

COMPATIBILITY DETERMINATION

USE: Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation

REFUGE NAME: Edwin B. Forsythe National Wildlife Refuge

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

Edwin B. Forsythe National Wildlife Refuge (NWR, refuge) was created on May 22, 1984, by combining the former Brigantine and Barnegat NWRs (98 Stat. 207). The Brigantine NWR was established on January 24, 1939, by the Migratory Bird Conservation Commission, under the authority of the Migratory Bird Conservation Act of 1929 (16 U.S.C. § 715d) as amended, to preserve estuarine habitats important to the Atlantic Brant (*Branta bernicla*) and to provide nesting habitats for black ducks (*Anas rubripes*) and rails (*Rallidae*). The Barnegat NWR was established on June 21, 1967, under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715d) to preserve estuarine feeding and resting habitat for ducks and brant. Edwin B. Forsythe NWR is managed by the U.S. Fish and Wildlife Service (Service).

REFUGE PURPOSES:

For lands acquired under the Migratory Bird Conservation Act as amended, "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (16 U.S.C. § 715d)

For lands acquired under the Fish and Wildlife Act of 1956 (16 U.S.C. § 742(a)-754) as amended, "...for the development, advancement, management, conservation, and protection of fish and wildlife resources..." (16 U.S.C. § 742 (a)(4)) "...for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." (16 U.S.C. § 742f(b)(1))

For lands acquired under the Emergency Wetlands Resources Act of 1986 (16 U.S.C. § 3901(b)) as amended, "...the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions..." (16 U.S.C. § 3901(b))

For lands designated as parts of the National Wilderness Preservation System under Public Law 93-632 (88 Stat. 2154) in accordance with the Wilderness Act of 1964 (16 U.S.C. § 1131) as amended, "...to secure for the American people of the present and future generations the benefits of an enduring resource of wilderness." (16 U.S.C. § 1131(a))

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

The mission of the National Wildlife Refuge System (Refuge System) is "...to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for

the benefit of present and future generations of Americans.” — National Wildlife Refuge System Improvement Act of 1997, as amended (Public Law 105-57 (111 Stat. 1254))

DESCRIPTION OF ACTION:

a) What is the use? Is the use a priority public use? The uses under this Compatibility Determination (CD) are wildlife observation, wildlife photography, environmental education and interpretation. These are priority public uses identified by Executive Order 12996 (March 25, 1996) and legislatively mandated by the Refuge System Administration Act of 1966 (16 U.S.C. sections 668dd-668ee), as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57).

b) Where would the use be conducted? The four priority public uses would occur at Forsythe NWR in New Jersey (Map 1) on established and newly developed roads, trails, parking areas, beachfront areas, and in buildings, including the refuge locations listed below. These are visitor areas currently open to the public and one is planned for future public access (as noted).

1. Visitor Information Center (Galloway Township, Atlantic County).
2. Wildlife Drive (Galloway Township, Atlantic County).
3. Nature Discovery Area (Galloway Township, Atlantic County).
4. Archery Area (Galloway Township, Atlantic County).
5. Grassland Trail (Galloway Township, Atlantic County).
6. Leed’s Eco-Trail and Boardwalk (Galloway Township, Atlantic County).
7. Jen’s Trail (Galloway Township, Atlantic County).
8. Songbird Trail (Galloway Township, Atlantic County).
9. Refuge Reflection Area (formerly the Experimental Pool Area) (Galloway Township, Atlantic County).
10. Akers Woodland Trail (Galloway Township, Atlantic County).
11. Lily Lake and dam (Galloway Township, Atlantic County).
12. Scotts Landing (Galloway Township, Atlantic County).
13. Graveling Point (Little Egg Harbor Township, Ocean County).
14. Holgate Front Beach and Clamming Trail (Long Beach Township, Ocean County).
15. Dock Street Parking and Crabbing Area (Little Egg Harbor Township, Ocean County).
16. Cedar Bonnet Island Trail (Stafford Township, Ocean County).
17. Loveladies Kayak Area (Long Beach Township, Ocean County).
18. Barnegat Boardwalk and Overlook (Barnegat Township, Ocean County).
19. Middle Branch Trailhead (Lacey Township, Ocean County).
20. Eno’s Pond (Lacey Township, Ocean County).
21. Good Luck Point Trail (Berkeley Township, Ocean County; to be opened in the future).
22. deCamp Wildlife Trail (Brick Township, Ocean County).

Each public use site and associated activities (including potential future projects) are described below in (d).

c) When would the use be conducted? All four uses could occur year-round at all locations during the refuge’s normal hours (1/2-hour before sunrise to 1/2-hour after sunset). Exceptions

include Jen’s Trail, Bristow Trail, and the Refuge Reflection Area when they are closed during the 3-day shotgun deer season in December each year. Additionally, Holgate is open 24 hours each day and (currently) only September 1 through March 31 to accommodate surf fishing and challenging access issues. Scotts Landing is open at 4 a.m. to accommodate waterfowl hunters and anglers launching at the site. Other exceptions include refuge programs conducted outside daylight hours (e.g., nocturnal wildlife program), which would be facilitated by refuge staff or in cooperation and close coordination with a refuge partner. Conflicts with a management activity or an extenuating circumstance may also necessitate deviating from these procedures (e.g., storm events).

d) How would the use be conducted? Visitors engaged in these four priority uses generally drive to the refuge, then walk, hike, bicycle, snowshoe, cross country ski, boat (non-motorized), or drive on established and newly developed roads, trails, parking areas, beachfront areas, waterways, and in buildings (see locations listed in (b) above) that have been designed to accommodate such uses and in areas that are least sensitive to human intrusion. Uses would be conducted by the general public, typically individually or in small groups, but also in organized groups, including school, youth and nature-based groups. Brochures and maps depicting the roads and trails open for these uses are available at the refuge Visitor Information Center (VIC) and on the refuge’s website. Educational and interpretive information will be provided via signage, kiosks, printed information, exhibits, audiovisual presentations, websites, podcasts, radio messages and lecture programs.

Interpretation may be conducted by way of personal presentations by staff, volunteers, teachers and other youth leaders, and at special events and displays both on and off the refuge. Interpretation can also be shared through social media and via the internet. On- and off-site environmental education (EE) programs are organized in cooperation with refuge volunteers and partners, and programs are delivered as time and volunteer availability allow. Wildlife observation and photography are usually self-conducted activities and are facilitated through the availability of trails, viewing areas, tours, and informational materials. Wildlife observation programs such as birding field trips, Friends of Forsythe tram tours, and other nature walks are frequently given.

Where needed for access, parking areas would be provided to the public. Viewing platforms and/or towers are located at Wildlife Drive, Refuge Reflection Area, Barnegat Boardwalk, and in the future would occur Good Luck Point Trail. Viewing scopes are provided in several areas. Pet walking would occur on all trails except Holgate. Picnicking would occur at the Akers Trail area, where four tables are currently located for public use, and on Cedar Bonnet Island at two pavilions. Bicycling and jogging would be permitted on the Wildlife Drive, Cedar Bonnet Island Trail, and deCamp Wildlife Trail. To minimize impacts, visitors would be asked to “Leave No Trace” and dispose of trash properly; in some locations “pack in/pack out” messaging will be directed to visitors.

Vehicular access on the refuge will be conducted according to applicable provisions of the Code of Federal Regulations Title 50 §27.31 General Provisions Regarding Vehicles, and New Jersey State Law. Vehicles must be properly licensed and registered, properly equipped, and legal for street travel by New Jersey State law. Driving is permitted on entrance roads, Wildlife Drive and

in associated parking areas. In addition, the Friends of Forsythe operate a tour tram on Wildlife Drive. Non-motorized boat access and use is permitted at Lily Lake (launch from dam) and at Middle Branch; motorized boat launching is permitted at Scotts Landing. No commercial activities are permitted under this CD.

Each public use site and associated activities (including potential future projects) are described below. The list of potential future projects is not all-inclusive, as other projects to implement the four uses may be proposed that are not foreseen at this time. Minor, new projects with similar impacts could be included under this CD, and larger projects would likely result in a modification or update to the CD.

Visitor Information Center

The VIC (Map 2) was completed in 2010 to educate and inform the public about the refuge's wildlife, habitat and activities. The display area discusses how people and nature in South Jersey coexist and impact each other. It also highlights places to visit on the refuge. The Friends of Forsythe have a gift shop in which wildlife-related items are sold year-round. The refuge sells access passes and the Migratory Bird Hunting and Conservation Stamp. Volunteers and staff provide information and assistance to visitors. A refuge-specific video is available for viewing, and binoculars and field guides are available for the public to borrow to facilitate wildlife observation. The VIC Meeting Room is used regularly for public events, seminars, training, workshops and meetings. To enhance the uses evaluated in this CD, several projects are proposed for future implementation for the VIC (subject to availability of funding):

- Re-design and install informational signage in VIC/Headquarters (HQ) outside area.
- Install updated interpretive signage at VIC entrance area.
- Reconfigure video alcove to improve interpretation to public.

Wildlife Drive

The Wildlife Drive (Map 3) is comprised of an impoundment system that was constructed in the 1950s to provide habitat for waterfowl and other water birds. Even prior to impoundment completion, the site was regularly visited by birdwatchers as the South Dike was the former railroad bed of the Brigantine Railroad. Upon completion of the dike project in 1958, the public could access about 6 miles of the dike system via an entrance near the HQ office and then traverse nearly 2 miles of uplands and forest to an exit on Great Creek Road. Travel on the site remains as it has since construction.

The Wildlife Drive is the primary site visited on the refuge. It is composed of a South, East, and North Dike on the perimeter (traveled by the public), and a Cross Dike that separates the West and East Pools. Approximately 125,000 people visit each year to engage in all four uses. It is open sunrise to sunset every day, unless weather events require closure. The site is managed for an extensive number of waterbird species throughout the year. Wildlife viewing and photography opportunities are excellent and many people visit several times each week. Two metal observation towers and 15 pull-off areas are provided for the public to improve viewing opportunities, but users are known to pull over to the side of the 2-lane, one-way road at any

moment to scan the horizon. The Wildlife Drive is also used for EE. Occasional grading is necessary to maintain the site for visitor use.

The nature of the Wildlife Drive's surface (gravel/crushed concrete) allows the engagement of the four uses to occur via automobile and bicycle. Other ways the four uses are conducted on the Wildlife Drive include jogging, pet-walking, snowshoeing, and cross-country skiing. The Friends of Forsythe operate guided tours via a tram. A valid agreement and Special Use Permit must be maintained between the Service and the Friends of Forsythe for continued tram operation, and the Friends of Forsythe must maintain liability insurance for operation. A CD was completed in 2014 to permit use of the tram for tours by the Friends of Forsythe. The tram tours will continue to allow visitors to engage in wildlife-dependent activities such as wildlife observation and photography and no longer require a stand-alone CD as it is presented as a part of this CD.

Access of Wildlife Drive is limited to the crest of the dikes with no use of the sides and no access to adjacent lands permitted. The areas of the Wildlife Drive open to the public include Gull Pond Tower Road, the South, East and North Dikes, and the upland western portion that leads to the exit. Areas generally closed to the public include Short Dike, Long Dike, and Cross Dike. Short Dike is traversed by special permission to a local birding group that hosts nature walks in spring and fall, and may be open to other groups or the public for special events or activities. Cross Dike access will be highly regulated by the refuge and may be open to the public or groups for special events or activities only. Cross Dike access is limited due to the narrowness of the road and because wildlife in that portion of the impoundment system are not routinely disturbed. No pedestrian or bicycle use would be permitted on Cross Dike, and drivers and passengers provided access would remain in their vehicles with no parking or pulling over permitted. No fishing is permitted from Wildlife Drive. The west end of the Wildlife Drive is closed during the annual deer hunt for safety purposes. At that time, two-way traffic is permitted on the Wildlife Drive from its start to the North Dike "Dogleg." Drivers then turnaround and retrace their trip.

The only area of the refuge that requires fees for public access is in the vicinity of the VIC and the Wildlife Drive. Pedestrians are charged \$2 per person per day to walk on trails at the site (Songbird, Leed's Eco-trail and Boardwalk, and Akers) and the Wildlife Drive (including bicyclists). Drivers are charged \$4 per vehicle per day to access the Wildlife Drive. Annual refuge access passes are \$12 per person. We intend to offer online purchasing for access passes in the future.

To enhance the uses evaluated in this CD, several projects are proposed for future implementation for the Wildlife Drive (subject to availability of funding):

- Construct accessible wildlife photography blind(s) in the vicinity of the Wildlife Drive.
- Design and construct an approximately 2,000-foot-long boardwalk into the Northwest Pool.
- Rehabilitate surface of Cross Dike to allow access during special events or activities.
- Develop visitor-driven (self-guided) programming (e.g., earthcaches).

Nature Discovery Area

The Nature Discovery Area (Map 2) is located northwest of the VIC. It is used year-round by visitors to encourage children to play outdoors. Activities provided include arts and crafts, a dirt exploration mound, a reflection area and a fort. The activities are interpreted at the site. To enhance the uses evaluated in this CD, several projects are proposed for future implementation (subject to availability of funding):

- Rehabilitate site and activities provided at the Nature Discovery Area.
- Work with partners to create new activities.

Archery /Outdoor Recreation Program Area

The Archery Area (Map 2) is located in the vicinity of the VIC. The site consists of permanently mounted poles that are used to hang a backdrop cloth. The purpose of the site is for educating would-be archery hunters about technique, skill and safety, along with encouraging a long-term commitment to outdoor recreation including archery hunting. Courses of various skill levels are offered throughout the year and are largely supported by expert volunteer instructors, when available. Other outdoor recreation programs may be offered. Staff time and support are necessary to implement the programs. To enhance the uses evaluated in this CD, several projects are proposed for future implementation in the area (subject to availability of funding):

- Review programming to ensure it is up-to-date.
- Construct an approximately 2,400-square-foot covered pavilion for outdoor recreation programs (i.e. archery) and other public use activities.

Grassland Trail

The 0.2-mile-long Grassland Trail (Map 2) is accessed from the main entrance of the VIC and meanders through a grassland habitat maintained to allow sweeping views of the Wildlife Drive and marsh. It is paved for 0.1 miles and the remaining 0.1 miles are mowed grass. It provides a short walk that links to the Leed's Eco-Trail and Boardwalk. Panels are installed to interpret the habitat and the Air Quality Monitoring Station located adjacent to the trail. To enhance the uses evaluated in this CD, several projects are proposed for future implementation on the Grassland Trail (subject to availability of funding):

- Install trailhead/map sign.
- Update and replace the existing grassland interpretive panel.

Leed's Eco-Trail and Boardwalk

The Trail and Boardwalk (Map 2) both originate from a parking lot along the Wildlife Drive. The 0.2-mile-long Leed's Eco-Trail is wheelchair-accessible and terminates at an overlook to the marsh. Interpretive panels and benches are installed along the site. The 0.09-mile-long Boardwalk terminates about 280 feet short of the Trail, also in the marsh. Environmental education is taught along the Boardwalk. Staircases lead to the marsh from the Boardwalk for dip-netting which provides an opportunity for educators to show students the fauna that occur in the salt marsh. Two viewing binoculars, donated by the Friends of Forsythe, allow observation of an osprey nest, which is about 730 feet from the boardwalk. Panels are installed to interpret

the site. To enhance the uses evaluated in this CD, several projects are proposed for future implementation along the Leed's Eco-Trail and Boardwalk (subject to availability of funding):

- Construct an approximately 280-foot-long extension of the Boardwalk to create a loop with the Leed's Eco-trail.
- Install an orientation map at the trailhead.

Jen's Trail

Jen's Trail (Map 3) is a 0.5-mile-long loop accessed from two parking lots at the west end of the Wildlife Drive. A short stretch of the Wildlife Drive links the lots. A few benches are located on the trail, but it contains no interpretive panels. It is open year-round, with the exception of the annual deer shotgun hunt in December when the trail is closed for safety purposes because the area is part of the hunt zone. To enhance the uses evaluated in this CD, several projects are proposed for future implementation for Jen's Trail (subject to availability of funding):

- Install an orientation map at the two entrances to the trail.
- Install a kiosk at one of the entrances.
- Re-configure and improve design of the two parking areas for better traffic control.

Bristow (formerly Songbird) Trail

Bristow Trail (Map 3) begins and ends at the visitor parking area, traverses 1 mile of the Wildlife Drive and loops through woodlands. The trail is about 2.7-miles-long. A few short spurs periodically join the trail to the Wildlife Drive. It is open year-round, with the exception of the annual deer shotgun deer hunt in December when the trail is closed for safety purposes because the area is part of the hunt zone. To enhance the uses evaluated in this CD, several projects are proposed for future implementation along Bristow Trail (subject to availability of funding):

- Install orientation maps throughout the trail.
- Realign trail to improve aesthetics of the experience for the public and to increase safety.

