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Oregon State Rank Assessment for Northern Leopard Frog (*Lithobates pipiens*)

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Natural Heritage Ranking Form - Oregon State Rank

Oregon Ranking Form Northern leopard frog (*Lithobates pipiens*)

Oregon Biodiversity Information Center

SPECIES ASSESSED

Scientific Name *Lithobates pipiens* ELCODE AAABH01170
Common Name Northern leopard frog Element ID 6298

Species Concept Reference Citation

Frost, D. R. 1985. Amphibian species of the world. A taxonomic and geographical reference. Allen Press, Inc., and The Association of Systematics Collections, Lawrence, Kansas. v + 732 pp.

CONSERVATION STATUS RANK

Assigned Rank **S1**

Rank Assignment Author	Nelson, Misty	Rank Review Date	12/01/2023
Rank Factors Author	Nelson, Misty	Rank Factors Date	12/01/2023
Calculated Rank	S1	Rank Change Date	01/08/2024
Rank Methodology Used	Rank calculation - Biotics v2		

Assigned Rank Reasons

2023: Limited distribution, lack of observations within the past 20 years, and potentially vulnerable to a variety of threats.
2019: Trends unknown, but very few populations in OR.

Rank Adjustment Reasons

2023: No rank adjustment from calculated rank of S1. 2019: Reduced rank to S1S2 because there are only 2 extant populations known.

RANGE/DISTRIBUTION

Range Extent

Rating	1000-5000 square km (about 400-2000 square miles)		
Estimate	1703	Unit Used for Estimate	Square Kilometers
Comments	1,703 sq km based on EO data.		

Area of Occupancy

Grid Cell Size	4 km ² Grid Cells		
Rating (as Number of 4 km ² Grid Cells)	D = 6-25		
Comments	2023: 8 4-sq-km grid cells calculated from PODs data. 2019: Historic and extant EOS cover 9 4km ² grid cells. Peripheral to Oregon.		

ABUNDANCE AND CONDITION

Number of Occurrences

Rating	1 - 20		
Comments	2023: 7 EOs in Biotics, 5 with mappable location information, and only 2 with post-2000 Last Observation Date. 2019: 4 EOs, 2 extant. 14 PODs records, 8 of them post-1990.		

Population Size

Rating	Unknown
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Good Viability/Ecological Integrity

Number of Occurrences with Good Viability/Ecological Integrity

Rating Very few (1-3)

Comments

Limited to Malheur Co. Both extant records in vicinity of Vale, within 10 miles of each other.

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>
1	Residential & commercial development					Urbanization contributes to loss of wetland habitat
2	Agriculture & aquaculture	B = High	Large: Affects most (31-70%) of the total population or occurrences or extent	Extreme - serious		Habitat loss due to agriculture and livestock grazing
5	Biological resource use					
5.3	Logging & wood harvesting					Timber harvest activities can degrade habitat and cause habitat fragmentation
8	Invasive & other problematic species, genes & diseases					Introduction of non-native species, including bullfrogs, and disease
9	Pollution					Pollution, road runoff, and acid rain may have negative impacts.
11	Climate change & severe weather					Climate change may alter habitat for this species

Calculated Overall Threat Impact B = High

Assigned Overall Threat Impact B = High

Overall Threat Impact Comments

Widespread loss of wetland habitat has likely contributed to declines; invasive species, disease, pollution, and climate change may also have negative impacts, although detailed information for Oregon is not available.

Overall Threat Impact Adjustment Reasons

Invasive species, disease, climate change

TRENDS

Short-Term Trend

Rating U = Unknown

Long-Term Trend

Rating AD = Decline of >50%

Comments

Extirpated from most of its historical range in Oregon.

ADDITIONAL SPECIES INFORMATION

Oregon Habitat Comments

Avoids ponds devoid of vegetation--prefers cattail or sedge marshes or temporary ponds with some kind of vegetation in the water.

RANKING REFERENCES

<u>Short Citation</u>	<u>Author</u>	<u>Year</u>	<u>Full Citation</u>
ORBIC		2019	Oregon Biodiversity Information Center. 2019. Point Observation Database (PODs). Unpublished species point observations collated from many sources across Oregon.

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

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