

Activity 3. Tree Density

ACTIVITY SUMMARY:

1. Read from 'Living with Fire' and have students journal about the reading.
2. Tree Density Journal Activity: Perform the exercise with the whole class on the board and have students read and journal about the brush fire experience.
3. Tree density activity.

Part 1. Tree Density: Background

READING: Living with Fire

“In the summer of 2002—the driest year for Colorado on record—the Hayman Fire burned 140,000 acres, destroyed 133 homes and 466 outbuildings, and left parts of four counties vulnerable to flash floods and mudslides. The cost of fighting the fire and rehabilitating the burned area exceeded \$80 million, excluding an estimated \$160 million in indirect economic losses and long-term rehabilitation.

Although the Hayman Fire was the biggest wildfire in Colorado’s recorded history, a number of other major fires also occurred over several severe fire seasons associated with a multiyear drought. The same year as the Hayman Fire, more than 4,000 other wildfire events burned an additional 480,000 acres in Colorado; and yet, losses throughout the state could have been much greater. By sheer chance, no major fire in the last few years has found its way into a large residential area. Colorado has, up to this point, ‘dodged a bullet’ with regard to loss of life and property. The state’s luck, however, will not last forever. With the memories of recent fire seasons still fresh in their minds and concerns about dry summers to come, Front Range residents understand more than ever the need to diminish the dangers posed by fire to life and property...

Scientists agree that most of the ponderosa pine forests ... are unnaturally dense and in need of fuels reduction treatment. Evidence of pre-settlement

conditions in these forests shows scattered open meadows and more large, old, fire-resistant ponderosa pines, spaced fairly far apart (with approximately 40 to 50 trees per acre) and with a rich understory. However... the lower montane forests are now extremely dense (with 200 to 400 trees per acre) and often lack understory and forest openings. While frequent surface fires used to be the norm for this life zone, dense ladder fuels are now capable of carrying fire up to



the canopy and causing unnaturally severe crown fires. Hazardous fuels reduction through selective thinning of mostly smaller trees can effectively reduce the occurrence of extensive crown fires, and restore the historical surface fire regime as well as other ecological processes.”

This information is from a 2006 report: ‘Living with Fire: Protecting Communities and Restoring Forests, Findings and Recommendations of the Front Range Fuels Treatment Partnership Roundtable, May 2006’

The state’s ‘luck’ was tested again in 2010 with the fires around Boulder. The mass of area burned was less than the 2002 fire season and the overall severity of the fire was less, but the loss of homes was far greater than the 2002 fire season. Again in 2012 and 2013, wildfires burned near urban areas close to Colorado Springs and Fort Collins. These fires burned fewer acres than the Hayman Fire, but destroyed many more homes.

It is extremely important to understand that trees must be cut down to protect the forest because we have suppressed natural wildfire for so many decades. Nature will heal all wounds; however, it will take a very long time to heal these burn scars. If left alone, the Hayman Fire scar would take over 500 years to heal. Nature’s way is not always pleasing to the eye, or in line with our concept of property values and private ownership. We, human kind, created the imbalance that causes the fires to be so devastating. You can learn about it and become part of the solution to help restore the natural balance. Understanding is the first step.

What does it all mean?

Fire has been cast as a very bad character. When you look at the burned houses above Boulder and the huge scar left from the Hayman, the role fits. What about the other side of fire, the fire that burns the natural gas that heats your home or fireplace?