Climate Change Vulnerability Index
Plant Species Assessment
Completed by John Gamon, Washington Natural Heritage Program
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Name: *Erythronium quinaultense*
Index Result: Not Vulnerable / Presumed Stable

Exposure to Climate Change:

1) Temperature – All occurrences fall within the same temperature category (<3.9^0 F warmer).
2) Moisture – All occurrences fall within the same moisture metric category (-0.074 - -0.096).

Climate: Indirect

1) Exposure to sea level rise - Neutral
2) Distribution relative to barriers
    a. Natural barriers – Selected 'Somewhat increase' vulnerability due to landscape position in mountains leaves the species little room to migrate.
    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 – Selected 'Somewhat increase' vulnerability on assumption that at least 5% of propagules will be dispersed between 10 and 100 meters, but not further than that.
2) Predicted sensitivity to temperature and moisture changes
    a. Predicted sensitivity to changes in temperature
        i. historical thermal niche – Selected 'Somewhat increase' vulnerability. Considering the mean seasonal temperature variation for occupied cells, the species has experienced slightly lower than average (47.1 - 57° F/26.3 - 31.8° C) temperature variation in the past 50 years.
        ii. physiological thermal niche - Selected 'Somewhat increase' vulnerability. Species is somewhat (10-50% of occurrences or range) restricted to relatively cool or cold environments that may be lost or reduced in the assessment area as a result of climate change.
    b. Predicted sensitivity to changes in precipitation, hydrology, or moisture regime
        i. historical hydrological niche – Selected 'Somewhat decrease' vulnerability. Considering the range of mean annual precipitation across occupied cells, the species has experienced greater than average (> 40 inches/1,016 mm) precipitation variation in the past 50 years.
        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 – Selected 'Somewhat increase' vulnerability based on assumption that snow-pack has an influence on sites with this species.
3) Restriction to uncommon geological features or derivatives - Neutral
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 - Neutral
    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")*- Neutral
6) Phenological response to changing seasonal temperature and precipitation dynamics - Unkown