Refuge Reflection Area (formerly Experimental Pool Area)

The Refuge Reflection Area (Map 3) is to be the primary site of the refuge's EE program. The site would be designed to evoke reflection and contemplation and facilitate EE. Signage and interpretation will appeal to the five senses and be an area of discovery and allow facilitation of an arts and history curriculum, among other programming. The site would be opened year-round and available to the public and for specific EE programming, which will require considerable involvement from the Friends of Forsythe, who provide this type of programming at the refuge. The site would be closed during the annual deer shotgun hunt in December for safety purposes. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at the Refuge Reflection Area (subject to availability of funding):

- Construct a covered pavilion (400-square-foot) to facilitate EE programs and for a gathering place.
- Construct a 100-foot-long pier for EE programs.
- Rehabilitate existing overlook.

- Install directional and interpretive signage.
- Rehabilitate the existing trail and parking lot.
- Restore surrounding uplands to native grassland/pollinator habitat.
- Professionally design programming for the site.

Akers Woodland Trail

The Akers Woodland Trail (Map 2) is a 0.7-mile-long natural trail that originates in the VIC area. It is open year-round. The trail has interpretive panels throughout. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at the Akers Woodland Trail (subject to availability of funding):

- Install an orientation map at the trailhead.
- Install an interpretive panel discussing the history of the area.

Lily Lake and Dam

The 21-acre freshwater Lily Lake (Map 2) is owned by the Service in its entirety. It is the primary water reservoir for the Wildlife Drive impoundment system. Two private residences are located on the lakeshore as well as a private (former) museum and two refuge buildings. The earthen Class III dam was constructed in the 1920s to create Lily Lake. A water control structure within the dam (closed to the public) moves water to the Wildlife Drive impoundment system. It was rehabilitated in 1999. Public use of the dam is permitted, although no anchoring of boats is allowed. Only non-motorized boats are permitted on Lily Lake. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at Lily Lake (subject to availability of funding):

- Install an interpretive panel to highlight the history of Lily Lake.
- Clear vegetation along the southern shoreline to improve hiking and fishing access.

Scotts Landing

The Scotts Landing (Map 4) site consists of a parking area, boat ramp, dock and bulkhead that provide water access to the public. The site is primarily used for launching boats and fishing or crabbing from the bulkhead. The area is tidal, which requires knowledge by the user when launching as water levels can be quite low at low tide. Both motorized and non-motorized boats are permitted at the site. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at Scotts Landing (subject to availability of funding):

- Rehabilitate parking area, boat launch, bulkhead and dock area.
- Work with Galloway Township to rehabilitate access road.
- Replace directional and interpretive signage.

Graveling Point

The Graveling Point area (Map 5) of the refuge is a piece of saltmarsh that contains a 0.3-mile-long, well-worn walking trail. Only pedestrians are permitted to access the trail. To minimize impacts, “pack in/pack out” messaging will be directed to visitors. The public can access the refuge by parking at the end of Radio Road and walking along 650 feet of beach owned by Little

Egg Harbor Township. Fishing from this site is popular. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at Graveling Point (subject to availability of funding):

- Install an interpretive panel/orientation map at the refuge boundary line.
- Install signs to designate the trail location.

Holgate Front Beach and Clamming Trail

The refuge portion of Holgate Beach (Map 6) is comprised of an approximately 3.5-mile-long peninsula of natural beach and dune habitat surrounded by the Atlantic Ocean to the east, Little Egg Inlet to the south, and Manahawkin Bay to the west. The northern (approximately) 2 acres of Holgate is owned by Long Beach Township. Parking for refuge access is provided on Township-owned land.

The refuge beach along the Atlantic Ocean is currently open to the public September 1 through March 31 each year. The entire area is a dynamic system whose delineation and boundary lines change on a nearly daily basis depending on wind and wave action. When the site is open to the public, vehicular use of the beach is permitted below the mean high water (MHW) line, which is the defined refuge boundary. This is also the defined boundary of the Brigantine National Wilderness Area, designated in 1976, which is an overlay that prohibits vehicular use, motorized equipment, and use of wheeled equipment (among other uses). Because MHW is difficult to determine in the field, in practice, the portion of the front beach open to vehicles is defined as the area from the water's edge to the wet/dry line that is created by the ocean's final location at the last high tide. Vehicles driving on the beach must be licensed (no all-terrain vehicles/ATVs) and require a Long Beach Township 'beach buggy' pass as visitors cross about 500 feet of Township land before they reach the refuge. Pedestrians are permitted to walk on the beach up to the dune line, which is marked with "Area Closed" signs.

The public engages in wildlife observation and photography, fishing and clamming at the site. No fires, kites, pets, metal detectors or sporting activities are allowed in the area. Clamming in waters below the mean high water (MHW) line is a traditional use of the "back side" or western portion of Holgate. Access to the clamming areas has generally occurred via vehicle. However, the access formerly used is impassable due to wet conditions and driving on the back side can negatively impact habitat.

Holgate Beach is currently closed April 1 through August 31 (including boat landing) each year to provide nesting and resting habitat for the federally listed threatened piping plover and other shorebirds. Portions of the site may be closed earlier or remain closed longer than set dates if birds are considered to be negatively impacted by public use. The refuge provides staff to educate the public about beach uses and the beach closure during breeding season. Several nature walks are provided to the public during that time and an information station is erected to share information about organisms that rely on the beach.

To enhance the uses evaluated in this CD, several projects are proposed for future implementation at Holgate Beach Front and Clamming Trail (subject to availability of funding):

- Install a kiosk to be coordinated with Long Beach Township on their property.
- Install interpretive panel/orientation map at the north end of the site.
- Create a pedestrian access trail for clammers and other users to the back side and install signs to demarcate the access area.
- Develop year-round programming with partners to educate the public about the site.

Dock Street Parking and Crabbing Area

The refuge Dock Street parking area (Map 7) is located along Parker Run. It is heavily used for access to dockside crabbing. It is available year-round, but mostly used in the summer months. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at the Dock Street Parking and Crabbing Area (subject to availability of funding):

- Install signage that welcomes users of the site.
- Rehabilitate parking area for improved public access.

Cedar Bonnet Island Trail

Cedar Bonnet Island (CBI; also known as Bonnet Island; Map 8) was formerly a saltmarsh that was transformed into a confined disposal facility in the 1950s to store material dredged from the adjacent Intra-coastal Waterway (ICWW). The site was acquired by the Service in 1991. While some of the saltmarshes around CBI have been open to migratory bird hunting, the upland portion of the site has been closed to the public since acquisition. In 2014, about 18 acres of the upland area was converted to saltmarsh. The project was funded by the New Jersey Department of Transportation (NJDOT) to mitigate for impacts associated with the renovation of U.S. Route 72.

The site has 0.8 miles of walking trails, two overlook pavilions with picnic tables, interpretive signage, a non-motorized boat landing, and parking located within the NJDOT right-of-way (ROW) adjacent to the refuge for up to 14 vehicles. A sidewalk in the ROW also provides access to the ICWW for fishing. The site opened in June 2018. No additional improvements are proposed for CBI at this time.

The site is used for EE and field trips and accessed from U.S. Route 72 via foot or bicycle. Due to the sensitive nature of the marsh restoration project and the intention to manage the newly created marsh for wildlife, no boating access will be permitted onto or through CBI. To minimize impacts, “pack in/pack out” messaging is posted. To enhance the uses evaluated in this CD, the following project is proposed for future implementation at Cedar Bonnet Island (subject to availability of funding):

- Cover the existing trail with stone dust to ensure it is universally accessible.

Loveladies Kayak Area

The Loveladies site (Map 9) is comprised of about 40 acres of saltmarsh habitat that was previously impacted by a proposed lagoon community project. Dredging of the canals for the

community commenced but was never completed. The refuge acquired the site from the U.S. Army Corps of Engineers in 2011. Upon acquisition, the local community requested that they be allowed to continue to kayak in the canals on the site. A CD was completed in 2012 to permit use by non-motorized boats. Subsequently, conflicts with users of motorized boats occurred and, in coordination with the New Jersey Department of Environmental Protection (NJDEP), a determination was made that motorized vessels are permitted in the portions of the site that are considered natural streambed, but not in the canals that were dug prior to acquisition (see Appendix A). Non-motorized boat use to engage in wildlife-dependent activities such as wildlife observation and photography will continue to be permitted and no longer require a stand-alone CD as it is presented as a part of this CD. No boat landing or anchoring to marshes is permitted. Other than boundary sign maintenance, no other improvements are proposed for the Loveladies Kayak Area at this time.

Barnegat Boardwalk and Overlook

The Barnegat Boardwalk (Map 10) on Bayshore Drive is about 160 feet long and ends at an overlook of one of the refuge's inland tidal ponds. Parking is available for six cars. The site is used by birdwatchers and photographers by foot. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at the Barnegat Boardwalk (subject to availability of funding):

- Replace kiosk in the parking area.
- Install an interpretive panel/orientation map.
- Rehabilitate boardwalk, as needed.

Middle Branch Trail

This site is a cooperative effort with Ocean County and located in conjunction with their Barnegat Branch Trail, which is an over 15-mile-long rail-to-trail project (Map 11). The Trail was recently paved at this location and an unsafe bridge over Middle Branch was replaced. An interpretive panel is located here. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at the Middle Branch Trail (subject to availability of funding):

- Clear herbaceous and shrubby vegetation at the access point to the refuge lake.
- Improve access to the lake by decreasing the slope of the site and installing a structure to facilitate boat launching (non-motorized) for access to the north side of the trail for wildlife-dependent activities.

Eno's Pond

The Eno's Pond portion of the refuge (Map 12) is immediately adjacent to Eno's Pond County Park and is managed by Ocean County Parks and Recreation (OCPR). A 2-mile-long trail traverses both sites, with 0.5 miles on the refuge. The site is used for hiking, birdwatching and wildlife photography. Regulations associated with the refuge at this location are similar to County Park regulations. The OCPR conducts maintenance on the Service-owned portion of the site. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at Eno's Pond (subject to availability of funding):

- Replace signs marking entrance to refuge along self-guided nature trail.
- Improve Service-owned portion of trail system to reduce tripping hazards.

Good Luck Point Trail

The Good Luck Point area (Map 13) was formerly owned by the American Telephone and Telegraph Company (AT&T). The refuge acquired the property in 2003 and, in 2017, removed nearly 500 wooden telephone poles and associated metal antennae from the site. The area is accessed through a driveway owned by Berkeley Township in which the Service has a 20-foot-wide ROW that allows access to the property and parking for up to 10 vehicles. Currently, the site is closed to the public, but it could be opened in the future provided the Berkeley Township-owned brick building and all contaminants and other hazards are removed from their property. Once the site is cleared, the Service would consider providing public access for wildlife observation, wildlife photography, and interpretation. A 0.25-mile-long road currently traverses the site, but it is subject to flooding. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at Good Luck Point Trail (subject to availability of funding):

- Install an informational kiosk with an interpretive panel and map.
- Construct an American Disabilities Act-compliant overlook/raised platform for improved wildlife observation.
- Enhance the existing 0.25-mile-long road/trail that traverses the site.
- Develop EE and interpretive programming around the trail.

deCamp Wildlife Trail

This site (Map 14) provides parking for up to 10 cars and a 1.7-mile-long trail. The first 0.4 miles of the trail is native material, the next 0.9 miles is covered with crushed stone, and the last 0.4 miles, adjacent to a cove known as T-Cove or “dinghy land,” is sandy. The site is excellent for wildlife observation and photography. New site-specific interpretive signage was installed and the trail was rehabilitated in 2016, which included two new bridge walkways that were previously clogged with debris. Benches were also installed along the trail. To enhance the uses evaluated in this CD, several projects are proposed for future implementation at the deCamp Wildlife Trail (subject to availability of funding):

- Rehabilitate portion of trail around cove area to improve access.
- Resurface 0.4 miles of dirt trail with crushed stone.
- Install gates and bollards as needed to deter illegal dirt bike and ATV use.
- Pave existing shell-surfaced parking area.

Guide-led tours

While the public can engage in all four uses presented in this CD on their own, both not-for-profit organizations and commercial businesses are known to provide guided tours to enhance opportunities for enjoyment of the refuge. Groups of 25 or more are required to complete a Group Request Form prior to their visit (Appendix B) for coordination with refuge staff. Examples of such organizations include bird groups, church groups, and community

organizations. Commercial tours will be addressed in a separate CD.

e) Why is this use being proposed? Wildlife observation, wildlife photography, environmental education and interpretation are priority public uses as defined by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997. If compatible, these priority public uses are to receive enhanced consideration over other general public uses on national wildlife refuges.

Wildlife observation, wildlife photography, environmental education and interpretation are popular uses at the refuge and expected to continue to be into the future. These uses are conducted to provide compatible educational and recreational opportunities for visitors to enjoy the refuge's resources, and to gain or increase their understanding of and appreciation for fish, wildlife, wildlands ecology, the relationships of plant and animal populations within the ecosystem, and wildlife management. These uses will provide opportunities for visitors to directly observe and learn about wildlife and habitats at their own pace in an unstructured environment. These uses will enhance the public's understanding of natural resource management programs and ecological concepts to enable the public to better understand the problems facing natural resources and to realize what impact the public has on wildlife resources. Additionally, the public can learn about the Service role in conservation and better understand the biological facts upon which Service management programs are based, consequently fostering an appreciation for the importance of wildlife and habitats. It is anticipated that participation in these uses will result in a more informed public, with an enhanced stewardship ethic and greater support for wildlife conservation. Furthermore, these uses will provide an intrinsic, safe, outdoor recreational opportunity in a scenic setting, with the realization that those who come strictly for recreational enjoyment will be enticed to participate in the more educational facets of the visitor use program, and can then become informed supporters for wildlife conservation. By allowing these uses, we will provide opportunities and facilitate programs in a manner and at locations on the refuge that offer high quality, wildlife-dependent recreation while maintaining the current levels or increased levels of natural resource values.

AVAILABILITY OF RESOURCES:

Wildlife observation, wildlife photography, environmental education and interpretation are generally funded from annual appropriated funds occurring in the refuge's base budget. Special project and some operational funding will be used to enhance public use opportunities described in this CD. Coordination and partnership with the Friends of Forsythe and through grant opportunities will also provide opportunities for improvements.

Generally, annual costs to maintain and oversee facilities and implement programs are about \$200,000. This is largely funding for staff time, who are responsible for (but are not limited to): on-site evaluations to resolve visitor use issues; monitor and evaluate impacts of public uses; maintain boundaries and signs; meet with interested public; recruit volunteers; prepare and present interpretive and educational programs; maintain existing trails and viewing areas; revise brochures and develop new information materials, install and/or update kiosks; develop signage; organize and conduct refuge events; conduct regularly scheduled programs for the public;

display off-site exhibits at local events; develop relationships with media; provide law enforcement and security; and respond to public inquiries. About \$15,000 a year is used to make repairs and purchase signs, brochures and program support (e.g., binoculars, crafts, books).

The financial and staff resources necessary to provide and administer these uses at their current levels are now available. While we expect the resources to continue in the future, staffing and budget declines could impact these plans.

ANTICIPATED IMPACTS OF THE USE:

The following are descriptions of potential adverse and beneficial impacts on resources as a result of wildlife observation, wildlife photography, environmental education and interpretation. A variety of projects are proposed to facilitate the four uses to enhance public use opportunities. Their impacts are reviewed here and include: installation of interpretive, directional or informational signs and orientation maps; installation of a photo blind(s) in the HQ area; construction of a boardwalk in the Wildlife Drive impoundment system; refurbishing Cross Dike, parking areas at Jen’s Trail and Dock Street, and the road at Good Luck Point; extending the Leeds Eco-Trail Boardwalk; pavilion construction at the VIC area; refurbishing the Refuge Reflection Area trail, parking area and overlook, and constructing a covered pavilion and pier there; realignment of Bristow Trail; rehabilitation of Scotts Landing parking and boat ramp; creation and marking of a clamming trail on Holgate; upgrading the Middle Branch Trail site and a portion of deCamp Trail; placing a new kiosk and overlook at Good Luck Point; and improving ADA-compliant accessibility of Cedar Bonnet Island Trail.

