

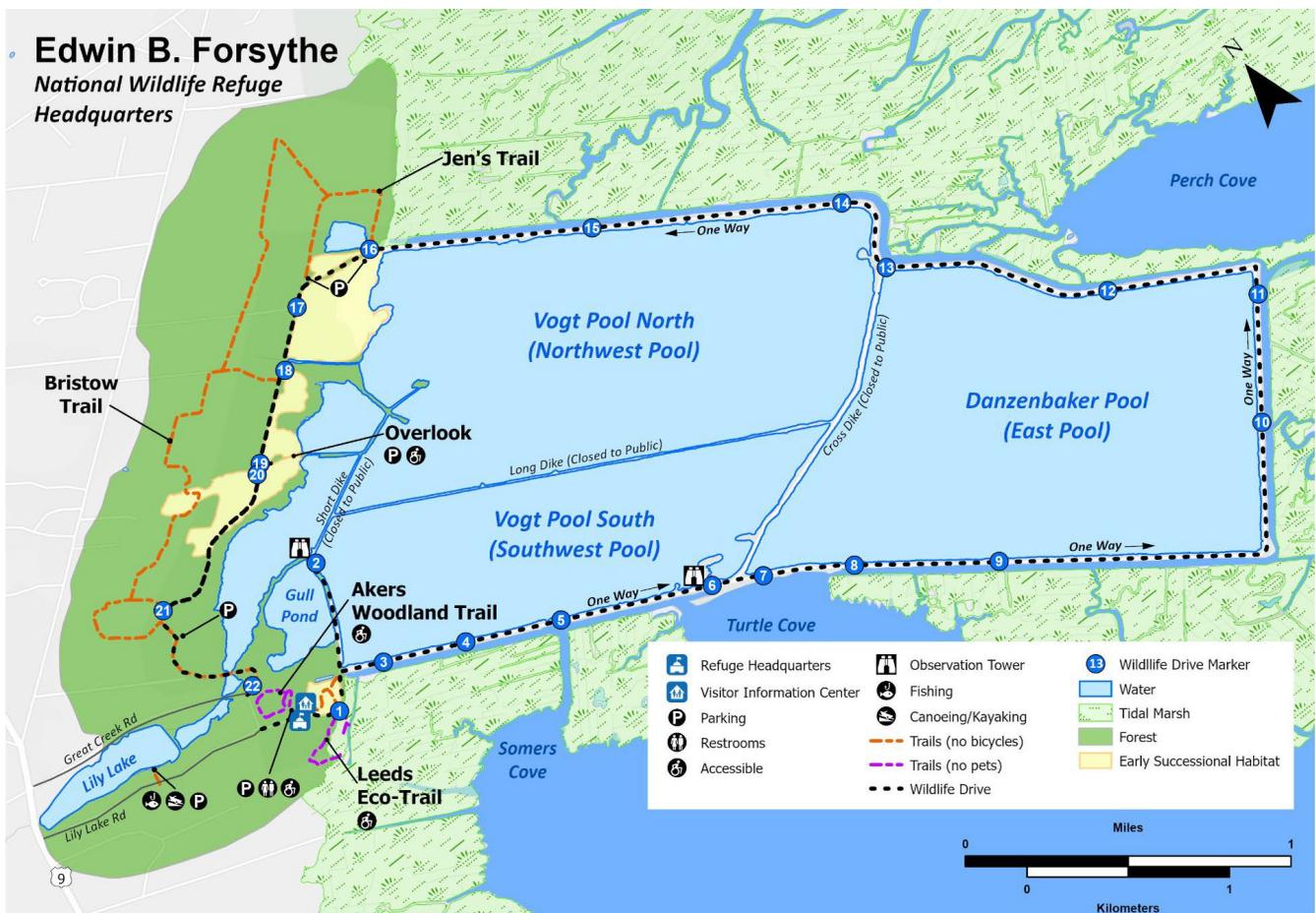
# Welcome to Edwin B. Forsythe National Wildlife Refuge!

Edwin B. Forsythe National Wildlife Refuge (NWR) protects more than 48,000 acres of southern New Jersey coastal habitat. The Refuge, which is actively managed for migratory birds, is located on one of the Atlantic Flyway's most active flight paths, making it a critical link during seasonal bird migration. Its value for the protection of water birds, their habitat, and the habitat of many other species continues to increase as we develop the New Jersey shore for our own use.

