

## Species Status Assessment

**Class:** Birds  
**Family:** Pandionidae  
**Scientific Name:** *Pandion haliaetus*  
**Common Name:** Osprey

### Species synopsis:

Ospreys breed in New York along coastal and inland shorelines where shallow water makes their fish prey more easily accessible. The second Breeding Bird Atlas shows breeding concentrated on Long Island—where nests are found along every shoreline—and at locations upstate including Lake Champlain, the St. Lawrence River, Oneida Lake, and the Finger Lakes. Possible records, which indicate the presence of a bird in appropriate habitat during the breeding season, appear in every county, a distinct change from the first Atlas when very few records were outside the Adirondack Mountains and the Coastal Lowlands.

During the 1950s to 1970, about 90% of the ospreys between New York City and Boston disappeared due to contamination from DDT. The ban on DDT in the 1970s combined with increasingly available artificial nest sites and hacking programs (including in the Allegheny Reservoir in the 1980s and Oak Orchard WMA in western NY during the 1990s) together with the osprey's ability to tolerate human activity near nests have allowed the population to rebound and even expand into formerly unoccupied habitat. Breeding Bird Survey trends show significantly increasing populations in the United States and in the Eastern region from 2000-2010.

### I. Status

#### a. Current and Legal Protected Status

- i. **Federal** Not Listed **Candidate?** No
- ii. **New York** Special Concern; SGCN

#### b. Natural Heritage Program Rank

- i. **Global** G5
- ii. **New York** S4B **Tracked by NYNHP?** No

**Other Rank:**

New York Natural Heritage Program – Watch List  
IUCN - Least Concern  
CITES – Appendix II

**Status Discussion:**

Osprey are have regained their status as a common breeder near waterways and water bodies with sufficient fish populations.

**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:  2000-2010

**b. Regional**

**i. Abundance**

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

**ii. Distribution:**

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

Regional Unit Considered:  Eastern BBS

Time Frame Considered:  2000-2010

**c. Adjacent States and Provinces**

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

**i. Abundance**

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

**ii. Distribution:**

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

Time frame considered: 2000-2010

Listing Status: Not Listed                      SGCN? Yes

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

**i. Abundance**

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

**ii. Distribution:**

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

Time frame considered: 2000-2010

Listing Status: Not Listed                      SGCN? No

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

**i. Abundance**

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

**ii. Distribution:**

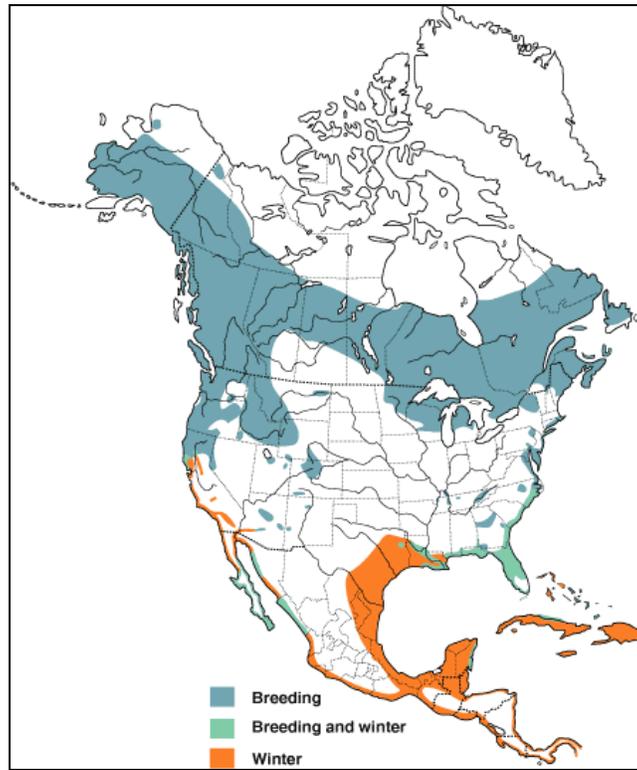
\_\_\_\_ declining   **X** increasing      \_\_\_\_ stable      \_\_\_\_ unknown