Projects that will require additional review regarding Section 7 of the Endangered Species Act and/or Section 106 of the National Historic Preservation Act when design details are known are listed below:

Location	Project Name/Description	Section 7	Section 106
Wildlife Drive	Construct accessible photography blind(s)		X
Wildlife Drive	Design and construct boardwalk	X	X
Archery Area	Construct covered pavilion		X
Leed’s Boardwalk	Construct Boardwalk extension	X	X
Jen’s Trail	Rehabilitate parking areas		X
Refuge Reflection Area	Construct covered pavilion		X
Refuge Reflection Area	Construct pier		X
Refuge Reflection Area	Rehabilitate existing overlook		X
Refuge Reflection Area	Rehabilitate existing trail and parking area		X
Refuge Reflection Area	Restore uplands to grassland habitat		X
Scotts Landing	Rehabilitate parking area, boat launch, bulkhead and dock area		X
Scotts Landing	Work with Galloway Township to rehabilitate access road		X

Holgate Front Beach and Clamming Trail	Create pedestrian access trail		X
Middle Branch Trail	Clear herbaceous and shrubby vegetation at lake access point		X
Middle Branch Trail	Decrease slope of site and install structure to facilitate boat launching		X
Good Luck Point Trail	Construct ADA-compliant overlook		X
deCamp Wildlife Trail	Rehabilitate portion of trail		X

Impacts on Wildlife: Refuge staff will seek to minimize impacts from these four uses primarily by conducting them on the areas designated in this CD and on trails and sites that are designed to support these uses. Minimization of impacts will occur if the public remains on designated trails, parks in designated parking locations, and follows rules and regulations. Disturbance to wildlife is expected to occur when people use trails and outside visitor areas, but it is expected to be negligible and short-term if people stay on trails, on road, paved areas, etc.

Disturbance to wildlife by activities associated with recreational trails has long been documented (Beale and Monaghan 2004; Burger 1981; Gill et al. 1996; Knight and Cole 1991) and can be extrapolated to other visitor areas (roads, parking lots, etc.). These disturbances can result in wildlife moving away from the trail, shifting habitat use, or abandoning a site. In some cases, birds nest farther away from trails (Miller et al. 1998) and reproductive success diminishes with increased disturbance on the trail (Schulz and Stock 1993). Human presence and disturbance can alter the ability of wildlife to use or access resources (food supplies, roosting sites, or prey species) (Gill J.A. 2007). Wintering waterfowl are known to experience higher levels of disturbance by pedestrians than vehicles in an impoundment system (Pease et al. 2005). Mammalian use of trails in forests of the eastern United States were not impacted by hikers (Kays et al. 2017), and impact to nesting birds can vary depending on which level of the forest breeding occurs (Deluca and King 2014; Thompson 2015). However, joggers can be more disruptive than walkers on trails (Lethlean 2017). Noise impacts on wildlife are also well documented (Shannon et al. 2016), which can interfere with wildlife communication, behavior and abundance.

Several studies have identified management actions to minimize wildlife impacts including seasonal closures, designated parking areas, etc. (Pease et al. 2005, Borgmann 2010). To reduce disturbance to birds in the Wildlife Drive impoundment system, the public is only permitted atop the dike. Jogging is permitted; however, because the site is so highly traveled and open to vehicles, jogging is not considered to have additional negative impact to wildlife there. Holgate Beach is currently closed April through August each year to reduce impacts to nesting and migrating birds, including the federally listed piping plover (*Charadrius melodus*). Nearly all areas included in this CD have been open to the public for many years and no large-scale impacts to wildlife have been observed. Newly proposed openings include the Cross Dike at Wildlife Drive, a lake at the Middle Branch Trailhead (a partnership with Ocean County), and a trail at Good Luck Point. Cross Dike would only be open for short-term activities to ensure long-term disturbance does not occur. Additionally, dike traffic would be one-way and people would not be permitted to exit their vehicles as the dike goes through the center of the impoundment system

in an area that is commonly used by wildlife, especially migratory birds, for cover and foraging. The lake at Middle Branch Trailhead has not been open to boating in the past. Non-motorized boats only would be permitted to reduce impacts to wildlife. Opening a trail at Good Luck Point would disturb wildlife initially; however, it is anticipated that species would eventually become accustomed to the foot traffic. The trail is within an approximately 160-acre site that is generally not accessible by the public at any other location so wildlife would have areas to flee to if disturbed.

The ditches surrounding the south, east and north dikes of the Wildlife Drive were created when material was borrowed from the adjacent marsh to create the dike system (and the Brigantine Railroad). NJDEP Tidelands maps, created in 1977, depict areas claimed by the State as now or formerly flowed at mean high tide (<https://www.nj.gov/dep/gis/tidelandssh.html>) (Map 15). The purpose of the impoundment system is to provide high quality marsh (both fresh and salt) habitat to myriad migratory bird species. Migratory birds as a group are a trust resource that the Service is required to protect. Through years of research we have learned that the amount of natural food (seeds and invertebrates in the soil column) we provide birds in the system is five times higher than that found in the surrounding marshes (Ringelman et al. 2018). When the tide is up, the ditches fill with water that can be a few feet deep; thus, providing passage for boaters and jet skiers to ride through at speed. Numerous visitors observe and report that boaters flush feeding birds both in the ditches and within the impoundment system when they traverse these areas. As this activity directly negatively impacts the purposes for which the Service manages the site, boats (motorized and non-motorized) or other water-based access are prohibited from the ditches surrounding the Wildlife Drive (Map 16). While the New Jersey Tidelands claim map shows waterways that cross the borrow ditches, the refuge is working with the NJ DEP Bureau of Tidelands to avoid these negative impacts to the resources we manage, and recommends closing the waterways.

Though formerly a tidal marsh, Cedar Bonnet Island was converted to an upland in the 1950s with the extensive placement of dredge material. One component of the mitigation project described above includes the creation of saltmarsh and tidal channels to restore flow and provide habitat for wildlife. The newly created habitat provides excellent opportunities for wildlife to forage and rest. Therefore, we close the tidal channels to all public access, including motorized and non-motorized boats, to provide a respite for wildlife (see Map 17 for tidelands map and closure area).

Overall, physical improvements to the refuge's public use sites will have negligible, short-term negative impacts. This will include temporary disturbance when signs and kiosks are installed, and roads and trails are refurbished. Projects that would occur over a few weeks could cause longer-term disturbance to wildlife that would likely be displaced during construction (i.e., road refurbishment and boardwalk, overlook and boat ramp construction projects). In all cases, abundant habitat is available adjacent to construction sites for wildlife. It is expected that once construction is complete, wildlife would return to original areas. No removal of vegetation would occur during the bird nesting season (April 1 through August 31).

Impacts on Threatened and Endangered Species: A Section 7 analysis has been conducted to evaluate impacts of this CD on threatened and endangered species on the refuge. That analysis

(see Appendix C) concludes that the uses and projects in this CD: will have no effect on the listed piping plover, American chaffseed, swamp pink, and Knieserkern's beaked-rush; may affect, not likely to adversely affect the listed northern long-eared bat, red knot, and seabeach amaranth; and will have no effect on the Eastern black rail, which is proposed to be listed.

Impacts on Vegetation and Soils: Most of the public access to support the four uses would occur in areas that are generally hard-surface roads, trails, and dikes. Increased damage to ecosystems is known to occur when informal trails are created and used by the public (Barros and Pickering 2017). No informal or off-trail activity is permitted; therefore, impacts to vegetation and soil should be minimal regarding engagement of the activities. Habitat will not be impacted if the public stays on trails and in designated visitor areas. Pedestrian use of Holgate would occur on the front beach and on the Clamming Trail. The beachfront is overwashed by the tide twice each day so impacts in that area are negligible and short term. The new Clamming Trail will be posted to keep public access to a very limited area of hard-packed sand. The rest of the dune system will remain closed to the public.

People can be vectors for invasive plants when seeds or other propagules are moved from one area to another. The threat of invasive plant establishment would always be an issue requiring annual monitoring, and when necessary, treatment. Staff would work to educate the visiting public to reduce introductions and would also monitor and control invasive species. This threat is considered to be minimal.

Regarding potential projects that support the implementation of the uses, some impacts to vegetation and soils would occur. The replacement of signs and new kiosks would temporarily impact vegetation and soil during installation. Vegetation would be permanently cleared from areas where the proposed wildlife photography blinds are constructed, as well as access to the lake at Middle Branch Trailhead, trail improvements at deCamp Trail, and upgrades to Jen's trail and Dock Street parking. Improvements to Cross Dike, the road at Good Luck Point, and the parking area and trail at the Refuge Reflection Area would be minor (adding material such as gravel and grading) and would only have negligible, short-term impacts at the sites. Scotts Landing parking area, boat launch and dock rehabilitation would require permanent removal of a small area (less than 1-acre) of shrubby habitat and trees to reconfigure the site and grading.

Construction of an approximately 280-foot-long boardwalk extension at Leeds Boardwalk, an approximately 1,000-foot-long boardwalk in the northeast corner of the West Pool, and a raised platform at Good Luck Point would temporarily disturb vegetation and soil at the sites. The structures would be on pilings or helical piers and elevated above the water/vegetation surface. Soil would be disturbed and displaced and vegetation would be trampled to install the pilings. Impacts are expected to be short-term and negligible. As an example, the current Leeds Boardwalk was constructed in 2009 and vegetation at the site recovered in one growing season.

Construction of an archery pavilion near the VIC would include laying a concrete foundation that would permanently cover about 2,400 square feet of mowed grass. The site is in an area that receives high pedestrian traffic which has resulted in the compaction of soils there. The impacts from construction of the pavilion are considered minor. Construction of a smaller pavilion at the

Refuge Reflection Area, would permanently cover soil, but has also been heavily impacted by people and equipment for the duration of the refuge's history.

Impacts on Air Quality: Edwin B. Forsythe NWR is a designated Class I air quality area and the 6,600-acre Brigantine National Wilderness Area is afforded special protection by the Clean Air Act. The NJDEP Division of Air Quality and the Service work together to monitor air quality. The uses described herein will not have a long-term impact on air quality in the area. There is a potential that providing more opportunities to the public would result in increased automobile transportation, and air pollution, as people travel to and from the refuge; however, the sites are surrounded by development and highly traversed roads that likely have a larger impact on air quality that refuge visitors.

Construction activities for new projects could have negligible, short-term impacts to air quality when heavy equipment is used. Examples of these include on-site generators, graders, backhoes, trackhoes, and dump trucks, among other types of equipment. Impacts from project implementation on air quality would be minor to negligible as best management practices during construction would be used to minimize or avoid impacts.

Impacts on Water Resources, Hydrology and Wetlands: The refuge is comprised of over 33,000 acres of tidal saltmarsh, over 7,000 acres of forested wetlands, 1,700 acres of impoundments, and nearly 600 acres of freshwater herbaceous wetlands. The majority of public use of new and existing facilities, as proposed here, would not impact water resources, hydrology or wetlands in the refuge as most activities would be limited to those existing facilities/areas and would not occur on wetland areas. For example, installation of interpretive, directional, and other signage and all kiosks would have no impact on water resources, hydrology, or wetlands as they will not be installed in wetland areas and would be installed in a manner that does not create impacts. Construction and installation of wildlife photography blinds in the vicinity of the Wildlife Drive would only occur in upland areas. Construction of the Good Luck Point platform and a covered pavilion at the HQ area would occur on uplands. Rehabilitation of Cross Dike, the Refuge Reflection Area, Jen's Trail and the Dock Street parking area would only occur in upland areas and no changes would be made that would alter hydrology of the areas. Creation of the Holgate Clamming Trail would occur in uplands only.

At a few locations, minor impacts to wetlands and water resources would occur during construction, including the North Pool boardwalk, the Leeds Eco-Trail boardwalk, and the Scotts Landing dock/boat ramp. Pilings or piers would be installed to support the boardwalks. Repairs to the Scotts Landing site would require some in-water construction to improve the ramp, dock and bulkhead. Water-based impacts would be short-term and minor. All appropriate permits would be acquired before construction would take place and stipulations followed to protect water resources.

Impacts on Wilderness: The approximately 6,600-acre Brigantine National Wilderness Area occurs in the refuge. The area is comprised of Holgate Beach (southern end of Long Beach Island); Little Beach Island (south of Little Egg Inlet); and the Mullica-Motts area (south of the Mullica River: 1,780 acres of marsh). Public use activities on refuge wilderness only occur at Holgate Beach. Most visitors either walk on the front beach or drive along the water's edge (off-

refuge) to access the site. Foot traffic is permitted on all beach areas to a point where the dunes begin. Vehicles (licensed only, no ATVs) are only permitted from the MHW line towards the ocean. The intention of the limitation is to adhere to the Wilderness Act of 1964, as amended, which prohibits the use of motorized vehicles on wilderness areas. As the State of New Jersey lays claim to all land below MHW, this zone is not within the Brigantine National Wilderness Area and is the corridor for access for visitors to engage in activities such as fishing, birdwatching, and wildlife photography.

A new access area for pedestrians would be marked across one of the flattened overwash areas from the front beach to the back bay portion of Holgate Beach. The Clamming Trail would primarily be used by recreational clammers, but would be open to all users when the beach is open to the public (currently September 1 through March 31 each year). Clamming is a traditional use of the area and tidal sites were historically accessed via vehicle around the tip of the site. This access has become overgrown and inaccessible, and also causes damage to refuge habitat. Therefore, vehicular access on the backside of Holgate Beach will no longer be permitted and all access to the State-owned tidal flats will be by foot. No wheeled equipment is permitted on the Brigantine National Wilderness Area so visitors will need to carry their equipment or tools. Clamming sites are in State tidal waters and this activity does not occur on refuge land. Impacts from trail demarcation would be negligible. The trail would be marked by posts. No power equipment would be used when marking the trail. A minimum requirements analysis was conducted prior to approving designation of the new trail and is attached as Appendix D.

Impacts on Cultural and Indian Trust Resources: Public use of new facilities, as proposed here, will not likely impact cultural and Indian Trust resources. All activities with the potential to impact historic properties or areas of importance to Federally Recognized Tribes will comply with Section 106 of the National Historic Preservation Act (NHPA) prior to implementation and are noted above. The regional Section 106 review form is provided in Appendix E.

Impacts on Visitor Use and Experience: Across all uses, we estimate that about 250,000 people visit the refuge each year. About half visit the Wildlife Drive, and other visitors engage in all of the six priority public uses of the refuge (including hunting and fishing) at a variety of locations. To date, few conflicts occur between user groups. Existing known conflicts include:

- **Wildlife Drive:** disturbance by boaters/anglers in the ditch around the Wildlife Drive as visitors engage in wildlife observation and photography; conflicts among Wildlife Drive users when engaging in rare bird/wildlife viewing, including blocking access by double-parking.

No fishing is permitted from the Wildlife Drive to reduce conflicts between user groups. The Wildlife Drive is world-famous for wildlife observation and photography, and anglers compete with space and detract from visitors and disturb foraging wildlife. People are required to stay on top of the dike.

Potential conflicts as a result of this CD and their location:

- **Wildlife Drive:** competition by users of new wildlife photography blinds could be a concern at peak use times; and public use of the one-way Cross Dike for special events could result in negative interactions as travel would be impacted by the line of cars ahead of each driver. The refuge would implement measures to reduce these conflicts, as needed.
- **Archery Area:** during archery training, the general public would be in the vicinity – signs and directives would be installed to warn the public and ensure safety.
- **Cedar Bonnet Island:** migratory bird hunt areas are located in the marshes in the vicinity of the southern end of the island. To minimize disturbance to hunters and improve safety, portions of the hunt area closest to visitor use areas on the island were closed as a part of the 2018 hunt plan update.

Effects on Socioeconomics: The activities and projects proposed in this CD would not detract from the socioeconomics of the area. All of the actions will promote use of the refuge as it relates to the four priority public uses. The most recent Banking on Nature report (2013) estimates that non-consumptive use of the refuge results in over \$2.7 million in recreation expenditures. The improvement in facilities and the increase in opportunities presented in this CD would likely increase the economic impact to the area (Ocean, Atlantic and Burlington Counties). Therefore, a positive, long-term impact is expected.

Impacts on Environmental Justice: Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all Federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental impacts of their programs and policies on minorities and low-income populations and communities. The Service has not identified any potential high and adverse environmental or human health, negative impacts from the actions proposed in this CD. Current and future programming, in association with the proposed improvements, seek to attract people from groups that have traditionally been minimally engaged in the refuge and to expand into minority or low income communities, which could result in positive impacts on environmental justice.

PUBLIC REVIEW AND COMMENT:

This CD was available for a 30-day public review and comment period ending April 30, 2019. Notification was posted at the refuge headquarters and visitor information center, on the refuge website (<http://www.fws.gov/northeast/forsythe>), and the refuge Facebook page. Three public meetings were announced. After poor attendance to the first two meetings (1 person total), the third meeting was canceled. Four comments were received. One commenter opposed any activities related to hunting, trapping or expending any tax dollars. One commenter expressed concern and was opposed to establishment of the Clamming Trail on Holgate Beach. Use of the new trail will be monitored by staff. If users do not stay on the marked location, the trail may be closed. One commenter did not agree with allowing activities other than wildlife observation and photography on the Wildlife Drive. The nature of the Wildlife Drive can be enjoyed in a

variety of ways, including cross-country skiing, snow showing, jogging and pet walking, which we have deemed compatible. If those uses are found to cause conflict with wildlife management, they will be reviewed and potentially modified to reduce that conflict. The fourth commenter provided suggestions for realigning Bristow Trail to avoid overlap with the Wildlife Drive (which we plan to implement if funds are available) and support for the planned rehabilitation the bulkhead at Scotts Landing.

