

# Swainson's Hawk

*Buteo swainsoni*



Photo by Larry Neel

### Habitat Use Profile

Habitats Used in Nevada	
Great Basin Lowland Riparian Agriculture Sagebrush	
Key Habitat Parameters ●	
Plant Composition	Fremont cottonwood, agricultural crops (especially alfalfa), perennial grasses, sedges, and rushes, sagebrush spp. and other xeric shrubs
Plant Density	Sparse tree cover, or single old-growth cottonwoods; avoids dense forest stands; dense wet meadow or agricultural areas, or sparse shrublands for foraging <sup>1</sup>
Mosaic	Open riparian woodlands with significant expanses of pasture, agricultural fields, wet meadow, or open shrublands with grass cover in immediate vicinity <sup>1</sup>
Distance to Water	In Nevada, most often riparian or in mesic landscapes <sup>EO</sup>
Response to Vegetation Removal	Negative to tree removal, otherwise response depends on prey populations <sup>EO</sup>
Area Requirements ●	
Minimum Patch Size	Unknown; varies with prey density
Recommended Patch Size	≥ 5,000 ha (11,000 ac) <sup>EO</sup>
Home Range	70 – 8,700 ha (150 – 19,000 ac) <sup>4</sup>

### Conservation Profile

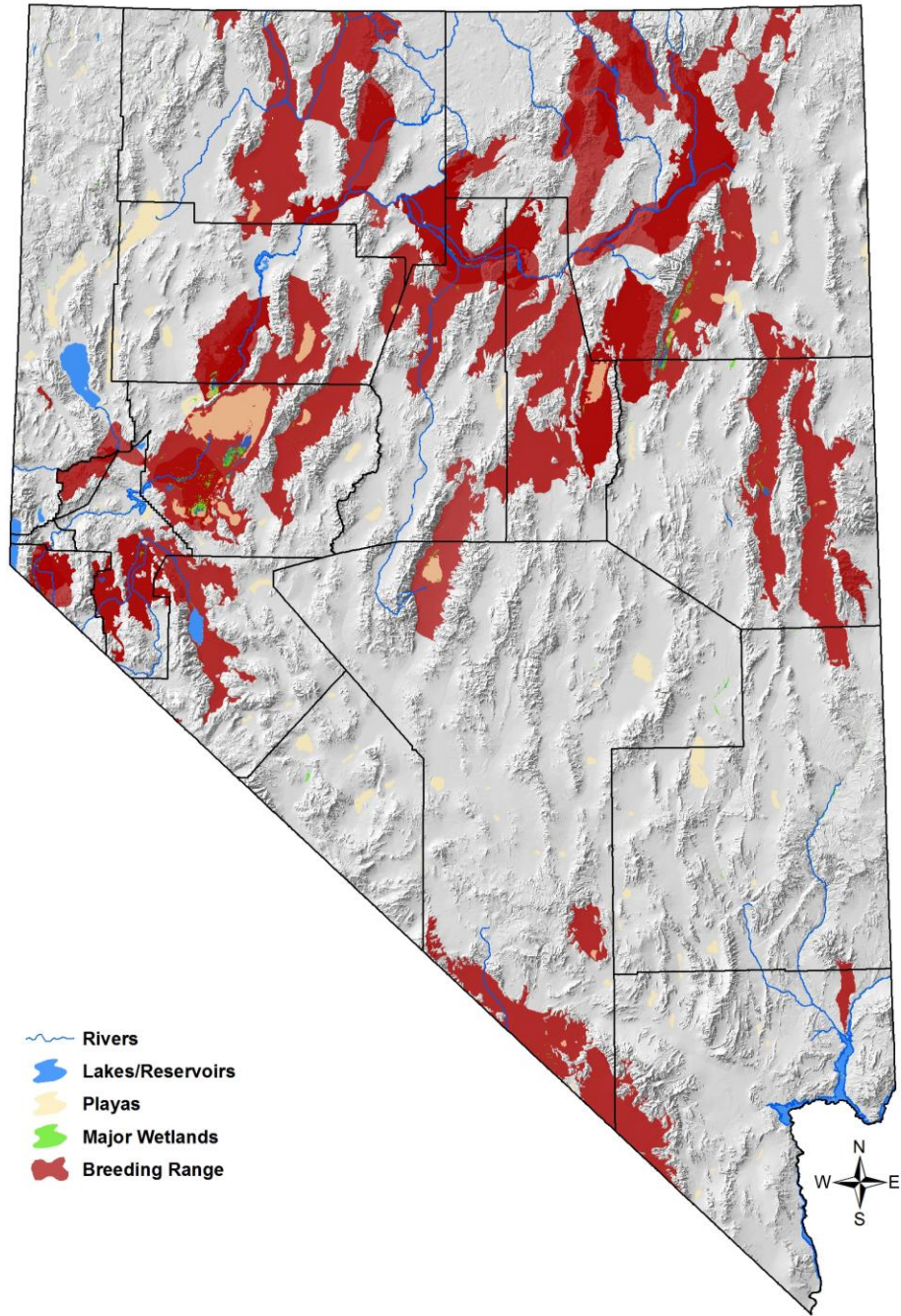
Priority Status	
Conservation Species	
Species Concerns	
Historic population declines Habitat threats	
Other Rankings	
Continental PIF	Watch List
Audubon Watchlist	Yellow
NV Natural Heritage	S2B
USFWS	Migratory Bird
BLM	Special Status: Sensitive
USFS	None
NDOW	Conservation Priority
Trends	
Historical ●	Rangewide declines and range contraction <sup>1</sup>
Recent ●	Probably declining westwide <sup>1</sup>
Population Size Estimates	
Nevada (PIF) ●	7,700; (or < 300 <sup>2</sup> )
Global ●	460,000 <sup>3</sup>
Percent of Global ●	2% (or < 1%)
Population Objective	
Maintain/Increase <sup>EO, 3</sup>	
Monitoring Coverage	
Source	NDOW raptor surveys, Nevada Bird Count
Coverage in NV ●	Good/Fair
Key Conservation Areas	
Protection	Great Basin lowland riparian and agricultural
Restoration	Great Basin lowland riparian and agricultural

