

**FINAL  
RESTORATION PLAN AND  
ENVIRONMENTAL ASSESSMENT FOR  
PIPING PLOVER (*Charadrius melodus*)**

**Impacted by the Bouchard Barge 120 Oil Spill  
BUZZARDS BAY  
MASSACHUSETTS AND RHODE ISLAND**

**December, 2012**



USFWS

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## EXECUTIVE SUMMARY

This Final Restoration Plan and Environmental Assessment for Piping Plover (*Charadrius melodus*) (Final RP/EA) has been developed by Federal and state natural resource trustees (Trustees) responsible for restoring natural resources and resource services injured by the April 27, 2003 oil spill from the Bouchard Barge 120 in Buzzards Bay (Spill) and nearby waters in Massachusetts and Rhode Island. This Final RP/EA focuses solely on the piping plover, a federally threatened shorebird, to expedite restoration of this rare, injured resource. Additional restoration plans will be developed to address restoration for other injured resources and their lost services (aquatic and shoreline resources and habitats, other birds, and lost recreational uses).

Consistent with the Oil Pollution Act of 1990 (OPA) (33 U.S.C. section 2701, *et seq.*) and the National Environmental Policy Act (NEPA), the purpose of restoration planning is to identify and evaluate a reasonable set of restoration alternatives and to provide the public with an opportunity for review and comment on the proposed restoration alternatives. Restoration planning provides the link between resource injury and restoration. The purpose of restoration, as outlined in this Final RP/EA, is to make the environment and the public whole for injuries resulting from the Spill by implementing one or more restoration actions that return injured natural resources and services to baseline conditions<sup>1</sup> and compensate for interim losses.<sup>2</sup>

The National Oceanic and Atmospheric Administration (NOAA), the U. S. Fish and Wildlife Service (USFWS), the Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs (EEA) and the State of Rhode Island Department of Environmental Management (RIDEM) are the Trustees responsible for restoring natural resources<sup>3</sup> and resource services<sup>4</sup> injured by the Spill, as authorized by the OPA. As a designated Trustee, each agency is authorized to act on behalf of the public under state and/or Federal law to assess and recover natural resource damages, and to plan and implement actions to restore, rehabilitate, replace, or acquire the equivalent of the natural resources or services injured or lost as a result of an unpermitted discharge of oil.

The Trustees and the party responsible for the Spill have reached agreement on the injury assessment and restoration for several of the injuries resulting from the Spill. These include injuries to piping plover, aquatic and shoreline resources, and lost recreational uses. The specific terms of this agreement were memorialized in a publicly-available consent decree on May 17, 2011.

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<sup>1</sup> Baseline conditions are the environmental conditions that would have existed had the oil spill not happened.

<sup>2</sup> Interim losses are the losses of natural resources or services that ensued from the time of the oil spill until baseline conditions are regained.

<sup>3</sup> Natural resources are defined under the Oil Pollution Act (OPA) as "land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any State or local government or Indian tribe, or any foreign government."

<sup>4</sup> Services (or natural resources services) means the functions performed by a natural resource for the benefit of another natural resource and/or the public.

To initiate restoration of piping plover and to take advantage of a timely and high priority restoration opportunity, the Trustees prepared a Draft RP/EA to inform the public about the Trustees' determination of the injuries to piping plover and proposed restoration actions to compensate for these injuries.

The Draft RP/EA identified and evaluated five alternatives to restore piping plovers. The preferred alternative is to implement an enhanced management program for piping plovers at breeding sites in Massachusetts and Rhode Island, consisting of a three-tiered approach of predator management, enforcement, and outreach and education. Four other alternatives (no action, protection of nesting habitat, nest monitoring and management, and habitat enhancement) were evaluated and determined to be not preferred.

The public was invited to comment on the Draft RP/EA from June 18, 2012 through August 1, 2012. The Trustees also held a public informational meeting on July 10, 2012 in Fall River to present the Draft RP/EA.

Comments received during the comment period and at the public meeting are summarized in Section 7.0, along with the Trustees' responses to the comments. After consideration of the comments received and the environmental assessment prepared in the Draft RP/EA, the USFWS, on behalf of the Trustees, has issued a Finding of No Significant Impact (FONSI) for the selected project alternative; and the Trustees have released this Final RP/EA to the public. Implementation of the preferred restoration project is expected to begin in the fall of 2012.

## **1.0 INTRODUCTION**

### **1.1 Overview of the Incident**

On April 27, 2003, the Bouchard Barge 120, owned and operated by the Bouchard Transportation Company, struck a shoal, soon after entering the western approach to Buzzards Bay. The grounding ruptured a 12-foot hole in the hull of the barge, causing the discharge of approximately 98,000 gallons of No. 6 fuel oil into the bay. The oil was driven ashore by winds and currents and primarily affected the north, northwest, and northeast portions of the bay, including the municipalities of Westport, Dartmouth, New Bedford, Fairhaven, Mattapoisett, Marion, Wareham, Bourne, and Falmouth, Massachusetts (Figure 1). More than 98 miles of shoreline were affected, including shoreline and coastal waters in both Massachusetts and Rhode Island. Oiling was unevenly distributed and was especially concentrated at exposed points and peninsulas in certain localized areas (e.g., Barneys Joy Point, Mishaum Point, West Island, Sconticut Neck and Long Island). In addition, sporadic shoreline oiling was reported on the Elizabeth Islands and in eastern Rhode Island (e.g., Little Compton and Block Island). The shoreline of Buzzards Bay is comprised of a diversity of shoreline types, including sand and cobble beaches, rocky shores, tidal wetlands and tidal flats under both public and private ownership. Approximately two-thirds of the oiled shoreline received very light or light oiling, while the remaining third was moderately to heavily oiled. Species

inhabiting or using the oiled shoreline were adversely affected by the Spill and/or the Spill clean-up activities. One of the species negatively impacted by the Spill was the federally threatened piping plover.

The effects of the Spill on piping plovers are described in Section 2.

## 1.2 Natural Resource Damage Assessment

Immediately after the Spill occurred, the Trustees commenced the Pre-assessment Phase of the natural resource damage assessment (NRDA) in accordance with the OPA NRDA regulations (OPA regulations) (15 CFR § 990.40) to determine if the agencies had jurisdiction to pursue restoration under OPA and, if so, whether it was appropriate to do so. Based on the Trustees' analyses of initial data collected during the response and the Pre-assessment Phase (Massachusetts Executive Office of Environmental Affairs, *et al.* 2005), including the observation of oiled birds and the collection of dead threatened and endangered bird species, the Trustees found that they had jurisdiction to pursue restoration under the OPA. The Trustees further determined that response actions had not adequately addressed the injuries resulting from the incident, and that feasible primary<sup>5</sup> and/or compensatory restoration<sup>6</sup> options existed to address the potential injuries. These determinations were memorialized in a Notice of Intent to Conduct Restoration Planning. The Notice was signed on July 21, 2006 by NOAA and published in the Federal Register on July 28, 2006 (Federal Register Vol. 71, No. 145 pp. 42812-42814). Consequently, the Trustees initiated the Restoration Planning Phase of the NRDA, in accordance with Section 990.50 of OPA, which includes evaluating and quantifying potential injuries (injury assessment) and using that information to determine the need for and scale (or size) of restoration actions.

## 1.3 Coordination

### 1.3.1 Trustee Council Organization and Activities

OPA, Executive Orders 12580 and 12777, and 40 CFR § 300.600 designate the Federal, state, and tribal trustees for natural resources. The Secretary of Commerce, acting through the NOAA, is a designated Federal trustee for natural resources, including living marine resources and their habitats (e.g., marine, estuarine and diadromous fishes and aquatic biota and certain marine mammals). The Secretary of the Department of the Interior (DOI) is the designated Federal trustee for certain natural resources including, but not limited to, migratory birds, some marine mammals, anadromous fish, federally endangered and threatened species and their respective habitats, and Federal lands managed by the DOI. The Secretary of the Interior has designated the Northeast Regional Director, Region 5 of the USFWS, to act on behalf of the Secretary as the Authorized

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<sup>5</sup> Primary restoration is any action undertaken to speed the return of injured natural resources and services to the baseline condition, i.e., the conditions that would have existed had the oil spill not occurred.

<sup>6</sup> Compensatory restoration is the compensation provided to offset interim losses (the natural resource injuries that accrue from the time that an oil spill occurs until baseline conditions are re-established).



