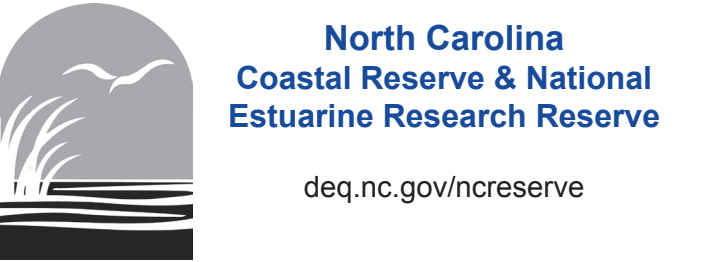


Rules & Tips For Visitors

Zeke's Island Reserve

NEAR WILMINGTON, NC

- For the most up to date rules and guidance visit:** deq.nc.gov/reserve-rules
- The reserve is open to visitors year round.
 - Visit at your own risk. The site is remote and conditions can include natural hazards such as insects and poisonous plants.
 - Off-leash pets are prohibited.
 - Fires, fireworks, target shooting, nudity, and camping are prohibited.
 - Hunting is allowed per state and local hunting rules. Both hunters and visitors should use appropriate caution.
 - Producing noise that is disruptive to wildlife or other visitors is prohibited.
 - Removal or disturbance of plants, animals, fungi, or cultural resources is prohibited.
 - Littering is prohibited. Leaving any personal property unattended within the boundaries longer than 24 hours is prohibited.
 - Recreational/off-road motorized vehicles are allowed in designated areas by permit only, through N.C. State Parks.
 - Respect posted bird and turtle nesting areas, and adhere to posted guidance signs.
 - The rock wall is extremely dangerous and should not be used to access the reserve.
 - Written authorization is required for organized events, commercial activities, and other special activities.



North Carolina Coastal Reserve & National Estuarine Research Reserve

deq.nc.gov/ncreserve

The Zeke's Island Reserve is managed through a federal-state partnership between NOAA and the N.C. Division of Coastal Management to protect the site's ecosystems for research, education, and compatible traditional uses. Stewardship support of the site by the N.C. State Parks Fort Fisher Recreation Area is gratefully acknowledged. This site is also a Dedicated State Nature Preserve.

The North Carolina Coastal Reserve & National Estuarine Research Reserve is a part of the N.C. Division of Coastal Management, a division of the N.C. Department of Environmental Quality.



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2025

Features of Zeke's Island Reserve

A rock revetment, installed in the 1880s, created the lagoon-like estuary complex at the Zeke's Island Reserve. It is one of the most unusual areas of the North Carolina coast, with more than 220 acres of uplands and 1,400 acres of estuary habitats.

Creation of the Reserve

The property that makes up the Zeke's Island Reserve was held in private ownership throughout most of the twentieth century. Previously it was the site of a turpentine factory, a center for gill net fishing and a terrapin hatchery. The property was donated, in its entirety, in 1980 by Mr. Walter Davis. In 1985, the Zeke's Island Reserve was dedicated as one of four N.C. National Estuarine Research Reserve components.

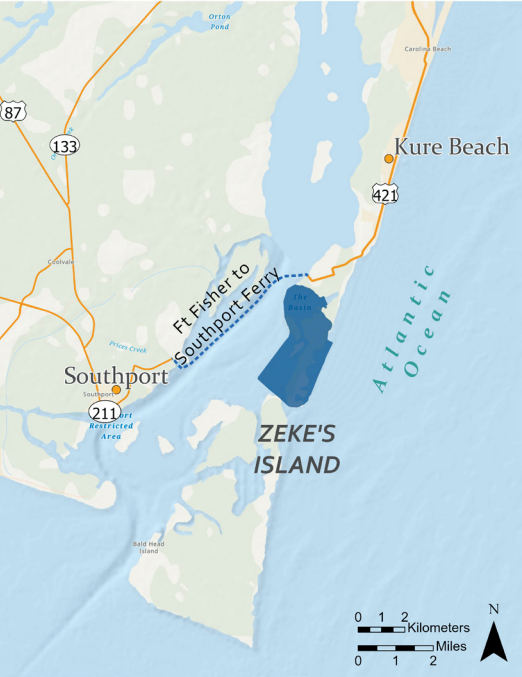
Purpose of the Reserve

This natural area is one of 10 sites that make up the North Carolina Coastal Reserve & National Estuarine Research Reserve. Preservation of the Zeke's Island Reserve allows this coastal ecosystem to be available as a natural outdoor laboratory where scientists, students, and the general public can learn about coastal processes, functions, and influences that shape and sustain the coastal area. Traditional uses, including recreation, are allowed as long as they do not disturb the environment or organisms or interfere with research and educational activities.

