

# Bald Eagle



ASSESSING HABITAT QUALITY FOR PRIORITY WILDLIFE SPECIES IN COLORADO WETLANDS

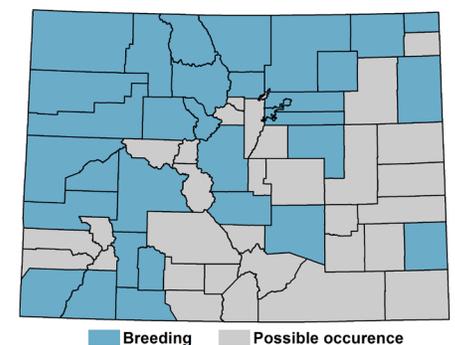
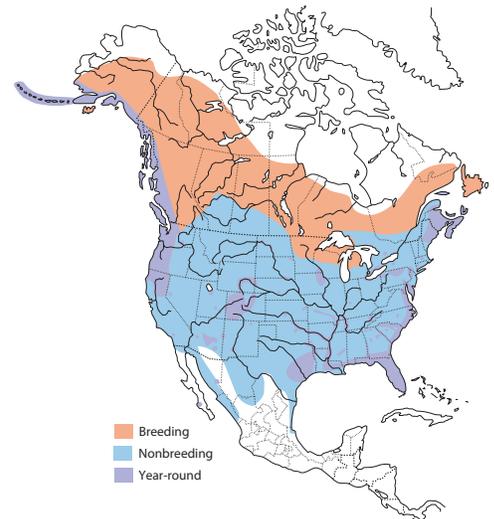


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## Species Distribution

### Range

Bald eagles live almost entirely within North America. Their distribution is highly scattered throughout North America and in Colorado. Up-to-date maps of their distribution in Colorado are unavailable due to their sensitive status.



North America map used by permission from Birds of the World, published by Cornell Lab of Ornithology. Colorado map based on Andrews and Righter (1992), Winternitz (1998), Wickersham (2016), and CFO (2020).

Bald eagles (*Haliaeetus leucocephalus*, Family *Accipitridae*) prefer tall, mature trees for perching and nesting. From these perches, they watch for fish or other small prey.

## Species Description

### Identification

Our national emblem, the bald eagle, is distinguished by its white head and tail contrasting with a dark brown body in its full adult form. Immature bald eagles (first four years) may have light or brown heads and tails; they can best be distinguished from immature golden eagles by the light leading edge of the wing contrasting with darker flight feathers.

### Preferred Habitats

The most important wetland habitats for bald eagles are those connected with large bodies of water, such as rivers and reservoirs. Bald eagles use tall trees and dead snags along the edge of waterbodies to perch and watch for prey.

### Diet

Bald eagles are opportunistic foragers. They prefer fish when available, but also consume small mammals and birds, especially during winter.

### Conservation Status

The U. S. Fish and Wildlife Service removed bald eagles from the Federal list of endangered species in 2007 (USFWS 2007). In Colorado, bald eagles are listed as a Tier 2 Species of Greatest Conservation Need (CPW 2015). The number of bald eagle pairs breeding in Colorado increased from 14 pairs during Colorado Breeding Bird Atlas I (1987–1994) to 148 pairs during Colorado Breeding Bird Atlas II (2007–2011).

# Preferred Habitat Conditions

Distance between tall trees and open water with fish	the closer the better, best within 1 mile
Distance from human disturbance	varies with location; >0.25 to >0.5 miles
Dominant vegetation	open canopy and easy-to-access large trees with open horizontal branches
Tree size	mature, tall, large-diameter trees for perching and nesting



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## Management Recommendations

This fact sheet contains easy-to-use guidelines for understanding habitat needs of Colorado Parks and Wildlife priority wetland-dependent wildlife. Biologists with expertise in bald eagles have suggested numerous practical steps that can be taken to improve habitat quality for this species.

### Hydrology

- Maintain water levels to maximize prey availability and foraging.
- Manage for a diversity of fish.

### Vegetation

- Thin dense forests (particularly in the vicinity of reservoirs), burn by prescription, and selectively harvest to achieve desired open canopy.
- Avoid clearcutting.
- Manage for age diversity and species diversity.
- Protect existing tall, large-diameter trees, including open-top trees and snags.
- Promote growth of trees in areas where lacking.
- Create super-canopy trees (much taller than the rest) by cutting.
- Revegetate with trees where appropriate.
- Create or protect openings that are  $\geq 8.5$  acres within 2 miles of shoreline; maintain these openings with sparsely-spaced roosting and/or nesting trees.

### Contamination

- Reduce contaminants.

### Land Use

- Reduce visual contact with disturbance using vegetation strips 8–100 yards wide.
- Minimize development along shorelines.

### Conservation

- Preserve undeveloped shores and adjacent forests.
- Maintain mosaic of wetlands in different successional stages.

### Acknowledgements

Chase Taylor (Rocky Mountain Bird Observatory) reviewed an earlier version and provided input on preferred habitat conditions.

### Suggested Reading and Citations

Andrews, R., and R. Righter. 1992. *Colorado Birds*. Denver Museum of Natural History, Denver, Colorado.

