

# **FEASIBILITY STATEMENTS FOR PIPING PLOVER MANAGEMENT GOAL AND OBJECTIVES 2000-2015**

*Prepared by: Mark A. McCollough  
March 23, 2001*

The desirability, feasibility, habitat capability, and possible consequences of the recommended piping plover objectives are presented below. To achieve the stated objectives, management activities will have to be significantly increased, new partnerships and working relationships will need to be established, and additional staff or a reallocation of staff time will be needed. Significant new funding will have to be generated for plover management. The financial and staff resources to achieve these objectives are currently not available to the Maine Department of Inland Fisheries and Wildlife (MDIFW).

**Goal: Increase the abundance of piping plovers and the number and quality of nesting sites in Maine.**

**Population Objective: Increase the number of nesting pairs of piping plovers to at least 80 distributed at all available sites in at least 3 of the prior 5 years by 2015.**

Desirability: Meeting this objective would better secure the status of the piping plover and approach the 100 pair levels needed in Maine for down-listing the species from Endangered to Threatened. Furthermore, an increase to 80 pairs would be a significant contribution toward the New England federal recovery goals of 625 pairs.

Feasibility: Increasing the population to 80 pairs is not feasible at this time because 1) the habitat may not support this many birds, and 2) financial resources needed to address piping plover management are insufficient to support the intensive management needed to support a population at this level. A recent assessment of MDIFW endangered species needs and priorities (Job 113) determined that \$85,000 is needed annually to address the needs of piping plover management, planning, landowner relations and contracts to cooperators. Partnerships may help to reduce the amount needed, but MDIFW still needs to assume the leadership role in coordinating recovery.

Capability of the Habitat: As of 2000, piping plovers have been documented nesting at 21 different sites (Table 3, Assessment). The maximum number of pairs that these beaches ever supported (in different years) totals 79 pairs.

## *Piping Plover Feasibility Statements*

Furthermore, in some instances in Maine, and elsewhere in New England, plovers have nested at higher densities than previously believed was possible. Thus it could be assumed, that under optimal beach configuration, ideal management, with the cooperation of landowners, and at the highest nesting densities, Maine's habitat could support 80 pairs of piping plovers.

Eighty pairs of plovers nesting in Maine are unlikely. The maximum number of pairs recorded in Maine in any single year is 60 pairs (1996 and 1998). Rarely, have all beaches been configured ideally in any one year to provide ideal habitat conditions. Finally, we don't know if piping plovers will exhibit higher nesting densities, especially with the amount of beach sweeping (habitat deterioration) and human disturbance on our beaches.

Possible Consequences: Consequences of a growing plover population will result in greatly increased complexity of plover management. During the 1990's, the increasing population of piping plovers greatly increased the complexity and cost of management. With static levels of funding, the time afforded to each pair has diminished and productivity has declined. Likewise, management problems (predator control, landowner relations, municipal management, "take" provisions of the state and federal Endangered Species Acts, Essential Habitat) have increased markedly, taking time away from beach management. As a result, plover productivity in Maine, one of the highest on the East Coast, has begun to diminish because of the decreased amount of time that can be afforded to each pair. Adequate financial resources are imperative to increase, maintain, and effectively manage an increased population of 80 pairs of piping plovers. Partnerships may help address these issues, but will not be the sole solution.

### **Nesting Habitat Objective 1: Maintain nesting, and the integrity of nesting habitat, at the 23 active nesting sites (Table 6 of the Assessment) used by piping plovers between 1997-1999.**

Desirability: Attaining this objective would secure the remaining habitat in Maine for plovers and the many other species of plants and wildlife that use the beach/dune community.

Feasibility: This objective is feasible and attainable, particularly if additional financial resources can be allocated to plover management. Additional resources are needed to support full implementation of Essential Habitat and increase the amount of time, training, and support provided to landowners, municipalities, and park managers.

