

**CITY OF OCEAN CITY**

**BEACH MANAGEMENT PLAN**

**For the Protection of**

**Federally & State-Listed Species**

**April 2009**

**IN COOPERATION WITH:**

New Jersey Department of Environmental Protection  
Division of Fish and Wildlife  
Endangered and Nongame Species Program

and

United States Department of the Interior  
Fish and Wildlife Service  
New Jersey Field Office

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## **I. INTRODUCTION**

### **A. PURPOSE**

The purpose of this management plan is to provide a framework for cooperation among the City of Ocean City (City), the New Jersey Division of Fish and Wildlife's (NJDFW) Endangered and Nongame Species Program (ENSP), and the United States Fish and Wildlife Service's (USFWS) New Jersey Field Office (NJFO) in the stewardship of federally and State-listed endangered and threatened beach-nesting birds and flora (listed species) occurring on the City's beaches.

Through this plan, the parties seek to provide for the long-term protection and recovery of species populations in the City and the State, while balancing potentially conflicting missions. In the plan, the parties define and describe the roles and responsibilities of the City, the NJDFW, and the USFWS in the protection and management of listed species within the City. Protective statutes and regulations are summarized in Section B of this Introduction.

Through this management plan, the parties endeavor to increase the nesting success of listed bird species and to foster the continued recovery of listed plant species in the City by reducing detrimental human activities and decreasing predation. Through this plan, the parties hope to effect a progressive shift of specific beach management responsibilities to the City and citizens of Ocean City, particularly for those aspects of management that protect listed species from activities permitted, encouraged, sponsored, or performed by the City. This plan is the result of meetings and discussions among the City Mayor, Council, Manager, Clerk, Police, Beach Patrol, Animal Control & Code Enforcement, and Public Works Departments; the NJDFW; and the USFWS.

This management plan is consistent with the USFWS's Recreational (Appendix A) and Fireworks (Appendix B) Guidelines, and with the State Coastal Zone Management Rules (Appendix C). This plan also satisfies the Terms and Conditions of the December 2005 Programmatic Biological Opinion between the USFWS and the U.S. Army Corps of Engineers, Philadelphia District (Corps) (Appendix D) with respect to municipal management planning for the City, and is intended to meet the conditions of permits issued by the New Jersey Department of Environmental Protection's (NJDEP) Division of Land Use Regulation (DLUR) requiring management planning in municipalities receiving beach nourishment. Development and implementation of Service and NJDFW approved Plans is also directed by the Final Natural Resources Restoration Plan (2004) that resulted from the *Anitra* Oil Spill that occurred in the Delaware Bay in May 1996 and moved north along New Jersey's Atlantic Coast.

The parties to this plan acknowledge that the aforementioned guidelines, rules, terms, and conditions may be periodically revised, and agree to adjust the management of listed species as appropriate to ensure continued compliance, including revision of this plan if necessary.

### **B. APPLICABLE LAWS AND REGULATIONS**

#### **1. Federal**

**Clean Water Act** (33 U.S.C. 1344 *et seq.*) (CWA): Regulates discharges into waters of the United States. The CWA is administered by the U.S. Environmental Protection Agency and the Corps.

**Endangered Species Act** of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA): Establishes that endangered and threatened animals and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. Section 4 provides for listing wildlife and plants as threatened or endangered, including criteria for listing and de-listing species. Section 6 authorizes cooperative agreements and funding for States to establish programs for conservation of threatened and endangered species. Section 7 directs all Federal agencies to consult with the USFWS regarding any proposed Federal action that may affect a federally listed species. Section 9 prohibits take of federally listed wildlife and restricts collection, destruction, and transport of endangered plants. Section 10 establishes permits for scientific collection, and permits for take of listed wildlife that is incidental to an otherwise lawful non-Federal action contingent upon preparation of a Habitat Conservation Plan. Implementing Federal regulations are found at 50 CFR 17 and 50 CFR 402. The Federal list of threatened and endangered species is found at 50 CFR 17.11 and 17.12. The ESA is administered jointly by the USFWS and the National Marine Fisheries Service.

**Migratory Bird Treaty Act** (40 Stat. 755; 16 U.S.C. 703-712) (MBTA): prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests except when specifically authorized by the U.S. Department of the Interior. The MBTA is administered by the USFWS.

## **2. State**

**New Jersey Endangered and Nongame Species Conservation Act** of 1973, as amended (N.J.S.A. 23:2A *et seq.*): Establishes a list of wildlife species designated by the State of New Jersey as threatened and endangered, and prohibits taking, possessing, transporting, exporting, processing, selling, or shipping listed species. Implementing State regulations are found at N.J.A.C. 7:25-4. The State list of threatened and endangered wildlife is found at N.J.A.C. 7:25-4.13 and 4.17. The Act is administered by the ENSP.

**New Jersey Endangered Plant Species List Act** (N.J.S.A. 13:1B *et seq.*): Finds that plant species have medicinal, genetic, ecological, educational and aesthetic value to the citizens of New Jersey and that the perpetuation of many native plant species is in jeopardy. The Act establishes an official State list of endangered plants found at N.J.A.C. 7:5C1-1 *et seq.* The Act is administered by the Office of Natural Lands Management (ONLM).

**New Jersey Coastal Zone Management Rules** (N.J.A.C. 7:7E): Constitute the substantive rules of the NJDEP regarding the use and development of coastal resources, to be used primarily by the DLUR in reviewing permit applications under the New Jersey Coastal Area Facility Review Act (N.J.S.A. 13:19-1 *et seq.* as amended to July 19, 1993) (CAFRA), the New Jersey Wetlands Act of 1970 (N.J.S.A. 13:9A-1 *et seq.*), the New Jersey Waterfront Development Law (N.J.S.A. 12:5-3), Water Quality Certification (Section 401 of the CWA), and Federal Consistency Determinations (Section 307 of the Federal Coastal Zone Management Act (104 Stat. 4779; 16 U.S.C. 3951 *et seq.*)). The Rules are administered by the DLUR.

## **C. LISTED SPECIES**

### **1. Species Known to Occur on the City Beaches**

The following species have been documented on the City's beaches. The parties to this plan anticipate the continuing presence of these species in the City and the continued suitability of City beaches as habitat for these species.

(a) Piping Plover (*Charadrius melodus*)

Piping plovers are small, territorial shorebirds present on the New Jersey shore between March and August. Nests consist of a shallow scrape in the sand located above the high tide line. Flightless chicks are led by their parents to feeding areas, including the intertidal zone. The plover diet consists of invertebrates. Between three and seventeen pairs of plovers (North and Central nesting areas combined) have nested in the City since 1997. Piping plovers are federally listed as threatened, State-listed as endangered, and protected by the MBTA.

(b) Least Tern (*Sterna antillarum*)

Least terns are small, colonial-nesting sea birds, present on the New Jersey shore between April and September. Nests consist of a shallow scrape in the sand located above the high tide line. Flightless chicks remain in the colony, where they are fed by their parents. The least tern diet consists of fish. Tern colonies at the North end nesting area of the City have ranged from 12 to 379 birds between 1999 and 2003. Tern colonies in the Central nesting area of the City have ranged from 12 to 191 birds between 1999 and 2008, with the exception of zero birds in 2004. Least terns are State-listed as endangered and protected by the MBTA.

(c) Black skimmer (*Rynchops niger*)

Black skimmers are colonial beach-nesting sea birds that have nested on the City's beaches in the past. Black skimmers nested at the North end of Ocean City and ranged from 25 to 1212 birds between 2000 and 2002. Black skimmers are State-listed as endangered and protected by the MBTA.

(d) American oystercatcher (*Haematopus palliatus*)

American Oystercatchers are territorial nesters, nesting on New Jersey beaches from April – August. They make their nests on beaches by scraping a shallow depression in the sand just above the high tide line and also nest on back bay islands. Oystercatchers are a State species of concern (currently proposed). They have nested at the North end of the City, the most recent occurrence being in 2005 when one breeding pair was present.

(e) Seabeach Amaranth (*Amaranthus pumilus*)

Seabeach amaranth is an annual plant, visible on New Jersey's Atlantic coastal beaches between May and November. Seabeach amaranth is usually found growing in nearly pure sand. The species requires sparsely vegetated upper beach habitat that is not flooded during the growing season. Seeds are dispersed by wind and water, and are present on the beach year-round. Seabeach amaranth plant numbers in the City have ranged from 5 plants to 1 plant in 2004 and 2003, respectively. Seabeach amaranth is federally listed as threatened and State-listed as endangered.

(f) Seabeach evening primrose (*Oenothera humifusa*)

Seabeach evening primrose occurs on New Jersey's Atlantic coastal beach and dune habitats. Seabeach evening primrose has been documented in the City in 2002 and 2004 and is State-listed as endangered.

(g) Seabeach knotweed

Seabeach knotweed is an annual plant visible on the New Jersey shore between May and November. Most seabeach knotweed occurrences in New Jersey are on sandy beaches where the plants generally occur above the limit of the tide. Seabeach was last documented in the City in 2004. Seabeach knotweed is State-listed as endangered.

## **2. Species that may Potentially Occur on the City's Beaches**

The following species have not been documented in the City, but could become established in the future. The parties to this plan will work cooperatively to manage these species if they colonize the City's beaches. The habitat management and species protections laid out in this plan are expected to be sufficient to protect the following species if they become established; therefore, plan revision would likely not be necessary.

(a) Seabeach Sandwort (*Honckenya Peploides*): beach and salt marsh habitats plant, State species of concern.

## **D. GOVERNMENT ENTITIES**

**City:** City of Ocean City, Cape May County, New Jersey.

**Corps:** U.S. Army Corps of Engineers, Philadelphia District. The Corps Regulatory Program issues permits for placement of fill material in waters of the United States and for construction activities in navigable waters, pursuant to Section 404 of the Federal CWA and Section 10 of the Rivers and Harbors Act of 1899 (30 Stat. 1151, as amended; 33 U.S.C. 403 *et seq.*), respectively. Corps permits are required for activities such as wetland fill, beach nourishment, and construction or maintenance of ocean groins and jetties. The Corps' Civil Works Planning Program carries out shore protection, flood control, navigation, and ecosystem restoration projects as directed by Congress, including the New Jersey Shore Protection Study that includes beach nourishment in the City.

**DLUR:** New Jersey Department of Environmental Protection, Division of Land Use Regulation. The DLUR administers the State permitting program for activities in wetlands and within New Jersey's Coastal Zone. Permits from the DLUR are required for activities such as disturbance of wetlands, beach and dune maintenance, construction or maintenance of structures on the beach, beach nourishment, and construction or maintenance of groins, jetties, seawalls, and bulkheads.

**ENSP:** New Jersey Department of Environmental Protection, Division of Fish and Wildlife, Endangered and Nongame Species Program. The ENSP is responsible for listing, monitoring, and managing State-listed wildlife species, and administration of the New Jersey Endangered

and Nongame Species Conservation Act.

**NJDEP:** New Jersey Department of Environmental Protection. The NJDEP is the State Department that oversees environmental laws and policies, and includes the DLUR, the NJDFW, and the ONLM.

**NJDFW:** New Jersey Department of Environmental Protection, Division of Fish and Wildlife. The NJDFW is charged with protecting and managing the State's fish and wildlife to maximize their long-term biological, recreational, and economic values. In addition to the ENSP, the NJDFW includes the Bureaus of Wildlife Management, Freshwater Fisheries, Marine Fisheries, Shellfisheries, and Information and Education, and the Office of Environmental Review.

