

## Species Status Assessment

**Class:** Birds  
**Family:** Laridae  
**Scientific Name:** *Sterna hirundo*  
**Common Name:** Common tern

Common terns breed across much of Canada and on shorelines in the northeastern United States including both large inland water bodies and the Atlantic Coast. Wintering occurs primarily along the coastlines of Central and South America. The continental population of common tern is widespread and productive but threats are numerous, including prey contamination, mismanagement on wintering grounds, catastrophic weather events, displacement by gulls, beach traffic, and vandalism.

Common terns use a variety of habitats during the breeding season and may be found on coastal beaches or barrier islands, marshes, or large inland lakes. They are present in New York from April to September. Breeding occurs along shorelines of the state including Lake Ontario, Lake Erie, Oneida Lake, the Niagara River, and the St. Lawrence River, with the highest concentrations occurring on Long Island. There are roughly 50 colonies nesting on Long Island each year with additional inland populations that are generally smaller and scattered. The distribution and abundance in New York has been stable or increasing for the past 20 years.

### I. Status

#### a. Current Legal Protected Status

- i. **Federal** Not Listed **Candidate:** No
- ii. **New York** Threatened; SGCN

#### b. Natural Heritage Program Rank

- i. **Global** G5
- ii. **New York** S3B **Tracked by NYNHP?** Yes

#### Other Rank:

Audubon – Watch List

IUCN – Least Concern

Species of Northeast Regional Conservation Concern (Therres 1999)

**Status Discussion:**

Common tern is a locally abundant breeder and migrant on Long Island, and less numerous in the interior, breeding locally in the vicinity of the Niagara River, the St. Lawrence River, and Lake Ontario. Common tern is ranked as Vulnerable in New York, Massachusetts, Connecticut, and New Jersey. It is ranked as Critically Imperiled in Vermont.

**II. Abundance and Distribution Trends**

**a. North America**

**i. Abundance**

\_\_\_ declining  X  increasing \_\_\_ stable \_\_\_ unknown

**ii. Distribution:**

\_\_\_ declining  X  increasing \_\_\_ stable \_\_\_ unknown

Time frame considered:  1999-2009

**b. Regional**

**i. Abundance**

\_\_\_ declining  X  increasing \_\_\_ stable \_\_\_ unknown

**ii. Distribution:**

\_\_\_ declining  X  increasing \_\_\_ stable \_\_\_ unknown

Regional Unit Considered:  East

Time frame considered:  1999-2009

**c. Adjacent States and Provinces**

**CONNECTICUT**                      **Not Present** \_\_\_\_\_                      **No data** \_\_\_\_\_

**i. Abundance**

**declining**     **increasing**                       **stable**                       **unknown**

**ii. Distribution:**

**declining**     **increasing**                       **stable**                       **unknown**

Time frame considered: Not specified

Listing Status: \_\_\_\_\_ Special Concern \_\_\_\_\_                      SGCN? Yes

**MASSACHUSETTS**                      **Not Present** \_\_\_\_\_                      **No data** \_\_\_\_\_

**i. Abundance**

**declining**     **increasing**                       **stable**                       **unknown**

**ii. Distribution:**

**declining**     **increasing**                       **stable**                       **unknown**

Time frame considered: 1980s to present

Listing Status: \_\_\_\_\_ Special Concern \_\_\_\_\_                      SGCN? Yes

**NEW JERSEY**                      **Not Present** \_\_\_\_\_                      **No data** \_\_\_\_\_

**i. Abundance**

**declining**     **increasing**                       **stable**                       **unknown**

**ii. Distribution:**

**declining**     **increasing**                       **stable**                       **unknown**

Time frame considered: 1999-2009

Listing Status: \_\_\_\_\_ Special Concern (breeding only) \_\_\_\_\_                      SGCN? Yes

