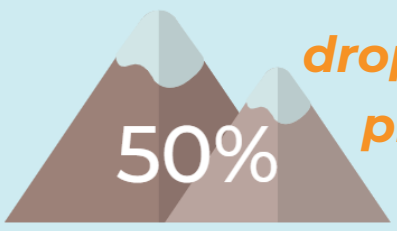
Our Changing Park: Climate Change in Rocky Mountain National Park

increase in wildfires since the 80's

of plants and animals at risk of extinction

trees have died in the past 15 years



drop in snow pack predicted this century

RMNP is comprised of six unique ecosystems. How have they changed?

PONDEROSA PINE WOODLANDS

Moderate Danger

Greatest Threat: Fire

Severe, frequent fires kill overstory & seeds, scorch ground making it difficult for woodlands to regenerate.

Also vulnerable to warming temperatures, variable precipitation, and insect outbreaks.

SUBALPINE SPRUCE-FIR FORESTS

Moderate Danger

Greatest Threat: Invasive Species

Longer periods of warm weather allow beetles to speed up reproduction. Increasing frequency & severity of outbreaks.

Also vulnerable to drought, fires and atmospheric nitrogen deposition.

ALPINE TURF AND SHRUBLANDS

High Danger

Greatest Threat: Invasive Species

As temperatures rise, native species are crowded out as others seek suitable habitat. Tree encroachment from lower altitudes.

Also vulnerable to warming temperatures, early snowmelt, and higher variability in seasonal freezes.

GLACIATED VALLEYS

Very High Danger

Greatest Threat: Early Snowmelt

Warm temps cause glacial retreat, reduced snowpack, low water tables, early snowmelt. Impacting timing, quantity, and quality of water moving downstream.

Also vulnerable to invasive species, recreational use, and air pollution.

LOW GRADE MOUNTAIN STREAMS

Very High Danger

Greatest Threat: Fire & Early Snowmelt

Ash and sediment deposits severely impair water quality. Erosion from upper water shed moves through steep areas and settles in low grade valleys.

Also vulnerable to flooding, drought, invasive species, and recreational use.

GREAT PLAIN RIPARIAN AREAS

Very High Danger

Greatest Threat: Fire & Invasive Species

Cheatgrass, a flammable invasive species increases fire danger. As temps rise, non native species like tamarisk, Asian carp, and American Bullfrogs compete with native species for space and nutrients.

Also vulnerable to reduced snowmelt and runoff, flooding, and recreational use.

Information Sources:
United States Department of Agriculture
National Park Service, U.S Department of the Interior
MyColoradoParks

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