

Least Tern



ASSESSING HABITAT QUALITY FOR PRIORITY WILDLIFE SPECIES IN COLORADO WETLANDS



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The least tern (*Sternula albifrons*, Family *Laridae*) is a small, ground nesting bird that nests in open, sandy soil. They are rare throughout their range, including in Colorado.

Species Description

Identification

At 8–9 inches in length and slightly smaller than an American robin, the least tern is the smallest tern of North America. Their white forehead contrasting with a black cap is easily seen in flight. They have a yellow bill tipped in black.

Preferred Habitats

Interior least terns nest on sandy shores of reservoirs and gravel pits; although not usually considered wetlands, these habitats are often adjacent to or associated with wetlands along the shores. Sandbars, particularly along the Arkansas River, represent potential nesting habitat; however, the regulation of water probably precludes least terns from successfully nesting. They forage in streams, reservoirs, marshes, gravel pits, and other impounded wetlands.

Diet

The diet of least terns consists primarily of small (1–4 inches long), slender (½ inch) fish that swim near the surface. To a lesser degree, they also feed on aquatic invertebrates.

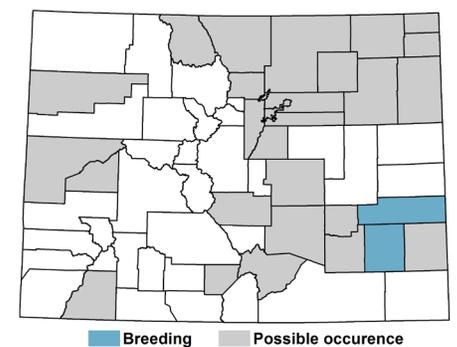
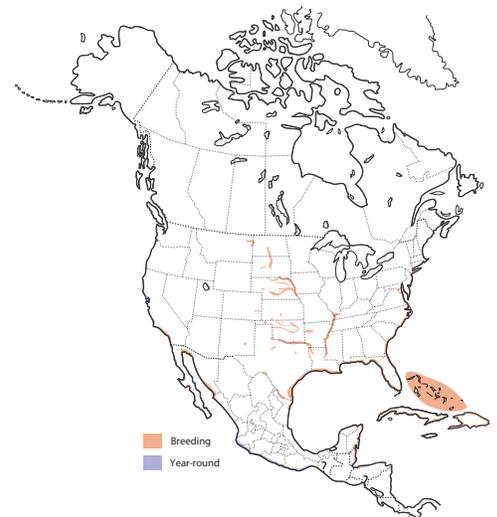
Conservation Status

The interior population is Federally listed as endangered. In Colorado, least terns are listed as endangered and a Tier 2 Species of Greatest Conservation Need (CPW 2015). During the second Colorado Breeding Bird Atlas (2007–2011), least terns were observed and confirmed breeding in only two priority blocks: Adobe Creek Reservoir and just south of Neesopah and Neegronda Reservoirs. During the previous Colorado Breeding Bird Atlas (1987–1994), they had also been confirmed as breeders in the vicinity of Neenoshe Reservoir.

Species Distribution

Range

Least terns range extensively along coasts and major rivers in North America, Central America, the Caribbean, and northern South America. In Colorado, least terns breed only in the Lower Arkansas River Basin. During migration, they occasionally occur in the Lower South Platte River Basin, and less frequently on the west slope.



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), Nelson (1998, 2016), and CFO (2020).

Version Date: November 2020

Preferred Habitat Conditions

Dominant vegetation	open view with little to no vegetation
Height of vegetation	< 6 inches
Location of nesting habitat patch	next to water with an unobstructed view
Nesting substrate	sand or fine gravel, free from silt and/or clay
Percent canopy cover	none
Percent herbaceous cover	0-5%
Size of nesting habitat <i>if</i> other ideal conditions met	> 0.2 acres
Size of unvegetated patch on vegetated bar	> 1 acre
Water depth at nest sites	0 inches
Woody debris on ground	presence of woody debris near nests (not well understood)



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Acknowledgements

Dr. Eileen Kirsch (U. S. Geological Service) reviewed an earlier version and provided input on preferred habitat conditions.

Suggested Reading and Citations

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

Hydrology / Substrate

- Manage and time flows to benefit habitat (scouring) while minimizing nesting mortality.
- Create sand and gravel river islands.
- Control vegetation by flooding after breeding and lower water level prior to arrival in spring.
- Add sand to islands as needed.
- Add small amount of woody debris where needed.

Vegetation

- Control vegetation to create or maintain sparse vegetation.

Land Use

- Curtail cattle grazing near potential nesting sites.

Conservation

- Provide exclosures/enclosures or electric fencing where needed to protect from predators.
- Close beaches to human use during breeding season.
- Create educational signage to protect breeding birds from human disturbance.



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DISCLAIMER: This scorecard is designed specifically for the Colorado Parks and Wildlife (CPW) Wetland Wildlife Conservation Program. It does not replace protocols required by U. S. Fish and Wildlife Service (USFWS). Please contact USFWS regarding questions about their required protocols for species listed under the Endangered Species Act.

Habitat Scorecard for Least Terns (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
Date of assessment				
Dominant ground description				
No vegetation (open bare ground)	13.5			
<10% low grasses	9.0			
10 – 15% low grass	4.5			
Location: Juxtaposition of habitat patch to water				
Totally surrounded by water	13.5			
Partially connected and adjacent to water	9.0			
Not adjacent to water	4.5			
Location: Distance with unobstructed view (from appropriate patch)				
>275 yards	13.5			
>100 – 275 yards	9.0			
50 – 100 yards	4.5			
Percent total canopy cover 6.6 feet				
None	13.5			
Substrate				
>85 – 100% coarse and/or fine sand and <15% silt or clay	12.8			
>75 – 85% coarse and/or fine sand and >15—25% silt or clay	8.6			
65 – 75% coarse and/or fine sand and >25—35% silt or clay	4.3			
Size of habitat patch (Answer for ONLY one, using best option)				
Size of entirely unvegetated bar or island				
>0.25 acre (0.1 hectare)	12.2			
>0.06 – 0.25 acre (>0.02 – 0.1 hectare)	8.1			
0.02 – 0.06 acre (~900 sq feet – ~2,500 sq feet)	4.1			
Size of unvegetated patch on otherwise vegetated bar or island				
>1 acre (>0.4 hectare)	12.2			
0.5 – 1 acre (>0.2 – 0.4 hectare)	8.1			
0.25 – 0.5 acre (0.1– 0.2 hectare)	4.1			

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Habitat Scorecard for Least Terns (v. Nov 2020)

Assessment of habitat before and after restoration or management actions

Least Tern Scorecard *continued.*

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Predominant water depth				
No water	10.8			
Vegetation height				
<6 inches	10.1			
6 – 10 inches	6.8			
10 – 20 inches	3.4			
Total (of 100 possible): add all numbers in before or after columns				