Whooping Crane (*Grus americana*)
Conservation Status Rank Summary

January 9, 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	2024-10-21		-	MTNHP Range Maps	**Factor not used in ranking.**
Area of Occupancy			-		**Factor not used in ranking.**
Number of Occurrences	2024-10-21	1	0.000	MTNHP Databases	None
Population Size			-		**Factor not used in ranking.**
# of Occurrences in Good Condition	2025-01-08		1.100	MTNHP Data	Single occurrence for MT
% of Area Occupied in Good Condition			-		**Factor not used in ranking.**
Environmental Specificity	2011-12-22	Narrow	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Narrow Specialist. Roost in shallow wetlands. | Methodology: NS (2003) | Original Score: B
Rarity is calculated by averaging weighted factor scores: **((0.00 × 1) + (1.10 × 2)) / 3 = 0.73**					
Trends					
Short-term Trend	2025-01-09		0.000	MTNHP Data, US Fish and Wildlife Service 2023	Global population is stable to increasing and state records are consistent
Long-term Trend	2011-12-22		-0.220	MTNHP Species Rank Data Table	Population in 1870 was estimated at 1300 to 1400 birds whereas current global population was 383 in 2010. | Methodology: NS (2003) | Original Score: C
Trends score is calculated by summing weighted short and long-term trend scores: **((0.00 × 2) + (-0.22 × 1)) = -0.22**					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		Very high	0.000		None
Intrinsic Vulnerability	2011-12-22	Highly vulnerable	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Highly Vulnerable. Species is slow to mature, reproduces infrequently, and/or has low fecundity such that populations are very slow (>20 years or 5 generations) to recover from decreases in abundance; or species has low dispersal capability such that extirpated populations are unlikely to become reestablished through natural recolonization (unaided by humans). | Methodology: NS (2003) | Original Score: A
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: **(0.00) = 0.00**					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Pollution	2025-01-09	Low	Restricted	Moderate	Moderate	Negative impacts from pesticide and fungicide application on suggar beets and corn.
Climate Change & Severe Weather	2025-01-09	Very high	Pervasive	Extreme	Moderate	Audubon's Survival by degrees project predicts an 86% loss of suitable habitat for the species with 1.5 C warming
Threat Tally: 1 - Very High, 0 - High, 0 - Medium, 1 - Low Overall Threat Impact* = Very high						

*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: (0.73 × 70%) + Threats: (0.00 × 30%) + Trends: (-0.22) = 0.29

Calculated Rank: S1

Accepted Rank	S1M
Date Approved	Date Unknown
Approval Authority	Legacy Assessment: MTNHP Staff
Rank Justification	Species is currently a rare migrant through Montana. Historically it was hunted to near extinction for its feathers. Currently populations are low but stable and recovery efforts are ongoing. It faces ongoing threats due to potential habitat loss from a warming climate and exposure to agricultural chemicals.

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=ABNMK01030

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=ABNMK01030

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.

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
Pollution - 9.7 - Pesticide/Herbicide/Insecticide Application	2025-01-09	Dan Bachen	Austin 2018	Restricted	Moderate	Moderate	Negative impacts from pesticide and fungicide application on suggar beets and corn.
Climate Change & Severe Weather - 11.1 - Habitat Shifting & Alteration	2025-01-09	Dan Bachen	Audubon Survival by Degrees Project	Pervasive	Extreme	Moderate	Audubon's Survival by degrees project predicts an 86% loss of suitable habitat for the species with 1.5 C warming