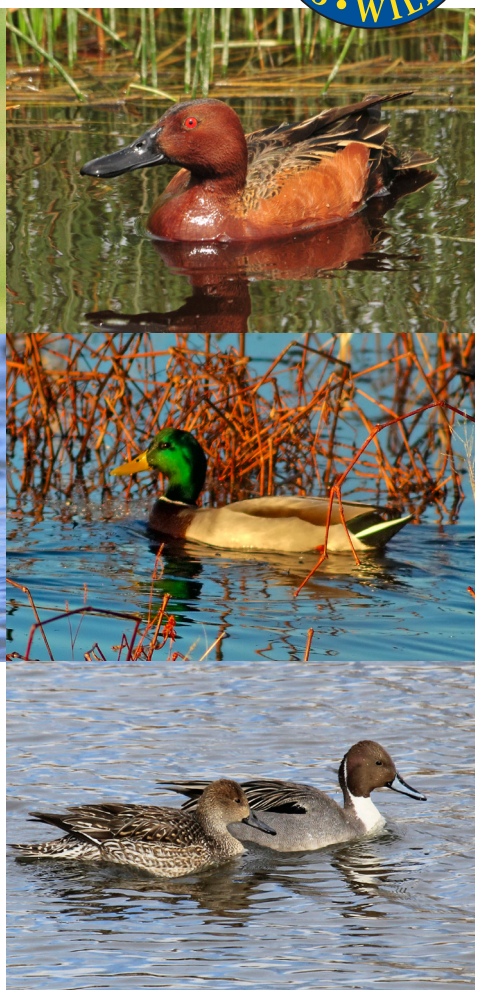
COLORADO PARKS & WILDLIFE

Dabbling Ducks

ASSESSING HABITAT QUALITY FOR PRIORITY WILDLIFE SPECIES IN COLORADO WETLANDS

GADWALL © TOM KOERNER, USFWS / AMERICAN WIGEON © BILL GRACEY



NORTHERN PINTAIL © GEORGIA HART / MALLARD © MICHAEL MENEFEE, CNHP / ALL TEAL PHOTOS © TOM KOERNER, USFWS

Several species are included in the Dabbling Duck guild. Top row from left: American wigeon *(Mareca americana),* blue-winged teal *(Spatula discors),* cinnamon teal, *(S. cyanoptera)*. Second row from left: gadwall *(M. strepera),* green-winged teal *(Anas crecca),* mallard *(A. platyrhynchos)*. Bottom: northern pintail *(A. acuta)*.

Species Description

Preferred Habitats

The most important wetland habitats for dabbling ducks during spring and fall migration include beaver ponds, emergent marshes, warm water sloughs, moist soil units, wet meadows, and herbaceous riparian wetlands. During winter, most small wetlands freeze and ducks congregate in deeper water, such as open river channels, warm water sloughs, reservoirs, and deep gravel pits, or on open sandbars. During the breeding season, most dabbling ducks nest in upland vegetation.

Diet

Most dabbling ducks consume far more invertebrates during the breeding season compared with other times of year. During non-breeding seasons, the diet varies according to species but includes seeds, aquatic vegetation, tubers, and crop grains.

Conservation Status

The population status differs among species. All ducks in this guild are federally protected game birds in the United States, Canada, and Mexico. Colorado Parks and Wildlife designated these ducks as priority species because they provide valuable hunting and viewing opportunities.

Species Distribution

Range

The ducks in this guild are widely distributed. With the exception of cinnamon teal, all have a distribution beyond the Americas. They are found throughout most of Colorado during at least part of the year. In general, outside of winter, the greatest concentrations include the San Luis Valley, North Park, and the Front Range within the South Platte River Basin.

Version Date: November 2020

Preferred Habitat Conditions

Dominant vegetation	sedges, rushes, grasses, forbs, and aquatic vegetation
Density of plants desirable to ducks	abundant (desireable plants are often seed bearing species such as pondweeds, dock, sedges, and some grasses)
Emergent vegetation within open water	20–50% for diurnal use 60–80% for nocturnal use
Interspersion	complex patterns that maximize interface between water and vegetation
Landscape context	proximity to other wetlands on the landscape
Size of habitat	At least 20 acres for wet meadows At least 10 acres for other wetlands
Submergent vegetation	30–60%
Water depth (predominant)	4–12 inches; during breeding 8–24 inches or deeper if submergent vegetation is present
Nesting habitat	wetlands surrounded by at least 40 acres of treeless upland habitat with ample residual cover and dense vegetation, at least 10 inches in height

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 dabbling ducks have suggested numerous practical steps that can be taken to improve habitat quality for this species.

Hydrology

- Maintain water depth as appropriate for seasonal use.
- Time drawdowns in summer to coincide with desired vegetation.
- Drawdown gradually for the greatest diversity of vegetation.
- Re-flood in late summer or early fall for fall migrants.

