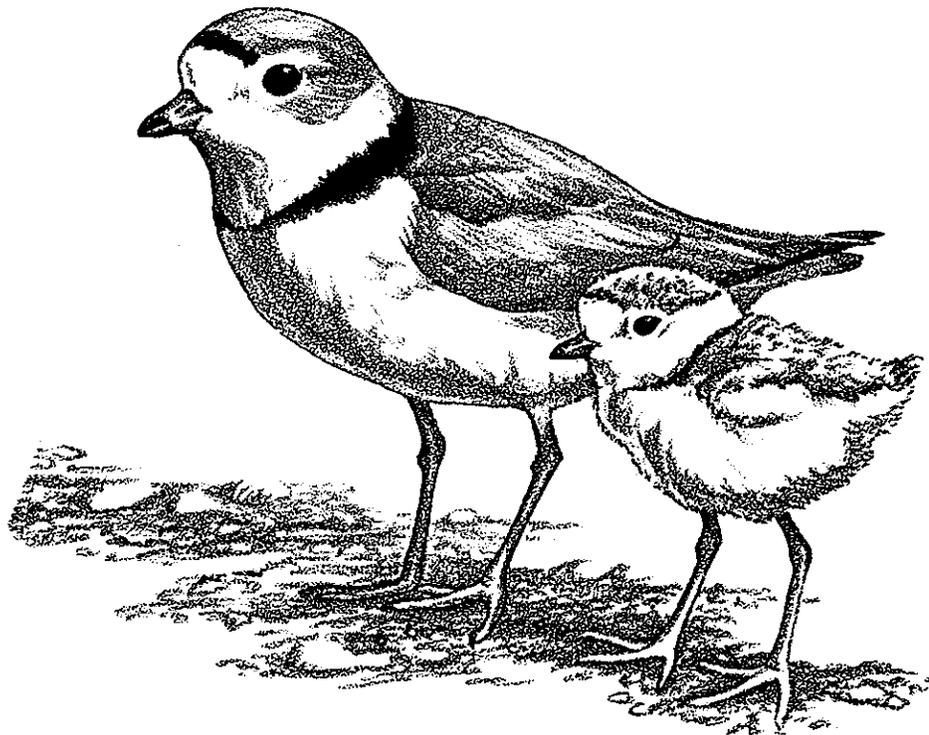


PIPING PLOVER (*Charadrius melodus*)
Atlantic Coast Population
REVISED RECOVERY PLAN



U.S. Fish and Wildlife Service
Hadley, Massachusetts

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Atlantic Coast Population

REVISED RECOVERY PLAN

Prepared by the

Atlantic Coast Piping Plover Recovery Team

for the

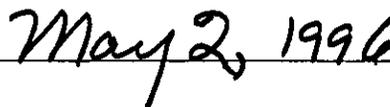
U.S. Fish and Wildlife Service
Region Five
Hadley, Massachusetts

Approved:



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EXECUTIVE SUMMARY

Atlantic Coast Piping Plover Revised Recovery Plan

CURRENT STATUS: The Atlantic Coast piping plover (*Charadrius melodus*) population breeds on coastal beaches from Newfoundland to North Carolina (and occasionally in South Carolina) and winters along the Atlantic Coast from North Carolina south, along the Gulf Coast, and in the Caribbean. Since being listed as threatened in 1986, the population has increased from approximately 800 pairs to almost 1350 pairs in 1995; however, most of the apparent increase between 1986 and 1989 is attributable to increased survey effort in two States, and the population increase between 1989 and 1995 has been very unevenly distributed. Since 1989, the New England subpopulation has increased 346 pairs, while the New York-New Jersey and the Southern (DE-MD-VA-NC) subpopulations gained 62 and 18 pairs respectively, and the Atlantic Canada subpopulation declined by 34 pairs. Substantially higher productivity rates have also been observed in New England than elsewhere in the population's range. Recovery of the Atlantic Coast piping plover population is occurring in the context of an extremely intensive protection effort now being implemented on an annual basis. Pressure on Atlantic Coast beach habitat from development and human disturbance is pervasive and unrelenting, and the species is sparsely distributed.

HABITAT REQUIREMENTS AND LIMITING FACTORS: Piping plovers nest above the high tide line on coastal beaches, sandflats at the ends of sandspits and barrier islands, gently sloping foredunes, blowout areas behind primary dunes, sparsely vegetated dunes, and washover areas cut into or between dunes. Feeding areas include intertidal portions of ocean beaches, washover areas, mudflats, sandflats, wrack lines, and shorelines of coastal ponds, lagoons, or salt marshes. Wintering plovers on the Atlantic Coast are generally found at accreting ends of barrier islands, along sandy peninsulas, and near coastal inlets.

