Species Status Assessment

Common Name: Least tern **Date Updated:** March 10, 2025

Scientific Name: *Sternula antillarum* **Updated By:** Meghan Oberkircher

Class: Aves

Family: Laridae

Species Synopsis *(a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):*

The least tern was reclassified from the paraphyletic genus *Sterna* to the genus *Sternula* (Banks et al. 2006). Least terns nest along the Atlantic Coast from southern Maine to Florida and along the Gulf of Mexico to Texas. In New York, least terns are present from May through September, breeding on the north and south shores of Long Island.

The second Breeding Bird Atlas (2000-05) showed a shift in distribution since the first Atlas (1980-85) that resulted in a gap along the south shore of Long Island and re-population of areas on the north shore. This shift coincides with expansion of the federally endangered piping plover population and accompanying management and protection efforts, which also benefit least terns. Despite annual variability, the number of breeding pairs of least tern has remained stable from 2001 to 2022 according to the Long Island Colonial Waterbird Survey. Breeding Bird Survey data for the United States show a non-significant decline of -2.7% per year from 1993-2022; the data are problematic because BBS methods are not conducive to surveying beach-nesting species.

I. Status

a. Current legal protected Status

i. **Federal:** Not listed **Candidate:** N/A

ii. **New York:** Threatened

b. Natural Heritage Program

i. Global: G4

ii. New York: S3B **Tracked by NYNHP?:** Yes

Other Ranks:

-NYS 2025 SGCN status: Species of Greatest Conservation Need
-The interior population (central U.S.) was listed as endangered in 1985 and delisted in 2021.
-The California Least Tern (subspecies) has been listed as endangered since 1970.
-USFWS Bird of Conservation Concern
-Species of Northeast Regional Conservation Concern
-IUCN: Least Concern
-Northeast Regional SGCN: RSGCN

Status Discussion:

Least tern is a common local breeder and a common to abundant migrant on Long Island. It is a rare visitant elsewhere in New York. Populations are increasing Massachusetts but declining in Connecticut. Least tern is ranked as Vulnerable in New York and as Imperiled in Massachusetts and Connecticut. It is ranked as Critically Imperiled in New Jersey.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Declining	Declining	1999-2009		-
Northeastern US	Yes	Stable	Stable	1999-2009		-
New York	Yes	Stable	Stable	2000-2022		Yes
Connecticut	Yes	Declining	Declining	1998-2004	Threatened	Yes
Massachusetts	Yes	Increasing	Stable	1990-2021	Special Concern	Yes
New Jersey	Yes	Stable	Declining	1976-2024	Endangered	Yes
Pennsylvania	No	-	-			-
Vermont	No	-	-			-
Ontario	No	-	-			-
Quebec	No	-	-			-

Column options
Present?: Yes; No; Unknown; No data; (blank) or Choose an Item
Abundance and Distribution: Declining; Increasing; Stable; Unknown; Extirpated; N/A; (blank) or Choose an item
SGCN?: Yes; No; Unknown; (blank) or Choose an item

Monitoring in New York *(specify any monitoring activities or regular surveys that are conducted in New York):*

Surveys for least tern are conducted annually during the Long Island Colonial Waterbird Survey.

Trends Discussion *(insert map of North American/regional distribution and status):*

Least terns were extirpated from New York from 1882 until 1926 (Cruickshank 1942). By the 1970s, surveys documented colonies at 29 to 47 active sites from Staten Island to the Peconic Bay and Fishers Island, as far west along the north shore to Eaton's Neck where 851 pairs nested in 1976 (Peterson 1988). By the mid-1970s, colonies had been established around much of coastal New York with as many as 2,600 pairs nesting at 29 to 47 colonies (Peterson 1988).

The species was listed as endangered in New York in 1983. During the mid-1980s, there were as many as 3,000 pairs at 39 to 59 sites. Through the 1990s, the population averaged 2,500 to 3,500 pairs at 40

to 60 sites each year. Because populations appeared to be stable, least tern was reclassified as a threatened species in New York in 1999. The Long Island Colonial Waterbird Survey documented 2,246 pairs of nesting least terns at 62 active sites (out of 173 sites) in 2022. From 2001-2022 the population has remained stable, averaging 2,613 nesting pairs.