Vegetation

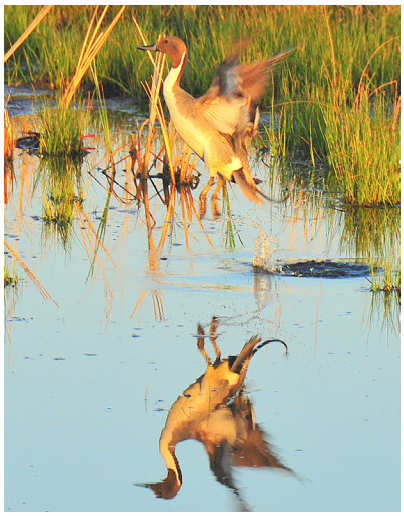
- Consider establishing submerged aquatic vegetation.
- Consider revegetating with native plants during drawdown if devoid of vegetation for long periods.
- Use disturbance techniques to set back succession.
- Control undesirable vegetation, especially exotics, and woody vegetation.
- Control woody vegetation at young age.
- Create 50:50 interspersion or hemimarsh conditions (1:1 open water to emergent vegetation).
- Manage for diversity of native plants.
- Use drawdowns to accelerate decomposition.

Land Use / Other

- Limit time of grazing and maintain appropriate stocking rate; where possible, protect wetland with fencing.

Conservation

- Minimize disturbance by humans.
- Control for burrowing mammals only if needed to maintain integrity of levees or to avoid excessive vegetation removal or obstructions.
- Control fish that cause turbidity, e.g., carp.
- Provide diversity through wetland complexes on landscape.



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Acknowledgements
Jim Gammonley, Adam Behney, and Brian Sullivan (Colorado Parks and Wildlife) and Matt Reddy (Ducks Unlimited) reviewed an earlier version and provided input on preferred habitat conditions.

Suggested Reading and Citations

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Habitat Scorecard for Dabbling Ducks (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: Select appropriate checklist: (1) **Breeding Wetlands and Uplands,** (2) **Non-breeding Wetlands**, (3) **Wet Meadows**, or (4) **Sandbars**. Enter one value that best describes the appropriate seasonal 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.

Breeding Wetlands (e.g., emergent, beaver ponds, and impoundments) and Uplands. Use this scorecard for projects intending to benefit primarily breeding ducks during spring/summer.

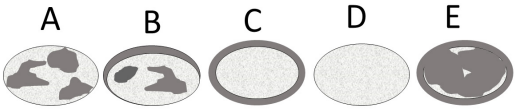
Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Date of assessment				
Wetland components				
Residual cover (growth from the previous year)				
Abundantly available and dense (3 years of undisturbed growth and/or difficult to see through)	7.3			
Available but spotty and/or easy to walk through or see through	4.9			
Sparse and easy to walk through	2.4			
Vegetation cover type				
Vegetation provides both cover (robust vegetation, e.g., bulrush, cattail) and food (soft vegetation, e.g., sedges, grasses, smartweeds, arrow-heads)	7.3			
Vegetation provides cover (robust vegetation, e.g., bulrush, cattail) but little to no food within the wetland	4.9			
Monoculture of cattails	2.4			
Hydrology management				
Area of emergent vegetation dries naturally by >50% or can be managed to dry by >50% every 4-5 years or more frequently	7.0			
Area of emergent vegetation dries naturally by >50% or can be managed to dry by >50% every 6-10 years	4.6			
Area of emergent vegetation dries naturally by 25-50% or can be managed to dry by 25-50% at least every 6-10 years	2.3			
Size of habitat				
>10 acres	6.6			
>5 – 10 acres	4.4			
0.5 – 5 acres	2.2			
Height of emergent vegetation from wetland edge to water line, in late spring/early summer				
>24 inches	6.2			
>16 – 24 inches	4.2			
8 – 16 inches	2.1			
Density of emergent vegetation				
Ample emergents but not too dense for ducks to swim through	6.2			
Ample in only a few restricted areas or sparse	4.2			
Too dense for ducks to swim through or very sparse	2.1			

Continued on next page.

Habitat Scorecard for Dabbling Ducks (v. Nov 2020)

Assessment of habitat before and after restoration or management actions

Breeding Wetlands and Uplands Scorecard *continued.*

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Interspersion				
A or B or (E if vegetation is diverse and managed for ducks)	5.9			
C	3.9			
D or (E if monoculture stand, e.g. solid cattail)	2.0			
Interspersion patterns refer to the above diagram (stippled = water, solid = vegetation) 				
Water depth				
8 – 24 inches or deeper if submergent vegetation is present	5.1			
4 – 8 inches	3.4			
> 24 inches without submergents	1.7			
Upland components				
Residual cover (growth from the previous year)				
Abundantly available and thick (hard to walk through)	7.3			
Available but spotty and/or easy to walk through	4.9			
Hard to find	2.4			
Height of potential upland nest cover, in late spring/early summer				
>10 inches	7.3			
>6 – 10 inches	4.9			
2.5 – 6 inches	2.4			
Density of potential upland nest cover				
Abundant areas with dense grass and/or forbs (hard to walk through)	7.3			
A few areas with dense grass and/or forbs (easy to walk through)	4.9			
Areas with dense grass and/or forbs hard to find	2.4			
Distance to water from potential nesting habitat				
<150 yards	7.0			
150 – 220 yards	4.6			
>220 yards	2.3			
Percent of good upland nesting habitat within 150 yards of wetland				
>85 – 100%	6.6			
>70 – 85%	4.4			
55 – 70%	2.2			
Size of habitat				
>160 acres	6.6			
>10 – 160 acres	4.4			
5 – 10 acres	2.2			
Vegetation cover type				
Grasses, forbs, residual cover, and scattered shrubs; if >40 acres no trees to few trees	6.2			
Grasses, forbs, and residual cover or scattered shrubs; if <40 acres no trees	4.2			
Grasses, forbs, with no residual cover or shrubs	2.1			
Total (of 100 possible): add all numbers in before or after columns				

