

Island No. 2 and a portion of the eastern perimeter of the mid-inlet shoal; Transect Area No. 3 encompasses the potential project impact area along the south side of Dudley Island; and Transect No. 4 extends along the eastern side of Bear Island proceeding west for 500 meters along the ocean shoreline (Figure 14.1). Monitoring areas include accreting areas along the inlet; bayside, sand and mud flats; and recently disturbed areas such as wash overs. Bird monitoring observations are conducted by an ornithologist equipped with a spotting scope to assist in identifying nesting, roosting, and foraging activities, as well as territory establishment, courtship, and copulating birds.

Monitoring of bird species began on April 2, 2003 and will continue for one-year during the breeding, migratory and wintering periods to obtain baseline information. Surveys are conducted approximately every ten days during the spring migration (March 1st to April 30th); approximately every fifteen days during the breeding season (May 1st to July 13th); and approximately every ten days during the fall migration (July 14th to November 30th). Bird monitoring surveys return to a monthly schedule from December 2003 thru February 2004.

Monthly reports of observations made along the four transect areas are submitted to the COE, USFWS, NCWRC, as well as other concerned parties. A pre-construction monitoring report summarizing data will be prepared and submitted at the end of the monitoring period. Post-construction reports will be prepared and submitted on May 30th of every year and will document observations through April 1st of the reporting year.

14.2 Macroinvertebrate and Infaunal Sampling

Macroinvertebrate and infaunal sampling will occur at three locations along the existing channel and along the proposed channel alignment to provide a representation of the species common to the project area (Figure 14.1). Sampling parameters include coquina clams (*Donax variabilis*), mole crabs (*Emerita talpoida*), penaeid shrimp (*Penaeus* sp.), and amphipod and polychaete indicator species. Six sampling stations are located along the existing channel (Stations 1-3) and adjacent to the new channel alignment (Stations 4-6). One sampling site (Station 7) is located in the intertidal habitat on the south side of Island No. 2. This sampling station has been included as a reference site for the infaunal samples located along the existing and proposed channel alignment.

Three additional infaunal sampling stations are located and coincide with the salt marsh monitoring stations to identify benthic species in the substrate of the salt marsh communities. Continuous sampling at these locations will provide insight into the potential for change in species diversity and abundance due to erosion or accretion in the vicinity of the salt marshes.

Infaunal data for each station will be reported as the number of individuals from each taxon, the number of species and the total number of organisms per square meter. Annual reports documenting the findings will be prepared simultaneously with the saltmarsh monitoring report. A pre-construction monitoring report will be submitted to the COE, at the end of the study period. Post-construction infauna monitoring reports will be submitted at the end of February of each year.

14.3 Salt Marsh Monitoring

Salt marsh vegetation has been used as a reliable indicator of salinity levels and hydrologic conditions in estuarine environments. Monitoring of salt marsh habitats in the project area was designed to assess and document the potential effects of project implementation, such as sedimentation accumulation, on adjacent salt marshes. Salt marsh monitoring transects are located at the following stations: 1) north of Bogue Inlet on the east side of the main channel, 2) on the east side of Dudley Island, and 3) north of Bear Island. A total of four monitoring events will be conducted to determine if impacts are directly or indirectly attributed to project activities.

The project effects on vegetative conditions will be most pronounced during active vegetative growth and development periods. Therefore, observations of these effects will be better identified at the end of the growing season in September/October. Pre-construction monitoring to collect baseline conditions will be conducted at the end of the growing season in either September or October 2003. Annual saltmarsh monitoring will continue for three-years post-construction in September/October of each year.

Appendix 1 provides the approved Bird, Macroinvertebrate/Infaunal and Salt Marsh Monitoring Plans for the Bogue Inlet Channel Relocation project.

The biological monitoring data will be used in conjunction with the mapping and water quality data to assist in evaluating changes in salinity and the hydrologic flow regime upstream of the inlet.

