Species Status Assessment

Common Name:	Saltmarsh Sparrow	**Date Updated:**	2024-12-20
Scientific Name:	*Ammospiza caudacuta*	**Updated By:**	Tgh, V. Bonaiuto
Class:	Aves		
Family:	Passerellidae		

Species Synopsis

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

The sharp-tailed sparrow group was split in 1995 to recognize two distinct species: saltmarsh sharp-tailed sparrow (*Ammodramus caudacutus*) and Nelson's sharp-tailed sparrow (*A. nelsoni*). "Sharp-tailed" was subsequently dropped from each common name (AOU 2009). The two species replace each other geographically with saltmarsh sparrow breeding and wintering along the Atlantic Coast and Nelson's sparrow occurring in the Canadian Great Plains, Hudson and James bays, and the northern Atlantic Coast. There is overlap of the two species from Maine to Massachusetts and it has been suggested that this hybridization zone is expanding southward (Hodgman et al. 2002).

As its name implies, saltmarsh sparrow is an obligate species of brackish and salt marshes. Available data on population trends for saltmarsh sparrow suggest that loss of coastal marsh habitat over the past 100 years has resulted in population reductions and local extirpations (DiQuinzio et al. 2001). New York's Breeding Bird Atlas in 1980-85 (Lent 1988) provided the first comprehensive evaluation of the species in New York (Greenlaw 2008). During that period, breeding was confirmed only in the salt marshes of the Coastal Lowlands with a concentration on the South Shore of Long Island. The second Atlas in 2000-05 documented this sparrow in nearly the same distribution, though in 15% fewer survey blocks.

I. Status

a. Current legal protected Status

i. Federal: Not listed **Candidate:**

ii. New York: Not listed: protected native

b. Natural Heritage Program

i. Global: G2

ii. New York: S3B **Tracked by NYNHP?** On Watch List

Other Ranks:

NYS 2025 SGCN status: High Priority Species of Greatest Conservation Need
COSEWIC: Not listed in Canada
IUCN Red List: Not assessed by IUCN Red List
Northeast Regional SGCN: RSGCN

Status Discussion:

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Declining	Declining	1995-Present		
Northeastern US	Yes	Declining	Declining	1995-Present		RSGCN
New York	Yes	Declining	Declining	1980-present	S3B	Yes
Connecticut	Yes	Declining	Declining	2000-Present	SC; S2B	Yes
Massachusetts	Yes	Stable	Declining	Unknown	SC; S3	Yes
New Jersey	Yes	Declining	Declining	Unknown	T; S2B,S3N	Yes
Pennsylvania	Yes	Unknown	Unknown	Unknown	SNA	No
Vermont	No	-	-	Unknown		
Ontario	No	-	-	Unknown		
Quebec	No	-	-	Unknown		

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):

The Saltmarsh Habitat and Avian Research Program (SHARP) monitors populations of tidal marsh birds and the health of tidal habitats in the New England and Mid-Atlantic states. Saltmarsh sparrow is one of the focus species monitored on Long Island.

