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# Oregon State Rank Assessment for Pacific Brook Lamprey (*Lampetra pacifica*)

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# 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

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

### Rank Adjustment Reasons

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

## RANGE/DISTRIBUTION

### Range Extent

<b>Rating</b>	5000-200,000 square km (about 2000-80,000 square miles)		
<b>Estimate</b>	40,000	<b>Unit Used for Estimate</b>	Square Kilometers
<b>Comments</b>	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

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

## ABUNDANCE AND CONDITION

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

<b>Rating</b>	Unknown
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### Number of Occurrences with Good Viability/Ecological Integrity

<b>Rating</b>	Unknown
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<b>THREATS</b>
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<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.