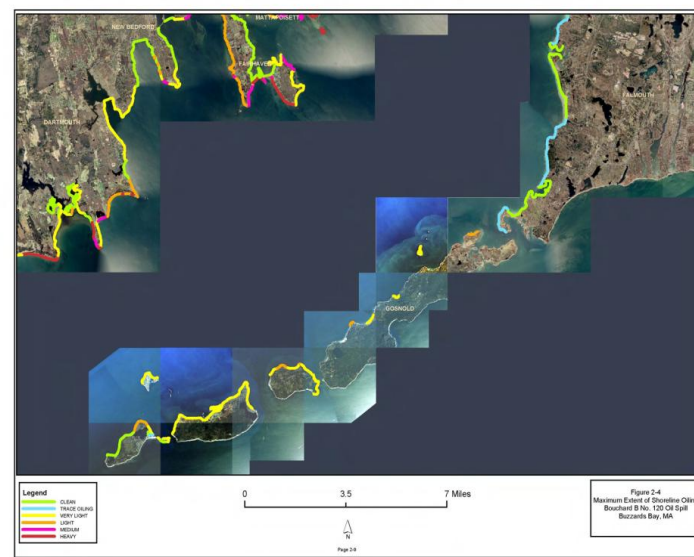
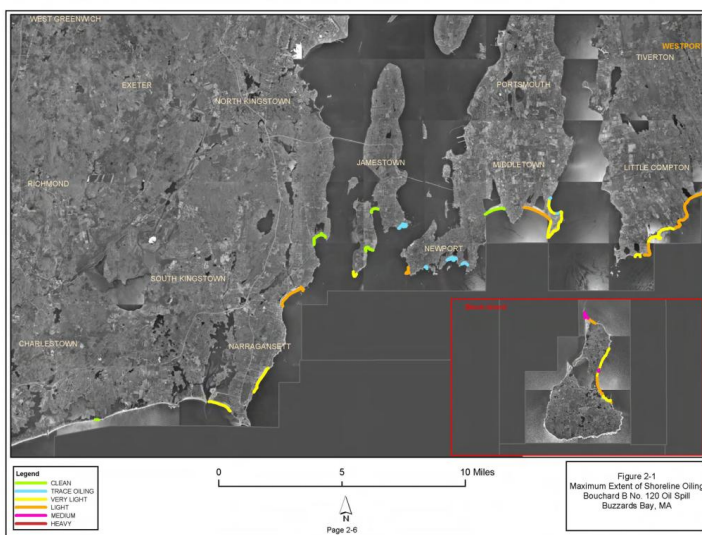
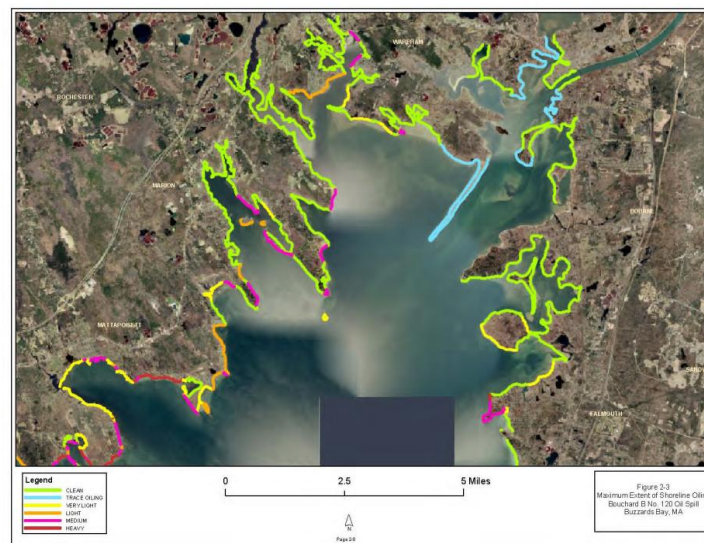
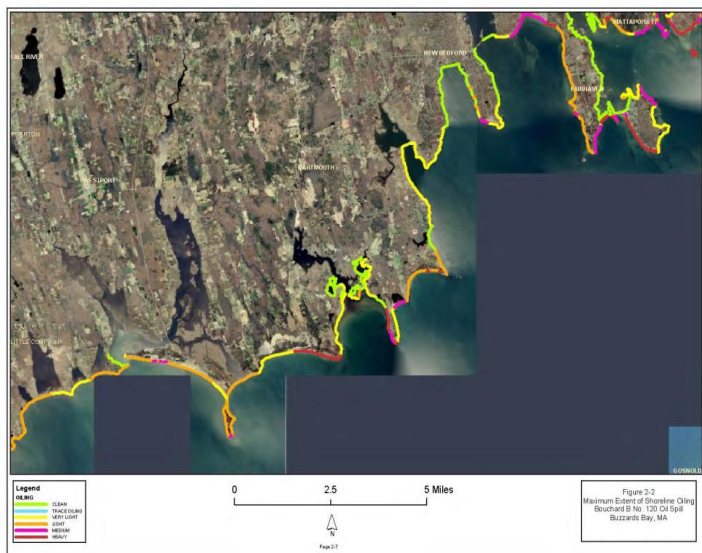


Figure 1. Maximum Extent of Shoreline Oiling. Bouchard Barge No. 120 Oil Spill – From Figures 2-1, 2-2, 2-3 and 2-4 in Massachusetts Executive Office of Environmental Affairs *et al.* 2005.

Official for the Spill. The Executive Orders and Federal Regulations referred to above also provide that each state is a designated trustee for all natural resources within its boundaries. The governor of each state designates the state agency or agencies that will act as the natural resource trustee(s) for the particular affected state. The Governor of Massachusetts has designated the EEA as the Commonwealth's trustee. Within the EEA, the Massachusetts Department of Environmental Protection (MassDEP) administers the NRDA Program. The Governor of Rhode Island has designated RIDEM as the state's natural resource trustee. Indian tribes are trustees for natural resources belonging to, managed by, controlled by, or appertaining to the tribes. For the Bouchard Barge 120 oil spill, the NOAA, USFWS, EEA, and RIDEM are the Trustees.

To memorialize the ongoing collaborative interagency efforts to accomplish the common goals of natural resource damage assessment and restoration, the Trustees entered into a Memorandum of Agreement (Trustee MOA) in March 2007. The Trustee MOA identified NOAA as the Lead Administrative Trustee agency for the Bouchard Barge 120 oil spill case. The Trustees have worked collaboratively to assess the natural resource injuries and identify restoration alternatives. Since the piping plover is a federally threatened species, the USFWS, with assistance from the Massachusetts Division of Fish and Wildlife and RIDEM's Division of Fish and Wildlife, has prepared this Final RP/EA. The Trustees are continuing to work collaboratively to prepare a separate RP/EA for restoration of shoreline and aquatic resources and lost uses of coastal resources injured by the Spill. The Draft RP/EA for the restoration of these other resource injuries is expected to be released for public review and comment in late 2012 or early 2013.

### 1.3.2 Responsible Party Involvement

Federal regulations implementing OPA encourage the Trustees to invite Responsible Parties to participate in the NRDA, and enter into agreements with the natural resource Trustees to promote cost-effectiveness and cooperation (15 C.F.R. 990.14(c)). In October 2006, Bouchard Transportation Co, Inc., the Responsible Party, entered into a cooperative NRDA agreement with the Trustees—"Memorandum of Agreement between Bouchard Transportation Co., Inc. and the Natural Resource Trustees Governing Cooperative Natural Resource Damage Assessment and Restoration Planning Activities for the Bouchard B. 120 Oil Spill" (hereafter, Trustee-Responsible Party MOA), which included a reimbursement agreement supporting the Trustees' role in injury assessment studies.

The Trustees prepared and provided the Responsible Party with scopes of work for assessment studies, according to the procedures for cooperative studies outlined in the Trustee-Responsible Party MOA. The Responsible Party's consultant, ENTRIX (now known as Cardno ENTRIX) participated in natural resource assessment studies, injury determinations, restoration planning discussions and restoration scaling calculations. The Trustees and Responsible Party negotiated a mutually agreeable settlement for certain specified categories of natural resource damages, including piping plover, in November 2010 (see Section 3.0 for details).



### 1.3.3 Public Involvement, Notification and Review

Prior to expending funds for restoration, the OPA requires the Trustees to develop a Restoration Plan (RP) for public review and comment (15 CFR Part 990). The DOI NRDA Regulations (43 CFR Part 11) require that the restoration plan list a reasonable number of potential alternatives for restoration, rehabilitation, replacement, and/or acquisition of equivalent resources and the services lost to the public associated with each injured resource (43 CFR §§11.93 and 11.81). In addition, the Final RP/EA constitutes the Environmental Assessment (EA) as defined under NEPA (40 CFR Part 1502.10), and addresses the potential impact of proposed restoration actions on the quality of the physical, biological, and cultural environment.

The Trustees issued the Draft RP/EA on June 18, 2012 to inform the public of potential restoration actions and to solicit the public's input on the proposed restoration activities. The Trustees published a notice of availability of the Draft RP/EA in the *Providence Journal* and the *Cape Cod Daily Times*. The Trustees also circulated the notice to state agencies and local organizations with expertise or familiarity with the piping plover.

The Draft RP/EA was also available for review online at:

<http://www.fws.gov/newengland>

In addition, hard copies of the Draft RP/EA were available from the USFWS at the following address:

U.S. Fish and Wildlife Service  
70 Commercial Street, Suite 300  
Concord, New Hampshire 03301  
Contact: Ms. Molly Sperduto  
Phone: 603-223-2541, Fax: 603-223-0104  
email: [molly\\_sperduto@fws.gov](mailto:molly_sperduto@fws.gov)

Hard copies of the Draft Plover RP/EA were also available for public review at the Jonathan Bourne Public Library in Bourne and the New Bedford Free Public Library in New Bedford.

The public was invited to comment on the Draft RP/EA from June 18, 2012 through August 1, 2012. Comments received during the public comment period are summarized in Section 7.1. The Trustees also held a public informational meeting on July 10, 2012 to present the Draft RP/EA. A summary of the public meeting is presented in Section 7.2.

After consideration of the comments received on the Draft RP/EA, and the Environmental Assessment prepared as part of the Draft RP/EA, the USFWS, on behalf of the Trustees, has issued a Finding of No Significant Impact (FONSI) for the selected project alternative. The Trustees have also prepared and released this Final RP/EA.

#### 1.3.4 Administrative Record

The Trustees established an Administrative Record in compliance with Federal regulatory requirements for NRDAs of oil spills (15 CFR §900.45). The Administrative Record includes information and documents prepared by and/or relied upon by the Trustees during the injury assessment, and throughout the case. Interested persons can access or view these records at the following location:

NOAA Office of Habitat Conservation  
Restoration Center  
28 Tarzwell Drive  
Narragansett, RI 02882  
Contact: Mr. James Turek  
Phone: 401-782-3338, Fax: 401-782-3201  
Email: James.G.Turek@noaa.gov

Arrangements must be made in advance to review or to obtain copies of these records by contacting the office listed above. Access to and copying of these records is subject to all applicable laws and policies including, but not limited to, laws and policies relating to copying fees and the reproduction or use of any material that is copyrighted.

## **2.0 AFFECTED ENVIRONMENT AND SUMMARY OF NATURAL RESOURCE INJURIES**

This section describes the physical, biological and cultural environment of the Spill area and the proposed restoration areas, and forms the basis for evaluation of the potential environmental impacts of the selected restoration actions. Much of the description of the affected environment relies on the Comprehensive Conservation and Management Plan for Buzzards Bay prepared by the Buzzards Bay National Estuarine Program (Buzzards Bay National Estuarine Program 1991). This section also describes the injury to piping plovers resulting from the Spill.

### 2.1 The Physical Environment

Buzzards Bay is a moderately large estuary that is approximately 28 miles long, averaging about 8 miles in width and covering approximately 228 square miles (Buzzards Bay National Estuarine Program 1991). There are approximately 280 miles of shoreline in the Bay. The shoreline is comprised of a variety of physical types including sand, cobble and boulder beaches, rocky shores, tidal wetlands and tidal flats.

The entire watershed of Buzzards Bay covers 434 square miles. West of the Cape Cod Canal, seven major river basins drain into the Bay, including the Agawam, Wankinco, Weweantic, Mattapoisett, Acushnet, Paskamanset, and the Westport Rivers. East of the canal, the shore is drained mostly by groundwater and several small rivers including the Back, Pocasset and Wild Harbor Rivers, and Herring Brook (Buzzards Bay National Estuarine Program 1991).