Trends Discussion

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

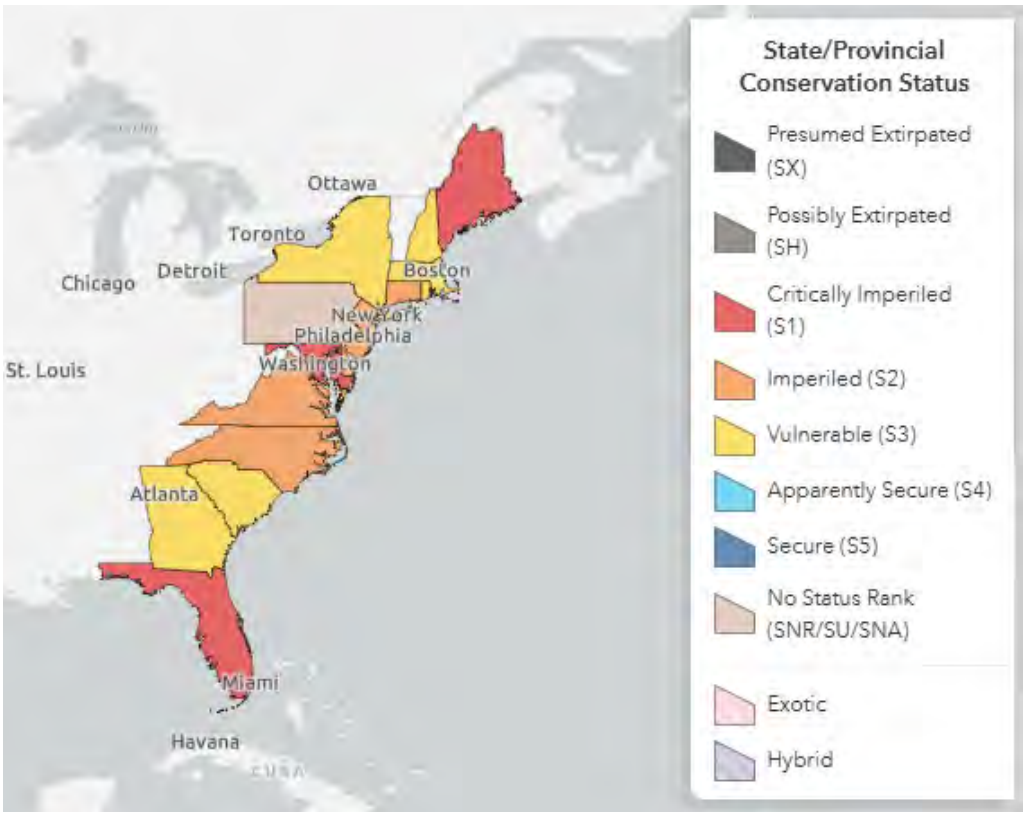

Figure 1. Conservation status of saltmarsh sparrow in North America (NatureServe 2025).

