

Snowy Plover

Charadrius alexandrinus



Photo by Larry Neel

Habitat Use Profile

| Habitats Used in Nevada | |
|--|--|
| Ephemeral Wetlands/Playas Desert Springs Open Water (shorelines) | |
| Key Habitat Parameters ● | |
| Plant Composition | Saltgrass, saltbush, sedges, rushes |
| Plant Density | Very sparse or barren; avoids all densely vegetated areas ¹ |
| Mosaic | Alkali flat or flat beach adjacent to permanent water (spring or wetland) with unvegetated, very shallow shorelines or mudflats; often in highly alkaline soils ¹ |
| Hydrology, Water Quality | Tolerant of ephemeral, alkaline conditions, but water must be present during breeding season ¹ |
| Response to Vegetation Removal | Positive if overgrown ^{EO} |
| Area Requirements ● | |
| Minimum Patch Size | Unknown |
| Recommended Patch Size | ≥ 10 ha (22 ac) ^{EO} |
| Home Range | Unknown |

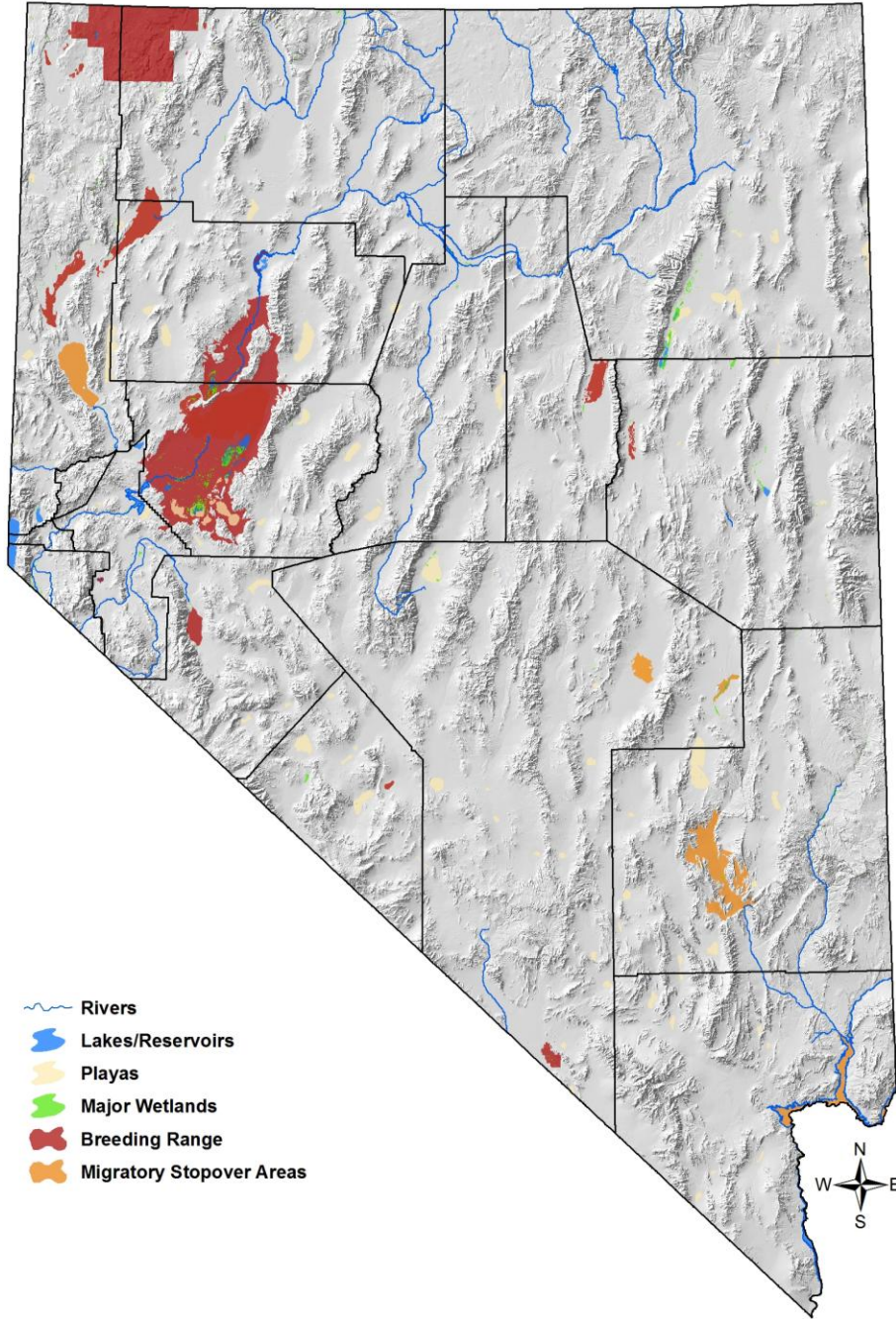
Conservation Profile

| Priority Status | |
|--|---|
| Conservation Species | |
| Species Concerns | |
| Population declines Habitat threats | |
| Other Rankings | |
| Continental PIF | None |
| Audubon Watchlist | None |
| NV Natural Heritage | S3B |
| USFWS | Conservation Concern, Migratory Bird |
| BLM | Special Status: Sensitive |
| USFS | None |
| NDOW | Conservation Priority |
| IW Shorebird Plan | Critically Important |
| Trends | |
| Historical ● | Rangewide declines ¹ |
| Recent ● | Declining; trends in Great Basin uncertain ² |
| Population Size Estimates | |
| Nevada ● | 350; highly variable ³ |
| Global ● | 18,000 ⁴ – 36,000 ² |
| Percent of Global ● | 1 - 2% |
| Population Objective | |
| Increase by 100% ^{EO} | |
| Monitoring Coverage | |
| Source | NWR and WMA counts, GBBO inventory (2007), Aquatic Bird Count |
| Coverage in NV ● | Very good (inventory); else Fair/Poor |
| Key Conservation Areas | |
| Protection | NW playa lakes, Lahontan Valley |
| Restoration | NW playa lakes, Lahontan Valley, desert springs |

Natural History Profile

| Seasonal Presence in Nevada | |
|----------------------------------|--|
| Spring – summer | |