The bay was formed during the last ice age and the southeastern side consists of glacial moraine debris deposited by the glacier's leading edge. The resulting shoreline is comprised of mostly sand and gravel beaches. The northwest side was formed by the glacier's retreat and it is characterized by sheltered bays and inlets.

Oil from the Spill adversely affected more than 100 miles of shoreline and coastal waters in both Massachusetts and Rhode Island (Michel *et al.* 2008). Oil was unevenly distributed and generally concentrated at exposed points and peninsulas (e.g., Barneys Joy Point, Mishaum Point, West Island, Sconticut Neck and Long Island). In addition, sporadic shoreline oiling was reported on the Elizabeth Islands and in eastern Rhode Island (e.g., Little Compton and Block Island).

## 2.2 The Biological Environment

The coastal area of Buzzards Bay is characterized by a variety of habitat types, including salt marshes, tidal streams, eelgrass beds, tidal flats, barrier beaches, rocky shores and subtidal areas. Aquatic resources, including lobsters and crabs, shellfish (quahog, bay scallop, soft-shelled clams, and oysters), finfish (e.g. killifish, silversides, alewives, scup, winter flounder, tautog, sea bass, and striped bass), and marine mammals (e.g., harbor seals) depend on the bay for spawning, rearing and foraging habitat. Numerous bird species winter, migrate through, or breed in the bay. These include shorebirds (e.g., willets, oystercatchers and federally listed threatened piping plovers), terns (common, least, and federally listed endangered roseate), waterfowl (e.g., swans, ducks, and geese), loons, grebes, raptors (osprey), gulls, warblers, and wading birds (e.g., black-crowned night herons and snowy egrets).

## 2.3 The Cultural and Human Environment

Nineteen municipalities in Massachusetts and three communities in Rhode Island fall within the Buzzards Bay Basin. Shoreline oiling was observed in many of these, including Westport, Dartmouth, New Bedford, Fairhaven, Mattapoisett, Marion, Wareham, Bourne, and Falmouth, Massachusetts, as well as Little Compton and Block Island, Rhode Island.

Much of the watershed is rural and forested; only limited amounts of the watershed are classified as developed (14 percent); however, within a half mile of the coast, development is greater (30 percent) (Buzzards Bay National Estuarine Program 1991). According to US census data, the population within the watershed was approximately 260,000 in 2000 (Buzzards Bay National Estuarine Program 2011).

Shoreline ownership in the watershed is both public and private and use of the shoreline occurs on both types of land. Much of the use is concentrated in defined public access points, such as state parks and town beaches. Eleven miles of public beaches attract numerous tourists and residents. Shoreline use also occurs along private and semi-private

shorelines, such as beaches adjoining private property, individual residences, or private communities.

## 2.4 Injury to Piping Plovers

The piping plover is a small North American shorebird with three distinct populations that breed in the Great Lakes, the Northern Great Plains and the Atlantic Coast. The Atlantic Coast population breeds from North Carolina to Newfoundland and winters in the Caribbean and along the Atlantic and Gulf Coasts. Piping plovers typically utilize sand beaches, mixed sand and gravel beaches and exposed sandy tidal flats in the area. Of the 100 plus miles of shoreline that were affected by oiling, approximately 70 percent was either sand or gravel beaches (Michel *et al.* 2006).

Once described as a common summer resident on Atlantic Coast beaches (Haig and Oring 1987; USFWS 1996), the species was nearly extirpated in some areas by the start of the 20<sup>th</sup> century due to hunting primarily for the feathers which were used to decorate women's hats, as well as egg collecting. The species recovered somewhat following the passage of the Migratory Bird Treaty Act in 1918. In the latter part of the 20<sup>th</sup> century, the population declined again as habitat was destroyed and summer homes and roads were built due to an increasing human population. In 1986, the piping plover was listed as endangered and threatened under provisions of the Endangered Species Act, as amended (U.S. Fish and Wildlife Service 1985). The species was designated as endangered in the Great Lakes region and threatened in the Northern Great Plains and in the Atlantic Coast regions. The species is also listed as threatened under the Massachusetts Endangered Species Act (M.G.L. c. 131, § 4, subsection 13A) and under the Rhode Island Endangered Species Act (RI ST § 20-37-1-5).

Massachusetts and Rhode Island support breeding habitat for more than one-third of the Atlantic Coast population (USFWS 2009), and nearly 15 percent of the total pairs worldwide (Elliott-Smith *et al.* 2009). As a result of the species' threatened status and because such large proportions of the Atlantic Coast and global populations nest in Massachusetts and Rhode Island, the species is a high conservation priority.

When oil began washing onto beaches utilized by breeding and migrating piping plovers immediately following the Spill (April 28, 2003), the Trustees worked with a pre-existing group of cooperating bird and conservation organizations to monitor and protect plovers in the area of the Spill. More than 50 pairs of piping plovers were known to utilize beaches in the area affected by the Spill, and the birds were at risk due to direct oiling of nests or adults, or due to impacts associated with cleanup efforts.

Plover activity (territory establishment and courtship) and subsequently plover nests and broods were monitored several times per week during April, May, June, and July of 2003 at all breeding areas affected by the Spill in eastern Rhode Island and Bristol County, Massachusetts. Monitoring was conducted to protect plovers from oil and cleanup activities, as well as to document presence and severity of plover oiling, and to accurately determine the number of nesting pairs and the number of chicks fledged (i.e., chicks

surviving until able to fly) per mated pair in the breeding season during and following the Spill. A data collection form was developed by the USFWS to allow observers to note patterns and degree of oiling for each adult or chick (if oil was observed), indications of any abnormal behavior, breeding chronology and success, incidents of nest abandonment, predation, and potential interactions between oil spill cleanup activities and plovers or their nests/broods. More than 3,800 data sheets were recorded in 2003.

Potential injury to piping plovers was characterized as follows: (1) mortality of adults during the 2003 breeding season; (2) delayed mortality of adults occurring during the wintering season and measured at the start of the 2004 breeding season; (3) mortality of chicks during the 2003 breeding season; and (4) indirect effects associated with decreases in future productivity. These effects can result from multiple causes, including direct oiling, oiling of plover habitat or prey, and cleanup activities.

To evaluate potential injury, the Trustees, working cooperatively with the Responsible Party, compiled and analyzed piping plover survey data from 2003 and 2004, and compared the results to historic data. The Trustees estimated:

- 1) the number of adult plovers that died in 2003 due to the Spill;
- 2) the number of young that failed to fledge in 2003 due to the Spill;
- 3) the number of adult and first-year plovers that did not survive to return to breeding habitats impacted by the Spill between September 2003 and April 2004; and
- 4) Spill-related impacts on reproductive success in 2004.

Based on monitoring data collected in 2003 and the lack of dead adults collected after the Spill, the Trustees were unable to determine whether any adults were killed immediately following the Spill, even though approximately 85 percent of the adult plover population seasonally residing between Sakonnet Point, Rhode Island and Woods Hole, Massachusetts was observed to be either heavily or moderately oiled. A bird was classified as lightly oiled if it had only one spot of light oil on its body. Moderately-oiled birds were observed to have two or more spots of oil on their bodies, and heavily-oiled birds had large areas of oil on their bodies and oil in multiple areas. Approximately 15 percent of the birds were observed to be either lightly oiled or unoiled.

Regarding the Spill's effect on fledging, one dead chick and one oiled chick which later died were collected on beaches during the beached bird surveys. Additional oiled chicks were observed during monitoring and increased numbers of eggs failed to hatch for unknown reasons following the spill (5.2 percent) compared to historic data (2.4 percent). After careful analysis of these data, the Trustees determined, based on literature indices and best professional judgment, the range of potential Spill-related loss of fledglings during the 2003 breeding season was between 2.6 to 7 fledglings. This estimate accounts for the two dead chicks plus the potential loss of 0.6 to 5 fledges that were never hatched as a result of decreased hatching success following the Spill.

The potential impacts to adults and fledges during the non-breeding season were also estimated to determine potential latent Spill-related impacts and to estimate subsequent impacts to reproductive success in 2004. Many birds were observed to have been oiled following the Spill and were also observed preening oil from their feathers. Because this can result in prolonged adverse effects on piping plovers, several methods were utilized to calculate expected rates of return in the following year by plovers to the spill area, and to estimate mortality during the non-breeding season. These methods included a simulation approach based on population modeling and an assessment that assumes the rate of return to the Spill area in the year following the Spill year (2004) should have been equal to that for the average rate of return to the area in the preceding three years. Based on these analyses, the Trustees determined that between eight and 16 adult plovers that were expected to return to the area in 2004, in fact, failed to return as a result of the Spill. The Trustees presumed that these adults died by the beginning of the 2004 breeding season.

The Trustees then prepared a resource equivalency analysis (REA) to evaluate the injury to piping plovers and to calculate appropriate compensation for this injury. Utilizing the REA methodology, the Trustees first calculated the loss of plovers (adults and fledges) for each year of their expected life spans (direct injuries), plus the loss of the first generation of fledges for each year of their expected life spans (indirect injuries). This procedure results in the calculation of a bird-years metric which includes the total number of birds injured and the period of time for which they are missing. Then, using basic economic tools, the Trustees converted the total loss (direct and indirect injuries) to a present day value, which is known as discounted bird-years. Discounting is commonly used in NRDAs (NOAA 1999) to adjust injury and restoration scaling calculations that occur throughout the past and future to a comparable, present value.

In an effort to ensure adequate compensation for the environment and the public and to account for the variability inherent in these complex scientific calculations, the Trustees used the mid-points of the ranges established for direct losses of adults and fledges noted above (that is, five fledges lost and 12 adults lost) to calculate the Spill injury to piping plovers. Based on this analysis, the Trustees determined that the direct loss in this case (the number of fledges and adults lost multiplied by their life expectancy) was 43.61 discounted bird-years, while the indirect interim loss of future fledges was 55.88 discounted bird-years. Thus, the calculated total Spill injury debit to piping plovers is 99.5 discounted bird-years.

