeys strut and dust in open fields. On dry, sandy ridges, the rare Well's pixie moss shows its pale, pinkish-white colors. Depending on water temperature, largemouth bass may begin spawning.

April - The early arriving blue-gray gnatcatcher builds its nest along streams as the resident Bachman's sparrow begins to sing in field edges and mature pines. Bluebird nestlings extend eager beaks from within the many nesting boxes on the refuge.

*Eastern wild turkey*

May - Neotropical songbirds migrate through the refuge. Endangered red-cockaded woodpeckers nest in mature longleaf pines. Young wood ducks swim in vegetated perimeters of ponds and lakes.

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Yellow fringed orchid

June - Near seepage bog edges, the Pine Barrens treefrog calls at night. Whitetailed deer give birth.

Carnivorous pitcher plants begin to flower and the white wicky blooms in stream head pocosins.

Brian Von Eerden



Pine Barrens gentian

July - Wildlife activity slows due to hot weather. Whitetail deer does forage with their fawns. Abundant rainfall during the month is quickly soaked up by the deep, sandy soils.

August - Many fall wildflowers, including lobelia, blazing star and hairy false-foxglove bloom along roadsides and field edges. Listen for the call of the chuck-will's-widow and the whip-poor-will.

SCE



Open observation tower

September - Hawks, warblers and other migratory songbirds travel through the refuge along pool edges and water courses. Pine Barrens gentians bloom in refuge woodlands.

October - Whitetail deer bucks rub the protective velvet off of their antlers and stake out a territory. The first frost arrives.

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Volunteers construct a kiosk

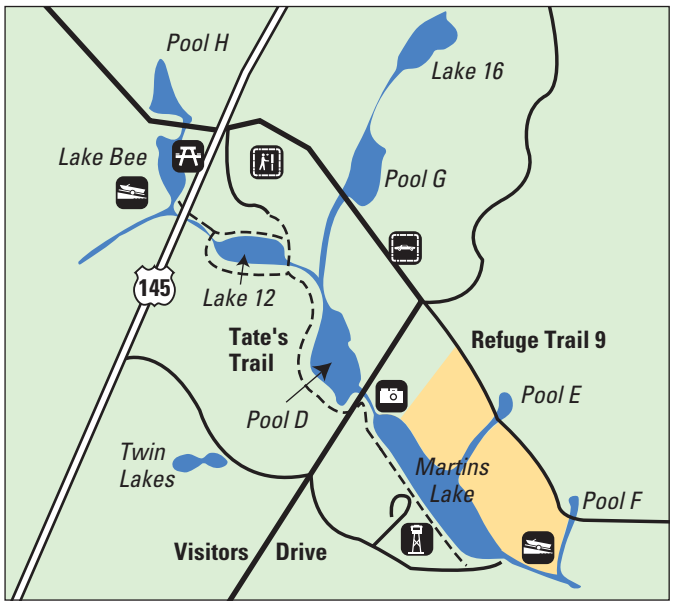
November - Early in the month, mockernut hickory, red maple, blackgum, and dogwood show their radiant fall colors. Ducks, such as mallard, gadwall, and widgeon arrive.

December - Canada geese call from refuge ponds and lakes. Fox, bobcat and raccoon are more obvious because of the coming of winter and the reduction of natural cover.

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Boy Scouts build bird boxes



Visitor Opportunities

The refuge offers numerous opportunities for wildlife dependent recreation. Facilities include the Wildlife Drive, three nature trails, two observation towers and a photography blind.

Interpretive wildlife displays and literature found at the main entrance, refuge office, and Lake Bee area provide the visitor with a better understanding of the refuge and management objectives. Staff and volunteers conduct environmental education programs throughout the year for school children, civic organizations, and the general public.

Numerous ponds and lakes are open for fishing. The refuge is open to limited hunting for several species. Consult the refuge office for current hunting and fishing regulations.



