

Sandhill Crane

Grus canadensis



Photo by Steve Ting

Habitat Use Profile

Habitats Used in Nevada	
Wet Meadow Marsh Agriculture Great Basin Lowland Riparian	
Key Habitat Parameters •	
Plant Composition	Bulrush, sedges, rushes, willows, grasses, agricultural crops (pasture, wheat, barley crops)
Plant Density	Unknown
Mosaic	Diversity of wetland types and structures, interspersed with agriculture ¹⁰
Distance to Water	Always near water; nest success higher if surrounded by deeper water (> 30 cm [12 in]) ⁸
Hydrology	Seasonally stable stage preferred ¹⁰
Response to Vegetation Removal	Negative ^{EO}
Area Requirements •	
Minimum Patch Size	Unknown; but larger wet meadow / agricultural complexes probably preferred ^{EO}
Recommended Patch Size	> 150 ha [370 ac] ^{EO}
Territory Size	10 – 23 ha [25 - 57 ac] ¹⁰

Conservation Profile

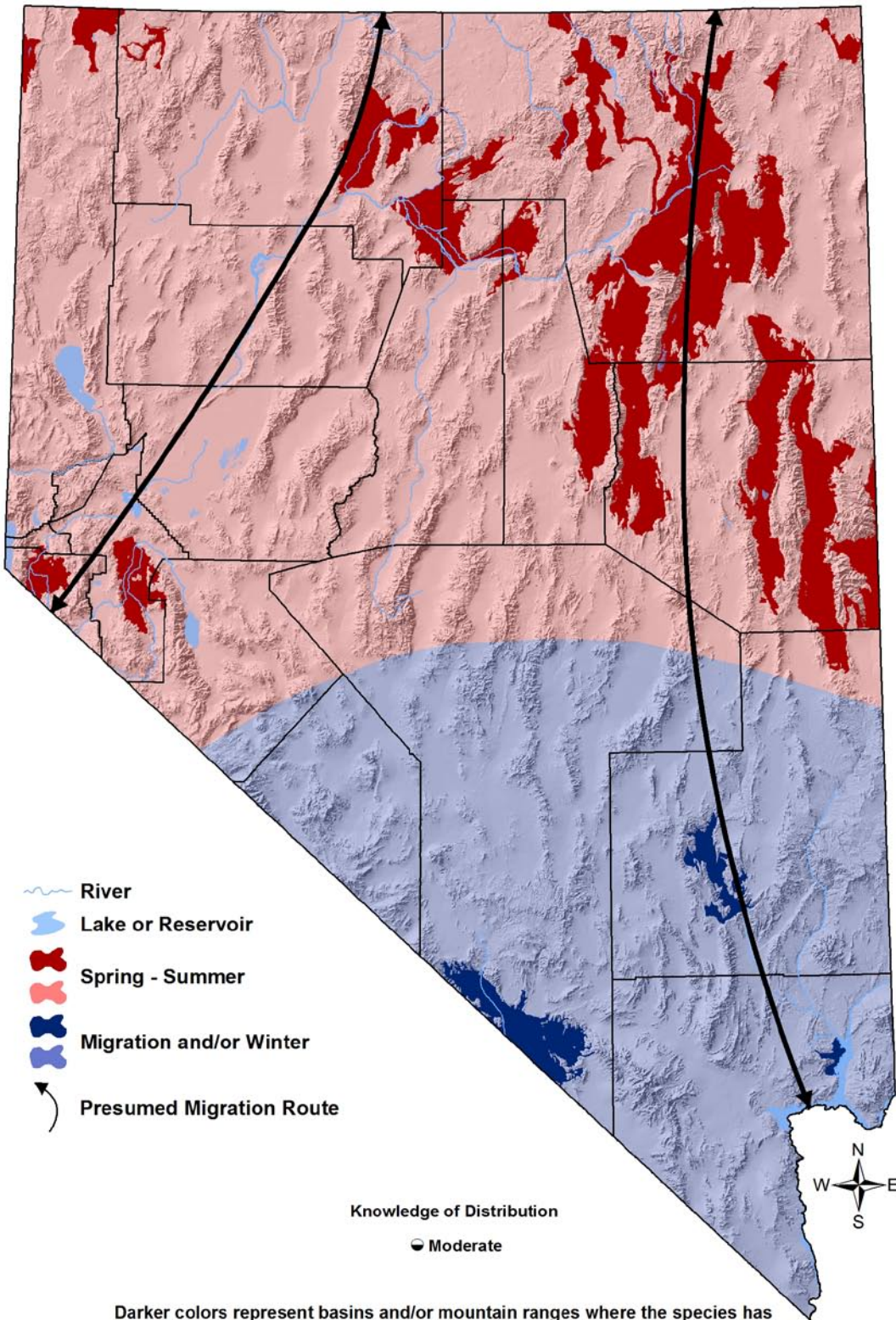
Priority Status	
Conservation Priority Species	
Species Concerns	
Historical declines High stewardship responsibility (Lower Colorado River Valley population) Habitat threats	
Other Rankings	
Continental PIF Audubon Watchlist NV Natural Heritage USFWS BLM USFS NDOW IW Waterbird Plan	None None S3B Migratory Bird Sensitive Species None Conservation Priority High Concern
Trends	
Historical •	Range contractions and declines ^{5, 10}
Recent •	Stable or increasing ^{5, 10}
Population Size Estimates	
Nevada •	650 – 1,000 ^{9, EO}
Global •	700,000 ¹⁰
Percent of Global	< 1% global; > 32% of Lower Colorado River Valley population ^{EO}
Population Objective	
Maintain ^{EO}	
Monitoring Coverage	
Source	NDOW aerial surveys, NWR and WMA counts, Nevada Bird Count
Coverage in NV	Good
Key Conservation Areas	
Protection	Ruby Valley, Humboldt River and tributaries, Owyhee watershed, Boyd Wetland IBA
Restoration	Pahrnagat Valley, main stem of Humboldt River system from Elburz to Mote