The Trustees then evaluated various alternative methods to restore piping plovers to their baseline population condition and generate additional piping plover bird-years to compensate for the 99.5 bird years lost due to the Spill. The Trustees focused on alternatives that increase productivity of breeding piping plovers. The Trustees relied on their experience implementing piping plover restoration for other spills such as the 1996 North Cape oil spill in Rhode Island, and the Trustees' efforts to protect and recover the species as outlined in the USFWS recovery plan to identify suitable alternatives. Based on evidence that a plover restoration program would result in a 20 percent increase in productivity, the Trustees determined that implementing the plover restoration program at

50 plover nests for five years would generate a restoration benefit equivalent to the estimated loss. The Trustees further determined that the cost to implement a plover restoration program of this magnitude would be approximately \$715,000, including funds for restoration implementation, and Trustee planning, administration, and oversight. Due to the relative degree of injury to piping plovers in the two states, the Trustees estimated that 30 percent of the restoration should be conducted in Rhode Island and 70 percent conducted in Massachusetts, though these percentages are subject to change, depending on the availability of actual restoration opportunities in each state.

### **3.0 SUMMARY OF SETTLEMENT FOR NATURAL RESOURCE DAMAGES**

Under the OPA rules, the Responsible Party is liable for the costs of conducting a NRDA, as well as the costs of implementing restoration projects to restore the injured resources. Throughout the assessment phase, the Responsible Party reimbursed the Trustees for assessment costs. In May 2011, the Trustees and Responsible Party reached a mutually agreeable settlement to restore injuries to piping plovers resulting from the Spill. Under the agreement, the Responsible Party agreed to pay the Trustees \$715,000. This settlement includes the costs of Trustee restoration planning, implementation, oversight, and monitoring. The settlement was memorialized in a consent decree on May 17, 2011 (United States of America v. Bouchard Transportation Company, Inc., Tug Evening Tide Corporation, and B. No. 120 Corporation, May 17, 2011, U.S. District Court, District of Massachusetts).

### **4.0 RESTORATION ALTERNATIVES**

The purpose of restoration, as outlined in this Final RP/EA, is to make the public whole for injuries to piping plovers resulting from the Spill by returning the injured natural resources to “baseline” condition and compensating for associated interim losses.

#### **4.1 Criteria for Identifying and Selecting Alternatives**

According to Section 990.53(2) of the OPA NRDA regulations (15 CFR §990.53(2)), the Trustees must consider a reasonable range of primary and compensatory restoration alternatives before selecting their preferred alternative(s) for restoration. As previously noted, primary restoration is any action undertaken to speed the return of injured natural resources and services to the baseline condition, i.e., the conditions that would have existed had the oil spill not occurred. Compensatory restoration is the compensation provided to offset interim losses (the natural resource injuries that accrue from the time that an oil spill occurs until baseline conditions are re-established).



The Trustees applied the following criteria and requirements for developing restoration alternatives:

- the action must be technically feasible;
- the action must be in accordance with applicable laws, regulations, or permits;
- the action should provide natural resource services of the *same* type and quality, and of comparable value, as those injured, or if such is not possible, then actions should provide natural resource services of *comparable* type, quality, and value as those injured; and
- a “no-action” alternative must be considered.

Once the list of potential alternatives was compiled, the Trustees considered the following factors when evaluating the alternatives and selecting one or more as the proposed preferred alternative(s) (15 CFR §990.54(a)):

- the extent to which each alternative is expected to meet the Trustees’ goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses;
- the likelihood of success of each alternative;
- the extent to which each alternative will prevent future injury as a result of the incident, and avoid collateral injury as a result of implementing the alternative;
- the extent to which each alternative benefits more than one natural resource and/or service;
- the effect of each alternative on public health and safety; and
- the cost to carry out each alternative.

## 4.2 Restoration Alternatives for Piping Plovers

The Trustees evaluated the following potential restoration alternatives:

### 4.2.1 Alternative 1: No Action/Natural Recovery (NON-PREFERRED)

Federal regulations require the consideration of this alternative. Under this alternative, no restoration, rehabilitation, replacement, or acquisition actions (other than those which already exist) would occur to compensate for piping plovers injured as a result of the Spill. There would be no cost associated with this alternative; however, the goal of restoring injured piping plovers would also not be realized. If the No Action Alternative were selected, natural recovery would be the sole restoration mechanism for piping

plovers, and the public and the environment would not be made whole for injuries resulting from the Spill.

#### 4.2.2 Alternative 2: Acquisition and Protection of Breeding Habitat (NON-PREFERRED)

Acquiring lands and protecting shoreline habitat where piping plovers breed is one mechanism to maximize survival and productivity at breeding sites (USFWS 1996). Permanent acquisition allows land managers to minimize adverse effects of human disturbances and to implement long-term, intensive protection efforts such as public beach closures and enforcement of local, state or Federal ordinances and laws. Acquired lands can also be managed to promote increased productivity, including implementation of strategies to reduce predation.

Minimal piping plover nesting habitat is currently available for acquisition in Rhode Island or Massachusetts, particularly in the area most affected by the Spill. Most coastal parcels are small and isolated and would be very costly to purchase. Management measures would also need to be implemented to reduce the effects of human disturbance and predation. Habitat acquisition, therefore, carries a relatively high cost to achieve potential restoration benefits. Due to the lack of currently available acquisition opportunities in and near the Spill area and the relatively high cost associated with habitat protection, this alternative is not preferred.

#### 4.2.3 Alternative 3: Nest Monitoring and Management Activities (NON-PREFERRED)

Landowners (primarily Federal, state, and municipal, as well as some private organizations and individuals) currently implement piping plover nest monitoring and management practices on all breeding beaches in the Spill area (Appendix G, USFWS 1996). These practices were developed for beach managers and property owners seeking to avoid potential violations of section 9 of the Endangered Species Act (ESA) (16 U.S.C. 1538) and its implementing regulations (50 CFR Part 17) that could occur as the result of recreational activities on beaches used by breeding piping plovers. In Massachusetts, monitoring and protection of nests and chicks is also being done to avoid violations of the Massachusetts Endangered Species Act (Massachusetts Division of Fisheries and Wildlife 1993) and, in many instances, as required by Orders of Conditions pursuant to the Massachusetts Wetlands Protection Act. While all sites in the area affected by the Spill are being monitored and protected from recreational impacts, the level of effort varies somewhat (e.g., some areas are managed less intensively due to minimal recreational use).

Since the USFWS' or State of Massachusetts' nest monitoring and management protocol is currently being implemented at sites affected by the Spill to afford protection to landowners under the ESA or to avoid violations of the Massachusetts Endangered Species Act or the Massachusetts Wetlands Protection Act, directing funds towards this effort is not an appropriate use of settlement restoration funds. Furthermore, the funding of nest monitoring and management activities outlined in the USFWS guidelines

(Appendix G, USFWS 1996) or state guidelines (Massachusetts Division of Fisheries and Wildlife 1993) would not be expected to increase piping plover productivity over current baseline levels, and therefore, would provide little to no net benefit to piping plovers. Because the Trustees are seeking to expend restoration funds to *augment* productivity above existing levels that are currently achieved with monitoring and management activities, this alternative is not preferred.

#### 4.2.4 Alternative 4: Habitat Enhancement (NON-PREFERRED)

Habitat enhancement or restoration consists of implementing actions to increase the spatial extent or quality of nesting habitat or foraging areas. Activities include vegetation removal from nesting sites, beach replenishment that increases the size of nesting habitat, and enhancements to foraging areas such as drawdowns of coastal ponds that increase exposed mudflat areas.

Preliminary review of 10 projects with the primary objective of habitat restoration in Rhode Island, New York, New Jersey, and Virginia by Maslo (2009) suggested that increases in abundance of nesting pairs followed some vegetation removal and foraging habitat enhancement projects. Furthermore, projects that improved foraging opportunities away from the ocean intertidal zone were also more likely to be associated with increased productivity. Most of these projects have been very small-scale.

At a site on Long Island, New York, where vegetation and substrate were removed to restore foraging habitat, the number of fledglings produced per year increased, though the number of nesting pairs did not significantly increase (McIntyre and Heath 2010).

Dredged material deposition, or beach replenishment associated with shoreline stabilization projects, is sometimes associated with increased numbers of nesting pairs, especially at sites where development immediately landward of the beach precludes natural overwash processes (USFWS 1996, 2001, 2005). Despite potential benefits to piping plovers from beach nourishment projects, these projects are extremely costly, often exceeding \$1 million/shoreline mile (USACE factsheet), and the gains can be short-lived as beach erosional processes tend to remove sand from replenished areas and diminish the extent of habitat. Increased recreational pressures also result when beach habitat is created, and without sufficient post-nourishment management, piping plover productivity may be adversely impacted.

Conditions created from beach nourishment, vegetation removal, substrate removal, and other foraging habitat creation may be short-lived, and management actions may need to be repeated frequently to maintain the desired habitat conditions. Furthermore, both nesting and foraging habitat enhancement are strictly regulated, and in some cases, may not be allowed, or may be severely restricted under state and Federal wetlands laws.

In Massachusetts and Rhode Island, the amount and quality of available piping plover nesting and foraging habitat are typically not limiting (USFWS 2009). Rather, other factors that adversely affect productivity, such as predation, are the primary limiting

factors for piping plovers. Because nesting and foraging habitat is not limiting in the Spill area, the relatively short-term nature of habitat enhancement projects, and the high cost associated with some habitat enhancement projects, this alternative is not preferred.

#### 4.2.5 Alternative 5: Enhanced Management Program (PREFERRED)

This alternative consists of coordinated implementation of three activities targeted to increase survival and productivity at nest sites: (1) predator management; (2) law enforcement; and (3) public outreach and education. The intent of these activities is to reduce adverse effects primarily associated with predators (e.g., crows, striped skunk, red fox), domestic dogs, and recreational activities such as fireworks, campfires, and parties. Strategic combinations of these three measures, as determined by the specific needs of individual beaches, would significantly build upon and enhance existing monitoring and management activities, and likely result in increased productivity of nesting piping plovers.

##### 4.2.5.1 Predator Management

Predation is a serious threat to breeding piping plovers, resulting in the loss of eggs, chicks and adults throughout the range (USFWS 1996; Clark and Niles 2000; USFWS 2009). In Massachusetts and Rhode Island, predation is the most serious factor limiting reproductive success of piping plovers. In Massachusetts, nearly 30 percent of nests are unsuccessful in some years due to predation (S. Melvin, Massachusetts Division of Fisheries and Wildlife, pers. comm. 2011). There are a variety of avian and mammalian predators, including crows, skunks, fox, coyote, rats, gulls, feral cats, and raccoons, that prey on plover eggs, chicks and adults. Principal nest predators in Massachusetts are crows, foxes, skunks, coyotes, and gulls. Substantial evidence also shows that human activities are affecting types, density and activity of predators, thereby increasing natural predation (USFWS 1996).

