

Long-billed Curlew (*Numenius americanus*)

Conservation Status Rank Summary

December 9, 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	2024-12-09	S: 380530.8 km ²	4.710	MTNHP Range Maps	None
Area of Occupancy	2024-12-09	12986 4km ² cells	5.500	MTNHP Modeling	None
Number of Occurrences	2024-12-09	4809	5.500	MTNHP Databases	None
Population Size			-		Factor not used in ranking.
# of Occurrences in Good Condition	2024-12-09		3.300	MTNHP Data	The majority of occurrences have significant operational threats
% of Area Occupied in Good Condition			-		Factor not used in ranking.
Environmental Specificity	2011-12-20	Narrow	-	MTNHP Species Rank Data Table	Factor not used in ranking. Dependent on shortgrass prairie (12 inches with 8 inches probably ideal for nesting). Methodology: NS (2003) Original Score: B
Rarity is calculated by averaging weighted factor scores: $((4.71 \times 1) + (5.50 \times 2) + (5.50 \times 1) + (3.30 \times 2)) / 6 = 4.64$					
Trends					
Short-term Trend	2023-12-20	13.8%	0.070	IMBCR	IMBCR trend in population estimates for Montana. "-Point Estimate"
Long-term Trend	2011-12-20		-0.140	MTNHP Species Rank Data Table	Grassland habitats have been heavily impacted since European arrival and species has probably declined by 25-50% over this time period as a result of this habitat loss. Methodology: NS (2003) Original Score: D
Trends score is calculated by summing weighted short and long-term trend scores: $((0.07 \times 2) + (-0.14 \times 1)) = 0.00$					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		Very high	0.000		Habitat loss, human disturbance during nest period through a variety of activities, pesticides and herbicides.
Intrinsic Vulnerability	2011-12-20	Moderately vulnerable	-	MTNHP Species Rank Data Table	Factor not used in ranking. Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance within 5-20 years or 2-5 generations. Species has good dispersal capabilities such that extirpated populations generally become reestablished through natural recolonization. Methodology: NS (2003) Original Score: B
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
Residential & Commercial Development	2026-03-19	Low	Small	Slight	High	Development decreasing habitat
Agriculture & Aquaculture	None	High	Large	Serious	High	Multiple Level 2 threats - see Additional Threat Details below.
Biological Resource Use	2024-12-09	Medium	Large	Moderate	High	Species appears to be commonly shot (illegally). In Idaho 33% of telemetered birds were shot (Katzner et al. 2020). Impacts of shooting are unknown in Montana.
Natural System Modifications	2026-03-19	Low	Large	Slight	High	Fire suppression can result in encroachment of shrub growth into prairie grasslands.; Encroachment of shrubs and forests into grasslands results not only in direct loss of habitat but also reduces the quality of the remaining habitat. Long-billed Curlews are purported to avoid nesting in grassed areas that are close to surrounding shrublands or forests
Pollution	2026-03-19	Low	Large	Slight	High	High levels of pesticide use in North America have been linked to declines in grassland birds and millions of bird mortalities either through acute impacts of direct toxicity, or indirect impacts from reduced food availability. While there is limited understanding of the effects of

						chemical applicants on curlew, experts on team agree there is an effect and needs to be studied.
Climate Change & Severe Weather	2024-12-09	High	Pervasive	Serious	Moderate	Audubon's Species by Degree project predicts significant loss of habitat for the species at scenerios with more than 2 degrees of warming.
Threat Tally: 0 - Very High, 2 - High, 1 - Medium, 3 - 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: $(4.64 \times 70\%)$ + Threats: $(0.00 \times 30\%)$ + Trends: $(0.00) = 3.25$

Calculated Rank: S3

Accepted Rank	S3B
Date Approved	2004-07-01
Approval Authority	Montana Species of Concern Committee
Rank Justification	Species is common to uncommon across grassland ecosystems state-wide. Trends appear to be stable to increasing. Species faces high threats from illegal shooting and habitat loss due to conversion of native habitats to agriculture and climate change.

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=ABNNF07070>

Predicted Suitable Habitat Model:

<https://mtnhp.mt.gov/resources/models/?elcode=ABNNF07070>

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

Summary of Information Needs

No additional data are needed at this time, but given the high level of threats for this species, monitoring 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	Immediacy	Comments
Residential & Commercial Development - 1.1 - Housing & Urban Areas	2026-03-19	Dan Bachen	SWAP Assessment	Small	Slight	High	Development decreasing habitat
Agriculture & Aquaculture - 2.1 - Annual & Perennial Non-Timber Crops	2024-12-09	Dan Bachen	MTNHP Data and WWF Plowprint tool	Large	Serious	High	Approximately half of the species breeding range overlaps with areas at risk of conversion from native habitats to agriculture. 79% of suitable habitat is on private lands without protection.
Agriculture & Aquaculture - 2.3 - Livestock Farming & Ranching	2026-03-19	Dan Bachen	SWAP Assessment	Large	Moderate	High	Incompatible timing, intensity, duration of grazing, Altered native vegetation, Reduced grass and forb diversity
Biological Resource Use - 5.1 - Hunting & Collecting Terrestrial Animals	2024-12-09	Dan Bachen	Katzner et al. 2020	Large	Moderate	High	Species appears to be commonly shot (illegally). In Idaho 33% of telemetered birds were shot (Katzner et al. 2020). Impacts of shooting are unknown in Montana.
Natural System Modifications - 7.1 - Fire & Fire Suppression	2026-03-19	Dan Bachen	SWAP Assessment	Large	Slight	High	Fire suppression can result in encroachment of shrub growth into prairie grasslands.; Encroachment of shrubs and forests into grasslands results not only in direct loss of habitat but also reduces the quality of the remaining habitat. Long-billed Curlews are purported to avoid nesting in grassed areas that are close to surrounding shrublands or forests
Pollution - 9.3 - Agricultural & Forestry Effluents	2026-03-19	Dan Bachen	SWAP Assessment	Large	Slight	High	High levels of pesticide use in North America have been linked to declines in grassland birds and millions of bird mortalities either through acute impacts of direct toxicity, or indirect impacts from reduced food availability. While there is limited understanding of the effects of chemical applicants on curlew, experts on team agree there is an effect and needs to be studied.
Climate Change & Severe Weather - 11.1 - Habitat Shifting & Alteration	2024-12-09	Dan Bachen	Audubon Species by Degree project	Pervasive	Serious	Moderate	Audubon's Species by Degree project predicts significant loss of habitat for the species at scenerios with more than 2 degrees of warming.