**NJFO:** New Jersey Field Office, Ecological Services, U.S. Fish and Wildlife Service. Within New Jersey, the NJFO's responsibilities include review of Federal water-resources projects, monitoring and management of federally listed species (both wildlife and plants), and administration of the ESA.

**OEM:** The City Office of Emergency Management. The OEM is the City office responsible for managing States of Emergency.

**ONLM:** New Jersey Department of Environmental Protection, Division of Parks and Forestry, Office of Natural Lands Management. The ONLM is responsible for administration of the New Jersey Natural Heritage Database on biodiversity resources, promulgation and amendment of New Jersey's Endangered Plant Species List, and administration and management of State-owned lands designated to the Natural Areas System.

**USFWS:** U.S. Fish and Wildlife Service. The USFWS is the principal agency through which the Federal government carries out its responsibilities to conserve, protect, and enhance the nation's fish and wildlife and their habitats for the continuing benefit of the people. The primary responsibilities of the USFWS are migratory birds, endangered species, certain marine mammals, anadromous fish, and wildlife resources on Federal land.

## **E. ACRONYMS AND DEFINITIONS**

**ATV:** all-terrain vehicle.

**beach nourishment:** addition of sand in designed contours to extend a beach and the nearshore shallows seaward.

**Biological Opinion:** a document that includes: (1) the opinion of the USFWS as to whether or not a proposed Federal action is likely to jeopardize the continued existence of federally listed species; (2) a summary of the information on which the opinion is based; and (3) a detailed discussion of the effects of the action on federally listed species. Issuance of a Biological Opinion concludes formal consultation between the USFWS and a Federal action agency pursuant to Section 7 of the ESA, and an accompanying Incidental Take Statement authorizes, if appropriate, limited incidental take of federally listed wildlife in the course of implementing the Federal action.

**brood:** a group of young birds hatched at one time and cared for by the same parents.



**Conservation Measures:** actions to benefit or promote the recovery of listed species that are included by a Federal agency as an integral part of a proposed action. These actions will be taken by the Federal agency and serve to minimize or compensate for project effects on the federally listed species impacted by the proposed action. Conservation Measures are usually included in a Biological Opinion.

**consultation:** the process required by Section 7 of the ESA through which the USFWS works with a Federal action agency to determine if a proposed Federal action is likely to adversely affect a listed species under USFWS jurisdiction, or jeopardizes the continued existence of such a species. Federal actions include actions that are carried out, funded, or authorized by a Federal agency.

**Declared Emergency:** a state declared by City, County, State, and/or Federal governments in anticipation of, during, or following an event that threatens human health, safety, or property.

Throughout this plan, “State of Emergency” (SOE) signifies a state of Declared Emergency. The term “emergency” is defined below.

Within the City, the Mayor or Office of Emergency Management (OEM) declares all Emergencies, and the OEM manages the Emergency. A copy of the Emergency Declaration Document is on file at the City Municipal Clerks Office, 861 Asbury Avenue. Once the Emergency has been declared, the OEM, Mayor, or Chief of Police confirm and notify the City Clerk. Activities responding to a State of Emergency (SOE) may include the following:

**SOE Beach Nourishment:** placement of clean sand on the beach to protect human life or health or public or private structures, signified by a Declared Emergency and eligibility for DLUR permits under N.J.A.C. Section 7:7E-3A.3 of the New Jersey Coastal Zone Management Rules. Emergency Beach Nourishment is included in the definition of “SOE Post-storm Beach or Dune Restoration.”

**SOE Clean-up:** removal from the beach of large debris that poses a threat to human health or safety using vehicles and equipment, signified by a Declared Emergency.

**SOE Raking:** mechanical beach raking necessary to remove from the beach debris that poses a threat to human health or safety (*e.g.*, medical waste, hazardous materials), signified by a Declared Emergency.

**SOE Post-storm Beach or Dune Restoration:** activities listed at Section 7:7E-3A.3(b) of the New Jersey Coastal Zone Management Rules to restore beaches or dunes impacted by coastal storms with a recurrence interval equal to or exceeding a 5-year storm event, signified by a Declared Emergency and eligibility for DLUR permits under Section 7:7E-3A.3. Placement of sand and other materials (beach nourishment) and sand scraping (defined below) are among the activities listed at 7:7E-3A.3(b).

**emergency:** a situation presenting imminent risk to human life, health or safety.

**emergency vehicle:** a vehicle responding to an emergency.

**essential vehicle:** a vehicle required to provide for safety, law enforcement, maintenance of public property, or access to private dwellings not otherwise accessible.

**feral:** wild, untamed or un-owned, referring to animals that are normally pets such as cats or dogs.

**Fireworks Guidelines:** the USFWS document entitled *Guidelines for Managing Fireworks in the Vicinity of Piping Plovers and Seabeach Amaranth on the U.S. Atlantic Coast* (Appendix B).

**fledged:** able to fly. Piping plover, least tern, and black skimmer chicks are presumed to have survived the nesting season once fledged; monitoring and management restrictions are usually relaxed once all chicks are fledged. For management purposes, piping plover chicks are considered fledged at 35 days of age or when observed in sustained flight for at least 15 meters, whichever occurs first.

**growing season:** the time of year when seabeach amaranth is present on the beach; usually May 15 through November 30.

**harass:** an act which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.

**harm:** an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

**incidental take:** take of listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity.

**listed species:** for the purposes of this plan, a species that is: (1) listed or proposed for listing as endangered or threatened, or designated as a candidate for listing, by the USFWS pursuant to the ESA and its implementing Federal regulations; (2) listed as endangered or threatened by the State pursuant to the New Jersey Endangered and Nongame Species Conservation Act and its implementing State regulations; (3) listed by the State as endangered pursuant to the New Jersey Endangered Plant Species List Act; and/or (4) listed as a State species of concern by the NJDFW or the ONLM.

**nesting area:** an area occupied by nesting piping plovers, least terns, and/or black skimmers in the current or recent nesting seasons, including areas used for courtship, territorial displays, egg-laying and incubation, and chick brooding and foraging.

**nesting season:** the time of year when nesting piping plovers, least terns and/or black skimmers are present on the beach; usually March 15 through August 31 if both plovers and colonial nesters are present.

**predator enclosure:** staked wire fencing that encircles a piping plover nest as a barrier to predators while permitting passage of plover adults and chicks; netting is normally installed on the top of the structure to prevent entry by avian predators.

**predator management:** activities to reduce the adverse effects of predators on listed bird species, including but not limited to monitoring, minimizing food sources, use of predator exclosures, and predator population control through trapping or other means of removal.

**productivity:** a measure of piping plover, least tern, and black skimmer nesting success measured as chicks fledged per pair of nesting birds.

**Programmatic Biological Opinion:** a Biological Opinion that addresses a Federal program rather than a single Federal action; such programs typically guide implementation of future agency actions by establishing standards, guidelines, or governing criteria to which future actions must adhere.

**Recreational Guidelines:** the USFWS document entitled *Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered Species Act* (Appendix A).

**routine:** not associated with a State of Emergency (SOE).

**sand scraping:** mechanical redistribution of sand from the lower beach profile to the upper beach profile, or alongshore; also known as sand mining or sand transfer.

**service animal:** any guide dog, signal dog, or other animal individually trained to provide assistance to a person with a disability (*e.g.*, seeing-eye dogs).

**SOE:** State of Emergency; see Declared Emergency.

**supervised beach:** a life-guarded bathing beach.

**symbolic fencing:** string-and-post fencing marked with flagging and signs, intended to protect listed species by restricting human entry into an area.

**take:** to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a listed species, or attempt to engage in any such conduct.

**Terms and Conditions:** specific methods by which a Federal action agency must implement actions necessary or appropriate to minimize the extent of incidental take of federally listed wildlife in the course of carrying out an otherwise lawful Federal action. Terms and Conditions are usually included in an Incidental Take Statement that accompanies a Biological Opinion.

**wrack:** organic material including seaweed, seashells, driftwood, and other materials deposited on beaches by tidal action; often forms a “wrack line” along the high water mark.

## II. MANAGEMENT ZONES

Four separate management zones are identified on the City beaches consisting of two Protected, one Precautionary, and Recreational Zones, that are based on their current and historical use by beach-nesting birds and potential colonization by listed plants. The relative importance of protective management practices in each management zone considers existing human uses, habitat conditions, and past distribution and occurrence of listed species.

**PROTECTED ZONES:**

***Central Protected Zone (Eighteenth St. to Twenty Ninth St.):*** This zone will be managed to promote the protection and recovery of listed species and the enhancement of their habitat (beach raking will be permitted only at specified times in the 18<sup>th</sup> to 29<sup>th</sup> St. zone). Recreational uses will be accommodated consistent with species protections. Limited uses include emergency access, hand cleaning of debris, outfall pipe and beach/dune maintenance and inspections when necessary. Beach raking as approved by NJDFW & USFWS.

***Northern Protected Zone (The Terminal Groin north to the Longport Bridge):*** This zone will be managed to promote the protection and recovery of listed species and the enhancement of their habitat (beach raking is not conducted). Recreational uses will be accommodated consistent with species protections. Limited uses include emergency access, hand cleaning of debris, outfall pipe and beach/dune maintenance and inspections when necessary. Beach raking as approved by NJDFW & USFWS.

**PRECAUTIONARY ZONE: (Twenty Ninth St. to Thirty Fourth St.)**

Recreational uses will be accommodated consistent with species protections. Limited uses include emergency access, hand cleaning of debris, outfall pipe and beach/dune maintenance and inspections when necessary.

Beach raking as approved by NJDFW & USFWS.

**RECREATIONAL ZONES: (Thirty Fourth St. to Corson's Inlet State Park, Eighteenth St. to the Terminal Groin, and the Longport Bridge north and west to W. Aberdeen Rd.)**

This zone is comprised of the developed recreational beaches. Any listed species documented in this zone will receive protection as required by applicable State and Federal laws and regulations. Use includes daily beach raking from April to October.

Figure 1. The City of Ocean City's Beach Management Zones

### III. RECOVERY GOALS

The parties to this plan consider the following to be realistic, sustainable targets for listed species on the City's beaches. Populations of listed species above these goals will continue to be protected in accordance with applicable State and Federal laws and regulations.

#### **Piping plovers: (10-18 pairs City-wide goal)**

- 4-8 pairs in the Northern Protected Zone (*the Terminal Groin north to the Longport Bridge*)
- 5-8 pairs in the Central Protected Zone (*Eighteenth St. to Twenty Ninth St.*)
- 1-2 pairs in the Precautionary Zone (*Twenty Ninth St. to Thirty Fourth St.*)
- Productivity greater than or equal to the USFWS recovery goal of 1.5 chicks fledged per pair

#### **Least terns:**

- One colony of birds in either the Northern or Central Protected Zone with at least moderate productivity ( $\geq 0.5$  to  $\leq 1.00$  chicks fledged per pair) when a colony is present.

#### **Seabeach amaranth:**

- Long-term average population size of 50 plants
- Minimum one-year population size of 10 plant

#### **Seabeach evening primrose:**

- The presence of plants and to effectively protect any plants that occur

### IV. MANAGEMENT ISSUES

Management issues form the basis or framework for this plan. The major issues are defined, and the roles and responsibilities of each party to the plan are set forth to address each issue.

