

# Species Status Assessment

**Common Name:** Pied-billed grebe      **Date Updated:** January 4, 2024

**Scientific Name:** *Podilymbus podiceps*      **Updated By:** Jed Hayden

**Class:** Aves

**Family:** Podicipedidae

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

One subspecies of pied-billed grebe occurs in New York: *Podilymbus podiceps podiceps*. It breeds in all of the United States, northward into southern Canada, and southward to all of Central America.

The pied-billed grebe is a Threatened species in New York. It is a rare and local breeder in the Ontario Plain, Great Lakes Plain, and Hudson Valley. Nesting occurs in freshwater wetlands with open shallow water and an abundance of aquatic emergent vegetation. The second Breeding Bird Atlas documented a 47% increase in occupancy from 1980-85 to 2000-05 with new records centered in Jefferson and St. Lawrence counties.

## I. Status

### a. Current legal protected Status

i. **Federal:** Not listed      **Candidate:** No

ii. **New York:** Threatened; SGCN

### b. Natural Heritage Program

i. **Global:** G5

ii. **New York:** S3B,S1N      **Tracked by NYNHP?:** Yes

### Other Ranks:

-New York 2025 SGCN status: High Priority Species of Greatest Conservation Need

-Northeast Regional SGCN: Not listed

-IUCN Red List Category: Least Concern

### Status Discussion:

The pied-billed grebe is an uncommon local breeder; it is a common migrant, though more numerous in fall, and a rare but regular winter visitant in the lower Hudson Valley and Long Island.

## II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Increasing	Increasing	2000-2023	None	Yes
Northeastern US	Yes	Declining	Unknown	2000-2023	None	Yes
New York	Yes	Increasing	Increasing	2000-2023	Threatened	Yes
Connecticut	Yes	Unknown	Unknown		Endangered	Yes

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
Massachusetts	Yes	Stable	Stable	1975-2011	Endangered	Yes
New Jersey	Yes	Unknown	Unknown		Endangered	Yes
Pennsylvania	Yes	Declining	Declining	1984-89 to 2004-08	No	Yes
Vermont	Yes	Declining	Declining	1976-2007	Special Concern	Yes
Ontario	Yes	Stable	Stable	1970-2021	No	No
Quebec	Yes	Stable	Stable	1970-2021	No	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*):

A three-year pilot study of the National Marshbird Monitoring Program was conducted from 2009-2011 at selected wetlands across the state. Surveys continued from 2010-2016. 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 pied-billed grebe is a target species in both survey protocols. The species is currently being surveyed by the current Breeding Bird Atlas.

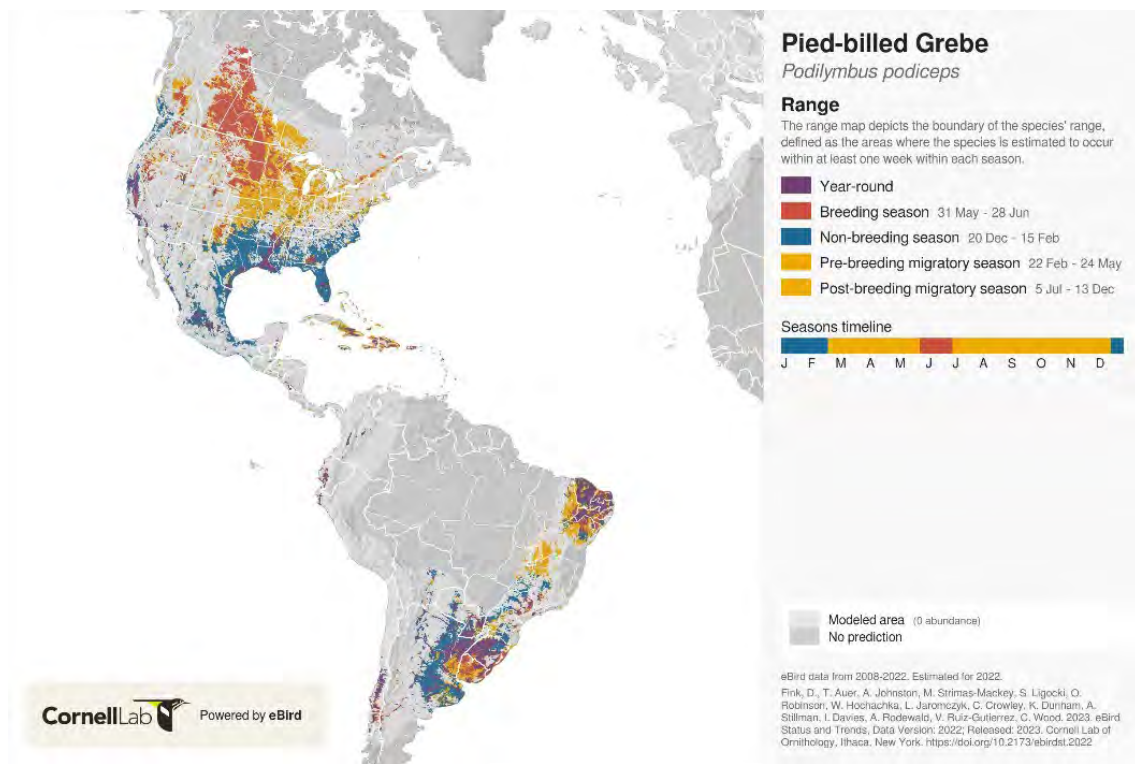
**Trends Discussion** (*insert map of North American/regional distribution and status*):