Loss and degradation of habitat due to development and shoreline stabilization have been major contributors to the species' decline. Disturbance by humans and pets often reduces the functional suitability of habitat and causes direct and indirect mortality of eggs and chicks. Predation has also been identified as a major factor limiting piping plover reproductive success at many Atlantic Coast sites, and substantial evidence shows that human activities are affecting types, numbers, and activity patterns of predators, thereby exacerbating natural predation.

RECOVERY OBJECTIVE: The primary objective of the revised recovery program is to remove the Atlantic Coast piping plover population from the List of Endangered and Threatened Wildlife and Plants by: (1) achieving well-distributed increases in numbers and productivity of breeding pairs, and (2) providing for long-term protection of breeding and wintering plovers and their habitat.

RECOVERY CRITERIA: Delisting of the Atlantic Coast piping plover population may be considered when the following criteria have been met:

1. Increase and maintain for five years a total of 2,000 breeding pairs, distributed among four recovery units as follows: Atlantic Canada, 400 pairs; New England, 625 pairs; New York-New Jersey, 575 pairs; Southern (DE-MD-VA-NC), 400 pairs.
2. Verify the adequacy of a 2,000-pair population of piping plovers to maintain heterozygosity and allelic diversity over the long term.

EXECUTIVE SUMMARY (Cont.)

3. Achieve five-year average productivity of 1.5 fledged chicks per pair in each of the four recovery units described in criterion 1, based on data from sites that collectively support at least 90% of the recovery unit's population.
4. Institute long-term agreements to assure protection and management sufficient to maintain the population targets and average productivity in each recovery unit.
5. Ensure long-term maintenance of wintering habitat, sufficient in quantity, quality, and distribution to maintain survival rates for a 2,000-pair population.

ACTIONS NEEDED:

1. Manage breeding piping plovers and habitat to maximize survival and productivity.
2. Monitor and manage wintering and migration areas to maximize survival and recruitment into the breeding population.
3. Undertake scientific investigations that will facilitate recovery efforts.
4. Develop and implement public information and education programs.
5. Review progress towards recovery annually and revise recovery efforts as appropriate.

In furtherance of action 1, appendices to this plan include: (a) guidelines for managing recreational activities in piping plover breeding habitat to avoid direct mortality, harassment, and/or harm (Appendix G); and (b) guidelines for preparation and evaluation of permit applications for incidental take of piping plovers (Appendix H).

ESTIMATED COSTS (in thousands):

	<u>NEED 1</u>	<u>NEED 2</u>	<u>NEED 3</u>	<u>NEED 4</u>	<u>NEED 5</u>	<u>TOTAL</u>
FY 1	1885	150	330	60	3	2428
FY 2	1960	142	327	60	3	2492
FY 3	<u>2035</u>	<u>142</u>	<u>287</u>	<u>60</u>	<u>3</u>	<u>2527</u>
TOTAL	5880	434	944	180	9	7447

Costs beyond FY 3 will be determined as the recovery program proceeds.

DATE OF RECOVERY: A 168% increase in the New England population between 1989 and 1995 demonstrates that rapid recovery is possible with intensive protection efforts. Contingent on vigorous implementation of all recovery tasks, full recovery is anticipated by the year 2010.

ACKNOWLEDGMENTS

Susi von Oettingen of the U.S. Fish and Wildlife Service's New England Field Office and Mary Parkin and Paul Nickerson of the Northeast Regional Office provided invaluable help during all phases of preparation of this revised recovery plan.

During the last decade, hundreds of dedicated biologists and other professionals have contributed to the recovery efforts for the Atlantic Coast piping plover. The individuals listed below provided direct contributions to this recovery plan revision, by responding to special information requests or by reviewing sections of draft text. In many cases, their contributions represent compilations of information from dozens of additional individuals.

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* * *

The following recovery plan revision describes recovery progress to date and delineates further actions required to recover and/or protect the threatened Atlantic Coast population of the piping plover (*Charadrius melodus*). Attainment of recovery objectives and availability of funds will be subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities.

This plan does not necessarily represent the views or official position of any individuals or agencies other than the U.S. Fish and Wildlife Service. Recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

Literature citations should read as follows:

U.S. Fish and Wildlife Service. 1996. Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised Recovery Plan. Hadley, Massachusetts. 258 pp.

Additional copies of this plan can be purchased from:

U.S. Fish and Wildlife Reference Service
5430 Grosvenor Lane, Suite 110
Bethesda, Maryland 20814
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