#### **A. BIOLOGICAL MONITORING**

##### **➤ Background**

Basic biological information is routinely collected about listed species on the City of Ocean City's beaches. The NJDFW monitors beach-nesting birds to determine habitat use, numbers of nesting pairs, nest locations, and reproductive success. The USFWS surveys and monitors (when funding is available) seabeach amaranth to determine plant numbers, size, reproductive status, location, and condition. Additional plants of concern that may occur are recorded incidentally during the USFWS surveys. This information is essential in evaluating species trends and progress towards recovery, and assessing the effectiveness of beach management practices.

Note: ONLM has conducted annual state-wide surveys documenting any Federal or State-listed threatened or endangered plants occurring on New Jersey's coastline and provided that information to the USFWS.

#### **NJDFW/USFWS Actions**

- The NJDFW will continue intensive surveys, monitoring, and management of nesting birds throughout the City's beaches, as per agreement with the USFWS pursuant to Section 6 of

the ESA. The NJDFW currently staffs the City's nesting areas at least 3 days per week during the nesting season, including weekends and holidays.

- The USFWS will conduct (subject to available funding) annual seabeach amaranth surveys that include the City to monitor population trends and distribution, and plans to initiate limited early-season survey work to identify seabeach amaranth plants at risk of damage or destruction.
- The NJDFW and the USFWS will promptly report any new or expanded occurrence of a listed species to the City, particularly within the Recreational Zone.
- The NJDFW and the USFWS will regularly report relevant biological information to the City (see Section G).

## **B. PREDATOR MANAGEMENT**

### **➤ Background**

Predation is a major factor impairing piping plover and least tern productivity in the City. The primary predators in the City are red foxes (*Vulpes vulpes*), gulls (*Larus* spp.), and crows (*Corvus* spp.). Other potential predators include raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), and feral cats (*Felis catus*). Reducing predation will involve reducing or eliminating provisions of food from refuse and hand feeding, using predator exclosures, educational outreach, and if necessary, predator removal.

Predators (herbivores) of seabeach amaranth (if plants are present in City) may include moth caterpillars belonging to the Lepidopteran families Noctuidae (cutworms) and Pyralidae (webworms), and aphids. Other potential herbivores include grasshoppers and mammals. Seabeach amaranth may also be affected by fungal diseases.

### **➤ City Actions**

- The City will review existing municipal ordinances regarding feral cats, and free-roaming cats and will revise these or enact new ordinances or policies as appropriate to:
  - Develop an educational program to promote and phase in the American Bird Conservancy's "Cats Indoors" program for its residents and seasonal visitors.

Information regarding the "Cats Indoors" program is available at:

<http://www.abcbirds.org/abcprograms/policy/cats/>.

Free downloadable brochures for the "Cats Indoors" program are available for the City's use at:

[http://www.abcbirds.org/abcprograms/policy/cats/materials/brochure\\_low.pdf](http://www.abcbirds.org/abcprograms/policy/cats/materials/brochure_low.pdf)

- Enforce New Jersey's "No Animal Abandonment" statute (N.J.S.A 4:22-20(a)(b)).

- Through the Animal Control Officer, the City will conduct removal of cats in problem areas when necessary, preferably through humane live trapping. If the Animal Control Officer is unable to effectively manage cats in problem areas, the City will explore other alternatives with the NJDFW assistance. Primary responsibility for control of feral cat populations lies with the City.
- The City will emphasize the importance of its ordinance prohibiting dogs, cats and any other animals on the beach.
  - By ordinance, the City prohibits dogs, cats, and any other animals (except service dogs) from March 15 through September 30 from the City's Precautionary and Protected Zones. All other City Beaches, dogs are prohibited from May 1<sup>st</sup> to September 30th(City Ordinance Code §11-4.4b). All service animals, are required to be leashed. Ordinance pending as of April 14, 2009.
  - The City will enforce the seasonal prohibition of animals on the beach through the City's Police Department, and will take any other necessary steps to provide adequate enforcement such as posting signs regarding the pet prohibition at each entrance to the beach.
- Consistent with current State and local regulations, the City will not actively block measures to control predator populations recommended and/or undertaken by the NJDFW or the USFWS. The City will not enact any new ordinances to prohibit predator management activities.
- By way of signature to this plan, the City gives the NJDFW and the USFWS written permission to engage in predator control activities on City beaches, including removal of foxes and other predators including herbivores of seabeach amaranth. The City will be primarily responsible for control of the feral cat population. If the City is unable to effectively manage or needs assistance with the control of the feral cat population, NJDFW will assist the City with control efforts.
- See also Education and Outreach (Section F).

#### ➤ **NJDFW Actions**

- The NJDFW will continue to monitor the extent of predation on nesting birds within the City (Section A), and will include this in the information reported to the City (Section G)
- The NJDFW will erect predator exclosures on piping plover nests where and when appropriate. Use of predator exclosures to reduce plover nest predation will generally be tried prior to undertaking predator removal, unless the NJDFW has cause to believe that exclosures could worsen predation pressures (certain predators are known to target exclosures). In addition, control of predator populations may be necessary to reduce predation on plover chicks, or on least tern and black skimmer eggs and chicks, none of which are protected by exclosures.



- Any predator population control (other than for feral cats) will be the responsibility of the NJDFW. The NJDFW will pursue control when necessary and appropriate.
- The NJDFW will notify the City Clerk, the City Police, and the Director of Public Works at least 2 days before engaging in any predator control activities; by way of this plan the City grants the NJDFW permission for these activities, as indicated above. The NJDFW will adopt the City's recommendations for timing, methods, or other aspects of control operations to the extent possible.
- If the City is unable to obtain assistance from the City's Animal Control Officer with cat removal, the NJDFW will assist the City in exploring other alternatives, including carrying out removal with the NJDFW or contract staff.

#### ➤ **USFWS Actions**

- Upon request and within the limits of available staff time and funding, the USFWS will assist the City and/or the NJDFW in control of predator populations, such as arranging for removal through the U.S. Department of Agriculture's Animal and Plant Health Inspection Service or other qualified vendors.
- In the course of annual seabeach amaranth surveys, the USFWS will monitor the extent of seabeach amaranth herbivory and disease within the City (if applicable) (Section A), and will include this in the information reported to the City (Section G).
- In the course of annual seabeach amaranth surveys, the USFWS will note any observations of herbivory and disease of other listed plant species (Section A), and report this information to the City (Section G) and the ONLM.
- If herbivory and/or disease threaten the seabeach amaranth recovery goals specified in this plan, the USFWS will recommend and/or implement necessary actions, potentially including application of appropriate pesticides. By way of this plan, the City grants the USFWS permission for these activities, as indicated above. The USFWS will initiate early coordination with the City upon detection of an herbivory/disease problem, and will include the City in the planning of any proposed control measures. The USFWS will notify the City Clerk in writing at least 10 days before implementing any herbivory/disease control activities, and will adopt the City's recommendations for timing, methods, or other aspects of control operations to the extent possible. The USFWS will post signs in any treated areas as necessary and appropriate. Any USFWS actions are subject to the Intra-Service consultation requirements of Section 7 of the ESA, as well as all applicable regulations regarding pesticide handling and use.

### **C. HUMAN DISTURBANCE**

#### ➤ **Background**

The broad area of human disturbance includes any human activities that directly or indirectly harm or harass listed plants or birds, including interference with incubation and care of chicks. Recreational beach users and municipal employees may directly harm listed species by crushing beach-nesting bird eggs or plants. In addition, unfledged plover, tern, and skimmer chicks are

highly sensitive to disturbance. Nesting birds may experience low success if exposed to frequent harassment by vehicles, pedestrians, sunbathers, pets, or kites.

### ➤ **City Actions**

- The City will assist the NJDFW with pre-season symbolic fencing, or will identify volunteers to assist with this task if needed by NJDFW. (See NJDFW Actions, below.)
- In the event that seabeach amaranth plants remaining on the beach after August 31 are threatened by human activities (*e.g.*, a large population of plants near a beach access structure, a City-sponsored clean-up or event in an area of species occurrence), the City will erect and maintain symbolic fencing, posted with appropriate signs, as recommended by the USFWS (in addition to any seabeach amaranth or other listed plants that are incidentally fenced areas by NJDFW). The City will remove fencing once all plants are gone or the threat is abated, as recommended by the USFWS. (See USFWS Actions, below.)
- As needed, the City will seek land owner permission for symbolic fencing and other activities to protect and manage listed species, when and where listed species occur on privately owned portions of the beach.
- The City will regulate permanent and temporary private structures and storage of private property on the beach (*e.g.*, catamarans, volleyball nets, shelters) as needed to protect listed species or their habitat. The City will move the catamaran storage out of the 23<sup>rd</sup> St. area and relocate the catamarans to the 29<sup>th</sup> St area prior to the start of the 2009 nesting season.
- Within the Protected Zones or the Precautionary Zone, the City will not designate any new recreational areas (*e.g.*, supervised beaches) or take any actions to promote increased recreational use without written concurrence from the NJDFW and the USFWS that such designation or action would not adversely affect listed species or their habitats.
- The City will work with the NJDFW and the USFWS to regulate existing and new recreational activities as needed to protect listed species.
- The City will prohibit and discourage kite flying within 200 meters of posted nesting areas between March 15 and August 31 by signs and education.
- In the Recreational Zone, the City may conduct, permit, or sponsor any organized recreational activities or events (*e.g.*, tournaments, races, games, musical events) at any time with no restrictions unless the City has been notified that listed species are present. If listed species are present, the City will adopt restrictions such as timing, fencing, or alternate locations as recommended by the NJDFW and/or the USFWS.

In the Protected Zones, the City will not schedule organized events.

In the Precautionary Zone, the City will schedule organized events only between September 1 and March 14, unless the NJDFW and the USFWS have indicated in writing that the event will not affect listed species (*e.g.*, nesting activity or the growing season

has concluded for the year, or listed species are absent from the event area). For events scheduled in the Precautionary Zone between September 1 and November 30, the City will implement the USFWS fencing recommendations to protect seabeach amaranth, if present.

- The City will continue to allow use of recreational vehicles on City beaches only from September 15<sup>th</sup> thru May 15<sup>th</sup> of the following year, for the sole purpose of surf fishing, but will prohibit use in the Precautionary and Protected Zones from March 15 through September 15<sup>th</sup> (Ordinance 18-5.5). Ordinance pending on April 14 2009
- The City Police Department maintains supervised and unsupervised beaches throughout the City. Patrols are conducted on ATVs and four-wheel drive vehicles. The City will implement driving restrictions in the Protected and Precautionary Zones consistent with the USFWS's Recreational Guidelines (Appendix A) and the City's Beach Vehicle Use Regulations (Appendix E). Specifically:
  - Between March 15 and August 31st, Police Beach Patrols will restrict patrol driving to the Recreational Zone, except as allowed during determined times by NJDFW and USFWS (*i.e.* if listed species are not present) in the Precautionary Zone.
  - No restrictions apply when Police or Fire are responding to an emergency as defined in this plan.

No driving restrictions will apply in the Recreational Beach Zone unless the City has been notified that listed species are present. If listed species colonize the Recreational Zone, the City will coordinate with the NJDFW and the USFWS to develop a Recreational Zone Vehicle Use Policy. The policy will be consistent with the Recreational Guidelines if plovers establish nesting in the Recreational Zone.