The second Breeding Bird Atlas documented a 47% increase in occupancy statewide. Notable is the increase in Jefferson and St. Lawrence counties, mirrored by the increase in breeding reports in Ontario from the northeastern portion of Lake Ontario northward along the St. Lawrence River (McGowan 2008).

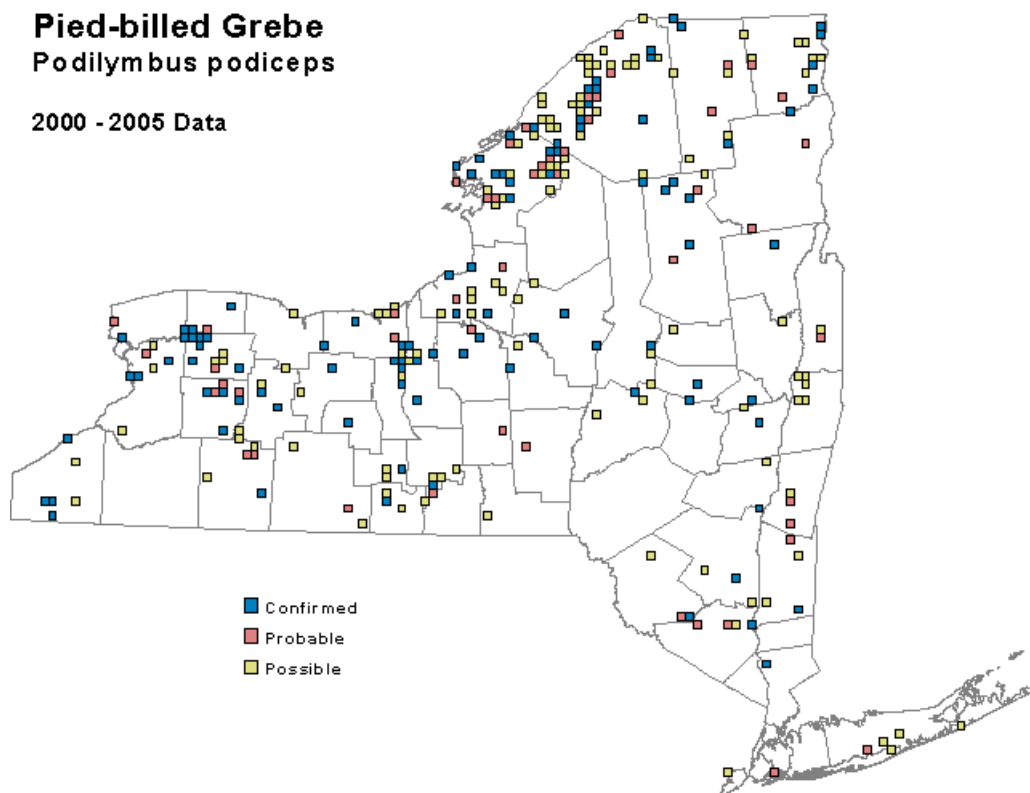
The Marsh Monitoring Program (Bird Studies Canada) shows a declining trend of -7.1% per year from 1995-2007 in the Great Lakes Basin (Archer and Jones 2009).

Pied-billed grebe is not well sampled by Breeding Bird Surveys (BBS); trend estimates should be viewed with caution. Most tended to be nonsignificant; the few significant trends were nearly equally divided between increases and declines. Strong numerical decline in the eastern U.S. has not been analyzed in detail; may reflect eutrophication of wetland habitats.

