

Short-eared Owl

Asio flammeus



Photo by Larry Neel

Conservation Profile

Priority Status	Conservation Target
Reasons for Priority Status	Possible declines Possible threats
Other Rankings	Continental PIF: Watch List Audubon Watchlist: Yellow Natural Heritage: S4 USFWS: Migratory Bird BLM: Sensitive Species NDOW: Conservation Priority
Trends	Historical: Significant declines [p1] Recent: Likely declines in West, 1960's – 1970's; probably stable or nearly so since 1980's but data insufficient [i1]; Nevada trends unknown
Population Size Estimates	Nevada (NBC): Insufficient data Nevada (PIF): 5,000 Global: 710,000 [p5] Percent of Global: < 1 %
Population Objective	TBD
Monitoring Coverage	Source: Nevada Bird Count Coverage and Adequacy: Fair
Key Conservation Areas	TBD

Habitat Use Profile

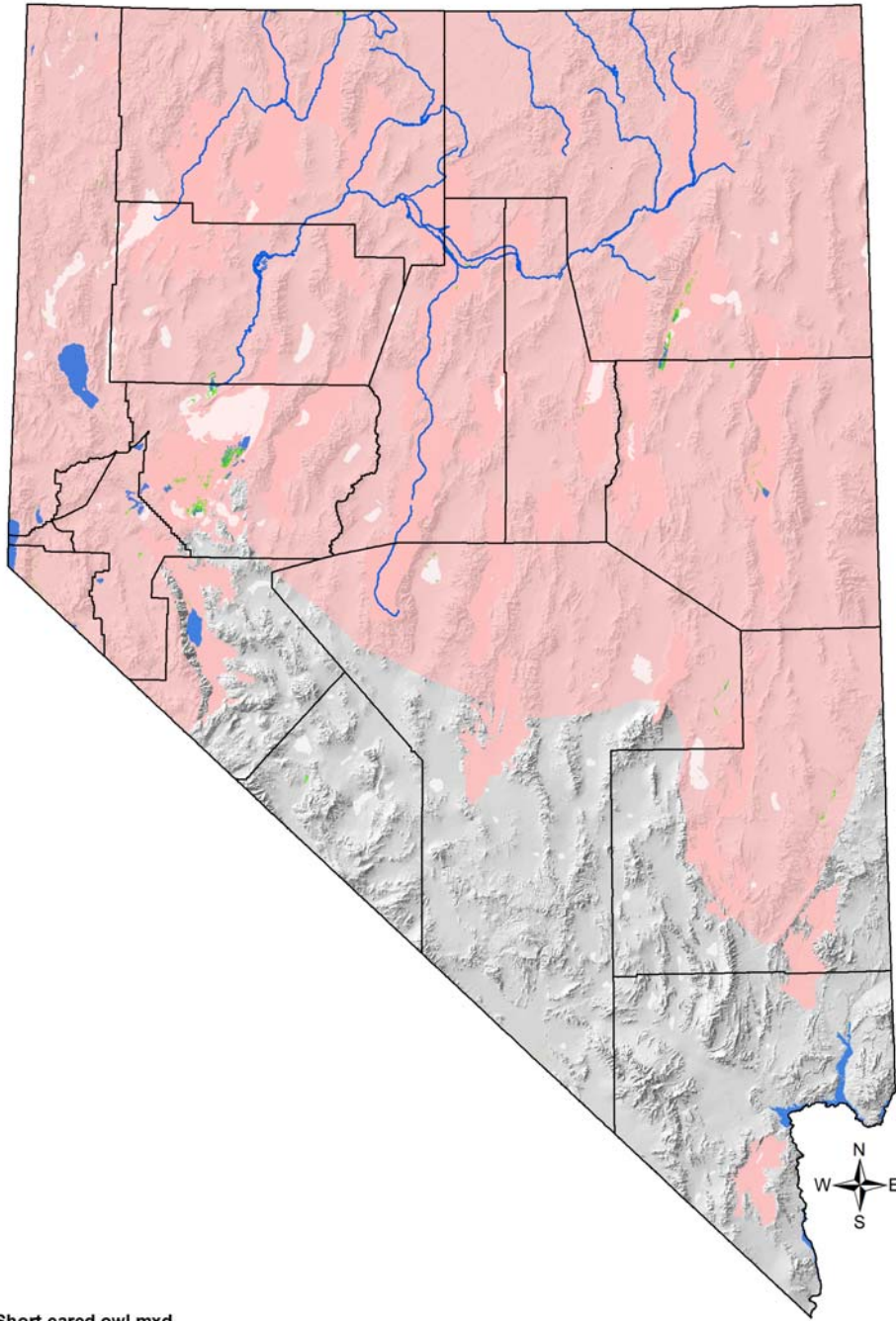
Main Habitats Used in Nevada	Wet Meadow Marsh Sagebrush Agricultural
Key Habitat Use Parameters	Inhabits a wide variety of open habitats (meadows, grasslands, shrublands, irrigated hayfields) with low vegetation, especially where dense small mammal populations are present [p1] Avoids forest, developed areas, and areas of intensive agricultural use [p1] Tends to occur in ecotonal areas, such as meadows with some shrub invasion [EO] Sometimes uses pinyon-juniper woodlands or riparian willows for winter roosting [p1]
Minimum Patch Size	1 nest per 5.5 ha in Montana [p1]; no additional information for Nevada Some indications that larger patches (> 100 ha) of suitable habitat are required [p1]

