

Visitor Information

- **Access:** Reach the beach strand by foot or four-wheel drive vehicle only. The beach entrance is just north of the N.C. Aquarium at Fort Fisher. A N.C. Wildlife Resources Commission boating access area is located at the end of U.S. Highway 421.
- **Parking:** Public parking and boat ramp are at the northern shore of the Basin.
- **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.
- **Facilities:** There are no public rest rooms or facilities available at the Zeke's Island Reserve.
- **Habitat:** Salt marsh, beach, dune, maritime forest and grassland are the largest habitats within the Reserve boundary.
- **Wildlife:** Raccoon, opossum, grey fox, non-native red fox, diamondback terrapin, 200+ bird species and 100+ fish species.

How to Find Us

The Zeke's Island Reserve is 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 terminal which is adjacent to the northern reserve boundary. The Southport ferry terminal is at 1650 Ferry Road, Southport, N.C.



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 and has 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 the original components of the N.C. National Estuarine Research Reserve.

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 public can learn about coastal processes, functions and influences that shape and sustain the coastal area. Traditional recreational uses are allowed as long as they do not disturb the environment or organisms or interfere with research and educational activities.



North Carolina Coastal Reserve & National Estuarine Research Reserve

Wilmington Field Office
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Wilmington, NC 28409
(910) 962-2998
www.nccoastalreserve.net

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 island's ecosystems for research and education. Ongoing stewardship of the site by the N.C. State Parks Fort Fisher Recreation Area staff 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 Environment and Natural Resources.

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Rules & Tips For Visitors

- The Reserve is open to visitors year-round.
- Do not remove or disturb plants or wildlife and do not feed the wildlife.
- Camping, fires and fireworks are not permitted.
- Recreational/off-road vehicles are allowed in designated areas by permit only.
- No littering. Pack out everything you packed in.
- To protect natural features, use extreme care in and around the dunes.
- Leash and clean up after your pets.
- Observe posted bird and turtle nesting areas. Adhere to posted guidance signs.
- Public decency laws apply.
- The rock wall is extremely dangerous and should not be used to access the reserve.
- Additional information is available at the N.C. Coastal Reserve Wilmington Field Office.

Zeke's Island Reserve Wilmington, NC



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

Maritime Grasslands

- About 10 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 hay, 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 5 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, 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

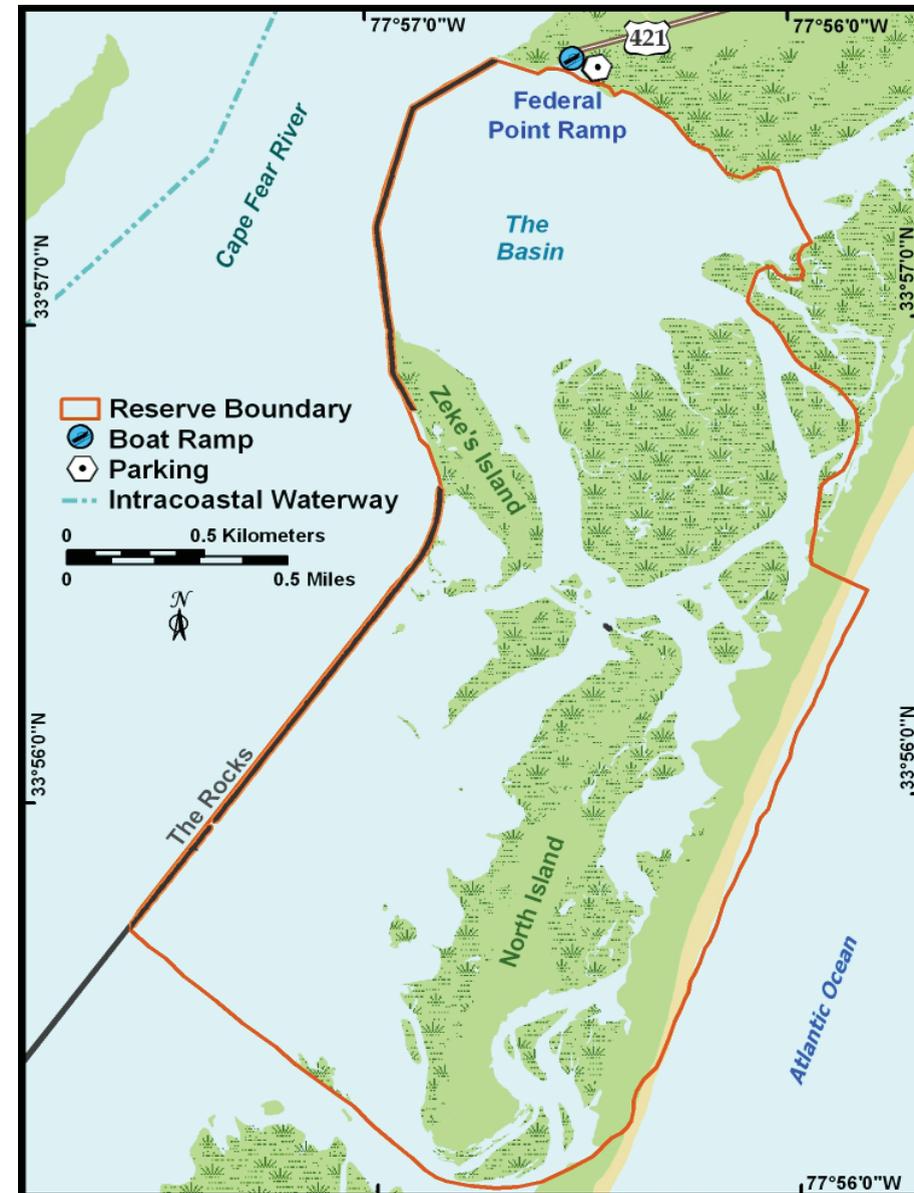
- A man-made revetment marks the western boundary of the reserve. Constructed in 1881 to reduce shoaling in the Cape Fear River, the Rocks have caused extensive changes in the landforms of the area.
- The Rocks were not designed for walking or fishing and should not be used to access the Reserve.

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 waters. It prefers the brackish water of the salt marsh. The shell of this reclusive turtle has distinctive diamond-shaped scales.

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. Only one in 10,000 of these threatened turtles will make it to adulthood.

Non-native Species

- The population of non-native red fox has increased in recent years resulting in damaged sea turtle and shore bird nests. White poplar trees were introduced by early settlers. This woody shrub competes with native plants on the uplands of the Reserve and interferes with natural community succession.

Birds

- Mud and sand flats provide important foraging area for ibis, heron, plovers, dowitcher, dunlin and egrets. Also feeding and nesting in the area are pelicans, terns, gulls and numerous types of ducks. Rare species include piping plover, Wilson's plover, least tern, gull-billed tern and black skimmer.