ONTARIO Not Present \_\_\_\_\_ No data \_\_\_\_\_

i. Abundance

declining  increasing  stable  unknown

ii. Distribution:

declining  increasing  stable  unknown

Time frame considered: 1999-2009

Listing Status: Not Listed

PENNSYLVANIA Not Present  No data \_\_\_\_\_

QUEBEC Not Present \_\_\_\_\_ No data \_\_\_\_\_

i. Abundance

declining  increasing  stable  unknown

ii. Distribution:

declining  increasing  stable  unknown

Time frame considered: 1999-2009

Listing Status: Not Listed

VERMONT Not Present \_\_\_\_\_ No data \_\_\_\_\_

i. Abundance

declining  increasing  stable  unknown

ii. Distribution:

declining  increasing  stable  unknown

Time frame considered: 1976-81 to 2003-07

Listing Status: Endangered SGCN? Yes

**d. New York**

No data \_\_\_\_\_

**i. Abundance**

\_\_\_ declining \_\_\_ increasing  X  stable \_\_\_ unknown

**ii. Distribution:**

\_\_\_ declining \_\_\_ increasing  X  stable \_\_\_ unknown

Time frame considered:  1980-85 to 2000-05

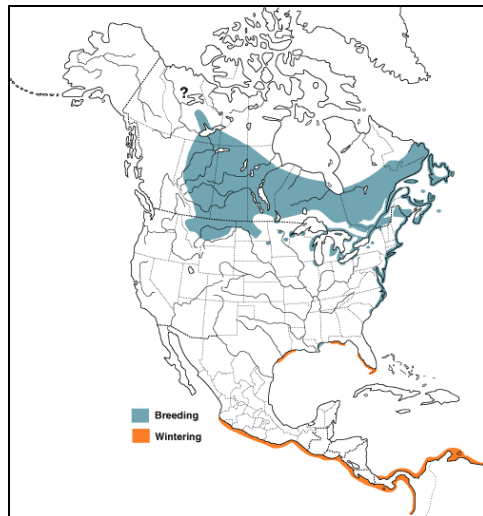
**Monitoring in New York.**

A three-year pilot study of the National Marshbird Monitoring Program was conducted from 2009-2011 at selected wetlands across the state. Surveys continued in 2012. In addition, the Marsh Monitoring Program through Bird Studies Canada has long term marsh bird monitoring routes in the Great Lakes Basin part of New York. The common tern is a target species in both of these survey protocols. NYSDEC or its contractors conduct annual nest counts of the inland colonies.

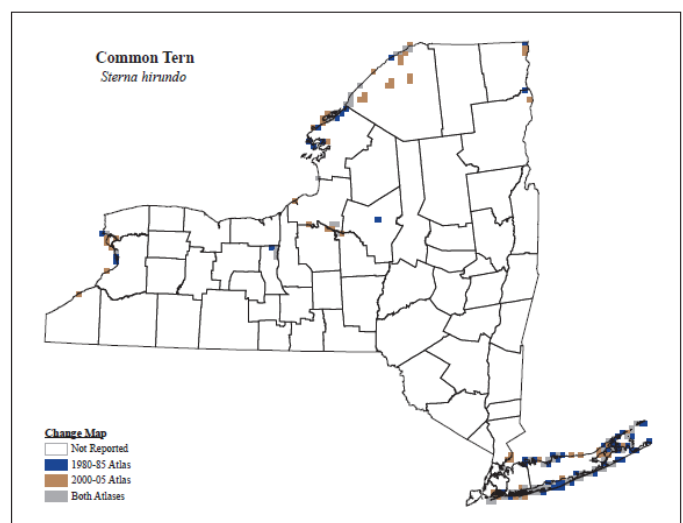
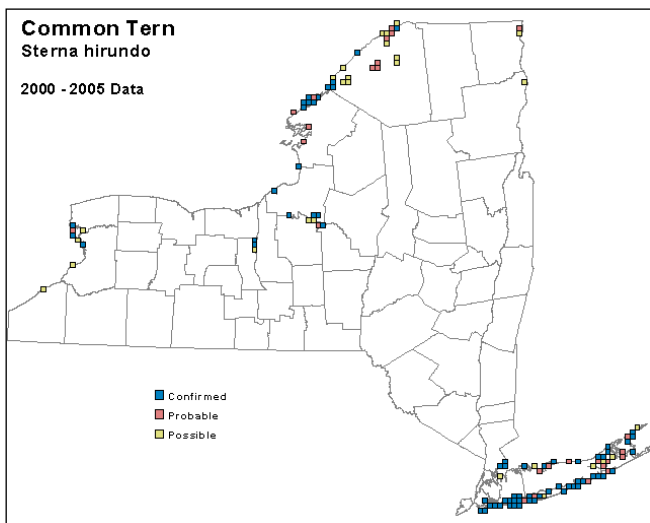
**Trends Discussion:**

