

Our Dry Forests - A Century of Change

We know forests have changed in Eastern Washington and Oregon.

But how have they changed and why?

What do we need to do to make sure they stay healthy?

For thousands of years, before the arrival of settlers to Central Washington, disturbance by fire was the dominant force which shaped our dry forest ecosystems.

Lewis and Clark noticed many fires on their travels across the continent from 1803 - 1807. These were light surface burns that kept the forest floor open and allowed for easy travel.

Settlers following the path of Lewis and Clark noted the large ponderosa pine trees, the forest's open structure, an absence of underbrush and small trees and a lush cover of grass.



Ponderosa pines are uniquely adapted to thrive in an ecosystem with frequent low-intensity fires. They have few limbs at ground level so it is difficult for surface fires to climb into the tree tops. Pines have thick bark which provides insulation from the heat of flames.



Frequent, low intensity ground fires benefitted the forest by thinning out some of the young ponderosa pine and most of the Douglas-fir and grand fir seedlings. This made for less competition for nutrients and water.

So, why do we have thick stands of pine and fir trees growing when 150 years ago we had open stands of ponderosa pine?

In North America, frequent fires shaped the landscape over thousands of years. As settlement advanced across the continent, communities in fire-prone areas were vulnerable. Hundreds of people died when fires burned through wooden towns with minimal fire protection. In addition, wood became viewed as a valuable commodity for homes, buildings and fences.

In the early 1800's it was natural to view fire as the enemy. As a result, a century of vigorous fire suppression began.



Today, more than 300,000 acres of the dry forest within the boundaries of the Wenatchee Forest are densely populated and are highly vulnerable to insects, tree disease, and high intensity fires.

Current research shows that tree populations have increased by 2 - 7 percent in the dry areas of the Wenatchee Forest.

For several decades people have become used to forests unaffected by the cleansing effects of frequent natural ground fires. It is easy to believe that much of the present dense, thick forest of the eastside is the natural forest. It is not. And, unfortunately, there comes a time when it cannot be defended from catastrophic fire.



In dense, dry forests fires are now able to climb into the tree tops and move from tree to tree. This has caused a fire environment prone to large scale and high intensity fires difficult to prevent and control. This was the case in 1994 when wildfires in Chelan County exploded across 186,000 acres.

It's clear there is work to be done to move dense, dry forests into a more resilient, sustainable and healthy condition.



Pruning lower tree branches removes fuel ladders, which will help control wildfire.

The task of bringing several hundred thousand acres of unhealthy, over-crowded forests back to a sustainable condition is a daunting one.

Three specific actions will provide the critical first steps to creating a healthy forest:

1. An aggressive program of thinning on a landscape basis, covering thousands of acres each year will be required.
2. Selective logging would focus on removing excess firs and pines, leaving larger, well-spaced pines, Douglas-fir, and western larches.
3. Pruning of lower branches and careful use of prescribed fire will further reduce excessive fuels.

We've done a great job of preventing wildfires. Now we need to gain more understanding of the role fire plays in maintaining sustainable ecosystems. The question is not *if* fires will occur, but when and how extreme they will be.

**It took almost 100 years to create current forest conditions.
It will take many years to restore healthy forests.**

If we can design ecologically responsible management to meet society's needs, there will be benefits for generations to come.



A study in the Mission Creek drainage of the Wenatchee National Forest found that there were approximately 30 to 40 trees per acre in the early 1800's. Today, not only is the composition of tree species different, but there are now more than 200 trees per acre in the same locations.