### Natural History Profile

Seasonal Presence in Nevada	
Spring – summer	
Known Breeding Dates in Nevada	
April – August <sup>1,5</sup>	
Nest and Nesting Habits	
Nest Placement	Platform in old-growth tree with overhead cover, or on cliff ledge, juniper <sup>1,EO</sup>
Site Fidelity	High for breeding territory <sup>1</sup>
Other	Often re-uses old raptor or heron nests <sup>EO</sup>
Food Habits	
Basic Primary Prey	Predatory; hunts from perch or wing Diurnal small to medium-sized mammals, especially rodents such as ground squirrels, and rabbits <sup>1</sup>
Secondary Prey	Reptiles, large terrestrial insects <sup>1</sup>

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References: <sup>1</sup> England et al. (1997), <sup>2</sup> Herron (1985), <sup>3</sup> Rich et al. (2004), <sup>4</sup> WAP Team (2006), <sup>5</sup> GBBO unpubl. atlas data, <sup>EO</sup> expert opinion

### Overview

Several aspects of the Swainson's Hawk's biology are particularly interesting, including their long-distance migrations to wintering grounds in Argentina where they primarily feed on insects, in contrast with the breeding grounds where they primarily hunt ground squirrels and similarly sized mammals (England et al. 1997). Historical and recent declines have been relatively well documented in this species, and threats may occur on the breeding grounds, wintering grounds, and along the migration routes (England et al. 1997). In large measure, Swainson's Hawks have adopted agricultural landscapes as their primary breeding habitat in Nevada, and the greatest threats to the species in this state are probably conversion to row crops from more suitable prey habitat (e.g., alfalfa) to other land uses, and the loss of nesting trees in suitable foraging areas. In Nevada, the species likely specializes on ground squirrels and similar-sized small mammals, which provides an opportunity for landowner outreach to convey the benefits of this predator. This species willingly travels up to several kilometers to forage, so it is not necessarily important that suitable agricultural areas are adjacent to nesting habitat, as long as habitat with a sufficient prey base is within several miles (Brown et al. 2003). Estimates of Nevada's breeding population are highly variable, and further efforts to determine population size are needed. Provisionally, the lower population estimates are probably more realistic.

### Abundance and Occupancy by Habitat

- Typical densities in Nevada < 0.4 pairs km<sup>2</sup> (Neel 1999)

### Nevada-Specific Studies and Analyses

- Herron (1985)

### Main Threats and Challenges

- Loss of traditional agricultural landscapes, including large trees and tree groves
- Residential development
- Loss of prey populations (small to medium-sized mammals) to crop conversion

### Species with Similar Conservation Strategies

- Bald Eagle (winter use of same or similar habitats)

## **Swainson's Hawk**

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### **Conservation Strategies**

#### **Habitat Strategies**

1. Agricultural and Lowland Riparian habitat conservation strategies benefit this species (see habitat accounts)

#### **Public Outreach**

1. Using private landowner outreach partnerships as needed, encourage retention of appropriate nesting trees and groves in agricultural lands suitable for nesting Swainson's Hawks

#### **Research, Planning, and Monitoring**

1. Continue and expand monitoring efforts to better determine population size and current trends
2. Conduct further research on habitat and prey use, including effects of pesticides