

Long-billed Curlew

Numenius americanus



Photo by Martin Meyers

Habitat Use Profile

Habitats Used in Nevada	
Agriculture Wet Meadow	
Key Habitat Parameters •	
Plant Composition	Agricultural crops and pastures, perennial grasses, annual grasses
Plant Density & Height	Naturally short grasslands and short-stubble agriculture; height 4-15 cm [1.5 – 5.9 in] throughout home range, ¹³ < 10 cm [4 in] at nest sites; ² seek denser cover for broods ^{2,7}
Mosaic	Landscapes with grasslands and irrigated agricultural fields. May benefit from nearby marshes with mudflats or wet soils and shallow shorelines ²
Water Depth	< 16 cm [6.2 in] for foraging ²
Distance to Water	Unclear whether foraging opportunities along shorelines are important during breeding season ³
Response to Vegetation Removal	Positive to shortening (grazing) prior to breeding, but neutral/negative during brood rearing ²
Area Requirements •	
Minimum Patch Size	50 ha [125 ac] ²
Recommended Patch Size	> 100 ha [250 ac] ²
Home Range	6 -14 ha [16 - 36 ac] ²

Conservation Profile

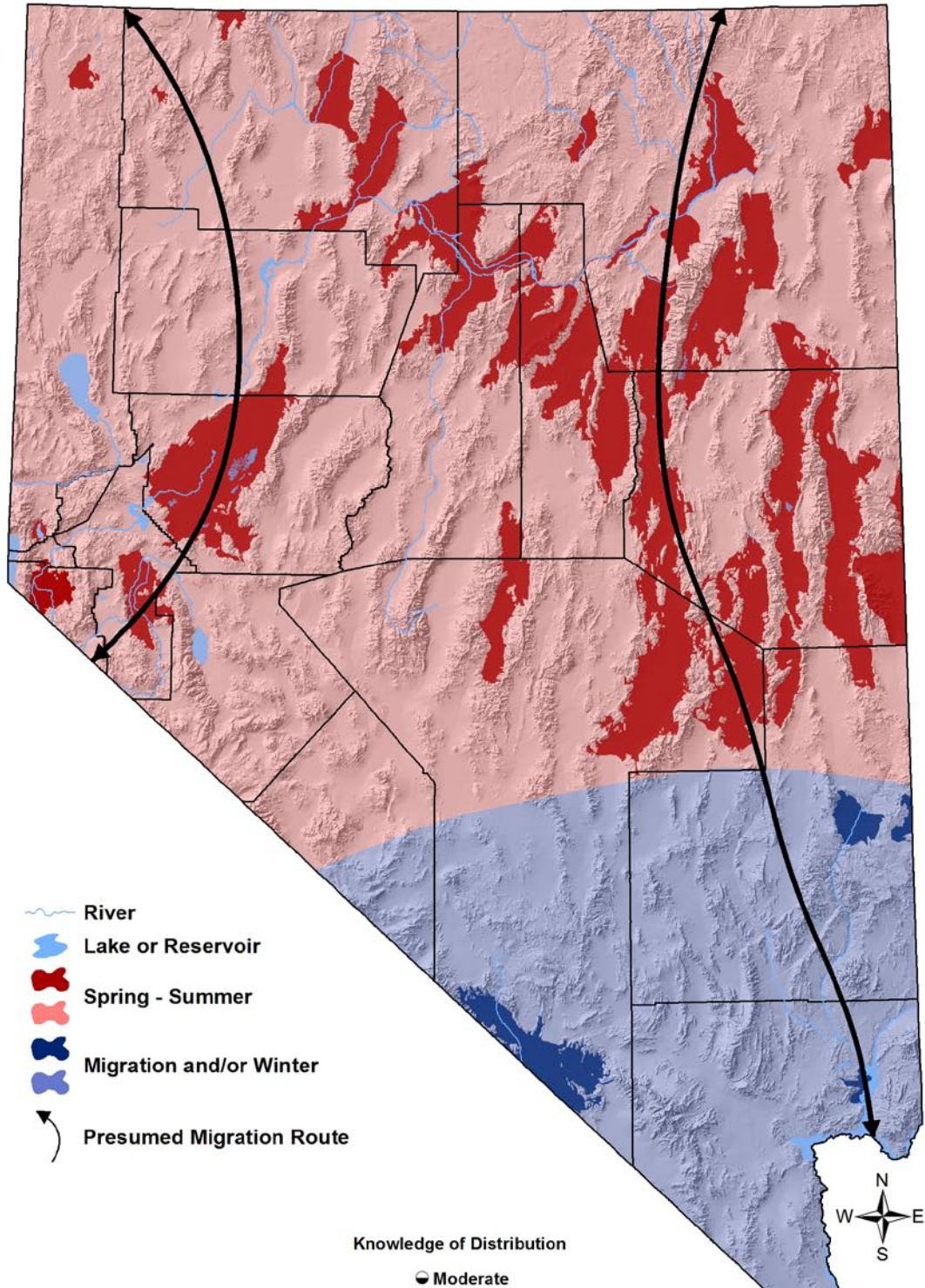
Priority Status	
Conservation Priority Species	
Species Concerns	
Habitat threats Historical declines	
Other Rankings	
Continental PIF	None
Audubon Watchlist	Yellow
NV Natural Heritage	S2S3B
USFWS	Bird of Conservation Concern, Migratory Bird
BLM	Sensitive Species
USFS	None
NDOW	Conservation Priority
IW Shorebird Plan	Critically Important
Trends	
Historical •	Rangewide declines ²
Recent •	Stable or increasing ³
Population Size Estimates	
Nevada •	1,150 ³
Global •	160,000; 40,000 in Great Basin ³
Percent of Global	~ 1%
Population Objective	
Maintain ^{EO}	
Monitoring Coverage	
Source	Nevada Bird Count, NWR and WMA counts
Coverage in NV	Good / Fair
Key Conservation Areas	
Protection	Ruby Valley, Humboldt River system
Restoration	Degraded wet meadows