The statewide distribution has remained relatively stable since the first Breeding Bird Atlas (1980-85) when confirmed nesting was documented in 68 blocks. During the second Breeding Bird Atlas (2000-05) confirmed nesting was documented in 77 blocks. Noteworthy since the 1980-85 Atlas are three new confirmed breeding records on the Hudson River in Westchester County and the continued effort by inland terns to make use of man-made nesting platforms (Richmond 2008). Inland populations expanded from 25 blocks during the first Atlas to 42 during the second (Richmond 2008). Year to year variation in numbers on Long Island is generally high. Numbers peaked with 27,270 pairs in 1987 and were at a low in 1995 of 17,442 pairs (Hays 1998, Sommers and Alfieri 1998).

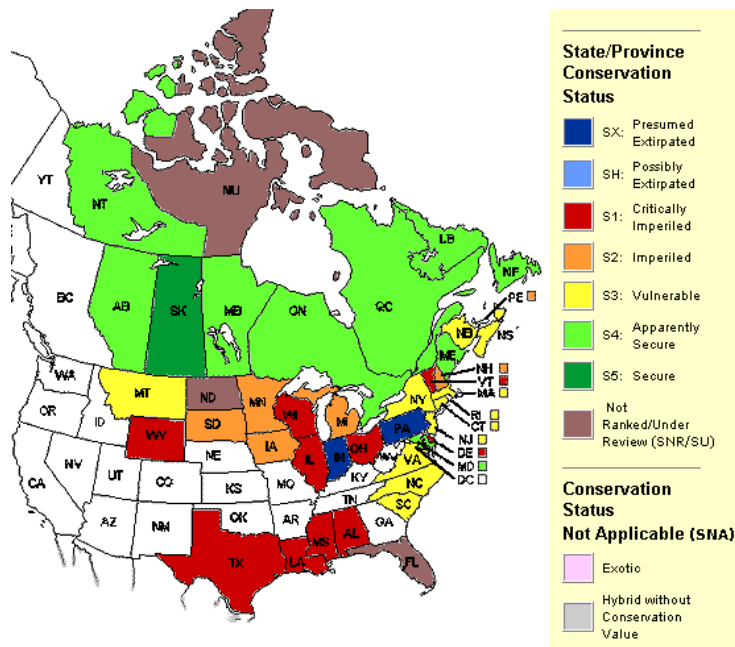
The range in southern Great Lakes has contracted since 1960, but terns nested in all Great Lakes states except Indiana during 1990s (Cuthbert and Timmerman 2001).



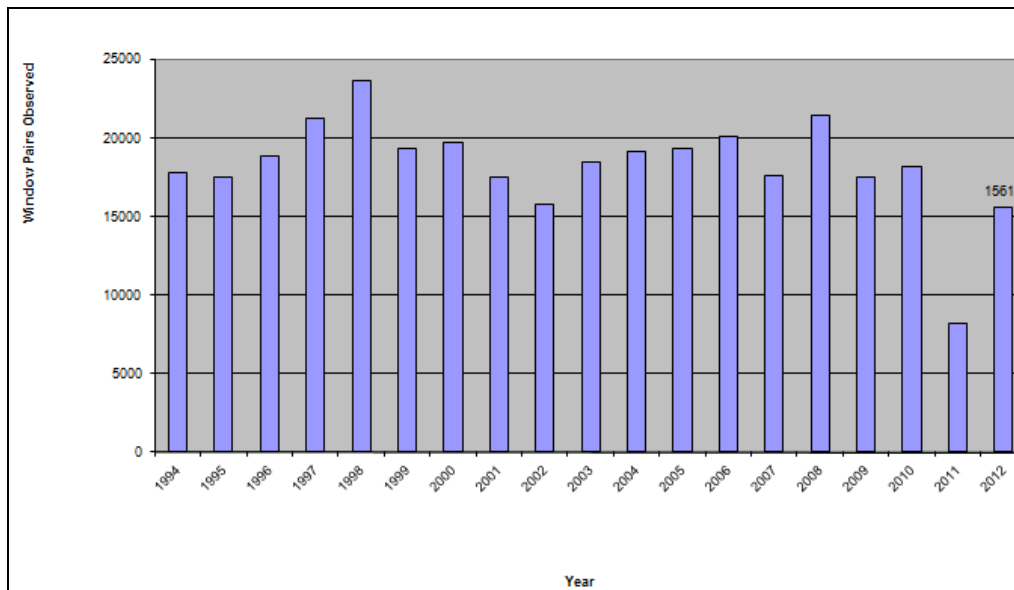
**Figure 1:** Distribution of common tern in North America (Birds of North America Online).