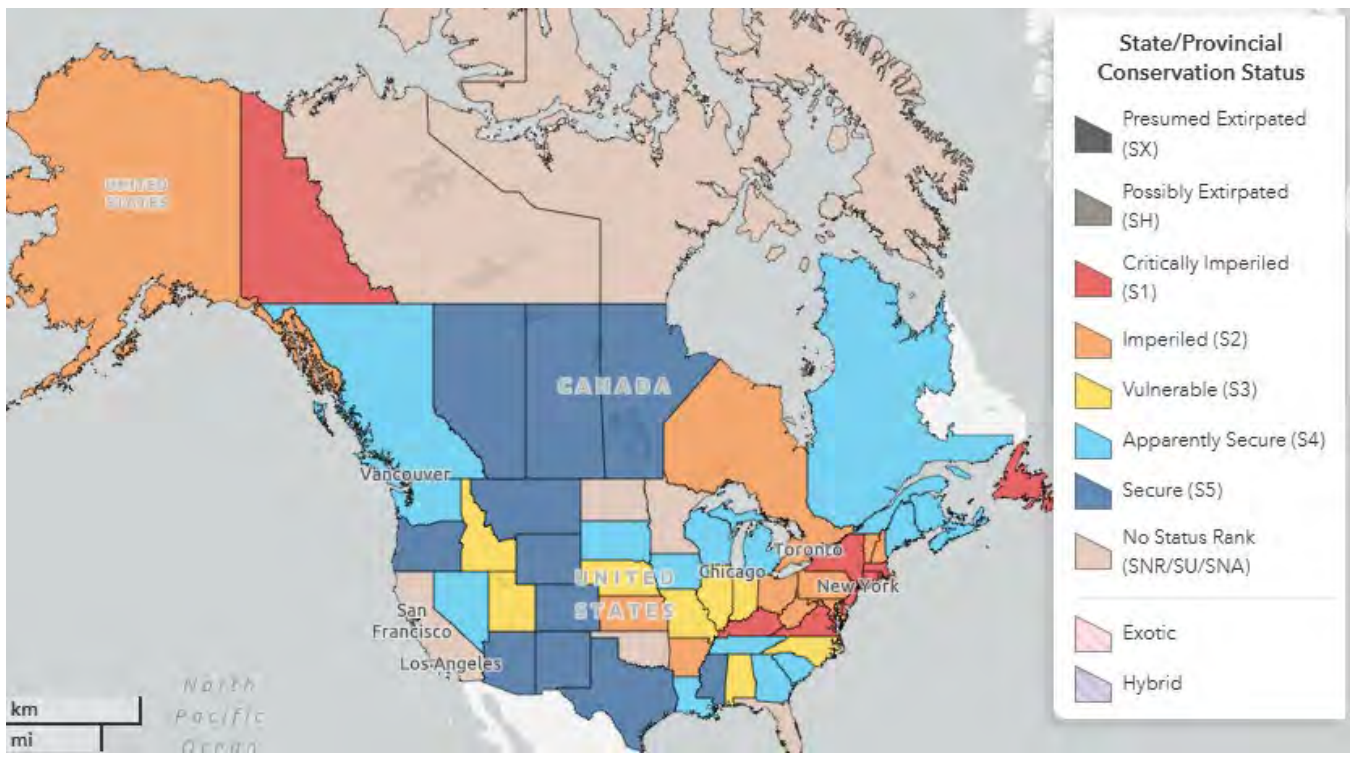
Marsh bird surveys performed by DEC from 2010-2016 showed that Pied-billed grebe abundance is increasing (Moore, B. A, et al.).