Edwin B. Forsythe Refuge's Brigantine and Barnegat Divisions were originally two distinct refuges, established in 1939 and 1967, respectively. In 1984, the two were merged and became Edwin B. Forsythe NWR, in honor of the conservationist Congressman from New Jersey.

Forsythe is one of more than 560 refuges in the National Wildlife Refuge System administered by the U.S. Fish and Wildlife Service. The system is a network of lands and waters managed specifically for the protection of wildlife and wildlife habitat, and represents the most comprehensive wildlife resource management program in the world.

We hope you enjoy this self-guided tour of our Wildlife Drive - **Refer to the numbered Blue Goose marker signs as you drive.** Every day is different on the Refuge, and as the seasons change, new opportunities to observe different species occur. Edwin B. Forsythe National Wildlife Refuge is a place where wildlife and people thrive.



**1. Explore the Leeds Eco-Trail:** The first stop is Leeds Eco-trail and boardwalk: a half-mile accessible walk. The boardwalk looks out over the salt marsh towards the Atlantic City skyline. The wooded segment of the trail is a short hike that ends at an overlook.

**2. Gull Pond Overlook:** Before you turn right onto the dikes of the Wildlife Drive, continue straight to Gull Pond Tower. The water you're seeing flow into the impoundment system is fresh water from Doughty Creek and Lily Lake.

**3. The Original People:** Human history began here with Native Americans. This part of the coast's original inhabitants were the Lenni-Lenape people of South Jersey, whose name loosely translates to "Original People." It is their land that we stand on today.

**4. Diking to Create Wetland Diversity:** Here at Forsythe, staff maintain man-made "dikes"- large embankments that control the flow of water. There are both fresh and saltwater pools. Refuge biologists will change pool water levels to create habitats of varying water depth. In creating these, they diversify the wetlands, and the refuge is able to support a wider range of wildlife than the surrounding saltmarsh habitat would naturally.

**5. Fresh Water Pool:** The 900-acre freshwater West Pool complex is to your left. This area is specifically managed to attract and support a wide variety of migratory water birds. Research shows there are up to four times more food resources within the dikes than outside; and in a saltmarsh environment, fresh water is a critical resource. This pool provides space for migratory species to rest, drink, feed, and bathe.

**6. South Tower:** Climb the South Tower and get a bird's-eye view of the varied wetland habitats that make up over 80% of Forsythe NWR. The link between land and water, wetlands are some of the most productive ecosystems in the world. Wetlands are incredibly important habitats - they purify water, process carbon and other nutrients, stabilize our shorelines, and support a wide variety of plants and animals as breeding grounds, nurseries, and sources of food and shelter.

**7. Turtle Cove:** To your right is Turtle Cove. In this area, the ocean tides rise and fall twice each day, and can fluctuate up to two feet. Low tides expose the muddy bottoms of the channel, which shorebirds take advantage of by probing the bottom for tiny organisms to eat. At high tide, water levels rise, and birds like Black Skimmers, Forster's Terns, and Great Blue Herons will come to search for fish at the marshes edge. Watch during May and June for spawning horseshoe crabs, and for shorebirds like the Ruddy Turnstone and Red Knot that come to eat their eggs.

**8. The East Pool:** To your left, the 700-acre East Pool impoundment is open to the saltwater tides. Water levels fluctuate with the tides - at high tide, the ditches are popular with diving terns and skimmers catching food, and at low tide, mudflats full of a diversity of invertebrates attract shorebirds.

**9. Brigantine Railroad:** You are currently traveling on what was once a railroad bed that connected Brigantine Island to the Oceanville Station on the mainland. It was built in 1890, and abandoned after it was destroyed in a storm in 1903. As you turn the corner ahead, think about what a train full of tourists would have seen going to Brigantine over a century ago. Would they observe some of the same species that you see today?

**10. Maintaining the Islands:** Islands in the East Pool to your left provide nesting and brood-rearing habitat for American Black Ducks, night-herons, and more. Portions of the area are mowed to allow pollinator plant growth, while unmowed areas provide food and nest cover. Take a close look - do you see wildlife on the islands? Along the edges of the dike, watch for goslings starting in April and for ducklings beginning in mid-May.