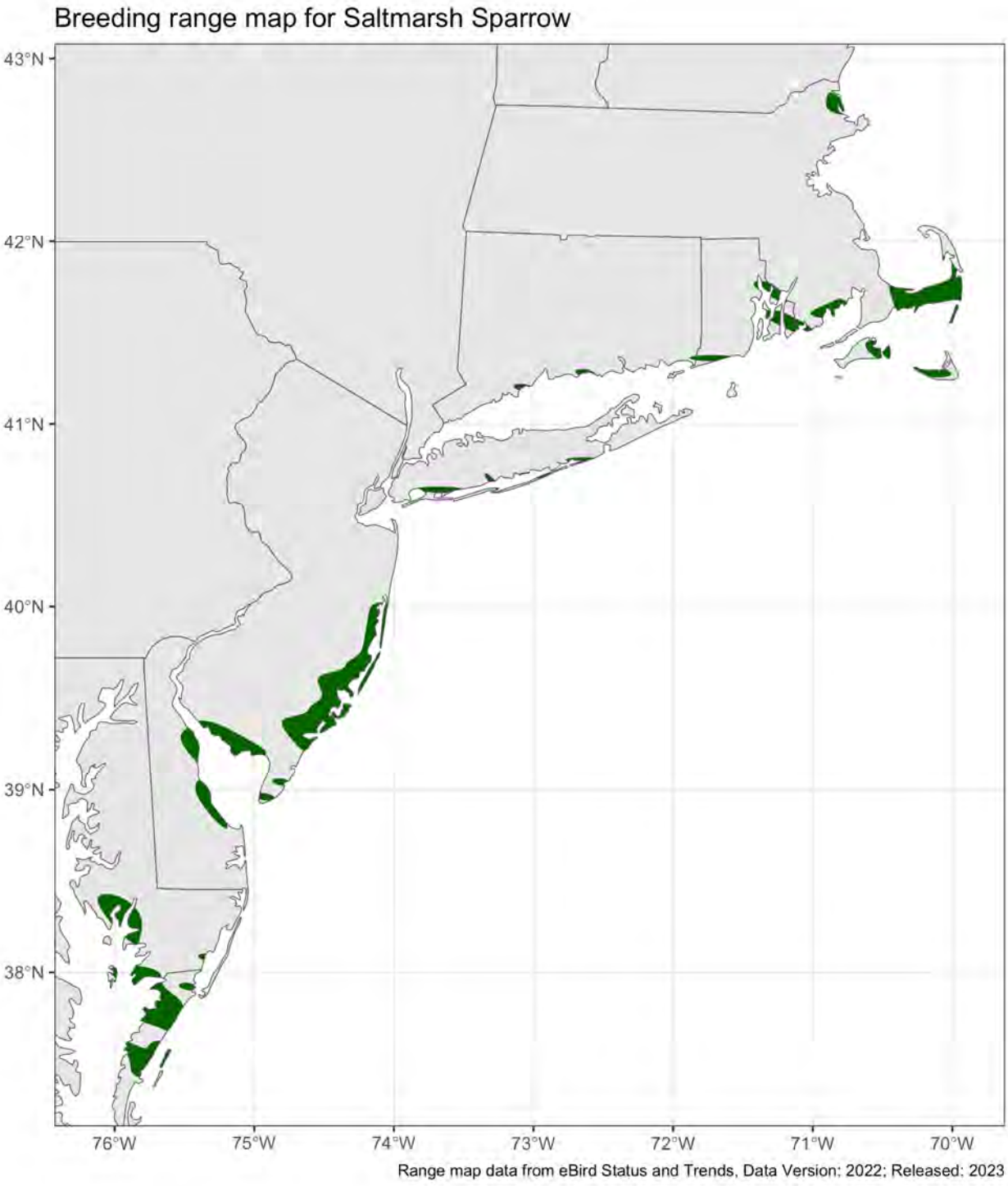

Figure 2. Breeding range for saltmarsh sparrow (eBird).

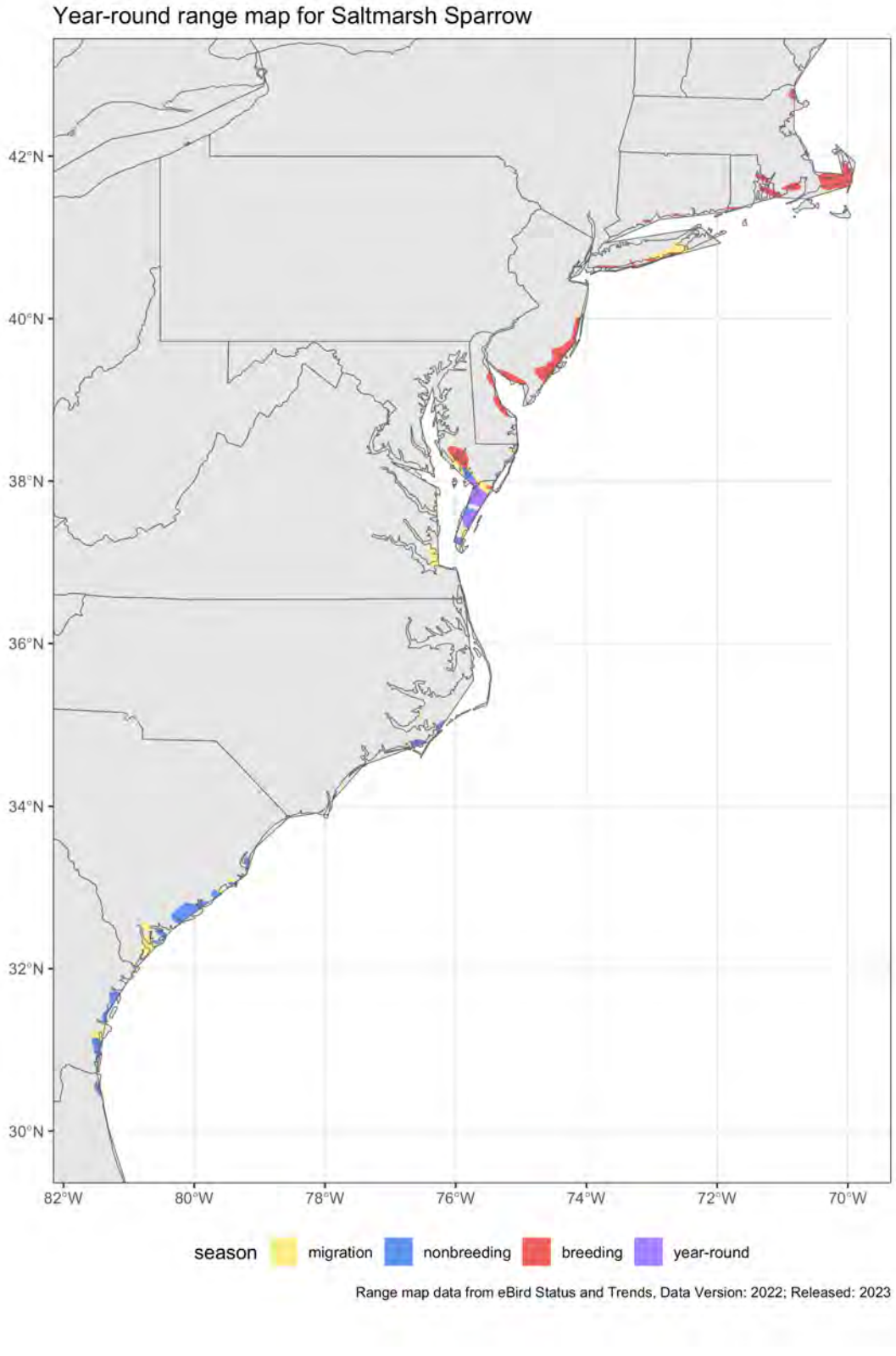

Figure 3. Year-round range of saltmarsh sparrow (eBird).

