

THREAT LEVEL

IDAHO FISH & GAME

Species not yet assessed



CALL TO ACTION

- ▶ Protect huckleberries from overharvesting and destructive harvest practices*
- ▶ Protect areas with concentrations of huckleberry plants
- ▶ Conserve high-alpine ecosystems, which are especially important as the climate continues to change

*The US Forest Service is implementing huckleberry harvesting permits in the Gifford-Pinchot Forest.



Huckleberry

Vaccinium membranaceum &
Vaccinium caespitosum

Photo Credit: Washington State Department of Natural Resources

OVERVIEW

Huckleberries are important to Ktunaxa culture and as a food source for Grizzly bear. Huckleberries thrive in higher elevations and cold nighttime temperatures. Warming temperatures may threaten plant development and lead to lower fruit yields. Increased development is leading to loss of habitat and overharvesting. Destructive harvesting practices, such as rakes, threaten huckleberry survival. Enforcing policies to protect huckleberries from illegal harvesting methods will be important to long-term sustainability.

CONSERVATION CONSIDERATIONS

VULNERABILITY RANKING

CLIMATE

High

NON-CLIMATE

High

CONFIDENCE

High

Physiological, phenological, or ecological factors to consider when planning conservation projects:

- ▶ Huckleberries prefer high elevations and cooler nighttime temperatures
- ▶ Huckleberries are sensitive to temperature and substantial snowpack is important for berry production

Vulnerability Rankings Methodology

These priority species have been assessed for climate and non-climate vulnerability using a process adapted from the Washington Department of Fish & Wildlife's Methodology for ranking the Climate Change Vulnerability of Species. WDFW's approach includes rating each species' climate sensitivity and exposure. These two rankings are then averaged for a climate vulnerability ranking. The Tribe developed a non-climate vulnerability ranking to capture species' relative risk and adaptability to factors such as human-caused development, predator/prey relationships, or low population numbers. Confidence rankings were assessed based on the availability of scientific research.

KEY THREATS

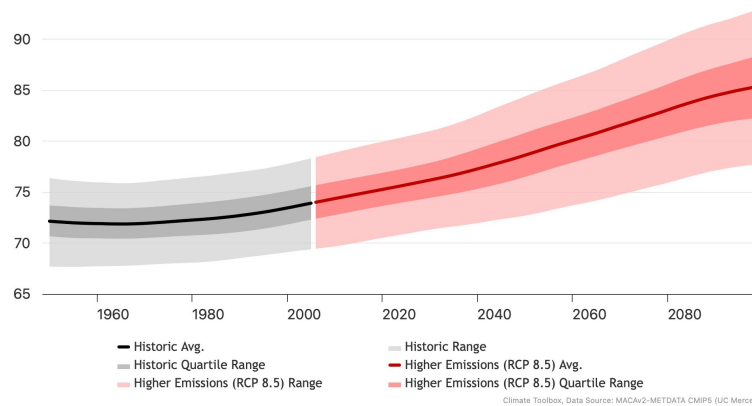
Habitat Degradation & Loss

Destructive practices, such as using rakes and other tools, can damage or even kill bushes. Development at higher elevations can limit suitable habitat. Improved recreational access to traditional huckleberry ranges and increased consumer demand for berries have increased overharvesting and contributed to the decline of populations.

Climate Change

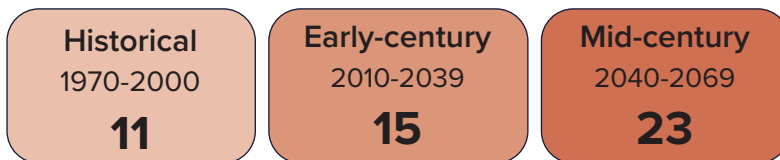
- ▶ Increasing temperatures are modifying alpine ecosystems where huckleberries thrive. Climate shifts will cause suitable huckleberry habitat to move northward and to higher elevations.
- ▶ Wildfires are becoming more intense and more frequent with climate change, threatening habitat.
- ▶ Huckleberry plants are adapted to smaller, low-intensity fires that helped to thin out competing vegetation.