**Figure 1.** Pied-billed grebe distribution in the western hemisphere (eBird 2022)

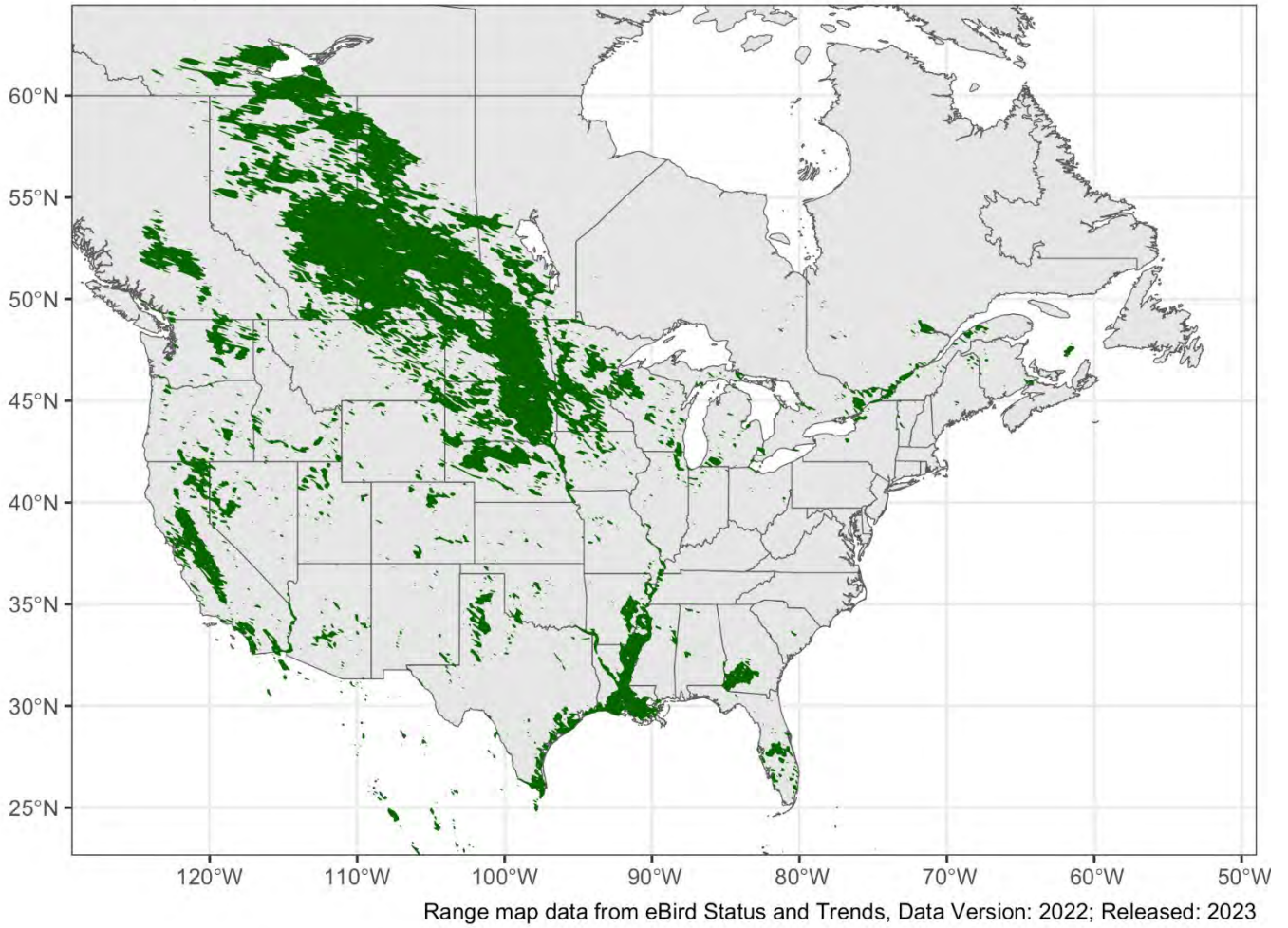


**Figure 2.** Pied-billed grebe occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008)



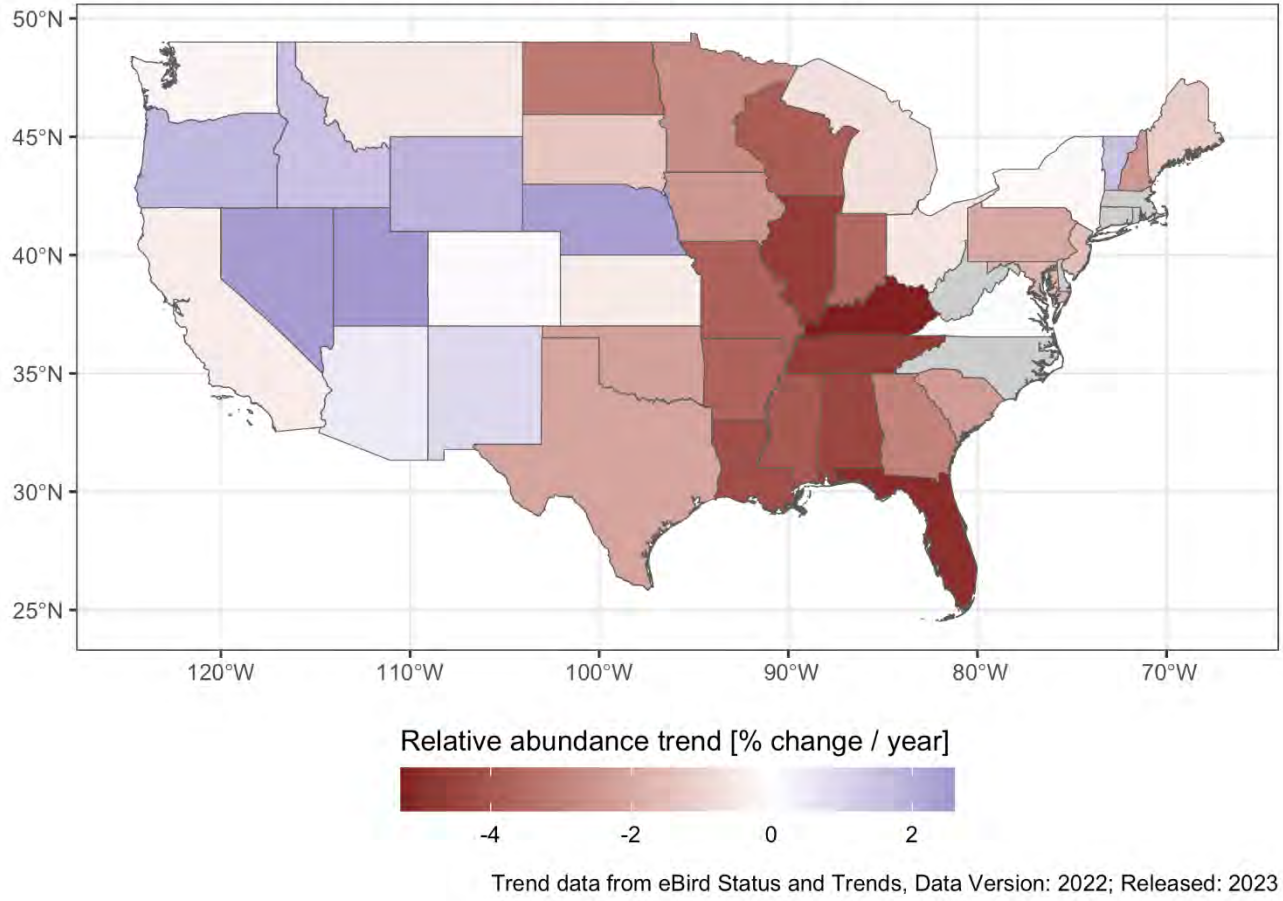
**Figure 3.** Conservation Status of the pied-billed grebe in North America (NatureServe 2024).