Time frame considered: 2000-2010

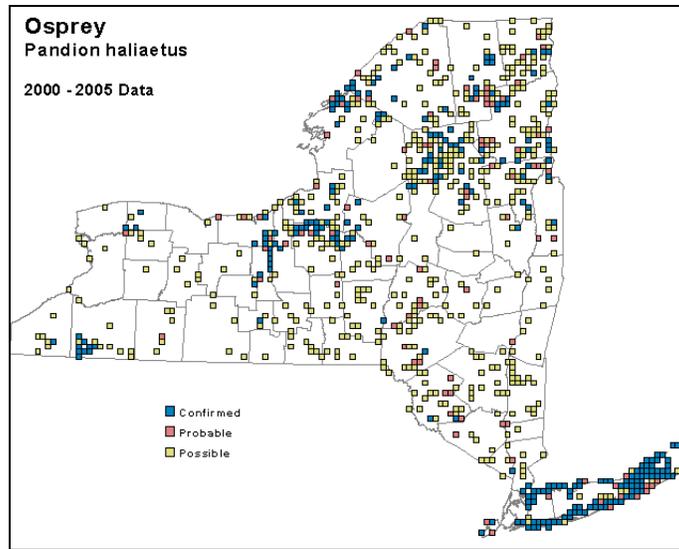
Listing Status: Threatened                      SGCN? Yes



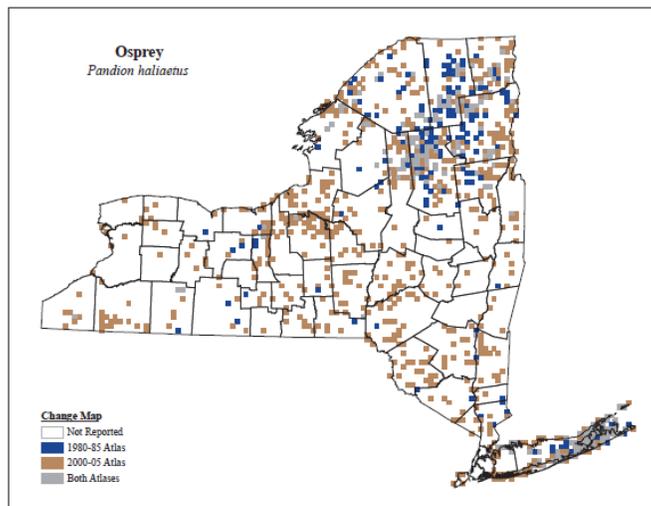




**Figure 1:** Distribution of osprey in North America (Birds of North America Online).



**Figure 2.** Osprey occurrence in New York State during the first Breeding Bird Atlas (McGowan and Corwin 2008).



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

**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>335 blocks</u>	<u>6</u>

**Details of historic occurrence:**

Spitzer (1980) reported that Long Island’s nearly 500 active nests in 1940 had declined to fewer than 75 by 1970. The first Breeding Bird Atlas (1980-85) documented occupancy in 335 survey blocks statewide, or 6% of the state. The population was concentrated in the Adirondacks and on Long Island.

<b>Current</b>	<b><u># of Animals</u></b>	<b><u># of Locations</u></b>	<b><u>% of State</u></b>
	_____	<u>826 blocks</u>	<u>15</u>

**Details of current occurrence:**

The second Breeding Bird Atlas (2000-05) documented occupancy in 826 survey blocks statewide, or 15% of the state. The population expanded across the entire state and occupancy increased by 147%. The number of blocks with confirmed records increased by 163%.

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

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

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

**Abundance** (within NY distribution)

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

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

- 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. Rocky Outcrop
2. Lake and River Shore/Beach
3. Maritime Dunes
4. Commercial/Industrial and Residential
5. Floodplain Forests
6. Freshwater Marsh
7. Estuarine, Brackish Intertidal, Tidal Wetland
8. Urban Structure Exterior

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

Declining       Stable       Increasing       Unknown

Time frame of decline/increase: \_\_\_\_\_

Habitat Specialist?       Yes       No

Indicator Species?       Yes       No

**Habitat Discussion:**

Osprey are found along coastal and inland water bodies with abundant fish populations. Shallow water is required for hunting since this raptor catches its fish prey with its feet. Surrounding habitats may include mature forest, emergent marsh, sparsely-vegetated areas, or pine barrens.

Ospreys historically nested in dead tree snags and rocky cliffs but have adapted to using man-made structures of a large variety. The shift has been dramatic in some areas, with 90-95% of pairs building nests on channel markers, buildings, towers, power poles, and poles constructed exclusively for them. Occasionally, ospreys will nest on rocks on the ground (Carroll 1988, Poole et al. 2002).

**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:**

Osprey breeds annually, producing one brood per year. Based on a small sample (20 individuals identified as nesting and producing eggs for the first time) in an expanding population with abundant artificial nesting sites in southern New York and New England, Spitzer (1980) found 50% 3-year-olds, 30% 4-year-olds, and 20% 5-year-olds. Larger sample (45 additional breeders) in this region revealed a similar pattern, with mean age at first breeding 3.6 year (Poole 1984).