- In addition to Police patrols, municipal vehicles are occasionally driven on the City's beaches (*e.g.*, City Public Works Department, Beach Patrol, Animal Control Officer, and Beach Tag Program). Other than Police Emergency Responses, no municipal vehicles (except Public Works for routine beach clean-ups, see Beach Management and Maintenance Section E of the Plan) will be driven in the Protected Zones between March 15 and August 31st, and in the Precautionary Zone between March 15 and August 31st (unless no listed species are present) unless responding to an emergency or a SOE as defined in this plan, or to perform essential outfall maintenance to prevent street flooding. It is the City's responsibility to limit contractor and any vendor vehicles to the same restrictions as the municipal vehicles. If the City needs to do any beach access work, this will be completed by March 15. If work on these access paths is needed after March 15 the City will consult with NJDFW and USFWS before beginning access work. The City will make all efforts to ensure clean-ups with Public Works vehicles are conducted before March 15 in the Protected and Precautionary Zones. If any clean-ups cannot be completed by March 15, the City will consult with the NJDFW and USFWS for listed species presence to allow for clean-ups until March 31. However, clean-ups may be stopped immediately in the Protected and Precautionary Zones if necessary during this time (March 15 – March 31) if listed species are present and may be adversely impacted.

No driving restrictions will apply in the Recreational Beach Zone unless the City has been notified that listed species are present. If listed species colonize the Recreational Zone, the City will include non-Police municipal, contractor, vehicles in the Recreational Zone Vehicle Use Policy to be developed with the NJDFW and the USFWS. The policy will be consistent with the Recreational Guidelines if plovers establish nesting in the Recreational Zone.

- The City will inform, in writing, all appropriate City Departments (*e.g.*, Police, Public Works, City Clerk, Beach Patrol, Beach Tag) and any contractors of the need to avoid vehicle travel in the Protected Zones from March 15 through August 31st and in the Precautionary Zone from March 15 through August 31 (if no listed species are present, then July 15) except in bonafide emergency or SOE situations.

#### ➤ **NJDFW Actions**

- With City assistance if needed, the NJDFW will be responsible for pre-season fencing, and will continue to post signs for all nesting areas. The NJDFW will conduct pre-season fencing with symbolic fencing in areas of suitable nesting habitat as necessary and appropriate (in any Beach Zone) in late March or early April. The NJDFW will coordinate annually with the City regarding the extent of areas that will be pre-season fenced.
- The NJDFW will post all active nesting areas (in any beach Zone) with appropriate signs and symbolic fencing, including enlarging or adjusting pre-season fencing based on observed nesting activity. Within the limits of available funding, the NJDFW will also assist in fencing and posting of limited areas identified by the USFWS where seabeach amaranth or other listed plants are at risk of being damaged (primarily in vicinity of beach nesting birds).
- The NJDFW will remove fencing within 10 days of the end of any nesting activity, unless fencing is needed longer to protect seabeach amaranth. The NJDFW, the USFWS, and the City will cooperate to remove seabeach amaranth fencing in a timely manner (see USFWS Actions, below). All fencing will be removed promptly when it no longer provides protection to listed species.
- The NJDFW will inform the City Municipal Clerk, Chief of Police, Superintendent of Public Works, and Beach Patrol Supervisor within 2 working days of any areas that have been fenced.
- The NJDFW will provide a timely response to City notification of planned events, and will provide recommendations to protect listed species.

#### ➤ **USFWS Actions**

- Subject to Corps or other funding, the USFWS will conduct limited early-season surveys to identify areas where seabeach amaranth or other listed plants are at risk of being damaged or destroyed, in order to make fencing recommendations.
- The USFWS will make recommendations after August 31, to the City, regarding the

extent and duration of symbolic fencing needed to protect seabeach amaranth. Recommended fencing will be limited to areas where plants are at clear risk of being damaged or destroyed by human activity.

- The USFWS will generally recommend that the NJDFW and/or the City remove amaranth fencing once all plants are gone, or by August 31, whichever comes first. In the unlikely event that plants remaining on the beach past August 31 are at continued risk of being damaged or destroyed by human activities, the USFWS will recommend that the City erect and maintain symbolic fence in limited areas as needed to protect these plants (*e.g.*, a large population of plants near a beach access structure, a City-sponsored clean-up or event in an area of species occurrence). The USFWS will recommend that the City remove the fencing material promptly once all plants are gone for the season, or the threat is abated (*e.g.*, the event is over).
- Subject to Corps or other funding, the USFWS will assist the City with any fencing needed after August 31 to protect seabeach amaranth.
- The USFWS will provide seabeach amaranth signs to post on symbolic fencing.
- The USFWS will continue work on Seabeach Amaranth Fencing Guidelines, and will provide these to the City and the NJDFW if and when approved.
- If justified by the State-wide species distribution, the USFWS will investigate creating a Seabeach Amaranth Steward position with seasonal field duties. The Steward would oversee the fencing and protection of seabeach amaranth during the growing season, and the implementation of beach management plans with regard to listed plants. At this time, it is unclear if the Steward would be employed by a Federal or State agency or a private organization, and potential funding sources have not been secured. The USFWS will ensure coordination with the City if and when a Steward position is created.
- The USFWS will provide a timely response to City notification of planned events, and will provide recommendations to protect listed species.

## **D. FIREWORKS**

### **➤ Background**

Listed species in the vicinity of a fireworks launch site can be directly harmed (eggs or chicks injured or destroyed, plants crushed) by explosions, debris, equipment, or launch personnel. Listed species within a fireworks viewing area, which may be distant from the launch site, may be directly harmed by spectators, illegal pyrotechnics, and off-road vehicle patrols by public safety personnel. In addition, listed birds are indirectly affected by fireworks. Normal breeding, feeding, and sheltering activities can be disrupted by noise and activity at both launch and viewing areas, and increased trash in viewing areas attracts predators. Many of these impacts are worsened because fireworks events are conducted at night, limiting visibility of plants, eggs, chicks, and symbolic fencing.

In recent years, the primary July 4<sup>th</sup> fireworks viewing area in Ocean City has been centered on

the 9th Street Beach, located in the Recreational Zone, with off-shore launching. The fireworks launch site is approximately 1 mile away from the Central Protected Zone. This location avoids most of the direct adverse impacts to listed species. However, large numbers of spectators have viewed these fireworks events from secondary viewing areas in the Protected and Precautionary Zones; the NJDFW and the City have provided law enforcement and other personnel at the nesting areas to manage these crowds. In past years, extensive launching of personal fireworks on the beach during the July 4<sup>th</sup> weekend was also a major threat to nesting birds, but the City has significantly increased law enforcement efforts with regard to this issue, which has successfully minimized this threat. Fireworks will continue to be managed consistent with the Fireworks Guidelines.

➤ **City Actions**

- The City will continue to inform the NJDFW and the USWFS, in writing, of any planned fireworks events and the location proposed at least 30 days in advance.
- The City will continue to coordinate with the NJDFW and the USFWS to arrange for a seabeach amaranth survey and fencing within the fireworks primary and secondary viewing area in the week preceding the event.
- To protect listed species in the Protected and Precautionary Zones, the City will take the following protective measures:
  - Keep the launch and primary viewing area at or near 9<sup>th</sup> Street Beach, as long as nesting/foraging areas remain limited to the Protected Zones and/or Precautionary Zone.
  - Provide adequate law enforcement and other personnel to the Protected Zones (and Precautionary Zone if necessary) during events to enforce listed species protections, including prohibiting entry in fenced areas and use of illegal personal fireworks. The City will coordinate with the NJDFW to determine the number of required enforcement personnel.
  - Prohibit driving of municipal, contractor, and vendor vehicles in the vicinity of nesting areas during these nighttime events, unless responding to an emergency. Law enforcement patrol vehicles and any other essential municipal vehicles will remain on the street behind the dunes, from which personnel can access the beach front on foot.
  - Ensure that monitors and enforcement personnel receive accurate, current information about the locations of listed species so they can minimize any disruptions from their own activities.
  - Prohibit all pets except service animals on the beach (especially near nesting areas) during fireworks events, and ensure compliance with this prohibition. Service animals near active nesting areas will be required to stay on a leash and will not be permitted in fenced areas.
  - Remove any trash or litter from the vicinity of nesting areas immediately following the event, except any trash located within fenced areas, which will be left until

daylight and then removed by or under the supervision of the NJDFW monitors. Further, any vehicles needed to remove trash will be operated during daylight hours, under supervision of a NJDFW monitor, and consistent with the Recreational Guidelines.

- If nesting becomes established within the Recreational Zone, the City will continue the above protective measures in the Protected Zones and will take the following additional actions:
  - Relocate the primary viewing area and/or the launch site to minimize disturbance to nesting birds to the extent possible. In no case will a launch area be closer than 0.75 mile to a nesting area unless the NJDFW and the USFWS concur in writing that the proposed launch site is not likely to adversely affect listed birds.
  - Extend to nesting areas in the Recreational Zone all the protective measures listed above for the Protected Zones, and work with the NJDFW to implement all relevant additional protective measures listed in the Fireworks Guidelines, including enhanced survey efforts, expanded fencing (100-foot instead of 50-foot buffers), and control of beach access and parking lots.

➤ **NJDFW Actions**

- The NJDFW will provide a timely response to any request from the City to review specific fireworks plans and will provide recommendations to protect listed species.
- To protect listed species in the Protected Zones, the NJDFW will take the following protective measures:
  - Provide a monitor to the Protected Zones during fireworks events to assist the City in enforcement of listed species protections, if birds are present.
  - Provide a monitor the following day as needed to oversee trash removal from fenced areas, and any trash removal requiring a vehicle.
- If nesting becomes established within the Recreational Zone, the NJDFW will continue the above protective measures in the Protected Zones, and will take the following additional actions:
  - Review proposed relocated primary viewing areas and/or launch sites to determine if fireworks events are likely to adversely affect listed birds.
  - Extend to nesting areas in the Recreational Zone all the protective measures listed above for the Protected Zones, and will also work with the City to implement all relevant additional protective measures listed in the Fireworks Guidelines, including enhanced survey efforts, expanded fencing, and control of beach access and parking lots.

➤ **USFWS Actions**

- The USFWS will provide a timely response to any request from the City to review specific fireworks plans and will provide recommendations to avoid impacts to listed species.
- The USFWS will continue to conduct in a timely manner consultation with the U.S. Coast Guard regarding authorization of City fireworks events pursuant to Section 7 of the ESA.
- Subject to the availability of Corps or other funding, the USFWS will survey the primary viewing area within the Recreational Zone and the Protected Zones within the week preceding the event and will erect symbolic fencing around seabeach amaranth or other listed plants to provide a minimum 3-meter buffer zone around plants.

## **E. BEACH MANAGEMENT AND MAINTENANCE**

Beach maintenance includes activities that the City undertakes to physically maintain the City's beaches and dunes, including mechanical beach raking, refuse and large debris removal, dune maintenance, beach nourishment, sand scraping, and oversight of beach access structures. These activities can impact habitat quality, disturb nesting birds, and destroy nests, chicks, and plants.

### **1. Beach Raking**

#### **➤ Background**

Beach rakes can inadvertently destroy unprotected nests, kill chicks, and remove plants. Beach raking can also diminish the suitability of nesting habitat by removing shell fragments and sparse vegetation. Habitat quality is also diminished by removal of natural wrack, an important foraging area for piping plovers and a key growing zone for seabeach amaranth. Beach raking is regulated by the New Jersey Coastal Zone Management Rules. The City will prohibit raking the North Protected Zone, year round. The Central protected Zone and the Precautionary Zone from March 15 to August 31 except if no listed species are present by July 15 (or otherwise determined by NJDFW and/or USFWS). At this time, the raking restriction may be lifted, except for a back portion of the beach that will remain unraked for the potential occurrence of seabeach amaranth.