### Breeding range map for Pied-billed Grebe



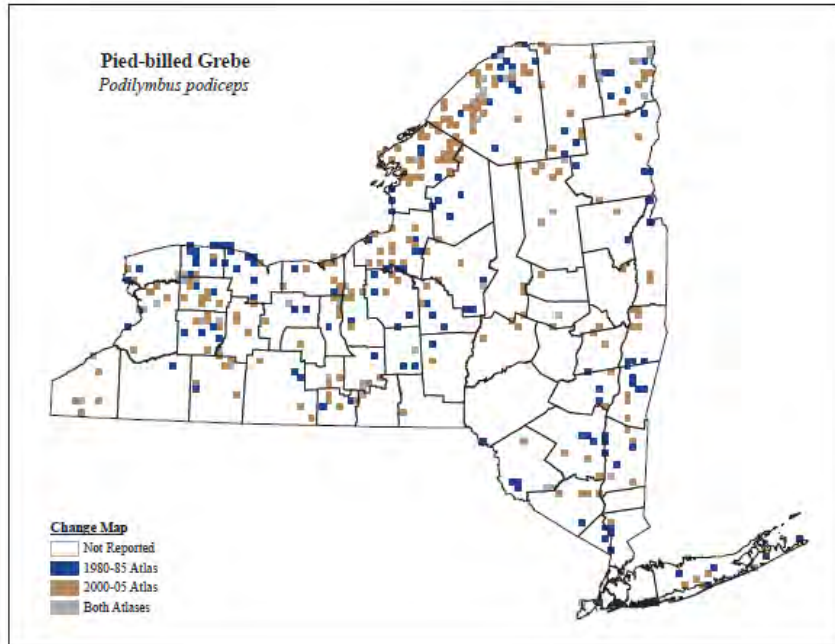
**Figure 4.** Breeding range of pied-billed grebe (eBird).

