Lewis's Woodpecker (*Melanerpes lewis*)
Conservation Status Rank Summary

January 31, 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	2024-10-22	S: 229428.7 km²	4.710	MTNHP Range Maps	None
Area of Occupancy			-		**Factor not used in ranking.**
Number of Occurrences	2025-01-22	*	1.380		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	2009-01-29	Narrow	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Species is dependent on large nest trees with relatively open understory - late successional valley bottom forest. | Methodology: NS (2003) | Original Score: B
Rarity is calculated by averaging weighted factor scores: **((4.71 × 1) + (1.38 × 1)) / 2 = 3.05**					
Trends					
Short-term Trend	2023-12-20	[9.4, 82.2%]	[0.000, 0.140]	IMBCR	IMBCR trend in population estimates for Montana. "- 95% CI"
Long-term Trend	2009-01-29	*	-0.140	MTNHP Species Rank Data Table	Large Ponderosa Pine and large trees in riparian in general have substantially declined (>25%) since European arrival. | Methodology: NS (2003) | Original Score: D
Trends score is calculated by summing weighted short and long-term trend scores: **(([0.00, 0.14] × 2) + (-0.14 × 1)) = [-0.14, 0.14]**					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		High	1.830		Habitat loss, timber harvest, altered hydrology are all threats. Conservation recommendations include: (1) maintaining snag trees; (2) not logging old growth ponderosa pine or burned conifer forest; (3) managing for open parkland stands of ponderosa pine
Intrinsic Vulnerability	2009-01-29	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
Residential & Commercial Development	2024-10-22	Low	Restricted	Slight	High	Urban expansion causing habitat loss
Agriculture & Aquaculture	2026-03-26	Low	Restricted	Moderate	High	Removal of injured, dead, and dying large-diameter trees on private properties to maintain open rangelands removes important nesting and foraging trees. Overgrazing of riparian areas can limit establishment and growth of cottonwood trees used for nesting and foraging.
Biological Resource Use	2024-10-22	Low	Restricted	Moderate	High	Loss of mature forest due to loggin and thinning
Natural System Modifications	None	Medium	Large	Moderate	High	Multiple Level 2 threats - see Additional Threat Details below.
Invasive & Other Problematic Species, Genes & Diseases	2024-10-22	Low	Restricted	Moderate	High	Compotition for nest cavities with European Starling
Climate Change & Severe Weather	2026-03-26	Low	Restricted	Moderate	Moderate	Widespread stream incision and over-widening results in shifts to upland vegetation communities in perched floodplains that diminish important processes for creating and maintaining streamside woody vegetation, out-compete woody riparian vegetation that can get established, and/or allow for disturbances to function outside of

						their normal range of variation in the floodplain (e.g., wildfires).
Threat Tally: 0 - Very High, 0 - High, 1 - Medium, 5 - 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: (3.05 × 70%) + Threats: (1.83 × 30%) + Trends: ([-0.14, 0.14]) = [2.54, 2.82]

Calculated Rank: S3

Accepted Rank	S2B
Date Approved	Date Unknown
Approval Authority	Legacy Assessment: MTNHP Staff
Rank Justification	Species is found in forested areas across western and portions of central and southeast Montana. Recent trend appears stable to increasing. It faces threats from habitat loss.

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=ABNYF04010

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=ABNYF04010

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

None

Summary of Information Needs

None

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
Residential & Commercial Development - 1.1 - Housing & Urban Areas	2024-10-22	Dan Bachen	Expert Opinion	Restricted	Slight	High	Urban expansion causing habitat loss
Agriculture & Aquaculture - 2.3 - Livestock Farming & Ranching	2026-03-26	Dan Bachen	SWAP Assessment	Restricted	Moderate	High	Removal of injured, dead, and dying large-diameter trees on private properties to maintain open rangelands removes important nesting and foraging trees. Overgrazing of riparian areas can limit establishment and growth of cottonwood trees used for nesting and foraging.
Biological Resource Use - 5.3 - Logging & Wood Harvesting	2024-10-22	Dan Bachen	Expert Opinion	Restricted	Moderate	High	Loss of mature forest due to loggin and thinning
Natural System Modifications - 7.1 - Fire & Fire Suppression	2024-10-22	Dan Bachen	Expert Opinion	Large	Moderate	High	Salvage logging within burned areas and reduction in post-fire snags
Natural System Modifications - 7.2 - Dams & Water Management/Use	2026-03-26	Dan Bachen	SWAP Assessment	Restricted	Moderate	High	Lack of flood-related disturbance regimes in dammed large river systems reduces floodplain processes critical for establishment of important deciduous tree species for pileated woodpeckers (e.g., cottonwoods).
Natural System Modifications - 7.3 - Other Ecosystem Modifications	2026-03-26	Dan Bachen	SWAP Assessment	Restricted	Moderate	High	Lack of floodplain connection across large swaths of streams and rivers results in drying out of floodplains which may allow fires to burn at high intensity in valley bottoms and through riparian areas. Causes of stream degradation include historical logging practices that have resulted in fewer older trees available to fall into stream channels, purposeful stream channel manipulation (e.g., ditching, re-routing), and loss of beavers from areas of their historical range.
Invasive & Other Problematic Species, Genes & Diseases - 8.1 - Invasive Non-Native/Alien Species/Diseases	2024-10-22	Dan Bachen	Abele et al. 2004	Restricted	Moderate	High	Compotition for nest cavities with European Starling
Pollution - 9.3 - Agricultural & Forestry Effluents	2026-03-26	Dan Bachen	SWAP Assessment	Large	Unknown	High	Use of pesticides and herbicides reduces prey base (i.e., invertebrates).
Climate Change & Severe Weather - 11	2026-03-26	Dan Bachen	SWAP Assessment	Restricted	Moderate	Moderate	Widespread stream incision and over-widening results in shifts to upland vegetation communities in perched floodplains that diminish important processes for creating and maintaining streamside woody vegetation, out-compete woody riparian vegetation that can get established, and/or allow for disturbances to function outside of

							their normal range of variation in the floodplain (e.g., wildfires).