

THREAT LEVEL

IDAHO FISH & GAME

Critically Imperiled (S1):
Very high risk of extirpation



WDFW PRIORITY HABITAT AND SPECIES PROGRAM

Species of Great Conservation Need



CALL TO ACTION

- ▶ Increase research on climate change impacts, specifically effects on parasites and disease
- ▶ Track and collect data on moose populations and movements



Moose

Alces alces

Photo Credit: idfg.idaho.gov

OVERVIEW

Moose populations in northern Idaho are at great risk. They prefer high-altitude, second-growth forests, which are at risk due to insufficient federal and state protections and inadequate forest management practices. Increased wildfires and drought are direct threats to moose and second-growth forests. These threats push moose to explore beyond their normal range, increasing interactions between moose and humans. Maintaining federal habitat protections, monitoring populations, and expanding climate research is critical for the long-term conservation of moose in northern Idaho.

CONSERVATION CONSIDERATIONS

VULNERABILITY RANKING

CLIMATE

MODERATE - HIGH

NON-CLIMATE

MODERATE - HIGH

CONFIDENCE

MODERATE

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

- ▶ Low reproductive rates can limit population growth and recovery following disturbances
- ▶ Moose have a wide range and strong dispersal ability, which supports genetic diversity across populations

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

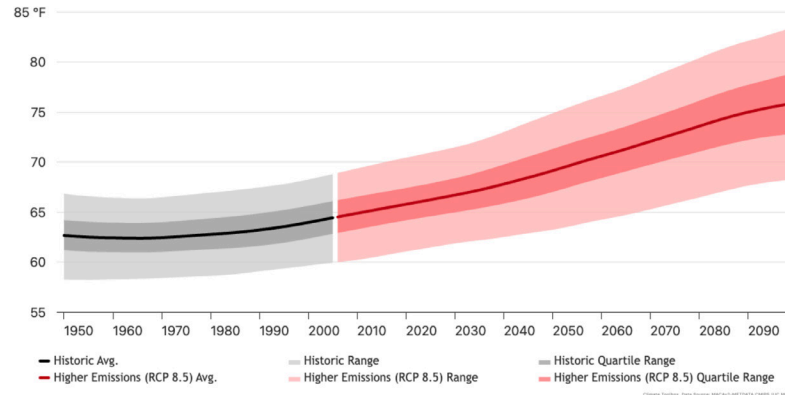
Human Interactions

Increased development and recreation pose threats to key habitat and lead to more human and moose interactions. Poaching and legal hunting are continuous threats to moose, although sustainable hunting practices resulting from management and regulations have helped maintain populations.

Climate Change

- ▶ Moose are adapted to mild summers and cold winters, making increased heat in either season a significant stressor.
- ▶ Increasing frequency and intensity of wildfires will fragment important forested habitats, which can disrupt movement and increase encounters between predators and prey.
- ▶ Warmer temperatures are expected to push suitable habitat northward and to higher elevations, forcing moose to shift their range in search of cooler temperatures.

JUN-JUL-AUG MAX TEMPERATURE BOUNDARY COUNTY, ID



AVERAGE ANNUAL “EXTREME” FIRE DANGER DAYS

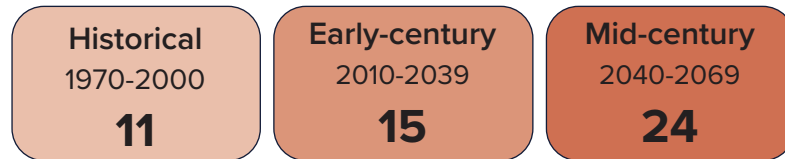
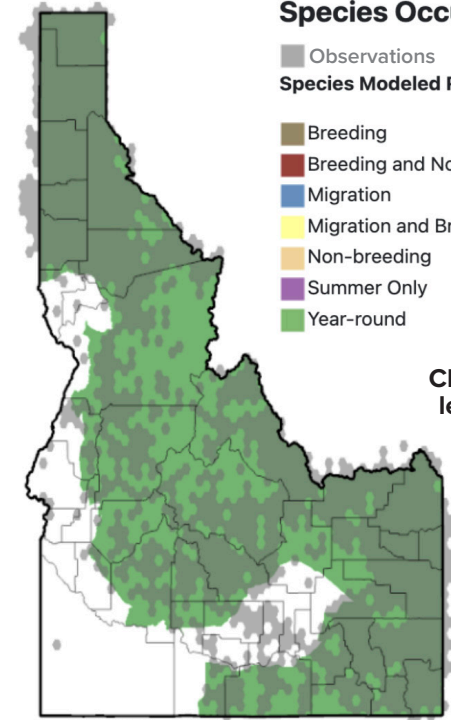


Photo Credit: Pexels

Species Occurrence

- Observations
- Species Modeled Range
 - Breeding
 - Breeding and Non-breeding
 - Migration
 - Migration and Breeding
 - Non-breeding
 - Summer Only
 - Year-round



Click map to learn more

Source: idfg.idaho.gov

REFERENCES

“Moose (*Alces Alces*) | Idaho Fish and Game.” [Idfg.idaho.gov](https://idfg.idaho.gov/species/taxa/77108), idfg.idaho.gov/species/taxa/77108.

“Moose | Washington Department of Fish & Wildlife.” [Wdfw.wa.gov](https://wdfw.wa.gov/species-habitats/species/alces-alces), wdfw.wa.gov/species-habitats/species/alces-alces.

“NatureServe Explorer 2.0.” [Explorer.natureserve.org](https://explorer.natureserve.org), explorer.natureserve.org. Accessed 14 May 2025.

Temperature chart: Hegewisch, K.C., Abatzoglou, J.T., ‘Future Time Series’ web tool. Climate Toolbox (<https://climatetoolbox.org/>) accessed Mar. 18 2025.

Wildfire chart: Source: Hegewisch, K.C., Abatzoglou, J.T., ‘Tribal Climate’ web tool. Climate Toolbox (<https://climatetoolbox.org/>) accessed Apr. 23 2025.

PRIORITY AT-RISK SPECIES KOOTENAI TRIBE OF IDAHO