Wasilco (2008) noted changes in the distribution of least tern that became apparent during the second Breeding Bird Atlas survey. Areas on the north shore that appeared as gaps during the first Atlas have been filled with breeding records while areas on the south shore have been abandoned. This shift coincides with expansion of piping plover nesting and accompanying management and protection efforts, which also benefit least terns.

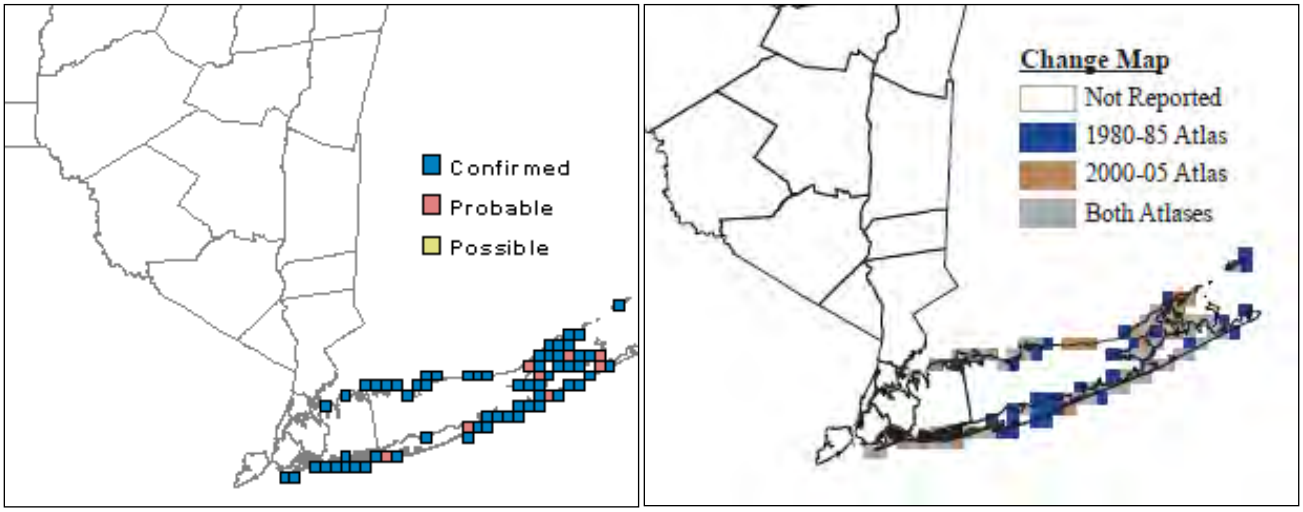

Figure 1. Distribution of least tern in New York during the first Atlas(left) and change in the distribution of least tern since the first Atlas (McGowan and Corwin 2008).

