Fire Control and the 2015 Canyon Creek Complex Fire

Hutch Brown

Fire control—the notion that all wildland fires can and should be quickly controlled, with fire largely excluded from the landscape—is ingrained in public expectations of government in the United States. A review of the issue for the International Code Council summarized the thinking of many homeowners in the wildland–urban interface (WUI):

> In the event that a wildland fire should break out near your peaceful sanctuary, government firefighting agencies will respond with "quasi military" might. You won't see a bill for their services. And if your home burns down, insurance money will build you another … coupled with the "it won't happen to me" syndrome, [is]one of the explanations why so many are making the decision to live in these areas (Bailey 2007).

A False Sense of Security

In fact, the chance of any given home in the WUI burning down in a wildfire in any given year is negligible. From 2010 to 2016, for example, 3,754 structures burned on average in wildfires each year (NICC 2017), whereas the WUI nationwide had 43.8 million homes (Martinuzzi and others 2015).

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Accordingly, the average annual risk of a wildfire destroying a home in the WUI was less than 1 one-hundredth of 1 percent.

Of course, the risk is much higher in fire-prone parts of the South and West, but so are expectations that government firefighters will come to the rescue (NWCG 2001; Pyne 2015; Stein and others 2013). Confident that they can shape wild landscapes to their liking, people have bought homes in the WUI believing that wildfires could be controlled (Bramwell 2014; Gorte 1995). They did so in part because the Forest Service had told them so. For most of its history, the agency waged a relentless war on wildfire (Pyne 1982, 2001, 2015), "creating a false sense of security and outsized expectations from homeowners" (Bramwell 2014).

The expectations persist. During fire season, the prevailing mindset in the public, the media, and the Forest Service alike revolves around wildland fire suppression, despite the limitations of fire control—and despite the responsibility of homeowners for treating fuels in and around their homes. So when disaster strikes and homes burn down, the natural reaction is to blame the Forest Service for fire control failure and for the Forest Service to blame fuels, weather, insufficient resources—anything but the susceptibility of the homes themselves to ignition and destruction.

Investigative Report

A classic case was an instance of investigative reporting on the Forest Service's response to a disastrous wildfire in Oregon in 2015 (Gunderson and Sickinger 2016). On August 12, under severe drought conditions, lightning ignited fires on the Malheur National Forest, which lies in the spectacular Blue Mountains about 5 miles (8 km) south of the town of John Day in eastern Oregon (fig. 1). Driven by high winds, the fires burned together to form the Canyon Creek Complex Fire. Vigorously fought from the start, the fire was finally declared controlled on November 5, but not before it had spread across 110,261 acres (44,621 ha) and destroyed 43 homes and at least 100 outbuildings. It was the most homes destroyed by a wildfire in Oregon since the Bandon Fire in 1936.

