

Snowy Plover

Charadrius alexandrinus

Conservation Profile



Photo by Larry Neel

Priority Status	Conservation Target
Reasons for Priority Status	Declines Threats
Other Rankings	Continental PIF: None Audubon Watchlist: None Natural Heritage: S3B USFWS: Bird of Conservation Concern (Great Basin); Migratory Bird BLM: Sensitive Species NDOW: Conservation Priority IM West Shorebird: Critically Important
Trends	Historical: Declines, which probably extended to inland breeders, though documentation is lacking [p1] Recent: Decreasing [USFWS]
Population Size Estimates	Nevada: 350 [USFWS, GBBO], with high annual variability Global: 36,000 (Morrison 2006) or 18,000 [p1] Percent of Global: Minimally 1%, up to 6% depending on year and global population estimate
Population Objective	Increase to rolling ten-year average of 600 breeding birds
Monitoring Coverage	Source: Special NDOW / GBBO plover surveys (not consistent), Aquatic Bird Count Coverage and Adequacy: Poor in most years, Very Good in recent inventory
Key Conservation Areas	Northwest Nevada playa lakes Lahontan Valley

Habitat Use Profile

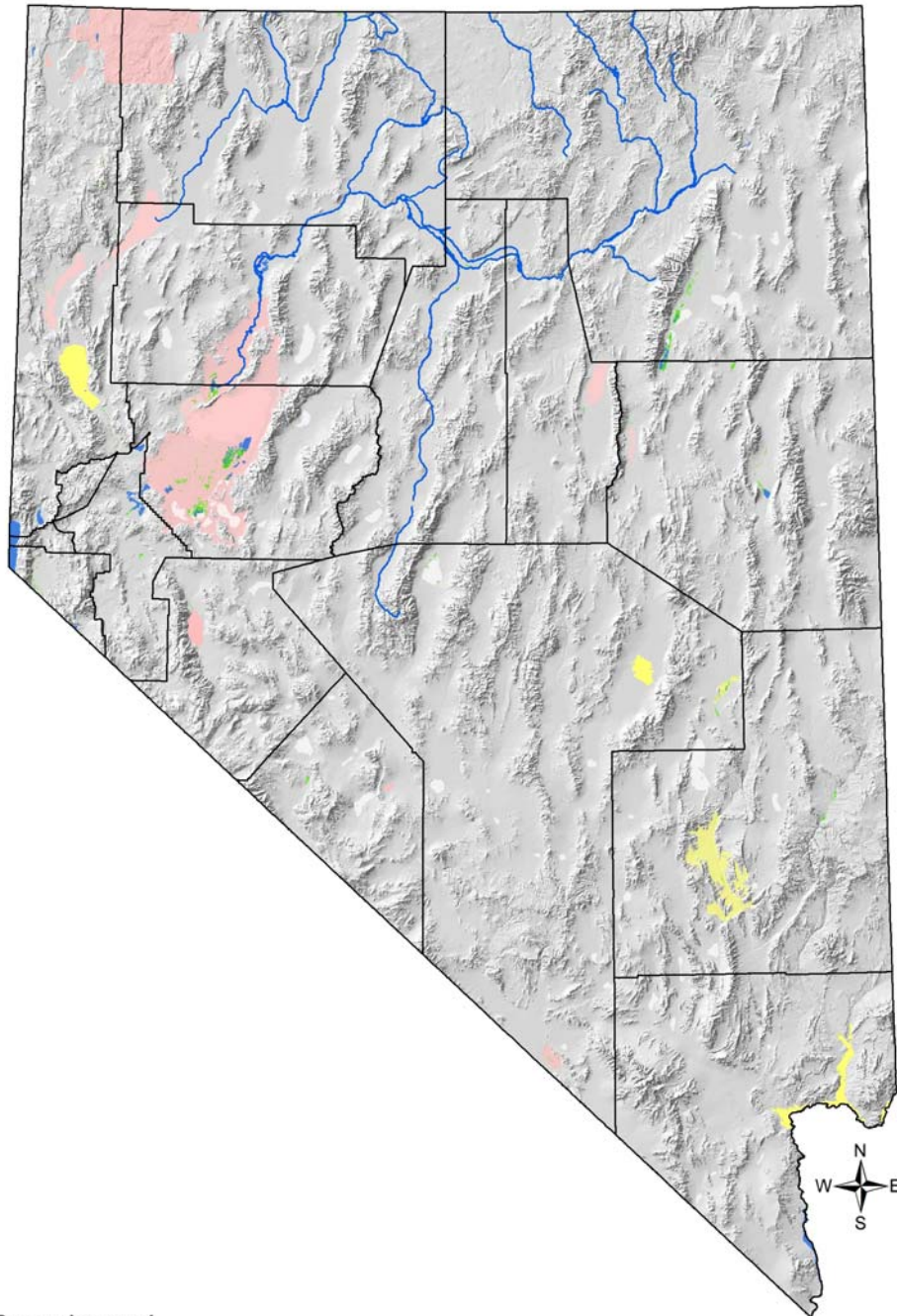
Main Habitats Used in Nevada	Ephemeral Wetlands and Playas Desert Springs Open Water (shorelines)
Key Habitat Use Parameters	Occurs on barren or nearly barren shorelines; avoids wetlands with emergent vegetation or significant shoreline vegetation [p1] Water must be present on playa before and during breeding season Most often associated with alkaline wetland conditions; presence of shoreline alkaline crust may be a good predictor of Snowy Plover presence [EO]
Minimum Patch Size	Not determined