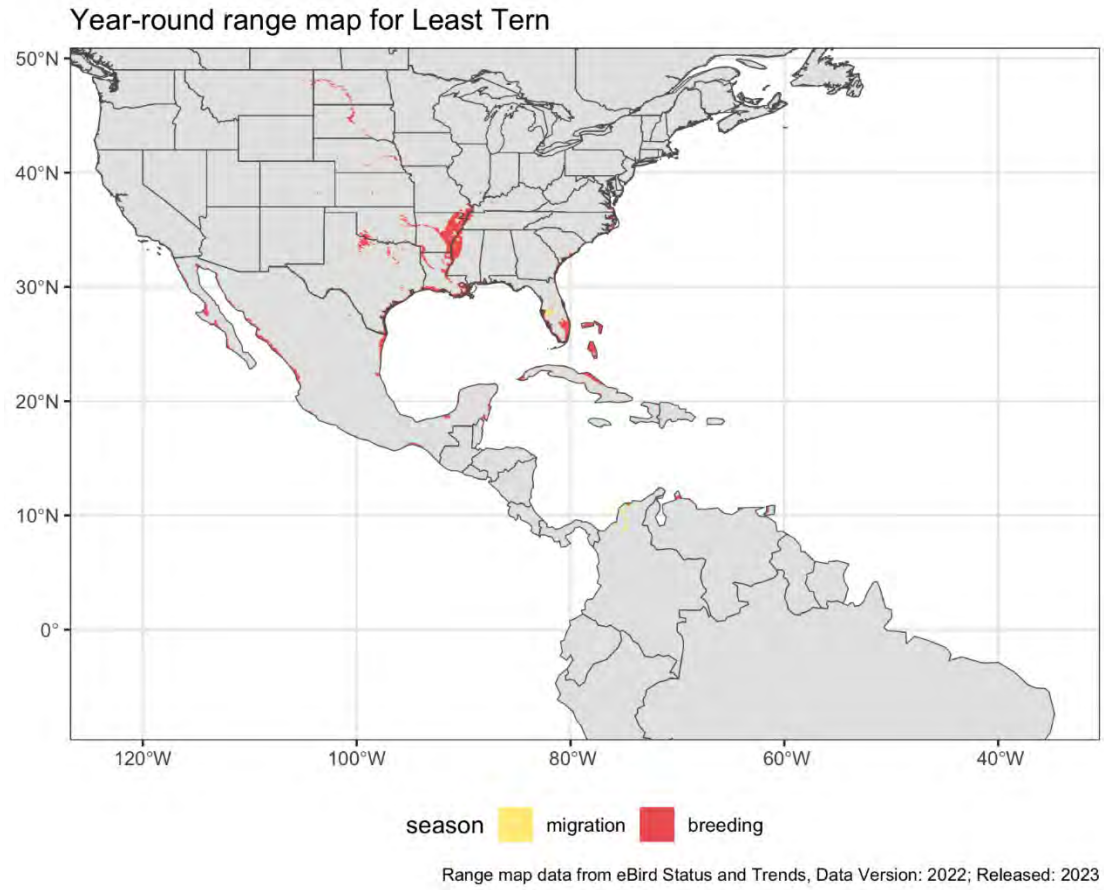

Figure 2. Full (year-round) range for least tern. (eBird).

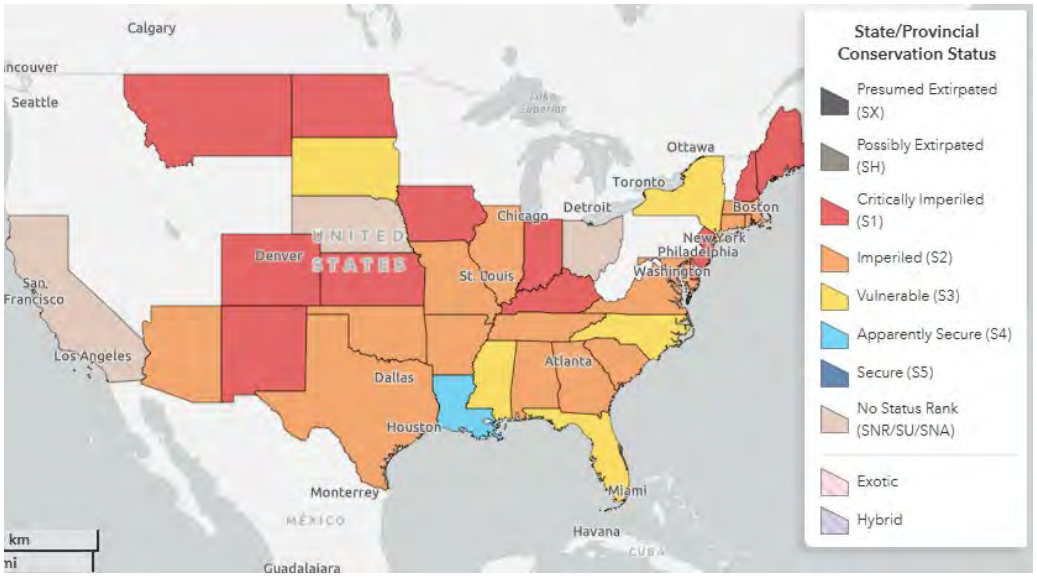

Figure 3. Conservation status of least tern in North America (NatureServe 2024).

