

# Ferruginous Hawk

*Buteo regalis*



Photo by Larry Neel

## Habitat Use Profile

Habitats Used in Nevada	
Sagebrush Great Basin Salt Desert Agricultural	
Key Habitat Parameters ●	
Plant Composition	Sagebrush spp., juniper spp., other xeric shrubs, upland grasses, forbs
Plant Density	Unknown, but avoids forested areas, deep canyons, and heavy agriculture <sup>1</sup>
Mosaic	Variety of open habitats with single juniper or pine trees <sup>1</sup>
Distance to Water	No known relationship
Prey Populations	Presence most correlated with high-density prey (jackrabbits, cottontail, ground squirrels) <sup>1</sup>
Response to Vegetation Removal	Probably negative, if prey populations are affected <sup>EO</sup>
Area Requirements ●	
Minimum Patch Size	Unknown
Recommended Patch Size	> 800 ha (1,800 ac) <sup>EO</sup>
Home Range	590-760 ha (1,400 – 2,000 ac) <sup>1</sup>

## Conservation Profile

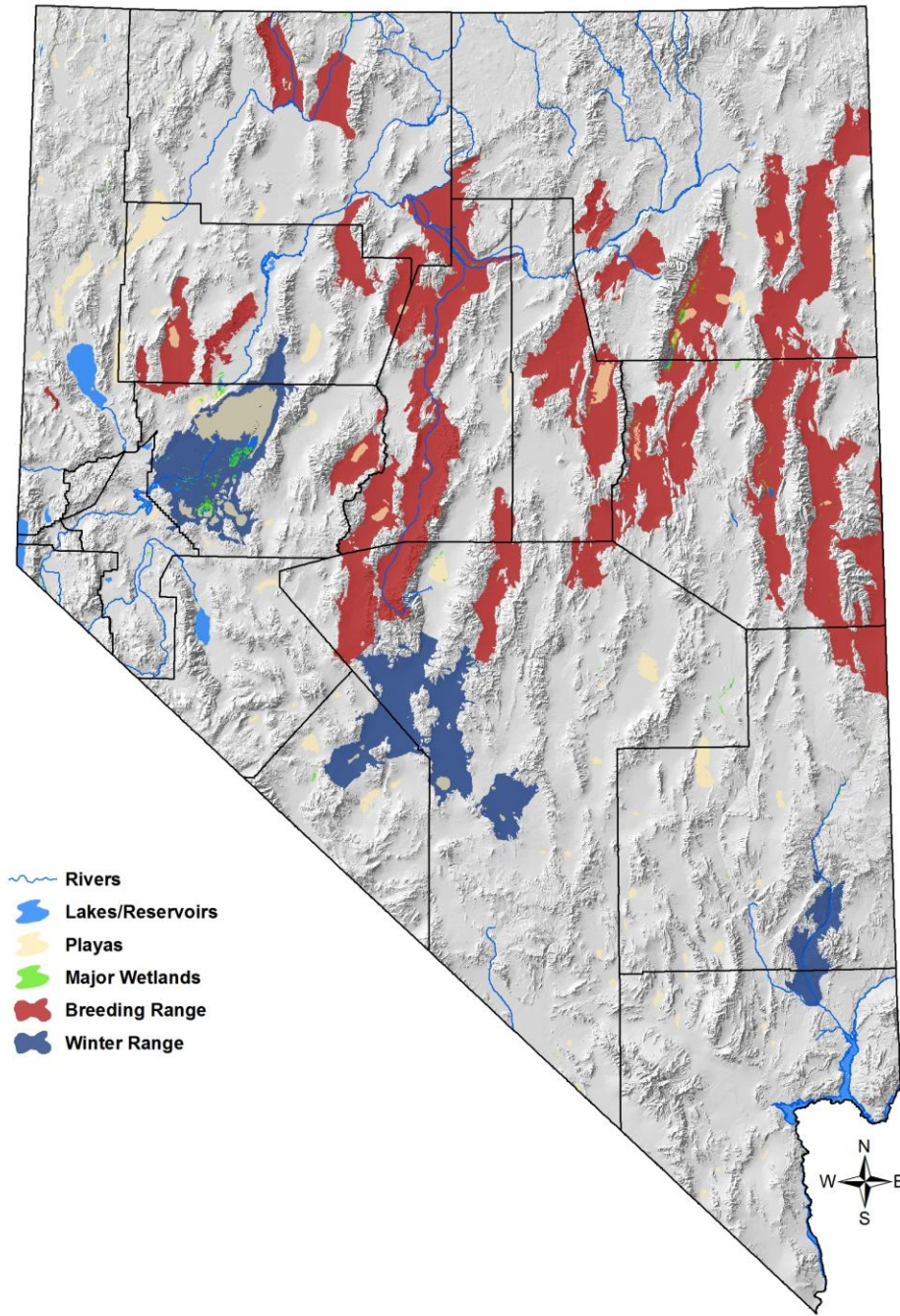
Priority Status	
Conservation Species	
Species Concerns	
Possible declines Small population size Habitat threats	
Other Rankings	
Continental PIF	None
Audubon Watchlist	None
NV Natural Heritage	S2
USFWS	Conservation Concern, Migratory Bird
BLM	Special Status: Sensitive
USFS	None
NDOW	Conservation Priority
Trends	
Historical	Unknown
Recent ●	In Nevada, unknown, but possible declines <sup>1,2</sup>
Population Size Estimates	
Nevada (PIF–NBC) ●	880 – 1,200 <sup>3</sup>
Global ●	6,000 – 22,500 <sup>4,1</sup>
Percent of Global ●	5% or higher
Population Objective	
Maintain <sup>EO</sup>	
Monitoring Coverage	
Source	NDOW raptor surveys, Nevada Bird Count
Coverage in NV ●	Good
Key Conservation Areas	
Protection	Northern and eastern Nevada
Restoration	Northern and eastern Nevada

