

Climate Change Vulnerability Index

Plant Species Assessment

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Name: *Allium dictuon*

Index Result: Not Vulnerable / Presumed Stable

Exposure to Climate Change:

- 1) Temperature – All occurrences fall within the same temperature category (4.5-5.0 ° F warmer).
- 2) Moisture – All occurrences fall within the same moisture metric category (-0.097 - -0.119).

Climate: Indirect

- 1) Exposure to sea level rise - Neutral
- 2) Distribution relative to barriers
 - a. Natural barriers – Somewhat increase. The species is confined to upper slopes of deep canyon system.
 - b. Anthropogenic barriers - Neutral
- 3) Predicted impact of land use changes resulting from human responses to climate change - Neutral

Species-Specific Factors:

- 1) Dispersal and movements – Somewhat increase.
- 2) Predicted sensitivity to temperature and moisture changes
 - a. Predicted sensitivity to changes in temperature
 - i. historical thermal niche – Somewhat increase. Although the species occurs within the range that would make this factor neutral (57.1-77° F), it barely makes it into this category (mostly values of 58 – 59°).
 - ii. physiological thermal niche - Neutral
 - b. Predicted sensitivity to changes in precipitation, hydrology, or moisture regime
 - i. historical hydrological niche – Neutral. The species has experienced average precipitation variation in the last 50 years (21-40 inches).
 - ii. physiological hydrological niche - Neutral
 - c. Dependence on a specific disturbance regime likely to be impacted by climate change – Neutral
 - d. Dependence on ice, ice-edge, or snow-cover habitats - Neutral
- 3) Restriction to uncommon geological features or derivatives – Neutral. Species is restricted to limited set of basalt flows, but there is significantly more unoccupied but apparently suitable substrate/parent material available.
- 4) Reliance on interspecific interactions
 - a. Dependence on other species to generate habitat - Neutral
 - b. Dietary versatility (animals only)
 - c. Pollinator versatility (plants only) - Neutral
 - d. Dependence on other species for propagule dispersal - Unknown
 - e. Forms part of an interspecific interaction not covered by 4a-d
- 5) Genetic factors
 - a. Measured genetic variation - Unknown
 - b. Occurrence of bottlenecks in recent evolutionary history (*use only if 5a is "unknown"*)
- 6) Phenological response to changing seasonal temperature and precipitation dynamics - Unknown