

Ask an Expert – Does Forest Thinning Lead to Increased Wildfire Danger and Community Risk?

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Wildland/urban interface in Summit County at high risk of wildfire (Photo by Brad Washa)

May is National Wildfire Awareness Month, a time to help raise awareness about the dangers of wildfires and encourage people to take measures to protect themselves, their homes, and their communities.

Wildfires have recently made headlines, and some researchers question whether active wildfire management practices – such as forest thinning – may cause more harm than good. At the same time, data indicate some Utah communities may be at higher risk than previously believed. A new study ranks Utah as the fourth highest in the nation.

Understanding historic and natural fire regimes is important when considering management options. A Utah State University study found patchy or sparsely distributed vegetation, commonly found in Utah, can significantly impact when and how often wildland fires burned in an area. Additionally, previous land practices, such as grazing, mining, logging, farming, and fire exclusion, can influence today's landscape and the possibility of fire.

Consider these examples of how wildland fire has historically occurred in Utah:

- Ponderosa pine is adapted to frequent fires, which promotes larger trees with thick bark. Under natural fire regimes, smaller-diameter trees are often killed

by fire and result in open stands that may allow higher winds and greater solar radiation that dry out the forest floor. Although with smaller trees removed, the risk of fire changing from a surface fire to a running crown fire is reduced. Once fire moves into the treetops, controlling it is challenging, often resulting in all trees being killed.

- Mixed conifer stands occur at mid-to-higher elevations throughout Utah with species such as white and subalpine fir. In recent years, these fir stands have seen an increase in dead and dying trees caused by insects and disease along with stress from climate change. The forests have experienced moderate-to-high-severity fires, including stand-destroying crown fires. Allowing these natural processes to occur is typically not desirable, especially when homes and other structures could be threatened in the wildland/urban interface (WUI), where the leaves meet the eaves.
- Thinning vegetation near areas of WUI allows for an offensive rather than a defensive approach by firefighters. A monitoring application that collects data that documents the effectiveness of fuel treatments on wildfire behavior was reviewed from 2017 to 2024. The data from federal lands found 786 such intersections where fire burned into or started within a fuel treatment with 850,528 acres burned in wildfires. These interactions resulted in fewer acres burned, a reduction in damage caused by the wildfire, and a safer environment for firefighters to work. In 2024, 115 intersections were recorded in Utah with 91% of the treatments reporting a change in fire behavior and another 93% helping control the wildfires.

In a [2025 study by Headwaters Economics](#), an analysis of wildfire risk to communities studied recent urban fires caused by wind-driven embers from nearby wildfires that ignited homes, spreading fire rapidly to neighboring homes. These fires may start as wildfires but, upon entering communities, buildings become the source of fuel with building-to-building transmission causing widespread destruction. The study listed 57 communities in Utah that face two of the biggest wildfire dangers: a high chance of a fire starting and a strong risk of losing homes – even when firefighting resources are available.

- The study identified the need for community leaders and fire personnel to weigh local risk factors, including wind conditions, ignition sources and locations, fuel moisture, firefighting resources,

housing arrangement, and building design and construction.

- In addition, rapid housing development occurring in areas with flammable vegetation contributes to risk. The study calls for a shift in local, state, and federal approaches to wildfire management – moving beyond fire suppression and vegetation management. To combat this, the construction of wildfire-resistant homes, neighborhoods, and communities must be prioritized.

Utahns live in and around fire-dependent ecosystems with a historic occurrence of wildfires. The fire regimes of Utah are not the same as those in Australia, California, or elsewhere in the west, but we can learn from their experiences.

As we enter the wildfire season in Utah, now is the time to prepare to protect your home. [Preparing Homes for Wildfire](#) and the [USU Extension Firewise Landscaping](#) publication have tips you can implement on your property.

The [National Interagency Fire Center](#) also offers resources, and for a deeper dive into the topic, see [Millions of Americans believe they're safe from wildfires in their cities](#).

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