

Species Status Assessment

Class: Birds
Family: Accipitridae
Scientific Name: *Haliaeetus leucocephalus*
Common Name: Bald Eagle

Species synopsis:

The bald eagle is a member of the family Accipitridae and the order Falconiformes, of the genus *Haliaeetus*, meaning sea eagle and species *leucocephalus*, meaning white-headed. It is the only member of its genus regularly occurring in North America, with the largest breeding populations occurring in Canada and Alaska. In the lower 48 states, the highest concentrations are found in the Northwest and the Southeast.

Breeding typically occurs in undisturbed forested areas, near lakes, rivers, or wetlands. Bald eagles are known to breed throughout New York, with the exception of the New York City area, Long Island, and a portion of central New York.

Bald eagles were nearly eliminated in New York by the late 1960s. In 1971, the bald eagle was listed as endangered in the state. An intensive restoration program began in the late 1970s, slowly rebuilding the nesting population. As a result of the restoration program and additional protection and management provided by the New York State Department of Environmental Conservation (NYSDEC), New York's population of bald eagles increased to the point where state down-listing from endangered to threatened occurred in 1999. New York's breeding bald eagle population is experiencing a consistent annual increase, having rebounded from one breeding pair in the 1970s to 192 breeding pairs in 2010.

While current bald eagle numbers are encouraging, the species faces continued threats including habitat loss or disturbance, rail-strikes, and lead poisoning.

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** S2S3B,S2N **Tracked by NYNHP?** Yes

Other Rank:

CITES – Appendix II
IUCN Red List Category - Least Concern
Committee on the Status of Endangered Wildlife in Canada (COSEWIC) – Not at Risk

Status Discussion:

In 2010, NYSDEC monitoring revealed 192 known occupied nesting territories. A total of 173 breeding pairs were documented at these sites, successfully fledging a total of 244 young.

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: 1986-2006

b. Regional

i. Abundance

___ declining X increasing ___ stable ___ unknown

ii. Distribution:

___ declining X increasing ___ stable ___ unknown

Regional Unit Considered: Northeast

Time frame considered: 1986-2006

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: 1990-2006

Listing Status: Endangered SGCN? Yes

MASSACHUSETTS Not Present ___ No data ___

i. Abundance

___ declining X increasing ___ stable ___ unknown

ii. Distribution:

___ declining X increasing ___ stable ___ unknown

Time frame considered: 1990-2006

Listing Status: Endangered SGCN? Yes

Trends Discussion:

Reportedly “numerous” in New York during the 19th century, the bald eagle was considered functionally extirpated by 1970 when only one active but unproductive bald eagle nest remained in the state. An intensive reintroduction program began in 1976. Over 200 eaglets were released as part of the effort, which was terminated in 1988 after the initial goal of reestablishing ten nesting pairs in the state was achieved. Populations continued to increase and in 1999 the state down-listed the bald eagle from endangered to threatened. New York’s bald eagle population has experienced a consistent annual increase of 10-15% per year from 2006-2010. In 2010, there were 224 nesting territories (192 nesting pairs) statewide.

