

**Amendment to the Recovery Strategy for the Roseate Tern  
(*Sterna dougallii*) in Canada**

**RE: Critical Habitat Identification and Action Planning**

**Environment Canada**

**May 2010**

# INTRODUCTION

The *Recovery Strategy for the Roseate Tern (Sterna dougallii) in Canada* (Environment Canada, 2006) was posted on the Species at Risk Public Registry in October 2006.

Under Section 45 of the *Species at Risk Act* (SARA), the Minister of the Environment may amend a recovery strategy at any time.

This amendment to the *Recovery Strategy for the Roseate Tern (Sterna dougallii) in Canada* is for the purpose of:

- Clarifying the language used in the critical habitat identification section.
- Clarifying the description of activities likely to result in destruction of critical habitat.
- Clarifying Environment Canada's approach to and timing of the action plan for Roseate Tern.
- Deleting *Appendix C: Implications of critical habitat identification* as being outdated.

This amendment is being posted on the Species at Risk Public Registry for a 60-day comment period. At the time of final posting, the following text will replace sections 1.3.4; 1.3.5; 1.6 of the complete recovery strategy as well as revising the section on References Cited and deleting Appendix C from the strategy.

## 1.3.4 Identify critical habitat

In the pre-SARA Canadian Roseate Tern Recovery Plan, suitable breeding habitat was presumed to be unlimited (Lock et al. 1993). However, research has shown that Roseate Terns actually have specific habitat requirements that are not met by most apparently suitable coastal habitat in the United States (Nisbet and Spendelow 1999). Roseate Terns may be more limited by the location of foraging habitat than by the suitability of nesting habitat. In Canada, recent survey data suggest that Roseate Terns have used only a small, varying subset of coastal islands where terns nest (Leonard et al. 2004).

Roseate Terns generally forage in shallow areas close to shore, near shoals and tidal rips (Gochfeld et al. 1998), although little is known about their foraging ecology in Canada. After fledging in early August, juvenile Roseate Terns from the northeastern population disperse with their parents to staging areas. There is also little known about staging habitat for Canadian birds, although in 2002 two Roseate Terns that had been banded as chicks on The Brothers, NS were sighted within a month of fledging at Great Gull Island, New York (H. Hays, pers. comm. ) and 13 of 14 chicks banded on Country Island in 2009 were sighted from August to October of that year staging at sites in Cape Cod, Massachusetts (J. Spendelow, pers. comm.). Roseate Terns migrate south in late August and early September. They arrive in South America by October, where they have been recovered and recaptured along the north coast from western Colombia to eastern Brazil, between 11°S and 18°S (Hays et al. 1997).

### *Identification of critical nesting habitat*

The federal *Species at Risk Act* (SARA) (Government of Canada 2002) defines critical habitat 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.*”

Survival of the current population requires, at a minimum, maintenance of the existing managed colonies at The Brothers, NS (North Brother [43°38.191'N, 65°49.406'W]; South Brother [43°37.798'N, 65°49.530'W]; >80 pairs) and Country Island, NS (45°06.096'N, 61°32.544'W; >40 pairs).

To meet the recovery goal outlined in this strategy, several widely dispersed island colonies with sheltered nest habitat (vegetation, rocks, or artificial nest shelters) that are free of gulls, mammalian predators and human disturbance, and have access to good foraging areas are required. Roseate Terns formerly nested at many colony sites now occupied by gulls, which could be restored for recovery through active management. Habitat may also be available for additional nests at existing colony sites, although this possibility has not been thoroughly studied.

The criteria used to identify critical habitat are:

1. Sites that currently<sup>1</sup> support more than 15 pairs of Roseate Terns (>10% of the Canadian population);
  - **The Brothers, NS (North Brother [43° 38.191'N, 65° 49.406'W]; South Brother [43° 37.798'N, 65° 49.530'W])** – the entire terrestrial habitat of both islands, as well as aquatic habitat extending 200 m seaward from the mean high tide line of each island.
  - **Country Island, NS (45° 06.096'N, 61° 32.544'W)** - the entire terrestrial habitat of the island, as well as aquatic habitat extending 200 m seaward from the mean high tide line.
2. Tern<sup>2</sup> colonies in areas that have supported small but persistent numbers of nesting Roseate Terns for over 30 years;
  - **Sable Island, NS (43° 55.839'N, 59° 54.467'W)** – the polygons encompassing entire individual nesting tern colonies on the island and the habitat extending 200 m beyond each polygon.
  - **Magdalen Islands, QC (Paquet Island [47° 24.492'N, 61° 50.162'W]; Deuxième Îlet [47° 30.153'N, 61° 43.837'W]; and Chenal Island [47° 33.927'N, 61° 32.847'W])** – the entire terrestrial habitat of each island, as well as the aquatic

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<sup>1</sup> As of October 25, 2006, the date the Recovery Strategy for the Roseate Tern was published on the SAR Public Registry.

<sup>2</sup> The term ‘tern’ refers to all tern species that comprise the colonies in which Roseate Terns nest. Since Roseate Terns nest only in large colonies comprised of a mixture of tern species, any activities that adversely impact terns within the colony, or the ability of terns to use habitat within or surrounding the colony, may also result in the destruction of Roseate Tern critical habitat

habitat extending 200 m offshore as measured from the mean high tide line of each island. Aquatic critical habitat associated with Paquet Island is identified only as that which occurs within Lagune du Havre-aux-Maisons and excludes aquatic habitat located south of île-du-Havre-aux-Maisons. Similarly, the area comprising the marina and all anthropogenic structures within the aquatic critical habitat surrounding Paquet Island are excluded from this identification of critical habitat for Roseate Tern.