#### **➤ City Actions**

- No raking restrictions will apply in the Recreational Zone unless the City has been notified that listed species are present, except as otherwise regulated or prohibited by the New Jersey Coastal Zone Management Rules. If listed species colonize the Recreational Zone, the City will include raking in the Recreational Zone Vehicle Use Policy to be developed with the NJDFW and the USFWS. The policy will be consistent with the Recreational Guidelines if plovers establish nesting in the Recreational Zone and will include protective measures for seabeach amaranth.
- The City will not rake the Central Protected Zone March 15th through August 31 except during an SOE (*i.e.*, potentially harmful debris must be removed from the beach to protect public health and safety).



- The City will not rake the Precautionary Zone between March 15<sup>th</sup> and August 31 except during a SOE (*i.e.*, potentially harmful debris must be removed from the beach to protect public health and safety). If no listed species are present (as determined by NJDFW and/or USFWS) by July 15, the raking restriction may be lifted; however, the City will delineate a 2-3 meter corridor (approximately 1 beach-rake width) as a “no rake” zone at the toe of the dune or landward limit of the berm for seabeach amaranth connectivity habitat. This will allow for the potential transport of seabeach amaranth seeds. If this is a difficult concept to communicate for the City’s beach-rakers, the USFWS recommends the area be posted with signs to delineate a “no rake” zone. If any plants occur, they will be fenced with a 3-meter buffer for protection.
  
- The City will notify the NJDFW and the USFWS promptly upon Declaration of an Emergency (notice by fax with confirmation of receipt is acceptable). In any beach Zone, the City will implement the protective measures listed in Table 1 when conducting SOE Raking in the vicinity of an active nesting area or seabeach amaranth occurrence. When implemented with these protective measures, the NJDFW and the USFWS will not object to SOE Raking of the Protected and Precautionary Zones to remove medical waste, hazardous trash, or other unusual debris; SOE Raking may proceed once any required authorizations are obtained from the DLUR.

➤ **NJDFW and USFWS Actions**

- The NJDFW will monitor nesting activity and regularly inform the City through the Municipal Clerk’s office, Police, Beach and Public Works Departments of nest and brood locations so that changes in raking procedures effected by nesting status can be implemented on a timely basis.
  
- The NJDFW and the USFWS will promptly review requests from the City for SOE Raking in the Protected and Precautionary Zones, and will make recommendations to protect listed species.
  
- The NJDFW and/or the USFWS will provide an on-site monitor during SOE Raking, if determined that it is needed.
  
- The NJDFW and the USFWS will recommend to the DLUR that normal raking prohibitions in the Protected and Precautionary Zones be waived to permit SOE Raking and other provisions in the Plan that will be carried out with the protective measures listed in Table 1.

**Table 1. Seasonal Protections for Listed Species When Motorized Vehicles or Equipment are Required to Respond to a State of Emergency (SOE)**

	Protections for Listed Birds	Protections for Listed Plants	Protections for All Listed Species
January			
February			
March 1 <sup>st</sup> – March 14th			
March 15 <sup>th</sup> - April	<ul style="list-style-type: none"><li>▪ SOE response will be supervised by the NJDFW monitors;</li><li>▪ vehicle use will take place during daylight hours;</li><li>▪ vehicles will not exceed 5 miles per hour when and where unfledged plover chicks are present;</li><li>▪ vehicles will not enter fenced areas; and</li><li>▪ vehicles will temporarily halt or change route as requested by the NJDFW monitors to avoid harassment of listed birds.</li></ul>	<ul style="list-style-type: none"><li>▪ vehicles will avoid crushing or removing seabeach amaranth and State-listed plants.</li></ul>	<ul style="list-style-type: none"><li>▪ vehicles will minimize removal of wrack material; and</li><li>▪ SOE response will proceed in accordance with any other recommendations of the NJDFW or the USFWS to protect listed species.</li></ul>
May			
June			
July			
August 31			
September			
October			
November			
December			

## **2. Large Debris Removal**

### **➤ Background**

Large debris washes up on City beaches and must be removed periodically. Clean-ups are conducted through the NJDEP Clean Shores Program, Clean Ocean Action, and Clean Communities programs. Additional clean-ups are sometimes carried out by the City Community Organizations. Removal of large debris requires motorized vehicles and equipment that can impact listed species.

### **➤ City Actions**

- No restrictions on clean-ups will apply in the Recreational Zone unless the City has been notified that listed species are present. If listed species colonize the Recreational Zone, the City will include clean-ups in the Recreational Zone Vehicle Use Regulations to be developed with the NJDFW and the USFWS. The Regulations will be consistent with the Recreational Guidelines if plovers establish nesting in the Recreational Zone and include protective measures for seabeach amaranth.
- The City will ensure that the Clean Shores Program, Clean Ocean Action, and Clean Communities programs schedule the annual clean-up in the Protected and Precautionary Zones between August 31 and March 15th.
- The City will not conduct, sponsor, or authorize routine clean-ups (separate from the Clean Shores Program) of the Protected Zones using motor vehicles between March 15 and August 31 and in the Precautionary Zone between March 15 and August 31 (or by July 15, if no listed species are present). The City will make all efforts to ensure clean-ups with Public Works vehicles are conducted before March 15 in the Protected and Precautionary Zones. If any clean-ups cannot be completed by March 15, the City will consult with the NJDFW and USFWS for listed species presence to allow for clean-ups until March 31. However, clean-ups may be stopped immediately in the Protected and Precautionary Zone if necessary during this time (March 15 – March 31) if listed species are present and may be adversely impacted.
- Vehicles engaged in routine, City-sponsored clean-ups of the Protected and Precautionary Zones between September 1 and November 30 will remain at or below the high water line to protect listed plants; the City will notify the NJDFW and the USFWS at least 10 days prior to such a clean-up.
- The City will notify the NJDFW and the USFWS promptly upon Declaration of an Emergency (notice by fax with confirmation of receipt is acceptable). In any beach Zone, the City will implement the measures listed in Table 1 when conducting SOE Clean-ups in the vicinity of an active nesting area or seabeach amaranth occurrence. When implemented with these protective measures, the NJDFW and the USFWS will not object to SOE Clean-ups to remove hazardous trash or other unusual debris to protect public health and safety; SOE Clean-ups may proceed once any required authorizations are obtained from the DLUR.

### **➤ NJDFW and USFWS Actions**

- The NJDFW will assist the City in coordinating with the Clean Shores Program to schedule the annual NJDEP-sponsored clean-up in the Protected and Precautionary Zones between September 1 and March 14.
- The NJDFW and the USFWS will provide timely review of notifications of City-sponsored clean-ups (both routine and SOE), and will provide recommendations to protect listed species.
- The NJDFW and/or the USFWS will provide a monitor to oversee SOE Clean-ups in the Protected Zones between March 15 and August 31.

### **3. Refuse Containers**

#### **➤ Background**

Regular servicing of trash cans and recycling containers increases vehicle traffic on the beach with inherent risks to listed species. However, minimizing trash on the beach benefits listed birds by limiting food scraps that attract predators.

Containers are placed along the City Beachfront and at the street end of all beach access paths. Trash from near the wrack line is also collected.

#### **➤ City Actions**

- The City will continue existing trash collection practices within the Recreational Zone unless notified that listed species are present. If listed species colonize the Recreational Zone, the City will include refuse removal in the Recreational Zone Vehicle Regulations to be developed with the NJDFW and the USFWS. The policy will be consistent with the Recreational Guidelines if plovers establish nesting in the Recreational Zone and include protective measures for seabeach amaranth.
- In the Protected Zones, refuse containers are placed on the beach front and will be serviced with the use of manual labor gaining access from the street end and will all have predator-resistant lids. Cans are limited to essential numbers only., In the Precautionary Zone, refuse containers may be placed on the beach front and will be serviced with the use of a vehicle on the beach, and travel from one container to the next is limited to staying in the hard packed sand away from the nesting areas. Cans are limited to essential numbers only.. In the future, refuse containers on the beach in the Protected and Precautionary Zones may be subject to removal and alternate placement based on recommendations of the USFWS and NJDFW.
- The City will ensure that all refuse containers on the beach in the Protected and Precautionary Zones are covered with predator-resistant lids.

### **4. Dune Management and Invasive Plant Species Control**

#### **➤ Background**

Steep, stabilized dunes do not provide suitable habitat for the beach-dependent listed species included in this plan. The dune management goal in the Protected and Precautionary Zones is the development of a more natural dune system, featuring an irregular face, occasional breaches, and a low-lying sparsely vegetated fore-dune. Limiting the width of the dune zone is also important to ensure sufficient low, unstabilized, sparsely vegetated back beach habitat, which is essential to listed species. A more natural dune system can also provide habitat for diverse native vegetation and wildlife. Dune creation and maintenance are regulated by the New Jersey Coastal Zone Management Rules (Section 7:7E-3A.4). Invasive plant species (e.g. Asiatic sand sedge [*Carex kobomugi*]), either exotic or native, can degrade or eliminate native habitat for listed species. Asiatic sand sedge has been documented at the 27<sup>th</sup> St. beach in the City. Although its distribution is relatively limited at this time, the area impacted has grown considerably the past several years.

### City Actions

- The City will adopt recommendations of the NJDFW and the USFWS to manage dunes and control invasive plant species in the Protected and Precautionary Zones in ways that enhance suitability of habitat for listed species, and dunes that provide for adequate storm protection. Dunes will be managed to promote a diverse assemblage of native vegetation and in accordance with N.J.A.C. 7:7E-3A.4.
- The City will provide plans for review by the NJDFW and the USFWS at least 30 days before carrying out routine dune management or invasive plant species control activities at any time of year in the Protected and Precautionary Zones, or in the vicinity of any nesting area or seabeach amaranth occurrence that may be documented in the Recreational Zone. The City will incorporate any recommendations of the NJDFW or the USFWS to protect listed species and their habitats.
- For routine dune management or invasive plant species control in the vicinity of a nesting area in any beach Zone, the City will schedule work between September 1 and March 14. Work in the vicinity of a seabeach amaranth occurrence will be carried out between December 1 and May 14. Both seasonal restrictions will apply where seabeach amaranth coincides with listed birds.
- The City will coordinate any SOE Post-storm Beach or Dune Restoration with the NJDFW and the USFWS. The need for such activities will be signaled by a Declared Emergency, and eligibility for DLUR permits under Section 7:7E-3A.3 of the New Jersey Coastal Zone Management Rules. The City will notify the NJDFW and the USFWS promptly upon Declaration of an Emergency (notice by fax with confirmation of receipt is acceptable).

In any beach Zone, the City will implement the protective measures listed in Table 1 when conducting SOE Restoration activities in the vicinity of an active nesting area or seabeach amaranth occurrence. When implemented with these protective measures, the NJDFW and the USFWS will not object to SOE Restoration activities; SOE Restoration may proceed once any required authorizations are obtained from the DLUR. The parties anticipate that SOE Restoration activities will have low potential to impact listed species, as suitable nesting/growing habitat is likely to be damaged or destroyed by the erosional or storm event(s) that caused the SOE.