Predator removal programs have been implemented at a number of sites in the northeast, including New York (Cohen *et al.* 2009), Virginia, New Jersey (National Park Service 2007a), Maryland (National Park Service 2007b), Massachusetts (USFWS 2008; U.S. Department of Agriculture 2011a), Rhode Island (Hartlaub *et al.* 2007; Hartlaub *et al.* 2008; Wiitala *et al.* 2009), and Maine (Vashon 2008). In general, targeted predator removal efforts have resulted in increased piping plover productivity (USFWS 2009); however, there is considerable variability. For example, at Plymouth Long Beach in Plymouth, Massachusetts, productivity averaged 1.30 fledged chicks/pair during five years when foxes were removed, compared to 1.05 chicks/pair during the preceding seven years (24 percent increase) (S. Melvin, Massachusetts Division of Fisheries and Wildlife, pers. comm. 2011). Similarly, at Crane Beach in Ipswich, Massachusetts, productivity averaged 1.52 chicks/pair during three years when predators were removed, compared to 0.73 chick/pair during the preceding three years (108 percent increase). At Briggs Beach in Little Compton, Rhode Island, plover productivity increased 198 percent over two years when predators including coyote, fox, raccoon and skunk, were removed (Hartlaub *et al.* 2007; Hartlaub *et al.* 2008). In some cases productivity has declined, even

with predator removal efforts in place (e.g., Hartlaub *et al.* 2008; USFWS 2008; Wiitala *et al.* 2009). These declines in productivity may indicate that key predators were not removed or may have resulted from other factors such as inclement weather.

To implement an effective predator management program, piping plover nesting beaches with a history of reduced productivity due to predation will be identified in or in the vicinity of Buzzards Bay in Massachusetts and Rhode Island. Site-specific assessments will be undertaken at potential beaches to determine which predators are present and to recommend specific control and/or removal methods and feasibility of implementation.

The predator management activities will depend on the needs of individual beaches. A suite of predation management techniques similar to those utilized by the USFWS in Maine (Vashon 2008), the National Park Service (NPS) in New Jersey (NPS 2007a), and the U.S. Department of Agriculture (USDA) in Virginia (USDA 2005) and Massachusetts (USDA 2011a; USDA 2011b) will be utilized. The management will be adaptive in nature, allowing the Trustees to select predation control methods that are most suited to reducing narrowly-targeted and most problematic predator species and/or individuals.

Activities aimed at eliminating environmental factors that encourage predator presence where piping plovers nest or reducing predator access to nesting sites may be undertaken at some sites. These include activities such as trash removal to minimize predator presence, removal of natural perches utilized by avian predators, or installation of perch deterrents near piping plover nesting locations. Piping plover exclosures (cages around nests to prevent predators from eating the eggs) were once a successful management practice, but are now considered to cause the loss of some adults and nest abandonment by attracting “smart” or learned predators (e.g., common crow, coyote). While these activities will likely be implemented in cases where they may be beneficial, they are limited in scope and thus their effectiveness is also quite limited.

For those beaches where predation is one of the primary causes of reduced productivity, additional measures will be needed to control predators. One approach is to selectively remove individual predators, particularly those predators that have learned to key in on plover nests, chicks or adults, in the vicinity of breeding piping plover. Removal efforts will be implemented using approved lethal techniques for wildlife damage management (USDA 2003; USDA 2004; USDA 2011b). Massachusetts law (MGL c.131 Section 80A: Regulations 321 CMR 2.08) requires that trapping of mammalian predators (e.g., raccoons, opossums and skunks) be limited to cage- or box-type traps. This restriction does not apply to Federal lands or lands in Rhode Island. All traps used to capture mammals will meet the existing Best Management Practices for Trapping (Association of Fish and Wildlife Agencies 2006). Massachusetts and Rhode Island do not permit mammalian predator relocation; therefore, mammalian predators will be humanely euthanized. In addition to trapping, nocturnal mammalian predators such as coyote and fox will be located at night using spotlights or thermal imaging equipment, and then shot with suppressed rifles or shotguns (USDA 2011b). Avian predators will also be removed, primarily using firearms employing a silencing device. Toxicants may also be used to

remove crows. If feral cats are among the identified predators, cat control will be coordinated with local animal shelters. All cats that are live captured as part of the proposed program will either be returned to the cat's owner (if proper identification can be determined), or taken to an animal shelter for health evaluation and, if possible, adoption. The final disposition of the feral cat would be determined by the animal shelter.

Predator removal efforts will be implemented in late winter or spring by USDA–Wildlife Services (USDA 2011b). Removal efforts will be undertaken before or as piping plovers return to nest locations. A second phase of predator removal may be implemented during the first few weeks of plover egg-laying (i.e., from late April into early or mid-May) if the removal activity does not adversely affect plovers. Monitoring for predator presence will be completed following the predator removal efforts to identify any predators that may still be present.

Care will be taken to minimize the effects of removal actions on area predators that are not targeting piping plovers. Such selective removal efforts will have short-lived and highly-localized effects on predator populations (USDA 2011b). Benefits to piping plovers will also be relatively short-lived; thus, a multi-year removal program will be most effective. Site selection for predator removal efforts will be determined by the Trustees' Technical Representatives, including biologists from the Massachusetts Division of Fisheries and Wildlife, RIDEM, and the USFWS. Site selection will also be determined through consultations with animal damage control specialists with USDA–Wildlife Services, and with landowners and local property managers. Any predator removal efforts will only be conducted with permission from the landowner and with secured appropriate local, state and Federal permits. More detailed site selection procedures are discussed below in Section 4.2.5.4. Predator removal activities are typically implemented at times of the year (late winter) and times of the day (evening) when human use of the beaches is reduced. As a result, beach closures are not usually necessary during implementation.

#### 4.2.5.2 Enforcement

The objective of enforcement activities is to reduce the incidence of plover harassment, nest abandonment and potential chick and/or adult mortality caused by off-leash dogs or illegal recreational activities (e.g., fireworks, parties or bonfires). Off-leash dogs have been identified as threats to piping plover productivity on a number of beaches in the Buzzards Bay area. Unleashed dogs harass adult plovers and their young, inadvertently crush eggs, and have been known to chase, capture and kill plovers (Cairns and McLaren 1980). State and local governments have restrictions that prohibit fireworks, bonfires and some other human recreational activities; however, due to complex ownership patterns (in some instances) and the pervasive threats posed by recreational activities and dogs, difficulties associated with enforcing these regulations can result in mortality (crushing adults, chicks or eggs), harassment of adults and chicks, and abandonment of nests.

Sites with significant recreational issues and/or complex ownership patterns may receive funding to hire additional enforcement staff for irregularly-scheduled and weekend

patrols to assist with enforcing local dog and other beach ordinances. Enforcement has been shown to be successful to a limited degree. In combination with outreach tools (e.g., signs, beach staff and educational programming), the Trustees anticipate that increased enforcement will increase plover productivity, and may positively affect plover fitness and overwinter survival of fledglings.

#### 4.2.5.3 Outreach and Education

The objective of outreach and education efforts is to enhance beach visitor and local community support for and compliance with piping plover protection measures. Some sites may benefit from outreach efforts to reduce incidences of vandalism, encourage community support of piping plover management, and educate pet owners with respect to local ordinances. An outreach and education strategy will likely include interpretive signs or specific activities such as the development of educational programs to reach the local community.

#### 4.2.5.4 Site Selection

Following release of the Final RP/EA, the Trustees will select sites for management on an annual basis according to the following procedure. Each year in August or September, the Trustees will identify geographic areas and management activities to be emphasized. The USFWS will post an announcement of the availability of funding for the enhanced management program on [www.grants.gov](http://www.grants.gov). Interested landowners and beach managers will have 30 days to apply for funding directly through grants.gov. Applicants will be required to provide documentation of landowner permission to implement management activities. The Trustees will use a number of criteria to prioritize the selection of potential restoration sites, including:

- a. Number of piping plovers likely to benefit
- b. Site location within or as close to area impacted by Spill as possible
- c. Site monitoring indicates substantially-reduced reproductive success due to predation or human disturbance
- d. Site is not currently part of a mitigation effort or already receiving sufficient funding from other sources
- e. Site discreteness – site has defined boundaries, and management is consistent throughout the entire site

After the grants.gov announcement closing date, the Trustees will select the most appropriate restoration sites based on the criteria and award the funds.

#### 4.2.5.5 Summary

The Trustees propose to implement the Enhanced Management Program to restore injuries to piping plovers resulting from the Spill. In New England, where breeding and foraging habitat is not limiting, approaches to increase productivity will be most effective in restoring impacts to piping plovers. Implementation of the Enhanced Management



Program, compared to other alternatives, will likely result in the greatest potential increases to productivity. Furthermore, a targeted, holistic management program will be cost-effective. During the settlement negotiations, the Trustees determined that a settlement of \$715,000 would support an Enhanced Management Program at approximately 50 plover nests for five years, and would generate a restoration benefit equivalent to the calculated loss. Finally, an Enhanced Management Program offers the Trustees flexibility in choosing appropriate restoration locations based on yearly conditions and needs. The Trustees have concluded that this approach will most quickly and cost-effectively return injured piping plover populations to baseline levels, and compensate for interim losses, and thus, this alternative is the Trustees' proposed preferred alternative.

## **5.0 ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS OF RESTORATION ALTERNATIVES**

The Trustees evaluated each restoration alternative with respect to its potential to impact, either adversely or beneficially, the natural and socioeconomic environments of the project area. Summaries of the detailed analyses are shown in Table 1. Further explanation is given below for the potential consequences that are listed in Table 1 as other than "No Impact."

### **5.1 Alternative 1: No Action/Natural Recovery (NON-PREFERRED)**

This alternative will have no impact on the human or natural environments, other than the fact that compensation for losses to piping plovers will not be provided.

### **5.2 Alternative 2: Acquisition and Protection of Breeding Habitat (NON-PREFERRED)**

#### Environmental consequences

- Beneficial consequences – Preserving undeveloped land would prevent the degradation of surface water, sediment, soil, groundwater, and wetland quality that could result if the land were not protected and became developed. Preserving undeveloped land would also help to protect biodiversity and local abundance of plant and animal species.

#### Social consequences

- Beneficial consequences – Preserving undeveloped land is aesthetically pleasing, provides opportunities for passive recreation, and preserves current views and landscapes in the watershed.

