

New Jersey Department of Environmental Protection
Division of Fish and Wildlife
Endangered and Nongame Species Program

Status Review of Bald Eagle
Final Report

Prepared by:
Kathleen Clark
Endangered and Nongame Species Program
NJDEP Division of Fish and Wildlife
Trenton, NJ
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EXECUTIVE SUMMARY

- The compiler for this status review was Kathy Clark, NJDEP Division of Fish and Wildlife, Endangered and Nongame Species Program.
- This was a single-species status review for Bald Eagle breeding status in NJ. The review was conducted in 2021 following methods in Clark et. al (2006).
- Nineteen reviewers, who had previously participated in the 2017 review of land birds, had these affiliations: 39% were independent (had no affiliation), 22% from conservation organizations, 22% from academia, 17% from state government, 6% from consulting business.
- At the start of Round 1, reviewers were provided with background data from the most recent Bald Eagle report of 2020, including known nests, productivity over all years, and distribution map. This two-page background is attached at the end of this report.
- Round 1 spanned February 1-15, and Round 2 spanned February 18-March 7. SurveyMonkey was the platform for soliciting and compiling the results.
- The results of each of the two rounds are included below. Consensus ($\geq 85\%$ of respondents) on the status of Special Concern was reached in Round 2. Fourteen reviewers responded in Round 2.
- This draft report will be presented to the NJ Endangered & Nongame Species Advisory Committee (ENSAC) for their review. A final report will follow.
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- The report of the status review was presented to the NJ Endangered & Nongame Species Advisory Committee at their May 19, 2021, meeting. The Committee voted unanimously to accept the findings and recommend the breeding-season status of Special Concern. The Division of Fish and Wildlife concurred and will plan to make that change in regulations.

Results of single-species status review for Bald Eagle, breeding season

Results of Round 2

Consensus reached

Survey open 2/18 – 3/7

Rank	# Votes	Mean Confidence	
Endangered			
Threatened	2	5.0	14.3%
Special Concern	12	6.3	86.7%
Secure/Stable			
Unknown			
No Opinion			

Round 2 justification statements (in no order):

Given the latest 10-year increasing trend and good productivity, status can be moved to special concern. There are cases when population status has ‘jumped’ a status (eg: moved up from say stable to threatened, bypassing SC) when perceived population decline or production is particularly poor. Philosophically, it would seem to me that the same standard could be applied when going the other way (eg: skipping a status step when “downgrading”). That is something to be applauded and allows effort, money, and focus to be applied to other species that have a higher need. (SC)

I voted for SC last round, and I will vote for SC again, albeit with a little less confidence as I considered other opinions and votes for Threatened status. The Bald Eagle (and Osprey) are amazing success stories, but as several responders pointed out, there is not a lot of other good news coming from the Delaware Bayshore, as sea level rise imperils not only high marsh and its key species, but even possibly much of the low marsh as well. The upland edges are threatened too, with, in most places, little area for the salt marsh to "migrate" due to human activities. We are learning that status and distribution can change very quickly in a rapidly changing climate. Special Concern is needed. (SC)

Other reviewers have brought up many good points about long term threats to habitat - both nest trees and foraging areas. The estuaries that support the densest eagle populations are under threats related to climate change, sea level rise, and subsequent changes to habitat structure and fish populations. I think these may cause the eagle population and/or productivity to be limited, with some limitations expressed in competition for nest sites. I also agree there are other threats important to monitor, like lead poisoning and vehicle strikes, causing mortalities. Ideally, lead in ammunition and fishing tackle would be eliminated by regulation in the future. I also worry that lesser regulatory protection could reduce habitat near nests. However, I think the population status no longer meets the definition of endangered or threatened, and the status should be changed to special concern. (SC)

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The Eagle has made a remarkable recovery, and we see them regularly in central NJ as well, where they also nest. I think if it weren't an eagle, we would surely reduce it to special concern. Nesting pairs do not seem unduly concerned, and they are nesting in relatively populated areas. Continuing to spend money on a species that has made an incredible recovery, is widely distributed in the state, and is increasing is unsupportable when so many other species are in dire need - some of even determining what their status is. (SC)