## ➤ **NJDFW and USFWS Actions**

- The NJDFW and the USFWS will provide technical assistance to the City to develop dune management strategies that enhance suitability of habitat for listed species while meeting storm protection needs. The NJDFW and USFWS will provide technical assistance to the City for controlling invasive plant species to enhance suitability of habitat for listed species. The NJDFW and the USFWS recommendations will promote a diverse assemblage of native dune vegetation, and will be consistent with N.J.A.C. 7:7E-3A.4
- The NJDFW and the USFWS will provide a timely response to any request from the City to review specific routine dune management activities, and will provide recommendations to protect listed species and their habitats.
- The NJDFW and the USFWS will provide timely recommendations upon City notification of SOE Post-storm Beach or Dune Restoration activities.
- The NJDFW and the USFWS will provide timely recommendations upon City notification of invasive plant species control activities.
- The NJDFW and/or the USFWS will provide a monitor to oversee SOE Beach or Dune Restoration activities, as necessary.

## **5. Beach Nourishment**

### ➤ **Background**

The Corps is currently 17 years into the construction phase of a 50-year beach nourishment program that includes the northernmost terminal groin south to the 18<sup>th</sup> St. beach. Initial nourishment of City beaches under the Corps program took place in 1992. Routine renourishments are scheduled approximately every 3 years. In addition, renourishment has occurred periodically through state-funded projects.

Prior to beach nourishment, many sites within the U.S. Army Corps of Engineers, Philadelphia District (Corps) Program Area (Program Area) for beach nourishment activities now occupied by piping plovers and seabeach amaranth had become unsuitable due to previous shoreline stabilization efforts. Sandy beach habitats had eroded and new habitats were precluded from forming by the extensive system of hard stabilization structures and upland development found along the New Jersey coast. Nourishment of oceanfront beaches can create nesting habitat for piping plovers and suitable sites for seabeach amaranth.

It can be anticipated that, following initial construction of the Federal nourishment projects within the Program Area, similar creation of potentially suitable habitat for piping plovers and seabeach amaranth will occur in areas where these species are currently absent, or in the case of seabeach amaranth, are present in only very low numbers. It should also be noted that although the Corps nourishment projects will create sandy beach habitat that may attract piping plovers, the habitat created can be expected to be of lesser quality than habitat that is formed through natural coastal processes such as overwash. Habitat creation alone will not create a beneficial

effect for either species if the habitat is suboptimal and does not provide foraging habitat for plover chicks or if disturbance from municipal and recreational users cannot be managed to avoid loss of nests of chick or loss of plants.

Pursuant to Section 7 of the ESA, the Corps completed formal consultation with the USFWS for beach nourishment activities under the USFWS's December 2005 Programmatic Biological Opinion (PBO) on the effects of Federal beach nourishment, renourishment, stabilization, and restoration activities along the Atlantic Coast of New Jersey within the Corps, Philadelphia District on the federally listed (threatened) piping plover (*Charadrius melodus*) and seabeach amaranth (*Amaranthus pumilus*).

Relevant conservation measures proposed by the Corps for protection of federally listed species and reasonable and prudent measures imposed by the USFWS to minimize take of federally listed species are specified within the USFWS's PBO and are applicable to all projects carried out under the Corps program. To be exempt from the take prohibitions of Section 9 of the ESA, the Corps must implement all pertinent reasonable and prudent measures and terms and conditions, as stipulated in the USFWS's PBO, to minimize the impact of anticipated incidental take of piping plovers.

Nourishment or operation and maintenance activities will be scheduled and sequenced to avoid or minimize construction activities during the piping plover nesting season within known piping plover nesting areas. For areas where habitat conditions have changed substantially, such that a suitable habitat is no longer present, a case-by-base evaluation of the site will be conducted by the USFWS in coordination with the Corps and the NJDEP. All construction activities will avoid any delineated locations of seabeach amaranth to the greatest practicable extent.

In the future, the City and/or the NJDEP may decide to sponsor beach nourishment in the City to supplement the Corps' program. In addition, the City and/or the NJDEP may conduct beach nourishment as part of an SOE Post-Storm Beach or Dune Restoration. Whether routine or SOE, any beach nourishment outside of the Corps program would require Federal and State permits from the Corps and the DLUR, respectively.

### ➤ **City Actions**

- The City will work with the USFWS, NJDEP, and the Corps to implement the provisions of the 2005 Programmatic Biological Opinion, and of each streamlined consultation, during each renourishment of the City's beaches under the Corps' nourishment program. Key provisions of the Programmatic Biological Opinion include fencing, avoidance, and possibly salvage and replacement of seabeach amaranth plants; and a seasonal restriction (March 15 to fledging of the last chick) on construction within 1,000 meters of piping plover nesting areas, as defined in this plan.
- The City will work with the USFWS and the Corps to ensure that any routine nourishment activities sponsored by the NJDEP and/or the City (requiring Federal permits) include Conservation Measures at least as protective as the provisions of the Programmatic Biological Opinion that governs implementation of the Corps' beach nourishment program. Protection would be achieved mainly through seasonal restrictions on construction within 1,000 meters of plover nesting areas, and fencing, avoidance, and possibly salvage and replacement of seabeach amaranth plants.

- SOE Beach Nourishment may be necessary when conditions pose a clear danger to human life or health (*e.g.* ocean front beach erosion has occurred that makes public access points onto the beach dangerous or impossible to use) or pose a clear danger of damage to public or private structures lying landward of the ocean-front seawall or primary dune line, such as private homes, public buildings, streets, water lines and sewer lines. Placement of clean fill material is among the activities listed at N.J.A.C. 7.7E-3A.3(b); therefore, SOE Beach Nourishment qualifies as “SOE Post-storm Beach or Dune Restoration” as defined in this plan.

The City will coordinate any SOE Post-storm Beach or Dune Restoration (including SOE Beach Nourishment) with the NJDFW and the USFWS. The need for such activities will be signaled by a Declared Emergency, and eligibility for DLUR permits under Section 7:7E-3A.3 of the New Jersey Coastal Zone Management Rules. The City will notify the NJDFW and the USFWS promptly upon Declaration of an Emergency (notice by fax with confirmation of receipt is acceptable).

In any beach Zone, the City will implement the protective measures listed in Table 1 when conducting SOE Restoration activities in the vicinity of an active nesting area or seabeach amaranth occurrence. When implemented with these protective measures, the NJDFW and the USFWS will not object to SOE Restoration activities; SOE Restoration may proceed once any required authorizations are obtained from the DLUR and the Corps. The parties anticipate that SOE Restoration activities (including SOE Beach Nourishment) will have low potential to impact listed species, as suitable nesting/growing habitat is likely to be damaged or destroyed by the erosional or storm event(s) that caused the SOE.

#### ➤ **NJDFW Actions**

- The NJDFW will provide current information on the status and locations of listed birds before and during any renourishment (whether sponsored by the Corps, the NJDEP, or the City) to aid in the implementation of relevant Conservation Measures and Terms and Conditions.
- In the course of planning for beach nourishment projects, the NJDFW will provide: (1) current and historical nesting data and locations, and (2) recommendations for habitat enhancements that could be incorporated into the project.
- The NJDFW will provide a timely response to any request from the City to review specific beach nourishment plans.
- The NJDFW will provide timely recommendations upon notification of SOE Post-storm Beach or Dune Restoration activities that include SOE Beach Nourishment.

#### ➤ **USFWS Actions**

- The USFWS will provide updated information of the locations of seabeach amaranth before and during any renourishment (whether sponsored by the Corps, the NJDEP, or the City) to aid in the implementation of relevant Conservation Measures and Terms and



Conditions.

- In the course of planning for beach nourishment projects, the USFWS will provide: (1) current and historical locations of seabeach amaranth, and (2) recommendations for habitat enhancements that could be incorporated into the project.
- The USFWS will work with the Corps to complete promptly streamlined consultation for each renourishment of the City's beaches under the Corps' program.
- The USFWS will work with the Corps, the applicant, and the City to complete promptly consultation regarding Corps permits to authorize routine or SOE beach nourishment sponsored by the NJDEP and/or the City.
- Regardless of the project sponsor, the USFWS will provide the City with copies of relevant documents resulting from the consultation process regarding beach nourishment, including key sections of Biological Opinions.
- The USFWS will provide timely recommendations upon notification of SOE Post-storm Beach or Dune Restoration activities that include SOE Beach Nourishment.

## **6. Sand Scraping**

### **➤ Background**

Use of motorized equipment to conduct sand scraping (mechanical redistribution of sand; also called sand transfers or sand mining) can directly harm listed species by crushing eggs, chicks, plants, or seeds; can harass nesting birds through disturbance; and can adversely impact habitats for listed species by creating ruts and removing shells, wrack, and natural debris. Sand scraping is regulated by the New Jersey Coastal Zone Management Rules. The City will prohibit sand scraping in the Protected Zone and Precautionary Zones year round. This prohibition may be waived if the NJDFW and USFWS determine that the identified areas do not represent suitable threatened or endangered beach nesting shorebird habitat due to beach erosion or other causes.

### **➤ City Actions**

- No restrictions on sand scraping will apply in the Recreational Zone unless the City has been notified that listed species are present, except as otherwise regulated or prohibited by the New Jersey Coastal Zone Management Rules. If listed species colonize the Recreational Zone, the City will develop appropriate policies for sand scraping with NJDFW and the USFWS. The policy will be consistent with the Recreational Guidelines if plovers establish nesting in the Recreational Zone.
- The City will not conduct sand scraping in the Protected or Precautionary Zones at any time of the year except as a necessary part of SOE Post-storm Beach or Dune Restoration.
- Mechanical redistribution of sand is among the activities listed at N.J.A.C. 7.7E-3A.3(b); therefore, sand scraping under SOE conditions qualifies as "SOE Post-storm Beach or Dune Restoration" as defined in this plan.

The City will coordinate any SOE Post-storm Beach or Dune Restoration with the NJDFW and the USFWS. The need for such activities will be signaled by a Declared Emergency, and eligibility for DLUR permits under Section 7:7E-3A.3 of the New Jersey Coastal Zone Management Rules. The City will notify the NJDFW and the USFWS promptly upon Declaration of an Emergency (notice by fax with confirmation of receipt is acceptable).

In any beach Zone, the City will implement the protective measures listed in Table 1 when conducting SOE Restoration activities in the vicinity of an active nesting area or seabeach amaranth occurrence. When implemented with these protective measures, the NJDFW and the USFWS will not object to SOE Restoration activities; SOE Restoration may proceed once any required authorizations are obtained from the DLUR and the Corps. The parties anticipate that SOE Restoration activities will have low potential to impact listed species, as suitable nesting/growing habitat is likely to be damaged or destroyed by the erosional or storm event(s) that caused the SOE.

## **7. Beach Access Structures**

### **➤ Background**

Public access to New Jersey's beaches is a central goal of the NJDEP's Coastal Management Program, as reflected in the State Coastal Zone Management Rules. Public access is also a key requirement of Federal and State rules governing beach nourishment carried out with public funds. However, an excessible number of beach access structures in the Protected or Precautionary Zones bring more recreational users into potential conflict with listed species. Such structures can also lead to unauthorized impacts to dunes, as recreational beach users create new, unauthorized walkways through the dunes; these gaps in the dune line fragment nesting and growing areas.

