

Short-eared Owl

Asio flammeus



Photo by Larry Neel

Habitat Use Profile

Habitats Used in Nevada	
Wet Meadow Sagebrush Agriculture Marsh	
Key Habitat Parameters ●	
Plant Composition	Perennial grasses and forbs, pasture and hay crops, sagebrush spp.
Plant Density	Very high density grasslands or other herbaceous cover; sufficiently dense to promote vole populations ¹
Mosaic	Expansive wet meadow or similar grassland buffered by open shrublands, mounds, or other dry habitat; marsh component beneficial, little or no urban encroachment ^{1, E0}
Other	Uses undisturbed pinyon-juniper or riparian woodlands for winter roosting ¹
Response to Vegetation Removal	Presumed neutral, if prey populations are unaffected ^{E0}
Area Requirements ●	
Minimum Patch Size	100 ha (220 ac) ¹
Recommended Patch Size	≥ 150 ha (370 ac) ³
Home Range	Unknown for western populations

Conservation Profile

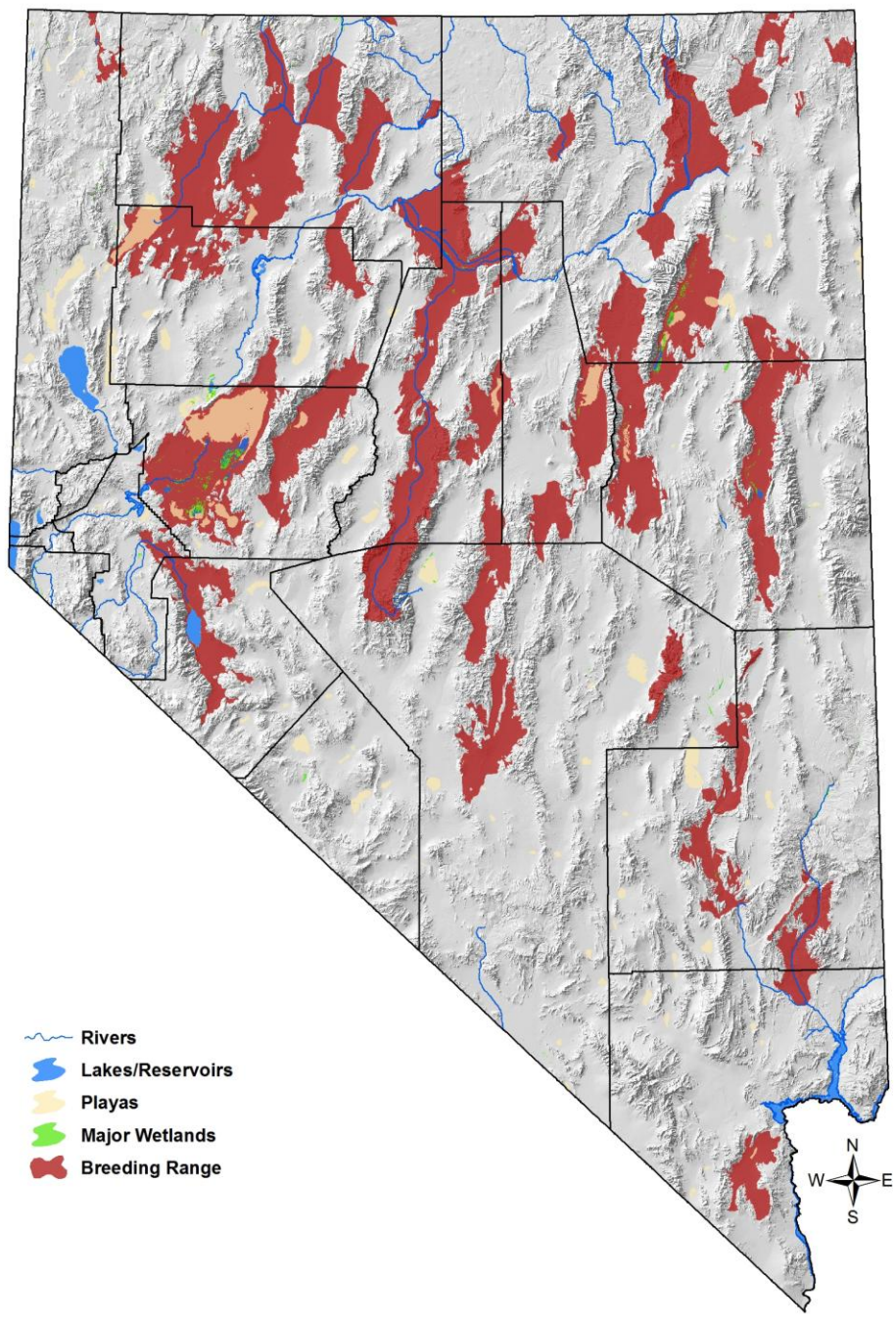
Priority Status	
Conservation Species	
Species Concerns	
Past population declines Possible habitat threats	
Other Rankings	
Continental PIF	Watch List
Audubon Watchlist	Yellow
NV Natural Heritage	S4
USFWS	Migratory Bird
BLM	Special Status: Sensitive
USFS	None
NDOW	Conservation Priority
Trends	
Historical ●	Rangewide declines ¹
Recent ●	Appears stable, but possible declines ²
Population Size Estimates	
Nevada (PIF) ●	5,000
Global ●	710,000 ³
Percent of Global ●	< 1%
Population Objective	
Increase by 100% ³	
Monitoring Coverage	
Source	Nevada Bird Count
Coverage in NV ●	Fair
Key Conservation Areas	
Protection	All wet meadow and traditional agricultural habitat in Great Basin
Restoration	All wet meadow and traditional agricultural habitat in Great Basin