DETERMINATION (check one below):

Action is Not Compatible

Action is Compatible with Following Stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The refuge will manage the four priority public uses—wildlife observation, wildlife photography, environmental education and interpretation—in accordance with Federal and State regulations and review the uses annually to ensure that wildlife and habitat goals are achieved and that these uses provide safe, high-quality experiences for participants. The refuge based these stipulations on the refuge Comprehensive Conservation Plan and Environmental Assessment (2004), refuge-specific regulations, Habitat Management Plan goals and objectives (in draft), current practices and known conflicts among user groups. Activities associated with commercial photography were addressed in a separate 2013 CD and will be reviewed and updated in 2023. No commercial guiding is currently permitted on the refuge. A Commercial Guiding CD, to include a variety of nature-based guide services, will be developed in the future. The 2011 CD regarding non-motorized boating on the Loveladies property, and the 2014 CD permitting tram tours on the Wildlife Drive by the Friends of Forsythe are incorporated into this CD and will no longer be reviewed in a separate process.

To ensure compatibility with refuge purposes and the mission of the Refuge System, wildlife observation, wildlife photography, environmental education and interpretation can occur on the refuge if the refuge-specific regulations are followed and the following stipulations are met:

- Access of Wildlife Drive is limited to the tops of the dikes. The areas of the Wildlife Drive open to the public include Gull Pond Tower Road, the South, East and North Dikes, and the upland western portion that leads to the exit. No use of the dike sides and no access to adjacent lands are permitted. No fishing is permitted from the Wildlife Drive. None of the waterways adjacent to the Wildlife Drive are open to boating or other public uses.
- Wildlife Drive areas generally closed to the public include Short Dike, Long Dike, and Cross Dike. Short Dike is traversed by special permission to a local birding group that hosts nature walks in spring and fall, and may be open to other groups or the public for special events or activities. Cross Dike may be opened for special, short-term periods for special events or to facilitate travel (e.g., during the 3-day refuge shotgun hunt). Any

access will be highly regulated due to the narrowness of the road (only one lane) and because wildlife in that portion of the impoundment system is not routinely disturbed. No pedestrian or bicycle use would be permitted on the Cross Dike and drivers and passengers would be required to remain in their vehicles. No pulling over or parking would be permitted due to the narrow width of the road.

- A valid agreement must be maintained between the Service and the Friends of Forsythe for continued tram operation. The Friends of Forsythe must maintain liability insurance for operation. A Special Use Permit is required.
- Only non-motorized boats on Lily Lake. No anchoring to Lily Lake dam.
- The following regulations would occur at the Holgate Front Beach and Clamming Trail location.
 - Motor vehicles must stay below the MHW or wet/dry line to access the site.
 - No wheeled-equipment or vehicles are permitted above the MHW or wet/dry line.
 - No ATVs.
 - No fires, kites, pets, metal detectors or sporting activities, such as disk throwing or ball playing.
 - No boat landing when the beach is closed to the public (currently April 1 to August 31, but subject to change).
 - Only foot travel is permitted on the Clamming Trail.
- Only pedestrians are permitted on the Graveling Point trail. It is a pack in/pack out site.
- No boat landing of motorized boats is permitted on Cedar Bonnet Island and it is a pack in/pack out site. Waterways within the island are closed to all access to minimize disturbance to wildlife.
- No boat landing or anchoring to marshes is permitted at the Loveladies Kayak Area.

JUSTIFICATION:

Wildlife observation, wildlife photography, environmental education and interpretation are priority public uses, and if compatible, these priority public uses are to receive enhanced consideration over other general public uses on national wildlife refuges. These four priority public uses are popular at Edwin B. Forsythe NWR and are conducted to provide high quality, wildlife-dependent educational and recreational opportunities for visitors to enjoy the refuge's resources while maintaining the current levels or increased levels of natural resource values. The wildlife observation, wildlife photography, environmental education and interpretation support

refuge purposes and any resource impacts from these uses can be minimized or avoided. Various minimization or avoidance measures will be conducted, and include but are not limited to: encouraging visitors to stay on trails, on roads, in vehicles and in existing visitor areas, closing areas temporarily or permanently to protect wildlife and habitats, overseeing large group visits, implementing best management practices during construction, limiting the mode of travel such as pedestrian travel only, and numerous other measures. For the reasons and information outlined in this compatibility determination, allowing wildlife observation, wildlife photography, environmental education and interpretation on the refuge will not materially interfere with or detract from the mission of the Refuge System or the purposes for which Edwin B. Forsythe NWR was established.

Signature - Refuge Manager: Virginia Rethy 8/19/2019
(Signature and Date)

Concurrence - Regional Chief: Sharon M. [unclear] 9/4/2019
(Signature and Date)

Mandatory 10-year Reevaluation Date: _____

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Appendices

- Appendix A. Service Letter Based on Tidelands Office Determination
- Appendix B. Group Request Form
- Appendix C. Section 7 Evaluation
- Appendix D. Wilderness Minimum Requirements Analysis
- Appendix E. Section 106 Evaluation for Cultural Resources

Maps

- Map 1. Refuge Overview
- Map 2. Headquarters and Visitor Information Area
- Map 3. Wildlife Drive Impoundment and Surrounding Trails
- Map 4. Scotts Landing Parking and Boat Ramp
- Map 5. Graveling Point Area
- Map 6. Holgate Beach Area
- Map 7. Dock Street Parking and Crabbing Area

Map 8. Cedar Bonnet Island

Map 9. Loveladies Kayak Area

Map 10. Barnegat Boardwalk

Map 11. Middle Branch Trail

Map 12. Eno's Pond

Map 13. Good Luck Point Area

Map 14. deCamp Wildlife Trail

Map 15. Tidelands Designation – Wildlife Drive

Map 16. Areas Closed to Public – Wildlife Drive

Map 17. Tidelands Designation and Areas Closed to Public – Cedar Bonnet Island

APPENDIX A
SERVICE LETTER BASED ON TIDELANDS OFFICE DETERMINATION

APPENDIX B
GROUP REQUEST FORM

**Edwin B. Forsythe National Wildlife Refuge
Group Visit Request Form
(25 People or More)**

Thank you for your interest in visiting Edwin B. Forsythe National Wildlife Refuge. We make every effort to accommodate all of our visitors. Fill out this form as precisely as possible so that we may inform you of possible conflicts or disruptions during your planned visit. Email completed forms to forsythe@fws.gov. For additional questions, call visitor services manager Keena Graham (609) 382-7641.

Today's Date: _____

Group/Organization Name: _____

Purpose of Visit:

Group Leader: _____

Address: _____

Group Size: _____ **Phone Number on Day of Visit(s):** _____

Email: _____

Please indicate your preferred method of contact.

Group Arrival Date: _____ **Group Arrival Time:** _____

Estimated Time of Departure: _____

Please Choose Location of Visit:

Wildlife Drive: _____ **Holgate Beach:** _____ **Cedar Bonnet Island:** _____ **deCamp Trail:**

Other: _____ **Please specify location:** _____

For Official Use Only

Date Request Received: _____ **Staff Receiving Request:**

Comments/Instructions:

APPENDIX C
SECTION 7 EVALUATION

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

Project Name:	Big 4 (wildlife observation, photograph, environmental education & interpretation) on EB Forsythe NWR	Originating Person:	Virginia Rettig
Townships:	Galloway	Telephone Number:	609-652-1665, VOIP 7638
County:	Atlantic, Burlington & Ocean	Email Address:	Virginia_rettig@fws.gov
Date:	10/29/18		

Distance to nearest town: Adjacent to Galloway Township

- I. Region:** 5
- II. Service Activity (Program):** NWRS, Edwin B. Forsythe NWR
- III. Pertinent Species and Habitat:**

A. Listed species and/or their critical habitat within the action area:

Birds

Piping plover (*Charadrius melodus*)
Red knot (*Calidris canutus rufa*)

Flowering Plants

American chaffseed (*Schwalbea americana*)
Knieskern's beaked-rush (*Rhynchospora knieskernii*)
Seabeach amaranth (*Amaranthus pumilus*)
Swamp Pink (*Helonias bullata*)

Mammals

Northern Long-eared Bat (*Myotis septentrionalis*)

B. Proposed species and/or proposed critical habitat within the action area:

Eastern black rail (*Laterallus jamaicensis jamaicensis*)

C. Candidate species within the action area:

None

D. Include species/habitat occurrences on a map.

An Information for Planning and Conservation (IPaC) trust resources list is attached that covers the public use areas of the refuge.

IV. Description of proposed action (attach additional pages as needed):

We propose to permit the public to engage in a variety of priority public uses throughout the refuge. These include wildlife observation, wildlife photography, environmental

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

education and interpretation. A compatibility determination with maps (attached) details the location of these four activities and any restrictions at specific sites. The activities would generally be offered year-round, with the exception of the current annual closure dates at Holgate April 1 through August 31.

Site names of the areas open to public use are:

1. Visitor Information Center (Galloway Township, Atlantic County).
2. Wildlife Drive (Galloway Township, Atlantic County).
3. Nature Discovery Area (Galloway Township, Atlantic County).
4. Archery Area (Galloway Township, Atlantic County).
5. Grassland Trail (Galloway Township, Atlantic County).
6. Leed's Eco-Trail and Boardwalk (Galloway Township, Atlantic County).
7. Jen's Trail (Galloway Township, Atlantic County).
8. Songbird Trail (Galloway Township, Atlantic County).
9. Refuge Reflection Area (formerly the Experimental Pool Area) (Galloway Township, Atlantic County).
10. Akers Woodland Trail (Galloway Township, Atlantic County).
11. Lily Lake and dam (Galloway Township, Atlantic County).
12. Scott's Landing (Galloway Township, Atlantic County).
13. Holgate Front Beach and Clamming Trail (Long Beach Township, Ocean County).
14. Graveling Point (Little Egg Harbor Township, Ocean County).
15. Dock Street Parking and Crabbing Area (Little Egg Harbor Township, Ocean County).
16. Cedar Bonnet Island Trail (Stafford Township, Ocean County).
17. Loveladies Kayak Area (Long Beach Township, Ocean County).
18. Barnegat Boardwalk and Overlook (Barnegat Township, Ocean County).
19. Middle Branch Trailhead (Lacey Township, Ocean County).
20. Eno's Pond (Lacey Township, Ocean County).
21. Good Luck Point Trail (Berkeley Township, Ocean County; to be opened in the future).
22. deCamp Wildlife Trail (Brick Township, Ocean County).

V. Determination of effects:

- A. Explanation of effects of the action on species and critical habitats in items III. A, B, and C (attach additional pages as needed):**

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

The following are descriptions of potential impacts on resources as a result of wildlife observation, wildlife photography, environmental education and interpretation. Several projects are proposed to facilitate the uses. These include: installation of interpretive, directional or informational signs and orientation maps; installation of a photo blind(s) in the HQ area; construction of a boardwalk in the Wildlife Drive impoundment system; refurbishing Cross Dike, parking areas at Jen's Trail and Dock Street, and the road at Good Luck Point; extending the Leeds Eco-Trail Boardwalk; pavilion construction at the VIC area; refurbishing the Refuge Reflection Area trail, parking area and overlook, and constructing a covered pavilion and pier there; realignment of Bristow Trail; rehabilitation of Scott's Landing parking and boat ramp; creation and marking of a clamming trail on Holgate; upgrading the Middle Branch Trail site and a portion of deCamp Trail; placing a new kiosk and overlook at Good Luck Point; and improving ADA-compliant accessibility of Cedar Bonnet Island Trail.

A few of these projects will be reviewed under separate consultations as the projects are not detailed enough at this time to appropriately evaluate affects to species here. Those are: construction of a boardwalk in the Wildlife Drive impoundment system and extending the Leeds Eco-Trail Boardwalk.

Piping plovers breed on Holgate and Little Beach Island in beach/dune habitat. Migrants occur as early as March and as late as September. Public use is only permitted on Holgate September-March and generally not on Little Beach Island (other than occasional special use permit requests for educational purposes). A new Clamming Trail will be established in the dune in about the middle of the Holgate peninsula (see map). The Clamming Trail would primarily be used by recreational clammers, but would be open to all users when the beach is open to the public (currently September 1 through March 31 each year). No permanent changes to the habitat will occur; rather, the trail will be marked with signs to direct visitors. No off-trail walking will be permitted. No negative impacts are expected to plovers as Holgate is already open for fishing and walking during that time, they are not present at that time of year, and the trail will be modified more by wind and storms than human activity.

Red knots migrate through Refuge coastal habitats and are observed in spring, fall and winter. Holgate regularly supports migrating red knot flocks that occasionally number in the hundreds of birds. The birds are also known to stop in marsh blow-outs, salt pannes, and tidal flats to forage. Sites where red knots might be encountered include Holgate Front Beach (especially at the inlet) and Clamming Trail, Graveling Point, and Good Luck Point Trail. Birds could be flushed periodically trail users. The impact of trail use is expected to be insignificant and/or discountable. Because people are required to stay on trails, and based on habitat conditions around the trails, disturbances are expected to be rare and to result in only short-lived flushing of small numbers of birds. No red knots are expected to be precluded from using preferred habitats, or to experience adverse effects

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

to their energy budgets, as a result of trail use or maintenance. Vehicular access to the Holgate Front Beach occurs below MHW. This ever-changing line is difficult to mark and maintain; therefore, visitors are permitted to use the current wet/dry line as their guide for access. Drivers generally prefer to drive below MHW on compacted sand; however, visitors have been observed driving upslope of the wet/dry line during high tides, or if the downslope beach is deteriorating. While this could occur daily, it is only at two times each day, and only at specific, deteriorated locations (which changes regularly due to beach dynamics). Vehicular access below MHW is managed by the State of New Jersey when the refuge is open to the public and not subject to Section 7 review. Access above the MHW line would cause intermittent impacts to red knots by flushing birds at roost sites, especially during high tide September -November. Holgate is well-visited during that time as fishing is a favorite activity there. The refuge's officer routinely visits Holgate and educates visitors about the rules. Additionally, Long Beach Township distributes a refuge brochure when they sell beach buggy permits for access to the site that describes "the rules" (see attachment).

Two extant occurrences of American chaffseed are located in Burlington County, NJ, and many additional historic occurrences are distributed across south Jersey, mainly in the Pinelands. No extant or historic occurrences are located on the Refuge so no impacts would occur to that species. No activities or projects are proposed in suitable chaffseed habitat.

Occurring only in southern New Jersey, Knieskern's beaked-rush is an obligate wetland species found in early successional habitats. One extant occurrence is located on Refuge property in Stafford Township, Ocean County. No impact is expected from visitors as that part of the refuge does not contain any public use trails. Another beaked-rush occurrence in Lacey Township is immediately adjacent to the refuge in a right-of-way. No activities or projects are proposed in suitable beaked-rush habitat.

Seabeach amaranth occurs on Holgate and Little Beach Island and in varying locations. Refuge biologists work with partners to identify new locations each year. Those areas are marked by refuge staff each year. If the public ignores areas that are marked off to protect the plants, they could trample or potentially drive over amaranth. However, we have not observed this behavior in the past and expect the impact of the use to be negligible to this species.

Swamp pink and swamp pink habitat occur on the refuge. However, none occurs along or near any public use trails; therefore, the visitors would not impact plants. No activities or projects are proposed in suitable swamp pink habitat.

The refuge contains habitat that could be used by the northern long-eared bat. No trees would be disturbed for the public to engage in trail use. No tree clearing would occur to

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

implement the projects described herein so no negative impacts to bats are expected. Larger projects, as described above, will be evaluated separately when design plans have been developed to ensure impacts are addressed appropriately for the species.

The Eastern black rail occurs in parts of the Refuge. Black rails require densely vegetated emergent wetlands. Rails can use tidal or non-tidal wetlands across the full salinity gradient, but require specific hydrologic conditions. Black rails need moist to saturated substrates (occasionally dry) interspersed with or adjacent to very shallow water (between 1 and 6 centimeters), with elevated refugia to escape high water events. Black rail records on and near the Refuge have been in salt marsh. In tidal areas, the black rail's habitat requirements correspond closely to the high marsh zone. Black rail surveys have been conducted in suitable habitat in the state since 2015 by NJDEP and have shown a decline; with zero detections in 2018 surveys. None of the projects evaluate here would occur in black rail habitat so no effects are expected.

B. Explanation of actions to be implemented to reduce adverse effects:

No public use will be permitted on areas that are closed during the piping plover nesting season.

If seabeach amaranth plants are identified to be present (late summer), they will be marked off before public use of Holgate resumes in September to avoid trampling by pedestrians or damaged by motor vehicles.

Generally, only significant impacts to roost trees or maternity colony trees would affect Northern long-eared bats. If we identify any roosts or colonies near public use areas, we will consult with the NJFO to take actions to ensure no negative impacts occur to bats whether by visitors or due to refuge projects.