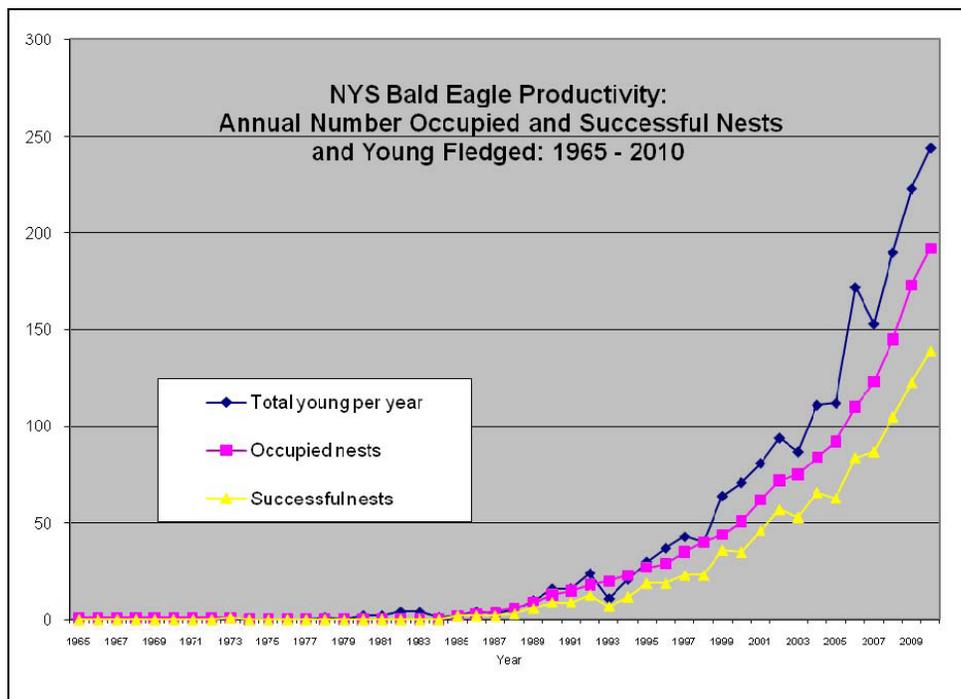


Figure 1. 2010 Annual Bald Eagle Report (NYSDEC).

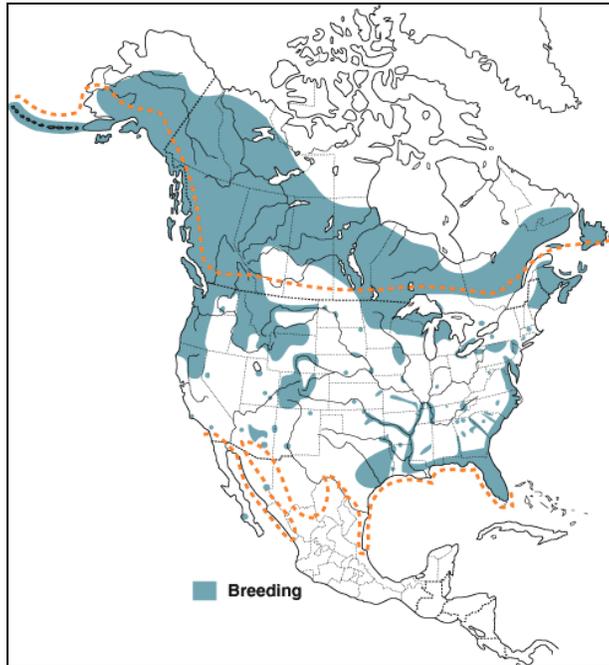


Figure 2. Distribution of bald eagle in North America (Birds of North America Online).

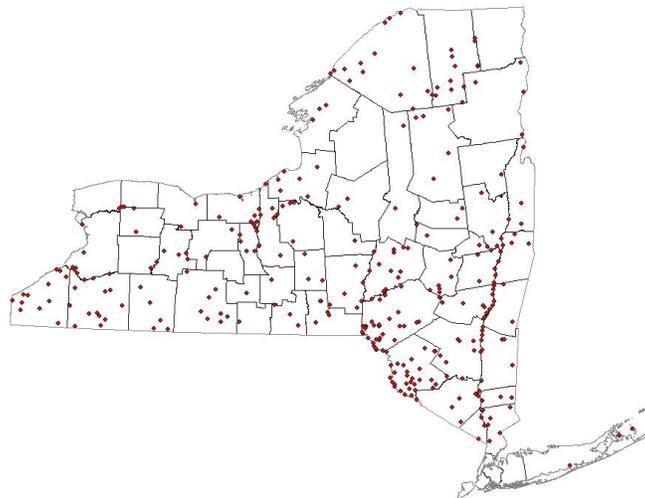


Figure 3. Bald Eagle Territories through 2014.