15. **PROJECT IMPACT SUMMARY**

Listed below are the major events and associated changes expected to occur within the project area from the westward repositioning of the ebb channel (selected alternative):

- Migration of the middle ground shoal (located west of the existing channel) to form the ebb tidal delta of the new channel;
- Accretion along the ocean shoreline of Bear Island;
- West end of Bogue Banks;
 - onshore movement of ebb tidal delta at the west end of Bogue Banks
 - transport and deposition of sediment along the inlet shoreline of Bogue Banks
 - development of sand spit from the west end towards Bogue Inlet
 - infilling of abandoned (existing) channel west of The Pointe shoreline
- Island 2 is an ephemeral island that is expected to migrate with or without project implementation and sand dike installation;
- Easterly transport effects along Emerald Isle will limit overall net sediment transport along the ocean shoreline of Emerald Isle;
- Beach nourishment of 20,500 feet (3.9 miles) of Phase 3 of the Emerald Isle project area;
- 39,000 cy of sediment transport in the southern portion of the Western Channel; and

- 158,000 cy of sediment transport deposition in the southern portion of the eastern channel over eastern channel area of Bogue Inlet.

These predicted changes are based on the geomorphic analysis, numerical modeling and effects observed after channel relocation project.

16. LISTED SPECIES AND CRITICAL HABITAT THAT MAY BE AFFECTED: Table 16.1 provides a list of federally protected species that may be found in the various habitats surrounding the project area. However, the presence and abundance of the species strongly depends on the availability of the appropriate habitat.

**Table 16.1
Federally Listed Threatened and Endangered Species Identified or Expected to Occur in the Vicinity of Bogue Inlet, Carteret and Onslow Counties.**

Common Name	Scientific Name	Status
Loggerhead Sea Turtle	<i>Caretta caretta</i>	Threatened
Green Sea Turtle	<i>Chelonia mydas</i>	Threatened
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	Endangered
Hawksbill Turtle	<i>Eretmochelys imbricata</i>	Endangered
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	Endangered
West Indian Manatee	<i>Trichechus manatus</i>	Endangered
Humpback Whale	<i>Megaptera novaeangliae</i>	Endangered
Right Whale	<i>Eubalena glacialis</i>	Endangered
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	Endangered
Piping Plover	<i>Charadrius melodus</i>	Threatened
Roseate Tern	<i>Sterna dougallii</i>	Endangered
Seabeach Amaranth	<i>Amaranthus pumilus</i>	Threatened

Key: Status Definition
Endangered - A taxon "in danger of extinction throughout all or a significant portion of its range."
Threatened - A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."

Source: USFWS, <http://nc-es.fws.gov/es/countyfr.html>. Updated 2/05/2003.

Critical Habitat for Wintering Piping Plover (*Charadrius melodus*) has been identified by the USFWS along the west end of Bogue Banks. The sand shoal islands adjacent to Bogue Inlet, and the eastern tip of Bear Island are included in the area designated as Critical Habitat for Wintering Piping Plovers. Minimization and mitigation measures, presented earlier, are designed to protect or replace this critical habitat and will be included in the final design of the project. The habitat mapping, aerial photography, and topographic/bathymetric surveying of the project area to be conducted during the summer of 2003, will assist in the development of mitigation measures necessary to protect this habitat. Refer to Section 17.6.2 for measures associated with Critical Habitat protection for Wintering Piping Plover.

Federal listed species of special concern such as the black rail (*Laterallus jamaicensis*), dune bluecurls (*Trichostema* sp. 1) and the undescribed skipper (*Atrytonopsis* sp. 1) may also be found within the project area.

The black rail frequents the coastal salt marshes of North Carolina during breeding season. However, it is known to winter in South Florida, and therefore is not expected to be present during construction activities (Canada's Aquatic Environments, University of Guelph, 2002). Observations of this species in the project area will be documented during the bird monitoring surveys.

Dune bluecurls is a plant that occurs on the vegetated secondary dunes in North Carolina. The project will introduce new sediments to the littoral profile seaward of the base of the existing dune systems and escarpments, and therefore is not expected to adversely impact dune or terrestrial resources or species of special concern.

