

# Town of Superior Raptor Monitoring 2024-25 Summary



*American Kestrel. Photo by Brian Beamer*

Sponsored by the  
Open Space Advisory Committee

For more information about the raptor monitoring program, or to volunteer as a monitor, please email  
[OSAC@superiorcolorado.gov](mailto:OSAC@superiorcolorado.gov).

*All photos in this document were taken with high-magnification lenses to minimize disturbance to the raptors.*

## Introduction:

The seventh full session of the Town of Superior's raptor monitoring program saw enthusiastic volunteer participation, which led to a record number of species being identified in the Town. The program, sponsored by the Open Space Advisory Committee, has several goals: determining what species of birds of prey are present in Superior, learning what areas raptors use at different times of the year, monitoring any nesting activity, working to prevent unnecessary disturbance to raptors, identifying habitats to protect, and providing relevant education to the Town's residents.

In 2024-25, 40 volunteer observers, mostly Superior residents, monitored 15 general locations regularly between early winter and late summer. In over 660 observation reports representing 147 hours in the field, they identified 15 species of birds of prey, including eagles, falcons, hawks, and owls. Some of these species use open spaces in Superior only intermittently, for hunting or migration. However, monitors determined that four species nested in Superior in 2025. 12 active nests were located, but not all of them produced fledglings. The nesting species were Great Horned Owl, Red-tailed Hawk, Cooper's Hawk, and American Kestrel. All of these are known for being able to adapt to living near humans and to reproduce successfully in a suburban environment.

## Methods and Results:

Volunteer observers received orientation training, monitored open space and residential areas between early winter and late summer, and submitted observation reports via a web-based data reporting and analysis platform, <https://citsci.org/projects/town-of-superior-raptor-monitoring-program>. If courtship activity or a nest was discovered, volunteers increased their observation frequency at that site. They identified the following species of raptors (with observed seasonal and area usage info in parentheses.)

**Northern Harrier** (migrant and winter visitor; hunts in open areas especially near wetlands)

**Osprey** (migrant and intermittent summer visitor to Hodgson-Harris Reservoir)

**Sharp-shinned Hawk** (winter visitor; found in areas with large or dense trees)

**Cooper's Hawk** (year-round resident and nester; found in areas with large or dense trees)

**Broad-winged Hawk** (migrant; found in open areas with some large trees)

**Swainson's Hawk** (summer resident and nester; hunts in open areas)

**Red-tailed Hawk** (year-round resident and nester; found in areas with tall perch and nest sites bordering open space)

**Ferruginous Hawk** (winter visitor; hunts in open areas especially near prairie dog colonies)

**Bald Eagle** (year-round visitor; hunts in prairie dog colonies and large ponds)

**Golden Eagle** (year-round visitor; hunts in open areas especially near prairie dog colonies)

**American Kestrel** (year-round resident and nester; found in open areas with patches of trees)

**Prairie Falcon** (year-round visitor; hunts in open areas)

**Great Horned Owl** (year-round resident and nester; nests and roosts in very large trees, hunts in open areas and residential neighborhoods)

**Long-eared Owl** (migrant; found in areas with dense trees with open patches)

**Eastern Screech-Owl** (year-round resident; found in areas with dense trees with open patches)

Seen in one or more of 2018-2024, but not in 2025:

Barn Owl

Burrowing Owl

Merlin

Peregrine Falcon

The following areas received regular monitoring:

**Bell Flatirons / Autrey Reservoir** – hunting Red-tailed Hawks, Osprey, Great Horned Owls, and American Kestrels.

**Rock Creek riparian corridor (Autrey Park)** – hunting Cooper’s Hawks, Red-tailed Hawks, and American Kestrels.

**Rock Creek riparian corridor (Community Park)** - nesting and hunting Red-tailed Hawks, and American Kestrels; hunting Cooper’s Hawks and Bald Eagles.

**Eldorado Circle area** – nesting and hunting Cooper’s Hawks; hunting Red-tailed Hawks, Great Horned Owls, and Eastern Screech-Owls.

**Coalton trailhead area** - nesting and hunting Red-tailed Hawks and Great Horned Owls; hunting Cooper’s Hawks, Osprey, Bald Eagles, Golden Eagles, Ferruginous Hawks, and American Kestrels.

**Downtown / Vista Corridor** – hunting Swainson’s Hawks, Red-tailed Hawks, Bald Eagles, Great Horned Owls, and American Kestrels

**Coal Creek riparian corridor (Original Town)** – nesting and hunting Cooper’s Hawks and American Kestrels; hunting Swainson’s Hawks, Red-tailed Hawks, Ferruginous Hawks, Great Horned Owls, and Prairie Falcons.

