

# SARA REVIEW - PIPING PLOVER, *CIRCUMCINCTUS* SUBSPECIES CASE STUDY

## *Challenges with Identification of Critical Habitat*

### Introduction

This case study provides a brief overview of the challenges involved in critical habitat identification under the *Species at Risk Act* (SARA). It uses the example of the Piping Plover (*Charadrius melodus circumcinctus*) and focuses particularly on issues pertaining to scale and criteria, workload and time frames, the need to identify specific geographic locations for critical habitat, and consultation and timelines.

The Piping Plover is a small migratory shorebird that blends into its setting and is found on sparsely vegetated sand or gravel beaches where it nests and raises its young. The *circumcinctus* subspecies breeds on beaches of both freshwater and alkali wetlands, and its breeding range in Canada extends from central Alberta to southern Saskatchewan, southern Manitoba, Lake of the Woods (Ontario portion) and Lake Huron in southern Ontario.

The Piping Plover was initially designated as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in April 1978 and was the first species in Canada to be upgraded to endangered, in 1985. It was reassessed by COSEWIC in 2001 as two units, the *circumcinctus* subspecies and the *melodus* subspecies; both were designated as endangered and included among the 233 species on Schedule 1 when SARA came into force.

### Recovery Strategies and Critical Habitat

For each wildlife species listed under SARA for which the competent minister determines that recovery is feasible, paragraph 41(1)(c) of the Act requires that the recovery strategy include the identification of the species' critical habitat, to the extent possible, and based on the best available information, including the information provided by COSEWIC. Examples of activities that are likely to result in the destruction of critical habitat are also to be included in the recovery strategy.

Critical habitat is defined under SARA as “the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.” This broad definition requires consideration on a species-by-species basis as to what habitat features are necessary for each species and where that habitat is located. Habitat is an area with unique physical

and biological attributes that provide necessary elements to support key functions for a species, such as shelter, reproduction, the production of food or movement during its life cycle. The purpose of identifying critical habitat is to ensure that human activities are managed in a way that is consistent with maintaining the functional attributes of the habitat necessary for the survival or recovery of the species.

The critical habitat identification and protection provisions of SARA have added important new federal responsibilities for the management of species at risk. These include the authority to prohibit destruction of critical habitat on both federal and non-federal lands (i.e. the SARA critical habitat “safety net”; section 61). Through the use of the “safety net” the Minister is to ensure that the laws of the province or territory effectively protect critical habitat of listed endangered or threatened species when found in a province or territory outside of federal lands. The critical habitat provisions have potential implications for Aboriginal communities, landowners, lessees and other sectors of Canadian society, such as industry.

Section 39 requires cooperation and consultation in preparing a recovery strategy. The competent minister must, to the extent possible, cooperate and consult with various persons, landowners, wildlife management boards, Aboriginal organizations, appropriate provincial/territorial governments and other federal ministers and any other person or organization that the competent minister considers appropriate when preparing a recovery strategy, including the identification of critical habitat. These requirements involve making the parties aware of the implications associated with critical habitat identification under SARA.

Landowners, lessees and land managers want to know, first and foremost, how SARA recovery strategies might affect them. The greatest effect on these parties is critical habitat identification that leads to protection, possibly by way of a SARA prohibition; critical habitat identification and protection may impact land use and peoples’ livelihoods. This is an important matter in many parts of Canada where much of the habitat of species at risk occurs on privately owned or managed lands. Identification of critical habitat can create anxiety among landowners and land users because of the uncertainty about how the identification will limit activities on the land.

## **Critical Habitat Identification for the Piping Plover, *circumcinctus* subspecies**

The habitat for the Piping Plover is relatively specific, as it is restricted primarily to freshwater and alkali beaches and river sandbars. From surveys carried out in the Prairie Provinces, it was possible to determine the location of specific wetlands used by plovers. To identify and physically reference the specific critical habitat for the Piping Plover required knowledge of the species’ habitat requirements, as well as site-specific referencing from mapping or geo-referencing sources. With this background, it was possible to develop a framework for defining, describing and referencing critical habitat for this species.