Capability of the Habitat: Essential Habitat has been designated at most nesting areas (Table 2 of the Assessment) that, if applied properly, should prevent further deterioration of habitat. Full implementation of Essential

## *Piping Plover Feasibility Statements*

Habitat would require beach management agreements at many sites to better address projects and activities funded and carried out by municipalities and state agencies (e.g. beach sweeping, recreational use, garbage pickup, vehicles on beaches) that could adversely affect plovers. Major habitat improvement projects (removal of seawalls, jetties, and some beach nourishment projects) could further increase the carrying capacity of beaches to support nesting plovers.

Possible Consequences: Protecting the remaining habitat for piping plovers will require increased vigilance and attention to environmental permit reviews on these beaches. Activities of landowners, towns, and state park staff will need to be monitored closely, and the amount of time coordinating with these groups will need to increase appreciably. Adding Essential Habitat will mean increased complexity of permit review for landowners and developers. There may be public resistance to increased management activities.

### **Nesting Habitat Objective 2: Increase the number of successful nest sites by 5 in at least 3 of the prior 5 years through 2015.**

Desirability: Meeting this objective would help provide a broader selection of beach nesting habitats for the plovers and increase the probability of achieving the population objective.

Feasibility: Additional financial resources and staff time will be needed to negotiate beach management agreements with landowners, improve the habitat, or control predators. Some social facilitation (decoys or calls) could be considered to encourage use, but birds will likely colonize beaches by themselves. More likely, beach management (fencing nesting areas early in the season, pet and predator management) will provide the best enticement for prospective nesting birds.

Capability of the Habitat: Table 3 in the Assessment indicates that there are at least 10 beaches in Maine that are currently occupied with habitat believed to be able to support at least 1 pair of piping plovers. At least one site, Parsons Beach, was occupied for the first time in 2000. Non-breeding plovers have been seen at several of these sites. Factors limiting use of these beaches include intense recreational use, habitat alteration, and predators.

Possible Consequences: Increasing habitat for piping plovers will require additional recovery costs for negotiating management agreements and expanding management activities at up to 5 more sites. As birds nest on the sites, Essential Habitat, would need to be designated which will increase environmental permit reviews on these beaches. Activities of landowners, towns, and state park staff will need to be monitored closely and the amount

## *Piping Plover Feasibility Statements*

of time coordinating with these groups will need to increase appreciably. Increased use of Essential Habitat may affect landowner's plans to develop their land. Alternatives to Essential Habitat (beach agreements) are extremely costly to develop (see below).

### **Nesting Habitat Objective 3: Develop long term, non-regulatory habitat protection via management agreements, conservation easements, or acquisition for 10 nesting sites by 2015.**

Desirability: Meeting this objective is highly desirable as it can lead to increased partnerships and greatly facilitate future beach management. For instance, in Wells, the town agreed to hire a volunteer coordinator, and over 20 volunteers assisted with plover management in 2000. The town has also played plover public service announcements on the local cable channel, developed plover interpretive materials, and made mailings to residents. Furthermore, future environmental permit review will be greatly facilitated by the communication and understanding achieved through the beach management agreement process.

Feasibility: Management agreements have been drafted at one beach (Wells and Laudholm) in 2000 in lieu of Essential Habitat. To achieve a beach management agreement (which all stakeholders did not sign in the end) required about 9 months of meetings (1 meeting/ month) between MDIFW staff (Wildlife Division Director, Regional Biologist and Endangered Species Project Leader), use of a paid professional facilitator hired by MDIFW, and considerable staff time devoted to writing drafts, etc. Beach management agreements are attainable, but require extraordinary staff time and cost. Although all sites will not be as contentious as Wells, each site has its own unique history of management problems, personalities, and stakeholder groups. Without increased funding for the Wildlife Division and incentives for landowners, it is questionable whether this objective will be attained.

Capability of the Habitat: Not applicable.

Possible Consequences: Meeting this objective should help further secure the protection of key habitat for piping plovers. Few, if any, negative consequences would be expected.