Natural History Profile

Seasonal Presence in Nevada	
Year-round	
Known Breeding Dates in Nevada	
March – July ⁴	
Nest and Nesting Habits	
Nest Placement	On dry ground near grassland in 35 – 55 cm (14 – 23") tall ground cover ¹
Site Fidelity	Unknown
Other	Often nest semi-colonially ¹
Food Habits	
Basic	Predatory; hunts on the wing
Primary Prey	Specialist on voles and similar-sized rodents ¹
Secondary Prey	Small birds and large insects ¹

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References: ¹ Holt and Leasure (1993), ² Sauer et al. (2008), ³ Rich et al. (2004), ⁴ GBBO unpubl. atlas data, ^{EO} expert opinion

Overview

The Short-eared Owl is not strongly associated with any single defined habitat type, but rather it can be found in diverse types of open country where small mammal populations are sufficiently dense. Voles, their preferred prey, are typically most numerous in grasslands or wet meadows where herbaceous cover is well-developed, and Short-eared Owls often mirror this distribution pattern. Short-eared Owl numbers in Nevada are difficult to estimate with current survey methods, but concern exists because their preferred habitats are threatened by a variety of land-user demands, including intensified agriculture, locally heavy grazing, and water withdrawals. Additionally, although patch-size relationships have not been rigorously quantified, it has been suggested that patches of suitable habitat > 100 ha are particularly important to Short-eared Owls (Holt and Leasure 1999), meaning that habitat fragmentation is also a potential concern. As such, a Wet Meadows and Agriculture conservation strategies (see Agricultural and Wetland habitat accounts) will probably address many of the needs of this species.

Abundance and Occupancy by Habitat

- Often roosts communally in winter, and may breed semi-colonially in some situations (Holt and Leasure 1999)
- Densities may be high (but not yet quantified) where vole populations are plentiful (Holt and Leasure 1999); home range may reach 200 ha (440 ac; NaturServe 2009).

Nevada-Specific Studies and Analyses

- None

Main Threats and Challenges

- Loss or fragmentation of habitat with well-developed herbaceous cover (Wet Meadows, grasslands) to:
 - Livestock grazing
 - Intensified / altered agricultural practices, including early haying
 - Water withdrawals
 - Invasive plants

Species with Similar Conservation Strategies

- Long-billed Curlew

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- Sandhill Crane
- Willet

Conservation Strategies

Habitat Strategies

1. Wet Meadows and Agriculture conservation strategies benefit this species (see habitat accounts)
2. Manage for good grass cover from nest initiation to fledging (March – July) in areas where voles are present
3. Short-eared Owls are known to respond positively to many conservation measures undertaken on behalf of waterfowl species to restore and maintain wet meadows (Paige and Ritter 1999).

Research, Planning, and Monitoring

1. Continue monitoring through NBC and other means, if necessary, to confirm stable population trend in Nevada
2. Conduct additional research on distribution and habitat relationships of wintering populations to determine threats