**Figure 2:** Occurrence of common tern in New York during the second Breeding Bird Atlas (left), and change in occurrence since the first Atlas (right) (McGowan and Corwin 2008).



**Figure 3:** Conservation status of common tern in North America (NatureServe 2013).



**Figure 4:** Number of common tern breeding pairs in New York, 1994-2012 (Chip Hamilton, personal communication).

**III. New York Rarity, if known:**

<b>Historic</b>	<b><u># of Animals</u></b>	<b><u># of Locations</u></b>	<b><u>% of State</u></b>
<b>prior to 1970</b>	_____	_____	_____
<b>prior to 1980</b>	_____	_____	_____
<b>prior to 1990</b>	_____	<u>122 blocks</u>	<u>2%</u>

**Details of historic occurrence:**

The first Breeding Bird Atlas (1980-85) documented common tern in 122 survey blocks statewide (Andrle and Carroll 1988).

<b>Current</b>	<b><u># of Animals</u></b>	<b><u># of Locations</u></b>	<b><u>% of State</u></b>
	_____	<u>121 blocks</u>	<u>2%</u>

**Details of current occurrence:**

The second Breeding Bird Atlas (2000-05) documented common tern in 122 survey blocks statewide (McGowan and Corwin 2008); there was no significant change in occurrence in the past 20 years.

Four Important Bird Areas in upstate New York host more than 300 pairs of common terns. Buffalo Harbor is the largest, with 1,100 pairs. Seven IBAs on Long Island have more than 500 pairs. The largest is Great Gull Island with about 10,000 pairs.

**New York’s Contribution to Species North American Range:**

**Distribution** (percent of NY where species occurs)

- X 0-5%
- \_\_\_ 6-10%
- \_\_\_ 11-25%
- \_\_\_ 26-50%
- \_\_\_ >50%

**Abundance** (within NY distribution)

- X abundant
- \_\_\_ common
- \_\_\_ fairly common
- \_\_\_ uncommon
- \_\_\_ rare

**NY’s Contribution to North American range**

- X 0-5%
- \_\_\_ 6-10%



- 11-25%
- 26-50%
- >50%

**Classification of New York Range**

- Core
- Peripheral
- Disjunct

**Distance to core population:**

\_\_\_\_\_

**IV. Primary Habitat or Community Type:**

1. Great Lakes Dune and Swale
2. Maritime Dunes
3. Freshwater Marsh
4. Great Lakes Freshwater Estuary Marsh
5. Estuarine, Freshwater Intertidal, Artificial Structure
6. Marine Intertidal Gravel/Sand Beach
7. Lake and River Shore/Beach

**Habitat or Community Type Trend in New York:**

Declining       Stable       Increasing       Unknown

**Time frame of decline/increase:** Since 1970s

**Habitat Specialist?**                       Yes       No

**Indicator Species?**                       Yes       No

### **Habitat Discussion:**

Common terns use a variety of habitats and may be found on coastal beaches or barrier islands, marshes, or inland lakes (NatureServe 2011). They nest on sand, gravel, shell, or cobble in open areas with some scattered vegetation or other cover in which chicks can find shelter (Nisbet 2002). Selection of nesting locations may vary by habitat in different parts of the state. On two islands in Oneida Lake, Severinghaus (1982) found common terns selected dried grass as the nesting substrate over stony areas when available and these nests hatched significantly more young than nests located on stony substrate. The relatively recent discovery and apparent expansion into saltmarshes since the 1970s (Burger and Lesser 1978, Buckley and Buckley 1980) has led to some conjecture as to whether beaches are the preferred habitat on Long Island and human disturbance has forced common terns to nest in lower quality marsh habitat which is subject to increased flooding (Buckley and Buckley 2000).

