

Hawk Migration Association (HMA) Statement on Raptor Electrocutation

Electrocutation on power lines is a human-caused mortality factor to which raptors are particularly susceptible. Raptors, such as eagles, osprey, owls, hawks, are susceptible to electrocution because of their large size. Raptors can be electrocuted or incur electric shock injuries when simultaneously contacting two uninsulated energized components of differing electric potential (phase-to-phase electrocution), or when contacting an uninsulated energized component and a path to ground (phase-to-ground electrocution). Larger birds such as eagles are disproportionately affected. (Slater, et al, 2020). Large birds can also be electrocuted when they collide with the lines, accidentally pushing them together. Raptor collision & electrocution risk is especially high where power lines bisect travel corridors and when individual birds are distracted by courtship, territorial defense, hunting, or poor visibility due to weather or reduced light. (Eccleston & Harness, 2018).

Over half of the 31 diurnal raptors and 19 owl species breeding in North America have been reported in electrocution records. (Slater, et al, 2020). Electrocutations account for an estimated 504 Golden Eagle mortalities per year in North America, with juveniles electrocuted at nearly twice the rate of subadults or adults. (Slater, et al, 2020). In parts of Texas & New Mexico, 34 % of Golden Eagles are electrocuted within their first year of life.

Although standards for power-line construction and retrofitting designed to mitigate electrocution risk were established about thirty years ago, electrocutations persist. Reasons for this persistence include the sheer number of potentially lethal poles on the landscape, the fact that mitigation programs tend to be reactive rather than proactive, and the reality that there are approximately 3000 electric utility companies in the United States, making it difficult to standardize practices.

HMA supports the latest version of the widely-accepted *Suggested Practices and for Raptor Protection on Power Lines* by the Avian Power Line Interaction Committee (APLIC) and USFWS, and their voluntary *Avian Protection Plan Guidelines*. HMA also supports specifically the following recommendations of the United States Geological Survey (USGS):

- The electric power industry should increase information sharing about technology advances, increase efforts to retrofit lethal power poles, and ensure that every new and replacement line constructed incorporates raptor-friendly standards at all phases of development

- Governments, academic institutions, the conservation community and consumers should work with the industry to find and implement solutions (U.S. Geological Survey 2001).

In addition to the USGS recommendations, Dwyer & Mannon (2007) recommend that all potentially lethal power poles within 300 meters of nesting raptors (especially those in urban areas) be retrofitted with the addition of insulation, or increased spacing between conductors. Finally, HMA supports the call for properly designed studies to better understand this ongoing problem.

In addition to risk of electrocution, raptor attraction to power pole perches in relatively open landscapes may make them conspicuous targets for shooting. Perch deterrents on power poles might be helpful. Indeed, shooting deaths along power lines are common in the western US, and many deaths attributed to electrocutions are actually the result of illegal shooting. (Thomason, Turley, Belthoff, et.al, 2023).

Conservation organizations, governments, and power companies must work together to manage power distribution poles and lines to protect sensitive species.

Compiled by members of the Conservation Committee, HMA Board; reviewed by Laurie Goodrich, Ph.D., Director of Conservation Science, Hawk Mountain Sanctuary Association; Richard Harness, Certified Wildlife Biologist, EDM International, Inc.

The Hawk Migration Association's official mission is to conserve raptor populations through the scientific study, enjoyment, and appreciation of raptor migration. As a scientific, educational, and conservation organization, HMA collects data from hundreds of affiliated raptor monitoring sites throughout the United States, Canada, Central and South America, and publishes a journal Hawk Migration Studies that includes data from participating hawk watches as well as articles on raptor conservation and other issues impacting raptors. *For more information visit hawkmigration.org.*

References

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