Prairie Falcon (*Falco mexicanus*)
Conservation Status Rank Summary

January 31, 2025

For details on assessment and ranking methodology, see: *Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species*

Rarity and Trends

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Rarity					
Range Extent	2025-01-30	Y: 380530.8 km²	4.710	MTNHP Range Maps	None
Area of Occupancy	2025-01-30	8090 | 4km² cells	4.810	MTNHP Modeling	None
Number of Occurrences			-		Factor not used in ranking.
Population Size			-		Factor not used in ranking.
# of Occurrences in Good Condition			-		Factor not used in ranking.
% of Area Occupied in Good Condition			-		Factor not used in ranking.
Environmental Specificity	2025-01-31	Narrow	-		Factor not used in ranking.
Rarity is calculated by averaging weighted factor scores: **((4.71 × 1) + (4.81 × 2)) / 3 = 4.78**					
Trends					
Short-term Trend	2025-01-31	4.0%	0.000	Breeding Bird Survey, Expert Opinion	BBS Data show general stability but CIs are not credible. Given that the species is widely reported to be increasing G seems appropriate.
Long-term Trend	2025-01-31		0.000		None
Trends score is calculated by summing weighted short and long-term trend scores: **((0.00 × 2) + (0.00 × 1)) = 0.00**					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		Medium	3.670		None
Intrinsic Vulnerability	2025-01-31	Not intrinsically vulnerable	-		**Factor not used in ranking.**
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: **(3.67) = 3.67**					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Agriculture & Aquaculture	2025-01-31	Medium	Large	Moderate	High	Loss of native habitat due to agriculture. Species may face loss of prey when native habitat is converted to agriculture.
Natural System Modifications	2026-03-17	Medium	Large	Moderate	High	Wildfires exacerbated by extreme droughts, in frequency or intensity, lead to fluctuating small mammal populations through altered or degraded habitat
Climate Change & Severe Weather	None	Medium	Pervasive	Moderate	High	Multiple Level 2 threats - see Additional Threat Details below.
Threat Tally: 0 - Very High, 0 - High, 2 - Medium, 0 - Low Overall Threat Impact* = Medium						

*See Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species for calculation of Overall Threat Impact based on the number and impact of individual threats.

Conservation Status Rank Calculation

Raw score

Rarity: (4.78 × 70%) + Threats: (3.67 × 30%) + Trends: (0.00) = 4.45

Calculated Rank: S4

Accepted Rank	S4
Date Approved	2025-01-31
Approval Authority	Montana Natural Heritage Program Staff
Rank Justification	Species is relatively common within suitable habitat and widely distributed across portions of the state. It faces threats from loss of habitat due to agricultural conversion and a warming climate.

Supplementary Information

Montana Natural Heritage Program. 2021. Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species. 18 p.
https://mtnhp.mt.gov/docs/Montana_State_Rank_Criteria_20211201.pdf

Montana Field Guide Species Account:
https://fieldguide.mt.gov/speciesDetail.aspx?elcode=ABNKD06090

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=ABNKD06090

Information Needs

Information needs are assessed by considering the availability of factors used to assess species status as well as the quality of these assessments. Current information availability and quality to inform Conservation Status Rank for this species are highlighted.

Rank Factor	Assessment Category	Value	Criteria
General Status	Status Quality	Adequate	Calculated rank has low uncertainty and is represented by a single rank (e.g. S3); accepted rank may be adjusted to a range rank (e.g. S2S3)
		Poor	Rank assessed as SU or calculated rank has notable uncertainty and corresponds to a range rank with 2 or more values (e.g. S2?, S1S3, or S4S5)
Rarity	Range Quality	Adequate	Range polygon adequately represents area of probable occupancy and does not include substantial unoccupied areas; range may be adequately defined and still include areas of unsuitable habitat (e.g. mountain ranges for plains species)
		Marginal	Range polygon defined, but may include or exclude notable areas where the species may or may not occur on the landscape
		Poor	Range polygon not defined
	Habitat Quality	Adequate	Species-habitat relationship is well-defined (e.g. relevant literature or robust habitat model available)
		Marginal	Understanding of species-habitat relationship is adequate among some but not all habitats (e.g. literature covers similar habitats outside of Montana or habitat model performance is only somewhat adequate)
		Poor	Species-habitat relationship is not well understood
Threats	Threat Quality	Adequate	Threat Impact is a single value (including "Unthreatened")
		Marginal	Threat Impact assessed at more than one value (e.g. "High - Medium")
		Poor	Threat Impact is Unknown but Intrinsic Vulnerability is assessed
		Unknown	Threat Impact is Unknown and Intrinsic Vulnerability is not assessed
Trends	Recency	Current	Short-term Trend assessment date less than 10 years old
		Out of Date but Adequate	Short-term Trend assessment date is more than 10 years old or Unknown, but species is Unthreatened
		Out of Date	Short-term Trend assessment date more than 10 years old
		Not Available	Short-term Trend data are not available
	Trend Quality	Sufficient	Short-term Trend assessed at a single value or multiple values with a minimum trend greater than -10% (stable or increasing)
		Unknown but Sufficient	Short-term Trend is Unknown, but species is Unthreatened
		Poor	Short-term Trend is less than -10% (in decline) with two or more values selected
		Unknown	Short-term Trend is Unknown

Summary of Information Availability

Information to assess status is available

Summary of Information Needs

No further information is needed and monitoring through IMBCR/ BBS should continue.

Additional Threat Details

The table below contains the complete threats assessment for this species. While the Conservation Status Rank Calculation is based on cumulative, broadly categorized (Level 1) threats data, threats are assessed and tracked for more specifically categorized (Level 2) threats when available.

Threat Category	Date Assessed	Assessed By	Data Source	Scope	Severity	Imme-diacy	Comments
Agriculture & Aquaculture - 2.1 - Annual & Perennial Non-Timber Crops	2025-01-31	Dan Bachen	Expert Opinion	Large	Moderate	High	Loss of native habitat due to agriculture. Species may face loss of prey when native habitat is converted to agriculture.
Agriculture & Aquaculture - 2.3 - Livestock Farming & Ranching	2026-03-17	Dan Bachen	SWAP Assessment	Large	Unknown	High	Heavy livestock grazing intensity has the potential to degrade prey habitat leading to fluctuating small mammal populations, but effects of grazing aren't well understood. It would stand to reason that, when done with care, beef production can be used to benefit small mammal populations and their habitat through appropriate grazing.
Natural System Modifications - 7.1 - Fire & Fire Suppression	2026-03-17	Dan Bachen	SWAP Assessment	Large	Moderate	High	Wildfires exacerbated by extreme droughts, in frequency or intensity, lead to fluctuating small mammal populations through altered or degraded habitat
Climate Change & Severe Weather - 11.1 - Habitat Shifting & Alteration	2025-01-31	Dan Bachen	Audubon Survival By Degrees Project	Pervasive	Moderate	Moderate	Species is predicted to have moderate habitat loss under 1.5C warming
Climate Change & Severe Weather - 11.2 - Droughts	2026-03-17	Dan Bachen	SWAP Assessmet	Large	Moderate	High	Extreme droughts affected Prairie Falcons twice during the 24-year study period. Prairie falcon nesting success and productivity declined as ground squirrel populations declined after a winter drought in 1976-1977 (Smith and Johnson 1985) and after a spring drought in 1992 (Van Home et al. 1997)., However, Successful Prairie Falcons produced large broods in dry years and smaller broods in wet years. Precipitation prior to the nesting season usually increases the amount of grass and weed cover in the NCA and may interfere with the ability of Prairie Falcons to find and secure prey