VI. Effect determination and response requested: [* = optional]

A. Listed species/designated critical habitat:

Determination

Response requested

no effect/no adverse modification
(species: piping plover, American chaffseed, swamp pink,
Knieskern's beaked-rush)

X Concurrence

may affect, but is not likely to adversely affect
species/adversely modify critical habitat
(species: northern long-eared bat, red knot,

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

seabeach amaranth)

X *Concurrence

may affect, and is likely to adversely affect species/adversely modify critical habitat (species: _____)

____ Formal Consultation

B. Proposed species/proposed critical habitat:

Determination

Response requested

no effect on proposed species/no adverse modification of proposed critical habitat (species: Eastern black rail)

X *Concurrence

is likely to jeopardize proposed species/adversely modify proposed critical habitat (species: _____)

____ Conference

C. Candidate species:

Determination

Response requested

no effect (species: _____)

____ *Concurrence

is likely to jeopardize candidate species (species: _____)

____ Conference

Virginia Rettig
Project Biologist/Supervisor (Requestor)

12/19/2018
Date

VII. Reviewing ESFO Evaluation:

A. Concurrence ✓ Nonconcurrency _____

B. Formal consultation required _____

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

C. Conference required _____

D. Informal conference required _____

E. Remarks (attach additional pages as needed):

Wendy Walsh
Endangered Species Biologist (Reviewer),
New Jersey Field Office

12/20/18
Date

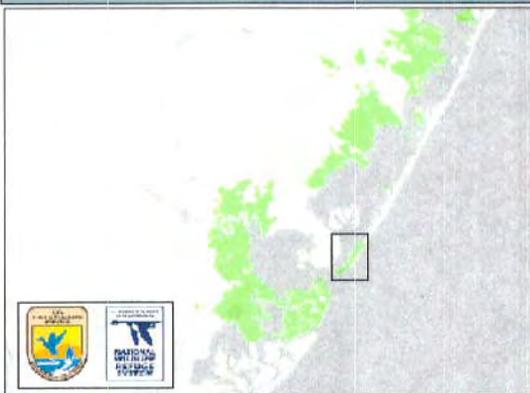
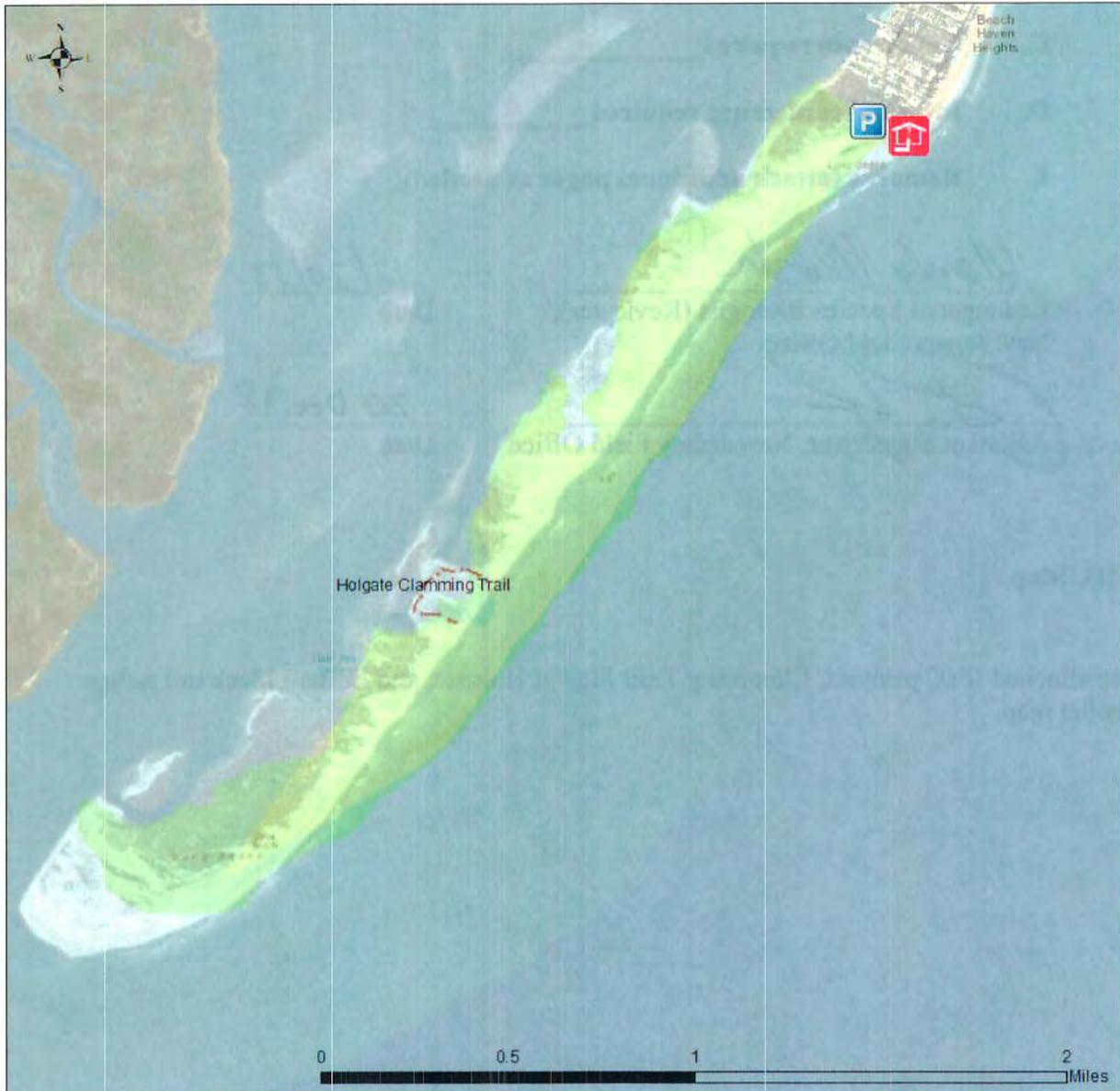
[Signature]
Assistant Supervisor, New Jersey Field Office

20 Dec 18
Date

VIII. Map

See attached IPaC printout, Clamming Trail Map at Holgate, and Eastern black rail refuge habitat map.

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM



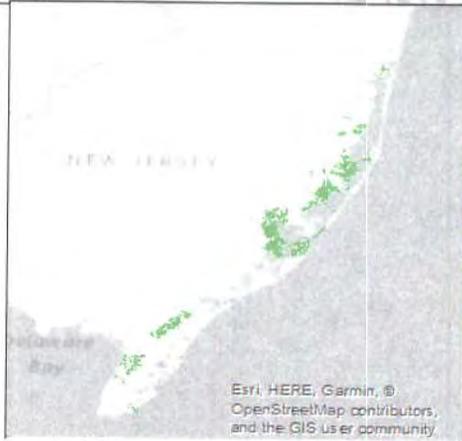
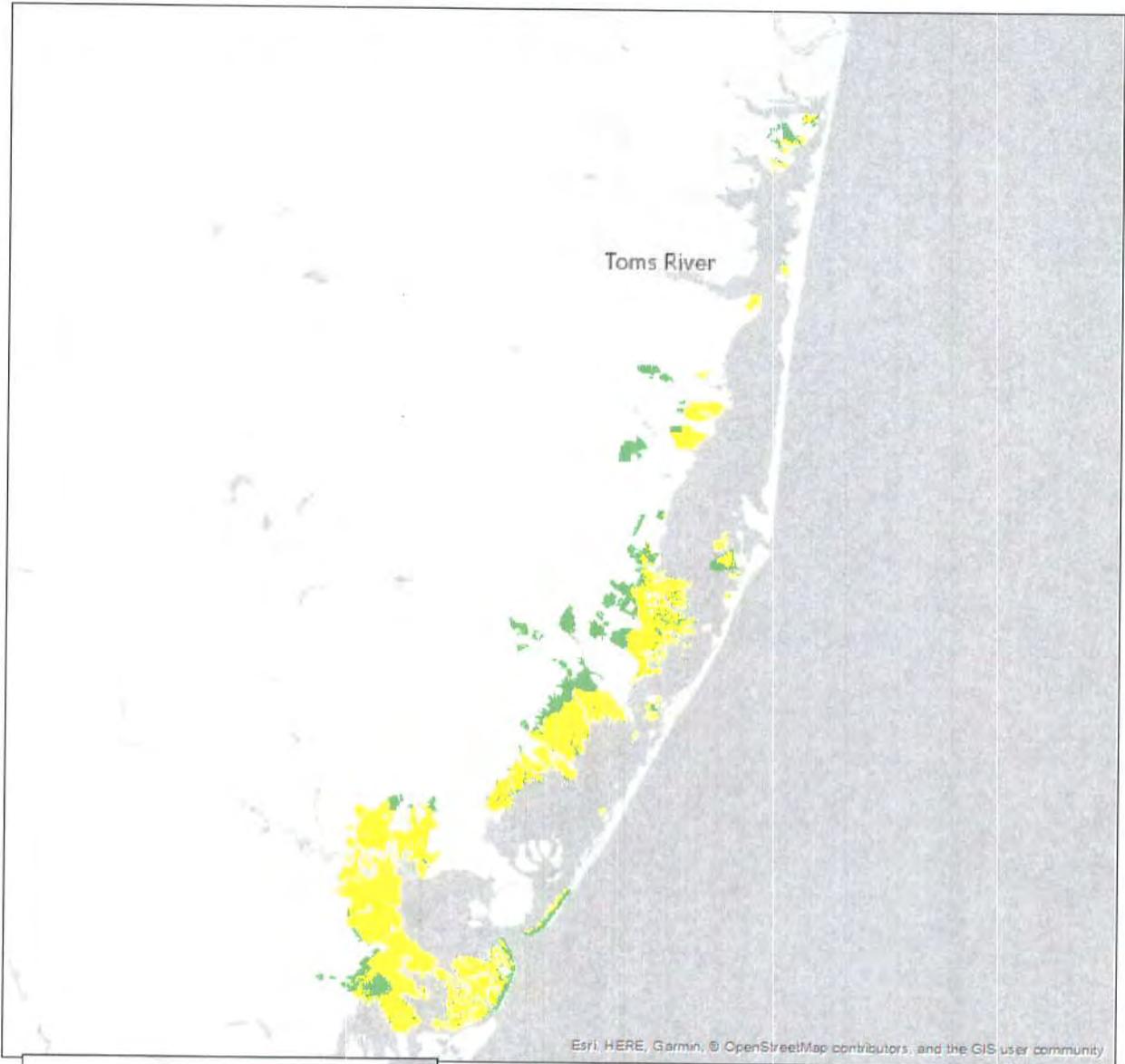
Edwin B. Forsythe NWR Holgate Beach Map 6

Legend

-  Holgate Interpretative Site
-  Parking
-  Refuge Trails
-  Refuge Lands

Map Created 10/25/2018

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM



Legend



Non-Black Rail Refuge Lands



Black Rail Habitat on EBF

APPENDIX D
WILDERNESS MINIMUM REQUIREMENTS ANALYSIS



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE WORKBOOK

"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

-- The Wilderness Act of 1964

Project Title: Improve access to clam beds at Holgate Unit of EB Forsythe Refuge

MRDG Step 1: Determination

Determine if Administrative Action is Necessary

Description of the Situation

What is the situation that may prompt administrative action?

Edwin B. Forsythe National Wildlife Refuge wilderness areas were originally identified as such because they were never physically modified by humans. The result of this action provides exceptional nesting habitats for the federally listed piping plover (*Charadrius melodus*), particularly at Holgate and Little Beach Island. And, as such, Holgate is closed April 1-August 31 each year, and Little Beach is closed year-round. Holgate may stay closed longer if beach-nesting birds are nesting past August 31.

New Jersey is a mean high water (MHW) State, which allows for public access below MHW September 1-March 31. At Holgate, we permit foot traffic during those months between the dunes (where we have Area Closed signs and the water's edge). Vehicles are permitted at the site but below the MHW. This allows for access to fishing, which is a priority public use of the National Wildlife Refuge System.

Historically, site conditions allowed for vehicular access very near to traditional clamming ground on the bay side of Holgate. The public would park and then walk to the shallows during lower tides to hand-harvest clams. Over time, and since landscape changes due to Hurricane Sandy and other storms, the bay side is no longer accessible by vehicles.

During 2018, refuge staff have developed an updated analysis and plan for management of refuge visitor services facilities throughout the refuge. Local clambers have requested abandonment of access to clamming beds on the bay side, and for a location to be marked where they can access the same beds by foot across the dune area.

The area to be used by the public has been identified. No wheeled equipment or motorized devices would be permitted. Generally, clambers only carry a bucket and rake. Other visitors expected to use the site would be bird watchers and nature lovers enjoying the new access. The area of access would

only be available during the times of year Holgate is open to the public. The access location is shown in blue below.



Options Outside of Wilderness

Can action be taken outside of wilderness that adequately addresses the situation?

- YES **STOP – DO NOT TAKE ACTION IN WILDERNESS**
 NO **EXPLAIN AND COMPLETE STEP 1 OF THE MRDG**

Explain:

The purpose of the project is to provide access to a location adjacent to and essentially within the wilderness area.

Criteria for Determining Necessity

Is action necessary to meet any of the criteria below?

A. Valid Existing Rights or Special Provisions of Wilderness Legislation

*Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that **requires** action? Cite law and section.*

YES NO

Explain:

N/A

B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws? Cite law and section.

YES NO

Explain:

N/A

C. Wilderness Character

Is action necessary to preserve one or more of the five qualities of wilderness character?

UNTRAMMELED

YES NO

Explain:

The project does not seek to preserve the untrammeled character.

UNDEVELOPED

YES NO

Explain:

The project does not seek to preserve the undeveloped character.

NATURAL

YES NO

Explain:

The project does not seek to preserve the natural character.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

YES NO

Explain:

Improved access would provide a new opportunity to experience portions of the wilderness area that has never been open to the public. The location is further away from the lands below MHW that are traversed by vehicles and will enhance the opportunity for solitude and primitive recreation.

OTHER FEATURES OF VALUE

YES NO

Explain:

Step 1 Determination

Is administrative action necessary in wilderness?

Criteria for Determining Necessity

- | | | |
|--|---|--|
| A. Existing Rights or Special Provisions | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| B. Requirements of Other Legislation | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| C. Wilderness Character | | |
| Untrammelled | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Undeveloped | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Natural | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Solitude/Primitive/Unconfined | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |
| Other Features of Value | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |

Is administrative action necessary in wilderness?

YES **EXPLAIN AND PROCEED TO STEP 2 OF THE MRDG**

NO **STOP – DO NOT TAKE ACTION IN WILDERNESS**

Explain:

This project is intended to provide access that protects the landscape from illegal access. The access is intended to be within the wilderness area.

MRDG Step 2

Determine the Minimum Activity

Other Direction

Is there “special provisions” language in legislation (or other Congressional direction) that explicitly **allows** consideration of a use otherwise prohibited by Section 4(c)?

AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

YES

DESCRIBE OTHER DIRECTION

NO

SKIP AHEAD TO TIME CONSTRAINTS BELOW

Describe Other Direction:

It is not a requirement by law, but national wildlife refuges are encouraged to seek opportunities to provide access to recreational opportunities as long as they are compatible with refuge establishment purposes and do not interfere with refuge management plans (identified by Executive Order 12996 (March 25, 1996) and legislatively mandated by the Refuge System Administration Act of 1966 (16 U.S.C. sections 668dd-668ee), as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57). Fishing is one of 6 priority public uses of the System.

Time Constraints

What, if any, are the time constraints that may affect the action?

Access will only occur September 1-March 31 each year due to closure of the site for federally listed beach-nesting bird activity. If active nesting is occurring past August 31, the beach (or portions of it) remain closed. This could affect access to the clamming area.

Components of the Action

What are the discrete components or phases of the action?

Component X: *Example: Transportation of personnel to the project site*

Component 1: Identify access location that best accommodates public use without reducing quality of refuge habitat.

Component 2: Deliver any required materials to the site via pick-up truck below MHW.

Component 3: Refuge personnel will make any needed improvements to the access location in order to limit public access of the site.

Component 4:	The public will use the trail September 1-March 31 each year unless birds are still nesting.
Component 5:	Each fall, refuge personnel will evaluate the site to determine if the location can be maintained or if alignment needs to change due to landscape factors (wind, storms, waves change sand patterns and distribution throughout the year).
Component 6:	The site location will be monitored through the “open” period to ensure site conditions do not deteriorate.
Component 7:	

Proceed to the alternatives.

Refer to the [MRDG Instructions](#) regarding alternatives and the effects to each of the comparison criteria.