An unnamed skipper (butterfly) was recently discovered on Brandt and Radio Islands at the eastern end of Bogue Sound. Genetic studies of the species are currently underway to determine if the skipper is endemic to this area or a previously known species. The habitat requirements for the skipper are unknown and are currently under investigation. (USFWS Bogue Banks Draft CAR, 2002)

Other Federally listed rare, threatened, or endangered species in Carteret and/or Onslow County not found in the coastal environments are: eastern cougar (*Puma concolor cougar*), American alligator (*Alligator mississippiensis*), bald eagle (*Haliaeetus leucocephalus*), red cockaded woodpecker (*Picoides borealis*), rough-leaved loosestrife (*Lysimachia asperulaefolia*), and Cooley's meadowrue (*Thalictrum cooleyi*). Since these species are not likely to be found at this project site, they are not expected to be affected by the proposed work.

17. SPECIES ASSESSMENTS:

17.1 LOGGERHEAD TURTLES, GREEN, LEATHERBACK, HAWKSBILL, AND KEMP'S RIDLEY SEA TURTLES

17.1.1 Status and Natural History of Species in Project Area

The North Carolina Wildlife Resource Commission has the most complete list of sea turtle nesting data (1997-2002) collected for Bogue Banks and Bear Island. Daily surveys of the area are conducted by the NCWRC and trained volunteers beginning on May 1st and continue until September 1st of each year or until the last documented nest hatches. Data provided by the NCWRC indicates that all but two of the nests identified in the survey area during the study period were loggerhead sea turtles (*Caretta caretta*). The other two nests were from green sea turtles (*Chelonia mydas*).

Loggerhead sea turtles are most commonly found nesting from Bogue Inlet to Beaufort Inlet between March and October. Loggerheads are known to frequently use North Carolina coastal waters as migration corridors (Wynne, 1999). Loggerhead nesting data

from 1997 through 2002 range from eleven to thirty-five nests along Bogue Banks (not including Fort Macon) and from eight to forty-five along Bear Island (Godfrey, 2003).

Green sea turtles can be found nesting from May to November along the beaches east and west of Bogue Inlet (Matthew Godfrey, personal communication, 2002), and are generally found in shallow water environments, such as nearshore reefs, bays and inlets. The turtles are attracted to shallow lagoons with a algal and marine seagrasses communities (USFWS, 2003). The NCWRC reported two green turtle nests on Bogue Banks in May and June 2000.

The leatherback (*Dermochelys coriacea*) and hawksbill (*Eretmochelys imbricata*) sea turtles prefer deep, saltwater environments and are uncommon in the vicinity of Bogue Sound. The Kemp's ridley (*Lepidochelys kempii*) turtles have been known to nest in the Gulf of Mexico, but can be found foraging in the shallow water environments of North Carolina. Leatherback and hawksbills have only been found to nest in the State of Florida and are not common in North Carolina (USFWS, 2003), although leatherbacks have been observed migrating in the vicinity of Bogue Inlet from May to June (Matthew Godfrey, personal communication, 2002).

Historical information on the leatherback, hawksbill, and Kemp's ridley sea turtles in the vicinity of Bogue Inlet is scarce and there are no records available on the leatherback sea turtle presence or absence on the east end of Bear Island, the south end of Dudley Island or the west end of Emerald Isle (Matthew Godfrey, personal communication, 2003). Anecdotal reports of one or two strandings of hawksbill turtle in the southern region of the North Carolina coast (e.g., Sunset, Holden, and Caswell Beaches) have been reported as well as several strandings of the Kemp's ridley sea turtles in the vicinity of Bogue Inlet (Matthew Godfrey, personal communication). It should be noted that researchers agree that strandings are not an indication of sea turtle distribution and occurrence, and therefore cannot be used for sea turtle abundance indices.

The diamondback terrapin (*Malaclemys terrapin*) is a Federally listed species of concern known to exclusively inhabit brackish waters from Cape Cod, Massachusetts to Corpus Christi Bay, Texas. These turtles commonly inhabit salt marshes, tidal flats, impoundments, and sounds behind barrier islands. The subspecies Carolina diamondback terrapin (*M. t. centrata*) is a North Carolina listed species of special concern that can be found in salt or brackish marshes and estuaries in the vicinity of Bogue Inlet. During the winter months, they are known to hibernate in muddy burrows along tidal creeks and ponds. Primary feeding grounds for this species are subtidal mud flats and shallow tidal creeks. (South Carolina Department of Natural Resources, 2001). The State of North Carolina does not have records or observations of the Carolina diamondback terrapin, but the State of South Carolina has studied these turtles extensively (Matthew Godfrey, personal communication, 2003).

