

Natural Heritage Ranking Form - Oregon State Rank

Oregon Ranking Form Pacific brook lamprey (*Lampetra pacifica*)

Oregon Biodiversity Information Center

SPECIES ASSESSED

Scientific Name	<i>Lampetra pacifica</i>	ELCODE	AFBAA02170
Common Name	Pacific brook lamprey	Element ID	399193

Reid, S.B., D.A. Boguski, D.H. Goodman and M.F. Docker. 2011. Validity of *Lampetra pacifica* (Petromyzontiformes: Petromyzontidae), a brook lamprey described from the lower Columbia River basin. *Zootaxa* 3091: 42-50.

CONSERVATION STATUS RANK

Assigned Rank	S2?		
Rank Assignment Author	E. Gaines	Rank Review Date	
Rank Factors Author	E Gaines	Rank Factors Date	01/17/2023
Calculated Rank	S2?	Rank Change Date	01/17/2023
Rank Methodology Used	Rank calculation - Biotics v2		

Rank Adjustment Reasons

Added '?' because of paucity of information available for this species.

RANGE/DISTRIBUTION

Range Extent

Rating	5000-200,000 square km (about 2000-80,000 square miles)		
Estimate	40,000	Unit Used for Estimate	Square Kilometers
Comments	As currently understood, this species is limited to the Columbia River Basin in Oregon (about 12,000 sq km; Boguski et al. 2012). However, ODFW has unverified collection records from 55 sites on the north coast and Willamette Basin (about 40,000 sq km; OD		

Area of Occupancy

Grid Cell Size	4 km ² Grid Cells		
Rating (as Number of 4 km² Grid Cells)	E = 26-125		
Comments	Based on ODFW records (ODFW 2019).		

ABUNDANCE AND CONDITION

Rating	21 - 80		
Estimate	25		
Comments	ODFW reports 50 collection locations which would distill to about 25 element occurrences.		

Rating	Unknown		
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Number of Occurrences with Good Viability/Ecological Integrity

Rating	Unknown		
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THREATS

<u>Threat Category Code</u>	<u>Threat Category</u>	<u>Calculated Impact</u>	<u>Scope</u>	<u>Severity</u>	<u>Timing</u>	<u>Comments</u>
2	Agriculture & aquaculture	B = High	Large: Affects most (31-70%) of the total population or occurrences or extent	Serious: Likely to seriously degrade/reduce affected occurrences or habitat, or reduce population 31-70%		Ag practices leading to channelization, scouring, loss of side channels.
5	Biological resource use	BC = High - medium	Large: Affects most (31-70%) of the total population or occurrences or extent	Serious - moderate		
5.3	Logging & wood harvesting	BC = High - medium	Large: Affects most (31-70%) of the total population or occurrences or extent	Serious - moderate		timber harvest leading to stream degradation
5.4	Fishing & harvesting aquatic resources	D = Low	Small: Affects a small proportion (1-10%) of the total population or occurrences or extent	Slight: Likely to only slightly degrade/reduce affected occurrences or habitat, or reduce population 1-10%		Harvest is minimal
7	Natural system modifications	BC = High - medium	Large - restricted	Serious: Likely to seriously degrade/reduce affected occurrences or habitat, or reduce population 31-70%	High: Continuing	
7.2	Dams & water management/use	BC = High - medium	Large - restricted	Serious: Likely to seriously degrade/reduce affected occurrences or habitat, or reduce population 31-70%	High: Continuing	barriers to mainstem and tributary passage
7.3	Other ecosystem modifications	BC = High - medium	Large - restricted	Serious: Likely to seriously degrade/reduce affected occurrences or habitat, or reduce population 31-70%		stream & floodplain degradation
9	Pollution	BC = High - medium	Large: Affects most (31-70%) of the total population or occurrences or extent	Serious - moderate		reduced water quality

11	Climate change & severe weather	C = Medium	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Moderate: Likely to moderately degrade/reduce occurrences or habitat, or reduce population 11-30%	High: Continuing	Climate change
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Calculated Overall Threat Impact A = Very high

Assigned Overall Threat Impact A = Very high

Overall Threat Impact Comments

Information on threats is largely unavailable. Assumed threats include increased water temperature, sedimentation, low water levels, altered hydrology, barriers to connectivity, and native or non-native predators (ODFW 2019).

TRENDS

Short-Term Trend

Rating U = Unknown

Rating U = Unknown

RANKING REFERENCES

<u>Short Citation</u>	<u>Author</u>	<u>Year</u>	<u>Full Citation</u>
ODFW		2019	Oregon Department of Fish and Wildlife (ODFW). 2019. Coastal, Columbia, and Snake Conservation Plan for Lampreys in Oregon. Final Draft.

RESOURCES

Oregon Biodiversity Information Center, Institute for Natural Resources
Portland State University, Mail Stop: INR, PO Box 751, Portland, OR 97207-0751 Phone: 503-725-9950

Additional ORBIC species ranking forms posted at
<https://inr.oregonstate.edu/orbic/rare-species/ranking-documentation>

Information on Natural Heritage ranking methodology is available at
<http://www.natureserve.org/biodiversity-science/publications/natureserve-conservation-status-assessments-methodology-assigning>

The Conservation Rank Calculator is developed and maintained by NatureServe and is available from
<http://www.natureserve.org/conservation-tools/conservation-rank-calculator>

ASSESSMENT CITATION

Oregon Biodiversity Information Center. 2023. Oregon state rank assessment for Pacific brook lamprey (*Lampetra pacifica*). Institute for Natural Resources, Portland State University, Portland, OR.