

## Flammulated Owl

*Otus flammeolus*



Photo by Fred Petersen

### Habitat Use Profile

Habitats Used in Nevada	
Coniferous Forest Aspen	
Key Habitat Parameters ●	
Plant Composition	Ponderosa and Jeffrey pines, white fir, mix of other coniferous species, aspen, native shrub understory in forest stands <sup>2,3</sup>
Plant Density	138-1040 trees/ha, canopy closure 35-75%, shrub density 182-776 shrubs/ha <sup>2</sup>
Mosaic	Large-diameter (44-87 cm DBH) snags near openings required, old-growth forest with natural openings, saplings and shrubs, multiple canopy layers, aspen groves <sup>2</sup>
Slope	16 – 30% <sup>2</sup>
Distance to Water	No known relationship
Response to Vegetation Removal	Negative <sup>EO</sup>
Area Requirements ●	
Minimum Patch Size	Unknown, estimated at 50 ha (110 ac) <sup>2,EO</sup>
Recommended Patch Size	150 ha (370 ac) <sup>EO</sup>
Home Range	3 - 16 ha (7 - 40 ac) <sup>2</sup>

### Conservation Profile

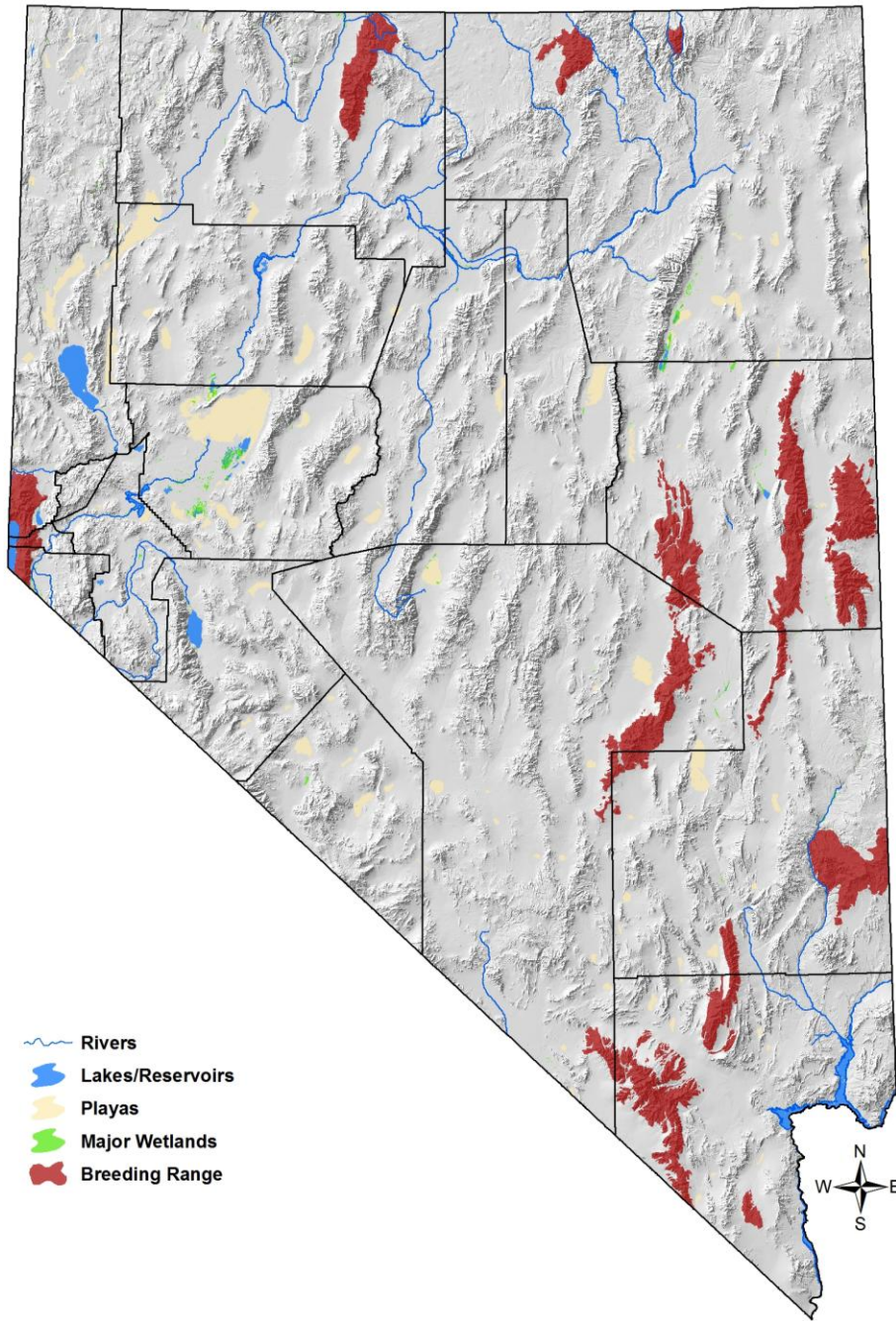
Priority Status	
Conservation Species	
Species Concerns	
Small population size Habitat threats	
Other Rankings	
Continental PIF	Watch List
Audubon Watchlist	Yellow
NV Natural Heritage	S4B
USFWS	Conservation Concern, Migratory Bird
BLM	Special Status: Sensitive
USFS	Sensitive Species
NDOW	Stewardship Species
Trends	
Historical	Unknown
Recent	Unknown
Population Size Estimates	
Nevada	Unknown; < 2,500 <sup>EO</sup>
Global ●	29,000 <sup>1</sup>
Percent of Global	Unknown
Population Objective	
Maintain/Increase <sup>EO</sup>	
Monitoring Coverage	
Source	None; some research projects provided distribution info
Coverage in NV ●	Poor
Key Conservation Areas	
Protection	Spring Mountains, Schell Creek and Snake ranges
Restoration	Peripheral mountain ranges in the state

