

Snowy Egret

Egretta thula



Photo by Larry Neel

Habitat Use Profile

Habitats Used in Nevada	
Marsh Great Basin and Mojave Lowland Riparian (Agriculture) (Open Water)	
Key Habitat Parameters •	
Plant Composition	Cottonwoods, willows, Russian olive, cattail, bulrush, sedges
Plant Density & Size	<u>Nesting</u> : Large cottonwoods, large willow patches, or very dense emergent vegetation; <u>Foraging</u> : marsh vegetation of intermediate density ⁷
Mosaic	Large groves of riparian trees or willows located near a large marsh and waterway ^{7, EO}
Water Depth	< 20 cm [8 in] for foraging ⁷
Hydrology	No known relationship; more vulnerable to mercury in drought years ^{2,3}
Response to Vegetation Removal	Negative ^{EO}
Area Requirements •	
Minimum Patch Size	Unclear; uses marshes of different sizes for foraging, but probably requires large habitat patches for nesting ^{EO}
Recommended Patch Size	> 150 ha [370 ac] of riparian – marsh complex ^{EO}
Home Range	~ 500 ha [1,240 ac] ^{EO}

Conservation Profile

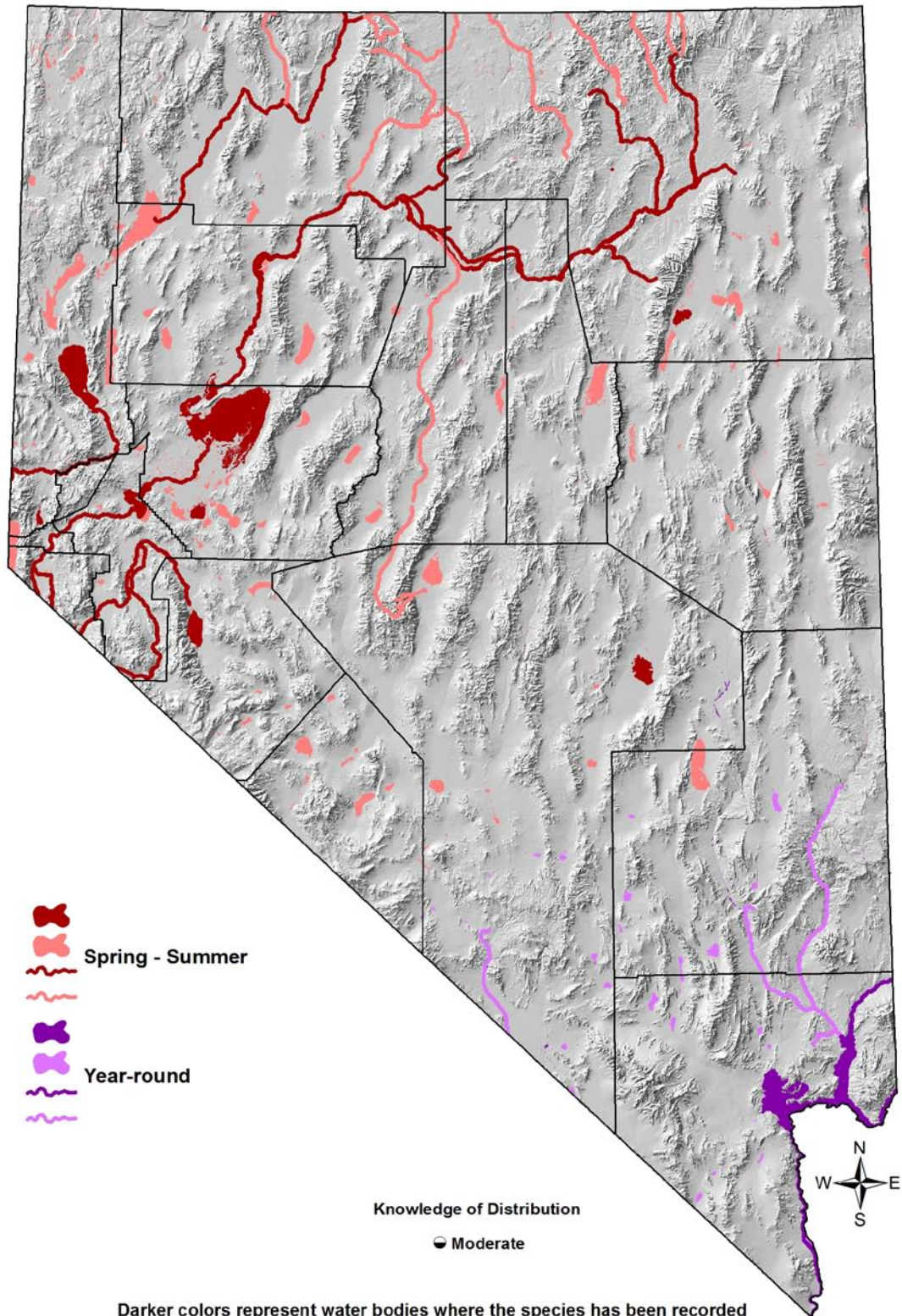
Priority Status	
Conservation Priority Species	
Species Concerns	
Historical and possible recent declines Habitat threats Small population size	
Other Rankings	
Continental PIF	None
Audubon Watchlist	None
NV Natural Heritage	S4B
USFWS	Migratory Bird
BLM	None
USFS	None
NDOW	Conservation Priority
IW Waterbird Plan	High Concern
Trends	
Historical •	Rangewide declines, followed by increases ⁷
Recent ○	Declining regionally, ⁴ but increasing rangewide ⁵
Population Size Estimates	
Nevada •	~ 600, with high annual variability ⁶
Global •	143,000 ⁵
Percent of Global	< 1%
Population Objective	
Maintain / Increase ^{EO}	
Monitoring Coverage	
Source	Nevada Colonial Waterbird Inventory, NDOW aerial surveys, NWR and WMA counts, Aquatic Bird Count
Coverage in NV	Good
Key Conservation Areas	
Protection	All major rivers, Lahontan Valley
Restoration	Degraded riparian – marsh complexes along major rivers

