

Species:

Astragalus diaphanus var. diurnus

Index Result:

Highly Vulnerable

Scientific Name

Common Name

South Fork John Day milk-vetch

Taxonomic Group

Vascular Plant

Geographic Area

Eastern Oregon

Confidence

Very High

(based on entered data)

Date Assessed 5/5/2020

GRank G4T2Q

SRank S2

Cave/Ground Water Obligate: No

Migratory area included in

assessment: No

Assessor

Sue Vrillakas

Climate Change Vulnerability Index Values: (greatest score shown when range was selected)

Category	Factor	Score	Comments
Temperature Scope (predicted increase)	A >6.0F	0	
	A 5.5F	0	
	A 5.1F	0	
	A 4.5F	100	
	A 3.9F	0	
	A <3.9F	0	
Hamon AET:PET Moisture Metric Scope	< -0.119	0	
	-0.119	0	
	-0.096	100	
	-0.073	0	
	-0.05	0	
	> -0.028	0	
Sea level rise	B1	N	Interior species Found in riparian corridor shrublands and woodlands
Natural barriers	B2a	SI	
Anthropogenic barriers	B2b	N	
Climate Change mitigation	B3	N	
Dispersal/Movement	C1	Inc	Seed dispersal fairly limited
Historical thermal niche	C2ai	N	Found in open areas Highest pixel value 19.898; lowest 11.859; difference=8.039
Physiological thermal niche	C2aii	N	
Historical hydrological niche	C2bi	Inc	Annual, sometimes biennial; germination dependent on spring moisture
Physiol. hydrological niche	C2bii	Inc	
Disturbance dependence	C2c	N	Not dependent on these conditions
Ice/snow dependence	C2d	N	
Physical habitat restrictions	C3	N	
Other spp create habitat	C4a	N	
Dietary Versatility	C4b	U	
Pollinator Versatility	C4c	U	
Other spp for dispersal	C4d	U	
Pathogen sensitivity	C4e	N	
Competition sensitivity	C4f	U	
Interspecific Relationship	C4g	U	
Measured genetic variation	C5a	U	
Bottlenecks	C5b	U	
Plant reproductive system	C5c	U	
Phenological response	C6	U	
Documented response	D1	U	

Modeled change	D2	U	
Modeled overlap	D3	U	
Modeled protected areas	D4	U	

Additional Notes:

Range map created using ArcMap Mimumum Mapping Boundary-Convex Hull on ORBIC element occurrence data, 4-29-2020 export. Climate and precipitation data from Climate Wizard using the A1B emissions scenario and ensemble average general circulation model: Historical = 1951-2006; Future = mid-century (2050s); Hamon AET:PET moisture metric (Hamon 1961).

References:**Data sources and notes:**

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Detailed definitions of criteria and methodology can be found in the documentation at <http://www.natureserve.org/conservation-tools/climate-change-vulnerability-index>

Legend and Definitions:

Affect to Vulnerability:
GI = Greatly increase
Inc = Increase
SI = Somewhat increase
N = Neutral
U = Unknown

Index Scores:

Extremely Vulnerable: Abundance and/or range extent within geographical area assessed extremely likely to substantially decrease or disappear by 2050.
Highly Vulnerable: Abundance and/or range extent within geographical area assessed likely to decrease significantly by 2050.
Moderately Vulnerable: Abundance and/or range extent within geographical area assessed likely to decrease by 2050.
Less Vulnerable: Available evidence does not suggest that abundance and/or range extent within the geographical area assessed will change (increase/decrease) substantially by 2050. Actual range boundaries may change.
Insufficient Evidence: Information entered about a species' vulnerability is inadequate to calculate an Index score.

Citation:

Oregon Biodiversity Information Center. 2020. Climate Change Vulnerability Index assessment for South Fork John Day milk-vetch (*Astragalus diaphanus* var. *diurnus*). Institute for Natural Resources, Portland State University, Portland, OR.