### Natural History Profile

Seasonal Presence in Nevada	
Spring – summer	
Known Breeding Dates in Nevada	
Late May – early August <sup>4,EO</sup>	
Nest and Nesting Habits	
Nest Placement	Large woodpecker cavity in large snag <sup>2</sup>
Site Fidelity	High for breeding territory <sup>2</sup>
Other	Nest within 30-100 m of forest opening <sup>2</sup>
Food Habits	
Basic	Insectivorous; nocturnal hunting on wing
Primary Prey	Nocturnal flying insects, e.g., moths <sup>2</sup>
Secondary Prey	n/a

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References: <sup>1</sup> Rich et al. (2004), <sup>2</sup> McCallum (1994), <sup>3</sup> Arsenault et al. (2003), <sup>4</sup> GBBO unpubl. atlas data, <sup>EO</sup> expert opinion

### Overview

Although its habitat needs are relatively well characterized, little is still known about the Flammulated Owl's numbers, distribution, or conservation status in Nevada. Records have come from the Santa Rosa, Jarbidge, Spring, Schell Creek, Quinn Canyon, White Pine, Sheep, Clover, Snake, Highland, and Carson ranges, but this small owl could potentially occur in other ranges as well (Floyd et al. 2007). Recent inventories in the central Nevada ranges suggest that it may be absent there. Perhaps the key management factor for this bird is managing forests to ensure the presence of large diameter snags. Flammulated Owls often breed in loose clusters comprised of multiple pairs, making targeted protection of nesting areas easier (Arsenault et al. 2003). The species likely requires a fairly large minimum stand size to accommodate the variety of microhabitat types it needs.

### Abundance and Occupancy by Habitat

- No information [Further literature review]

### Nevada-Specific Studies and Analyses

- Arsenault et al. (2003)
- [Add Marcus Mika study]

### Main Threats and Challenges

- Fuels reduction projects that remove snags (EO)
- High-intensity fire

### Other Species with Similar Strategies

- Spotted Owl
- Hermit Warbler
- Williamson's Sapsucker
- White-headed Woodpecker

### Further Reading

- Dunham et al. (1996) [add ref]

## **Flammulated Owl**

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### **Conservation Strategies**

#### **Habitat Strategies**

1. Coniferous Forest conservation strategies benefit this species (see habitat accounts).
2. Manage forests to conserve large-diameter snags
3. Manage forests for mixed-age mosaic structure, including old-growth patches, open stands of large-diameter ponderosa or Jeffrey pines, and forest openings with well developed understory vegetation.

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

1. Conduct additional study and monitoring to estimate population size and determine occupancy patterns (if any) in central NV ranges