Extensive research has been conducted on annual success. In 2012, 61 active nests surveyed on Long Island produced 58 young (M. Scheibel, personal communication). The number of failed breeders varies greatly year to year within populations, and also greatly among populations. Food availability and weather have major impacts, but few data are available.

The estimated mortality among first year birds is 57%. This rate decreases to 18% annually after the first year (Newton 1979). Weather is a significant and poorly studied influence on breeding success; overall, fewer young are produced in years with heavy rainfall, especially during late incubation and early nestling stage, when young are vulnerable to chilling; loss of eggs greatest during rainy periods (Poole 1984).

Oldest known North American individuals reported to date: 25-year-old male (Spitzer 1980); 23-year-old female; 20+ year-old female (Postupalsky 1989). All were still breeding. Few survive to this age, however.

Females disperse farther than males between sites of fledging and first breeding, but only rarely do ospreys of either sex breed >50 km from their natal sites; year-to-year fidelity to breeding locales appears to be even higher (few move >10–15 km). Together these findings suggest that (1) growth or decline of a population is determined largely by local reproductive and survival rates and (2) ospreys are slow to colonize new areas.

## **VI. Threats:**

Nye (2008) noted that despite statewide increases, there have been local decreases on Gardiners Island, with the number of active pairs dropping from 56 pairs to 36 pairs in the period 1998-2001 (P. Spitzer unpublished data). The decline is thought to be a result of increased predation by great horned owls, limited nesting sites, and limited food resources exacerbated by increasing populations of double-crested cormorant.

Poole et al. (2002) notes that nearly all studies of osprey population dynamics have been on populations that were small relative to the resources available to them (food, nest sites). Building evidence suggests that food and nest sites are serious limiting factors in growing populations.

Other threats in New York include entanglement with monofilament fishing line, electrocution, and mercury contamination of prey (Nye 2008).

In the urban environment there are unique challenges such as nesting on power lines, bridges, and close proximity to New York City airports. In 2012, wildlife control staff at JFK International Airport killed 15 osprey that entered the runway airspace. The operators of the airport have since requested permission from the U.S. Fish & Wildlife Service to increase the allowable take of osprey (J. Pane per. comm.).

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

No       Unknown

Yes

Osprey is protected under the Migratory Bird Treaty Act of 1918.

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

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
Species Management	Species Recovery
Education & Awareness	Awareness & Communication
External Capacity Building	Alliance & Partnership Development

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for osprey.

**Development rights acquisition:**

\_\_\_ Pursue conservation easements or outright purchase of essential osprey habitats.

**Acquisition:**

\_\_\_ Pursue conservation easements or outright purchase of essential osprey habitats.

**Educational signs:**

\_\_\_ Develop signs/displays and post where appropriate in essential habitat areas to inform the public of the need to protect the species and limit disturbance.

**Fact sheet:**

\_\_\_ Develop materials and post where appropriate in essential habitat areas to inform the public of the need to protect the species and limit disturbance.

**Habitat management:**

\_\_\_ Review and comment on any plans to ensure that any proposed actions would not be detrimental to essential osprey habitat or its use. Osprey nest platforms should be maintained and new ones placed when appropriate.

\_\_\_ Encourage restoration and protection of Long Island salt marsh habitat through coordination with local NGOs and existing management plans.

**Habitat monitoring:**

\_\_\_ Review and comment on any plans to ensure that any proposed actions would not be detrimental to essential osprey habitat.

**Habitat research:**

\_\_\_ Conduct studies into habitat quality involving changes in fisheries populations, possible impact of increasing cormorant populations, etc. Support marine fishery investigations/research into critical forage species in the coastal region, i.e. winter flounder and menhaden.

**Life history research:**

\_\_\_ Record notable new aspects of the species' ecology, especially pertaining to any local declines.

**Other action:**

\_\_\_ Ensure that information on all new osprey nests are submitted to the Natural Heritage Program as appropriate.

**Other management plan:**

\_\_\_ Prepare individual management plans as necessary.

**Population monitoring:**

\_\_\_ Annually or periodically monitor the population (or certain regions of the population) to maintain a feel for the number of territorial pairs and reproductive outcome.

**State land unit management plan:**

\_\_\_ Ensure needs of ospreys are incorporated into all UMPs where suitable habitat may exist.

**Statewide baseline survey:**

\_\_\_ Periodically monitor the population and its reproductive outcome.

## VII. References

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Poole, A. F. 1984. Reproductive limitations in coastal Ospreys: an ecological and evolutionary perspective. Unpubl. Ph.D. diss. Boston Univ. Boston, MA.

Poole, A.F., R.O. Bierregaard and M.S. Martell. 2002. Osprey (*Pandion haliaetus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/683> doi:10.2173/bna.683

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