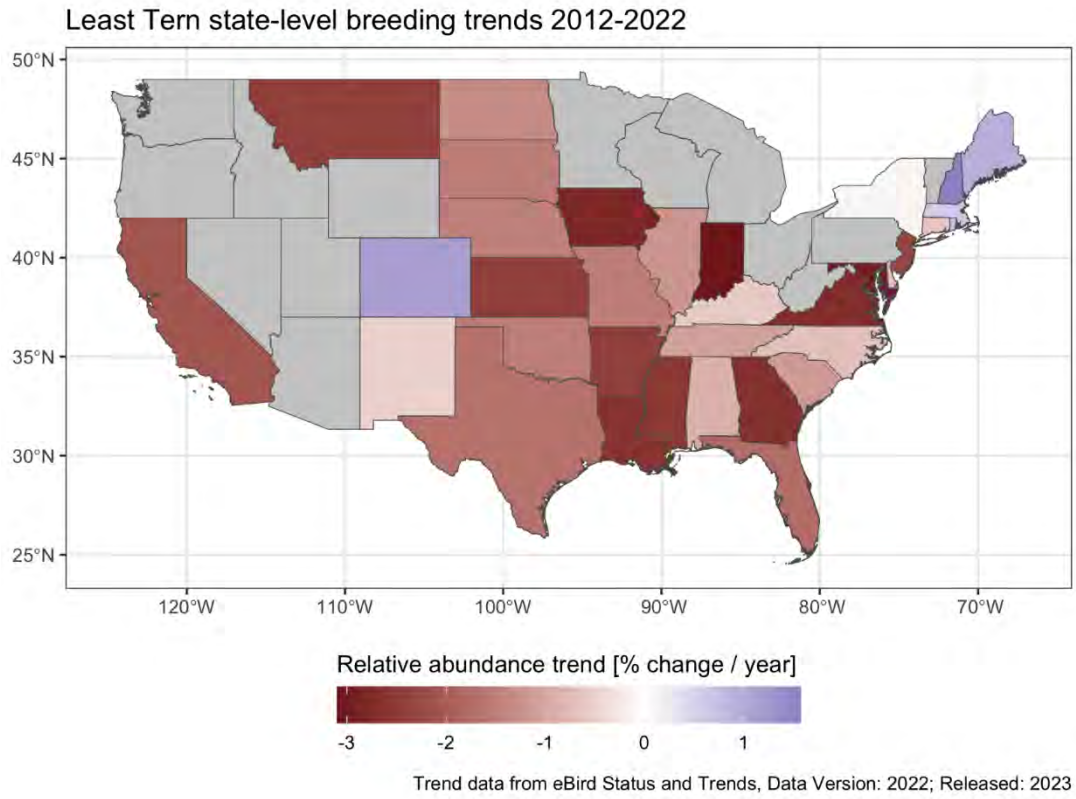

Figure 4. Trends, by state, for least tern (eBird).