17.1.2 Effect Determination

Several measures have been proposed in the design of this project to reduce the potential for adverse impacts to sea turtles. These measures include: 1) construction timing to

occur between November 16th and March 31st outside of nesting and migration season; 2) use of a cutter suction pipeline dredge; and 3) presence of a biological observer to monitor protected species during dredge and fill operations.

The project is not likely to adversely affect the hawksbill and leatherback sea turtles since these species are rarely observed or found nesting along the Atlantic coast of North Carolina. The most complete database, along Bogue Banks and Bear Island provided by the NCWRC, for the six year period from 1997 to 2002 shows no indication of the hawksbill or leatherback sea turtles in the project area.

Loggerheads, green turtles, and Kemp's Ridley sea turtles have been reported as the most common sea turtles nesting and foraging in the vicinity of Bogue Inlet (Matthew Godfrey, personal communication, 2002). The proposed project is likely to adversely affect the loggerhead, green sea turtles, and Kemp's Ridley sea turtles during beach nourishment efforts. Dredge and fill areas will be closely monitored and a construction methodology will be developed to limit adverse impacts to these species.

Although once considered a delicacy in the early 1920's resulting in devastating losses, the diamondback terrapin and the Carolina diamondback terrapin is now most severely threatened by estuarine habitat loss. Since the proposed project has the potential to indirectly affect the estuarine habitats behind Bogue Inlet, the project is likely to adversely affect these sea turtles although their presence has not been documented in the project area.

17.2. WEST INDIAN MANATEE

17.2.1 Status and Natural History of Species in Project Area

The West Indian manatee (*Trichechus manatus*) may be found from Bogue Inlet to the upstream estuarine, brackish, and freshwater environments of the White Oak River. Manatees have been recorded in North Carolina waters nine months of the year, but are most likely to occur from June through October (Schwartz, 1995). Manatees can be found in waters as shallow as 5 feet to as deep as 20 feet (USFWS, 2003).

17.2.2 Effect Determination

The proposed work will occur between November 16, 2004 and March 31, 2005, during the time of year when manatee occurrence in North Carolina is at its lowest, therefore the project is not likely to adversely affect this species. However, precautionary measures will be taken during construction activities to ensure that this species is not affected during project construction. Precautionary measures may include: 1) construction personnel instruction on the appearance, movement characteristics, and criminal penalties associated with harming manatees; 2) performance of visual surveys within the 300 feet of the work zone during construction activities to ensure that this species is not present; 4) if manatees are identified within the 300 feet of construction, precautionary measures will be implemented to avoid the species; 5) all construction equipment will be shutdown if manatees are identified within 100 feet of the construction equipment; 6) construction activities will resume once the manatee(s) have left the work zone; and 7) construction

will cease and the USFWS and NCWRC will be notified immediately if a construction related collision or injury to a manatee occurs.

The attached Precautionary Guidelines for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina Appendix 2 will be included in the Construction Bid Document and project specifications to avoid and minimize potential impacts to manatees.

17.3. HUMPBACK WHALES AND RIGHT WHALES

17.3.1 Status and Natural History of Species in Project Area

Humpback whales (*Megaptera novaeangliae*) are found in protected waters over shallow bars and shelf waters used by the species for breeding and feeding. Humpbacks migrate towards the poles in the summer and toward the tropics in the winter and are known to be present in North Carolina coastal waters during the seasonal migration, especially between the months of December and April (Conant, 1993).

The right whale (*Eubalena glacialis*) usually winters in the waters off the coast of Georgia and Florida, but has been occasionally sighted off the coast of North Carolina. Similar to the humpback whale, right whales are more commonly found in deep water, but will venture within a few hundred meters of the shoreline (Schmidly, 1981).

17.3.2 Effect Determination

Indirect adverse affects to these species may occur due to the disturbance to their food source (e.g., plankton and krill). However, disturbance of potential food source populations by dredging activities and burial associated with the Bogue Inlet Channel Relocation project will be limited to the immediate project area. Based on studies conducted during similar projects, effects to food sources will be short-term and populations are expected to quickly re-establish through natural recruitment from adjacent, unaffected areas. A whale observer with whale identification experience will be present during dredging and filling operations, if required by State and Federal resource protection agencies. Direct impacts such as collisions with the whales are not anticipated. Considering that the construction work will occur in shallow tidal environments, the work is not likely to be in areas where Humpback Right or other whale species frequent and is therefore not likely to adversely affect the whale species.

