

South Carolina Ecological Communities

A wide range of ecological communities exists throughout South Carolina. The Coastal Program and Charleston Field Office (CFO) prioritize working in the following communities: estuarine and tidal freshwater, maritime strand, longleaf pine, freshwater wetland, and river and palustrine forested wetland. Focusing on these communities benefits a variety of priority Federal Trust species and is consistent with the CFO strategic plan. The coastal focus areas in South Carolina fall within one physiographic province, the coastal plain, thus the same major habitats occur in all focus areas.

Estuarine and Tidal Freshwater. These communities experience diurnal fluctuations in their water level. In estuaries, freshwater from riverine systems mixes with marine waters to produce a nutrient-rich system with multiple and distinct habitat types. The diversity of plant species is comparatively low and is dominated by salt tolerant species such as smooth cordgrass. Tidal freshwater wetlands, normally confined by river morphology, are located upstream of the estuaries and have a negligible saline content, normally ≤ 0.5 parts per thousand. Vegetation diversity within tidal freshwater areas is high including broad leaved plants, grasses, rushes, and herbaceous species.

Several Federal Trust species are known to occur in the estuarine and tidal freshwater communities, either federally listed as threatened or endangered or listed by the State as species of concern. Many of these species spend only a portion of their life cycle within the estuarine environment or they may be migratory and utilize the estuary as resting areas. Priority species that occur in the CFO strategic plan that occur within this community and in the coastal program focus areas include the following:

Western Indian Manatee	wood stork	red knot
bald eagle	shortnose sturgeon	swallow-tailed kite
American Oystercatcher	black rail	Swainson's warbler

Maritime Strand. Maritime communities are found in a discontinuous narrow band along the barrier islands and on the adjacent mainland of the eastern United States. Geologically comprised of relic dunes, this dry, well-drained habitat is stabilized with a predominance of broadleaved evergreen trees (live oak) and shrubs (wax myrtle). The flora is particularly well adapted to survive the salt spray and elevated salt content of the soils. The beach dune system is located seaward of the maritime forest. Unlike the stable maritime forest, the beach dune system is a nearly fluid environment, constantly shifting in response to wind and wave action. Flora and fauna of the beach dune system have

evolved morphologically and behaviorally to adapt to the constantly changing environment.

Several Trust Species are known to occur in maritime forest and the beach/dune system, either federally listed as threatened or endangered or identified by the State as a species of concern. Many of these species are dependent upon a relatively undisturbed beach/dune system in order to successfully raise offspring. Priority species that occur in the CFO strategic plan that occur within this community and in the coastal program focus areas include the following:

sea-beach amaranth	Kemp's ridley sea turtle	leatherback sea turtle	loggerhead sea turtle
green sea turtle	pipin plover	red knot	painted bunting
gull-billed tern	southern hognose snake		

Freshwater Wetland. Wetlands, such as pond cypress savannas and depression wetlands, are an integral part of the pine flatwoods and savanna habitat. These wetlands support a number of rare plants including Canby's dropwort and pondberry, as well as the flatwoods salamander. Many of these wetlands have been lost due to ditching and draining for agriculture and forestry as well as for residential and commercial development. These habitats also require periodic fire in order to maintain habitat value for the dependent plant and animal species.

River and Palustrine Forested Wetland. South Carolina contains significant wetland resources associated with large rivers and streams. These rivers and streams provide valuable habitat for a number of at-risk mussels and diadromous fish. Extensive palustrine forested (bottomland hardwoods, swamps) lie adjacent to these rivers and streams and provide vast and productive wildlife habitat. These wetland areas support a number of listed at-risk species and migratory birds such as the swallow-tailed kite. Major wetland areas are found along the Savannah, Combahee, Ashepoo, Edisto, Cooper, Santee, Congaree, Wateree, Pee Dee, and Waccamaw Rivers and their associated tributaries. A total of 3.7 million acres of palustrine forested wetlands occurs in South Carolina, primarily in the coastal plain. Priority species that occur in the CFO strategic plan that occur within this community and in the coastal program focus areas include the following:

yellow lampmussel	shortnose sturgeon	Atlantic sturgeon	striped bass
American shad	blueback herring	American eel	swallow-tailed kite

Longleaf Pine and Associated Coastal Uplands. Typical longleaf pine communities, which once covered most of the Atlantic and Gulf coast, are found on sandy soils and dominated by a tall canopy of longleaf pine. Xeric longleaf pine occurs on dry ridges and frequently supports turkey oak as a co-dominant. Longleaf pine flatwoods and savannas are found on relatively flat terrain with a high water table. This community has been severely reduced throughout its range due to a variety of causes including conversion to loblolly pine plantation, agriculture and commercial or residential use. This habitat also requires prescribed fire to maintain its habitat value for plant and animal species.

Several Trust Species in South Carolina are dependent on longleaf pine habitat to a large degree, either federally listed as endangered or threatened or identified by the State as Species of Concern. Priority species that occur in the CFO strategic plan that occur within this community and in the coastal program focus areas include the following:

red-cockaded woodpecker	eastern indigo snake	flatwoods salamander	southern dusky salamander
pondberry	Canby's dropwort	chaff-seed	crested fringed orchid
pineland plantain	Bachman's sparrow	Henslow's sparrow	American kestrel
loggerhead shrike	eastern gopher tortoise	southern hognose snake	mimic glass lizard
northern pine snake	Florida pine snake		

It should be noted that some of these species are dependent on the numerous wetlands, such as pond cypress savannas and depression wetlands, which are an integral part of the flatwoods and savanna habitat.