

## **Northern Harrier (*Circus cyaneus*)**

NMPIF level: Biodiversity Conservation Concern, Level 2 (BC2)

NMPIF assessment score: 12

NM stewardship responsibility: Low

National PIF status: No special status

New Mexico BCRs: 16, 18, 35, (34)

Primary breeding habitat(s): Emergent Wetlands and Lakes

Other habitats used: Plains-Mesa Grassland, Chihuahuan Desert Grassland, Chihuahuan Desert Shrub

### **Summary of Concern**

Northern Harrier is a broadly distributed raptor of North America and Eurasia. Populations have declined globally due to loss of wetland and open grassland habitat. Limited data suggest sharply negative trends for breeding populations in New Mexico and elsewhere in the southwest.

### **Associated Species**

Great Blue Heron, Great Egret, Cattle Egret, American Coot, Bald Eagle (BC2), American Kestrel, Marsh Wren, Red-winged Blackbird

### **Distribution**

Northern Harrier is a very widespread species, breeding locally across most of northern North America and Eurasia. It is a year-round resident across much of the western United States and portions of the northeast, and a summer resident further north across Canada and Alaska. It winters across much of the United States, Mexico and Central America. New Mexico marks the southern limit of the breeding range; the species is a rare breeder in the state, though nesting has been recorded in marshy areas nearly statewide. It is relatively common statewide in winter and during migration (MacWhirter and Bildstein 1996, Parmeter et al. 2002).

### **Ecology and Habitat Requirements**

This species breeds primarily in open wetland areas, foraging widely in wet pastures, dry uplands and desert shrub-steppe habitat. Densest populations are typically associated with large tracts of undisturbed habitats dominated by thick, low vegetation. Northern Harriers nest on the ground in open, treeless areas such as marshes, wet meadows, and dry grasslands. Nests are typically placed in patches of dense vegetation such as cattails, usually close to water or on mats of vegetation raised above water level. Harriers are nomadic, and both breeding and nonbreeding densities may vary in response to local changes in prey availability and habitat condition. Nesting activity begins as early as late-March. The influx of fall migrants into New Mexico begins in late August (MacWhirter and Bildstein 1996).

**Conservation Status**

**Species Assessment**

DISTRIBUTION	1
THREATS	3
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	4
IMPORTANCE OF NEW MEXICO TO BREEDING	1
<b>COMBINED SCORE</b>	<b>12</b>

Northern Harrier is a Biodiversity Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 12. It receives a high vulnerability score of 4 from NMPIF for a negative local population trend. Northern Harrier is a U.S. Fish and Wildlife Service (2002) national Bird of Conservation Concern

**Population Size**

PIF estimates a species population of 1.3 million, and that roughly 35% percent occurs in the United States. Size of the New Mexico breeding population is unknown, and may be somewhat variable from year to year.

**Population Trend**

Numbers of breeding Northern Harriers in North America have declined in the twentieth century, apparently due to loss of habitat through extensive draining of wetlands and loss of undisturbed

grassland habitats. In recent decades, Northern Harrier has shown significant, moderately negative trends across the United States and Canada. Sharp downward trends appear in BBS data for New Mexico, Oklahoma and Texas, although the number of routes recording species in this area is small. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	-13.8	0.01	6
FWS Region 2	-7.4	0.01	41
Western States	-1.6	0.00	415

### **Threats**

Loss of wetland habitat poses an ongoing threat to breeding and wintering populations. Conversion of native grassland to irrigated agriculture has contributed to local population declines, and remains a threat in some areas. Prey availability may be reduced by widespread use of insecticides and rodenticides, as well as by overgrazing of pastures. In the Great Plains, southwest, and Intermountain West, Northern Harriers reduce their use of livestock-grazed grasslands (Bock et al. 1993).

### **Management Issues and Recommendations**

Management for Northern Harrier in New Mexico should focus on maintaining open areas with dense vegetation in and around wetlands.

### **NMPIF Recommendations**

- Maintain or increase wetland habitat statewide.
- Seek to maintain or improve suitable habitat in all known breeding areas.
- Allow annual vegetation and successional plants to grow, and leave dead vegetation.

### **Species Conservation Objectives**

#### **NMPIF Objectives**

- Establish statewide monitoring to better assess population trends.
- Maintain or increase current populations.

### **Sources of Information**

Bock, C. E., V. A. Saab, T. D. Rich, and D. S. Dobkin. 1993. Effects of livestock grazing on neotropical migratory landbirds in western North America. Pages 296-309 in D. M. Finch and P. W. Stangel, editors. Status and management of Neotropical migratory birds. U.S. Department of Agriculture, Forest Service General Technical Report RM-229.

MacWhirter, R. B., and K. L. Bildstein. 1996. Northern Harrier (*Circus cyaneus*). In The Birds of North America, No. 210 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.

Parmeter, J., B. Neville, and D. Emkalns. 2002. New Mexico Bird Finding Guide. New Mexico Ornithological Society, Albuquerque, NM.

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