- Access:** Access the beach strand by foot or permitted four-wheel drive vehicle only. The beach entrance is just north of the N.C. Aquarium. Federal Point boat ramp, a N.C. Wildlife Resources Commission access area, is located at the end of U.S. Hwy 421.
- Parking:** Public parking is available at the boat ramp.
- Guidance:** Do not walk or climb on the rocks. It is extremely hazardous due to sharp edges, slippery surfaces, and narrow crevices that can trap feet. Sun protection is advised.
- Facilities:** There are no public restrooms or facilities available at Zeke's Island Reserve.
- Habitat:** Salt marsh, beach, dune, maritime forest, and grassland are the largest habitats within the reserve boundary.
- Wildlife:** Raccoon, opossum, coyote, non-native red fox, diamondback terrapin, 200+ bird species, and 100+ fish species.

Visitor Information

How to Find Us



The Zeke's Island Reserve is located 22 miles south of Wilmington, N.C. at the end of U.S. Highway 421. The N.C. Department of Transportation operates a ferry from the Fort Fisher teminal which is adjacent to the northern reserve boundary. The Southport ferry terminal is located at 1650 Ferry Rd., Southport, N.C.

Zeke's Island Reserve

Upper Beach

The area adjacent to the Atlantic Ocean beach, between high tide and the dunes, is subject to harsh conditions including shifting sands, glaring sun, strong winds, salt spray, and storm tides.

Few species are specifically adapted to survive here. Flowering plants include sea rocket, orach, dune spurge, and sea elder. Grasses such as sea oat and beach panic grass grow here.

The upper beach is a critical nesting area for loggerhead sea turtles. Shorebirds such as the American oystercatcher, terns, black skimmer, and Wilson's plover build nests directly on the sand. The ghost crab makes deep tunnels under the sand to avoid predators and high temperatures.

Sand Dunes

Plants are found in greater numbers as distance and elevation above sea level increase.

Sea oats are the dominant vegetation. Their extensive underground stem and root networks stabilize the dunes by literally holding the sand together.

Other dune plants such as sea elder, sea rocket, croton, sand primrose, and sea spurge are adapted to the windy conditions. They have flexible leaves and stems and grow close to the sand.

The dune system has prominent frontal and secondary dunes, some in excess of 20 feet high.

Maritime Grasslands

About ten percent of the reserve has perennial beach grasses located primarily on the upland areas of North Island and Zeke's Island. Grass and herb species include saltmeadow cordgrass, sea oats, saltgrass, and several species of panic grass.

Maritime Shrub Thicket

A mix of vine, shrub, and tree species grows into a shrub thicket that covers about five percent of the reserve's total area. This habitat is found along the center corridor of North Island and upland Zeke's Island. Plants growing here include yaupon holly, wax myrtle, and laurel oak.

White-tailed deer, non-native red fox, coyote, opossum, raccoon, marsh rabbit, and cotton mouse use the shrub thicket for protection and shelter.

Salt Marsh

More than half of the reserve area has expanses of salt marsh habitat located in the center portion of the reserve and along the fringes of both North Island and Zeke's Island.

Lunar tides flood the intertidal salt marshes twice each day. Supratidal marshes remain above water except during occasional spring tides and storm tides.

Saltmarsh cordgrass, which dominates the intertidal marsh, is adapted to dramatic changes in salinity and temperature. This abundant plant regulates salt concentrations in its cells by releasing excesses through pores on its blades.

Tidal Flats

Expansive and seemingly barren mud flats are easy to see at low tide. Decaying marsh grass, or detritus, settles on the flats with each tide. These nutrients support a food web of crabs, fish, snails, and mussels.

Wading birds and shorebirds come to the exposed mud flats to feed during low tide. The sediments sometimes have a "rotten egg" smell due to the presence of hydrogen sulfide gas.