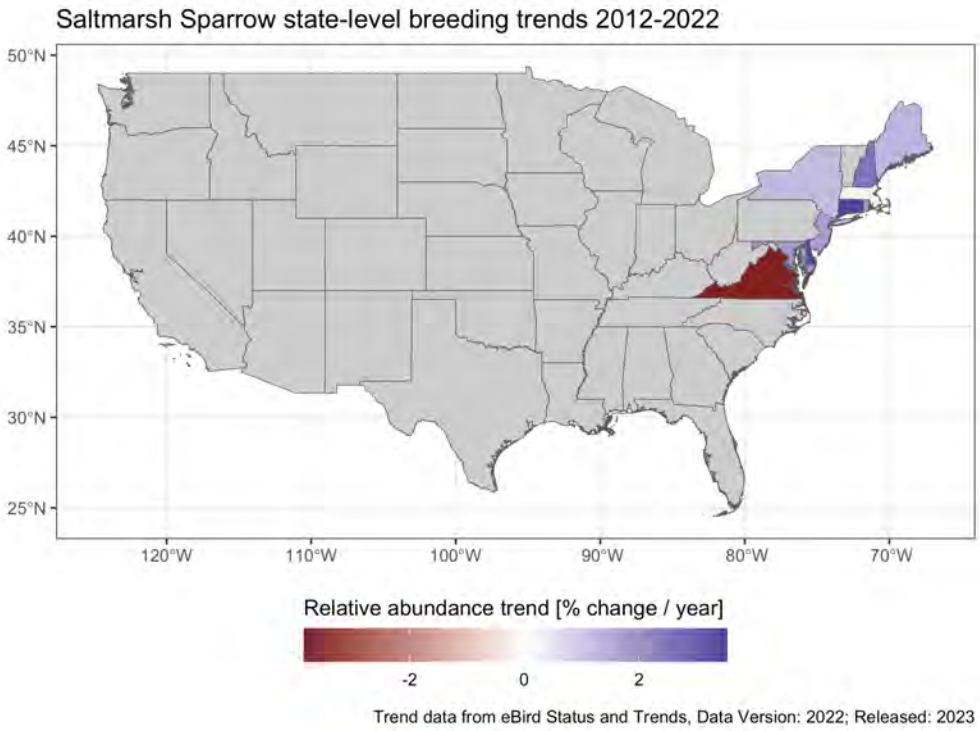

Figure 4. Trends, by state, of saltmarsh sparrow (eBird).

III. New York Rarity

(provide map, numbers, and percent of state occupied)

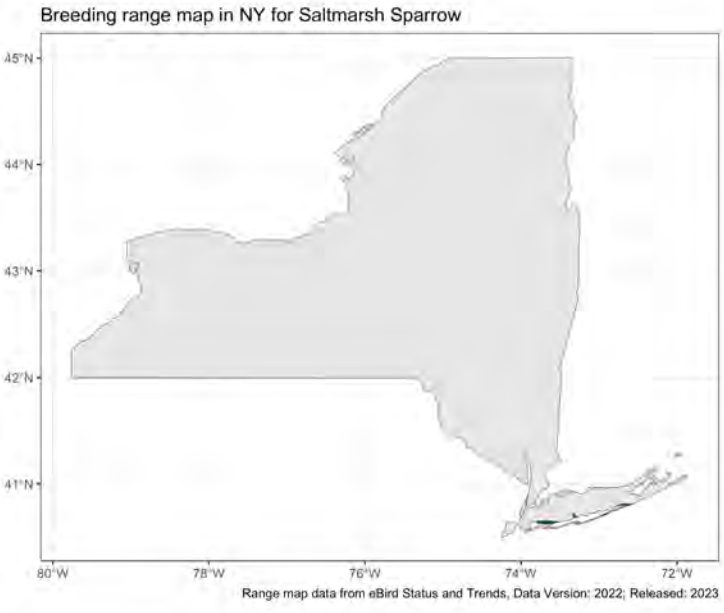

Figure 5. NYS breeding range of saltmarsh sparrow (eBird).