Red-bellied woodpecker



Enjoying the Refuge

Carolina Sandhills National Wildlife Refuge, located approximately 60 miles northeast of Columbia, South Carolina and 70 miles southeast of Charlotte, North Carolina, is free of charge and open year-round from one hour

before sunrise until one hour after sunset. The refuge office/visitor contact station is located on U.S. Highway 1, four miles northeast of McBee. The office is open from 7:00 am to 3:30 pm, Monday through Friday. (Closed Federal holidays).

Camping and the use of off-road vehicles are prohibited on the refuge.

All government property, including natural, historical, and archaeological features is protected by Federal law. Searching for or removing objects of antiquity or other value is strictly prohibited. Please do not pick flowers or remove other vegetation.



Lake Bee Recreation Area



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Hiking

Firearms are allowed only during special hunts and must be unloaded and encased or dismantled when transported in vehicles.

The use or possession of alcoholic beverages is prohibited on the refuge.

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Wildflowers

Layered clothing during cool months and the use of insect repellent during warm months are recommended. Binoculars, spotting scopes, field guides, and water are also suggested.

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Black Creek

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Sundew

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Longleaf seed












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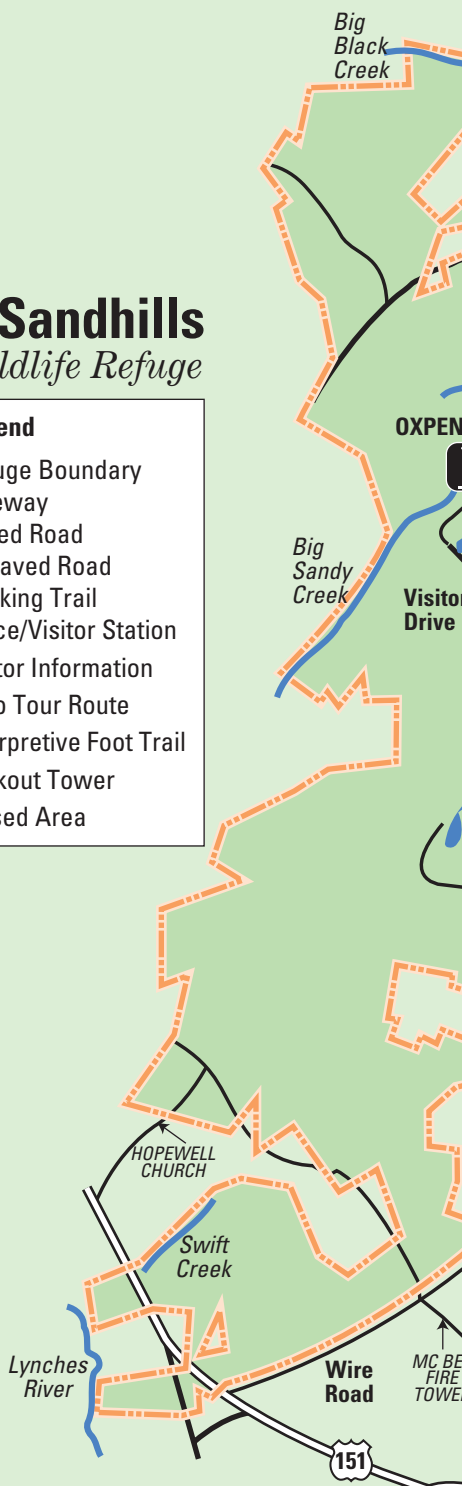
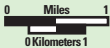