### **➤ City Actions**

- The City will work with the NJDFW and the USFWS to develop written materials regarding protections for listed species and dunes.
- The City will not propose any new beach access points/structures within the Protected or Precautionary Zones as the current number and locations of access points is sufficient and meets current State requirements. The City maintains one Public beach access at each numbered street in the Protected and Precautionary Zones. In between each numbered street are two smaller beach accesses used by the beachfront properties along the bulkhead. These are not normally used by the general public. If the City determines additional beach access (or a change in location of current access points) is necessary or is required to provide additional access, the City will work with the NJDFW and the USFWS to locate (or relocate), design, and construct any proposed new public access structures to minimize adverse impacts to listed species. The City will close off any unauthorized mid block beach access paths that are in addition to the two presently allowed.
- The City will work with the NJDFW and the USFWS to place appropriate signs

regarding protections for listed species and dunes at or near public access points. (See the section on education and outreach)

➤ **NJDFW and USFWS Actions**

- The NJDFW and the USFWS will provide recommendations regarding any proposed new (or relocated) public beach access structures, if it is determined such changes are necessary.
- The NJDFW and the USFWS will provide appropriate signs to post at or near public beach access points (see the section on education and outreach).

**F. EDUCATION AND OUTREACH**

➤ **Background**

This component of the management plan encompasses all of the management issues discussed above for the purposes of reducing predation, human disturbance, and the detrimental impacts of beach maintenance. Education and outreach include on-site and off-site distribution of educational materials, educational displays, lectures, beach walks, interpretive signs, and other elements that provide information on the biology of listed species, the impact of various human activities and predators, and recommended actions to help protect and restore populations of listed species.

➤ **City Actions**

- The City will work with the NJDFW and the USFWS to post appropriate signs at beach entry points and on the beach regarding protections for listed species and dunes, refuse policies, the City's pet ordinance, and activities prohibited or discouraged on the beach.
- Through the local newspapers and/or other publications, the City will inform residents, vacation homeowners, and renters about protections for listed species and dunes, refuse policies, the City's pet ordinance, and activities prohibited or discouraged on the beach. The City will also publish periodic updates on the nesting success, population status, species biology, and management activities for listed species (information provided by the agencies).
- Through the local newspapers and/or other publications, the City will inform residents, vacation homeowners, and renters about the importance of keeping cats indoors. The information will discourage cat owners from allowing their pets to roam freely outdoors, and from abandoning pet cats. The newsletter articles will also discourage feeding feral cats.
- The City will post signs within the City to discourage feeding of wildlife, with the exception of backyard bird feeders.
- To promote compliance with the aforementioned prohibition, the City will discourage kite-flying near nesting areas through signs and educational materials.

➤ **NJDFW and USFWS Actions**

- The NJDFW and the USFWS will assist the City in developing educational outreach materials by supplying existing materials and necessary information, and providing technical review.
- The NJDFW and the USFWS will provide information for the Ocean City newsletter articles and/or other publications. Upon request of the City, the agencies will author articles within limits of available staff time.
- The NJDFW will provide copies of the brochure, “CATS Indoors” to the City for general distribution.
- The USFWS will provide copies of the seabeach amaranth fact sheet developed by the ONLM (as needed), and the USFWS’s Beach Management Planning and Piping Plover Factsheets upon request and as available. NJDFW will provide brochures on beach-nesting birds upon request and as available.
- The NJDFW and the USFWS will place interpretive signs on the beach annually regarding listed species, as available. The NJDFW and the USFWS will consult the City in locating interpretive signs.
- The NJDFW will conduct beach walks to show beach nesting bird areas and nesting activity to Ocean City Officials as requested by the City and scheduled at least once per season.
- Upon request of the City, the NJDFW and/or the USFWS will conduct periodic educational talks and/or beach walks for the City employees, contractors, residents, or visitors within limits of available staff time.

#### **G. OTHER PROVISIONS**

- The NJDFW and the USFWS will regularly inform the City regarding changes in listed species locations, distribution, populations, habitat, and/or nesting activity that may affect any of the provisions of this plan or that would be of general interest to the City.
- The NJDFW will provide regular notification regarding nesting activity including but not limited to biweekly faxes or e-mails during the nesting season sent to the Municipal Clerk, Chief of Police, Director of Public Works and the Beach Supervisor. The faxes or e-mails will provide the current location of nests and chicks, the NJDFW management activities, and other important information.
- The NJDFW and the USFWS will provide the City with a brief summary of endangered species recovery status and management, with recommendations, by the end of each calendar year.
- The NJDFW and the USFWS will provide maps of species locations within the City, upon request.
- The NJDFW and the USFWS will work with the City to support implementation of this

Plan.

## APPENDIX A

U.S. Fish and Wildlife Service Guidelines for Managing Recreational Activities in Piping Plover  
Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered  
Species Act

## APPENDIX B

U.S. Fish and Wildlife Service Guidelines for Managing Fireworks in the Vicinity of Piping  
Plovers and Seabeach Amaranth on the U.S. Atlantic Coast

## APPENDIX C

Excerpts from the New Jersey Coastal Zone Management Rules



## APPENDIX D

Summary of the Binding Provisions of the December 2005 Programmatic Biological Opinion Between the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers, Philadelphia District, on the effects of Federal Beach Nourishment Activities along the Atlantic Coast of New Jersey on the Piping Plover (*Charadrius melodus*) and Seabeach Amaranth (*Amaranthus pumilus*)

This document provides a summary of the binding provisions of the Programmatic Biological Opinion (PBO) issued by the U.S. Fish and Wildlife Service (Service) for the U.S. Army Corps of Engineers, Philadelphia District's (Corps) ongoing program of beach nourishment of Ocean, Atlantic, and Cape May counties in New Jersey pursuant to Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA). Additional binding provisions may be developed during streamlined consultation that is required before each scheduled renourishment. The PBO addressed the federally listed (threatened) piping plover (*Charadrius melodus*) and seabeach amaranth (*Amaranthus pumilus*).

## **Definitions**

Sections 4(d) and 9 of ESA, as amended, prohibit *taking* (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. *Harm* is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. *Harass* is defined as actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. *Incidental take* is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant.

## **Incidental Take**

The PBO issued by the Service includes an Incidental Take Statement. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the provisions of the PBO. All the binding provisions of the PBO, as described below, are non-discretionary and must be undertaken by the Corps for the exemption in Section 7(o)(2) to apply. The Corps has a continuing duty to implement the activity covered by the PBO. If the Corps: (1) fails to implement the provisions or (2) fails to require all contractors to adhere to the provisions, the protective coverage provided by Section 7(o)(2) to the Corps and its contractors may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the action and its impact on the species to the Service as specified in the Incidental Take Statement.

## **Binding Provisions**

The binding provisions of this PBO include: (1) the Conservation Measures incorporated by the Corps into their project description for the protection of listed species; and (2) the Terms and Conditions of the Incidental Take Statement issued by the Service to reduce the level of anticipated incidental take of piping plovers.

## **CONSERVATION MEASURES PROPOSED TO MINIMIZE IMPACTS TO FEDERALLY LISTED SPECIES**

### **1. Materials and Materials Placement**

All nourishment material used in Corps sponsored or permitted projects will consist of clean

sand fill material (*i.e.*, 90 percent or greater sand) obtained from approved off-shore borrow areas. Grain size of fill material will be suitable for beach nourishment and will be similar in composition to the existing beach substrate on the targeted deposition site.

## **2. Materials Stockpiling and Equipment Storage**

No materials or equipment associated with beach nourishment or hard structure repair or replacement will be stockpiled or stored within 100 meters of known piping plover nesting areas or sites colonized by seabeach amaranth. Any materials or equipment stored adjacent to known plover nesting areas will be removed prior to the nesting season (March 15<sup>th</sup>).

## **3. Dune Stabilization and Vegetation Planting**

The Corps will work with the Service, the NJDEP, and the USDA to develop guidelines for planting and maintaining dune and beach vegetation and erecting sand fence on Corps nourished beaches that are protective of federally listed species while not diminishing the overall required beach protection function and/or dune stability. Vegetation and sand fencing should be maintained at densities that will not displace federally listed species from occupied sites, deter future colonization of unoccupied sites, or impede chick movements.

## **4. Extension of Outfall Structures**

Following placement of sand, extension of some existing outfall structures may be required. Work associated with outfall structure extension is an integral part of a beach fill project and will be conducted in accordance with all proposed conservation measures to protect federally listed species.

## **5. Access Into Construction Areas**

The Service and the ENSP, or their designated representatives, will be given access to Program construction areas, subject to site safety plans, for the purpose of surveying; monitoring; posting; symbolically fencing of piping plover courtship, nesting, and brood rearing areas; and erecting predator exclosures around nests. In addition, the Service and the NJDEP, Natural Heritage Program (NHP), Office of Natural Lands Management (ONLM), or their designated representatives, will be given access to Program construction areas, subject to site safety plans, to survey potentially suitable areas for seabeach amaranth.

## **6. Contractor Notification**

The Corps will ensure that all contractors and employees will be adequately informed of ESA concerns, and contract specifications will be written accordingly.

## **7. Legal Easements**

The local project sponsor will obtain legal easements allowing Service, State, and Corps representatives access to all portions of the project area over the life of each individual project for the purposes of carrying out endangered species management activities, including, but not limited to, installation of protective fencing, observation, and data collection.

## **8. Conservation Measures to Protect Piping Plovers**

### **a. Pipeline Placement**

On newly nourished beaches outside of current nesting areas and established buffer areas, pipelines may be placed and remain on the beach during construction activities. Pipelines can be placed within nesting areas during the non-nesting season provided they are removed prior to March 15.

### **b. Project Scheduling, Timing Restrictions, and Buffers**

#### **(1) Beach Nourishment**

No construction will take place during the nesting season (March 15<sup>th</sup> to August 15<sup>th</sup>) within a protective buffer area extending from each nesting area. Within nesting and buffer areas, work will be completed by March 15<sup>th</sup> or will proceed following conclusion of the nesting season. In general, known piping plover nesting areas will be afforded a 1,000-meter buffer so as not to interfere with courtship activities, nest site selection, and brood rearing. However, if due to eroded beach conditions or other beach features, no potentially suitable piping plover habitat is likely to be present within the buffer area during the affected nesting season, the buffer area may be reduced on a case-by-case basis by the Service.

#### **(2) Repair and Maintenance of Hard Structures**

Repair and maintenance of hard structures and associated operations and maintenance activities will be scheduled and sequenced to avoid or minimize construction activities during the nesting season (March 15<sup>th</sup> to August 15<sup>th</sup>) within known piping plover nesting areas or areas likely to be occupied during the affected nesting season.

### **c. Beach Profile Surveys**

Yearly beach profile surveys will be conducted outside of the nesting season to the greatest extent possible. If work must be done during the nesting season, the Corps will prioritize historical nesting areas vs. non-nesting areas to schedule surveys of sensitive areas outside of the nesting season.

### **d. Contractor Access Into Nesting and Buffer Areas**

No contractor shall be allowed into designated nesting areas without being accompanied by a qualified biologist. If it is necessary to enter a nesting area after nesting has begun, the Corps or its designated representative will coordinate with the ENSP and / or the Service to ensure that plover monitors are on site to escort workers through the nesting area. No motorized vehicles will be operated within the unfledged chick and nesting buffer areas unless authorized by the Service on a case-by-case basis and intensive monitoring is in place. Motorized vehicles will not be authorized access within 100 meters of unfledged chicks or nests under any circumstances except in the case of a *bona fide* emergency.