III. New York Rarity, if known:

Historic	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
prior to 1970	<u>1 pair</u>	_____	_____
prior to 1980	_____	_____	_____
prior to 1990	_____	_____	_____

Details of historic occurrence:

Bald eagles are native to New York and once thrived here. Historic records suggest that the bald eagle was commonly observed in New York prior to the onset of their population decline, although the actual number of nests is not known. Bald eagle numbers began declining post-European settlement as a result of shooting, logging, habitat loss, and disturbance. Records indicate that bald eagle populations began to decline in the early 1900s (Eaton 1914). By the mid-1940s, fewer than 20 breeding pairs remained in the state (Nye 1998). In later years, pollution and chemical poisoning—most notably from DDT—accelerated their decline. Historic bald eagle nests were identified in 41 locations in western and northern New York where water and fish were abundant (Bull 1974); activity was documented at some of these nests into the 1950s (Spofford 1953, Buckley 1963). However, by 1960 nesting activity had ceased at most of these locations (Buckley 1963). Bald eagle nesting may have occurred at 72 or more sites in New York, although not necessarily all at one time (P. Nye, pers. comm.).

Current (2014)	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
	<u>254 pairs</u>	_____	<u>15%</u>

Details of current occurrence:

In 2014, NYSDEC documented 331 nesting territories (254 breeding pairs) throughout the state.

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

In 2006, New York represented 1.1% (110 of 9,800 territorial pairs) of the total number of breeding pairs of bald eagles in the lower 48 states, and 15.2% (110 of 722 territorial pairs) of the total number of breeding pairs in the northeast (ME, VT, NH, MA, RI, CT, NY, NJ, PA) (USFWS 2007). During the first four years prior to breeding, immature bald eagles wander widely from their natal

territory. Food availability, competition and weather may act as determining factors for the distance travelled. Once a bald eagle reaches maturity, they will find a mate and establish a breeding territory of their own, generally within 250 miles of their natal territory (Nye 1988). This wandering behavior offers ample opportunity for individual birds to choose mates from locations much farther than 250 miles away. Bald eagles fledged in New York have been documented nesting as adults in eight states outside of New York, as well as in the provinces of Quebec and Ontario, Canada.

New York’s Contribution to Species North American Range:

Distribution (percent of NY where species occurs)

Abundance (within NY distribution)

<input type="checkbox"/>	0-5%	<input type="checkbox"/>	abundant
<input type="checkbox"/>	6-10%	<input type="checkbox"/>	common
<input checked="" type="checkbox"/>	11-25%	<input type="checkbox"/>	fairly common
<input type="checkbox"/>	26-50%	<input checked="" type="checkbox"/>	uncommon
<input type="checkbox"/>	>50%	<input type="checkbox"/>	rare

NY’s Contribution to North American range

<input checked="" type="checkbox"/>	0-5%
<input type="checkbox"/>	6-10%
<input type="checkbox"/>	11-25%
<input type="checkbox"/>	26-50%
<input type="checkbox"/>	>50%

Classification of New York Range

Core

Peripheral

Disjunct

Distance to core population:

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

1. Oak Pine Forest
2. Oak Forest
3. Coastal Hardwoods
4. Mixed Northern Hardwoods
5. Floodplain Forests
6. Lake and River Shore/Beach
7. Large/Great River, Warm
8. Riparian

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:

The bald eagle typically breeds in undisturbed forested habitat near lakes, rivers, or wetlands, especially in complex forested habitats with variable structure including super-canopy trees, where the nest is placed. In New York, it shows a preference for nesting in white pines and—particularly along the Hudson River—cottonwoods. During winter, bald eagles congregate at larger rivers where water remains open and food resources are abundant and accessible.