### Pied-billed Grebe state-level breeding trends 2012-2022

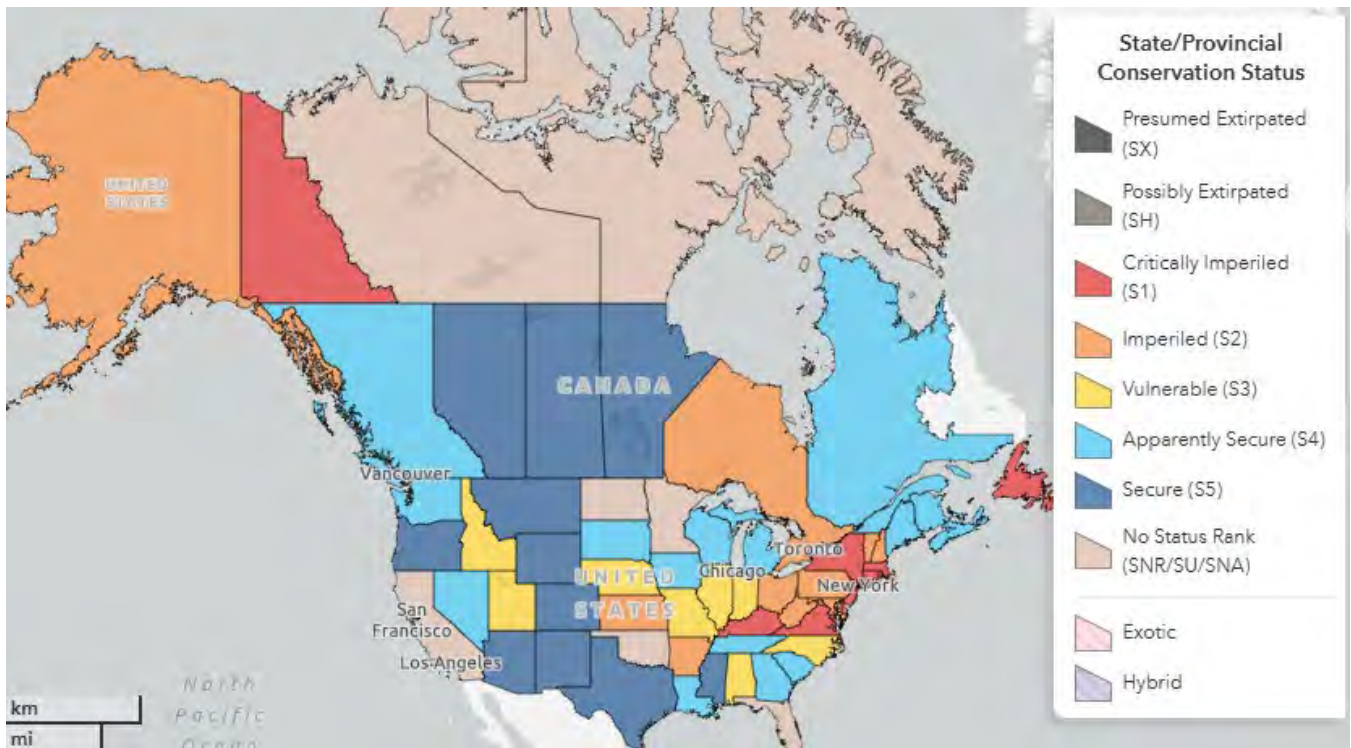


**Figure 5.** Breeding trends, by state, of pied-billed grebe (eBird).

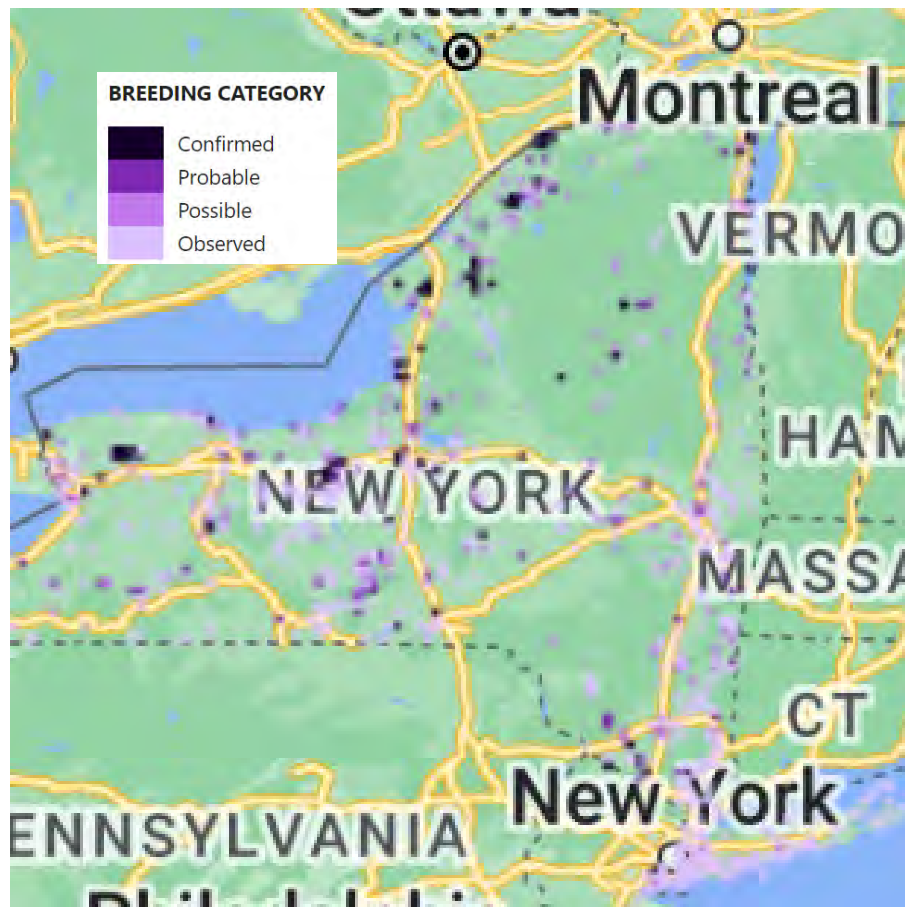
**III. New York Rarity** (provide map, numbers, and percent of state occupied)



**Figure 3.** Change in Pied-billed Grebe occurrence in New York State between the first Breeding Bird Atlas and the second Breeding Bird Atlas (McGowan and Corwin 2008).

