

California Status Factors

Elcode ABNSB12040
Gname STRIX NEBULOSA
Gcomname GREAT GRAY OWL

Number of Occurrences

B = 6 - 20

Comments Fifteen known breeding sites in the state (California Department of Fish and Game 2000).

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments

Population Size

B = 50-250 individuals

Comments The state population has been estimated to include fewer than 150 individuals (Inst. For Bird Populations 2002).

Range Extent

F = 20,000-200,000 km² (about 8,000-80,000 square miles)

Comments A rarely seen resident at 1400 to 2300 meters (4500-7500 feet) in the Sierra Nevada from the vicinity of Quincy, Plumas County south to the Yosemite region. Most recent records are from the Merced and Tuolumne River drainages of Yosemite National Park. Occasionally reported in northwestern California in the winter, and in Warner Mts. in the summer (McCaskie et al. 1988). The Sierran population is the most southerly in the world and is unique in that respect.

Area of Occupancy

F = 500-2,000 km² (about 125,000-500,000 acres)

LF = 5,000-20,000 km (about 3,000-12,500 miles)

Comments Average home range size for adults in northeastern Oregon is 67.3 km² (Bull and Duncan 1993).

Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

C = Substantial Decline (decline of 50-75%)

Comments Apparently now the rarest owl in California, and has suffered an apparent decline in occupied habitat over the past 100 years.

Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within $\pm 10\%$ fluctuation

Comments California Department of Fish and Game (1990) previously estimated about 10 breeding pairs in the state.

Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

Scope High **Severity** Moderate **Immediacy** High

Comments Timber harvest has the greatest potential impact on populations (Bull and Duncan 1993). Livestock grazing could potentially have adverse affects to the prey base. Development of campgrounds and associated disturbances in Yosemite National Park may have eliminated hunting areas. In California, habitat loss through logging of mature forest and overgrazing of meadows has been the primary cause for decline (California Department of Fish and Game 1990).

Number of Appropriately Protected and Managed Occurrences

C = Several (4-12) occurrences appropriately protected and managed

Comments The majority of currently known nesting sites are in Yosemite National Park and thus are protected through the natural resource management of the park (California Department of Fish and Game 2000). On U.S. National Forest land, known nest sites are protected from logging (Bull and Duncan 1993).

Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

Comments Rarely breeds at 1 year, occasionally at 2 years, more commonly at three years. One brood produced per year (Bull and Duncan 1993).

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

Comments Mixed conifer and red fir forests in the Sierra Nevada. Except for birds dispersing, nearly all great gray owls are found in or near meadows within these forest habitats (California Department of Fish and Game 2000). Rather specific habitat relationships in California, primarily because the species is so tightly linked to meadow ecosystems for its survival and there is a general lack of grass/forb habitats in Sierra Nevada forests (Beck and Winter 2000).

Other Considerations

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Reasons

Only fifteen known breeding sites in state in 2000, with multiple and immediate threats.

BCD Sources

California Department of Fish and Game. 1990. 1989 annual report on the status of California's state listed threatened and endangered plants and animals. 188 pp.

New Sources

Beck, T.W. and J. Winter. 2000. Survey protocol for the Great Gray Owl in the Sierra Nevada of California. Prepared for USDA Forest Service, Pacific Southwest Region Vallejo, California.

Bull, E. L., and J. R. Duncan. 1993. Great Gray Owl (*Strix nebulosa*). In *The birds of North America*, No. 41 (A. Poole and F. Gill, eds.). Acad. of Nat. Sci., Philadelphia, and Am. Ornithol. Union, Washington, D.C.

California Department of Fish and Game. 2000. The Status of Rare, Threatened, and Endangered Animals and Plants in California, Great Gray Owl.

http://www.dfg.ca.gov/hcpb/species/jsp/more_info.jsp?specy=birds&idNum=68

Institute for Bird Populations. 2002. Surveying Great Gray Owls on the Sierra Nevada's National Forests.

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McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1988. *Birds of northern California, an annotated field list*. 2nd ed. Golden Gate Audubon Soc., Berkeley.