Black Tern

Chlidonias niger

Photo by Martin Meyers

Habitat Use Profile

Habitats Used in Nevada	
Marsh Open Water	
Key Habitat Parameters ◑	
Plant Composition	Pondweed, bulrush, sedges, rushes[2]
Plant Density	25-75% cover within patches of emergent vegetation[2]
Mosaic	Large marsh complexes (avoids small isolated marshes); roughly equal amounts of open water and emergent vegetation; < 50% tilled upland[2, 5]
Water Depth	0.5 – 1.2 m [1.6 – 3.9 ft] at nest site[2]
Water Quality	Presumed to require very low salinity [EO]
Hydrology	Minimal fluctuation in stage during incubation [EO]
Response to Vegetation Removal	Probably negative [EO]
Area Requirements ◑	
Minimum Patch Size	20 ha [49 ac][2]
Recommended Patch Size	> 1,000 ha [2,500 ac] based on requirement of marsh complexes[2, EO]
Home Range / Territory Size	Unknown

Conservation Profile

Priority Status	
Conservation Priority Species	
Species Concerns	
Historical and recent declines Small population size Habitat threats	
Other Rankings	
Continental PIF	None
Audubon Watchlist	None
NV Natural Heritage	S2S3B
USFWS	Migratory Bird
BLM	None
USFS	None
NDOW	Conservation Priority
IW Waterbird Plan	High Concern
Trends	
Historical ●	Rangewide declines[6]
Recent ◑	Declining[3]
Population Size Estimates	
Nevada ◑	700 [EO]
Global ◑	300,000 [4]
Percent of Global	< 1%
Population Objective	
Maintain / Increase [EO]	
Monitoring Coverage	
Source	Ruby Lake NWR surveys, Aquatic Bird Count
Coverage in NV	Good at Ruby Lake NWR, Fair / Poor elsewhere
Key Conservation Areas	
Protection	Ruby Valley
Restoration	Lahontan Valley, Ruby Valley

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer	
Known Breeding Dates in Nevada	
Late June – August[1]	
Nest and Nesting Habits	
Nest Placement	Floating nest in emergent or dense mats of submerged vegetation, near open water[2]
Site Fidelity	Low fidelity to nest area[2]
Other	Semi-colonial, 11-50 pairs, nests spaced 5 - 20 m [2]
Food Habits	
Basic	Aerial forager and dipper
Primary Diet	Insects; fish 2.5-3 cm [1-1.2 in] in length[2]
Secondary Diet	Unknown

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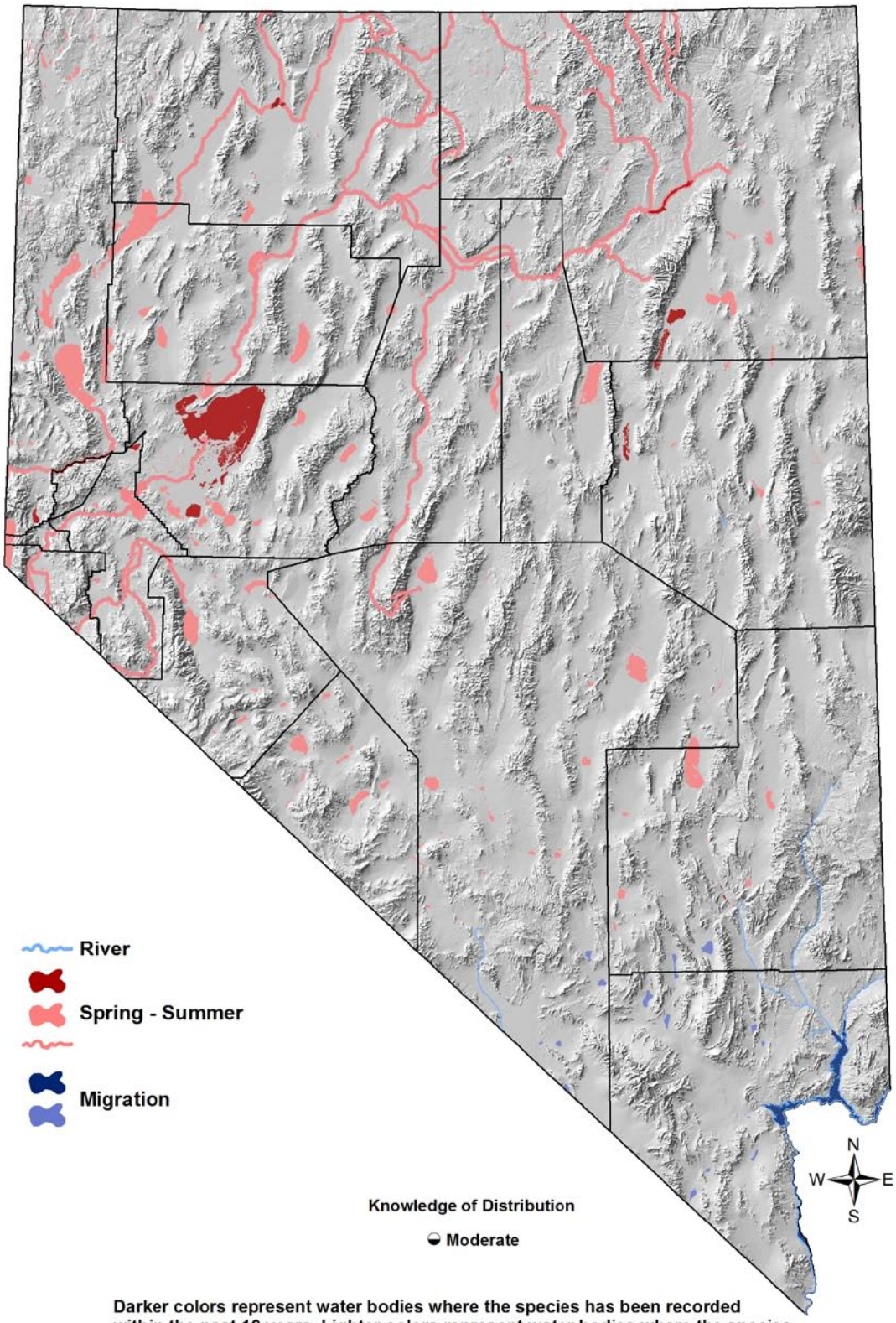