#### Economic consequences

- Beneficial consequences – Property values may increase slightly due to land protection efforts which preserve the aesthetic qualities of an area.

Table 1. Potential Environmental and Socioeconomic Consequences of Alternatives

		No Action	Protection of Nesting Habitat	Nest Monitoring and Management	Habitat Enhancement	Enhanced Management Program
Environmental	Air quality	NI	NI	NI	NI	NI
	Surface water quality	NI	+	NI	NI	NI
	Sediment quality	NI	+	NI	NI	NI
	Soil quality	NI	+	NI	NI	NI
	Groundwater quality	NI	+	NI	NI	NI
	Wetlands quality and services	NI	+	NI	NI	NI
	Biodiversity and abundance	NI	+	+	+/-	+/-
Social	Minority or low income populations	NI	NI	NI	NI	NI
	Aesthetics	NI	+	NI	+/-	-
	Public health or safety	NI	NI	NI	+	+
	Recreational activity	NI	NI	NI	+	NI
	Native American trust resources	NI	NI	NI	NI	NI
	Non-tribal cultural sites	NI	NI	NI	NI	NI
	Education	NI	NI	+	NI	+
	Local partnerships and collaborative efforts	NI	NI	+	+	+
	Subsistence activity	NI	NI	NI	NI	NI
	Nuisances	NI	NI	NI	+	+
Economic	Short-term commercial economic impact	NI	NI	NI	NI	NI
	Property values	NI	+	NI	+	NI
	Recreational expenditures and related businesses	NI	NI	NI	NI	NI
	Resource-based industries, commercial users	NI	NI	NI	NI	NI

## Key to Table

NI: indicates project will have no impact

+: indicates project will have a positive impact

-: indicates project will have an adverse impact

### 5.3 Alternative 3: Nest Monitoring and Management Activities (NON-PREFERRED)

As described in Section 4.2.3, since the USFWS or State of Massachusetts nest monitoring and management protocol is currently being implemented at sites affected by the Spill to afford protection to landowners under the ESA or to avoid violations of MESA or the Massachusetts Wetlands Protection Act, funding of nest monitoring and management activities would not be expected to increase piping plover productivity over current baseline levels, and therefore, would provide little to no net benefit to piping plovers.

#### Environmental consequences

- Beneficial consequences – Nest monitoring and management currently benefit shorebirds utilizing beach habitats. Additional site-specific monitoring may help ensure that management actions are effective. Management actions that limit disturbance caused by pedestrians or off-road vehicles in nesting areas prevent associated declines in productivity. Management actions may also benefit other wildlife species (e.g., invertebrates such as rare tiger beetles or plants) that might be susceptible to impacts from human recreation.

#### Social consequences

- Beneficial consequences – Both education and local partnerships and collaborative efforts may benefit from increased routine monitoring and management activities. Increased presence of monitors on the beach often results in increased outreach and education to beach-goers. Local partnerships and joint protection efforts may also result due to increased knowledge about piping plover and other shorebird resources.
- Negative consequences – Current nest monitoring and management activities (e.g., seasonal fencing or beach closures which are designed to keep pedestrians and recreational vehicles out of nesting areas) may adversely impact recreational activities; however, these would not be expected to increase above existing levels.

### 5.4 Alternative 4: Habitat Enhancement (NON-PREFERRED)

#### Environmental consequences

- Beneficial consequences – Amending piping plover nesting areas with dredged soils may increase nesting habitat and potentially increase productivity. Benefits associated with habitat enhancement are likely to be short-term.
- Negative consequences – Excessive amounts of dredged soils can impede natural beach overwash processes that maintain high quality piping plover habitat. Increased beach habitat may also result in increased pressure from recreational users and may result in diminished piping plover productivity. There may also be adverse impacts to sensitive beach-dwelling species. Efforts to enhance piping plover habitat through beach nourishment may actually degrade habitat or result in reduced productivity unless properly designed, timed, and carried out.

### Social consequences

- Beneficial consequences – Habitat enhancement activities may result in improved site aesthetics and a reduction in nuisance species where invasive plant species are removed. Recreational and safety benefits often result where dredging activities increase channel depths and widths for improved navigation of waterways. Partnerships may be formed between towns and government agencies seeking to dispose of dredge spoils and resource managers seeking to create shorebird nesting habitat.
- Negative consequences - In New York and New Jersey, habitat enhancement projects that included vegetation and substrate removal have been criticized for temporarily degrading the aesthetics of beaches.

### Economic consequences

- Beneficial consequences – Property values may increase slightly due to aesthetic improvements or increased beach size; however, these increases are expected to be minimal and likely temporary due to the transient, highly variable conditions associated with high-energy beaches.

## 5.5 Alternative 5: Enhanced Management Program (PREFERRED)

### Environmental consequences

- Beneficial consequences – Enhanced management activities include predator management, enforcement, and increased outreach and education, primarily to benefit shorebirds, including piping plovers. Site-specific predator control and management will target predators that are known to be adversely affecting adult piping plover survival and productivity. Predator control has been shown to be an effective tool to increase piping plover survival and productivity. Enforcement of regulations designed to limit impacts caused by domestic dogs and recreational activities in nesting areas will also help to prevent piping plover mortality and associated declines in productivity. Finally, educational efforts to increase public knowledge and appreciation for piping plovers are also expected to benefit the species.
- Negative consequences – Removal of individual predators to protect piping plovers will result in short-term, localized reductions in numbers of these predators.

### Social consequences

- Beneficial consequences – Removal of limited numbers of targeted predators will result in potential short-term public health or safety benefits via the reduction of nuisance individuals (predators such as coyote, skunks, crows or gulls). Both local partnerships and collaborative efforts may benefit from the educational component of an enhanced management program. Educational efforts will be

focused on teaching communities about shorebirds and how individuals can help protect these resources.

Negative consequences – Removal of predatory animals may be adverse to some individuals, depending on personal preference. Increasing piping plover survival at the expense of predators such as crows or coyotes will be unpalatable to some. However, predator control will be carefully planned and implemented to target a limited number of individuals of known predatory species. Risks inherent with removal activities will be minimized by carefully selecting removal times and locations and by employing experienced and trained personnel.

## 5.6 Cumulative Impacts of Preferred Alternative for Restoration

The preferred alternative is to implement an enhanced management program for piping plovers consisting of a three-tiered approach of predator management, enforcement, and outreach and education. The project is not expected to have a significant cumulative effect on the environment. While some short-term impacts may arise from predator removal methods, overall the project will not adversely affect the environmental conditions of the sites and is not expected to have significant additive effects on species diversity. Additional justification and rationale for implementing predator management to benefit shorebirds, including the piping plover, is thoroughly evaluated in the U.S. Department of Agriculture's Environmental Assessment for the Management of Predation Losses To Threatened and Endangered Species Populations in the Commonwealth of Massachusetts (USDA 2011b), and this document and the subsequent Finding of No Significant Impact (FONSI) (USDA 2011c) are herein incorporated by reference.

## 6.0 COMPLIANCE WITH OTHER AUTHORITIES

The following Federal, state, and local laws, regulations, and policies may affect completion of the restoration project. Compliance with these authorities was considered as part of the restoration planning process. All project sponsors that receive NRD funding will be responsible for obtaining necessary permits and complying with relevant local, state, and Federal laws, policies, and ordinances.

### 6.1 Laws

#### 6.1.1 Federal Laws

##### National Environmental Policy Act

NEPA requires that Federal agencies consider the environmental impacts of proposed actions and reasonable alternatives to those actions. The Authorized Official will determine, based on the facts and recommendations in this document and input from the public, whether this EA supports a Finding of No Significant Impact (FONSI), or whether an Environmental Impact Statement (EIS) will need to be prepared.

### Clean Water Act

The CWA is intended to protect surface water quality, and regulates discharges of pollutants into waters of the United States. All proposed restoration projects will comply with CWA requirements, including obtaining any necessary permits for proposed restoration actions.

### Endangered Species Act

The Federal ESA of 1973, as amended, 16 USC §§ 1531 *et seq.*, was enacted to protect species that are threatened with extinction. It provides for the conservation of ecosystems upon which these species depend and provides a program for identification and conservation of these species. Federal agencies are required to ensure that any actions are not likely to jeopardize the continued existence of a threatened or endangered species.

### Federal Insecticide, Fungicide, and Rodenticide Act

The FIFRA requires the registration, classification, and regulation of all pesticides used in the United States. The Environmental Protection Agency (EPA) is responsible for implementing and enforcing the FIFRA. All chemical methods that would be available under the alternatives are registered with and regulated by the EPA and the Massachusetts Division of Fisheries and Wildlife and/or the Massachusetts Department of Agricultural Resources and RIDEM, and would be used in compliance with labeling procedures and requirements. No toxicants are currently used or registered for use in managing mammalian nest predators in the Commonwealth. The repellent Avitrol and the avicide DRC-1339 are registered for use in the Commonwealth to alleviate damage and the threat of damage associated with crows.

### Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918, as amended, 16 USC §§ 703-712, protects all migratory birds and their eggs, nests, and feathers, and prohibits the taking, killing, or possession of migratory birds. The proposed restoration actions would not result in the taking, killing, or possession of any migratory birds.

### Coastal Zone Management Act of 1972 (CZMA)(16 USC 1451-1464)

The CZMA presents a congressional declaration to "preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations." The CZMA also encourages "states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone."

## Occupational Safety and Health Act

The Occupational Safety and Health Act (OSHA) of 1970, as amended, 29 USC §§ 651 *et seq.*, governs the health and safety of employees from exposure to recognized hazards, such as exposure to toxic chemicals, excessive noise, mechanical dangers, and unsanitary conditions. All work conducted on the proposed restoration actions will comply with OSHA requirements.

### 6.1.2 Massachusetts State Laws

#### Article 97 of the Commonwealth of Massachusetts Constitution (1972)

“The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose. The general court shall have the power to enact legislation necessary or expedient to protect such rights.”

“In the furtherance of the foregoing powers, the general court shall have the power to provide for the taking, upon payment of just compensation therefore, or for the acquisition by purchase or otherwise, of lands and easements or such other interests therein as may be deemed necessary to accomplish these purposes. Lands and easements taken or acquired for such purposes shall not be used for other purposes or otherwise disposed of except by laws enacted by a two thirds vote, taken by yeas and nays, of each branch of the general court.”