In Round 1, I wrote that my gut feeling was that Special Concern was the appropriate category, but I hesitated to make the jump from Endangered to Threatened. After reading the comments of other reviewers and considered the continuing growth in the nesting population, I am changing my vote to Special Concern. While the nesting population is doing well, the high mortality rate is a matter of concern. Some of these birds are likely visitors from other states, but it's still an issue. (SC)

I repeat my first round comments here with a bit of elaboration at the end:
Bald Eagle is clearly no longer endangered in New Jersey, and its prospects of survival or recruitment are not likely to be in jeopardy within the foreseeable future due to the factors listed in the Threatened designation. Therefore, I believe it cannot be considered "Threatened in NJ and should receive the next highest designation, Special Concern. Nesting success is relatively high and the number of nests continues to increase, with Bald Eagles now nesting in all of NJ's counties. Special Concern seems like a great fit for Bald Eagle NJ breeding status in 2020. I am not concerned with the process of jumping directly from Endangered to SC for breeding status - the time to move Bald Eagle from Endangered to Threatened was years ago, and so moving to the apparently appropriate SC designation seems to be in keeping with the bird's current status. I would also like to see a lot of other species considered more seriously for elevated status (including many of the neotropical migrants - discussed in a previous stage of this process - which have more concerning population trends than Bald Eagle in recent years) and I am somewhat concerned that elevated protections for Bald Eagle (which is doing well, by basically all accounts) could take away resources from less iconic species (Eastern Whip-poor-will comes to mind immediately) in our resource-limited world. (SC)

I am switching my evaluation from Threatened to Special Concern. My initial thoughts were to go in a step-wise manner and not jump past a status designation, but upon further consideration it is completely apparent that Special Concern best fits this species. If it were to be listed as threatened for the next 3+ years -- until further review might happen-- then the level of protection afforded to the species would still be significantly out of synch with the species' recovery trends and also hinder conservation efforts for more imperiled species. (SC)

I think that it would be inappropriate to change status directly from Endangered to Special Concern without intermediate status of Threatened. I believe that Threatened is the appropriate category. I have strong concerns about the future given pressures from sea level rise, climate

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change, agricultural chemical use, and development, and do not want to yield any tools that might help defend this species. (T)

Agreeing with some of the comments from others regarding SC status, Bald Eagle has made a Herculean comeback due to the great conservation work protecting nest sites and surrounding habitat. The limiting factor at this point to expansion is likely one of additional suitable habitat (especially in the southern part of the state). It is for this reason that continued conservation work should still focus on maintaining and augmenting the current population of Bald Eagle in NJ, while also balancing this with the needs of other species in peril across the state. (SC)

Bald eagles were reviewed in 2015 and downlisted to Threatened but it was never codified. Five + years later we have a chance to review the status again after seeing a continued increase in number of breeding pairs and productivity rates reaching higher than the target set for population recovery, even with a few harsh winters that lowered productivity. Based on these data, breeding bald eagles in NJ do not fit the definition of Threatened. True, we cannot foresee the future, but based on the data I cannot see how the survival or recruitment of breeding bald eagles in NJ will be in jeopardy within the foreseeable future (next 5-10 years). That said, we know they can be vulnerable to toxins and disturbance, which warrants a SC status instead of stable. (SC)

Based on the comments from Round #1 and the importance of continued nest monitoring for this species, I am hesitant to vote for a direct change from Endangered to Special Concern without first moving to Threatened status. (T)

