

Metolius Mule Deer Winter Range Western Juniper Management

A resilient desert species

If you're at all familiar with Central Oregon's striking landscapes, you will undoubtedly recognize the juniper tree, with its red-brown bark, scaly leaves and berry-like cones. But you may not know that western juniper is one of the oldest living trees in North America. In fact, the oldest individual tree found in Oregon was a 1600-year-old juniper!

On dry rocky sites, dead trees can remain standing for up to 600 years. However, an estimated 95% of western juniper trees living today are less than 100 years old. Many of these trees became established during the homesteading period, encouraged by wet climate conditions, fire suppression and intensive livestock grazing.



Old growth, or "heritage," juniper trees like this one are rare but important habitat features in the Winter Range.

Spreading threats

In the late 1990s, researchers found that as juniper populations increase, grass and sagebrush habitat decrease. A single juniper tree can use as much as 20 gallons of water per day, leaving fewer resources for native grasses and forbs (herbaceous plants). As deep-rooted plants are pushed out, species with shallow roots, including harmful weeds, are able to flourish, resulting in soil erosion. Most grassland wildlife depend on healthy and abundant shrubs for survival. On the Metolius Mule Deer Winter Range, foraging mule deer become vulnerable when their main food source, antelope bitterbrush, is out-competed by young juniper.

Another concern is the increased risk of wildfire. Fires sparked in areas with dense juniper can burn extremely hot and may result in the loss of vast acres of critical habitat. After an intense fire, it may take 30-50 years for the ecosystem to fully recover and support robust deer populations again.



Managing juniper risks

While young junipers can cause problems, old-growth trees play an important role in the region. Mature trees provide nesting spots for birds and small mammals and offer warm cover for deer during the winter months. Old-growth juniper can often be found on rocky ridge tops where the threat of wildfire is naturally lower.

PGE and our partners on the Winter Ranger frequently thin or remove young junipers to reduce wildfire risk and encourage the growth of diverse grassland species. Throughout these stewardship projects, old-growth trees are left in place.