Darker colors represent water bodies where the species has been recorded within the past 12 years. Lighter colors represent water bodies where the species could potentially occur. Smaller water bodies may be difficult to visualize on the map.

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Overview

The Black Tern is one of several Conservation Priority species covered in this plan that are declining in Nevada for no clearly identified reason. The regional loss and degradation of marshes is undoubtedly an important factor, but this does not explain why Black Terns seem to be declining more rapidly than most other marsh-associated species. Until very recently, the main Black Tern breeding colony in Nevada has been located at Ruby Lake NWR. However, no breeding has been observed in this colony since 2006, which is particularly disturbing because waterbird habitats in this NWR are well-managed and protected from most threats. Biologists have not yet developed concrete hypotheses for the recent loss of this colony, nor is there any information about whether it is the result of regional declines, or simply a displacement of birds to other breeding locations. It should be noted that the Black Tern's declining trends in Nevada are mostly attributable to the decline and recent loss of the Ruby Lake NWR colony. Confirming definitive statewide trends (that may also include migrant populations) will require collecting additional survey and monitoring data from a wider area. Apart from Ruby Lake NWR, other known historical and current breeding sites within Nevada include the Lahontan Valley, Humboldt Sink, Mason Valley WMA, the Boyd Humboldt Valley IBA, Quinn River, and Pahranagat NWR. The numbers of breeders at these sites have always been relatively low and variable, at least over recent decades. Possible breeding locations that deserve further study include Kirch WMA, and Key Pittman WMA, which are currently migration stopover sites for the species. Because several nearby sites in California provide important migration stopover location for Black Terns,[7] it is likely that many of the Nevada sites shown in the map above as Spring–Summer range also provide important migration habitat.

Abundance and Occupancy by Habitat

The Nevada population estimate shown above in the Conservation Profile table is based on recent historic average of 600 breeders at Ruby Lake NWR before 2006, plus an estimate of 100 additional breeders [EO] at scattered locations throughout state.

Nevada-Specific Studies and Analyses

No information

Main Threats and Challenges

Habitat and Other Threats

- Loss or degradation of marshes due to water diversions, declines in water quality, or development
- Changes in water level during incubation may destroy nests
- Heavy metal contamination may be a threat

- Human nest disturbance, invasive plants, and pesticides have also been suggested as threats, but not well documented[2]

Research, Planning, and Monitoring Challenges

- Causes of ongoing declines are not well understood and require more detailed research and monitoring in order to determine appropriate conservation actions
- Enhanced monitoring and survey efforts are needed to better determine breeding numbers and distributions at known or potential breeding sites across the state. This could also help to determine whether current declines, which are largely attributable to the decline and recent loss of the Ruby Lake NWR breeding colony, are systemic across Nevada

Conservation Strategies

Habitat Strategies

- Marsh (p. Hab-9-1) and Open Water (p. Hab-15-1) habitat conservation strategies benefit this species; Shuford[8] provides additional Black Tern conservation strategies
- Restored or artificial marshes can provide suitable habitat if the amount of emergent vegetation is appropriate.[5] Additionally, artificial nest platforms may be beneficial in waterbodies where water fluctuations would otherwise threaten nests
- River restoration projects along the Humboldt River system and elsewhere in historic breeding habitat can benefit Black Terns, if river-associated wetlands are created[2]

Research, Planning, and Monitoring Strategies

- Additional research and monitoring is needed to document the ongoing status of the Ruby Lake NWR, and to determine the causes for the cessation of breeding activity in 2006
- Expanded statewide surveys and monitoring efforts are needed to determine:
    - The numbers distribution of breeders at other sites
    - Whether declines are systematic
    - The extent to which Nevada marshes provide important migration stopover habitat
- Monitor water quality in important breeding sites

Public Outreach Strategies

- None identified

References: [1]GBBO unpublished Atlas data; [2]Heath et al. (2009); [3]Ivey and Herziger (2006); [4]Kushlan et al. (2002); [5]Naugle et al. (2000); [6]Sauer et al. (2008); [7]Shuford and Gardali (2008); [8]Shuford (1999); [EO] Expert opinion