III. New York Rarity *(provide map, numbers, and percent of state occupied)*

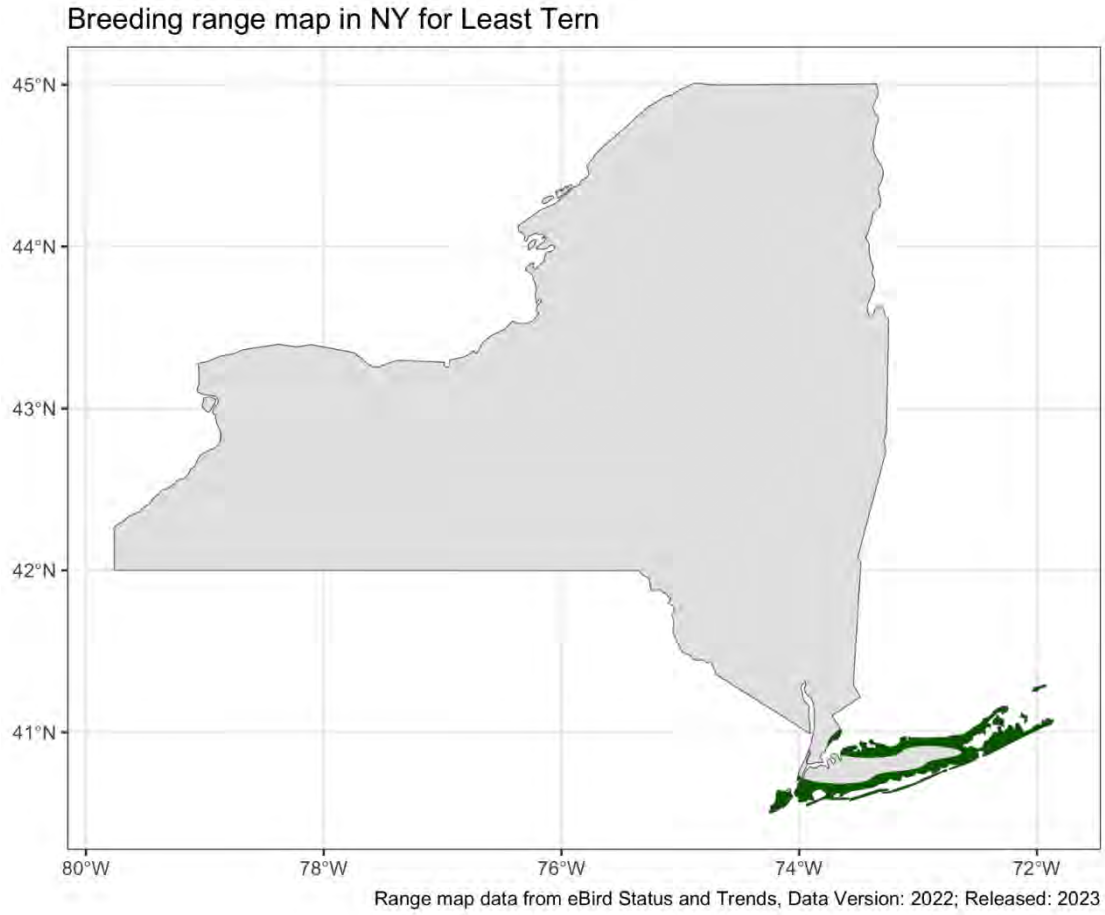

Figure 5. NYS breeding range for least tern (eBird).

Details of historic and current occurrence:

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 87 blocks, 1.63% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 69 blocks, 1.29% of the survey blocks statewide, not a significant change since the first atlas (McGowan and Corwin 2008).

The third BBA (2020-25) is currently underway and utilizes a different number and layout of survey blocks across New York, making direct comparison with the first two Atlases difficult. There were 5,333 blocks in the first and second BBAs, and there are 5,710 blocks in the current BBA, of which 1,815 are considered priority blocks. To date, least tern has been documented in 28 priority blocks, 1.5% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2023).

New York's Contribution to Species North American Range:

Based on eBird data, 1.68 percent of the population breeds in New York, while 0 percent of the non-breeding population occurs in New York. Among all states with breeding populations, New York ranks 8 of 31.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	

Column options
Percent of North American Range in NY: 100% (endemic); 76-99%; 51-75%; 26-50%; 1-25%; 0%; Choose an item
Classification of NY Range: Core; Peripheral; Disjunct; (blank) or Choose an item

IV. Primary Habitat or Community Type *(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):*

a. Maritime Dunes
b. Estuarine, Brackish Intertidal, Tidal Wetland, High Marsh
c. Estuarine, Brackish Intertidal, Benthic Geomorphology, Tidal Flat
d. Marine Intertidal Gravel/ Sand Beach

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/Increase
No	No	Declining	

Column options
Habitat Specialist and Indicator Species: Yes; No; Unknown; (blank) or Choose an item
Habitat/Community Trend: Declining; Stable; Increasing; Unknown; (blank) or Choose an item

Habitat Discussion:

In New York, least terns are locally common in coastal areas with suitable habitat of sandy substrates that are relatively free of vegetation; it is rare away from salt water. As open sandy areas become vegetated, they are no longer suitable for nesting until they are disturbed in some way to recreate the preferred sandy conditions. They will nest on dredge material and are capable of colonizing newly available areas.

Least Terns nest on open sand of ocean beaches, sand flats, barrier islands and dredges. Nesting locations appear to be a tradeoff between avoiding predators that access colonies from the dunes and flooding from high tides (Burger and Gochfeld 1990). Although Least Terns select more barren and relatively homogenous habitats than other tern species, a small amount of vegetation may be useful for chicks to gain shelter once they hatch (Burger and Gochfeld 1990). Least Terns often nest near Piping Plovers (Charadrius melodus); perhaps capitalizing on the increased protection from disturbance by beach goers, pets and ORVs offered by posting and fencing for Piping Plovers.

V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/ Catadromous?
Yes	No	No	Yes	No	Choose an item.