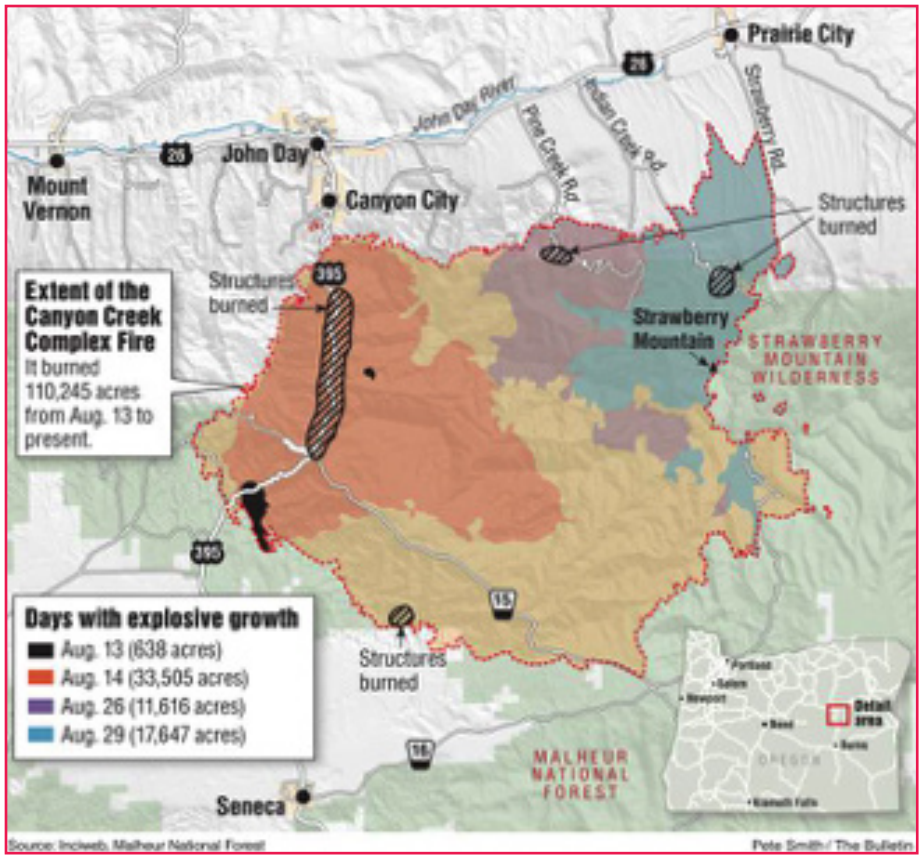

Figure 1—*Fire perimeter (dotted red line) of the Canyon Creek Complex Fire, August 12 to November 4, 2015. Structures burned included 39 homes along U.S. Route 395 during the first major fire run (August 14) and 4 homes along Indian Creek Road during the third major fire run (August 29). Although the fire burned structures along Pine Creek Road during the second major fire run (August 26), no homes were lost in the Pine Creek community, which had an active Firewise program. Source: Blue Mountain Eagle (2016).*

Most of the damage was in a scenic canyon along U.S. Route 395 (fig. 1), which follows Canyon Creek north to John Day. Canyon Creek reaches deep into the interior of the Blue Mountains, and its canyon floor was historically an open woodland made up of conifers (ponderosa pine, western larch, and Douglas-fir), with frequent fire return intervals (0 to 30 years) and low-severity fires. A century of fire control had left the area overgrown by dense mixed-conifer forest, with many missed fire return intervals and the threat of an uncharacteristically severe fire.

Much of the Malheur National Forest is part of a large-scale, long-term restoration project (the Southern Blues Restoration Coalition Project) under the Forest Service's Collaborative Forest Landscape Restoration Program. As part of the restoration project, the Canyon Creek area had been scheduled for thinning treatments, followed by the reintroduction of low-severity fire (MNF 2016).

Fire Control Failure?

The Canyon Creek Complex Fire preempted many of the planned restoration treatments, highlighting delays associated with collaborative projects, environmental analysis under the National Environmental Policy Act, and a lack of sufficient Forest Service funding for ecological restoration (Brown 2016). But the investigative reporters focused almost entirely on wildland fire suppression, blaming "poor planning and tactical errors" for a "monster wildfire that could have been tamed" (Gunderson and Sickinger 2016). Setting the theme for the article, the reporters quoted a distraught homeowner: "They should have put this fire out."

That judgment was followed in the article by a litany of complaints about the Forest Service, such as failing to hoard firefighting resources for local use, using excessive caution to protect firefighter safety, and conducting morning briefings instead of fighting the fire (Gunderson and Sickinger 2016). In response, the Forest Service noted that the Pacific Northwest Region was dealing with 88 new fires at the time, including 17 uncontained large fires and 12 new fire starts on the Malheur National Forest alone. Accordingly, all incident management teams in the region were overtaxed and understaffed.

Forest Service Chief Tom Tidwell and Oregon Governor Kate Brown at a briefing on the Canyon Creek Complex Fire on August 19, 2015. Source: NWCG (2016); photo: Lori Iverson, U.S. Fish and Wildlife Service.

Forest Service Chief Tom Tidwell, who came to the Canyon Creek Complex Fire for briefings, later emphasized the difficulty of making wildland firefighting decisions during "a record year for large, hot, destructive, and costly wildfires" (Tidwell 2016). A Forest Service report called the 2015 fire season in the Pacific Northwest "the most severe in modern history from a number of standpoints," including the number of wildfires (3,800) and the extent of the area burned (1.6 million acres (0.6 million ha)) (Blue Mountain Eagle 2016).

Homes Unprepared

Whatever their merits, the arguments on both sides focused on wildland firefighting, with few questions asked about how well prepared homes in the Canyon Creek WUI were for surviving a megafire like the Canyon Creek Complex. For an investigative report that was months in the making, that is surprising because Grant County—where the fire took place—had signed a community wildfire protection plan in 2013 (Jerome 2013).

The countywide plan was designed to encourage individual communities to adopt plans of their own or to become Firewise communities. Whether the community along Canyon Creek had taken corresponding steps is unclear; none were reported (Gunderson and Sickinger 2016), and apparently some homes were unprepared (fig. 2). For example, one homeowner tried to defend his home with a hose until "the pine tree next to the house suddenly burst into flames, sending a ball of super-heated gases under the eaves" (Gunderson and Sickinger 2016). That home, bordered by a combustible pine, went up in flames.