There are multiple comments from the first round of this 2021 review saying we shouldn't jump from endangered status to special concern status, but in 2017 there wasn't a consensus—it was 10 to 4, threatened to special concern (zero endangered)—so the view was really somewhere between threatened and special concern already. The designation stayed at endangered because the state errs on the conservative side when there's no consensus, which I think was fine. So I'm not worried at all about the official designation changing from endangered to special concern in 2021, it makes sense the way it's all gone. And now that we have more data, the population trend in nests and statewide nesting status can't be denied. During the last review, in 2017, one could have argued that well, the curve for number of nests has flattened, it could be turning in the other direction (down), let's wait and see and stay at Threatened for now. That's what I thought, actually. But since then, the number of nests has increased almost 50%. And there was a drop in young produced in 2017 and 2018, but in addition to the weather (mentioned in the Background doc as a possibility), the 2017-18 drops in young produced may have been due to a large number of young-adult birds either trying to breed for the first time or floating around established breeders and either interfering with them or replacing one of the pair, both of which could have contributed to the drop in nest success in 2017 and 2018, since recovered very well. (SC)

Continued statewide increases in population size and stability in breeding success as well as region-wide population increases support a Species of Special Concern status. (SC)

Results of Round 1

Consensus not reached

Survey open 2/1 – 2/15

Rank	# Votes	Mean Confidence	
Endangered			
Threatened	5	6.0	38.5%
Special Concern	7	6.7	53.8%
Secure/Stable	1	5.0	7.7%
Unknown			
No Opinion			

Round 1 justification statements (in no order):

This is a difficult decision. My gut feeling is that the species is probably of Special Concern, but making the jump from Endangered to Special Concern without an intermediate stop at Threatened seems too abrupt. Living in Cape May, where we see Bald Eagles almost every day, and birding in nearby Cumberland County, where eagles are hard to miss, gives me a different perspective from those in the northern counties. I'll be interested to see comments from some of the other reviewers. (T)

Looking at the rate of recent population increase, and its current distribution of nests in the state there looks to be no present need for endangered status. The species should be listed as threatened because of its population size, distribution, and growth. It is important that nest monitoring continues. But if any resources can be switched from Bald Eagle to try to help species more in need in the state, that would be positive and appropriate. (T)

Bald Eagle is clearly no longer "endangered" in New Jersey, and its prospects of survival or recruitment are not likely to be in jeopardy within the foreseeable future due to the factors listed in the "Threatened" designation, so I believe it cannot be considered "Threatened" in NJ. Nesting success is relatively high and the number of nests continues to increase, with Bald Eagles now nesting in all of NJ's counties. Special Concern seems like a great fit for Bald Eagle NJ breeding status in 2020 (especially with the established Federal protection that presumably supersedes state protection in most cases). (SC)

Bald eagles now nest statewide, a remarkable recovery since the 1980s with a single nesting pair. Nesting is concentrated in the Delaware Bay region in the superb habitat of bay, tributaries, and rural land. In the rest of the state, nests are associated with larger lakes and rivers. Despite nesting near human development, eagles are still vulnerable to disturbances that can cause nest failure or nest site abandonment. The state-level protections implemented by DEP land use regulations have provided larger nest buffers (than USFWS guidelines), and long-term protection of forested edges to waterways as foraging areas. Foraging area protection will be reduced or lost if/when eagles become delisted because USFWS does not define that in its guidelines. In NJ, threats continue to include habitat loss to development, disturbance near nests, disturbance or loss of foraging areas, lead poisoning, electrocution, and other (illegal) secondary poisonings. (SC)

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The breeding population has continued to increase and I do not believe they require endangered status. It would be nice if surrounding states had population data available since the status had been changed in those states. I unfortunately could not find any recent data from those states. Without that data I think the conservative approach is to change the status to threatened and reevaluate several years after that to see if the population trend changes. (T)

They have been steadily increasing for decades. As long as they have good nesting sites and a stable supply of fish, they should be fine. (S)