**11. Where Does This Water Come From?:** Approaching the next turn, look as you cross over the small bridge. Is the water moving in or out of the pool? This bridge is a water control structure, which allows us to delay the speed that the water level changes in response to the tides of the surrounding salt marsh. Twice daily, the tides refresh and renew the pool, introducing new food sources and revealing mud flats for foraging birds. Look around - different species, like double-crested cormorants, snowy egrets, and terns are probably on the lookout for a meal as fish swim by.

**12. The Coastal Plain:** Behind you now are the barrier islands - the last defense before the forces of the Atlantic Ocean meet the mainland. Barrier islands are naturally dynamic, and are shaped and changed by storms and other natural pressures, but absorb energy from the ocean, protect coastlines, and create areas of protected waters where wetlands can flourish. Forsythe has two barrier island sites: Holgate and Little Beach Island. These sites are critically important for the federally listed Piping Plover, a shorebird that uses them to breed and nest from spring until the end of summer. Refuge staff and our partners work hard to allow the species to thrive.

**13. Two Pools Divided:** You are at Cross Dike (again), in an area known as the Dogleg. This dike divides the fresh and salt water pools, and is a great spot to see congregations of different migrants, like Snow Geese and phalaropes.

**14. What Am I Looking At?:** In the distance to the north, you can see the remains of a fish factory (look for the water tower) that existed for many years and ceased operations in 1972. While in operation, it processed Menhaden for fish meal and oil for non-human consumption. More nearby, to the right of the fish factory, are the remains of a floating clam factory. Further to the right you may also see a raised "island" called Shad Island, where for years material dredged from local navigable waterways was dumped.

**15. Saltmarsh Eat-outs:** The large, muddy areas visible to your right as you drive have been created by thousands of Snow Geese that stop here during migration or to overwinter. While some goose species eat only the tips of marsh grasses, Snow Geese have an appetite for the roots. Once they have uprooted and eaten the grasses in an area, they move on, leaving a muddy 'eat-out' behind. Eventually, they will migrate back north to the Arctic tundra to breed and nest.

**16. Hiking Trails:** As you come back to the bluff of the uplands, you'll notice access points to multiple trails. Jen's Trail is a pleasant 0.75 mile loop. For a longer hike, take the 2.7 mile Bristow Trail through the piney woods, which will eventually take you back to the Visitor Information Center. Trail maps can be found on our website and at the Visitor Information Center.

**17. Scrub/Shrub Habitat:** As you enter the refuge uplands, scan for upland edge dwelling species such as deer, rabbits and songbirds, which are frequently visible from the road. Many species thrive on the edges of forests and fields, using one habitat to feed, and the other for cover and nesting. This type of area is known as scrub/shrub habitat. For this reason, maintenance staff periodically clear and maintain these fields in order to increase habitat diversity for wildlife. If left untouched, the natural process of plant succession would ultimately transform this space into mature forest.

**18. The Pinelands:** Our refuge lies on the edge of the New Jersey Pine Barrens, the largest surviving open space on the eastern seaboard between the northern forests of Maine and the Everglades in Florida. The Pinelands are an incredibly unique habitat right in the middle of the most densely populated area of North America.

**19. What Experiment?:** Pull in to the left and check out the overlook area once called the Experimental Pool. This pool was originally created to observe what factors were favoring the invasion of the non-native common reed, *Phragmites*, that was thriving on the refuge. The experiment has concluded, and the area serves as a great viewing platform for waterfowl, or a quiet place to sit and reflect.

**20. Habitat Recovery:** A raging wildfire destroyed most of the vegetation in this area in 1965. After some time, Refuge management turned the area into an early successional habitat. A transitional stage, this early successional phase welcomes the growth of larger trees and the arrival of forest plants.

**21. Doughty Creek:** Soon you will pass over Doughty Creek, which carries water from nearby Lily Lake to the impoundments. You can launch non-motorized boats off of our launch site on Lily Lake Road. In the early 1900's, this area hosted "Lily Lake Park," complete with a dance hall, game room, restaurant, and merry-go-round!

**22. Drive's End:** You have reached the end of the Wildlife Drive, and are now one of the more than 250,000 visitors who explore the refuge annually! We hope your visit has been pleasant, and that you have enjoyed this brief glimpse into the interesting work of wildlife management. We encourage you to visit again, walk our trails, come see us at our Visitor Information Center, and keep an eye out for programming hosted by Refuge staff and the Friends of Forsythe!