Details of historic and current occurrence:

Two notable historic sites are discussed in Lent (1988): a colony of more than 200 birds in a marsh adjacent to Jamaica Bay was lost when the marsh was filled to build the JFK International Airport (Elliot 1962); a colony at Piermont Marsh, “30 miles up the Hudson River from the Narrows” was apparently extirpated due to pollution around 1930 (Hill 1968).

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 72 blocks, 1.3% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 61 blocks, 1.1% of the survey blocks statewide (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, saltmarsh sparrow has been documented in 42 priority blocks, 0.9% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2024).

New York’s Contribution to Species North American Range:

Based on eBird data, 12.24 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 3 of 10.

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

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):

NatureServe broad habitat types: Herbaceous wetland

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/ Increase
Yes	Yes	Declining	Last 85+ Years

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:

Habitat includes coastal or tidal salt marshes. Saltmarsh sparrows breed in drier sections than seaside sparrow. They prefer areas with short grasses, especially *Spartina patens* & *Distichlis spicata.*

Found in a linear distribution along the Atlantic coast in salt marshes dominated by cordgrass, saltmeadow grass, and blackgrass (Woolfenden 1956). They nest on the ground under mat of grasses or several centimeters above wet ground in dense clump of grass (Byrd and Johnston 1991). Eighty percent of nests in a Rhode Island study were in high-marsh graminoids (DeRagon 1988).

V. Species Demographics and Life History

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

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):

The maximum observed lifespan for saltmarsh sparrows is 10 years for males and 6 years for females (Greenlaw 2020). Both male and female saltmarsh sparrows can breed at one years old, with clutch size ranging from 2-6 eggs. In New York, the average clutch size is 3.9 eggs (Greenlaw 2020). Saltmarsh sparrows show high fidelity to nesting sites. During the breeding season, individuals have a wide home range compared to other sparrow species. In New York, males core areas were a mean size of 4.3 ha, while females were 1.1ha (Greenlaw 2020).

Generally secretive; may be difficult to locate colonies and estimate population size (Byrd and Johnston 1991). U.S. east coast: males are not territorial; home ranges of about 1 hectare frequently overlap extensively; 17 males on 4.0 hectares have been recorded (Byrd and Johnston 1991).

VI. Threats

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
3. Energy Production & Mining	3.1 Oil & Gas Drilling	Choose an item. (oil spills)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.2 Dams & Water Management/Use	Choose an item. (ditching, dredging, fragmenting)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.3 Other Ecosystem Modifications	7.3.3 Natural erosion & sedimentation	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	8.1.4 Aquatic plants (common reed, *Phragmites australis;* habitat degradation)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.2 Industrial & Military Effluents	9.2.5 Mercury	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. (rising sea level)	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.	Choose an item.

Table 1. Threats to saltmarsh sparrow.

Any activities that would result in loss or degradation to saltmarsh habitat—ditching, dredging, and fragmenting—are threats to this species. Stedman and Dahl (2008) estimate the loss of almost 20,000 acres (0.9%) of saltwater wetlands along the Atlantic Coast from 1998 to 2004. Sea-level rise resulting from climate change is expected to have a significant impact on all coastal nesting species. An expected increase in the frequency and severity of coastal storms are also serious threats to reproductive success (Bayard and Elphick 2011).

This sparrow was classified as "moderately vulnerable" to predicted climate change in an assessment of vulnerability conducted by the New York Natural Heritage Program (Schlesinger et al. 2011). Bayard and Elphick (2011) investigated the frequency of tidal flooding and the response of females to these events and concluded that saltmarsh sparrow are incredibly vulnerable to even slight increases in sea level.

Invasion of nonnative plant species including common reed (*Phragmites australis*) is also thought to degrade habitat (Benoit and Askins 1999). Predation and high tide flooding are known to be factors affecting reproductive success. There is potential for a negative effect from rising ocean levels, but this is speculative (Hodgman et al. 1998). Spraying for mosquito control may be a threat (Byrd and Johnston 1991).

Saltmarsh sparrow is endemic to the East Coast of the United States and persists in "a narrow ribbon" of disappearing coastal habitat. Breeding populations are estimated to be around 37,000-69,000 birds. These two factors make the possibility of extirpation high.

