Northern Pike (*Esox lucius*) Conservation Status Rank Summary

March 6, 2024

For details on assessment and ranking methodology, see: <u>Conservation Status Assessment Definitions, Process,</u> <u>Rank Factors, and Calculation of State Ranks for Montana Species</u>

Rank Factor	Date Assessed	Value	Score	Data Source	Comments			
Rarity								
Range Extent	2024-01-10	Y: 3050.2 km²	None	MTNHP Range Maps	None			
Area of Occupancy			-		Factor not used in ranking.			
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			-		Factor not used in ranking.			
Environmental Specificity			-		Factor not used in ranking.			
Rarity is calculated by averaging weighted factor scores: None								
Trends								
Short-term Trend			-		Factor not used in ranking.			
Long-term Trend			-		Factor not used in ranking.			
No trend data used in ranking this species None								

Rarity and Trends

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments	
Threats						
Overall Threat Impact			-		Factor not used in ranking.	
Intrinsic Vulnerability	2024-01-10	Not intrinsically vulnerable	None		None	
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: None						

Individual Threats Data

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

Conservation Status Rank Calculation

Raw score

Not enough rank factors to rank

Calculated Rank: SU

Accepted Rank	SU					
Date Approved	2024-09-30					
Approval Authority	Montana Species of Concern Committee					
Rank JustificationSpecies is native in a very restricted area of northwest Montana and has not b observed within its native range						

Supplementary Information

Montana Natural Heritage Program. 2021. Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species. 18 p. <u>https://mtnhp.mt.gov/docs/Montana_State_Rank_Criteria_20211201.pdf</u>

Montana Field Guide Species Account: https://fieldguide.mt.gov/speciesDetail.aspx?elcode=AFCHD01020

Predicted Suitable Habitat Model:

https://mtnhp.mt.gov/resources/models/?elcode=AFCHD01020

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	Assessment	Malara	Criteria				
Factor	Category	Value					
General	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)				
Status	Status Quality	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)				
	Danas Qualita	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)				
	Range Quality	Marginal	Range polygon defined, but may include or exclude notable areas where the species may or may not occur on the landscape				
Rarity		Poor	Range polygon not defined				
		Adequate	Species-habitat relationship is well-defined (e.g. relevant literature or robust habitat model available)				
	Habitat Quality	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				
		Adequate	Threat Impact is a single value (including "Unthreatened")				
Thursday	Thurst Quality	Marginal	Threat Impact assessed at more than one value (e.g. "High - Medium")				
Threats	Threat Quality	Poor	Threat Impact is Unknown but Intrinsic Vulnerability is assessed				
		Unknown	Threat Impact is Unknown and Intrinsic Vulnerability is not assessed				
		Current	Short-term Trend assessment date less than 10 years old				
	Recency	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				
Trends	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

No data are available to assess status

Summary of Information Needs

Monitoring of native populations to confirm presence, trend and threats is necessary

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 Threat Identified - 0	2024-01-10	None	None	None	None	None	None
No threats data available for this species							