

Belted Kingfisher (*Ceryle alcyon*)

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, 34, 35

Primary breeding habitat(s): Middle-elevation Riparian

Other habitats used: Southwest Riparian, Montane Riparian, Emergent Wetlands

Summary of Concern

Belted Kingfisher is widely distributed across the United States and Canada, in association with lakes and rivers. Populations in the southwest are relatively small and sparsely distributed. This species has shown declines in recent decades, both in the state and range-wide.

Associated Species

Green Heron, Common Merganser, Bank Swallow (BC1), Northern Rough-winged Swallow

Distribution

Belted Kingfisher is a year-round resident across almost the entire continental United States, though the central grasslands and desert southwest are sparsely populated. Migratory birds breed throughout most of Canada and Alaska. In winter, this species occupies a vast area south of its year-round range, from the United States – Mexico border states to northern parts of South America.

In New Mexico, Belted Kingfisher is a rare and local breeder in suitable habitat, mainly in the northern part of the state (Hamas 1994, Parmeter et al. 2002).

Ecology and Habitat Requirements

Belted Kingfishers inhabit areas along streams, rivers, lakes, and marine estuaries. The species generally prefers open, moving water, and avoids areas where water is turbid or obscured by floating or emergent vegetation. Stream riffles are often a major source of prey, and may be used as cues for assessing habitat quality (Davis 1982). Suitable aquatic habitat may exist in a number of different terrestrial communities, including riparian habitat at higher elevations. Availability of suitable nesting sites is likely a decisive factor determining local abundance. This species nests in excavated burrows, constructed in earthen banks mostly lacking vegetation. Burrows are generally near water, but ditches, road cuts, landfills, other sites distant from water are sometimes used. Most typically, the breeding territory extends up and downstream from a nest burrow placed in a streamside bank. Tunnels extend 3-6 feet into the bank, ending in a small chamber. Nest tunnels are often located a short distance below the top of high embankments, making them difficult to access by predators and less vulnerable to flooding. Typically a single brood is raised per year, with most breeding activity occurring from April-July. Kingfishers forage for small fish swimming close to the water surface (Hamas 1994).

Conservation Status

Species Assessment

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

Belted Kingfisher 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 its negative local population trend.

Population Size

PIF estimates a species population of 2,200,000, and that New Mexico holds less than one percent of the species population, or about 7,400 birds. Breeding is relatively rare and local in the state, though the species is present on most major streams in the northern half of the state.

Population Trend

Negative population trends have emerged in recent decades, both locally and range-wide. This species is not well-sampled by BBS, and the sharply downward trends shown for New Mexico should be viewed with caution, noting the very small sample size. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	-9.9	0.06	7
FWS Region 2	-4.0	0.03	90
Western States	-0.6	0.32	339
Survey-wide	-1.7	0.00	2019

Threats

Reasons for population declines are not well understood, though habitat loss or deterioration resulting in lowered prey availability may be one factor. Kingfishers may exist in close proximity to humans, but require relatively undisturbed areas with appropriate water quality and suitable nesting sites. Breeding habitat may be lost or compromised due to river management activities, channelization, erosion, development, livestock grazing, and recreational land uses. Kingfishers are sensitive to disturbance and may avoid or vacate habitats that are frequented by humans, particularly when breeding (Hamas 1994).

Management Issues and Recommendations

Management for Belted Kingfisher in New Mexico should focus on maintaining healthy waterways and adjacent riparian habitat, and maintaining fish populations.

NMPIF Recommendations

- Protect known breeding sites from disturbance. In possible breeding areas, survey prior to undertaking any type of construction on embankments near water.
- Protect riparian habitat along flowing rivers statewide.
- Ensure high numbers of native fish populations.

Species Conservation Objectives

NMPIF Objectives

- Establish statewide monitoring to better assess population trends.
- Maintain or increase current populations.
- Ensure high water quality in areas of known or suspected breeding.

Sources of Information

Davis, W. J. 1982. Territory size in *Megaceryle alcyon* along a stream habitat. *Auk* 99: 353–362.

Hamas, M. J. 1994. Belted Kingfisher (*Ceryle alcyon*). In *The Birds of North America*, No. 84 (A. Poole and F. Gill, Eds.). Philadelphia, PA: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

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