### **Productivity Objective: Increase the statewide average annual productivity of piping plovers to 2.0 fledged chicks per nesting female in at least 3 of the prior 5 years through 2015.**

Desirability: Population modeling for piping plovers has demonstrated that a productivity of 1.5 chicks per female is needed for population stability.

## *Piping Plover Feasibility Statements*

Maintaining an average of 2.0 young per female would be highly desirable and help facilitate expansion of the population. The recent increase of plover nesting in New Hampshire can likely be attributed to expansion of the Maine population.

Feasibility: Maine's statewide productivity averaged 1.88 from 1988-1998, but exceeded 2.0 in 6 of those 10 years. Statewide productivity has declined in the late 1990s from 1.98 to 1.47 chicks per nesting female. This decline is believed to be from a) increased predation problems, b) deteriorating habitat conditions at some sites, and c) decreasing management attention afforded each pair as the population grows. Increased financial and staff resources will be needed to address each of these problems. Without increased funding, it is doubtful that this objective can be achieved.

Capability of the Habitat: Current beach management practices (beach sweeping and cleaning, beach nourishment) may reduce the productivity of the beach-dune and intertidal systems, thus limiting the fitness of adult birds and reducing the probability of survival of the young. In general, productivity > 2.0 fledged chicks per nesting female has been achieved on most Maine nesting beaches, demonstrating that food at many beaches is probably not limiting. A notable exception is Pine Point Beach in Scarborough.

Possible Consequences: Increasing productivity to > 2.0 young per female would help facilitate population growth and expansion, but will require intensified management. This would likely require additional consultations with municipalities, landowners, state parks, and beach users. There may be increased public resistance to increased management activities.

### **Outreach Objective 1: By 2004, develop with partners, an outreach plan containing measurable objectives to increase awareness and promote stewardship of nesting piping plovers in Maine.**

Desirability: Many factors limiting piping plovers (recreation, human disturbance, pets, landowner permission to manage birds, beach sweeping, etc.) require public education. Maine Audubon currently does many landowner contacts and meets with beach associations during the nesting season. These all have a positive affect on management of the birds. Expanding these efforts, and determining which education and outreach materials and methods are most effective, would undoubtedly help facilitate plover management.

Feasibility: Partners (MDIFW, U. S. Fish and Wildlife Service, Department of Conservation, Maine Audubon, The Nature Conservancy, and others) could probably begin this process immediately, however, a proper plan would take staff time (Audubon or MDIFW) to complete. Furthermore, the needs

## *Piping Plover Feasibility Statements*

identified in the plan will undoubtedly require substantial financial resources to execute. Maine Audubon currently provides fact sheets and newsletters to cooperating landowners.

Capability of the Habitat: Not applicable.

Possible Consequences: Producing and executing an outreach plan would have many positive outcomes, including much better cooperation and participation by the public and landowners in plover management. Few negative consequences would be anticipated. An outreach program would require a long-term financial commitment by MDIFW to sustain this effort.

### **Outreach Objective 2: Develop and implement a landowner assistance and recognition program by 2004.**

Desirability: Meeting this objective would provide a positive incentive for landowners to join in the management of piping plovers.

Feasibility: A landowner assistance program (if it requires compensation) is not attainable at this time. There are no state funds available. The Conservation and Reinvestment Act, if passed by Congress, may provide up to \$200,000 annually for landowner assistance and incentives. Open Space legislation considered by the Maine State Legislature may also provide an incentive for cooperating landowners.

A landowner recognition program is attainable in the short term. Although no funding is available in MDIFW, funds could possibly be obtained through grant writing (Outdoor Heritage Fund).

Capability of Habitat: Not applicable.

Possible Consequences: Incentives could help facilitate long-term conservation agreements. Landowner recognition should generate good publicity for plovers, a positive image for management agencies, and facilitate future management. However, many landowners may not choose to participate, because it would compromise future development options of expensive, beachfront real estate. A landowner incentive program would require a long-term financial commitment by MDIFW to sustain this effort.