Evening Grosbeak (*Coccothraustes vespertinus*)
Conservation Status Rank Summary

January 9, 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	2024-01-09	Y: 208150.7 km²	4.710	MTNHP Range Maps	None
Area of Occupancy			-		**Factor not used in ranking.**
Number of Occurrences	2025-01-09	3742	5.500	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	2011-12-22	Moderate	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Moderate Generalist. Generalist in conifer and mixed conifer forests. | Methodology: NS (2003) | Original Score: C
Rarity is calculated by averaging weighted factor scores: **((4.71 × 1) + (5.50 × 1)) / 2 = 5.11**					
Trends					
Short-term Trend	2023-12-20	-27.6%	-0.070	BBS	High credibility BBS scores with mean expanded to 10yr interval"-Point Estimate"
Long-term Trend	2025-01-09		-0.500	Partners in Flight	Across North America the species is estimated to have declined by 92%. Declines may have been less in Montana, but are unknown
Trends score is calculated by summing weighted short and long-term trend scores: **((-0.07 × 2) + (-0.50 × 1)) = -0.64**					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		High	1.830		No operational threats identified.
Intrinsic Vulnerability	2011-12-22	Not intrinsically vulnerable	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Not Intrinsically Vulnerable. Species matures quickly, reproduces frequently, and/or has a high fecundity such that populations recover quickly (5 years or 2 generations) from decreases in abundance. Species has good dispersal capabilities such that extirpated populations generally become reestablished through natural recolonization. | 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
Biological Resource Use	2025-01-09	Medium	Restricted	Serious	High	Reduction of mature timber in logged areas likely impacts this species
Natural System Modifications	2025-01-09	Medium	Restricted	Serious	High	Fire may cause significant declines in local abundance.
Climate Change & Severe Weather	2025-01-09	Medium	Restricted	Serious	Moderate	Audubon's Survival by Degrees project predicts moderate habitat loss for the species under warming of 1.5C
Threat Tally: 0 - Very High, 0 - High, 3 - Medium, 0 - 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: (5.11 × 70%) + Threats: (1.83 × 30%) + Trends: (-0.64) = 3.48

Calculated Rank: S3

Accepted Rank	S3
Date Approved	2012-04-17
Approval Authority	Montana Species of Concern Committee
Rank Justification	Species is widespread and can be common during eruptive periods. It has suffered severe declines that appear to be ongoing. Threats are poorly characterized but likely include loss of mature forest through timber harvest, fire, and climate change. Species may be impacted by insecticide application which reduces food and vehicle collisions along roads.

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=ABPBY09020

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=ABPBY09020

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

Information to assess status is generally available, but threats data for Montana are of poor quality and several threats that are likely contributing to ongoing declines cannot be scored due to lack of information.

Summary of Information Needs

Research to determine threats impacting the species and scope and impact of known threats.

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
Transportation & Service Corridors - 4.1 - Roads & Railroads	2025-01-09	Dan Bachen	IUCN Redlist 2025	Restricted	Unknown	High	Vehicle collisions on roads. Severity is unknown but it has been sugested as contributing to the decline of the species
Biological Resource Use - 5.3 - Logging & Wood Harvesting	2025-01-09	Dan Bachen	IUCN Redlist 2025	Restricted	Serious	High	Reduction of mature timber in logged areas likely impacts this species
Natural System Modifications - 7.1 - Fire & Fire Suppression	2025-01-09	Dan Bachen	Gyug 2013; Scott and Korb 2024	Restricted	Serious	High	Fire may cause significant declines in local abundance.
Pollution - 9.7 - Pesticide/Herbicide/Insecticide Application	2025-01-09	Dan Bachen	IUCN Redlist 2025	Unknown	Serious-Slight	Unknown	Aerial Spraying of pesticides on forests to combat spruce budworm has been sugested as a factor in declines for Grosbeaks. It is unclear if this is occuring and if so to what extent it impacts this species in Montana.
Climate Change & Severe Weather - 11.1 - Habitat Shifting & Alteration	2025-01-09	Dan Bachen	Audubon Survival by Degrees Project	Restricted	Serious	Moderate	Audubon's Survival by Degrees project predicts moderate habitat loss for the species under warming of 1.5C