**Mayhoffer-Singletree / Oerman-Roche area including Ochsner open space** - nesting and hunting Great Horned Owls; hunting Swainson’s Hawks, Red-tailed Hawks, Bald Eagles, American Kestrels, and Prairie Falcons; migrating Broad-winged Hawks.

**Purple Park / Heartstrong Park area** – nesting and hunting Cooper’s Hawks and Great Horned Owls; hunting Red-tailed Hawks and Bald Eagles.

**Meadowbrook / Riverbend area** – nesting and hunting Cooper’s Hawks; hunting Swainson’s Hawks, Red-tailed Hawks, Bald Eagles, Golden Eagles, Great Horned Owls, and American Kestrels.

**Bowes Pond Natural Area** – hunting Sharp-shinned Hawks, Cooper’s Hawks, Northern Harriers, Swainson’s Hawks, Red-tailed Hawks, Bald Eagles, Great Horned Owls, and American Kestrels.

**Hodgson-Harris Reservoir area** – hunting Red-tailed Hawks, Ferruginous Hawks, Bald Eagles, Golden Eagles, and American Kestrels.

**Southwest Superior** – hunting Cooper’s Hawks, Red-tailed Hawks, Bald Eagles, Great Horned Owls, and American Kestrels.

**Coyote Ridge** – hunting Sharp-shinned Hawks, Cooper’s Hawks, Red-tailed Hawks, and American Kestrels; migrating Long-eared Owls.

**76th St. / Sagamore** - nesting and hunting Red-tailed Hawks; hunting Cooper’s Hawks, Ferruginous Hawks, Bald Eagles, Golden Eagles, Great Horned Owls, and American Kestrels.

This year’s observations show a continued rebound in diversity following an unusually low number of species in most areas in 2023.

Figure 1 shows the history of observed nesting attempts and fledgling production since the beginning of the monitoring program. While not all nests have been successful, every species that has attempted nesting in a given year has fledged at least one young bird. In this report, a nesting attempt is counted when an adult raptor spends at least one day in an incubating position in the nest. In addition, a nesting attempt by a cavity-nesting species can be inferred by the presence of territorial and courtship behavior followed by the appearance of fledglings in the same area.