17.4 SHORTNOSE STURGEON

17.4.1 Status and Natural History of Species in Project Area

The shortnose sturgeon (*Acipenser brevirostrum*) can be found along the Atlantic seaboard from the southern reach of Canada to as far south as Florida. The sturgeon is typically found in the lower reaches of large rivers and coastal waters. Sturgeon have been shown to spend most of the year in brackish or salt water and move into fresh water only to spawn (USFWS, 2003). Shortnose sturgeons have been documented in the vicinity of Bogue Inlet (Onslow County) within the last 20 years (USFWS, 2003).

17.4.2 Effect Determination

Project construction and maintenance may adversely affect this species. Some of its invertebrate food sources may also be affected, however, similar to the whale species, impacts to food sources will be temporary in nature and natural recruitment will quickly reestablish the potential food source populations. The NMFS, in correspondence dated March 3, 2003, stated that the shortnose sturgeon is typically found in large rivers near the Cape Fear area and the NMFS has determined that the proposed project is not likely to adversely affect this species.

17.5 PIPING PLOVER

17.5.1 Status and Natural History of Species in Project Area

The piping plover (*Charadrius melodus*) is known to be present in the Bogue Inlet area throughout the year and utilize the region for nesting, overwintering, and migration. Plovers have been documented arriving at their breeding grounds from late March to April. By early September both adults and young generally depart for other wintering areas. Piping plovers prefer coastal environments during the winter, especially areas with expansive sand or mudflats for feeding that are located close to a sandy beach used for roosting. As part of the USFWS, the North Carolina Natural Heritage Program has recorded the piping plover in both Carteret and Onslow Counties.

The North Carolina Wildlife Resource Commission has collected piping plover data at Bogue Inlet since 1985. The NCWRC has not sighted a breeding pair of piping plovers in the Bogue Inlet area, although the NCWRC has noted that suitable habitat exists to support breeding activity (Sue Cameron, personal communication).

The NCWRC has identified the sand shoals of Bogue Inlet as good foraging and loafing habitat for piping plovers, other shorebirds and colonial waterbirds during migration and wintering. The NCWRC has also found that the beaches of Bogue Inlet provide habitat for migratory and wintering shorebirds and colonial waterbirds.

The gull-billed tern (*Sterna nilotica*) is recognized as a state-listed threatened species under the North Carolina Natural Heritage Program (LeGrand, 2001). This species has historically been found to nest around Bogue Inlet (Sue Cameron, personal communication). Gull-billed terns nest on barrier beaches, natural islands or shoals and dredged material islands. Gull-billed terns are reported to arrive in North Carolina between mid-April and early May, with nestings occurring in mid-May (Parnell et al., 1993). A gull-billed tern was observed resting on Bear Island on April 22, 2003 by CZR, Inc.

Other shorebirds including Wilson's plovers (*Charadrius wilsonia*), American oystercatchers (*Haematopus palliatus*) and willets (*Catotrophorus semipalmatus*) have been observed breeding in the areas adjacent to Bogue Inlet. Colonial waterbirds with documented breeding activity adjacent to Bogue Inlet include black skimmers (*Rynchops niger*), common terns and least terns (*Sterna antillarum*).

17.5.2 Effect Determination

The west end of Emerald Isle and Bear Island has been documented as habitat for piping plover, other shorebirds and colonial waterbirds (Sue Cameron, personal communication). The proposed work will be conducted during the winter season (November 16, 2004 through March 31, 2005) when migration is at its lowest.

Several measures will be implemented to avoid disturbing piping plover species and its habitat. Because the work along the shoals of Bogue Inlet will be timed outside of piping plover nesting season and the plovers are mobile, adverse impacts are not likely to occur. The project may cause some erosion to the distal end of the present sand spit extending from the west end of Emerald Isle. The loss of this site will be replaced by the formation of a new spit east of the new inlet channel.

Monitoring of piping plovers and other species of special concern identified under the North Carolina Natural Heritage Program will be conducted before, and after construction to evaluate affects. Additional mitigation and minimization measures indicated in Section 19 may be implemented to limit the potential for impacts to the listed bird species and their habitat.