### **e. Monitoring and Management During Construction Events**

The Corps will implement a monitoring program to ensure that construction activities occurring during the piping plover nesting season (March 15<sup>th</sup> to August 15<sup>t</sup>) minimize or avoid adverse impacts to the species.

f. Monitoring and Management Following Construction of Civil Works Projects

The Corps will fund a comprehensive program to monitor piping plovers on a yearly basis within each project area, beginning with the first nesting season after initial project construction and continuing for the life of the project or until assumed by the State or local project sponsor. Monitoring and management efforts will be consistent with the Service's (1994) *Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitats on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered Species Act* (Guidelines). Following construction or re-nourishment, beach management activities will be the responsibility of the local municipality or other appropriate landowner. To ensure the protection of federally listed species following project construction, the Corps will require the non-Federal sponsor (NJDEP) to work with each municipality or other appropriate landowner to prepare site-specific endangered species management plans. Plans will be implemented under the guidance of the Service, the ENSP, and the Corps. The management plans will describe site-specific protective measures for piping plover, including: establishment of protective zones; restrictions on beach raking, beach maintenance, and other municipal activities; actions to reduce impacts to the local plover population from predators and humans; and other management as appropriate for individual site conditions.

g. Habitat Enhancement

h. Measures Specific to Townsends Seawall Project

**9. Conservation Measures to Protect Seabeach Amaranth**

a. Surveys

Prior to project construction, a Corps biologist, contracted biologist/botanist or designated representative will survey the project area within the seabeach amaranth growing season (May 1 – November 1) to document the presence or absence of seabeach amaranth.

b. Monitoring and Protection of Seabeach Amaranth Plants

In the event that seabeach amaranth is found within a project area, information including plant locations, numbers of plants and size of plants will be recorded and provided to the Service and NHP.

If construction personnel or vehicles are active in proximity to the site or might transit the site, symbolic fencing will be erected, encompassing a 3-meter protective buffer around the plant(s). The buffers will be adjusted as necessary to protect the plants and, where appropriate, will be combined into a single larger buffer area to better accommodate larger numbers of seabeach amaranth plants.

All construction activities will avoid any delineated locations of seabeach amaranth to the greatest practicable extent. Construction activities include, but are not limited to, staging,

surveying, operation, and sand transport activities. The Corps will undertake all practicable measures to avoid damaging or destroying seabeach amaranth by avoiding areas where the species is present.

c. Restoration of Seabeach Amaranth Areas Likely to be Destroyed

(1) Transplantation of Plants

Individual plants that would be covered with sand, or that occur where impacts from construction equipment cannot be avoided, will be transplanted to a similar habitat near or within the project area.

(2) Seed Collection

When possible, seeds from plants to be translocated will be harvested prior to plants being moved.

(3) Stockpiling Sand Substrate

If translocation or seed collection is not a viable alternative, or has been proven ineffective, construction will be avoided around the plant and buffer area until individual plants die back. The top layer of sand substrate, including the plant site and the surrounding 3-meter buffer area, will be “scraped” and stockpiled. After the area has been graded to the design profile, the stockpiled “scraped sand” will then be re-spread within the project area in an area with suitable habitat conditions for seabeach amaranth.

d. Long-term Management

If seabeach amaranth is found within the project area, the appropriate municipal endangered species management plan(s) will be amended to include site-specific protective measures for this species. Such measures will include establishment of protective zones, restrictions on beach raking, fencing to prevent damage from vehicle and pedestrian use, monitoring, and other management as appropriate for individual site conditions.

**REASONABLE AND PRUDENT MEASURES (with implementing TERMS AND CONDITIONS, refer to USFWS’s 2005 PBO)**

***RPM 1:*** Ensure that all Corps project engineers, staff, contractors, cooperators, and / or permittees are fully informed and compliant with all conservation measures contained within the Program description, RPMs, and terms and conditions of this Biological Opinion.

***RPM 2:*** Ensure that the piping plover construction monitor is qualified to identify piping plovers and their habitats.

***RPM 3:*** Ensure that efficient and effective communication and coordination occurs among Corps project engineers, staff, contractors, cooperators, piping plover construction monitor and / or permittees and the Service, NJDEP, municipal, and any other construction and monitoring staff.

***RPM 4:*** Practice adaptive management of projects within the Program Area and adjust protective measures as needed or as new information becomes available.

***RPM 5:*** Ensure that the Corps piping plover monitoring and management program is sufficient to monitor and minimize disturbance to nesting piping plovers from recreational users on Corps Program Area beaches.

***RPM 6:*** Seek ways to preserve or enhance piping plover habitat within the Program Area while meeting shore protection goals.

***RPM 7:*** Ensure that dune and beach management actions carried out by the State and local project sponsors and / or permittees over the life of the Program are compatible with piping plover habitat requirements.

***RPM 8:*** Secure increased cooperation and participation of local beach managers in endangered species protection to augment conservation measure commitments summarized in the Program description.

***RPM 9:*** Report on the progress of the action and its impact on the species, as required pursuant to 50 CFR 402.14(i)(3).

## APPENDIX E

### CITY BEACH VEHICLE USE REGULATIONS



## **CITY OF OCEAN CITY BEACH VEHICLE USE REGULATIONS**

Recreational Vehicles are prohibited on City Beaches from May 15 through September 15th. On all city beaches, except in the Protected Zones and the Precautionary Zone where the restrictions begin on March 15 and extend until September 15.

Operators of Motor Vehicles must possess a valid N.J. State Drivers License.

Incidents that result in injury and/or property damage must be reported immediately to the City Police Department and/or Municipal Clerk.

All Drivers must obtain a copy of the City of Ocean City Beach Management Plan restrictions and the weekly Beach Nesting Birds & Endangered Species Update issued by the NJDFW Endangered & Nongame Species Program to be aware of the NO-Drive Zone Restrictions.

Public Works Vehicles travel will be limited to the hard pack sand only.

Maximum Speed Limit shall be 5 Miles per Hour.

Seat Belts must be worn at all times.

Vehicles must be equipped with fire extinguisher.

Lights must be on at all times.

Vehicles must be turned off when operator is out of the vehicle.

Tailgates must be up while vehicles are moving unless loaded with debris longer than 8 feet.

Backing up vehicles without a clear view will only be conducted with a ground guide.

Personnel must be seated inside of vehicle with seatbelt. (maximum 3 persons in front seat).

## APPENDIX F

### CITY OF OCEAN CITY BEACH ACTIONS TABLE

Action	Zone	Prohibited Date	Start	Prohibited End Date	Comment
<b>City Police Patrols (non-emergency)</b>	Protected	March 15		August 31	Emergency Patrols only
	Precautionary	March 15		August 31 July 15*	* In the event that no listed species are present. If seabeach amaranth occurs refer to protective measures in the Plan.
	Recreational	No Restrictions		No Restrictions	* In the event that no listed species are present.
<b>Beach Lifeguard Patrols (non-emergency)</b>	Protected	March 15		August 31	Emergency Patrols only
	Precautionary	March 15		August 31 July 15*	* In the event that no listed species are present. If seabeach amaranth occurs refer to protective measures in the Plan.
	Recreational	No Restrictions		No Restrictions	* In the event that no listed species are present.
<b>Public Works (non-emergency)</b>	Protected	March 15 – see Note		August 31	Emergency Activities only-no raking
	Precautionary	March 15 – see Note		August 31 July 15*	* In the event that no listed species are present. If seabeach amaranth occurs refer to protective measures in the Plan.
	Recreational	No Restrictions		No Restrictions	* In the event that no listed species are present.
<b>Organized Beach Clean-Ups, including Large Debris Removal (with vehicles)</b>	Protected	March 15 – see Note		August 31	NJDFW and USFWS do not object to SOE response and will provide a monitor to oversee.
	Precautionary	March 15 – see Note		August 31 July 15*	* In the event that no listed species are present. If seabeach amaranth occurs refer to protective measures in the Plan.
	Recreational	No Date Restrictions*		No Date Restrictions*	* In the event that no listed species are present.

Action	Zone	Prohibited Date	Start	Prohibited End Date	Comment
<b>Beach Raking</b>	Protected Central Zone Protected Northern Zone	March 15 <sup>th</sup> Year round		November 30* Year round	NJDFW and USFWS do not object to SOE response and will provide a monitor to oversee.
	Precautionary	March 15th		November 30*	* In the event that no listed species are present by July 15 the raking restriction may be lifted; however, a back portion of the beach (approximately 1 beach-rake's width) will remain unraked for seabeach amaranth.
	Recreational	No Date Restrictions*		No Date Restrictions*	Refer to DLUR permit * In the event that no listed species are present.
<b>Beach Nourishment</b>	Protected	March 15		Fledging of the last chick (plover or tern)	Refer to USFWS's 2005 Programmatic Biological Opinion.
	Precautionary	March 15		Fledging of the last chick (plover or tern)	Refer to USFWS's 2005 Programmatic Biological Opinion.
	Recreational	March 15		Fledging of the last chick (plover or tern)	Refer to USFWS's 2005 Programmatic Biological Opinion.

Action	Zone	Prohibited Start Date	Prohibited End Date	Comment
<b>Sand Scraping</b>	Protected	Year Round	Year Round	NJDFW and USFWS do not object to SOE response and will provide a monitor to oversee.
	Precautionary	Year Round	Year Round	NJDFW and USFWS do not object to SOE response and will provide a monitor to oversee.
	Recreational	No Date Restrictions*	No Date Restrictions*	Refer to DLUR permit. * In the event that no listed species are present
<b>Dune Management (Routine)</b>	Protected	March 15th	August 31st	If seabeach amaranth is present, any work will be carried out Dec 1 – March 14.
	Precautionary	March 15th	August 31st	If seabeach amaranth is present, any work will be carried out Dec 1 – March 14.
	Recreational	No Date Restrictions*	No Date Restrictions*	Refer to DLUR permit. * In the event that no listed species are present
<b>Fireworks</b>	Protected	Prohibited	Prohibited	Launch area prohibited within ¾ mile of any nesting site
	Precautionary	Prohibited	Prohibited	Launch Area Prohibited within ¾ mile of any nesting site
	Recreational	No Date Restrictions*	No Date Restrictions*	* Launch Area Prohibited within ¾ mile of any nesting site

Action	Zone	Prohibited Start Date	Prohibited End Date	Comment
<b>Organized Events</b>	Protected	Year Round	Year Round	
	Precautionary	March 15	August 31*	* If seabeach amaranth occurs refer to protective measures in the Plan.
	Recreational	No Date Restrictions*	No Date Restrictions*	* In the event that no listed species are present
<b>Kite Flying</b>	Protected	March 15	August 31*	Prohibited within 200 meters of posted nesting areas.
	Precautionary	March 15	August 31*	Prohibited within 200 meters of posted nesting areas.
	Recreational	No Date Restrictions*	No Date Restrictions*	*Prohibited within 200 meters of posted nesting areas.
<b>Dogs only on the Beach (leashed)</b>	Protected	March 15	September 30th	Refer to ordinance, 11-4.4b
	Precautionary	March 15	September 30th	Refer to ordinance, 11-4.4b
	Recreational	May 1	September 30th	Refer to ordinance, 11-4.4b

Note: Beach clean-ups requiring Public Works vehicles (Beach Rakes) may continue (if needed) after March 15 and until March 31 only after consultation with NJDFW and USFWS to determine listed species presence in the Protected and Precautionary Zones (refer to the Beach Management and Maintenance Section of the Plan (Section E)).