Column options
First 5 fields: Yes; No; Unknown; (blank) or Choose an item

Anadromous/Catadromous: Anadromous; Catadromous; (blank) or Choose an item

Species Demographics and Life History Discussion *(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):*

Most least terns begin breeding in their third year (Massey and Atwood 1981). Adults typically attempt to breed every year once they have started nesting. Only one successful brood is produced per season. On Long Island, New York, terns tend to nest in the same area in successive years if physical conditions are conducive to nesting (MacLean et al. 1991). Young of the year move from the natal colony within few weeks of fledging. Some terns banded as chicks were re-sighted breeding for the first time far from their natal area. One chick that was banded on Gulf Coast of Texas later nested in Kansas (Boyd and Thompson 1985).

Exposure is the greatest cause of mortality. Eggs and chicks frequently are killed by storm tide flooding in coastal areas, flooding of river sandbars, and sheet flooding of salt flats or mudflats. On sloping dredge piles, eggs have been swept out of nests during heavy rains. Eggs can die when exposed to cold or heat when adults are kept away from nests by human intruders, predators, or human recreation near nests. Eggs are sometimes buried by drifting sand from strong winds.

There is limited information of lifetime reproductive success. In California, lifetime productivity is estimated as 1.49 fledglings/adult on basis of calculated breeding life of 9.6 years (Massey et al. 1992). Substantial variation in estimated productivity relates to annual variation in colony outcomes, difficulty in locating young that fledge, and uncertainty about contribution of re-nesting.

Record longevity is 24 years, 1 month for a least tern banded in Massachusetts and recovered in New Jersey (Klimkiewicz and Futcher 1989).

VI. Threats *(from NY 2015 SWAP or newly described):*

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
6. Human Intrusions & Disturbance	6.1 Recreational Activities	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.3 Other Ecosystem Modifications	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.2 Problematic Native Plants & Animals	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.2 Industrial & Military Effluents	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.1 Habitat Shifting & Alteration	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.5 Storms & Severe Weather	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to least tern.

As a beach-nesting bird, least tern chicks and eggs are lost each year to beach maintenance equipment and during annual Fourth of July fireworks and associated nighttime human presence on nesting areas. Airboats, off-road vehicles, and human recreationists can be detrimental to eggs and chicks. Wasilco (2008) suggests that disturbance by human recreationists has pushed least terns to start new colonies in the same areas where piping plovers breed, thereby benefiting from the protection afforded this endangered species.

Vegetative succession and lack of new dredge spoil are likely reasons for loss of tern colonies on the islands within the south shore bays of Long Island. Remaining habitats are subject to rising sea levels due to global climate change, and to storm surges (North American Bird Conservation Initiative 2010). In an assessment of vulnerability to predicted climate change conducted by the New York Natural Heritage Program, least tern was identified as a second-priority species whose sensitivity should be assessed in the future (Schlesinger et al. 2011).

Because their diet consists primarily of fish, bioaccumulation of pesticides, heavy metals, and PCBs has potential for negative effect on Least Tern populations though this has not been quanitified.

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

Yes: ✓ **No:** _____ **Unknown:** _____

If yes, describe mechanism and whether adequate to protect species/habitat:

The least 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.

Least terns are 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. Least terns benefit from protection provided to federally-endangered piping plovers, as the breeding habitat is shared.

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

Generally, conservation measures have been directed at altering vegetation succession, reducing predation, or controlling human activities. Signs and symbolic fencing are used to lower human disturbance, and electric fencing to deter predators is used to protect nesting least terns. Artificial nesting sites have been constructed in some areas to provide more habitat and chick shelters are deployed in sites where young terns are vulnerable to the elements.

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct habitat management	Site/Area management
A.1 Direct Habitat Management	A.1.1.0.0 Manage plants, animals, fungi, or bacteria	Invasive/Problematic species control
A.2 Direct Species Management	A.2.1.1.2 Nest boxes, roosts, and other artificial maternities	Species Recovery (nesting platforms)
B.3 Outreach	B.3.1.4.0 Public outreach and information	Awareness & Communications
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	-Site/Area protection -Resource/Habitat Protection
C.6 Design and Plan Conservation	C.6.5.1.3 Develop a conservation, management, or restoration plan for protected private lands	Habitat/Natural process restoration
C.10 Institutional Development	C.10.2.0.0 External support and organizational development	Alliance and Partnership Development

Table 2. Recommended conservation actions for least tern.

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