On Lake Erie and the St. Lawrence and Niagara rivers, most of the common tern nest sites are on manmade structures including break waters, water intake structures, and navigation cells.

### **V. New York Species Demographics and Life History**

- Breeder in New York**
  - Summer Resident**
  - Winter Resident**
  - Anadromous**
- Non-breeder in New York**
  - Summer Resident**
  - Winter Resident**
  - Catadromous**
- Migratory only**
- Unknown**

### **Species Demographics and Life History Discussion:**

Breeding occurs annually starting from 2-4 years of age, with most individuals breeding at 3 years of age. At breeding sites, the main cause of adult mortality is predation by peregrine falcon, great

horned owl, or mink. Nest predation occurs by fox, crow, raccoon, opossum, Norway rat, and American oystercatcher. Predation of chicks by feral cat, gull, raccoon, fox, and crow limits productivity of nesting birds. Also, ring-billed gulls and herring gulls compete for nest sites.

## **VI. Threats:**

Threats to common tern colonies include human disturbance, high predation rates from predators associated with human development (raccoons, cats), and flooding and habitat loss due to storms and rising sea-levels due to predicted global climate change (NatureServe 2011). In an assessment of vulnerability to predicted climate change conducted by the New York Natural Heritage Program, common tern was identified as a second-priority species whose sensitivity should be assessed in the future (Schlesinger et al. 2011).

Boating near saltmarsh islands and beach driving and recreation near barrier beach colonies can disturb nesting birds, leaving nests and young vulnerable to predation. Such human disturbances can result in increased egg and chick mortality, premature fledging, and reduced body mass or slower growth of nestlings (Veen 1977, Schreiber, Parsons and Burger 1982 *in* Burger 1998). Burger (1998) found that among different types of boats, personal watercraft elicited the strongest disturbance response by nesting common terns because of their ability to travel fast in shallow water.

Elevated levels of environmental toxins such as DDE, DDT, PCBs, mercury, lead, selenium, chromium, and cadmium have been found in common tern tissues, feathers and eggs in parts of their range (Hays and Risebrough 1972, Custer et al. 1986, Burger and Gochfeld 1988b, Burger et al. 1992, Bishop et al. 1992, Nisbet 2002). Common terns are particularly susceptible to the effects of DDE and DDT which can cause eggshell fragility and issues with embryo and chick growth and reproductive fitness in adults. Although concentrations of organochlorides like DDT, DDE, and PCBs affected common tern populations historically, concentrations were already declining when first reported in the 1960s and 70s (Bishop et al. 1992, Nisbet and Reynolds 1984, Nisbet 2002). Significant levels of DDE, high enough to reduce hatching success, persisted in common terns in some Great Lakes sites into the 1980s (Weseloh et al. 1989, Hoffman et al. 1993).

Displacement by herring gull and great black-backed gull has been an issue on coastal sites (Kress et al. 1983) and displacement by herring gull and ring-billed gull has been an issue on the Great Lakes (Courtney and Blokpoel 1983).

Rising sea levels are expected to inundate the coastal beaches, barrier islands, and mud flats that provide habitat for shorebirds; storm tides may inundate nests (North American Bird Conservation Initiative 2010).

**Are there regulatory mechanisms that protect the species or its habitat in New York?**

\_\_\_ No      \_\_\_ Unknown  
 X  Yes

The common tern is listed as a threatened species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a take of a species listed as Threatened or Endangered, including, but not limited to, actions that may kill or harm individual animals or result in the adverse modification, degradation or destruction of habitat occupied by the listed species.