Natural History Profile

Seasonal Presence in Nevada	Year-round in northern 2/3 of state, but Nevada breeders probably migrate southward in winter [EO, p3] Some Nevada winter residents breed farther north [p3]
Known Breeding Dates in Nevada	March – July [s4, EO]
Nesting Habits	On ground, often on small ridges and mounds, sometimes in loose colonies [p1] Herbaceous cover at nest site usually 35-54 cm tall [p1]
Food Requirements	Specialized feeder on <i>Microtus</i> voles and similar-sized rodents; also some birds and insects [p1]

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File: Short-eared owl.mxd

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Temporary Map Key

Pink: Breeding range

Hot pink / magenta: For some birds, breeding data was limited, and was supplemented by extrapolation to include likely breeding range. In these cases, hot pink represents known breeding range, and lighter pink the extrapolated breeding range.

Blue: Winter range

Yellow: Important migration stopover areas

Purple: Year-round range

Green: In some maps, wetlands mapped by SWReGAP are shown in green for interpretational purposes

Dot symbols: In cases where breeding records were isolated or very restricted in extent, they are represented by a pink dot symbol rather than a shaded area.

Arrows: Major migration routes. These are shown only for birds for which there are migration-associated conservation issues.

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 probably stable at the present time, but concern exists because their preferred habitats are threatened by a variety of land-user demands, including intensified agriculture, 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 [p1], meaning that habitat fragmentation is also a potential concern. As such, a generalized “wet meadows” conservation strategy (see Agricultural and Wetland habitat accounts) will probably address most of the needs of this species.

ABUNDANCE AND OCCUPANCY BY HABITAT

- Often roosts communally in winter, and may breed semi-colonially in some situations [p1]
- Density may be very high (but not yet quantified) where vole populations are plentiful [p1, p9]

NEVADA-SPECIFIC STUDIES AND ANALYSES

- None [TBD]

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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

CONSERVATION STRATEGIES

Habitat Strategies

- General Wet Meadows conservation strategy
- Manage for good grass cover in areas where voles are present
- Short-eared Owls are known to respond positively to many conservation measures undertaken on behalf of waterfowl species to restore and maintain wet meadows [p9].

Research, Planning, and Monitoring

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

OTHER PRIORITY SPECIES WITH SIMILAR CONSERVATION STRATEGIES

- Long-billed Curlew
- White-faced Ibis
- Sandhill Crane
- Willet

FURTHER READING

- TBD

Temporary codes for standard references

[p1] Birds of N. America account for this species

[p2] NV Bird Conservation Plan ver. 1 (Neel 1999)

[p3] NV Wildlife Action Plan

[p4] Nevada Breeding Bird Atlas

[p5] PIF N. American Landbird Conservation Plan (Rich et al 2004) (NOTE:

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[p6] Intermountain West Regional Shorebird Plan (Oring et al 2003)
[p7] Pacific Flyway reports
[p8] Shrubsteppe Landscapes in Jeopardy (Dobkin and Sauder 2004)
[p9] Birds in a Sagebrush Sea (Paige and Ritter 1999)
[s1] NBC-based population size estimates
[s2, s3] NBC-based habitat relationship analysis
[s4] Breeding Bird Atlas breeding phenology data
[i1] BBS trends analysis (Sauer et al 2005)
[i2] NV Upland Game Management Plan (Espinosa et al in prep.)
[i3] Western Quail Management Plan (Zornes et al 2008)
[i4] NDOW Shorebird and Waterbird monitoring data (Neel)
[i5] Brad Andres IMJV Shorebird / Waterbird data set
[i6] GBBO Technical Report 08-01 (2008)
[EO] Expert opinion from NVPIF group members
[IWWCP] Intermountain West Waterbird Conservation Plan
[NAWCP] North American Waterbird Conservation Plan
[LBCUSACP] Long-billed Curlew Status Assessment and Conservation Plan
[USSCP] U.S. Shorebird Conservation Plan
[WHSRN] Western Hemispheric Shorebird Regional Network