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:

Bald eagle life history is categorized into breeding and non-breeding periods, with some variation in these seasons based on latitude. In New York, the nesting season lasts approximately seven months, with courtship and nest building beginning as early as January and ending post-fledging, as late as September. Eggs are laid between February and April, with the clutch size varying from one to three eggs. Incubation lasts approximately 35 days and young eaglets make their first flight 10 to 12 weeks after hatching. Within a few days of the first flight, chicks have fledged and will leave the nest to forage, but they may remain in the vicinity of the nest and continue to receive food from the parents for several weeks.

For the next four years of their life, bald eagles may travel great distances. Typically, upon reaching adulthood around the age of five, they will select a mate and choose a nesting location. They show strong site fidelity, often choosing a nest site near their natal territory. Based upon studies of our marked New York eagles, it is believed that male eagles are the primary territory-selectors, and establish territories closer to their natal areas than do females (Nye 1988). They are monogamous and mate for life, but will secure a new mate should something happen to either the male or the female. Bald eagles may live more than 30 years, but 15-25 years is the normal lifespan in the wild.

The causes of nest failure are not well documented, though they likely vary across the range, dependent on food availability, human disturbance, environmental contaminant loads, and weather. Mortality is high in juvenile birds, but considerably lower in birds who manage to survive their first two years (Nye 1987).

Of 1,428 individuals necropsied from 1963 to 1984, 329 (23%) died from trauma, primarily impact with wires and vehicles; 309 (22%) died from gunshot; 158 (11%) died from poisoning; 130 (9%) died from electrocution; 68 (5%) died from trapping; 110 (8%) from emaciation; and 31 (2%) from disease; cause of death was undetermined in 293 (20%) of cases (Wood et al. 1990). In the years between 2007 and 2011, the leading causes of death or injury for eagles recovered in New York State were collisions at 35 % (including vehicle, train, plane), 23% unknown, 11% fell from nests, and 11% died from contaminants and pathogens (lead, poisoning, botulism).

VI. Threats:

Humans are the most significant source of mortality for bald eagle. Loss of shoreline nesting, perching, roosting, and associated aquatic foraging habitat to human development is the most significant agent of habitat loss; human development may limit expansion of breeding populations in many areas and limit eagle carrying capacity at or below current population levels in some areas in the future. Where possible, bald eagles shun areas of high human use to avoid disturbance of nesting, foraging, perching, and roosting. Repeated human activity/disturbance may also lead to eagle abandonment of use areas (roost sites, foraging sites, or nest sites) and as a result habitat loss, if persistent (Fraser 1985).

Bald eagles are susceptible to motor vehicle and train strikes as they often feed on road and rail-killed animal carcasses. They are also susceptible to collision with wind turbines, communications towers and power lines, leading to injury and death from collision or from electrocution. As eagle habitat becomes more human-developed, importance of this form of mortality likely to increase.

Lead poisoning is a serious hazard for bald eagles. Low doses of lead cause problems including tremors, emaciation, lethargy, poor balance, and impaired vision. Higher doses can cause mortality due to the inherent toxicity of lead. Bald eagles ingest lead from a myriad of sources, including lead pellets and bullet fragments found in hunter-shot game species. Heavy metals, PCBs, DDE, and other environmental contaminants continue to pose threats to survival and reproduction.

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

No Unknown

Yes

The bald eagle 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.

Bald eagles are also protected under sections 11-0103 and 11-0537 of the ECL. Section 11-0103 defines eagles as wild birds and protected wildlife. Section 11-0537 protects bald and golden eagles and their nests and eggs. This law makes it illegal to take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner bald or golden eagles without a permit.

New York Code of Rules and Regulations (6NYCRR) Part 182.8 also prohibits the take of any species listed as endangered or threatened, except as authorized by an incidental take permit issued by the Department. In addition to eagles, nests and their eggs, this protection also extends to occupied habitat.

Additional NYSDEC regulations, including 2004 legislation prohibiting the sale of lead sinkers weighing one-half ounce or less and a 2010 trapping regulation requiring all fur trappers to cover their bait, provide some additional protections for bald eagles.

