

Sedge Wren (*Cistothorus stellaris*) Conservation Status Rank Summary

April 6, 2026

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 Factor Rating	Score	Data Source	Comments
Rarity					
Range Extent	2024-12-03	41975.7 km ² F = 20,000-200,000 km ²	3.930	MTNHP Range Maps	None
Area of Occupancy	2024-12-03	405 4km ² cells F = 126-500 4-km ² grid cells	3.440	MTNHP Modeling	None
Number of Occurrences	2024-12-03	36 C = 21 - 80	2.750	MTNHP Databases	None
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	2018-05-03	Very narrow A = Very narrow; specialist or community with key requirements scarce	-	MTNHP Species Rank Data Table	Factor not used in ranking. Uses wet areas with a narrow tolerance for vegetation density and water levels Methodology: NS (2003) Original Score: A
Rarity is calculated by averaging weighted factor scores: $((3.93 \times 1) + (3.44 \times 2) + (2.75 \times 1)) / 4 = 3.39$					
Trends					
Short-term Trend	2018-05-03	* U = Unknown	-	MTNHP Species Rank Data Table	Factor not used in ranking. Range wide this species appears to be stable based on Breeding Bird Survey (BBS) data. BBS methodologies are not robust for this species within the state, so trend for this species in Montana is unknown. Surrounding states and provinces have trends that a Methodology: NS (2003) Original Score: U
Long-term Trend	2018-05-03	* G = Relatively Stable (=10% change)	0.000	MTNHP Species Rank Data Table	Based on BBS data from surrounding states and range wide, trend since the 1960s appears stable to increasing. The species relies on specific vegetation types and structures in wetlands that may be impacted by agricultural practices or land management regimes. It is unlikely that >25% of this habitat has been lost in NE

					Montana since European settlement. Methodology: NS (2003) Original Score: E
<p>Trends score is calculated by summing weighted short and long-term trend scores: (0.00 × 1) = 0.00</p>					

*Values may be absent if not precisely estimated; factors may still be assessed for rank if a Factor Rating can be assigned.

Threats

Rank Factor	Date Assessed	Value Factor Rating	Score	Data Source	Comments
Threats					
Overall Threat Impact		High B = High	1.830		Destruction or alteration of habitat, relatively low overall but possible in the next few decades
Intrinsic Vulnerability	2009-01-29	Not intrinsically vulnerable C = Not intrinsically vulnerable	-	MTNHP Species Rank Data Table	Factor not used in ranking. Methodology: NS (2003) Original Score: C
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: (1.83) = 1.83					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Agriculture & Aquaculture	None	Medium	Large	Moderate	High	Multiple Level 2 threats - see Additional Threat Details below.
Natural System Modifications	2026-04-06	Low	Restricted	Moderate	High	Loss and draining of wetlands and wet-grass habitats and the subsequent conversion to agriculture land brings local population declines (Herkert et al., 2021)
Climate Change & Severe Weather	2024-12-03	High	Pervasive	Serious	Moderate	Audubon's Survival by Degrees project predicts significant loss of breeding habitat across various warming scenarios (1.5-3C).
Threat Tally: 0 - Very High, 1 - High, 1 - Medium, 1 - Low Overall Threat Impact* = 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: $(3.39 \times 70\%)$ + Threats: $(1.83 \times 30\%)$ + Trends: (0.00) = 2.92

Calculated Rank: S3

Author(s)	Dan Bachen
Date Information Last Updated	2026-04-06
Accepted Rank	S3B
Rank Approved By	Montana Species of Concern Committee
Date Current Rank Initially Approved	2001-08-01
Rank Justification	Species is rare in Montana and found only within wetlands in the northeastern corner of the state. Populations are currently unmonitored and it faces the threat of habitat loss due to 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=ABPBG10030>

Predicted Suitable Habitat Model:

<https://mtnhp.mt.gov/resources/models/?elcode=ABPBG10030>

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

Species lacks short-term trend data, but other information to assess status are available.

Summary of Information Needs

Monitoring of existing populations should be conducted to assess short-term trend and threat impacts.

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
Agriculture & Aquaculture - 2.1 - Annual & Perennial Non-Timber Crops	2026-04-06	Dan Bachen	SWAP Assessment	Small	Slight	High	Intensification of hay agriculture and mowing operations (Herkert et al., 2021).
Agriculture & Aquaculture - 2.3 - Livestock Farming & Ranching	2026-04-06	Dan Bachen	SWAP Assessment	Large	Moderate	High	Intensified grazing and overgrazing negatively effects sedge wren's ability to find appropriate habitat and decreasing nesting area density (MNHP, 2025).
Natural System Modifications - 7.2 - Dams & Water Management/Use	2026-04-06	Dan Bachen	SWAP Assessment	Restricted	Moderate	High	Loss and draining of wetlands and wet-grass habitats and the subsequent conversion to agriculture land brings local population declines (Herkert et al., 2021)
Pollution - 9.3 - Agricultural & Forestry Effluents	2026-04-06	Dan Bachen	SWAP Assessment	Large	Unknown	High	Herbicide and pesticides negatively impact insects and insect food in upland habitats (MNHP, 2025).
Climate Change & Severe Weather - 11	2024-12-03	Dan Bachen	Audubon's Survival by Degrees Project	Pervasive	Serious	Moderate	Audubon's Survival by Degrees project predicts significant loss of breeding habitat across various warming scenarios (1.5-3C).