

Great Plains Solonchic Grassland (G1215)

Conservation Status Rank Summary

July 10, 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	2025-07-10		[3.930, 4.710]	GIS Analysis	Exact distribution in MT is uncertain. Upper range limit is approx 250,000 sq km., which corresponds to the Great Plains Region though this NVC Group is likely more limited in distribution.
Area of Occupancy	2025-07-10		[3.440, 4.130]	Expert Opinion	This Group is recently defined and is currently un-mapped. Potential area of occupancy is estimated.
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	2025-07-10		[4.400, 5.500]	Expert Opinion	Rank reflects uncertainty in the amount of habitat still in good condition.
Environmental Specificity	2025-07-10	Narrow to moderate	-	Expert Opinion	Factor not used in ranking.
Rarity is calculated by averaging weighted factor scores: $(([3.93, 4.71] \times 1) + ([3.44, 4.13] \times 2) + ([4.40, 5.50] \times 2)) / 5 = [3.92, 4.79]$					
Trends					
Short-term Trend	2025-07-10		[-0.070, 0.000]	Expert Opinion	Reflects uncertainty in the short-term trend but also that some decrease in extent and/or condition as a result of grazing practices and invasion by non-native species has occurred.
Long-term Trend	2025-07-10		[-0.140, -0.070]	Expert Opinion	Reflects a decrease in extent and condition as a result of conversion of these sites to agricultural uses, grazing practices, and invasion by non-native species.
Trends score is calculated by summing weighted short and long-term trend scores: $(([-0.07, 0.00] \times 2) + ([-0.14, -0.07] \times 1)) = [-0.28, -0.07]$					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		High - medium	[1.830, 3.670]		None
Intrinsic Vulnerability	2025-07-10	Moderately to not intrin. vuln.	-	Expert Opinion	Factor not used in ranking.
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: ([1.83, 3.67]) = [1.83, 3.67]					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Agriculture & Aquaculture	2025-07-10	Medium - Low	Pervasive-Large	Moderate-Slight	High	Livestock grazing.
Energy Production & Mining	2025-07-10	Low	Small	Moderate-Slight	High-Low	None
Invasive & Other Problematic Species, Genes & Diseases	2025-07-10	High - Medium	Large	Serious-Moderate	High	Invasion by non-native species, including non-native grasses.
Threat Tally: 0 - Very High, [0,1] - High, 1 - Medium, [1,2] - Low Overall Threat Impact* = High - 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: $([3.92, 4.79] \times 70\%) + \text{Threats: } ([1.83, 3.67] \times 30\%) + \text{Trends: } ([-0.28, -0.07]) = [3.01, 4.39]$

Calculated Rank: S3S4

Accepted Rank	S3S4
Date Approved	2025-07-15
Approval Authority	Scott Mincemoyer
Rank Justification	These saline grasslands of the Great Plains are poorly documented in terms of their distribution and extent in the state as well as their overall condition. They have likely declined in condition from livestock grazing and from non-native species tolerant of saline conditions.

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/displayEG_Detail.aspx?eg=EVGLG1215

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 - 2.3 - Livestock Farming & Ranching	2025-07-10	sm	Expert Opinion	Pervasive-Large	Moderate-Slight	High	Livestock grazing.
Energy Production & Mining - 3.1 - Oil & Gas Drilling	2025-07-10	sm	Expert Opinion	Small	Moderate-Slight	High-Low	None
Invasive & Other Problematic Species, Genes & Diseases - 8.1 - Invasive Non-Native/Alien Species/Diseases	2025-07-10	sm	Expert Opinion	Large	Serious-Moderate	High	Invasion by non-native species, including non-native grasses.