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### ***Providing specific criteria for identifying critical habitat***

Every place where an individual Piping Plover, *circumcinctus* subspecies has been sighted is not necessarily critical habitat. Variability in environmental conditions from year to year can also change the availability and use of critical habitat. Thus, a set of criteria for determining which areas were necessary for the survival and recovery of this subspecies needed to be developed. These criteria related to identifying areas where the birds occurred in sufficient numbers over a sufficient number of years. The development of these criteria resulted in a critical habitat identification that is defensible and transparent. To narrow down specific wetlands that were likely to contain critical habitat required setting specific criteria for plover numbers seen on surveys, the minimum number and timing of these surveys and a time frame over which to determine the status of the site. Once the specific wetlands were identified, critical habitat was then identified on a quarter-section basis, depending on the number of adults or nests observed over a defined time frame.

### ***Workload and time required to properly identify critical habitat***

At the time of posting of the original recovery strategy, Environment Canada did not have access to many of the data needed to identify critical habitat. Various provincial government agencies and environmental non-governmental organizations had information about plovers. However, these data were in a variety of formats, including important information only available on hard-copy maps. These data sets had to be collated from the various sources, standardized and digitized to enable analyses as to what areas met the criteria<sup>1</sup> established to define critical habitat for this species.

### ***Providing specific geographic locations of critical habitat***

Early thinking about critical habitat for the Piping Plover, *circumcinctus* subspecies led the recovery team to identify entire basins (typically lakes). After further consideration, it was concluded that identifying basins did not provide adequately specific detail on where critical habitat was located because large portions of many basins contain unsuitable habitat for plovers. This inability to specifically identify critical habitat made it difficult to consult because the appropriate landowners and land managers could not be determined. Furthermore, the coarse-scale identification of entire basins precluded the required subsequent analyses of whether the critical habitat was protected or not.

In order to refine the identification of critical habitat, the recovery team adopted a hierarchical approach. Initially, a general set of “basin criteria” was applied to determine which basins within the range of the Piping Plover, *circumcinctus* subspecies were likely to contain critical habitat. A second criterion, the “quarter section criterion” was then used to determine precisely which portions of each basin’s shore constitutes critical

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<sup>1</sup> The specific criteria for defining these areas were as follows: “Quarter sections (or comparable units) with critical habitat are those where use has been documented by  $\geq 2$  Piping Plover pairs (or  $\geq 2$  nests, or  $\geq 4$  adults) in  $\geq 2$  breeding seasons over a floating 15-year window.”

habitat. Quarter sections were selected as the typical basis for identifying the location of critical habitat, using occurrence and time-frame criteria, because rural land in western Canada is generally owned and managed at the quarter-section level, and land ownership can easily be tracked at that level.

### ***Judicial review***

On November 6, 2006, the final recovery strategy was posted on the Species at Risk Public Registry. In the circumstances, Environment Canada held that the species' critical habitat could not be identified. The recovery strategy indicated that although several attributes and criteria had been described to assist in identifying critical habitat, there was a lack of knowledge of the specific locations that met these criteria. The recovery strategy provided that the identification of critical habitat sites would be done within subsequent action plans. However, the recovery strategy did not identify a schedule of studies indicating when critical habitat would be identified.

On December 4, 2006, an application for judicial review was filed by Sierra Legal Defence Fund on behalf of several environmental non-governmental organizations, including Nature Canada and the David Suzuki Foundation. The application alleged that the recovery strategy did not comply with the requirements of SARA because it failed to identify the Plover's critical habitat—notwithstanding that SARA requires it to be identified “to the extent possible”.

On March 16, 2007, Environment Canada posted an addendum to the recovery strategy. The addendum amended the recovery strategy by identifying certain critical habitat for the Piping Plover and by providing a clear explanation of what information was outstanding and why.

On August 7, 2007, the application for judicial review was dismissed by the court as a result of the Applicants' failure to respond to a Notice of Status Review.

### ***Consultation and timelines***

The Piping Plover experience illustrates the challenges that can arise in meeting the time frames for the posting of proposed recovery strategies, together with the cooperation and consultation requirements of section 39. These challenges include preparing relevant criteria for spatially identifying critical habitat, collating and sorting data to determine units that meet the specified criteria, collaborating with various jurisdictions, determining land ownership and contact information, contacting landowners, and arranging and carrying out consultation meetings. In the case of the Piping Plover, *circumcinctus* subspecies, the recovery strategy was posted within the required time frame without any critical habitat being identified because it was not possible to meet all of these challenges within that time frame.