Berry, M. E., C. E. Bock, and S. L. Haire. 1998. Abundance of diurnal raptors on open space grasslands in an urbanized landscape. *Condor* 100: 601-608.

Buehler, D. A. 2020. Bald Eagle (*Haliaeetus leucocephalus*), version 1.0. In *Birds of the World* (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA.

Caton, E. L., B. R. McClelland, D. A. Patterson, and R. E. Yates. 1992. Characteristics of foraging perches used by breeding bald eagles in Montana. *Wilson Bulletin* 104: 136-142.

Chester, D. N., F. Stauffer, T. J. Smith, D. R. Luukkonen, and J. D. Fraser. 1990. Habitat use by nonbreeding bald eagles in North Carolina. *Journal of Wildlife Management* 54: 223-234.

CFO (Colorado Field Ornithologists). 2020. Colorado county birding. <https://cobirds.org/CountyBirding/Specialties/>

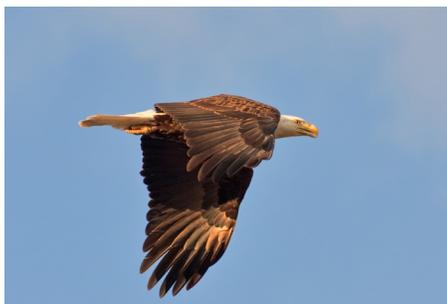
CPW (Colorado Parks and Wildlife). 2015. State Wildlife Action Plan: A Strategy for Conserving Wildlife in Colorado. Denver, Colorado.

Grubb, T. G., and R. M. King. 1991. Assessing human disturbance of breeding bald eagles with classification tree models. *Journal of Wildlife Management* 55: 500-511.

USFWS. 2007. Bald eagle fact sheet: natural history, ecology, and history of recovery. U. S. Fish and Wildlife Service.

Wickersham, J. L. 2016. Bald eagle. Colorado Breeding Bird Atlas (L. E. Wickersham, Ed.). pp. 172-173. Colorado Bird Partnership and Colorado Parks and Wildlife.

Winternitz, B.L. 1998. Bald eagle. Colorado Breeding Bird Atlas (H. E. Kingery, Ed.). pp. 108-109. Colorado Bird Atlas Partnership and Colorado Division of Wildlife, Denver, Colorado.



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# Habitat Scorecard for Bald Eagles (v. Nov 2020)

## Assessment of habitat before and after restoration or management actions

Project Name: \_\_\_\_\_ Project Area (acres): \_\_\_\_\_ Habitat Area (acres): \_\_\_\_\_

Size of Contiguous Habitat outside Project Area (acres): \_\_\_\_\_ Ownership (circle): Same / Different / Conservation Easement

**Scorecard Instructions:** Enter one value that best describes early to mid-summer conditions of each habitat variable, using the numbers in the value column. Habitat variables are in shaded boxes; ranges of condition are directly below each variable. **If condition is outside range or is not described, enter a zero.**

**Project Area and Habitat Area:** The project area includes the entire area affected by the project. The habitat is the area that will provide (in case of pre-project) or does provide (post-project) habitat for each potential target species within the project area. The habitat area may be the same size as the project area or it might be smaller and it may be defined differently for different target species. If there is contiguous habitat area outside the project area, note the size and whether the ownership of the contiguous areas is the same or different and whether it is under conservation easement or other habitat protection. If the habitat area within your project area is noncontiguous and/or if sections are in very different conditions, consider using multiple scorecards so that each scorecard represents the general conditions. If you use multiple scorecards, identify each habitat area on a map.

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
<b>Date of assessment</b>				
<b>Perching sites within 100 yards of project area</b>				
Open horizontal branches in upper half of dominant snag or tree (stands either alone or higher than any nearby trees)	17.1			
Open horizontal branches near top of non-dominating tall trees	11.4			
Open horizontal branches in lower half of trees or presence of artificial structure used as perch, e.g. utility pole without electrocution potential	5.7			
<b>Height of perch tree (variable above)</b>				
>50 feet	16.2			
>30 – 50 feet	10.8			
15 – 30 feet	5.4			
<b>Percent total canopy cover that is &gt;6.5 feet</b>				
10 – 40%	16.2			
>40 – 60%	10.8			
>60 – 100%	5.4			
<b>Distance to permanent open water capable of supporting fish</b>				
<0.25 mile	14.5			
0.25 – 1 mile	9.7			
>1 – 2 miles	4.8			
<b>Distance to nearest active prairie dog colony</b>				
<0.25 mile	12.8			
0.25 – 1 mile	8.5			
>1 – 2 miles	4.3			
<b>Distance from development</b>				
>0.5 mile	12.0			
0.25 – 0.5 miles	8.0			
>0.25 miles	4.0			
<b>Apparent water depth</b>				
<20 feet deep within 100 yards of shore	11.1			
<20 feet deep within 50 yards from shore but deeper beyond	7.4			
>20 feet deep within 50 yards from shore	3.7			
<b>Total (of 100 possible): add all numbers in before or after columns</b>				