MRDG Step 2: Alternatives

Alternative 1: Install Signs to Guide Visitors Along Clamming Trail

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

A 0.5 miles long trail will be maintained to provide public access to the back bay of the site. The trail will be marked annually when the beach opens to the public. Posts will be installed by hand shovel and signs will be attached with hand tools. All equipment will be carried in by hand – no wheeled equipment. Trail markers would be checked throughout the open season to ensure storms/wind/waves do not alter the preferred access route while ensuring limited negative impacts to resources. The public will be limited to the marked trail. They will only be permitted to carry gear and no wheeled or motorized equipment will be permitted.

Component Activities

How will each of the components of the action be performed under this alternative?

<u>Component of the Action</u>		Activity for this Alternative
1	Identify trail location that best accommodates safe public use without reducing quality of refuge habitat.	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.
2	Deliver poles and signs to the trailhead via pick-up truck below MHW.	May be done on foot if just a few posts, but larger loads will require a truck. The truck will be limited to access below MHW, which is State land and not part of the wilderness area.
3	Refuge personnel will install signs specially made to identify the trail location in order to limit unwanted public access of the site.	By hand and using hand tools, such as shovels, screwdrivers and ratchets.
4	The public will use the trail September 1-March 31 each year, unless birds are still nesting.	Only by foot. No wheeled or motorized equipment will be permitted.
5	Each fall, refuge personnel will evaluate if the trail location from the previous year can be maintained or if alignment needs to change due to landscape factors (wind,	By foot by refuge personnel.

	storms, waves change sand patterns and distribution throughout the year).	
6	Trail location will be monitored through the “open” period to ensure above factors do not occur and the trail location is still safe for the public.	By foot by refuge personnel.
7		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	May be done on foot if just a few posts, but larger loads will require a truck. The truck will be limited to access below MHW, which is State land and not part of the wilderness area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Only by foot. No wheeled or motorized equipment will be permitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	1	NE
<u>Untrammed Total Rating</u>		-1		

Explain:

Sign presence will negatively impact the untrammed quality as the signs will restrict access and passage will not be unlimited. Signage is needed to ensure people reduce their impact to this fragile dune habitat.

UNDEVELOPED

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	May be done on foot if just a few posts, but larger loads will require a truck. The truck will be limited to access below MHW, which is State land and not part of the wilderness area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Only by foot. No wheeled or motorized equipment will be permitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	1	NE
<u>Undeveloped Total Rating</u>		-1		

Explain:

Sign presence will negatively impact the undeveloped quality as people will see these as they walk. They are needed to ensure people reduce their impact to this fragile dune habitat.

NATURAL

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	May be done on foot if just a few posts, but larger loads will require a truck. The truck will be limited to access below MHW, which is State land and not part of the wilderness area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Only by foot. No wheeled or motorized equipment will be permitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	1	NE
<u>Natural Total Rating</u>		-1		

Explain:

Sign presence will negatively impact the natural quality as people will see these as they walk. They are needed to ensure people reduce their impact to this fragile dune habitat.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	May be done on foot if just a few posts, but larger loads will require a truck. The truck will be limited to access below MHW, which is State land and not part of the wilderness area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Only by foot. No wheeled or motorized equipment will be permitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	By foot by refuge personnel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		1	0	NE
<u>Solitude or Primitive & Unconfined Rec. Total Rating</u>		1		

Explain:

The ability to travel by foot to a new part of the refuge will be a positive experience for solitude that is not necessarily present at the site now.

OTHER FEATURES OF VALUE

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects				NE
Other Features of Value Total Rating				

Explain:

Summary Ratings for Alternative 1
--

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-1
Solitude or Primitive & Unconfined Recreation	1
Other Features of Value	
Wilderness Character Summary Rating	-2

MRDG Step 2: Alternatives

Alternative 2: Do Not Mark Clamming Trail (no signs)

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

This alternative would allow public access across the dunes to the back bay, but would not include sign installation. As this is a changing environment, and the trail will generally not be permanent, the public would not be guided as to where to walk.

Component Activities

How will each of the components of the action be performed under this alternative?

<u>Component of the Action</u>		Activity for this Alternative
1	Identify trail location that best accommodates safe public use without reducing quality of refuge habitat.	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.
2	Two trailhead signs will be installed on posts on each end of the trail to indicate location.	By hand and using hand tools, such as shovels, screwdrivers and ratchets.
3	The public will use the site September 1-March 31 each year, unless birds are still nesting.	Only by foot. No wheeled or motorized equipment will be permitted.
4		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Only by foot. No wheeled or motorized equipment will be permitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		1	0	NE
<u>Untrammeled Total Rating</u>		1		

Explain:

As there will be no signs on the trail, people would be free to traverse the site.

UNDEVELOPED

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Only by foot. No wheeled or motorized equipment will be permitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	0	NE
<u>Undeveloped Total Rating</u>		0		

Explain:

As there will be no signs on the trail, the site will be undeveloped.

NATURAL

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3	Only by foot. No wheeled or motorized equipment will be permitted.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	1	NE
<u>Natural Total Rating</u>		-1		

Explain:

Without marking access, it is likely that the public will illegally access the clamming beds on foot. They may damage refuge dunes and vegetation which could encourage invasive species production.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	Done on foot by refuge personnel. Trail will be digitally marked using handheld GPS unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	By hand and using hand tools, such as shovels, screwdrivers and ratchets.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Only by foot. No wheeled or motorized equipment will be permitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		1	0	NE
<u>Solitude or Primitive & Unconfined Rec. Total Rating</u>		1		

Explain:

The ability to travel by foot to a new part of the refuge will be a positive experience for solitude that is not particularly present at the site now.

OTHER FEATURES OF VALUE

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects				NE
Other Features of Value Total Rating				

Explain:

Summary Ratings for Alternative 2
--

Wilderness Character	
Untrammeled	1
Undeveloped	0
Natural	-1
Solitude or Primitive & Unconfined Recreation	1
Other Features of Value	
Wilderness Character Summary Rating	1

MRDG Step 2: Alternatives

Alternative 3:

No Action – Do not install Clamming Trail, Do not provide access for public

Description of the Alternative
What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

This alternative would be the No Action alternative, which currently does not permit the public to cross the Holgate peninsula over the dune system. No foot access to clamming grounds would be permitted at the refuge any longer.

Component Activities
How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
1	No actions to support the trail would be taken.	No activity would occur in the wilderness by refuge personnel or the public regarding a trail.
2		

Wilderness Character
What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
1	No activity would occur in the wilderness by refuge personnel or the public regarding a trail.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	0	NE
Untrammeled Total Rating		0		

Explain:

No actions would occur therefore no impacts would occur.

UNDEVELOPED

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	No activity would occur in the wilderness by refuge personnel or the public regarding a trail.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	0	NE
<u>Undeveloped Total Rating</u>		0		

Explain:

No actions would occur therefore no impacts would occur.

NATURAL

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	No activity would occur in the wilderness by refuge personnel or the public regarding a trail.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects			1	NE
<u>Natural Total Rating</u>		-1		

Explain:

Without the creation of access, it is likely that the public will illegally access the clamming beds on foot. They may damage refuge dunes and vegetation which could encourage invasive species production.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
1	No activity would occur in the wilderness by refuge personnel or the public regarding a trail.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects		0	1	NE
<u>Solitude or Primitive & Unconfined Rec. Total Rating</u>		-1		

Explain:

Opening the trail would provide solitude, primitive and unconfined recreation in an area that in which it was previously not permitted. Keeping the dunes closed to the public would detract from that experience.

OTHER FEATURES OF VALUE

<u>Component Activity for this Alternative</u>		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Number of Effects				NE
<u>Other Features of Value Total Rating</u>				

Explain:

Summary Ratings for Alternative 3
--

Wilderness Character	
<u>Untrammeled</u>	0
<u>Undeveloped</u>	0
<u>Natural</u>	-1
<u>Solitude or Primitive & Unconfined Recreation</u>	-1
<u>Other Features of Value</u>	
Wilderness Character Summary Rating	-2

MRDG Step 2: Alternatives
MRDG Step 2: Alternatives Not Analyzed

Alternatives Not Analyzed

What alternatives were considered but not analyzed? Why were they not analyzed?

N/A

MRDG Step 2: Alternative Comparison

Alternative 1:	Install Signs to Guide Visitors Along Clamming Trail
Alternative 2:	Do Not Mark Clamming Trail (no signs)
Alternative 3:	No Action – Do not install Clamming Trail, Do not provide access for public
Alternative 4:	

Wilderness Character	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	+	-	+	-	+	-	+	-
Untrammeled		1	1					
Undeveloped		1						
Natural		1		1		1		
Solitude/Primitive/Unconfined	1		1			1		
Other Features of Value								
Total Number of Effects	1	-3	2	-1	0	-2		
Wilderness Character Rating	-2		1		-2			

MRDG Step 2: Determination

Refer to the [MRDG Instructions](#) before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative

- | | | |
|-------------------------------------|--------------------------------|--|
| <input checked="" type="checkbox"/> | Alternative 1: | Install Signs to Guide Visitors Along Clamming Trail |
| <input type="checkbox"/> | Alternative 2: | |
| <input type="checkbox"/> | Alternative 3: | |
| <input type="checkbox"/> | Alternative 4: | |
| <input type="checkbox"/> | Alternative 5: | |
| <input type="checkbox"/> | Alternative 6: | |
| <input type="checkbox"/> | Alternative 7: | |
| <input type="checkbox"/> | Alternative 8: | |

Explain Rationale for Selection:

The purpose of the project is to provide access to the bay side area of the Holgate Unit by the public. The trail would traverse a very sensitive ecological feature - the dune and barrier system of New Jersey. Generally, all dunes in the State are closed except at specific locations to ensure people do not degrade them as they are exposed to extreme site conditions like wind, wave and storm action. Along with incidental degradation by the public, dunes can be dangerous as they shift and change. It is important that the trail be marked to keep the public safe and oriented properly and to ensure sensitive wildlife habitat is not degraded. Therefore, although the selected Alternative (1) does not have the highest score, it is the best option to provide this access to the public.

Describe Monitoring & Reporting Requirements:

The trail will be regularly checked by refuge personnel throughout the open months. We will encourage the public to inform us if they notice any trespass, sign damage, or other issues of concern.

Approvals

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

MRDG 12/15/16
Step 2:
Determination

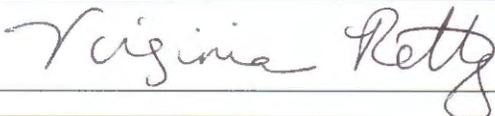
Prohibited Use

Quantity

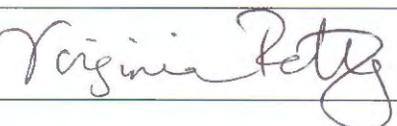
- Mechanical Transport:
- Motorized Equipment:
- Motor Vehicles:
- Motorboats:
- Landing of Aircraft:
- Temporary Roads:
- Structures:
- Installations:

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following signature authorities:

Prepared	Name	Position	
	Virginia Rettig	Refuge Manager	
	Signature	Date	
		11-15-18	

Recommended	Name	Position	
	Richard Albers	Deputy Refuge Manager	
	Signature	Date	
		11/16/18	

Approved	Name	Position	
	Virginia Rettig	Refuge Manager	
	Signature	Date	
		11-15-18	

APPENDIX E
SECTION 106 EVALUATION FOR CULTURAL RESOURCES

REQUEST FOR NHPA (SECTION 106) REVIEW – NORTHEAST REGION

Submit to RHPO in Advance of Undertakings

Project Background:

Project Name: _____ Project Type: _____
Station: _____ County: _____ State: _____ On USFWS land? Yes
No USFWS Program: _____ If Other, please
name: _____ Project Location: Township(s) _____
USGS Quad: _____ Total Project Area Size (in Acres): _____ If
road/trail, (linear ft, L and W): _____ USFWS Project Leader: _____
Phone #: _____
If there is a Governmental/NGO partner(s), please name: _____

Mandatory Attachments (on separate sheets):

1. USGS topographical map and aerial photo, ensuring that the proposed project boundaries are exact.
2. Details of anticipated project activities, i.e. ground/building disturbance (add maps as necessary)
3. Only the relevant sections of design drawings showing soil disturbance boundaries (e.g. plan, views)
4. Land use history and environmental setting of the project area (add maps as necessary)

Check here if you have done any informal consultation(s) outside the USFWS (if not, check here). If so, did you talk with SHPO? Tribes? Did you consult any database with known surveys or sites?
Please attach any information you have regarding your outside informal consultation(s).

Check here if there has been a CR survey done in the project area already (if not, check here). If so, who conducted it and when? Did they find any buildings/sites? Please see the next section.
Please attach any information/report(s) you have regarding any previous field survey(s).

Check here if there are buildings/known sites* in the project area. (if not, check here)
*Sites may include archaeological sites or features, artifact scatters, mounds or earthworks, cemeteries, privy pits, old foundations, ruins, bridges, dams, water control structures, historic roads/trails/fences, and trash pits/piles.

Information for RHPO if there are known buildings/sites in the project area:

1. Age of building(s)/site(s) or date(s) built: _____ RPI # or State(s) _____
2. Attach ground level photographs of both inside and outside of buildings/sites.
3. Attach close-up aerial photo or a sketch map illustrating the placement of the buildings/sites in the project area, key the ground photos to the aerial photo/sketch map.
4. Attach detailed descriptions of the buildings/sites with emphasis on their size, floor plans and architectural elements. Individually, what kind of physical shape are they in (good, fair or poor)?

Submitted by: _____ Date: _____ Phone #: _____

If applicable, submit this form with the Environmental Action Statement (EAS) or NEPA Checklist

RHPO Only *****

- Investigation *Final Finding by Regional Director via RHPO
- No Field Survey Needed No Potential Effect. No site/building(s) in APE. No Effect.
- Field Survey Done Site/Building(s) present, but none are Historic Properties. No Effect.
- Phase I (ARPA# _____) Historic Property(ies) present, but No Effect/No Adverse Effect.
- Phase II (ARPA# _____) Historic Property(ies) present, Adverse Effect, Resolved with MOA.
- Phase III (ARPA# _____) Justify Finding: _____
- Stipulations _____

Amy Wood, USFWS Northeast RHPO

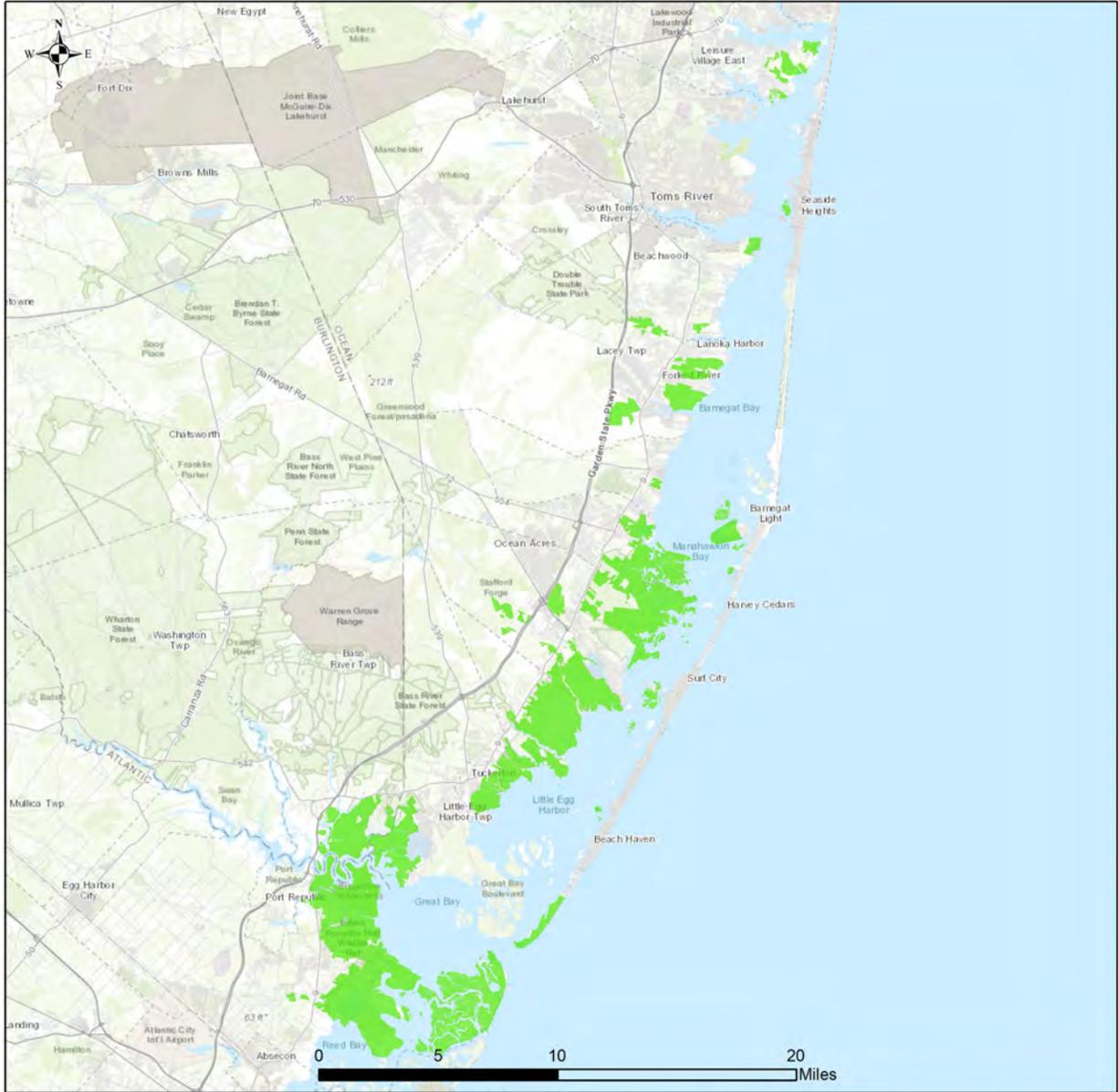
Date RHPO

Project #

*Although the project has been cleared, inadvertent discoveries are still possible. If so, please stop and contact the RHPO at 413-253-8297.

