Introduction to North American Raptor Conservation Species Assessments

We provide species assessments based on trend analyses through 2023 from 80 raptor migration count sites across North America spanning from Canada to Panama. Synthesis of trends at the continental and regional scales can highlight species and/or regions that warrant a closer look in the case of widespread declines, or highlight conservation successes in the case of widespread increases. It is important to note that the intent of long-term monitoring efforts like RPI is to identify changes over time, not necessarily to explain them—that is where focused research efforts come into play. RPI shines a light on species and places in need of closer looks and focused efforts.

In these assessments, we provide a summary of the continental and regional migration count trends for each species and highlight species of concern. For complete and/or long-distance migrants such as Osprey, Broad-winged Hawk, Swainson's Hawk, and Mississippi Kite, where essentially the entire population migrates out of its breeding range to a separate wintering range, the migration count trends provide a reliable assessment of actual population trends. For partial and short-distance migrants such as the Red-tailed Hawk, there is evidence that some species may be shifting their migratory behavior and/or wintering ranges in response to climate change and other factors (Bolgiano, 2013; Paprocki, et al, 2017).

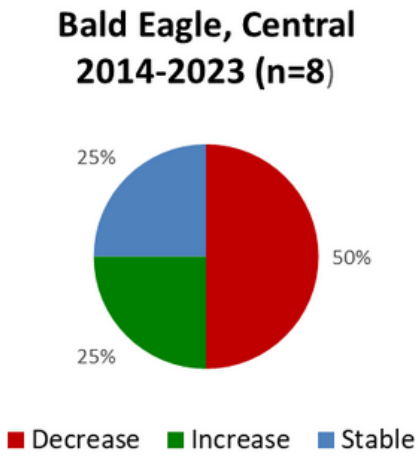
Another factor to consider in viewing the trends is that some species (e.g., Golden Eagle, Peregrine Falcon) have resident populations that may not be well-represented in the migration count data. Therefore, considering results from multiple datasets, including the Christmas Bird Count (CBC, https://netapp.audubon.org/cbcobservation/) and Breeding Bird Survey (BBS, https://www.pwrc.usgs.gov/bbs/results/), can provide a more complete picture of the population status of many raptor species. In these assessments, we also briefly examine CBC trends, especially where those data inform the findings from the migration count results. The results discussed here derive from www.audubon.org and were published in *Soykan, C.U., Sauer, J., Schuetz, J.G., LeBaron, G.S., Dale, K., and Langham, G.M. 2016. Population trends for North American winter birds based on hierarchical models. Ecosphere, 7(5).* The CBC data represented here only show trends where the confidence interval for the trend derived does not include zero.

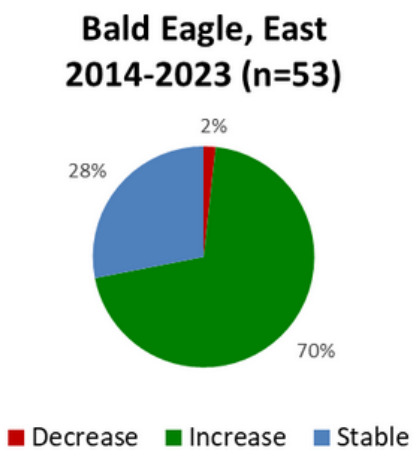
Bald Eagle (*Haliaeetus leucocephalus*)

The 10-year migration count trends for the Bald Eagle suggest a mix of primarily increasing and stable population across North America as 61% of sites recorded significant increases in counts, 27.6% of the sites reported stable counts and 11.8% (n=9) sites showed declining counts during this span. Regional patterns showed mixed results in the West, half the sites in the Central region showing declining counts, while sites in the East continue to show widespread increases in numbers (see pie charts and trend maps below). The 20-year count trends from 2004-2023

showed largely increasing counts across the continent; however these increases may be leveling off in recent years. Hawk Ridge, Minnesota, has the highest average count of Bald Eagles of all count sites (5,190), and after several decades of steadily increasing counts, now shows a decrease for the most recent 10-yr period.

Winter survey data from the Christmas Bird Count (CBC) confirm an increasing 10-year trend continent-wide with the annual percent change in population reported to be an increase of 3.65% for the period ending 2021. Additionally, eBird data reports an increase of 8.2% in annual abundance for the Bald Eagle between 2012-2022. The Bald Eagle is listed as a *Species of Least Concern* by the IUCN Red List throughout its range, but it is still vulnerable to threats such as energy development, nest disturbance, lead poisoning, disease, and electrocution.





D. Oleyar, D. Ethier, L. Goodrich, D. Brandes, R. Smith, J. Brown, and J. Sodergren. 2021. *The Raptor Population Index: 2019 Analyses and Assessments*. Available at http://rpi-project.org/2019/assessments2019.php