| Known Breeding Dates in Nevada | |
| Late March – July ^{3,5} | |
| Nest and Nesting Habits | |
| Nest Placement | Scrape on bare ground near edge of playa ¹ |
| Site Fidelity | Moderate for reliable breeding sites ¹ |
| Food Habits | |
| Basic | Invertebrates; benthic prober and gleaner |
| Primary Prey | Benthic, aquatic, and terrestrial invertebrates, such as brine flies and brine shrimp ¹ |
| Secondary Prey | n/a |

Snowy Plover
Charadrius alexandrinus



[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

Snowy Plover

Charadrius alexandrinus

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

References: ¹ Page et al. (1995), ² USFWS (?), ³ GBBO unpubl. data, ⁴ Morrison (2006), ⁵ GBBO unpubl. atlas data, ^{EO} expert opinion

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 and occupancy rates are 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)

Nevada-Specific Studies and Analyses

- GBBO population inventory 2006-2007
- Population inventory in the late 1980s (Page et al. 1991)

Main Threats and Challenges

- The threats particular to Nevada are not well identified
- Nevada-specific trends are not sufficiently known

Snowy Plover
Charadrius alexandrinus

- 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

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)

Conservation Strategies

Habitat Strategies

1. Ephemeral Wetland and Playa and Desert Springs conservation strategies benefit this species (see habitat accounts)
2. Where possible, ensure seasonal water inflow into playa lakes in suitable breeding sites during the breeding season (15 March – 1 July)
3. Minimize or completely avoid all land use activities that may break the soil clay pan and, thus, water retention in the playa environment (heavy machinery, mining, well-drilling, heavy livestock use, etc.)

Research, Planning, and Monitoring

1. Increased monitoring effort to better determine Nevada trends and population variability
2. Additional research to determine whether significant threats are affecting Nevada populations and how they can be addressed