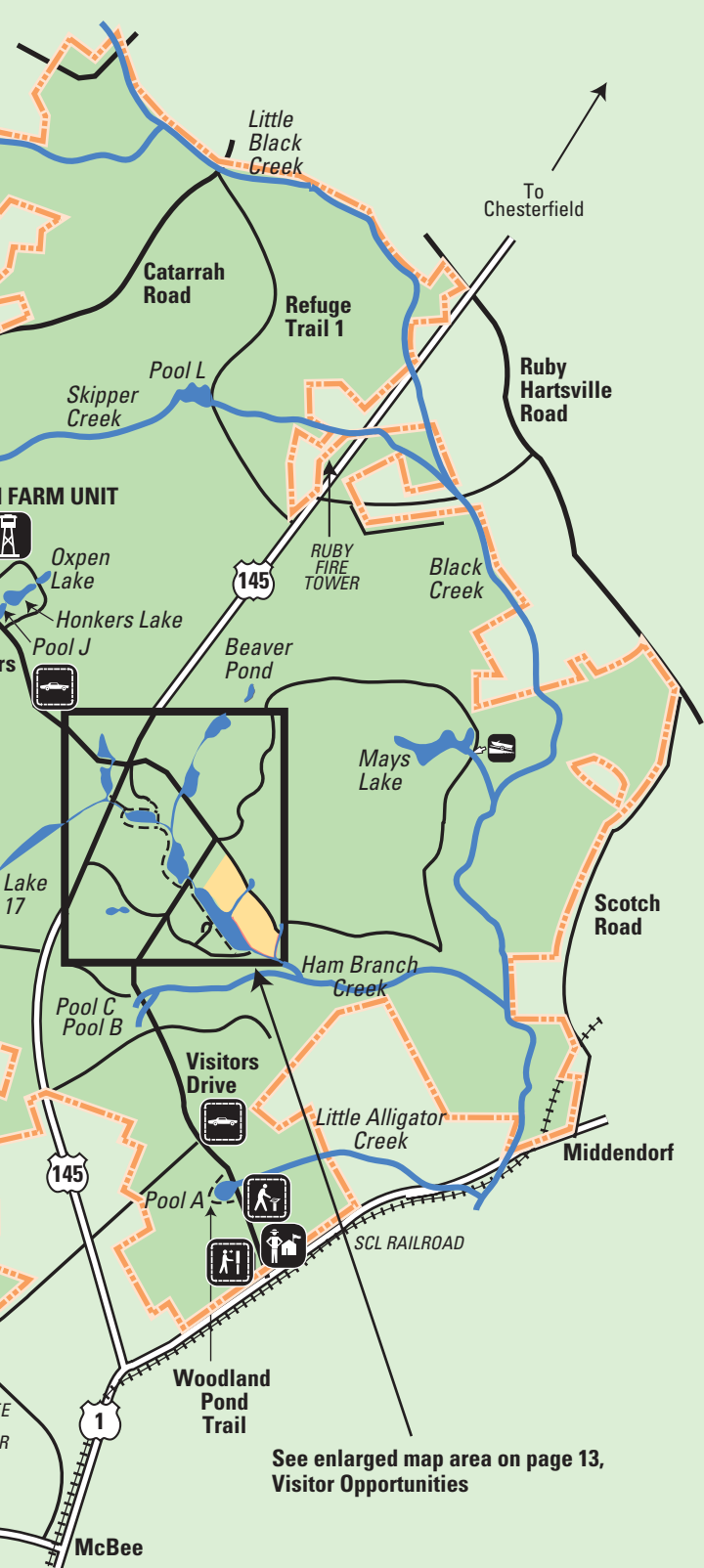
Yellow pitcher plants

Carolina Sandhills

National Wildlife Refuge

Legend	
	Refuge Boundary
	Freeway
	Paved Road
	Unpaved Road
	Walking Trail
	Office/Visitor Station
	Visitor Information
	Auto Tour Route
	Interpretive Foot Trail
	Lookout Tower
	Closed Area





See enlarged map area on page 13,
Visitor Opportunities

McBee

**Carolina Sandhills
National Wildlife Refuge
23734 Highway 1
McBee, SC 29101
843/335-8401
<http://www.fws.gov/carolinasandhills/>**

**<http://www.fws.gov/refuges/>
1 800/344 WILD**

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