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer (Great Basin) Spring and Fall (migration, especially Mojave)	
Known Breeding Dates in Nevada	
Early May – early August ⁴	
Nest and Nesting Habits	
Nest Placement	On ground near water's edge or platform over water in marsh or flooded field ¹⁰
Site Fidelity	Moderate to high for breeding sites ¹⁰
Food Habits	
Basic	Prober and gleaner
Primary Diet	Invertebrates, grains, seeds, tubers ¹⁰
Secondary Diet	Roots, small vertebrates ¹⁰

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Darker colors represent basins and/or mountain ranges where the species has been recorded within the past 12 years. Lighter colors represent the broader area within which the species is presumed to occur in appropriate habitat types.

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Overview

Nevada contains some of the Sandhill Crane's southernmost breeding sites, which are disjunct from the species' main breeding range in Canada and Alaska. Nevada breeding cranes belong to the subspecies *G. c. tabida*, the Greater Sandhill Crane. Within this subspecies, two distinct populations, named for their wintering grounds, breed here, the Lower Colorado River Valley population (LCRVP) in northwestern and central Nevada, and the Central Valley population (CVP) in western Nevada.¹⁰ Sandhill Cranes occupy flat river valleys and basins, often where the landscape offers a mix of marsh, riparian, wet meadow, and agricultural habitats. They nest on or near water, preferentially using small islands or peninsulas where available. Foraging takes place in adjacent wet terrestrial habitats. Nevada also provides Sandhill Cranes with important migratory stopover sites, including several in southern Nevada where breeding does not occur.

Sandhill Cranes from both population segments are stable or increasing in Nevada, although low recruitment has occurred in some years and should be monitored.^{3,6} The majority of Nevada's cranes depend significantly upon habitat on privately-owned lands, and public outreach is therefore an important component of a comprehensive conservation strategy. Additional work is needed to determine whether or not specific conservation issues exist at key migration stopover areas. Any such efforts should be coordinated closely with the existing Sandhill Crane research group headed by NDOW, which has been conducting radio-telemetry studies and species inventories at five-year intervals for the LCRVP.^{1,2,7} Similar research and inventory efforts for the CVP would also be beneficial.

Abundance and Occupancy by Habitat

As part of its obligation under the Pacific Flyway Council LCRV Population Management Plan, NDOW conducts an aerial nesting population survey for Sandhill Cranes at five-year intervals. In 2005, NDOW documented a record high of 641 cranes in northern Nevada, including at least 215 breeding pairs.⁷

Nevada-Specific Studies and Analyses

NDOW is currently conducting radio-telemetry studies of the LCRVP, with full results forthcoming.^{1,2,7} No comprehensive studies of the CVP in Nevada have been conducted.

Main Threats and Challenges

Habitat and Other Threats

- Loss or degradation of wet meadow, marsh, and riparian habitat due to:
 - Habitat conversion (agriculture, gravel operations, development, etc.)
 - Water diversions
 - Possible impacts of groundwater pumping in occupied areas

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- Heavy livestock grazing during nesting and fledging season, particularly in wet meadows
- Invasive plants
- Loss of traditional crop agriculture in migration stopover sites^{EO}
- Early haying that impacts nests or young
- Effects of predator populations have been noted, but predator control efforts do not always increase crane productivity⁷

Research, Planning, and Monitoring Challenges

- Habitat threats at migration stopover sites need more study
- The CVP in Nevada has received less monitoring and study than the LCRVP

Conservation Strategies

Habitat Strategies

- Wet Meadow (p. Hab-20-1), Marsh (p. Hab-9-1), Agriculture (p. Hab-1-1), and Great Basin Lowland Riparian (p. Hab-7-1) habitat conservation strategies benefit this species
- Manage wet meadows for maximum vegetation cover from 1 April – 15 July
- Protect water inflows in marsh and wet meadow areas used by cranes

Research, Planning, and Monitoring Strategies

- Continue monitoring of the LCRVP at five-year intervals
- Implement a five-year interval monitoring program for the CVP
- In areas potentially impacted by groundwater pumping, monitor for changes in water supplies and for impacts on crane productivity

Public Outreach Strategies

- Work with landowners in areas used by cranes to encourage:
 - Deferring haying until after 15 July
 - Use of flushbars on harvest equipment, especially before 15 July
 - Conservation of wet meadows, marshes, and riparian woodlands on private land
 - Encourage traditional agricultural practices

References: ¹August et al. (2009); ²Bradley (2005); ³Drewien et al. (1995); ⁴GBBO unpublished Atlas data; ⁵Ivey and Dugger (2008); ⁶Ivey and Herziger (2006); ⁷Laca et al. (2008); ⁸McWethy and Austin (2009); ⁹Nevada Wildlife Action Plan Team (2006); ¹⁰Tacha et al. (1992); ^{EO} Expert opinion