Natural History Profile

Seasonal Presence in Nevada	Spring – summer (breeding)
Known Breeding Dates in Nevada	Early April – July in Great Basin Late March – early July in Mojave [GBBO Snowy Plover Survey 2007, s4]
Nesting Habits	Nests in scraping on ground near margin of playa [p1] Moderately high fidelity to more predictably available breeding wetlands [p1]
Food Requirements	Probes or pecks for terrestrial, aquatic, or benthic invertebrates, especially brine flies and brine shrimp [p1, p2] Forages on wet mud or sand, or in shallow water (< 2 cm) [p1]

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File: Snowy plover.mxd

[NOTE: Map needs revision to account for observations collected in GBBO/USFWS Snowy Plover survey 2007. Note further that these results indicate breeding areas in

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eastern and southern Nevada that were not reflected in the BNA's revised 2009 Snowy Plover account]

Temporary Map Key

Pink: Breeding range

Hot pink / magenta: For some birds, breeding data was limited, and was supplemented by extrapolation to include likely breeding range. In these cases, hot pink represents known breeding range, and lighter pink the extrapolated breeding range.

Blue: Winter range

Yellow: Important migration stopover areas

Purple: Year-round range

Green: In some maps, wetlands mapped by SWReGAP are shown in green for interpretational purposes

Dot symbols: In cases where breeding records were isolated or very restricted in extent, they are represented by a pink dot symbol rather than a shaded area.

Arrows: Major migration routes. These are shown only for birds for which there are migration-associated conservation issues.

OVERVIEW

It is relatively easy to describe the Snowy Plover's habitat preferences in Nevada, namely the barren shorelines of playa lakes that contain water, but have little or no emergent or shoreline vegetation. In Nevada, at least 85 sites either have historic Snowy Plover records, or meet the basic breeding requirements of the species. In GBBO/USFWS's 2007 statewide inventory of the species, Snowy Plovers were located at 20 sites, 14 of which had confirmed breeding. One of these sites, Lake Mead, had not previously been known as a Snowy Plover breeding site. In the 2007 survey, 350 adults were recorded, with the greatest numbers of birds at Big Well (Railroad Valley), Gridley Lake, the Muddy River delta of Lake Mead, Massacre Lakes, and Stillwater National Wildlife Refuge. Historically, Carson Lake in Lahontan Valley has also been a hotspot for the species. The Snowy Plover has been declining for an extended period, and in all likelihood, the decline has also been occurring in Nevada. However, the specific nature of the threats faced by the species in our state (in contrast to the well-studied threats along the Pacific Coast), and the degree to which they may be manageable, are poorly understood. Further monitoring and research is a high priority for this species, along with efforts to support and maintain wet playas during the breeding season.

ABUNDANCE AND OCCUPANCY BY HABITAT

- Population size is highly variable from year to year depending on amount of overwinter precipitation and drought cycles
- Known peak population in recent decades was ~ 900 breeding birds in northwestern Nevada in 1980 (Herman et al 1988)

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NEVADA-SPECIFIC STUDIES AND ANALYSES

- TBD

MAIN THREATS AND CHALLENGES

- The threats particular to Nevada are not well identified
- Nevada-specific trends are not sufficiently known
- Possible threats include human disturbance, predators, OHV disturbance or damage to hydrological functions; however, the main limiting factor in Nevada is probably availability of water on playas and springs, which is largely a function of yearly variability in winter precipitation
- In some cases, lack of sufficient water on playas may be related to water withdrawals or diversions

CONSERVATION STRATEGIES

Habitat Strategies

- General Ephemeral Wetland and Playa and Desert Springs conservation strategies
- Where possible, ensure seasonal water inflow to play lakes in suitable breeding sites

Research, Planning, and Monitoring

- Increased monitoring effort to better determine Nevada trends and population variability
- Additional research to determine whether significant, manageable threats are affecting Nevada populations

OTHER PRIORITY SPECIES WITH SIMILAR CONSERVATION STRATEGIES

- American Avocet
- Black-necked Stilt

FURTHER READING

- Herman et al 1988
- Page et al 1991
- Shuford et al 2002
- Origna and Reed 1996

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Temporary codes for standard references

- [p1] Birds of N. America account for this species
- [p2] NV Bird Conservation Plan ver. 1 (Neel 1999)
- [p3] NV Wildlife Action Plan
- [p4] Nevada Breeding Bird Atlas
- [p5] PIF N. American Landbird Conservation Plan (Rich et al 2004) (NOTE:
- [p6] Intermountain West Regional Shorebird Plan (Oring et al 2003)
- [p7] Pacific Flyway reports
- [p8] Shrubsteppe Landscapes in Jeopardy (Dobkin and Sauder 2004)
- [p9] Birds in a Sagebrush Sea (Paige and Ritter 1999)
- [s1] NBC-based population size estimates
- [s2, s3] NBC-based habitat relationship analysis
- [s4] Breeding Bird Atlas breeding phenology data
- [i1] BBS trends analysis (Sauer et al 2005)
- [i2] NV Upland Game Management Plan (Espinosa et al in prep.)
- [i3] Western Quail Management Plan (Zornes et al 2008)
- [i4] NDOW Shorebird and Waterbird monitoring data (Neel)
- [i5] Brad Andres IMJV Shorebird / Waterbird data set
- [i6] GBBO Technical Report 08-01 (2008)
- [EO] Expert opinion from NVPIF group members
- [IWWCP] Intermountain West Waterbird Conservation Plan
- [NAWCP] North American Waterbird Conservation Plan
- [LBCUSACP] Long-billed Curlew Status Assessment and Conservation Plan
- [USSCP] U.S. Shorebird Conservation Plan
- [WHSRN] Western Hemispheric Shorebird Regional Network