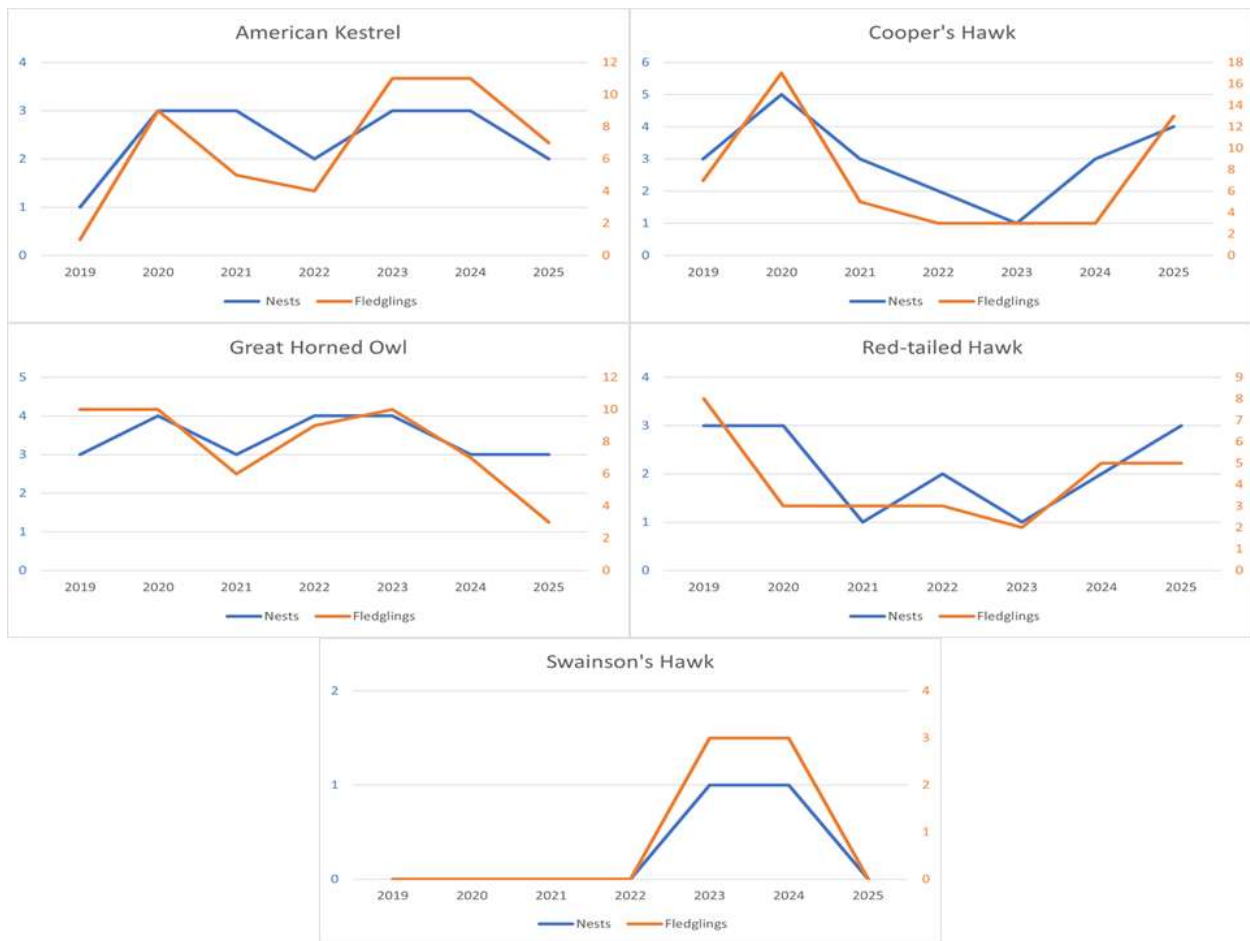


Figure 1 - Nesting attempts and fledging production

Note that differences in the number of observed nests per year may be due to changes in monitoring coverage and frequency in some areas. Since 2022, however, volunteers have been able to visit all known historical nesting sites each year, providing better consistency in year-to-year results.

Our raptors continued a trend of choosing nest sites on private property and/or in artificial structures in addition to trees in parks and open spaces. As large trees slowly disappear in public areas, birds find alternative sites on buildings or in maturing trees around private residences. For example, this year two of four Cooper's Hawk nests were in trees in residential yards and both American Kestrel nests were in human-made structures. For the first time, two species (American Kestrel and Great Horned Owl) nested in Town-provided boxes or platforms.

### Population cycles:

Now that we have seven years of observation data, it's possible to see some trends in raptor populations and nesting success. One positive shift is a rebound in nesting attempts by Cooper's Hawks and Red-tailed Hawks toward levels last seen around five years ago. Hawks are highly sensitive to both West Nile Virus and Highly Pathogenic Avian Influenza [1], which may have contributed to population declines in our area in recent years. Cooper's Hawks, which feed primarily on other birds, can be exposed to both viruses from their prey in addition to more common means of transmission such as mosquitoes. Since nesting and hunting environments for



*Figure 2 – Immature female Cooper's Hawk (left) paired with adult male (right). Photo by Peter Ruprecht*

Cooper's Hawks are widely available throughout Superior, habitat constraints are unlikely to cause town-wide drops in population.

One sign of an expanding breeding population, besides the detection of additional nests, is breeding participation by younger birds that can fill the spaces left by a reduced population of mature adults. Normally, hawks don't pair up until they are at least two years old and have attained their adult plumage. However, this year, volunteers observed two Cooper's Hawk pairs and one Red-tailed Hawk pair in which the female was still in immature plumage. Immature hawks tend not to nest successfully; however, both Cooper's Hawk pairs fledged multiple young. The Red-tailed

Hawks, though observed courting, nest building, and copulating, apparently did not lay eggs.

Great Horned Owls, on the other hand, experienced a notable drop in nesting success this year, possibly due to a lack of suitable nest sites. One pair chose to lay eggs in a nest structure that apparently had been damaged by squirrels, and the owls eventually abandoned the nest. In another case, the incubating adult owl was observed to leave her nest for several hours, seemingly in response to noisy tree removal work in the vicinity. Although she returned to the nest later in the day, the eggs never hatched despite her diligent incubation for several more months. Since natural nesting sites suitable for Great Horned Owls are declining in Superior, it's likely that nesting success by this species could be improved by providing additional artificial nest structures and by avoiding disturbances during the breeding season.

### **Species Spotlight – Red-tailed Hawk:**

Since Red-tailed Hawks are some of the most widespread and familiar raptors in North America, it can be easy to take them for granted. However, their adaptability and highly variable plumage should make us appreciate them both as a species and also as individuals.