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer (Great Basin) Year-round (Mojave)	
Known Breeding Dates in Nevada	
April – early June ¹	
Nest and Nesting Habits	
Nest Placement	Platform nests in trees or thickets ⁷
Site Fidelity	High for colony site ⁷
Other	Highly colonial nester in mixed or single species colonies, may re-use nests ⁷
Food Habits	
Basic	Ambush predator
Primary Diet	Fish, crustaceans, aquatic invertebrates ⁷
Secondary Diet	Small amphibian and terrestrial vertebrates ⁷

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Darker colors represent water bodies where the species has been recorded within the past 12 years. Lighter colors represent water bodies where the species could potentially occur. Smaller water bodies may be difficult to visualize on the map.

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Overview

Snowy Egrets have a particularly complex regional pattern of population trends, and it is not clear how Nevada fits into these broader patterns. After serious historical declines related to feather harvesting for the millinery trade, the Snowy Egrets resurged in many areas, only to suffer new setbacks beginning in the late 20th century.⁷ The most recent trend information is mixed and somewhat contradictory,⁸ and it is further complicated by substantial annual population variations related to drought-cycles and precipitation patterns. Ivey and Herziger's⁴ report of declines in the Intermountain West is probably reliable, but it is possible that trends within Nevada itself are more stable.⁶ The ongoing Nevada Colonial Waterbird Inventory project being conducted by GBBO and NDOW as part of a regional USFWS colonial waterbird inventory initiative should significantly improve our knowledge of breeding colony locations and population size, but further work to determine Nevada trends is merited. In addition, it would be helpful to determine key areas in Nevada for migrating and wintering Snowy Egrets. Limited data from the Nevada Aquatic Bird Count suggest that the Lake Mead area, the Virgin River, and Ash Meadows NWR are important in this respect.

Abundance and Occupancy by Habitat

- Most recent ten-year peak for Lahontan Valley was 1,000 birds in 2004 (L. Neel, *pers. comm.*)

Nevada-Specific Studies and Analyses

Mercury – Drought Studies on the Lower Carson River

The complexity of the factors controlling population stability and reproductive output in Snowy Egrets is well illustrated by studies conducted by Henny et al.² and Hill et al.³ The Carson River carries high levels of mercury as a result of historical upstream mining operations. These coordinated ten-year studies on the lower Carson River and Lahontan Reservoir revealed that mercury exposure had a negative impact on reproductive success in Snowy Egrets, but only during drought years when water levels were low. Impacts were much smaller during high-water years.

Main Threats and Challenges

Habitat and Other Threats

- Loss or degradation of lowland riparian and marsh habitats due to:
 - Habitat conversion
 - Water diversions
 - Sustained livestock grazing

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- Invasive plants
- Altered hydrology that prevents effective recruitment of cottonwoods
- Prolonged droughts
- Mercury contamination, particularly along the Carson River system during drought years^{2,3}

Research, Planning, and Monitoring Challenges

- Population trend for Nevada populations is unknown
- Winter and migration distribution within Nevada is poorly documented

Conservation Strategies

Habitat Strategies

- Marsh (p. Hab-9-1), Great Basin Lowland Riparian (p. Hab-7-1), and Mojave Lowland Riparian (p. Hab-11-1) habitat conservation strategies benefit this species
- Manage emergent marshes in known or potential breeding locations to ensure sufficient water inflows and sufficient stem densities for platform nests during the nesting period (1 May – 15 July)
- River restoration projects have the potential to create large areas of suitable habitat for Snow Egrets
- Ensure that riverine marshes near egret rookeries support fish populations throughout the breeding season, at least during most years

Research, Planning, and Monitoring Strategies

- Continue the Nevada Colonial Waterbird Inventory, Aquatic Bird Count, or other similar efforts to better document breeding distribution, numbers, and Nevada trends
- Conduct surveys outside of the breeding season to identify key areas for wintering and migrating Snowy Egrets
- Include plans for the creation of suitable colony nesting and foraging habitat as part of river restoration projects

Public Outreach Strategies

- None identified

References: ¹GBBO unpublished Atlas data; ²Henny et al. (2007); ³Hill et al. (2008); ⁴Ivey and Herziger (2006); ⁵Kushlan et al. (2002); ⁶Nevada Wildlife Action Plan Team (2006); ⁷Parsons and Master (2000); ⁸Sauer et al. (2008); ^{E0} Expert opinion