Black-crowned Night Heron (*Nycticorax nycticorax*)
Conservation Status Rank Summary

December 10, 2024

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	2024-12-10	S: 245137.6 km²	4.710	MTNHP Range Maps	None
Area of Occupancy	2024-12-10	847 | 4km² cells	4.130	MTNHP Modeling	None
Number of Occurrences	2024-12-10	18	1.380	MTNHP Databases	None
Population Size			-		**Factor not used in ranking.**
# of Occurrences in Good Condition	2024-12-10		2.200	MTNHP Data	Most Breeding occurrences are on Federally managed wildlife refuges
% of Area Occupied in Good Condition			-		**Factor not used in ranking.**
Environmental Specificity	2009-01-21	Narrow	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Species is dependent on large wetland complexes | Methodology: NS (2003) | Original Score: B
Rarity is calculated by averaging weighted factor scores: **((4.71 × 1) + (4.13 × 2) + (1.38 × 1) + (2.20 × 2)) / 6 = 3.13**					
Trends					
Short-term Trend	2024-12-10		0.000	MTNHP Data	Most occurrences have observations within the last 10 years
Long-term Trend	2009-01-21		0.000	MTNHP Species Rank Data Table	Large wetland complex habitats relatively stable since European arrival. | Methodology: NS (2003) | Original Score: E
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		Altered hydrology, nest site disturbance, and potentially contaminants in some areas. Climate change.
Intrinsic Vulnerability	2009-01-21	Moderately vulnerable	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Methodology: NS (2003) | Original Score: B
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
Biological Resource Use	2026-03-09	Low	Restricted	Slight	High	BCNH can be perceived by hatchery owners/operations as a pest. Lethal control by permit removes birds from the population
Natural System Modifications	2026-03-09	Medium	Pervasive	Moderate	High	Altered hydrology through wetland drainage and wetland loss
Pollution	2026-03-09	Low	Restricted	Moderate	High	Pesticide run-off including DDE and PCB contamination
Threat Tally: 0 - Very High, 0 - High, 1 - Medium, 2 - 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: (3.13 × 70%) + Threats: (3.67 × 30%) + Trends: (0.00) = 3.29

Calculated Rank: S3

Accepted Rank	S3B
Date Approved	1993-05-01
Approval Authority	Montana Species of Concern Committee
Rank Justification	Species is a rare breeding resident of wetlands complexes across northern and southwest Montana. based on incidental observation data most breeding sites appear to have continued occupancy over the last decade. Species faces few significant threats.

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=ABNGA11010

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=ABNGA11010

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

Data to assess species status are generally available, but short-term trend is based on incidental observations of the species at occurrences during the breeding season.

Summary of Information Needs

General avian monitoring programs are insufficient to characterize population changes for this species. Species specific monitoring is needed to determine population trend and explore impacts of threats.

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
Biological Resource Use - 5.1 - Hunting & Collecting Terrestrial Animals	2026-03-09	Dan Bachen	SWAP Assessment	Restricted	Slight	High	BCNH can be perceived by hatchery owners/operations as a pest. Lethal control by permit removes birds from the population
Natural System Modifications - 7.2 - Dams & Water Management/Use	2026-03-09	Dan Bachen	SWAP Assessment	Pervasive	Moderate	High	Altered hydrology through wetland drainage and wetland loss
Pollution - 9.3 - Agricultural & Forestry Effluents	2026-03-09	Dan Bachen	SWAP Assessment	Restricted	Moderate	High	Pesticide run-off including DDE and PCB contamination
Climate Change & Severe Weather - 11.1 - Habitat Shifting & Alteration	2024-12-10	Dan Bachen	Audubon Survival by Degrees project	Pervasive	Neutral-Benefit	Moderate	Audubon's Survival by Degrees project predicts a neutral to positive impact of warming temperatures on species range