

Geum canadense (White Avens)

Conservation Status Rank Summary

Date Published: June 25, 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	2026-06-25	9300.0 km ² E = 5,000-20,000 km ²	3.140	GIS Analysis	The currently documented observations support a range of about 9,300 sq. km. This is significantly less than the 25,128 sq. km. that the current MTNHP range encompasses. However, the range is likely to increase with additional surveys and documentation of additional locations.
Area of Occupancy	2026-06-25	14 4km ² cells D = 6-25 4-km ² grid cells	2.060	MTNHP Databases	The known observations occupy 14 grid cells.
Number of Occurrences	2026-06-25	15 B = 6 - 20	1.380	MTNHP Databases	The known observations group into 15 occurrences based on a 1km separation distance. Additional occurrences are likely to be found with increased survey efforts.
Population Size	2026-06-25	* U = Unknown	-	MTNHP Databases	Factor not used in ranking. Population size is unknown as most observations lack counts or estimates of population size.
# of Occurrences in Good Condition	2026-06-25	* U = Unknown	-		Factor not used in ranking.
% of Area Occupied in Good Condition			-		Factor not used in ranking.
Environmental Specificity	2025-03-01	Narrow B = Narrow; specialist or community with key requirements common	-	Expert Opinion	Factor not used in ranking. Assessed by Scott Mincemoyer
Rarity is calculated by averaging weighted factor scores: $((3.14 \times 1) + (2.06 \times 2) + (1.38 \times 1)) / 4 = 2.16$					
Trends					
Short-term Trend	2026-06-25	* FG = Decline of 30% to relatively stable	[-0.070, 0.000]	Expert Opinion	Actual short-term trends are unknown. However, the species has likely been relatively stable or experienced only minor declines in the recent past.
Long-term Trend	2026-06-25	* U = Unknown	-		Factor not used in ranking. Long-term trends are unknown. Declines in populations may have occurred over the long-term as a result of declines in habitat quality from livestock use and competition from non-native species.

Trends score is calculated by summing weighted short and long-term trend scores:
 $([-0.07, 0.00] \times 2) = [-0.14, 0.00]$

*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		Medium - Low CD = Medium - Low	[3.670, 5.500]		No specific threats have been noted for any of the observations. However, non-native species, particularly perennial rhizomatous grasses and livestock grazing occur in or adjacent to some sites and they may negatively impact at least some of the occurrences.
Intrinsic Vulnerability	2025-03-01	Moderately vulnerable to not intrinsically vulnerable BC = Moderately vulnerable to not intrinsically vulnerable	-	Expert Opinion	Factor not used in ranking. Assessed by Scott Mincemoyer
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: ([3.67, 5.50]) = [3.67, 5.50]					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
No individual threats data used in this rank						

Conservation Status Rank Calculation

Raw score

Rarity: $(2.16 \times 70\%)$ + Threats: $([3.67, 5.50] \times 30\%)$ + Trends: $([-0.14, 0.00])$ = $[2.47, 3.16]$

Calculated Rank: S3

Accepted Rank	S3
Author(s)	Scott Mincemoyer
Rank Approved By	Montana Natural Heritage Program Staff
State Rank Reason	DRAFT: Requesting feedback on the 2026 revised rank, factors, and State Rank Reason outlined below and in the Conservation Status Rank Report. <i>Geum canadense</i> is a species found primarily in eastern and central North America that reaches its western limit in southeastern Montana. It has been documented from less than 20 locations in the state; all of these locations are on National Forest lands. Population levels are unknown though most occurrences appear likely to be relatively small. Population trends are also unknown though the species has likely been relatively stable or experienced only minor declines in the recent past. Threats to the species are not well-documented. However, livestock grazing and various non-native species are known to occur in or in the vicinity of the species' habitat though the extent or magnitude of impacts from either of these is unknown. Surveys are needed at the known locations to document population size and extent, habitat quality and potential threats. Additional surveys are needed in areas of potentially suitable habitat to look for additional populations. The species may be overlooked and under-reported.

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=PDROS0S030>

Predicted Suitable Habitat Model:

<https://mtnhp.mt.gov/resources/models/?elcode=PDROS0S030>

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

Summary of Information Needs

Surveys are needed at the known locations to document population size and extent, habitat quality and potential threats. Additional surveys are needed in areas of potentially suitable habitat to look for additional populations. The species may be overlooked and under-reported.

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	2026-06-25	S. Mincemoyer	Expert Opinion	Unknown	Unknown	High-Low	Cattle grazing likely occurs in or adjacent to many of the known locations but actual impacts have not been reported or documented. Decreases in habitat quality are possible with moderate to heavy grazing pressure.
Transportation & Service Corridors - 4.1 - Roads & Railroads	2026-06-25	S. Mincemoyer	Expert Opinion	Restricted	Unknown	Unknown	A few occurrences are adjacent to or near roads, which increases the likelihood of negative impacts from various human activities and from the increased potential for spread of invasive species.
Invasive & Other Problematic Species, Genes & Diseases - 8.1 - Invasive Non-Native/Alien Species/Diseases	2026-06-25	S. Mincemoyer	Expert Opinion	Unknown	Unknown	Moderate-Low	Non-native species, particularly rhizomatous perennial grasses may negatively impact the habitats where <i>Geum canadense</i> occurs. However, it is unclear if and to what extent non-native species are currently threatening any of the sites.