



Climate Change Vulnerability Assessment in the Upper Snake River Watershed

Black-tailed Jackrabbit

MORE WARMING

Low Vulnerability

Medium Vulnerability

HIGH VULNERABILITY

Extreme Vulnerability

LESS WARMING

Low Vulnerability

MEDIUM VULNERABILITY

High Vulnerability

Extreme Vulnerability

Results above highlight **black-tailed jackrabbit climate change vulnerability in the 2050s** for two different climate change scenarios. The higher climate change scenario (RCP 8.5) is labeled “More Warming” and the lower climate change scenario (RCP 4.5) is labeled “Less Warming”. Generally, more greenhouse gas emissions over a longer time will lead to more severe impacts from climate change.

Relative vulnerability rankings were determined by combining the best available climate change science with the local and traditional knowledge of the Upper Snake River Tribes (USRT) Foundation’s four member tribes. These rankings are based on climate change projections, species-specific sensitivities, and the ability of species to adapt and respond to the projected changes.

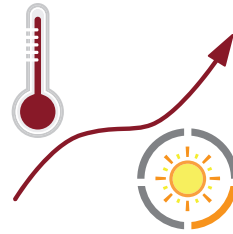
Black-tailed Jackrabbit and the USRT Member Tribes

This is the most utilized rabbit species by many of the USRT member tribes. Jackrabbit can live in marshes or sagebrush steppe habitats and depend on sagebrush and greasewood plants. Energy development, agricultural development, and wildfire have all played a role in decreasing the extent of these habitats throughout the region. Although isolated populations still exist in their natural habitat, some jackrabbits have adapted to these changes by living in and around alfalfa fields.

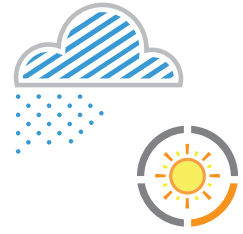


Key Climate Impacts

By the 2050s, summer maximum temperatures are projected to increase 6.5° to 8.5° Fahrenheit with little or no change in precipitation. Warmer temperatures will increase evaporation, further drying the soils and plants in the sagebrush steppe, which, in turn, increases wildfire risk in this important jackrabbit habitat.



Maximum summer temperatures are projected to increase 6.5°F to 8.5°F.



Summer precipitation is not projected to change.

Black-tailed Jackrabbit have:

factors that “**increase**” vulnerability

Risk of fire disturbance

The sagebrush steppe, an important habitat for the black-tailed jackrabbit, is vulnerable to the projected increase in the frequency and severity of fires in the western United States. Cheatgrass encroachment following wildfires will likely further reduce available habitat.

factors that “**somewhat increase**” vulnerability

Man-made barriers

Roads and other human modifications to the landscape can act as a barrier to movement and increase mortality for animals that unsuccessfully attempt to cross these barriers, limiting their ability to move in response to changing climate and habitat conditions.

Renewable energy development

Black-tailed jackrabbit habitat could be potential sites for solar array or wind farm development due to the open characteristics of the landscape.

Sensitivity to disease

Black-tailed jackrabbit is susceptible to a variety of diseases and rising air temperatures may increase the survival and transmission of these diseases, such as tularemia, bubonic plague, and Lyme disease.



Photo by: Larry Smith

These are select results of a more comprehensive climate change vulnerability assessment developed collaboratively by the Upper Snake River Tribes Foundation, Burns Paiute Tribe, Fort McDermitt Paiute-Shoshone Tribe, Shoshone-Bannock Tribes, Shoshone-Paiute Tribes, Adaptation International, the University of Washington Climate Impacts Group, and Oregon Climate Change Research Institute.

For more information on this assessment or to get involved, visit: www.upper-snakerivertribes.org/climate or contact Scott Hauser, Executive Director, USRT at scott.hauser@usrf.org.