## Natural History Profile

Seasonal Presence in Nevada	
Year-round	
Known Breeding Dates in Nevada	
March – August <sup>5,1</sup>	
Nest and Nesting Habits	
Nest Placement	Stick platform on isolated trees, ledges, poles, ground <sup>1</sup>
Site Fidelity	Moderate for breeding territory <sup>EO</sup>
Other	Sensitive to nest disturbance; 250 m (900 ft) buffer recommended <sup>6</sup>
Food Habits	
Basic	Predator on mammals; hunts from wing/perch
Primary Prey	Jackrabbits, cottontails <sup>1</sup>
Secondary Prey	Ground squirrels <sup>1</sup>

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References: <sup>1</sup> Bechard and Schmutz (1995), <sup>2</sup> Paige and Ritter (1999), <sup>3</sup> Herron et al. (1985), <sup>4</sup> Rich et al. (2004), <sup>5</sup> GBBO unpubl. atlas data, <sup>6</sup> White and Thurow (1985), <sup>EO</sup> expert opinion

## Overview

Open, rolling sagebrush country near the Pinyon-Juniper interface appears to be the preferred landscape for breeding Ferruginous Hawks in Nevada. This species is subject to substantial annual variability in numbers and nest success as a function of fluctuating abundance of jackrabbits and cottontails, their preferred prey items. Ferruginous Hawks are known for their extensive post-breeding vagrancy, and they are also a regular wintering raptor throughout Nevada. Based on widespread population declines in the 1980s, Ferruginous Hawks were petitioned for listing under the ESA in 1991 (Bechard and Schmutz 1999), but not subsequently listed. This bird remains a conservation priority among land management agencies in Nevada due to their small numbers and past declines. Proximity of suitable nesting habitat to agricultural areas that support suitable prey species may be beneficial to Ferruginous Hawks (Leary et al. 1998). The primary conservation strategy for this species is to manage its primary prey base, cottontails and jackrabbits, to maintain healthy populations (Paige and Ritter 1999). The species is also known to be sensitive to nest disturbance, and industrial or recreational developments may be sited so as to avoid Ferruginous Hawk nest sites.

## Abundance and Occupancy by Habitat

- TBD, NBC data insufficient

## Nevada-Specific Studies and Analyses

- NDOW telemetry data on breeding birds in northeastern Nevada suggest that about 90% of foraging activity occurs within 4 km of an active nest site (P. Bradley, *pers. comm.*).

## Main Threats and Challenges

- Sensitive to factors negatively affecting prey populations in sagebrush, including invasive plants, habitat degradation, catastrophic fire, or diseases affecting prey species
- More sensitive to nest site disturbances than other *Buteos*, especially during early stages of nesting cycle (Bechard and Schmutz 1999).
- Loss of nesting trees (small isolated junipers or similar)

## Species with Similar Conservation Strategies

- Prairie Falcon (similar prey populations)

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## Conservation Strategies

### Habitat Strategies

1. No single umbrella habitat conservation strategy of this plan sufficient (but note Pinyon-Juniper and Sagebrush habitat accounts)
2. Manage rangelands to promote healthy prey populations with dense herbaceous understory in sagebrush
3. Develop and implement fire management plan and priorities to conserve productive sagebrush habitat, especially near the Pinyon-Juniper interface
4. Limit spread of invasive plants, particularly cheatgrass
5. Pinyon-Juniper management and fuels reduction projects should be designed to maintain a "feathered" ecotone where scattered or isolated trees are present within areas dominated by shrubland
6. Siting of trails, access roads, and other land developments should consider avoiding nest sites at a long enough distance to prevent flushing the birds (recommended minimum: 1 km or 0.7 mi).

### Research, Planning, and Monitoring

1. Continue monitoring to better determine population trends in Nevada, and document important nesting areas and regions
2. Seek to integrate Nevada monitoring with regional Ferruginous Hawk monitoring to document trends, and to better distinguish them from regional population shifts.
3. Where disturbances do occur in proximity to nesting locations, document nesting outcomes to improve our knowledge of necessary buffer areas
4. Determine whether there is a relationship between prey density and site occupancy or abundance.
5. Through planning and permitting processes, minimize the disturbances listed above near known nesting locations
6. Explore the use of artificial nest platforms by this species (Bechard and Schmutz 1999) as a short-term management tool to mitigate for nest site losses to impacts.