MAPS

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge

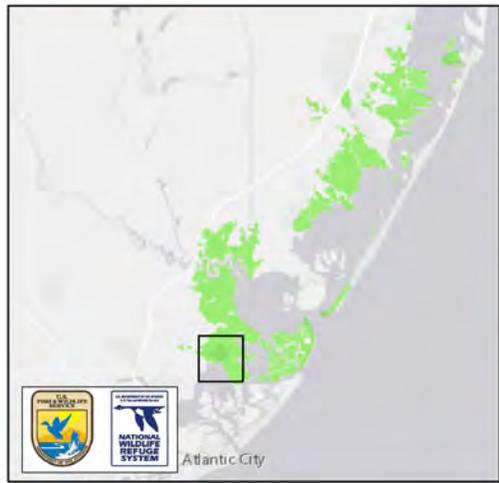


Edwin B. Forsythe NWR Refuge Overview Map 1

Legend

 Refuge Lands

Map Created 10/24/2018



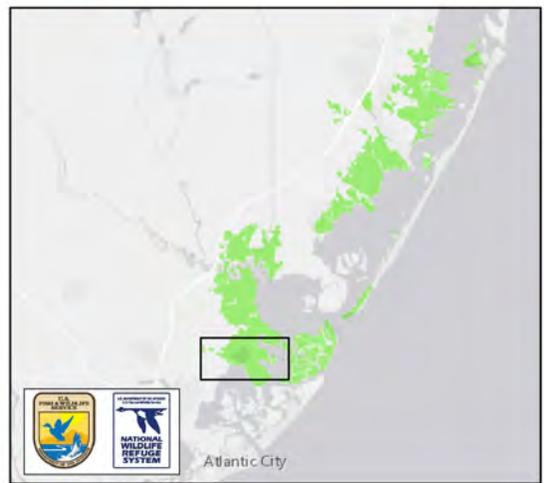
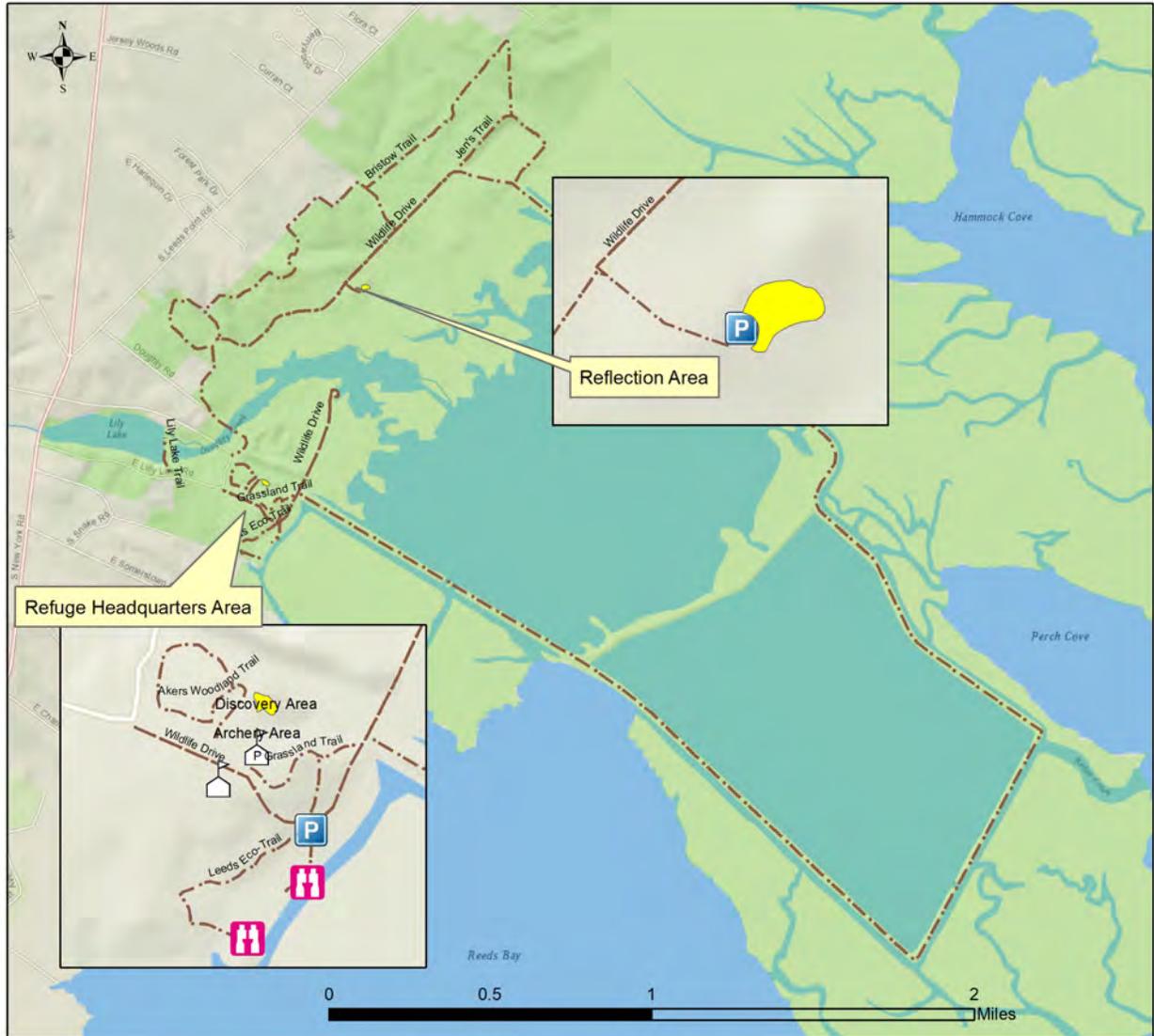
Edwin B. Forsythe NWR Headquarters Area Map 2

Legend

- Visitor Information Center
- Administration Building
- Fishing
- Non-Motorized Boat Launching
- Parking
- Viewing Area
- Refuge Trails
- Activity Areas
- Refuge Lands

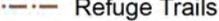
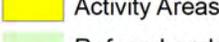
Map Created 10/30/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge

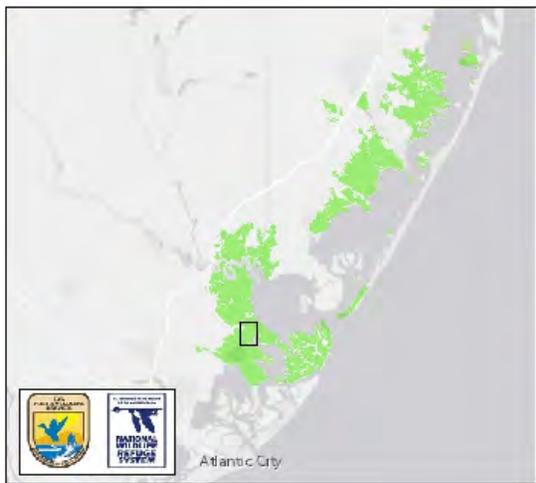
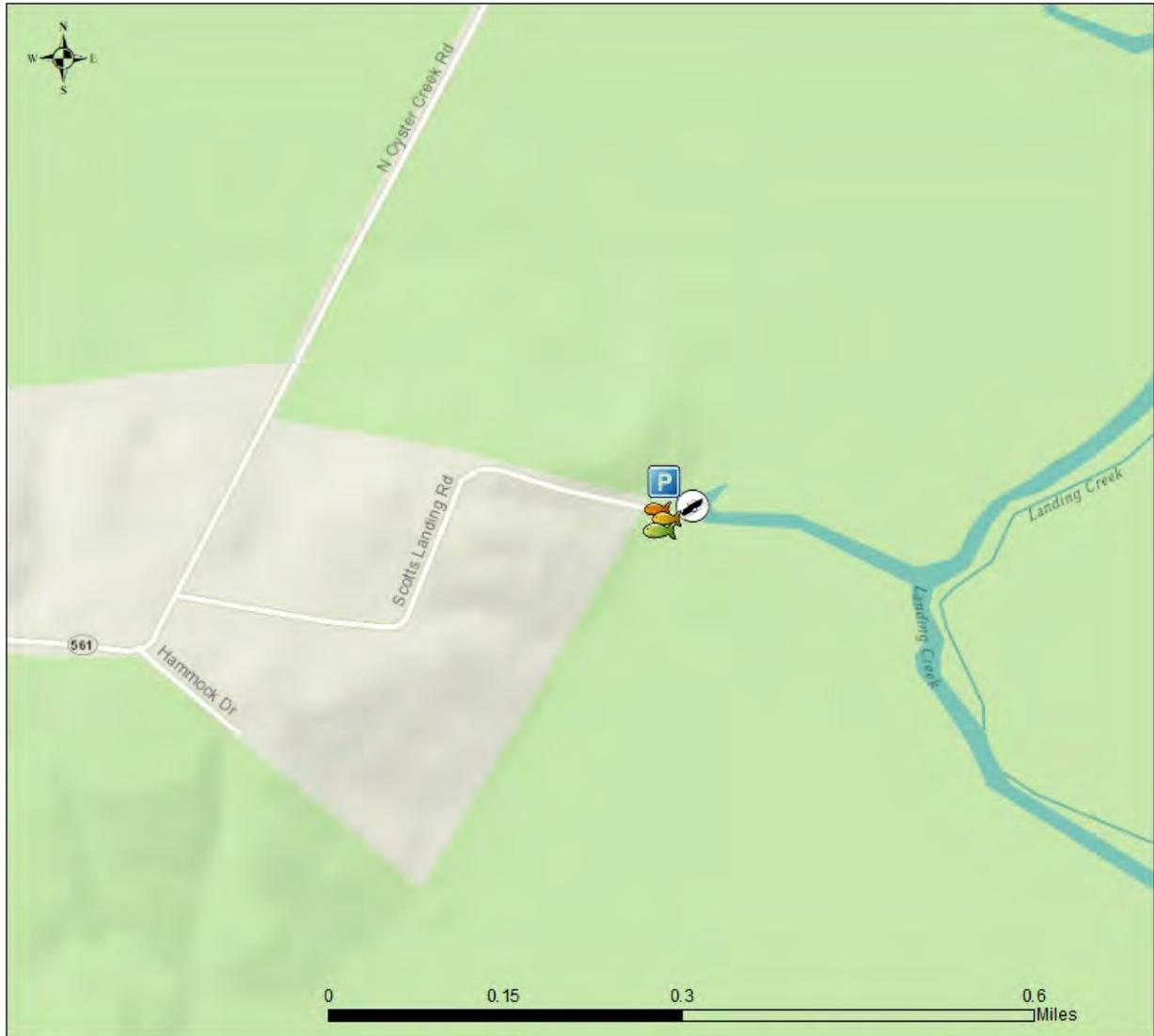


**Edwin B. Forsythe NWR
Wildlife Drive Area
Map 3**

Legend

-  Visitor Information Center
-  Administration Building
-  Viewing Area
-  Parking
-  Refuge Trails
-  Activity Areas
-  Refuge Lands

Map Created 10/30/2018



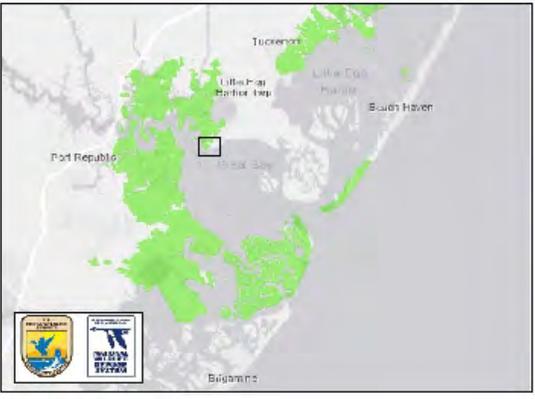
Edwin B. Forsythe NWR Scotts Landing Map 4

Legend

-  Boat Ramp
-  Fishing
-  Parking
-  Refuge Lands

Map Created 10/24/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge

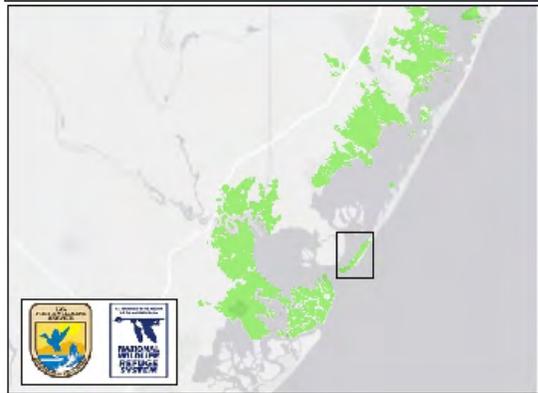
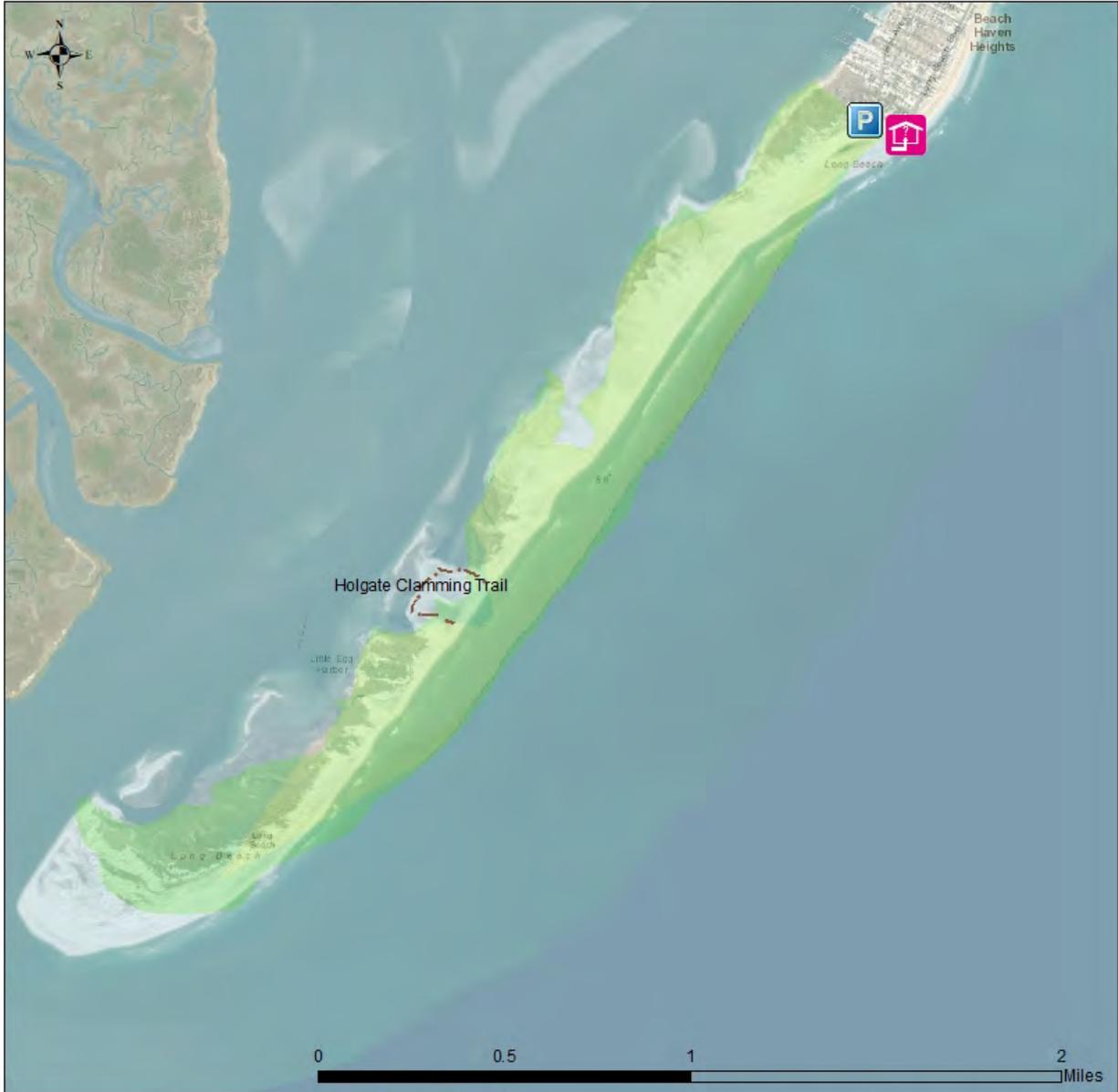


