

# Fire in a Natural (and Unnatural) Landscape

By: Katlin Miller, Executive Director, Middle Park Conservation District

Summer is upon us, and with summer comes hot, dry conditions. Though many of us have waited restlessly all winter long for the moment that we could put our coats and snow pants away and bring shorts and sundresses out, the hot summer sun brings with it just as much risk as it does enjoyment. In the wake of the recent fires burning throughout Colorado and the establishment of fire restrictions in Grand County, the threat of wildfire is on the forefront of many residents' minds.

There is no doubt why the threat is ever present when you look at the brown and gray hue that blankets our once green mountainsides. When the Mountain Pine Beetle epidemic hit Grand County a decade ago, it wiped out nearly all of our mature lodgepole pine trees. Yet, some wonder how the Mountain Pine Beetle Epidemic could have become such a problem in the first place. The answer, in part, circles right back to the very thing we fear today: wildfire.

Although the prospect of a wildland fire burning through our community can provoke fear, it should be understood that fire is a part of our forest ecosystem. Mountain communities must learn to become more fire adapted and understand that wildland fire can (and does) occur when conditions are in alignment and favorable for fire spread. **It has been said that forest fires are neither good nor bad, they just are.** Evidence of past wildland fires can be found on every acre of high country lodgepole pine forests.

Prior to the westward migration and development of sophisticated fire suppression techniques, wildfires were common, and many western tree species, such as lodgepole pine, evolved to survive (and even flourish) in the presence of wildfire. 'Cone serotiny' is living proof of the lodgepole pine's evolution and dependence on fire. Cone serotiny is defined as "an ecological adaptation in which the seed release occurs in response to an environmental trigger, rather than spontaneously at seed maturation". Fire is most often the trigger needed for the lodgepole pine's resin-covered serotinous cones to open and release their seeds.

In addition to seed propagation, fire plays many other roles in maintaining healthy forests. The frequency and severity of fire in the forest ecosystem can affect fuel accumulation, the incidence of insects and disease, and stand diversity and development. Historically, fires would ignite in western forest ecosystems on a fairly frequent basis. They were typically smaller acreage, lower intensity fires that, over time, created a patchwork of burned and unburned areas. Unburned areas would remain dominated by older trees, while burned areas would serve as nurseries for seedlings and saplings. This mosaic of various age-class trees helped to increase and retain forest resiliency. For example, because fires were more common, there was not the massive buildup of fuels that we see today. It is when highly flammable fuels accumulate (dead trees and forest floor litter) that we see catastrophic stand-replacing fires occur. Furthermore, many insects and diseases target specific age-classes of trees (i.e. only mature trees). The patchwork of various aged trees created by historical fires once helped to reduce the risk of devastating insect epidemics, as seen here in Grand County. Additionally, fire often increases the availability of plant nutrients in the soil thus boosting the vegetative growth of highly succulent and nutritious forbs and grasses. Forbs and grasses further enhance the overall species diversity of younger forests. Species diversity helps to support soil health and stability, reduce the incidence of insects and diseases, and enhance water quantity and quality. Finally, wildlife may also

benefit from the added nesting, broad-rearing, and feeding areas that arise after a fire has come through. All in all, fire is very beneficial in natural forest ecosystems.

So, all things considered, it begs the question, ‘what does it mean for world we live in today?’ The fact is, the draw of nature and all its beauty has attracted many of us to build homes in the backwoods where the nearest neighbor is out -of-sight, out-of-mind. Since 1990, 60 percent of new homes nationally have been built in areas known as the wildland-urban interface (WUI), where houses, structures, and people reside adjacent to (or within) wildlands. These residences are, therefore, at risk of structure loss, injury, and death from wildfire. When considering Grand County, nearly two-thirds of the land is federally-owned by the US Forest Service, National Park Service, and Bureau of Land Management. Most of the adjacent private land is within the WUI. The WUI is the area where most of the firefighting efforts and most of a fire’s cost are centered. As more private land development occurs, the risk of any significant fire in Grand County impacting an adjacent WUI area is almost certain.

To better combat these fire risks, we need to increase our understanding of how wildfires interact with communities in terms of structures, terrain, and weather. Together, we must take action to enhance community resilience against these risks. **To accomplish this, we each need to work on our own properties to do what fire would have historically done for us. It is called Wildfire Mitigation, Fuels Reduction, and Creating Defensible Space.** *Jack Cohen, a Forest Service research scientist, says “WUI fire disasters will only be preventable when homeowners take responsibility for protecting their own structures. We have to let people know if they care about these structures then they have to do something themselves.”*

**The Colorado State Forest Service and the Grand County Wildfire Council are your two best local sources for information on creating and maintaining healthy forests as well as protecting your property from wildfire.**

Colorado State Forest Service  
[www.csfs.colostate.edu](http://www.csfs.colostate.edu)  
970-887-3121



Grand County Wildfire Council  
[www.bewildfireready.org](http://www.bewildfireready.org)  
970-887-3380

Grand County Wildfire Council



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