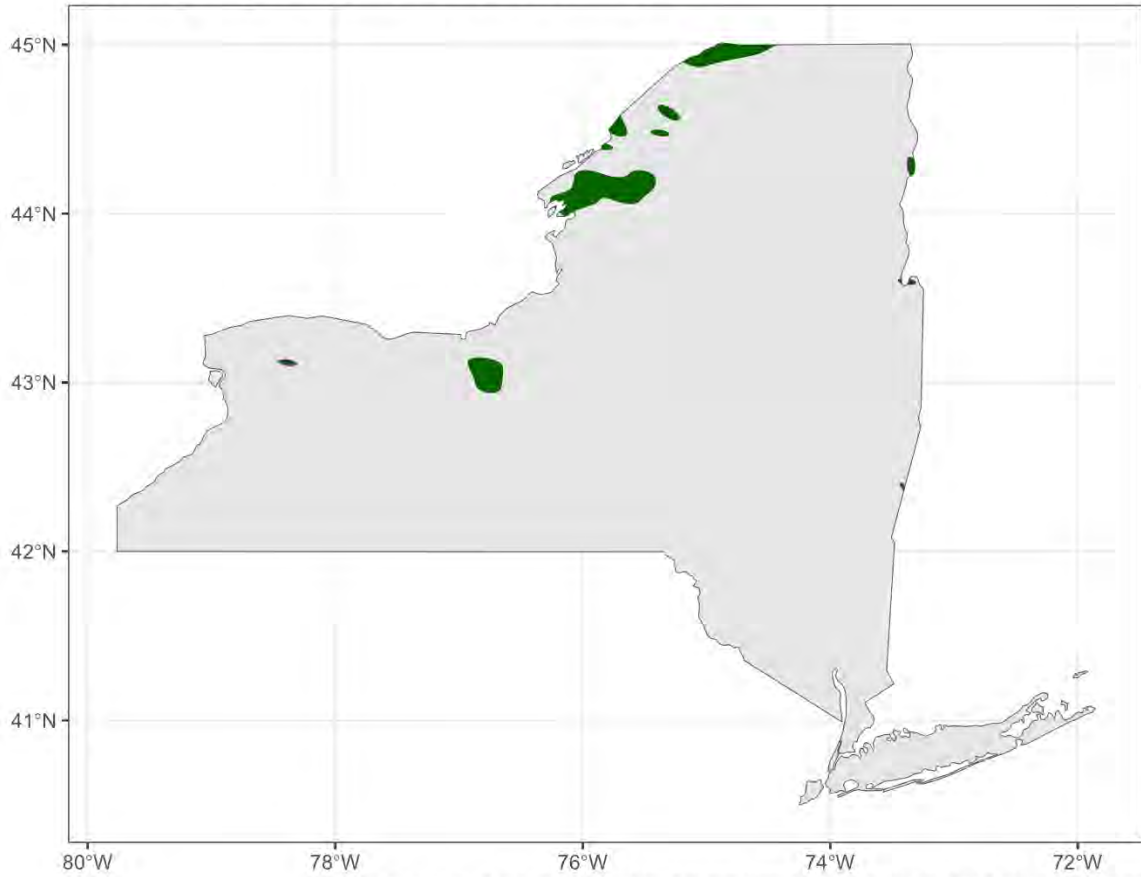


**Figure 4.** Conservation Status of the pied-billed grebe in North America (NatureServe 2024).



**Figure 5.** 2020-2025 eBird records of pied-billed grebe in New York

Breeding range map in NY for Pied-billed Grebe



Range map data from eBird Status and Trends, Data Version: 2022; Released: 2023

**Figure 6.** New York breeding range of pied-billed grebe (eBird).

**Details of historic and current occurrence:**

The first BBA (1980-85) documented occupancy in 182 blocks, 3% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-2005) documented occupancy in 267 blocks, 5% of the survey blocks statewide, an increase of 2% 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, Pied-billed grebe has been documented in 138 priority blocks, 7.6% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2024).