A cutter suction dredge will be used to access the new dredge location from the ocean side of Bogue Inlet. The dredge will cut through clean, sorted sand before depositing the sediment onto the beaches of Emerald Isle and into the existing main ebb channel of Emerald Isle. Dredging operations are not expected to adversely impact the piping plovers because of the slow mobility of the equipment which, allows the birds to relocate as the dredge approaches. The vibration and noise associated with the dredge will alert the piping plovers as construction activities near their location.

17.6 CRITICAL HABITAT FOR WINTERING PIPING PLOVER

17.6.1. Status and Natural History

On July 10, 2002, the USFWS designated 137 areas along the coasts of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas as critical habitat for wintering piping plover (*Charadrius melodus*) (Department of Interior-Fish and Wildlife Service, 2001). The Endangered Species Act of 1973 considers piping plover a threatened species when on their wintering grounds. Piping plovers begin arriving on their wintering grounds in July, with some arriving as late as early September, possibly due to a late nesting period. Piping plovers can be found in their in their wintering grounds throughout the year.

The primary constituent elements found to be essential for the conservation of wintering piping plovers are habitats that support foraging, roosting, and sheltering, or have the capacity to develop those components. These primary constituent elements are found in geologically dynamic coastal areas such as migrating inlets that can support or have the potential to support intertidal beaches, mud flats, sand flats above the annual high tide line, and associated dune systems. Essential components of intertidal flats include sand and/or mud flats for feeding with no or very sparse emergent vegetation located near a

sandy beach that can be used for roosting (USFWS, 2003). These areas have been identified as preferred wintering areas.

Critical Habitat for Wintering Piping Plover in Bogue Inlet (Figure 17.1) is listed as Conservation Unit NC-10 of the Federal Register (50 CFR Part 17). This unit is described as the “contiguous land south, west and north of Bogue Court to the MLLW line of Bogue Inlet on the western end of Bogue Banks. It includes the sandy shoals north and adjacent to Bogue Banks and the land on the Atlantic Ocean side. This unit also extends 1.3 km (0.8 miles) west of Bogue Inlet on the eastern portion of Bear Island.” Conservation Unit NC-10 contains 356 acres of habitat that includes the primary constituent elements for the piping plover in the wintering range of the species.

The North Carolina Natural Heritage Program states that an historic osprey nesting area was present more than 20 years ago in the areas of Onslow County as well as, a marsh bird nesting area more than 20 years ago in Carteret County. The Natural Heritage Program designates the areas where nesting was documented including the Bogue Inlet area, as historic natural communities.

The U.S. Congress has also designated a portion of Bogue Inlet (Figure 17.2) as an Otherwise Protected Area (NC-06P) under the Coastal Barrier Resources Act (CBRA). CBRA was enacted in October 18, 1982, (Public Law 97-348, 96 Stat. 1653; 16 U.S.C. 3501 et seq.) designating certain undeveloped coastal barrier islands, for inclusion in the Coastal Barrier Resources System (USFWS, 2003).

17.6.2 Effect Determination

Primary constituent elements likely to be directly or indirectly affected by the project through dredging, sand displacement and/or nourishment efforts include: the intertidal shoals in Bogue Inlet (dredging); the ocean shoreline of Bear Island (sand displacement) and Emerald Isle (sand displacement/nourishment); and the west end of Emerald Isle (sand placement and spit displacement). Dredging the intertidal shoals of Bogue Inlet will likely affect the primary constituent elements utilized by wintering piping plovers. However, dredging operations within this sensitive habitat will be minimized by limiting work within the intertidal shoals to the greatest extent possible. Also, the use of a cutter suction dredge will avoid direct contact with the interior areas adjacent to the construction zone.

Additional mitigation and minimization measures being considered for implementation during project development include:

- Establishing access restrictions around piping plover nesting areas along west end of Emerald Isle during breeding season using approved barriers;
- Signage in the vicinity of Critical Habitat for Wintering Piping Plover to educate the public on the bird’s behavior, identification and need to protect the habitat;
- Implementation of a habitat management plan that limits public access to nesting piping plover habitat especially during nesting season; and