Habitat Scorecard for Dabbling Ducks (v. Nov 2020)

Assessment of habitat before and after restoration or management actions

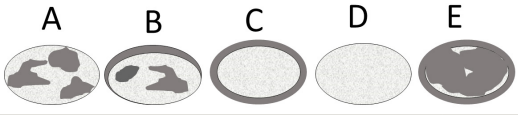
Project Name: _____ Project Area (acres): _____ Habitat Area (acres): _____

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

Scorecard Instructions: Select appropriate checklist: (1) **Breeding Wetlands and Uplands,** (2) **Non-breeding Wetlands**, (3) **Wet Meadows**, or (4) **Sandbars**. Enter one value that best describes the appropriate seasonal 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.

Non-breeding Wetlands (emergent wetlands, playas, and impoundments). Use this scorecard for projects intending to benefit primarily non-breeding ducks during fall/spring migration or winter.

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Date of assessment				
Dominant vegetation				
Sedges, rushes, grasses, forbs, and aquatic vegetation	18.7			
Robust wetland herbs (cattail, bulrush, reedgrass, etc.)	12.5			
Open willows / shrubs, closed canopy trees (>50% cover)	6.2			
Percent of emergent vegetation within water				
>20 – 50%	18.7			
5 – 20%	12.5			
>50 – 100%	6.2			
Predominant depth of water				
4 – 12 inches	18.7			
>12 – 25 inches	12.5			
>25 – 40 inches	6.2			
Percent submergent vegetation				
>30 – 60%	17.8			
>10 – 30%	11.8			
0 – 10%	5.9			
Interspersion				
A or B	15.0			
C	10.0			
D or E	5.0			
Interspersion patterns refer to the above diagram (stippled = water, solid = vegetation) 				
Size of habitat				
>2 acres	11.1			
>0.5 – 2 acres	7.5			
0.25 – 0.5 acres	3.7			
Total (of 100 possible): add all numbers in before or after columns				

Habitat Scorecard for Dabbling Ducks (v. Nov 2020)

Assessment of habitat before and after restoration or management actions

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Wet Meadows (natural or irrigation-influenced). Use this scorecard for projects intending to benefit primarily non-breeding ducks during fall/spring migration or winter.

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Date of assessment				
Dominant vegetation				
Sedges, rushes, grasses, forbs, and aquatic vegetation	28.2			
Robust wetland herbs (cattail, bulrush, reedgrass, etc.)	18.8			
Open willows / shrubs, Closed canopy trees (>50% cover)	9.4			
Percent of herbaceous vegetation that is too dense for a duck to move through				
0 – 20%	28.2			
>20 – 50%	18.8			
>50 – 80%	9.4			
Height of herbaceous vegetation				
8 – 20 inches	26.7			
>20 – 80 inches	17.8			
>80 inches	8.9			
Size of habitat				
>20 acres	16.9			
>5 – 20 acres	11.3			
2.5 – 5 acres	5.6			
Total (of 100 possible): add all numbers in before or after columns				

Habitat Scorecard for Dabbling Ducks (v. Nov 2020)

Assessment of habitat before and after restoration or management actions

Project Name: _____ Project Area (acres): _____ Habitat Area (acres): _____

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Sandbars. Use this scorecard for projects intending to benefit primarily non-breeding ducks during fall/spring migration or winter.

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Date of assessment				
Dominant vegetation				
Sedges, rushes, grasses, forbs, and aquatic vegetation	25.6			
Robust wetland herbs (cattail, bulrush, reedgrass, etc.)	17.1			
Open willows / shrubs, Closed canopy trees (>50% cover)	8.5			
Percent of herbaceous vegetation that is too dense for a duck to move through				
0 – 20%	25.6			
>20 – 50%	17.1			
>50 – 80%	8.5			
Percent of herbaceous vegetation that is easy for a duck to move through				
0 – 30%	25.6			
>30 – 60%	17.1			
>60 – 100%	8.5			
Percent cover of woody vegetation >6.6 feet (2 meters) in height				
0 – 20%	23.2			
>20 – 40%	15.4			
>40 – 100%	7.7			
Total (of 100 possible): add all numbers in before or after columns				