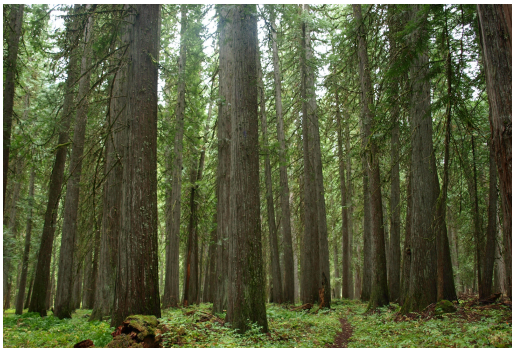
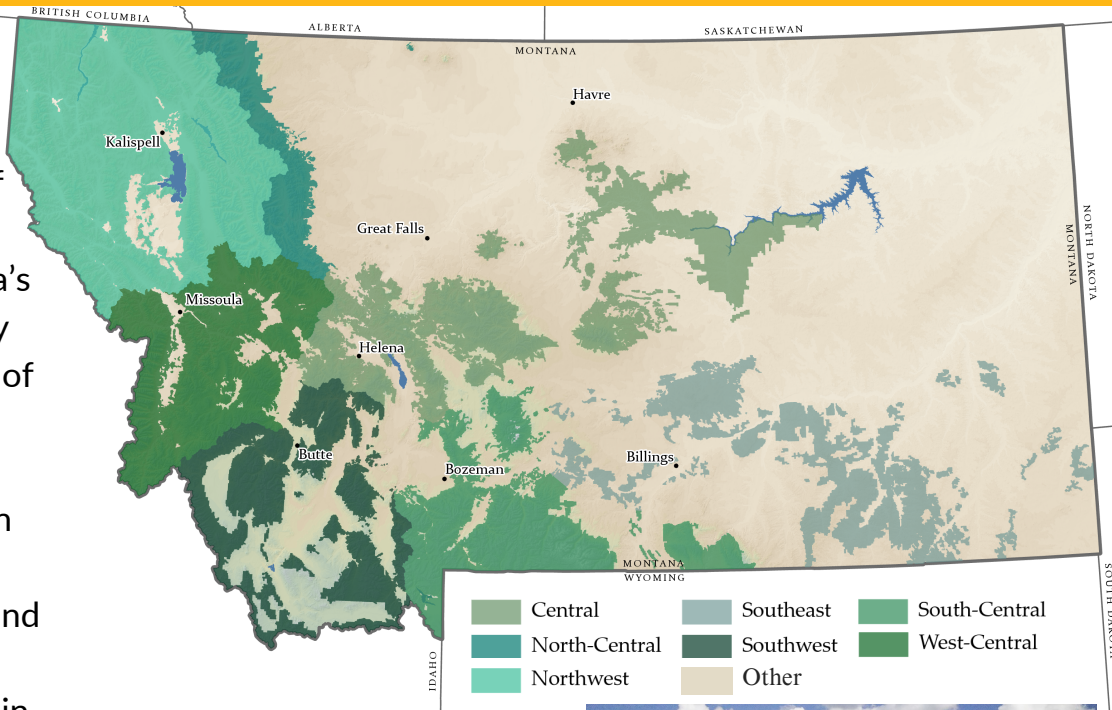


The Northwest Forest Region



What trees are around you?

The answer changes depending on climate, topography, and natural disturbances. Together, these factors create a mosaic of different forest types called forest regions. Each of Montana's eight regions is characterized by certain types and compositions of trees and other plants. The Northwestern Forest Region stretches between the Canadian border and the upper Missoula Valley. Here, steep mountains and moist air from the Pacific Coast create the most diverse forests in the state, with over a dozen species of trees.



1 Between 1,800 and 4,500 ft in elevation, many temperate rainforest species thrive, including western hemlock, western redcedar, western larch, and grand fir. Douglas fir and ponderosa pine are found on dryer sites.



2 Around 5,000 ft in elevation, subalpine fir and mountain hemlock begin to dominate the forest. Douglas-fir is also common.



3 Around 8,000 ft in elevation, growing conditions are harsh. Trees that survive are often stunted because of the windy conditions.

Topography

Imagine a trip up a mountainside in northwestern Montana. The forest changes based on elevation, steepness, and direction. Even small changes can make a big difference in how much water, sunlight, or wind a certain area receives, and what types of trees are able to grow. The pictures above illustrate how elevation affects forests in the Northwestern Forest Region.

The Northwestern Forest Region includes the cultural homelands of the Ktunaxa ʔamakʔis, Kalispel, Schitsuʔumsh (Coeur d'Alene), Séliš-Qlispé, Cayuse, Umatilla and Walla Walla peoples.



The Northwestern Forest Region gets more rainfall than any other area in the state. Weather systems from the Pacific Coast bring an abundance of rain and make temperatures milder. The mild climate allows forests to thrive, even at lower elevations, and creates ideal conditions for many temperate rainforest species like western redcedar and western hemlock.

Disturbances

While topography and climate change forests over thousands of years, natural disturbances can change the way a forest looks in months, days, or even hours. Fire, pests, disease, avalanches, and windstorms are natural parts of the Northwestern Forest Region. Often these disturbances help keep forests healthy by creating new space for trees to grow and returning nutrients to the soil. After a major disturbance like a fire, the forest grows back in stages over many years. This process is called succession. The pictures to the right depict a typical succession cycle in the Northwestern Forest Region. Forest regions are determined by the types of trees present in the climax forest, but it is common to see many stages of succession occurring at the same time.



1 Disturbance

Disturbances occur at different scales. For example, moderate-severity fires averaged 80 years for the Northwestern Forest Region. Large fires that burn entire stands of trees historically occurred every 150-500 years.

2 Pioneer Species

The first plants to grow after a major disturbance are called pioneer species. Many grasses and wildflowers, like beargrass and fireweed, are pioneer species.



3 Shrub Stage

Over time, trees and shrubs begin to grow in some areas. Rocky mountain maple, thimbleberry, and snowberry are among the most common shrubs in the region. Shade from the shrubs allows tree saplings to begin to grow.

4 Climax Forest

As the trees get taller, they shade out earlier succession species, creating the climax forest. The climax forest will persist until the next disturbance. In the Northwest Forest Region, the climax forest may be exclusively western red cedar and western hemlock but often feature other species such as lodgepole pine and Douglas-fir.



Resources

Read more about the different forest regions in "Forest Regions of Montana" at:
<https://www.fs.usda.gov/research/treesearch/32532>

Read more about disturbance and succession in "Fire Ecology of Western Montana Forest Habitat Types" at:
<https://www.fs.usda.gov/research/treesearch/32955>

Read more about disturbance and succession for this region at the Montana Natural Heritage Program at:
https://fieldguide.mt.gov/displayES_Detail.aspx?ES=4232