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer	
Known Breeding Dates in Nevada	
April – July ⁴ (nest initiation in Ruby Valley 17 April - 31 May) ⁷	
Nest and Nesting Habits	
Nest Placement	Scrape on ground ²
Site Fidelity	High ³
Food Habits	
Basic Primary Diet	Prober Medium to large terrestrial and soil invertebrates ²
Secondary Diet	Small vertebrates ²

Long-billed Curlew

Numenius americanus



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

Long-billed Curlew

Numenius americanus

Overview

Long-billed Curlews breed across northern Nevada, but there is a pronounced concentration in the northeast quadrant of the state, which is regarded as a breeding stronghold.⁹ Although the Great Basin contains only a modest portion of the global population of Long-billed Curlews, research conducted here has made a disproportionately large contribution to our knowledge of the species.^{1,5,6,7,11,12} Compared to other shorebirds, curlews breed in surprisingly dry areas (the photo above was taken during migration). In Nevada, they are found breeding and foraging in open habitats with moderate grass or other ground cover. Areas with trees, high shrub densities, and tall dense grass are generally avoided.^{11,13} The curlew's foraging habitats during the nesting and brood-rearing period contrast markedly with its use of shorelines and shallow water for foraging during other parts of the year.

Historically, breeding Long-billed Curlews were associated with native perennial grasslands, but they have adapted well to the wet meadows and agricultural lands located along major Great Basin waterways.^{6,7} Irrigated pastures and hayfields, along with their reliable invertebrate food sources, appear to be particularly suitable for Nevada breeding populations. Taller row crop production areas are generally avoided, however.³ In Ruby Valley, where suitable agricultural landscapes are abundant, curlews nest at very high densities that are comparable to their historical densities in the prairie grasslands.⁶ Agricultural lands are clearly critical to Long-billed Curlews in Nevada and the Great Basin, a situation that remains somewhat distinct from that seen elsewhere within the species' range. Flooding during the nesting period and predators, such as coyotes and Prairie Falcons, appear to be the main sources of reproductive failure, with livestock impacts also contributing to nest mortality.⁷ Because Long-billed Curlews have a large presence on privately-owned lands, outreach and coordination with landowners are important parts of this bird's conservation strategies. Little is known about the curlew's migratory habitats in Nevada, but they are not commonly observed in wet meadows, agricultural areas, and marshes during migration.

Abundance and Occupancy by Habitat

- As many as 450 Long-billed Curlews have been inventoried in North Ruby Valley, with densities recorded of ~ 7 males / km² [6 birds / 100 ac],⁵ and 5 birds / km² [2 birds / 100 ac]³

Nevada-Specific Studies and Analyses

Oring Group Studies

Seminal studies on the Long-billed Curlew's habitat use, breeding biology, and conservation status within the Great Basin have been conducted by Lew Oring and his colleagues at the University of Nevada, Reno.^{5,6,7} These studies are the primary source of our information about the Long-billed Curlew's biology and conservation needs in Nevada.

Long-billed Curlew

Numenius americanus

Main Threats and Challenges

Habitat Threats

- Loss of wet meadows to water diversions, groundwater pumping, or development
- Loss of flood-irrigated agricultural fields to habitat conversion
- Heavy livestock grazing, haying, or dragging that cause inadvertent nest losses^{2,9}

Research, Planning, and Monitoring Challenges

- None identified

Conservation Strategies

Habitat Strategies

- Agriculture (p. Hab-1-1) and Wet Meadow (p. Hab-20-1) habitat conservation strategies benefit this species
- Conserve and protect whole landscapes with a mix of different habitats (agriculture, wet meadow, perennial grasses, and marshes)⁹

Research, Planning, and Monitoring Strategies

- Determine whether proximity to marshes benefits curlews during the breeding season
- Bolster NBC and other monitoring programs to better monitor curlew population concentrations following rangewide survey and monitoring guidelines⁸
- Where groundwater pumping occurs, monitor impacts on wet meadows used by curlews

Public Outreach Strategies

- Continue outreach and coordination efforts to private landowners to encourage wildlife-friendly agricultural practices (e.g., installation of flushbars on mowing equipment, retaining native grasses and forbs, and low pesticide use)
- Encourage deferment of haying and other mechanized treatments until after the main nesting period during 15 April – 1 July (but any delays to avoid the first half of the breeding season are also beneficial)
- Rotational grazing occurring prior to (or after) breeding season may be beneficial for curlews
- Encourage stable water levels in irrigated pastures during breeding season, and discourage large irrigation pulses

References: ¹Allen (1980); ²Dugger and Dugger (2002); ³Fellows and Jones (2009); ⁴GBBO unpublished Atlas data; ⁵Hartman (2008); ⁶Hartman and Oring (2006); ⁷Hartman et al. (2009); ⁸Jones et al. (2003); ⁹Nevada Wildlife Action Plan Team (2006); ⁹Paige and Ritter (1999); ¹⁰Pampush and Anthony (1993); ¹¹Redmond and Jenni (1986); ¹²Saalfeld et al. (2010); ^{EO}Expert opinion