#### Massachusetts Area of Critical Environmental Concern (M.G.L. c. 21A, s. 2(7); 301 CMR 12.00)

ACECs are those areas within the Commonwealth where unique clusters of natural and human resource values exist and which are worthy of a high level of concern and protection. These areas are identified and nominated at the community level and are reviewed and designated by the state’s Secretary of Environmental Affairs. ACEC designation creates a framework for local and regional stewardship of critical resources and ecosystems. After designation, the aim is to preserve and restore these areas, and all EEA agencies are directed to take actions with this in mind.

#### Massachusetts Clean Waters Act (M.G.L. c. 21, Sections 26-53)

The Massachusetts Clean Waters Act authorizes MassDEP to take all action necessary or appropriate to secure to the Commonwealth the benefits of the Federal Water Pollution Control Act, as amended, and other Federal legislation pertaining to water pollution control by establishing a program for prevention, control, and abatement of water pollution through permits, municipal, regional and interstate planning, water quality standards, sampling and reporting, and financial and technical assistance.



Massachusetts Endangered Species Act, M.G.L. c. 131A and its implementing regulations (321 CMR 10.00)

MESA is the Commonwealth's analogue to the Federal ESA. MESA lists species as "endangered," "threatened," or a "species of special concern." It is illegal to kill, harm, or harass, or disrupt the nesting, breeding, feeding, or migratory behavior of species listed pursuant to MESA. Before project implementation, project proponents are required to consult with the Massachusetts Natural Heritage Endangered Species Program of the Division of Fisheries and Wildlife to ensure that proposed activities do not have a negative effect on species listed under MESA. The piping plover is listed as "threatened" under MESA.

Massachusetts Environmental Policy Act, M.G.L. Ch. 30 §61 *et seq.*

MEPA is the Commonwealth's equivalent of NEPA; it requires that Commonwealth agencies consider and minimize the impacts of their actions on the environment. For a project that requires MEPA and NEPA review, consolidation of these two processes is encouraged. After the Final RP is completed, individual projects that are determined to trigger MEPA thresholds will be required to proceed through a MEPA review.

Wetlands Protection Act, M.G.L. Ch. 131 §140 and Rivers Protection Act, St. 1996, C. 258

The WPA restricts the removal, filling, dredging, or alteration of fresh and salt water wetlands and coastal areas. It prevents adverse effects to habitats of state-listed species of wetland-dependent wildlife, including the piping plover. The Rivers Protection Act strengthens and expands the WPA to protect watercourses and adjacent lands. Local conservation commissions, under oversight from the MassDEP, are responsible for permitting under these acts. Project proponents whose actions are subject to these acts are required to seek approvals from local conservation commissions before proceeding with implementation, as well as notifying nearby landowners and any other affected parties.

401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters within the Commonwealth (314 CMR 9.00)

These regulations are promulgated by MassDEP to carry out its statutory obligations to certify that proposed discharges of dredged or fill material, dredging, and dredged material disposal in waters of the United States within the Commonwealth will comply with the Surface Water Quality Standards and other appropriate requirements of state law.

## 321 CMR 2:00 Miscellaneous Regulations Relating to Division of Fisheries and Wildlife

These regulations include: 2.08: Use of Certain Traps for the Taking of Fur-bearing Mammals; 2.10: Issuance of Permits to Expose Poisons for the Control of Mammal and Bird Species not Protected by Federal or State Statutes; 2.14: Problem Animal Control; and 2.15: Importation, liberation, and transportation of fish, amphibians, reptiles, birds, and mammals. This law bans the use, manufacture, or possession of any trap for the purpose of capturing furbearing mammals, except for common type mouse and rat traps, nets, and box- or cage-type traps, as otherwise permitted by law. A box or cage type trap is defined by this law as one that confines the whole animal without grasping any part of the animal. Other than nets and common-type mouse or rat traps, traps designed to capture and hold a furbearing mammal by gripping the mammal's body, or body part are prohibited, including steel jaw leghold traps, padded leghold traps, snares and species-specific traps such as those used to capture raccoons. Conibear traps are allowed for controlling beaver and muskrat to protect human health and safety. However, the Massachusetts Division of Fisheries and Wildlife acknowledges that this restriction does not apply to activities on Federal lands (W. MacCallum, Massachusetts Department of Fisheries and Wildlife, pers. comm. 2010).

### 6.1.3 Rhode Island State Laws

#### Rhode Island Endangered Species Act. R.I. Gen. Laws Section 20-37-1

The Rhode Island Endangered Species Act is the state's analogue to the Federal ESA. Listed animals, such as the piping plover, are protected under the provisions of the Rhode Island State Endangered Species Act, Title 20, Chapter 37 of the General Laws of the State of Rhode Island.

### Rules and Regulations Governing Nuisance Wildlife Control Specialists

These regulations are adopted pursuant to Sections 20-1-18, and 20-1-22, in accordance with the requirements of the Administrative Procedures Act, Chapter 42-35 of the Rhode Island General Laws of 1956, as amended. The purpose of these regulations is to establish the standards under which "nuisance wildlife control specialists" may be permitted to conduct the capture, handling, disposition, exclusion and other activities as related to wildlife protected by RIDEM under Rhode Island General Laws (RIGL) Chapter 20-1.

### 6.1.4 Local Laws

As appropriate, restoration actions will consider and comply with local plans and ordinances (e.g., growth management plans or ordinances dealing with zoning, noise, wild or nuisance animals, or wetlands). For example, in Massachusetts, municipal Conservation Commissions are empowered to administer the WPA (M.G.L. Chapter 131 s. 40) and may also adopt local bylaws, as well as undertake other activities such as

natural resource planning and land acquisition “for the promotion and development of the natural resources and for the protection of watershed resources of said city or town.”

## 6.2 Policies and Directives

### 6.2.1 Federal Policies and Directives

The following Presidential Executive Orders and state and local policies may be relevant to the proposed restoration projects in the proposed alternative.

#### Executive Order 11990 – Protection of Wetlands

This Executive Order instructs Federal agencies to avoid adverse impacts associated with the destruction or modification of wetlands. The Trustees will work to make sure that any wetland impacts associated with proposed projects are minimized and all necessary permits are obtained.

#### Executive Order 12898 – Environmental Justice (EJ)

This Executive Order instructs Federal agencies to assess whether minority or low-income populations would be disproportionately impacted by Federal agency actions. There are designated EJ populations in the area affected by the Spill, including Bourne, Dartmouth, Fairhaven, Fall River, Falmouth, Gosnold, New Bedford, Plymouth, and Wareham (EEA 2002). The proposed projects are not expected to substantially affect the environment or human health of these EJ populations.

### 6.2.2 State and Local Policies

#### Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs

It is the policy of the EEA that EJ shall be an integral consideration to the extent applicable and allowable by law in the implementation of all EEA programs, including but not limited to, the grant of financial resources, the promulgation, implementation and enforcement of laws, regulations, and policies, and the provision of access to both active and passive open space. Working with EJ populations, EEA will take direct action as part of the implementation of this policy to restore degraded natural resources, to increase access to open space and parks, and to address environmental and health risks associated with existing and potential new sources of pollution. This EJ policy applies to all agencies of the EEA.

## 7.0 PUBLIC COMMENTS AND TRUSTEE RESPONSES

This section summarizes public input received on the Draft RP/EA and provides the Trustees' response. The public was invited to comment on the Draft RP/EA from June 18, 2012 through August 1, 2012. Three comments were received during the public comment period; these comments and Trustee responses are summarized below.

The Trustees also held a public information meeting on July 10, 2012 in Fall River, Massachusetts to present the Draft RP/EA. A summary of the questions received at the meeting is presented in Section 7.2.

### 7.1 Comments Received During the Comment Period

#### Comment 1

The Nature Conservancy reviewed the Draft RP/EA and considered each of the proposed alternatives. They are most supportive of the preferred alternative, the enhanced management program. The Conservancy believes that implementing a program consisting of predator management, enforcement, and outreach and education will be the most effective means to increase piping plover productivity.

#### Response

The Trustees recognize The Nature Conservancy's support for the proposed alternative and agree that this approach will most quickly and cost-effectively help to restore injured piping plover populations.

#### Comment 2

Mr. Jamie Bogart, from the Lloyd Center, provided several comments on the Draft RP/EA based upon his experience at beaches that he currently monitors for the Massachusetts Department of Conservation and Recreation. First, he agrees that habitat acquisition is not a preferred restoration option, as suitable habitat is not currently limiting local piping plover populations.

Second, Mr. Bogart pointed out that while hatching success is high, productivity has been low due to hatchling loss. He believes that predation, as well as human disturbance, are the likely causes. He supports enhanced management for sites with reduced productivity, specifically focusing on additional staff for protection, enforcement, and public education.

Finally, on beaches with high human use, where productivity is high or improving, he does not support predator removal; rather he prefers that funds be used for night monitoring at beaches to better evaluate predation problems.

#### Response

In the Draft RP/EA, habitat acquisition is considered as a non-preferred alternative, primarily due to the lack of available opportunities and the expected high cost for coastal property purchase. The Trustees agree with Mr. Bogart that nesting habitat is not

currently limiting, and this further reduces the effectiveness of habitat acquisition as a suitable alternative.

The Trustees also agree with Mr. Bogart that additional staff for protection, enforcement and public education will help increase fledging success. Increasing these efforts is a priority under the preferred restoration alternative.

The Trustees support Mr. Bogart's suggestion to further evaluate night-time predation. A component of the Trustees' enhanced management program is to first evaluate potential sites to determine which predator species are present and potentially impacting productivity. The Trustees also agree that predator removal efforts should be focused on beaches where there is a documented history of predation problems, rather than on beaches with high or improving rates of productivity. Reduced productivity is one of the criteria that will be used by the Trustees to select restoration sites.

#### Comment 3

One comment was received via voice mail to the USFWS. The comment was from a resident who lives near the coast. The commenter expressed concern that "killing predators will exacerbate the rodent problem and put people at risk" [from Lyme disease]. Additionally, the commenter stated "it's horrible planning to kill animals that are just doing what nature programmed them to do."

#### Response

The Trustees' preferred alternative includes three activities to restore piping plovers: predator management, law enforcement and public outreach and education. Predator management, one component of the preferred alternative, will target individual predators that are preying on piping plovers. Care will be taken to select predators found at nesting sites that specifically key in on plover nests and/or chicks. Effects on local predator populations will be short-lived and highly localized. Due to the targeted nature of proposed predator removal efforts, the Trustees do not expect to significantly affect local predator populations, or the populations of their prey items, such as rodents that could be carriers of Lyme disease. The proposed efforts are not expected to exacerbate potential Lyme disease conditions in the project areas selected for piping plover restoration.