With the amazing upward trends we have seen in our Bald Eagle population, I actually would have voted for "Stable", except for one factor. I note how many nests are failing, indeed falling and disappearing, due to the sorry state of the upland edge and salt marsh island locales that eagles frequently choose for their nests. Sea level rise (and to a lesser extent, pine bark beetles on pines), are taking a huge toll on the mature suitable nest trees that eagles select and indeed require. This trend will continue and accelerate, and I feel this may become a limiting and detrimental factor to Bald Eagle nesting success. It is clear that many nesting trees are in bad shape, dead or dying, and this could impact eagle success in the near future. And, with little we can do about sea level rise in the near future, this is not something that we can actively manage, short of building artificial nesting structures. A second concern is lead poisoning, as I frequently see eagles feeding on discarded deer carcasses. Only the elimination of lead shot can solve this issue, unlikely in the near future. With these factors in mind, I vote for "Special Concern" rather than "Stable", and I do this with the background and belief that there are other raptors that need "Threatened" far more than Bald Eagle. Indeed, excepting vultures, Bald Eagle is the commonest raptor on the Bayshore, with my long-term Maurice River and Cohansey River data showing that eagles now outnumber Red-tailed Hawks. Thank you for the opportunity to comment. (SC)

While threats still exist for New Jersey's bald eagle breeding population, the primary cause of population declines is no longer a threat. Considering the increasing trends, high productivity, and widespread distribution along with the elimination of the primary cause of the demise of the population, New Jersey's bald eagle population does not fit the definition of endangered or threatened because current threats have not, and likely will not, jeopardize the bald eagle population within the foreseeable future. New Jersey's breeding population should be listed as Special Concern, however, because we know it is vulnerable to toxins and pollution and that an introduction of new toxins could result in their becoming threatened again. (SC)

The bald eagle population continues to increase and productivity remains suggesting that the population has yet to reach carrying capacity. Given this and the continues increasing trend in population sizes, I feel that the NJ population can be moved from threatened to species of special concern. (SC)

I am hesitant to vote for delisting from Endangered directly to Special Concern, and am voting on the err of caution to maintain Threatened status. (T)

Considerable increases since 2017 assessment. Population and productivity has doubled in past 10 years. (SC)

Following suit with other nearby states reflecting BAEAs success seems fitting here according to the data provided. They should be afforded special attention through volunteer monitoring which is currently being done. Cape May Hawkwatch data has also supported regional continued rebound. (SC)

The Endangered classification was appropriate while the breeding population of Bald Eagle in NJ was virtually extirpated. I think that it would be inappropriate to change status directly from Endangered to Special Concern without intermediate status of Threatened. I believe that Threatened is an appropriate category now and I am reluctant to endorse Special Concern. If the worst case makes it necessary, I suspect it is much harder to escalate from Special Concern to Threatened or Endangered than to de-escalate.

As pointed out in the NJDEP/DFW Bald Eagle Project Report for 2020 (1) we do not know what a stable/secure population size actually is, because we have no data from a time before persecution and negative human impacts. Currently the number of nests, and nest productivity, seem to be on steady upward curves. To be considered 'stable' the curve should have flattened out. While it's tempting to change the classification to a more cheerful one, I think there is no reason to change management, monitoring, or protection as long as the species is doing well at the current classification. This may seem counter-intuitive, but to decrease protections abruptly could artificially interrupt population growth before it reaches a natural plateau. I believe the Threatened category will offer a higher degree of monitoring and legal protection than Special Concern. A conservative approach seems appropriate to me because I don't think the story is over.

Population changes can happen suddenly. We cannot be certain what sea level rise and loss of salt marsh along the Delaware bayshore will do to the densest concentration of Eagle nests, but it is unlikely to be good news. A recent action plan for Bald Eagle protection in Florida predicts effects of climate change will likely include increased storm severity and frequency, changes in water chemistry, reduced prey availability, and habitat loss. (2) Studies show Saltmarsh Sparrow and Black Rail are suffering population declines due to flooding of nests and habitat, and both have been recently studied for listing in NJ or the Northeast. (3, 4, 5) Birders see disappearance of raptors (Short-eared Owl, Northern Harrier) which used to be observed in winter on the marshes (6), with most now wintering instead on inland remnant meadow locations in NJ (personal observation), likely due to tidal marsh flooding and absence of voles and other prey. We should be very alert to effects of declining quality and quantity of salt marsh habitat on Bald Eagles (and other raptors) because of their heavy reliance on the marshes of Cumberland and Salem counties.