AVERAGE MAXIMUM DAILY TEMPERATURE (JUN-AUG) BOUNDARY COUNTY, ID



Source: Climate Toolbox, Accessed November 13, 2025

“EXTREME” FIRE DANGER DAYS (RCP8.5) KOOTENAI BASIN

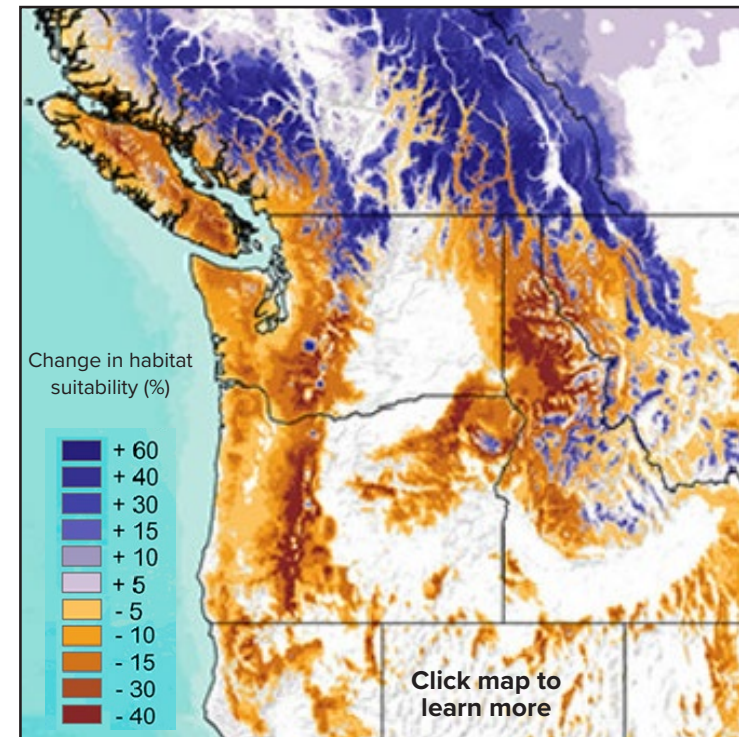


Source: Climate Toolbox. Accessed November 18, 2025



Photo Credit: Oregon Department of Fish & Wildlife

HUCKLEBERRY HABITAT BY 2085 (RCP 8.5)



Source: Science Direct. *Climate Change Shifts in Habitat Suitability and Phenology of Huckleberry (Vaccinium Membranaceum)*.

REFERENCES

Prevéy, Janet S., et al. (2020). *Climate Change Shifts in Habitat Suitability and Phenology of Huckleberry (Vaccinium Membranaceum)*. *Agricultural and Forest Meteorology*, vol. 280, p. 107803, <https://doi.org/10.1016/j.agrformet.2019.107803>.

The Northwest Huckleberry and Other Nuts and Berries of the Region. (2025). <https://storymaps.arcgis.com/stories/14e2c14aac6a48d4baab2b1ae2f75ec51>.

Wildfire chart: Source: Hegewisch, K.C., Abatzoglou, J.T. *Tribal Climate web tool*. Climate Toolbox. <https://climatetoolbox.org/>. (Accessed November 18, 2025).

Temperature chart: Hegewisch, K.C., Abatzoglou, J.T. *Future Time Series web tool*. Climate Toolbox. <https://climatetoolbox.org/>. (Accessed March 18, 2025).

NatureServe. 2025. NatureServe Explorer [Google Chrome]. NatureServe, Arlington, Virginia. Available <https://explorer.natureserve.org/pro/>. (Accessed: November 12, 2025).

PRIORITY AT-RISK SPECIES

KOOTENAI TRIBE OF IDAHO