

Western Sandpiper

Calidris mauri



Photo by Larry Neel

Habitat Use Profile

Habitats Used in Nevada	
Open Water (shorelines) Ephemeral Wetland and Playa	
Key Habitat Parameters •	
Plant Density	Very sparse or no vegetation ⁸
Mosaic	Shallow-water shorelines and mudflats with saturated soils and little or no vegetation ⁸
Water Depth	< 4 cm [1.6 in] ⁸
Water Quality	Tolerates variety of salinities ^{EO}
Response to Vegetation Removal	Neutral ^{EO}
Area Requirements ○	
Minimum Patch Size	Unknown
Recommended Patch Size	> 100 ha [250 ac] ^{EO}
Home Range / Territory Size	Unknown

Conservation Profile

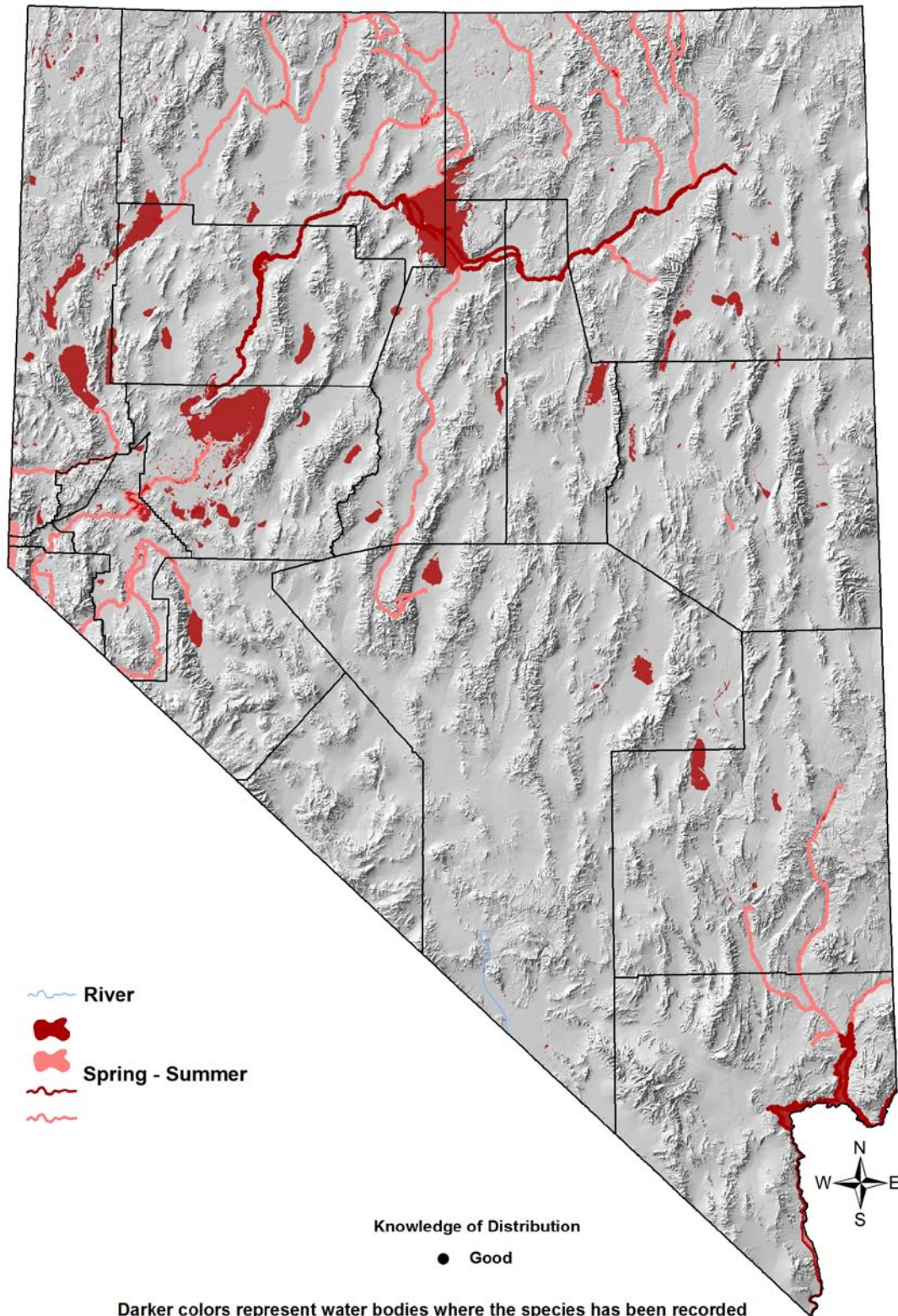
Priority Status	
Conservation Priority Species	
Species Concerns	
Recent declines High stewardship responsibility (migration) Habitat threats	
Other Rankings	
Continental PIF	None
Audubon Watchlist	None
NV Natural Heritage	S5M
USFWS	Migratory Bird
BLM	None
USFS	None
NDOW	None
IW Shorebird Plan	Very Important
Trends	
Historical ○	Unknown
Recent •	Probably declining ¹
Population Size Estimates	
Nevada •	~ 12,000, with high annual variability ²
Global •	3,500,000 ¹
Percent of Global	< 1%
Population Objective	
Increase by 30% ^{EO}	
Monitoring Coverage	
Source	NDOW shorebird surveys, NWR and WMA counts, Aquatic Bird Count
Coverage in NV	Good in Lahontan Valley, Fair elsewhere
Key Conservation Areas	
Protection	Lahontan and Ruby Valleys, Humboldt and Key-Pittman WMA's, Pyramid Lake, all open water habitat with muddy shoreline
Restoration	Threatened open water shorelines, dewatered playas