Inland, Eagle habitat will be affected directly by human actions, including land use and watershed-scale planning decisions, housing and industrial development, and the use of toxic chemicals in agriculture. Any of these can change abruptly depending on the political, economic and regulatory winds. For example, the current pandemic has led to pop-up development of Amazon warehouses on at least six former birding sites, by my own observation, some near nests. And the Endangered Species Act itself is a political target. (7)

Finally, to the argument that neighbor states have removed protections from the Bald Eagle, we know that New Jersey has denser human population and more development in a smaller land area than any other eastern state. This makes success in improving Eagle populations much more remarkable. But it also makes them much more vulnerable and requires that we be very certain

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we are on a long-term road to success before we give up any tools that have helped in the process.

All these circumstances argue for maintaining a careful watch over the status of this iconic bird by retaining it at Threatened status. (T)

References.

- (1) <https://www.njfishandwildlife.org/ensp/pdf/eglrpt20.pdf> New Jersey Department of Environmental Protection, Division of Fish and Wildlife. New Jersey Bald Eagle Project, 2020, prepared by Larissa Smith and Kathleen E. Clark. p. 4.
- (2) Florida Fish and Wildlife Conservation Commission [FWC]. 2017. A Species Action Plan for the Bald Eagle *Haliaeetus leucocephalus*. p. 11 <https://myfwc.com/media/1778/baldeaglesap.pdf> "In the coming century, projections indicate that Florida will be severely impacted by climate change. Climate change impacts include an increase in sea level rise, dynamic shifts in precipitation and air temperature, increased frequency and intensity of storm events, and changes in water chemistry. Increasing severity of storms could affect eagle habitats through flooding of nesting areas (potentially resulting in loss of native pines), as well as impacts to water quality caused by storm surges, potentially reducing prey availability or increasing risk of poisoning. Much of Florida's coastline is susceptible to inundation following a moderate rise in sea level, which would reduce a substantial portion of coastal habitat and change the structure of the shallow waters where bald eagles forage. Saltwater intrusion into coastal estuaries may also alter vegetation and prey base."
- (3) <https://academic.oup.com/condor/article/121/2/duy024/5393601> Samuel G Roberts, Rebecca A Longenecker, Matthew A Etterson, Chris S Elphick, Brian J Olsen, W Gregory Shriver. Preventing local extinctions of tidal marsh endemic Seaside Sparrows and Saltmarsh Sparrows in eastern North America. Study was done at Forsythe NWR; model predicts local extinction within 30 years. The Condor, Volume 121, Issue 2, 1 May 2019. alternate link: <https://doi.org/10.1093/condor/duy024>
- (4) https://www.fws.gov/northeast/science/pdf/peerreview/Peer_Review_Plan_sharp_tailed_saltmarsh_sparrow_Final.pdf Saltmarsh Sparrow (*Ammodramus caudatus*) Peer Review Plan. Krishna Gifford, Northeast Region ESA Listing Coordinator, Division of Threatened and Endangered Species. Listing studies are underway with a target of 2023 for completion.
- (5) <https://ecos.fws.gov/ecp/species/10477> U.S. Fish & Wildlife Service ECOS Environmental Conservation Online System. Eastern Black rail (*Laterallus jamaicensis* ssp. *jamaicensis*) Threatened, Region 4. US FWS, 2020.
- (6) <http://www.conserveNewJersey.org> New Jersey Endangered and Threatened Species Field Guide: Short-eared Owl. Conserve Wildlife, (c)2021, last updated 2010. "In New Jersey, short-eared owls inhabit coastal tidal and brackish marshes, inland fields, pastures, and grasslands. Vast areas of low marsh or thick stands of phragmites do not offer high quality habitat for these owls. Prime habitat for the Short-eared owl consists of large areas of coastal high marsh adjacent to undisturbed upland fields." Few winter reports now come from coastal marsh, with wintering birds occurring only in a few historic inland areas. pers. obs., 2020-1.
- (7) <https://www.washingtonpost.com>. Fears, Darryl. A new Trump rule could shrink protected habitat for endangered wildlife. Washington Post, Climate and Environment section, Dec. 15, 2020. "The administration says that in making the change, policymakers responded to a 2018 Supreme Court decision that found that protection of endangered habitats went too far. The court ruled that critical habitat should be narrowly defined so that it doesn't unnecessarily intrude on the rights of farmers, home builders, loggers and landowners."