Red-tails prefer open country with a few tall trees or utility poles for perching. They can be found year-round in open spaces and residential areas throughout Superior. Red-tails are the stereotypical "soaring hawks" and are often seen circling over grasslands and fields in search of prey. They consume large numbers of small rodents, rabbits, and squirrels, but will also hunt snakes and even other birds. One pair that nested in Autrey Park several years ago specialized in nabbing starlings and pigeons! Because their diets are so varied and their preferred habitat so widely available, Red-tailed Hawks are easy to find throughout our area. They are also more tolerant of human activity than many other raptors, allowing them to find niches in suburban and even urban areas. Their population in North America actually increased in the last 50 years.



*Figure 3 - Adult Red-tailed Hawk, showing the typical dark head, splotchy belly band, and dark leading edges of wings. Photo by Cheri Atkinson*

adult birds sport their namesake brick red upper tail surface, but immatures have a confusing brown and tan striped tail until they are a little over a year old. Sometimes shape is the best way to identify this species: look for a chunky body, fairly short tail, and broad wings that bulge on the trailing edge.

Because Red-tails eat so many small rodents, they are very susceptible to secondary poisoning by rodenticides. For example, a mouse that has eaten poisoned bait usually takes several days to die, during which time it is sluggish and more easily caught and consumed by predators. The toxins in the rodent's body then pass into the predator, which can in turn be sickened or killed. Multiple studies have shown that a majority of hawks brought to wildlife clinics are positive for anticoagulant or neurotoxin rodenticides[2]. Ironically, since a raptor may catch hundreds of rodents per year, putting out rat poison that ends up killing predators may actually result in a higher rodent population!

The key requirement for a Red-tailed Hawk nest site is an elevated view of the surrounding terrain. Historically, hawks in the Colorado plains would have chosen a large cottonwood tree but today they also use structures such as tall buildings or utility towers. In 2024, a pair built their bulky stick nest on a cell tower in Community Park and has successfully raised fledglings each year since then.

The plumage coloration of individual Red-tailed Hawks can vary considerably, which makes it seem that no two look quite the same. Three different subspecies of Red-tails overlap here on the Front Range, and within these groups there is a range of color "morphs" whose undersides vary from a light cream color to nearly black. Most



*Figure 4 – Adult Red-tailed Hawk, showing buffy "V" on shoulders and red tail. Photo by Hana and Ivo Orel*

## Recommendations:

Based on monitors' observations, we make several recommendations to help ensure that raptors can continue to survive in Superior.

- *Preserve large trees, especially Plains Cottonwoods.* Since 2019, 13 out of 15 observed Red-tailed Hawk nests and 23 of 24 Great Horned Owl nests were in mature Plains Cottonwood trees, which have strong horizontal branches near their tops that can support the substantial nests needed by large raptors. American Kestrels also frequently nest in hollow knotholes in mature cottonwoods. Since so many mature trees have been removed due to construction projects or damaged by fire, it is especially important to conserve those that remain. Ideally, new Plains Cottonwoods should be planted as replacements for lost or removed older trees.
- *Retain dead and dying trees, especially in natural open spaces.* Many raptor species preferentially use bare branches as hunting perches and for territorial and courtship displays. Hollow limbs and trunks are also important for cavity-nesting species.
- *Evaluate existing artificial nest boxes and platforms and relocate if necessary.* Several nest boxes and platforms have been installed in parks and open spaces. Not all of these structures have attracted nesting raptors. If a box or platform is not used for three years, it may need to be moved to a better spot.
- *Continue a vigorous public education campaign to discourage the use of all rodenticides outdoors.* Many of the parent raptors were observed delivering small rodents to their nestlings. A rodent that has ingested poison but not yet died can pass the toxins on to a raptor that eats it. These secondary poisonings are a significant cause of death among many raptor species [2].
- *Minimize construction or other disturbances around active raptor nests.* Some birds of prey begin incubating around January 15, while others don't fledge their young until late July. During this period, significant construction or arborist work should be avoided in the vicinity of an active nest to reduce the likelihood of nest failure [3].

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*\*20 or more reports submitted!*

## References:

[1] <https://www.nature.com/articles/s41598-025-90806-6> ;

<https://cwhl.vet.cornell.edu/article/west-nile-virus>

[2] <https://www.allaboutbirds.org/news/raptors-and-rat-poison/> ;

<https://now.tufts.edu/2023/07/11/new-study-first-find-exposure-neurotoxic-rodenticide-bromethalin-birds-prey>

[3] <https://cpw.widencollective.com/assets/share/asset/fqmg4ds76b> ;

<https://www.scribd.com/doc/264274461/CPW-guidelines-for-wildlife-viewing-and-photography>



Figure 5 – Photos by (clockwise): Jeff Krause, Stephanie Miller, Brian Beamer, Peter Ruprecht, Sandy Hardy Reigel, Lynn Benham