As coastal towns continue to grow, so do the populations of wildlife which take advantage of human-supplied food. Fox, raccoon, coyote, skunk, and crow populations can overwhelm those populations of species which are not abundant, such as piping plovers. The Trustees' obligation is to restore piping plovers impacted as a result of the oil spill. Removing predators, in combination with increased law enforcement and public outreach and education, will most quickly and effectively help to restore piping plovers. The Trustees only support removing targeted predators at piping plover nesting sites that have met selection criteria described in this document. This action is necessary to quickly and effectively restore the federally threatened piping plovers impacted by the oil spill.

## 7.2 Comments Received During the Public Meeting in Fall River on July 10, 2012

Q: How many sites will be selected?

R: Trustees anticipate selecting 4-5 sites per year for five years, depending on the size of the sites and how many pairs are nesting at each site. Trustees expect to provide approximately \$125,000 per year for five years.

Q: Are you looking for sites with no/less productivity, do you have hard data?

R: All sites in the area have good data on productivity. Trustees will look at historic data and select sites where restoration activities will have the greatest benefit.

Q: Have individual sites been targeted?

R: Yes, we have identified several potential sites.

Q: What are the funding mechanisms – USDA Wildlife Services does not apply for grants?

R: Landowners and managers would apply for funds to conduct restoration activities such as monitoring. There would be an interagency agreement with USDA to provide predator control services at selected sites.

Q: Do non-profits apply directly for their sites?

R: There will be an announcement on grants.gov. The announcement will include project needs and evaluation criteria. Organizations will be able to apply each year for five years. Trustees expect the annual announcement to occur in August or September to enable contracts to be in place for field work in February or March.

## 8.0 LIST OF PREPARERS

*U.S. Department of the Interior, U.S. Fish and Wildlife Service and Northeast Office of the Solicitor*

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Susi von Oettingen

Anne Hecht

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Scott Melvin

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Millie Garcia-Serrano

*Rhode Island Department of Environmental Management*

Chris Raithel

Mary Kay

*National Oceanic and Atmospheric Administration, U.S. Department of Commerce*  
James Turek

## **9.0 LIST OF AGENCIES, ORGANIZATIONS, AND PARTIES CONSULTED FOR INFORMATION**

U.S. Fish and Wildlife Service, Department of the Interior  
Massachusetts Division of Fisheries and Wildlife  
Rhode Island Department of Environmental Management, Division of Fisheries and Wildlife  
U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services  
The Nature Conservancy – Rhode Island  
Massachusetts Audubon Society



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## Appendix A

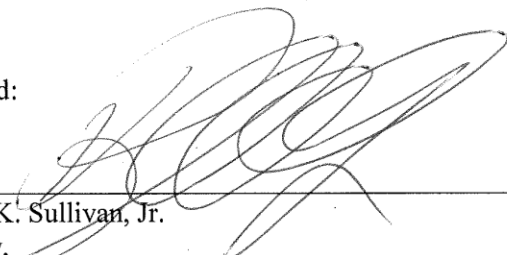
### Trustee Approval of the FINAL RESTORATION PLAN AND ENVIRONMENTAL ASSESSMENT FOR PIPING PLOVER (*Charadrius melodus*)

Impacted by the Bouchard Barge 120 Oil Spill  
BUZZARDS BAY  
MASSACHUSETTS AND RHODE ISLAND

**Commonwealth of Massachusetts**  
**Executive Office of Energy and Environmental Affairs**  
**Approval of the**  
**Final Restoration Plan and Environmental Assessment for Piping Plover**  
**(*Charadrius melodus*)**  
**Impacted by the Bouchard Barge 120 Oil Spill**  
**Buzzards Bay, Massachusetts and Rhode Island**

In accordance with Trustee protocol regarding documentation for Natural Resource Damage Assessment and Restoration (NRDAR) projects, the Executive Office of Energy and Environmental Affairs (EEA) is providing its approval of the Final Restoration Plan/Environmental Assessment for Piping Plover Impacted by the Bouchard Barge 120 Oil Spill.

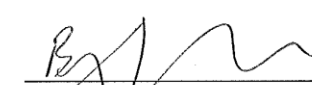
Approved:

  
 Richard K. Sullivan, Jr.  
 Secretary,  
 EEA


Natural Resource Trustee for the Commonwealth of Massachusetts

11/13/12  
 Date

Recommending Approval:

  
 Benjamin Ericson  
 Assistant Commissioner  
 Bureau of Waste Site Cleanup  
 Massachusetts Department of Environmental Protection

10/18/12  
 Date

  
 Millie Garcia-Serrano  
 Trustee Representative  
 Bouchard B-120 Trustee Council  
 Massachusetts Department of Environmental Protection

10-15-12  
 Date

**State of Rhode Island, Department of Environmental Management**  
**Approval of the**  
**Final Restoration Plan and Environmental Assessment for Piping Plover**  
**(*Charadrius melodus*)**  
**Impacted by the Bouchard Barge 120 Oil Spill**  
**Buzzards Bay, Massachusetts and Rhode Island**

In accordance with Trustee protocol regarding documentation for Natural Resource Damage Assessment and Restoration (NRDAR) projects, the Rhode Island Department of Environmental Management is providing its approval of the Final Restoration Plan/Environmental Assessment for Piping Plover Impacted by the Bouchard Barge 120 Oil Spill.

Approved:  
State of Rhode Island  
Department of Environmental Management

By: 

Name: Larry Mouradjian

Title: Associate Director, Natural Resources  
Trustee

Date: 9/24/12

**U.S. Department of the Interior**  
**Approval of the**  
**Final Restoration Plan and Environmental Assessment**  
**for Piping Plover (*Charadrius melodus*)**  
**Impacted by the Bouchard Barge 120 Oil Spill**  
**Buzzards Bay, Massachusetts and Rhode Island**

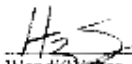
In accordance with U.S. Department of the Interior policy regarding documentation for natural resource damage assessment and restoration projects (521 DM 3), the Authorized Official for the Department must demonstrate approval of draft and final Restoration Plans and their associated National Environmental Policy Act documentation, with concurrence from the Department's Office of the Solicitor.

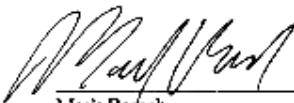
The Authorized Official for the Bouchard Barge 120 Oil Spill is the Regional Director for the U.S. Fish and Wildlife Service's Northeast Region.

By the signatures below, the final Restoration Plan/Environmental Assessment is hereby approved.

Approved:

Concurred:

 11-9-2012  
 Wendy Weber Date  
 Acting Regional Director  
 Northeast Region  
 U.S. Fish and Wildlife Service

 11/30/2012  
 Mark Barish Date  
 Senior Attorney  
 Northeast Region  
 Office of the Solicitor



**National Oceanic and Atmospheric Administration**  
**Approval of the**  
**Final Restoration Plan and Environmental Assessment for Piping Plover**  
**(*Charadrius melodus*)**  
**Impacted by the Bouchard Barge 120 Oil Spill**  
**Buzzards Bay, Massachusetts and Rhode Island**

In accordance with Trustee protocol regarding documentation for Natural Resource Damage Assessment and Restoration (NRDAR) projects, the National Oceanic and Atmospheric Administration is providing its approval of the Final Restoration Plan/Environmental Assessment for Piping Plover Impacted by the Bouchard Barge 120 Oil Spill.

Approved:

Name

Date

Title: NOAA Trustee Representative

Appendix B

Federal Environmental Action Statement  
and  
Finding of No Significant Impact

## UNITED STATES FISH &amp; WILDLIFE SERVICE

ENVIRONMENTAL ACTION STATEMENT

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of the *Restoration Plan and Environmental Assessment for Piping Plover (Charadrius melodus) Impacted by the Bouchard Barge 120 Oil Spill*:

\_\_\_\_\_ is a categorical exclusion as provided by 516 DM 6 Appendix 1 and 516 DM 6, Appendix 1. No further documentation will therefore be made.

XX \_\_\_\_\_ is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.

\_\_\_\_\_ is found to have significant effects, and therefore further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an EIS.

\_\_\_\_\_ is not approved because of unacceptable environmental damage, or violation of Fish and Wildlife Service mandates, policy, regulations, or procedures.

\_\_\_\_\_ is an emergency action within the context of 40 CFR 1506.11. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting documents (list):

Restoration Plan and Environmental Assessment for Piping Plover (*Charadrius melodus*) Impacted by the Bouchard Barge 120 Oil Spill.

Acting Regional Director/DOI Authorized Official

Date

11-9-2012

**FINDING OF NO SIGNIFICANT IMPACT****Restoration Plan and Environmental Assessment for Piping Plover (*Charadrius melodus*)  
Impacted by the Bouchard Barge 120 Oil Spill**

The U.S. Department of the Interior, the National Oceanic and Atmospheric Administration, and the States of Massachusetts and Rhode Island have completed a final Restoration Plan and Environmental Assessment that explains the decisions of the Trustees to select a restoration program for the piping plover consisting of predator control, public outreach and education, and increased enforcement. The proposed program will restore, replace, and/or acquire the equivalent of a portion of the natural resources injured, destroyed, or lost as a result of oil released from the Bouchard Barge 120 Oil Spill in Buzzards Bay, Massachusetts and Rhode Island. The selected alternative will provide an enhanced management program for protection of piping plovers at breeding sites in Massachusetts and Rhode Island. Additional restoration plans will be developed to address restoration for other injured resources and their lost services.

The Trustees provided the draft Restoration Plan and Environmental Assessment for public review and comment from June 18, 2012, through August 1, 2012. The Trustees also held a public informational meeting on July 10, 2012, in Fall River, Massachusetts, to present the draft Restoration Plan and Environmental Assessment. Trustee responses to public comments are presented in Section 7 of the final Restoration Plan. In general, the comments supported the restoration project selections identified by the Trustees. Some clarifications and additional information have been provided as a result of the comments; however, the Trustees did not change any decisions regarding the projects funded.

Based on a review and evaluation of the information contained in the final Restoration Plan, I have determined that the proposed actions do not constitute a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102 (2)(c) of the National Environmental Policy Act of 1969. Accordingly, the preparation of an environmental impact statement on the proposed actions is not required at this time.

Acting   
Regional Director/DOI Authorized Official

11-9-2012  
Date