~ End of Review ~

**BACKGROUND FOR RE-REVIEW OF STATUS: BALD EAGLE (breeding season)
PROVIDED TO BIRD STATUS REVIEWERS**

Current Status in NJ: Breeding Season - *Endangered* (pending a rule change to *Threatened*); non-breeding season – *Special Concern* (no change pending).

The bald eagle has been delisted from state endangered/threatened lists in PA (2014), MD (2007), and DE (2007). Its status remains threatened in NY (since 1999) and CT (since 2010). Despite delisting under the federal Endangered Species Act in 2007, federal protection against harm or take for eagle nests persists under the federal Bald and Golden Eagle Protection Act, and the US Fish & Wildlife Service maintains National Bald Eagle Management Guidelines, which are voluntary but identify the types of activities that should be avoided near nests unless a federal permit is obtained. Federal protection is relevant for activities within 200m of a nest.

State protections are primarily implemented via various land use regulations implemented by the NJDEP, and commonly exert jurisdiction over activities within 300m of a nest, as well as in areas identified by the Department as bald eagle foraging habitat. These protections may vary slightly in scope or extent from one NJ jurisdiction to another and are contingent on the listed status of eagles. Most NJ regulatory programs only protect wildlife with a state “threatened” or “endangered” status, though there are limited jurisdictions that provide protection for “species of special concern” as well.

Results of 2017 Status Review

“Consensus” level for a status is 85% after four iterations of review. There was no consensus reached among the participating reviewers in the 2017 status review. The results were Threatened (10 votes), Special Concern (4 votes). The ENSP’s recommendation was to adopt the Threatened status based on the majority of votes, recent trends, and concern over going from an “endangered” status directly to “special concern” without consensus of reviewers.

Reasons for Re-review

In 2020 the Division of Fish and Wildlife’s Endangered and Nongame Species Program (ENSP) biologists supervised volunteer nest monitors statewide to locate and monitor bald eagle nests and territories. 248 nest sites were monitored during the nesting season, of which 220 were active (with eggs) and 28 were territorial or housekeeping pairs (i.e., did not lay eggs). The total included 36 new pairs found this season, 22 in the south, seven in central and seven in the north. We were able to document productivity at 210 nests, and 179 (85%) produced 307 young, for a productivity rate of 1.46 young per active/known-outcome nest. The Delaware Bay region (Cumberland, Salem and bayside Cape May County) supports roughly half of all nests.

At the time of the 2017 status review, the bald eagle population was approximately 150 nesting pairs and the population trends appeared to have leveled. In 2018-19 the population increased to 185-190 pairs, and in 2020 rose to 220 pairs. Productivity is variable with nest or brood loss usually caused by harsh weather events that occur in March-April. Overall, though, the productivity rate since 2010 has averaged 1.30 young per known-outcome nest. Productivity of 1.0 young per nest and 0.9 young per nest are goals identified in the Northern States and Southeastern States bald eagle recovery plans, respectively (USFWS 1983 and 1989, respectively). In the last five years, eagle nests were known to occur in 20 of 21 counties; in 2020, one Essex County nest was found, resulting in documented nesting in all 21 counties.

The ENSP is thus reconvening the bird status assessment panelists to review the bald eagle status in light of the most recent data on population, productivity, and distribution.

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Figure 1. Number of active bald eagle nests (bars) and young produced (line), 1987-2020.