Exposure to mercury is a threat to saltmarsh sparrows throughout the Northeast; high exposure may result in detrimental physiological and behavioral changes, including reduced reproductive success (Lane et al. 2011). In New York, mercury is a significant stressor for breeding saltmarsh sparrows and Long Island sparrows showed some of the highest blood mercury concentrations among study areas throughout the Northeast. At three of the seven New York marshes sampled, sparrows had blood mercury levels high enough to negatively impact reproductive success. Analysis of wing and tail feathers indicated that mercury exposure occurred on the breeding grounds (i.e., NY) rather than wintering grounds (NYSERDA 2012).

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:

This species is included in the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) and is protected as a native species under the NYS Environmental Conservation Law.

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

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
B.3 Outreach	B.3.1.0.0 Outreach, communication, and distribution	Promote alternative products/services
B.5 Economic and Other Incentives	B.5.0.0.0 Economic and other incentives	-Market forces to change behaviors -Conservation payments to change behaviors
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.7 Legislative and Regulatory Framework or Tools	C.7.1.0.0 Create, amend, or influence legislation, regulation, or codes	-formal government sector legislation or policies at all levels -affecting implementation of laws at all levels
C.10 Institutional Development	C.10.2.0 External support and organizational development	Institutional & Civil Society Development
C.10 Institutional Development	C.10.4.1.0 Securing/raising funds required to carry out conservation measures	Conservation finance raising/providing funds

Table 2. Recommended conservation actions for *saltmarsh sparrow*.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for salt marsh breeding birds, which includes saltmarsh sparrow.

Habitat Management:

____ Develop coordinated and specific habitat management and restoration projects for identified focus areas.

____ Integrate bird conservation interests in agency planning, management, research, restoration, and permitting actions, within the context of agency missions.

____ Protect extant salt marsh habitat through:

- Developing and implementing a salt marsh management and restoration plan.
- Mapping extant salt marshes in the Lower Hudson/Long Island Bays Watershed.
- Implementing a “no net increase” in shoreline armoring for all estuaries, bays, and harbors in the watershed.
- Protecting land and requiring upland buffers associated with salt marsh habitat.
- Establishing vegetated buffers landward of salt marshes.
- Protecting salt marsh platforms of shoals and flats created by temporary barrier island beaches and overwash fans.
- Modifying tidal wetland laws, regulations, and policies to address sea level rise.

Habitat Monitoring:

____ Regularly monitoring status and trends of salt marsh habitat through aerial surveys and site-based monitoring.

Habitat Research:

____ Identify strategies and develop a plan for slowing the loss of emergent tidal salt marsh to erosion, fragmentation, and invasive species.

Habitat Restoration:

____ Alternative methods of mosquito control should be investigated to allow the modification of mosquito ditching to restore native ecological habitats, by allowing vegetated tidal wetlands to take precedence over mosquito control efforts in some areas. Mosquito ditching should be removed/closed when possible.

____ Financial incentives for landowners to remove bulkheads and plant native vegetation in upland buffer area to protect salt marshes.

____ Work with State, Federal, Local, and NGOs to identify tidal wetlands and fund their restoration to intact emergent salt marsh. Develop coordinated and specific habitat restoration projects for identified focus areas.

____ Develop NYS guidelines for salt marsh restoration. The guidelines should include information on the following:

- Phragmites control
- Reconnecting disjunct or fragmented salt marshes
- Reducing nutrient loading into salt marshes from road run-off septic systems, fertilizers, etc.
- Naturalizing and softening the shoreline
- Natural and “soft” alternatives to bulkheads

Invasive Species Control:

____ Develop plan for addressing habitat loss to invasive Phragmites reed.

Life History Research:

____ Identify critical habitat components for supporting each species.

Population Monitoring:

____ Initiate statewide, comprehensive salt marsh-breeding bird survey for Seaside Sparrow, Salt Marsh Sharp-tailed Sparrow, Black Rail, and Clapper Rail. Resurvey active sites annually, and all habitat sites every 5 years. Continue annual tern surveys and gull surveys every three years as part of Long Island Colonial Waterbird Survey.

Statewide Baseline Survey:

____ Initiate statewide, comprehensive salt marsh-breeding bird survey for Seaside Sparrow, Salt marsh Sharp-tailed Sparrow, Black Rail, and Clapper Rail.

Statewide Management Plan:

____ Develop coordinated, statewide management plan that takes into consideration differences in habitat needs, species distribution, life histories, and human impacts.

VII. References

This SSA drew heavily from these resources:

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