Senecio eremophilus (Desert Groundsel)
Conservation Status Rank Summary

Date Published: August 14, 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	2025-12-23	[60000.0,70000.0] km F = 20,000-200,000 km²	3.930	MTNHP Range Maps/GIS Analysis	The 2026 MTNHP range map likely over-estimates the species actual range of 60,000-70,000, which is based on verified observations.
Area of Occupancy	2025-12-23	6 | 4km² cells D = 6-25 4-km² grid cells	2.060	CPNWH Data, iNaturalist	Of the approximate 96,004 2km x 2km grid cells that cover Montana, 6 cells contain observations of the species.
Number of Occurrences	2025-12-23	6 B = 6 - 20	1.380	CPNWH Data, iNaturalist	6 recent, verifiable observations: 2 each from the Little Rockies, Bears Paw Mtns and the Big Snowy Mtns. 1 potential historical occurrence from the "Yellowstone Valley" Other specimens in the CPNWH from other localities are mis-identified.
Population Size	2025-12-23	* U = Unknown	-	Expert Opinion	**Factor not used in ranking.** Unknown though apparently small based on the few collections.
# of Occurrences in Good Condition			-		**Factor not used in ranking.**
% of Area Occupied in Good Condition			-		**Factor not used in ranking.**
Environmental Specificity	2025-03-01	Moderate C = Moderate; generalist or community with some key requirements scarce	-	Expert Opinion	**Factor not used in ranking.** Assessed by Scott Mincemoyer
Rarity is calculated by averaging weighted factor scores: **((3.93 × 1) + (2.06 × 2) + (1.38 × 1)) / 4 = 2.36**					
Trends					
Short-term Trend	2025-12-23	* U = Unknown	-	Expert Opinion	**Factor not used in ranking.** Unknown though habitat is largely intact and the species appears to tolerate or like minor disturbances. It appears that an increase in trend is as likely as a decrease.
Long-term Trend	2025-12-23	* U = Unknown	-	Expert Opinion	**Factor not used in ranking.** Unknown though habitat is largely intact and the species appears to tolerate or like minor disturbances.

No trend data used in this rank

*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		Low / D = Low	5.500		No significant or potential threats identified.
Intrinsic Vulnerability	2025-03-01	Not intrinsically vulnerable / C = 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: **(5.50) = 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: (2.36 × 70%) + Threats: (5.50 × 30%) + Trends: (0.00) = 3.30

Calculated Rank: S3

Accepted Rank	S3?
Author(s)	Scott Mincemoyer
Rank Approved By	Andrea Pipp
State Rank Reason	*Senecio eremophilus* is known from 6 verifiable collections and observations within the Little Rocky, Bears Paw, and Big Snowy Mountain Ranges. A 7th potential and historical collection from the "Yellowstone Valley" also exists. Collections and unverifiable reports from other localities are likely mis-identified. Plants typically grow in open, rocky slopes and mesic, open sites, which are largely intact in Montana. Population trends are unknown. Threats to these populations have not been identified, though the species appears to tolerate and potentially thrive with minor disturbance. Surveys and better precise mapping that brings forth current information on distributions, population counts and viability, habitat conditions, and threats are greatly needed.

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=PDAST8H160

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=PDAST8H160

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 and better precise mapping that brings forth current information on distributions, population counts and viability, habitat conditions, and threats are greatly needed.

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
No threats data available for this species							