The USFWS protects bald and golden eagles under three federal statutes. The Bald and Golden Eagle Protection Act (BGEPA), the Migratory Bird Treaty Act (MBTA) and the Lacey Act protect the birds and parts thereof as well as the nest and eggs.

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

Develop conservation easements or land management plans for individual landowners. Participate in environmental review of projects potentially impacting eagles or eagle habitat. Establish buffers at nest sites. Place predator guards at nest trees. Continue public education and outreach activities to decrease persecution by humans. Remove carrion from highways and railways. Issue incidental take permits to the impacted rail companies. Provide guidance for the siting of wind turbines, communications towers, and high voltage lines. Investigate alternatives to lead-shot for upland and big game hunting. Encourage pro-active steps to reduce the risks associated with lead ammunition. Discourage the intentional feeding of bald eagles. Continue to monitor contamination in bald eagles by collecting tissue samples from bald eagles, their eggs and prey. Support and encourage the application of the latest industry standards for new electric generation facilities and transmission

corridors, based on raptor research. Encourage the removal of animal carcasses suspected of botulism intoxication to reduce potential exposure to botulism. Implement a program to address the handling of distressed bald eagles.

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 & Communications
External Capacity Building	Alliance & Partnership Development

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

Development rights/Easement acquisition:

___ Pursue conservation easements or outright fee-acquisition of essential bald eagle habitats.

Educational signs:

___ Develop signs/displays and post in essential habitat areas to inform public of need to protect the species and to limit behavior that would be disturbing.

Fact sheet:

___ Prepare a landowner/contact pamphlet describing "what does it mean that eagles are using my land."

___ Develop materials and post in essential habitat areas to inform public of need to protect the species and to limit behavior that would be disturbing.

Habitat management:

___ Review and comment on any plans to ensure that any proposed actions would not be detrimental to essential bald eagle habitat or to the continued use of essential bald eagle habitats.

Habitat monitoring:

___ Review and comment on any plans to ensure that any proposed actions would not be detrimental to essential bald eagle habitat or to the continued use of essential bald eagle habitats.

Habitat research:

___ Conduct live-capture radio telemetry studies, as well as through field observations, to delineate essential bald eagle breeding and wintering habitats.

Life history research:

- ___ Determine site-fidelity, familial relationships to habitat use, migratory patterns/pathways, and home-ranges of breeding and wintering NYS bald eagles.

Other acquisition:

- ___ Pursue conservation easements or outright fee-acquisition of essential bald eagle habitats.

Other action:

- ___ Ensure cooperation of rail companies (i.e. Amtrak, Metro North) who operate high-speed trains in the daily removal of carrion from railroad tracks and the recovery of bald eagles and other raptors killed by such trains.
- ___ Ensure that essential wintering and breeding habitats are adequately posted and patrolled, as needed: hire seasonal technicians to be on site monitors when necessary, as at major wintering locations where human disturbance is a serious issue.
- ___ Ensure that all essential bald eagle habitat information is submitted to and included within the Natural Heritage/BCD database and updated annually.

Other management plan:

- ___ Prepare individual site management plans for each bald eagle breeding territory and major wintering habitat.

Population monitoring:

- ___ Annually monitor and determine the number of wintering bald eagles in NYS.
- ___ Annually monitor and determine the number of breeding bald eagles and their reproductive outcome.
- ___ Conduct live-capture radio telemetry studies, as well as through field observations, to delineate essential bald eagle breeding and wintering habitats.
- ___ Periodically sample NYS bald eagles for contaminant lodes (eggs, blood, carcasses); collect injured or dead eagles and determine causes of morbidity and mortality.

State land unit management plan:

- ___ Ensure needs of bald eagles are incorporated into all UMPs.

Statewide baseline survey:

- ___ Initiate comprehensive, statewide survey of landscape level habitat characteristics and trends across NYS; updating at least every 5 years. (This in order to monitor overall habitat loss/alteration trends).
- ___ Annually monitor numbers and distribution of breeding and wintering bald eagles in NYS.

VII. References

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