The 200 m distance is based on the following research. In a review of the effects of human disturbance on nesting colonial waterbirds, Carney and Sydeman (1999) recommended that to reduce human disturbance a distance of 100-400 m be established around Common Tern colonies. Based on flush responses of Common Terns, specific studies have recommended distances of 100 m (Burger 1998), 180 m (Rodgers and Smith 1995) and 200 m (Erwin 1989) be established around colonies to reduce the impacts of human disturbance. There have been no published studies specifically on Roseate Terns; however Roseate Terns virtually always nest within colonies of Common Terns. Recognizing the variability of responses to disturbance depending on the colony and the circumstance, it was felt that inclusion of a distance of 200 m distance around tern colonies in which Roseate Terns nest is critical to providing adequate protection to Roseate Tern nesting habitat.

If any of the sites described above are not occupied by breeding Roseate Terns for three consecutive years, they will be re-assessed in terms of their identification as critical habitat. Additional/new sites where Roseate Terns have nested for three consecutive years may be identified as critical habitat under criterion 1. If a new breeding site is established that meets criterion 1 (supports >10% of the national population) the critical habitat identification will be revisited to consider identifying the new colony specifically as critical habitat. Any Roseate Tern nest, located either within or outside of critical habitat, is protected under the *Migratory Birds Convention Act, 1994* and as a residence under SARA (a description of the Roseate Tern's nest residence can be found at [http://www.sararegistry.gc.ca/document/default\\_e.cfm?documentID=597](http://www.sararegistry.gc.ca/document/default_e.cfm?documentID=597)). SARA also protects all Roseate Terns from being killed, harmed, or harassed.

The critical habitat described herein supported 139 pairs of Roseate Terns in 2002 and 129 pairs in 2003 (Leonard et al. 2004) although only 72 in 2009 (Environment Canada, unpublished data). Efforts to establish a third predator-free colony of Roseate Terns (see 1.3.3 Manage additional colonies), if successful, would provide sufficient critical habitat to meet the recovery goal of no fewer than 150 pairs nesting in at least three colonies in Canada.

### **1.3.5 Examples of activities likely to result in destruction of critical habitat**

Examples of activities likely to result in destruction of critical habitat for the Roseate Tern include, but are not limited to:

#### *Modification of the surface of the islands*

The topography of the islands on which terns nest and the maintenance of the characteristics of the soil surface are necessary elements for successful breeding by Roseate Terns. Removing

material (e.g. debris, rocks, nesting structures), as well as adding material (e.g. sand, gravel, rocks) or the installation of anthropogenic structures are likely to result in the destruction of critical habitat.

#### *Modification of the vegetation cover*

Vegetation cover is a necessary attribute for reproduction and camouflage of individual birds. Partially or completely removing the vegetation used by Roseate Terns and/or other terns<sup>2</sup>, whether manually, mechanically (e.g. by machine) or chemically (e.g. by herbicides) or through activities connected with constructing, maintaining or operating anthropogenic structures, as well as intentionally adding vegetation, are likely to result in the destruction of critical habitat.

#### *Modification of hydrological characteristics*

Aquatic habitat is a necessary element for reproduction and feeding by Roseate Terns. Releasing substances that are likely to increase turbidity or change the chemical composition of surface waters, inland waters, marine waters or the water table, is an activity that is likely to result in the destruction of critical habitat. The same is true of the installation of anthropogenic structures in the aquatic environment.

Further human activities or outcomes of such activities that would disturb the birds in critical habitat to the extent that they are not able to successfully perform their biological activities (i.e. mating, egg laying, brood rearing, coming in and out of the colony, foraging, or even simply resting) are prohibited under sections 32 and 33 of SARA.

## **1.6 Development of Action Plans**

Roseate Terns currently nest in only two provinces in Canada (Québec and Nova Scotia), with sporadic nesting records from New Brunswick. Over 95% of the Canadian population nests in Nova Scotia. As a result the Canadian Roseate Tern Recovery Team is small, with only six members. It is felt that the Team as it currently exists can oversee the implementation of the recovery strategy and, as such, Recovery Implementation Groups (RIGs) are not needed. A single action plan for the Roseate Tern will be completed and posted on the SAR Public Registry by March, 2011.

A draft of the Action Plan has been prepared and a summary was posted on the Species at Risk Public Registry in September 2009 (Environment Canada). Finalization of the Action Plan has been delayed pending completion of this amendment to the Recovery Strategy for Roseate Tern. In addition to facilitating protection of the critical habitat, the clarification of the identification of critical habitat for Roseate Terns will ensure a more accurate evaluation of socio-economic costs of the action plan and benefits to be derived from its implementation (Section 49 (1) (e)).

The second Action Plan with respect to environmental assessment originally recommended in the Recovery Strategy is now considered to be a technical guidance document and not an action plan.

## LITERATURE CITED

- Environment Canada. 2006. Recovery Strategy for the Roseate Tern (*Sterna dougallii*) in Canada. *Species at Risk Act Recovery Strategy Series*. Environment Canada. Ottawa. vii + 37 pp.
- Environment Canada. 2009. Summary of the Action Plan for the Roseate Tern (*Sterna dougallii*) in Canada. Environment Canada. Ottawa. 2 pp.
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- Leonard, M.L., A.W. Boyne, and J.S. Boates. 2004. Status and recovery of Roseate Terns (*Sterna dougallii*) in Nova Scotia. *Proceedings of the Nova Scotia Institute of Science*. 42: 253-262.
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