The Rocks

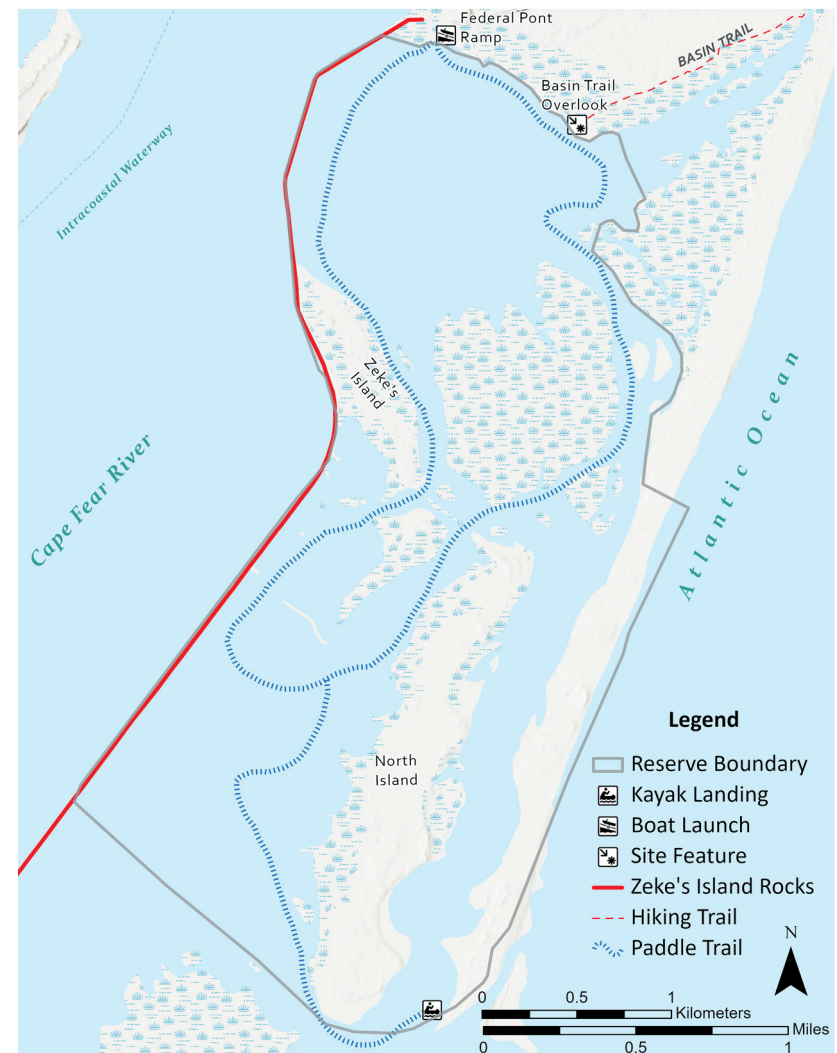
A man-made rock wall marks the western boundary of the reserve. Constructed in 1881 to reduce shoaling in the Cape Fear River, the Rocks have caused extensive changes in the landforms of the area. The Rocks were not designed for walking or fishing and should not be used to access the reserve.

Diamondback Terrapin

The diamondback terrapin is a state species of special concern. It is the only reptile specifically adapted to survive in fresh or salt water. It prefers the brackish water of the salt marsh. The shell of this reclusive turtle has distinctive diamond-shaped scutes.

Loggerhead Sea Turtle

Female turtles crawl out of the sea to nest during the summer. Hatchlings mature in the sea and the females may return after 20 years to nest in the same region. It is estimated only one in 1,000 of these threatened turtles will make it to adulthood.



Nuisance Species

The population of non-native red fox and coyotes has increased in recent years resulting in damaged sea turtle and shorebird nests. A woody shrub, called White Poplar, competes with native plants on the uplands of the reserve and interferes with natural community succession.

A type of red algae, *Gracilaria vermiculophylla*, can disrupt natural ecosystems and outcompete native species.

Birds

Mud and sand flats provide important foraging area for ibises, herons, plovers, dowitchers, dunlins, and egrets. Also feeding and nesting in the area are pelicans, terns, gulls, and numerous types of ducks. Other species include piping plovers, Wilson's plovers, least terns, gull-billed terns, and black skimmers.