Natural History Profile

Seasonal Presence in Nevada	
Spring (migration, peak April)	
Fall (migration, peak August - September)	
Known Breeding Dates in Nevada	
N/A	
Nest and Nesting Habits	
Nest Placement	N/A
Site Fidelity	Probably low - moderate for migration stopover sites ^{EO}
Food Habits	
Basic	Prober
Primary Diet	Benthic invertebrates ⁸
Secondary Diet	Terrestrial invertebrates ⁸

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Overview

Although most Western Sandpipers migrate between their Arctic breeding grounds and wintering grounds using a route that parallels the Pacific Coast, significant numbers take inland routes through the Great Basin where they are the most commonly observed small sandpiper. Western Sandpipers use shallow ephemeral wetlands, mudflats, and recently exposed or otherwise damp shorelines and beaches of Nevada's open water habitats. Numbers of spring and fall migrants are roughly equivalent, with a modest preponderance of spring migrants in the Great Basin,⁷ which contrasts with the preponderance of fall migrants along other migration routes through the continent's interior.⁸ As is the case with many other Conservation Priority shorebirds, Lahontan Valley provides Nevada's most critically important habitat for Western Sandpipers.⁵ For this reason, it has been designated as a "Site of Hemispheric Importance" by the Western Hemisphere Shorebird Reserve Network (www.whsrn.org). In addition to Lahontan Valley, Western Sandpipers also have a well-established migratory presence across most of Nevada, including Ruby Lake NWR in the east and Lake Mead in the far south. They commonly use shorelines along ephemeral wetlands and playas, if water is present.

Western Sandpipers appear to be declining across their range, and it has been suggested that threats during migration and on the wintering grounds play a role in this decline. Beyond this general statement, however, the precise causes of declines have not been the subject of any significant study. Gathering more data on migrating populations in Nevada might therefore be especially helpful in determining specific conservation strategies. In particular, further study and attention should be given to determining the relative importance of ephemeral wetlands and playas to Western Sandpipers.

Abundance and Occupancy by Habitat

The ten-year average seasonal count for Lahontan Valley is 7,600 birds, with 4,400 estimated to occur in other locations across Nevada (L. Neel, pers. comm.). Ten-year peaks in Lahontan Valley typically exceed 45,000, with highest recorded peak (which included some Least Sandpipers) of 66,700 in 1987, and another slightly smaller peak of 59,000 in 1990.⁴

Nevada-Specific Studies and Analyses

Shuford et al. (2002)⁷ provides the most comprehensive data for migratory shorebirds in the Intermountain West region, including Nevada.

Main Threats and Challenges

Habitat and Other Threats

- Loss or degradation of flat, muddy open water shorelines due to water diversions, declines in water quality, or development

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- Because Western Sandpipers may use ephemeral wetlands and wet playas extensively, they may be impacted by changing precipitation patterns associated with climate change
- Mid-summer dewatering of traditional or potential fall migration stopover sites
- Dewatering of ephemeral wetlands and playas due to diversion of seasonal runoff

Research, Planning, and Monitoring Challenges

- Extent and causes of declines are not well understood³
- The relative importance of ephemeral wetlands such as flooded playas, particularly during spring migration, has not been well-studied⁶

Conservation Strategies

Habitat Strategies

- Open Water (p. Hab-15-1) and Ephemeral Wetland and Playa (p. Hab-6-1) habitat conservation strategies benefit this species
- Maintain flooded conditions in important stopover habitat during the migration periods (20 April – 10 May; 1 – 30 August); prevent mid-summer dewatering of traditional or potential fall migration stopover sites
- Allow or encourage seasonal runoff into ephemeral wetlands and playas sufficient to create mudflats with water depth < 4 cm [1.6 in] during migration periods

Research, Planning, and Monitoring Strategies

- Devote more inventory and monitoring effort to ephemeral wetlands and playas to determine their relative importance as migration habitat
- Continue and expand current monitoring efforts to confirm and better quantify population trend and identify possible causes

Public Outreach Strategies

- None identified

References: ¹Brown et al. (2001); ²IWJV (in prep.); ³Fernández et al. (2010); ⁴Neel and Henry (1996); ⁵Oring and Reed (1996); ⁶Oring et al. (2000); ⁷Shuford et al. (2002); ⁸Wilson (1994);
^{EO}Expert opinion