Common tern is protected under the Migratory Bird Treaty Act of 1918. The Tidal Wetlands Act provides protection for all tidal wetlands under Article 25 of the NYS Conservation Law.

**Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:**

Common terns will make use of man-made nesting platforms and have successfully fledged young on these nesting platforms. Burger (1998) recommended that personal watercraft be restricted within 100m of nesting colonies. Conservation actions following IUCN taxonomy are categorized in the table below.

Conservation Actions	
Action Category	Action
Land/Water Protection	Site/Area Protection
Land/Water Protection	Resource & Habitat Protection
Land/Water Management	Site/Area Management
Land/Water Management	Invasive/Problematic Species Control
Land/Water Management	Habitat & Natural Process Restoration
Education & Awareness	Awareness & Communications
Species Management	Species Recovery (nesting platforms)
External Capacity Building	Alliance & Partnership Development

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for beach and island ground-nesting birds, which includes common tern.

**Easement acquisition:**

- \_\_\_ Protect nesting and foraging habitat and associated upland buffers through acquisition, easement and through regulatory constraints on development.

**Educational signs:**

- \_\_\_ Post interpretive signage at all public nesting locations.

**Fact sheet:**

- \_\_\_ Update Endangered Species fact sheets to reflect current status of species in New York.

**Habitat management:**

- \_\_\_ Encourage the establishment of nesting and foraging populations by protecting newly created suitable habitat produced as a result of overwash and/or breaches with symbolic fencing and posting.
- \_\_\_ Encourage and support a "no net increase" in shoreline armoring along Long Island bays and harbors.
- \_\_\_ Encourage compliance with the recommendations for habitat and recreation management contained within Federal and State Recovery Plans for beach-nesting species.
- \_\_\_ Encourage landowners to control predators that represent significant threats to the viability of species. Options to be considered include control of predators through contact with a licensed nuisance wildlife control person, allowing hunting and/or trapping during legally specified seasons and habitat modification to remove roosting or denning sites of nest predators. It is recommended that the mechanism for predator control by landowners be done in consultation with DEC.
- \_\_\_ Where possible, protect nesting areas from human disturbance by posting, electric fencing and symbolic fencing. Also, control density and composition of vegetation at breeding sites to maintain suitability for nesting. Accomplish through planting of fresh spoil sites with desired species and grading and/or spoil deposition at sites where vegetation has become too dense.
- \_\_\_ Enhance substrate on manmade structures utilized by terns for nesting.

**Habitat research:**

- \_\_\_ Support and encourage habitat research projects that would help define preferred habitat in order to guide restoration efforts and focus habitat protection efforts.
- \_\_\_ Assess beach driving activities, locations and impacts.

**Habitat restoration:**

- \_\_\_ Encourage and support policies that purchase storm-damaged homes within the coastal erosion hazard area for the purposes of beach and dune habitat restoration.
- \_\_\_ Where possible, reestablish high quality foraging habitats by either manufacturing sand flats, mudflats or overwash fans or allowing such formations to build naturally. Also, ephemeral pool creation adjacent to beach nesting habitat will be pursued.
- \_\_\_ Where possible, nesting habitat will be expanded to create new nesting opportunities for species. This will be accomplished through dredge spoil management, input into beach re-nourishment projects and de-vegetation of formally suitable sites.

**Life history research:**

- \_\_\_ Support research that addresses priorities established in the Tern Management Handbook (Kress and Hall 2002) and similar planning documents that have been prepared through interstate and interagency working groups.

**Other action:**

- \_\_\_ Minimize and mitigate habitat impacts from development and public works projects by pursuing a goal of no net loss of habitat at a project location.
- \_\_\_ Establish and/or maintain enforcement of no-work windows within breeding habitats during the breeding season (April 1 - September 1 on Long Island).
- \_\_\_ Educate the public on the impacts of domestic cats on birds and encourage landowners to keep their cats indoors.
- \_\_\_ Secure funding to initiate new beach-dependent species programs.

**Population monitoring:**

- \_\_\_ Annual surveys will track population status at known breeding locations.

**Regional management plan:**

- \_\_\_ Develop a long term management plan that establishes population objectives for all beach-dependent breeding birds and management recommendations to achieve them.

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