**Edwin B. Forsythe NWR
Graveling Point Area
Map 5**

- Legend**
-  Township Trail
 -  Refuge Trails
 -  Parking
 -  Refuge Lands

Map Created 10/24/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



Edwin B. Forsythe NWR Holgate Beach Map 6

Legend

-  Holgate Interpretative Site
-  Parking
-  Refuge Trails
-  Refuge Lands

Map Created 10/25/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



Edwin B. Forsythe NWR Dock Street Parking and Crabbing Area Map 7

Legend

-  Fishing
-  Parking
-  Refuge Lands

Map Created 10/25/2018

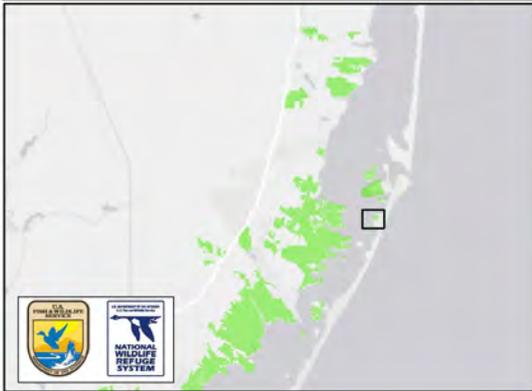
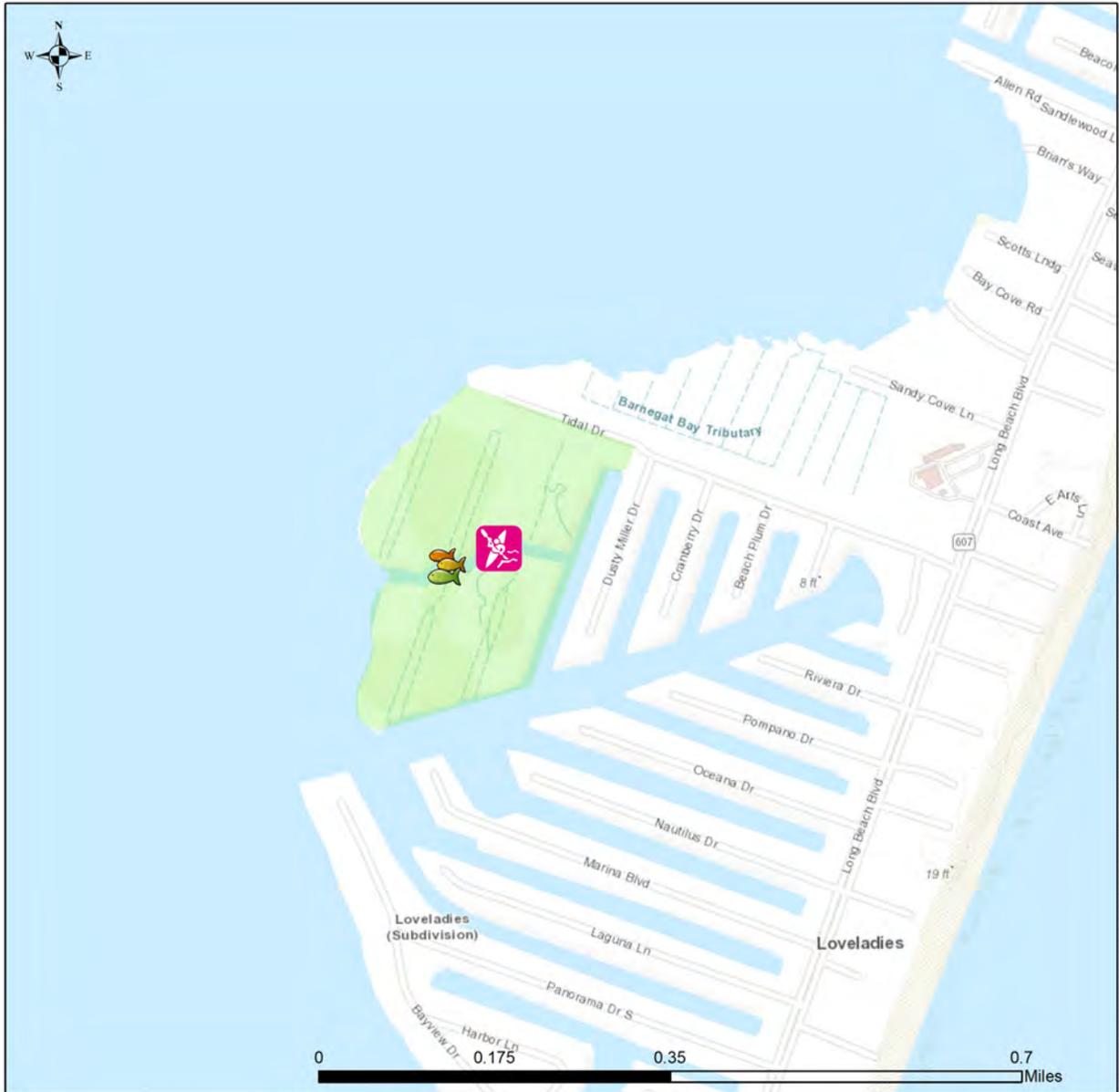


Edwin B. Forsythe NWR Cedar Bonnet Island Trail Map 8

Legend

-  Non-Motorized Boat Access (No launching permitted)
-  Viewing Area
-  Parking
-  Refuge Trails
-  Nature Areas
-  Refuge Lands

Map Created 10/30/2018



Legend

-  Fishing
-  Kayaking
-  Refuge Lands

**Edwin B. Forsythe NWR
Loveladies Kayak Area
Map 9**

Map Created 10/30/2018



Edwin B. Forsythe NWR Barnegat Boardwalk Map 10

Legend



Parking

--- Refuge Trails



Viewing Area

■ Refuge Lands

Map Created 10/25/2018



Edwin B. Forsythe NWR Middle Branch Trail Map 11

Legend

-  Non-Motorized Boat Launch
-  Parking
-  Refuge Lands

Map Created 10/25/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



**Edwin B. Forsythe NWR
Eno's Pond Trail
Map 12**

Legend

- Ocean County Trail
- - - Refuge Trails
- P Parking
- Refuge Lands

Map Created 10/25/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



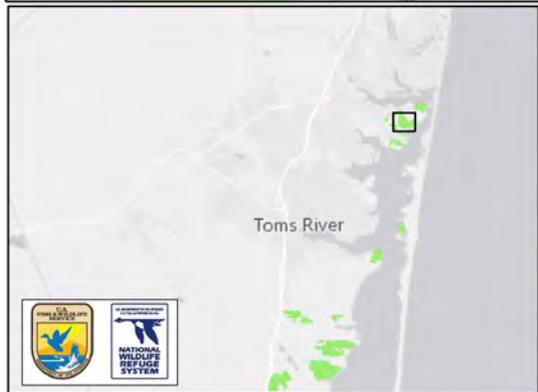
Edwin B. Forsythe NWR Good Luck Point Area Map 13

Legend

- Refuge Trails
- P Parking
- Refuge Lands

Map Created 10/25/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



**Edwin B. Forsythe NWR
deCamp Wildlife Trail
Map 14**

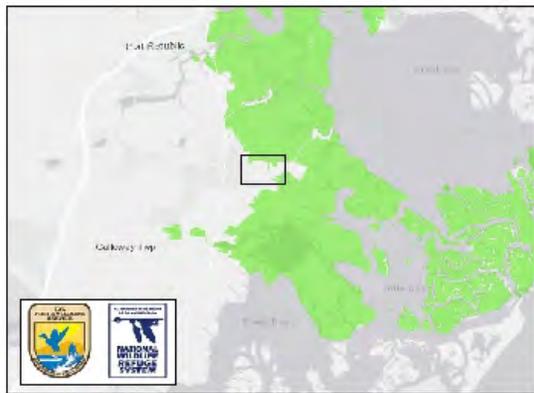
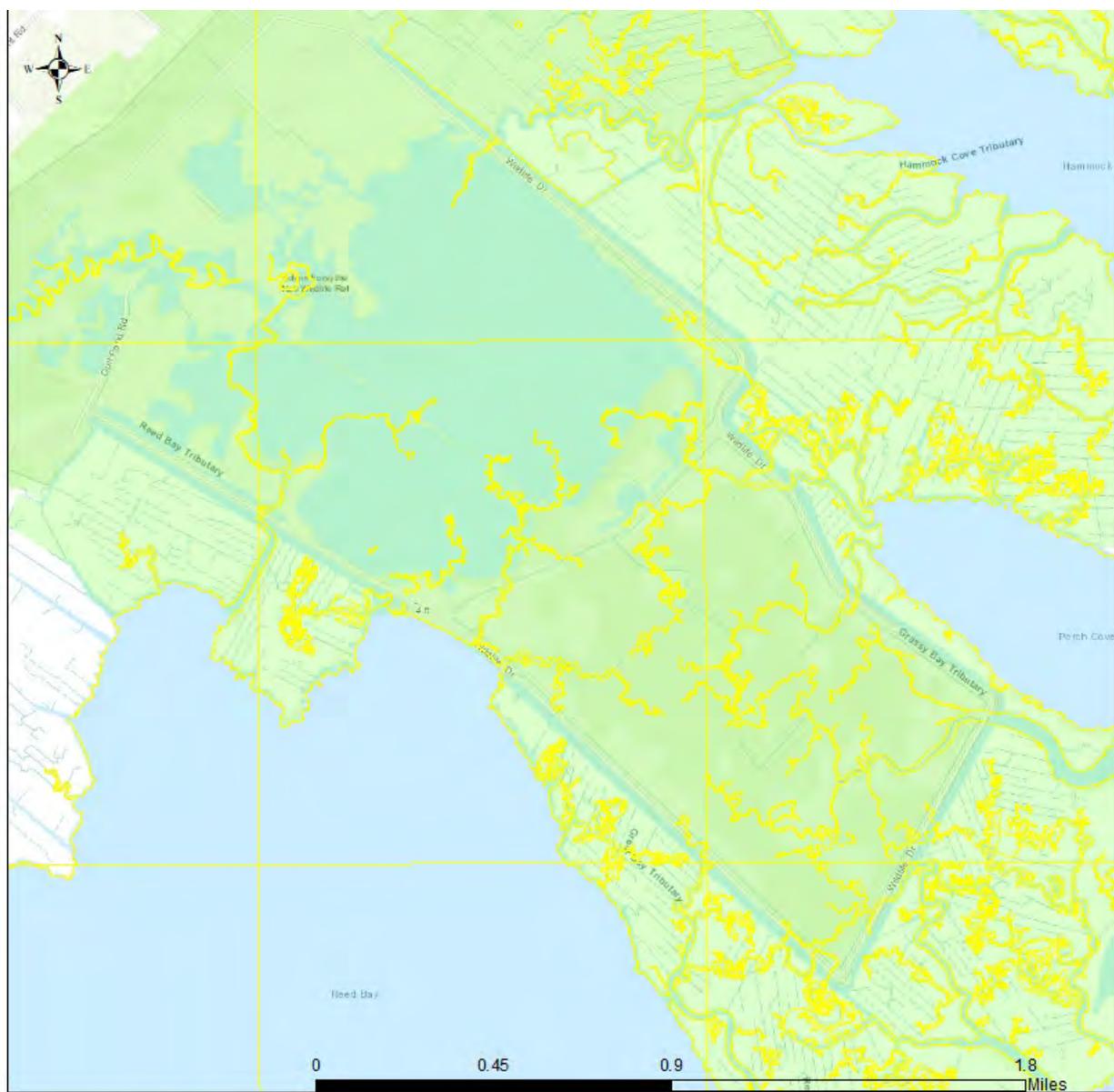
Legend

 Parking

 Refuge Lands

Map Created 10/25/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



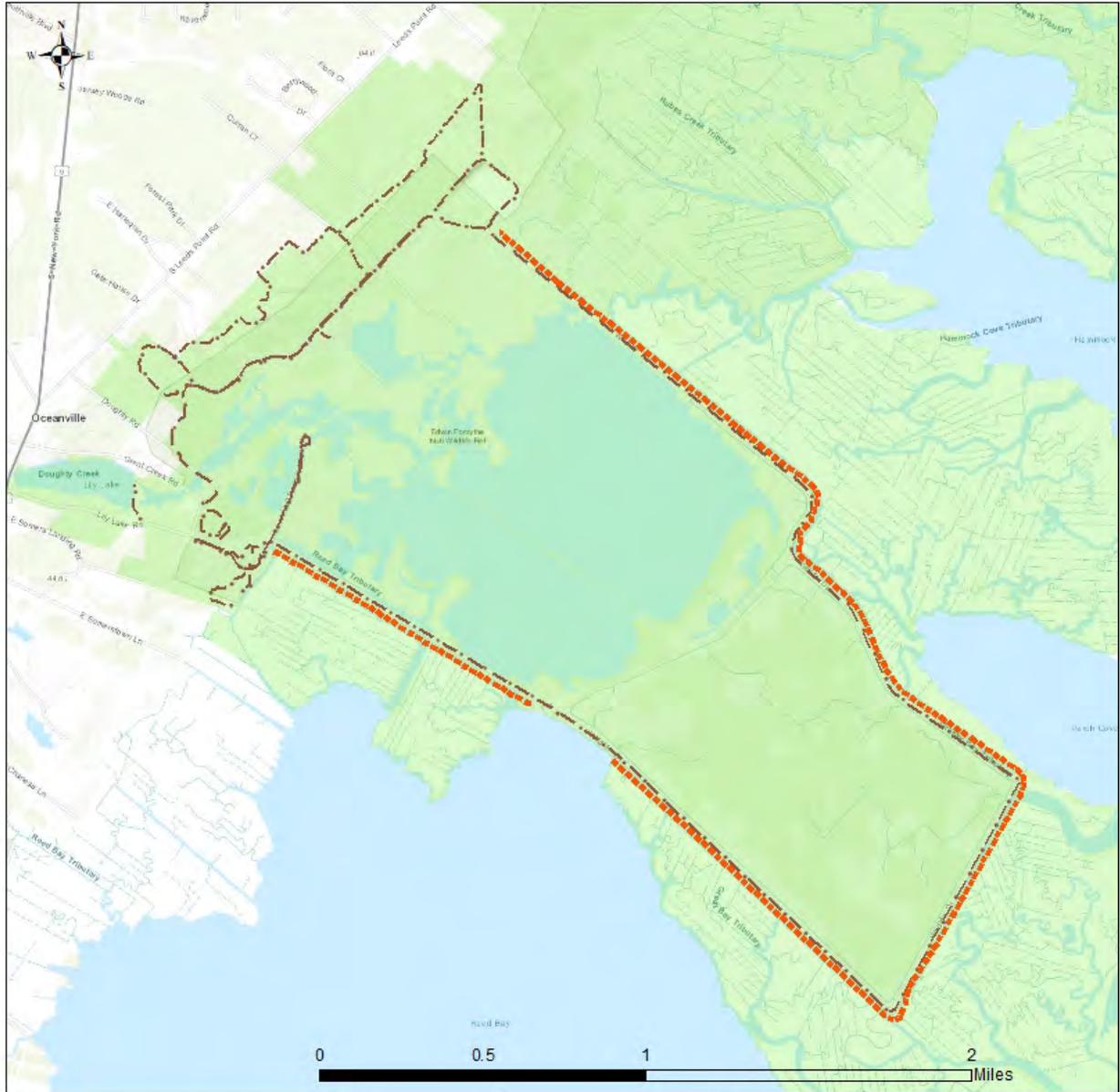
Edwin B. Forsythe NWR Tidelands Designation - Wildlife Drive Map 15

Legend

-  Tidelands Designation
-  Refuge Lands

Map Created 10/12/2018

Compatibility Determination – Wildlife Observation, Wildlife Photography, Environmental Education and Interpretation at Edwin B. Forsythe National Wildlife Refuge



Edwin B. Forsythe NWR

**Ditches Closed to Public Access
Wildlife Drive
Map 16**

Legend

- Area Closed to Public
- - - Trails
- Refuge Lands

Map Created 1/30/2019



Legend

-  Refuge Lands
-  Closed
-  Closed
-  Tidelands Designation

Edwin B. Forsythe NWR

**Tidelands Designation
and Closed Areas
Cedar Bonnet Island
Map 17**

Map Created 12/13/2018