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

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):

1. Freshwater Marsh
2. Great Lakes Freshwater Estuary Marsh
3. Coastal Plain Pond

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

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

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:**

Pied-billed grebes breed on seasonal or permanent ponds and other bodies of slow-moving or still water such as sluggish rivers and freshwater marshes where there is an abundance of emergent aquatic vegetation. The nest is floated on dense stands of dead or growing emergent vegetation. Open water areas are also important to pied-billed grebes.

**V. Species Demographic, and Life History:**

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/Catadromous?
Yes	-	-	Yes	Yes	-

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):

No data are available for age at first breeding in wild birds, but captive birds laid eggs at 13–14 months of age (MacVean 1988, 1990). Annual success is difficult to determine, owing to differences in parameters reported. No data is available on lifetime reproductive success. Nest success is influenced by wind and wave action, water level fluctuations, predation of eggs or adult bird at nest, or damage to nest and loss of eggs as result of spawning activity of common carp. Chicks are extremely susceptible to drafts and chilling for first 2 weeks after hatching (McAllister 1963). Pied-billed grebe eggs and newly hatched young are preyed upon by raccoons, mink, snapping turtles, and various avian predators. Few data on lifespan and survivorship (Muller and Storer 1999). The species was reported a victim of botulism outbreak at Lake Michigan in 1963–1964 (Rosen 1971).

The population probably is regulated by availability of suitable nesting habitat and food, and possibly by winter habitat, but not studied. Productivity is influenced by nest destruction and egg loss (wind and waves, swamping, drought, predation on adults, eggs, and chicks, nest destruction by introduced species). The influence of eutrophication of wetlands remains to be studied.

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

Habitat degradation and destruction resulting from the draining, dredging, filling, pollution, and siltation of wetlands through the 1900s are the greatest threats facing the pied-billed grebe population. Nests can be destroyed by alterations in water level (either flooding or drops in water level) or by wakes from motorized and non-motorized boats dislodging nests attached to emergent aquatic plants. In addition to these threats specific to nesting, pied-billed grebes are threatened by outright destruction of appropriate wetland habitats; decline and degradation of their prey populations; by pesticides in current use; and by the lingering effects of bioaccumulating pesticides used in the past. Pied-billed grebes have been killed at TV towers during nocturnal flights. They are also killed by cars, sometimes after landing on roadway during heavy rainstorm at night. Grebes occasionally become entangled in fishing line. Wading birds tend to be susceptible to many diseases such as avian cholera, botulism, lice and mites, but little is known about the effects of disease and parasites on reproduction (NatureServe 2013).

<b>Threat Level 1</b>	<b>Threat Level 2</b>	<b>Threat Level 3</b>	<b>Spatial Extent</b>	<b>Severity</b>	<b>Immediacy</b>	<b>Trend</b>	<b>Certainty</b>
1. Residential and Commercial	1.1 Housing & Urban Areas	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
1. Residential and Commercial	1.3 Tourism & Recreation Areas	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
6. Human Intrusions & Disturbance	6.1 Recreational Activities	6.1.1 Motor vehicles	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.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.3 Other Ecosystem Modifications	7.3.2 Vegetation succession	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	8.4 Pathogens	8.4.1 Bacterial pathogens	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.2 Industrial & Military Effluents	9.2.7 Other industrial discharges	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.3 Agricultural & Forestry 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	11.4 Changes in Precipitation & Hydrological Regimes	11.4.2 Droughts	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.5 Storms & Severe Weather	11.5.1 Storms & severe weather	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

**Table 1.** Threats to pied-billed grebe in New York.

**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 pied-billed grebe 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.

Pied-billed grebe is protected under the Migratory Bird Treaty Act of 1918. The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 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:**

In the Northeast, preservation of relatively large (>10 ha) wetlands with a mixture of dense, robust emergent vegetation, sub-emergent vegetation, and open water is the most urgent management need for pied-billed grebes. Wetland managers need to periodically reverse vegetative succession and open extensive stands of emergent vegetation while maintaining suitable habitats nearby to serve as alternate nesting areas during wetland manipulation. Complete drying during wetland drawdowns should be avoided to prevent die-offs of dragonflies and fish. Large, motorized boats should be excluded from marshes with nesting grebes to avoid flooding and capsizing of nest by wave action (Gibbs and Melvin 1992).

McGowan (2008) notes that the continued existence of pied-billed grebe in New York is closely tied to the protection of wetlands. Grebes undoubtedly benefit from preservation of habitat in wildlife management areas and federal refuges across the state.

Conservation actions following IUCN taxonomy are categorized in the table.

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

Action Category	Action	Description
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
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	Resource/Habitat protection
C.9 Education and Training	C.9.2.0.0 Training and individual skill development	Training

**Table 2.** Recommended conservation actions for pied-billed grebe

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<b>Latest revision</b>	