By contrast, the John Day community of Pine Creek, registered in the Firewise Community Program since 2014, survived the Canyon Creek Complex Fire unscathed, with no homes lost (NWCG 2015; Zaitz 2015). The community members had pruned, mowed, thinned trees, and improved local access routes. They had located water sources and set up sprinklers. Before the fire made a run toward their community on August 26, they had evacuated their homes. Upon returning, they found that the fire had bypassed their homes, which engine crews from fire departments in the John Day area could protect by extinguishing spot fires. Every home had survived.

The Firewise success story was reported at the time by *The Oregonian* (Zaitz 2015), the same paper that carried the subsequent investigative report (Gunderson and Sickinger 2016). Yet the investigative reporters made no mention of the Pine Creek story, focusing instead on the Forest Service's supposed failure to prevent the destruction of homes along Canyon Creek.

Figure 2—*Area of dense vegetation and uncleared ladder fuels allows a crown fire around a home. Source: NWCG (2016); photo: Forest Service.*

Safety First

Sensational reporting about "monster fires" notwithstanding, the Canyon Creek Complex Fire was neither unusual nor unexpected, given regional drought and decades of fuel buildups. Canyon Creek was only the latest in a series of 13 megafires in Oregon since 2000 (see the sidebar), several of them much larger than Canyon Creek. The only thing distinctive about Canyon Creek was the number of homes burned.

Extinguishing the fire in the first day or two would have done nothing to alter the explosive burning conditions; it would have only postponed the

Home that is firesafe, with enough defensible space. Source: NWCG (2016); photo: Forest Service.

Megafires in Oregon, 2000–2015

2015	
Canyon Creek Complex	110,261 acres (44,621 ha)
Comet–Windy Ridge	102,089 acres (41,314 ha)
2014	
Buzzard Complex	395,747 acres (160,153 ha)
2012	
Long Draw	557,628 acres (225,664 ha)
Miller Homestead	160,853 acres (65,095 ha)
2011	
High Cascades	(108,154 acres (43,768 ha)
2007	
Egley Complex	140,359 acres (56,809 ha)
2006	
South End Complex	117,553 acres (47,572 ha)
Columbia Complex	109,259 acres (44,216 ha)
2002	
Biscuit	500,068 acres (202,370 ha)
Tool Box Complex	120,085 acres (48,597 ha)
2001	
Lakeview Complex	179,400 acres (72,601 ha)
2000	
Jackson	108,000 acres (43,706 ha)

Source: NIFC (2016).

inevitable. After winds drove the fire out of control 2 days after it started, firefighters did what they normally do on large wind-driven fires: they stopped trying to control the fire and started protecting points of value, such as infrastructure and individual communities, by evacuating large areas and using backfires and burnouts to "herd" the fire around sensitive points. Despite the steep and difficult terrain and the extreme fire behavior—such as multiple fire runs across more than 10,000 acres (4,000 ha) in a single burning period (on August 14, 26, and 29)—nobody was seriously hurt on the fire, a remarkable success; safety is the first priority on any fire.

After burning through the Canyon Creek area on August 14, the fire threatened other WUI communities, yet no more than a handful of homes were lost (fig. 1), partly due to successful point protection by firefighters. And as the fire spread into the backcountry, it burned areas long overdue for a wildland fire, restoring fire to vast areas of fire-adapted forest that desperately needed it—a beneficial effect of any large fire like Canyon Creek.

Lessons Learned

In short, the Canyon Creek fire disaster was not a lesson in suppression gone awry but in WUI fuels done wrong—and done right by the Pine Creek community. Sooner or later, fire-adapted landscapes in places like the Blue Mountains will burn. The best way of protecting the WUI on their outskirts, in Oregon and elsewhere across the country, is for homeowners to take responsibility for altering the fuels in and around

their own homes (Calkin and others 2014; Cohen 2000, 2008, 2010; Reinhardt and others 2008).

Clearly, wildland fire suppression is often needed to protect homes, communities, infrastructure, and other values. But the fire control mindset of so many in the public—*and* in the wildland fire community—is a holdover from a bygone era. Based on wishful thinking about conditions that no longer exist (if ever they did), it distracts from what actually needs to be done: managing fuels within a 100-foot (30-m) home ignition zone so that a home in the WUI can survive even a severe wildland fire (fig. 3).

The community of Pine Creek, registered in the Firewise Community Program since 2014, survived the Canyon Creek Complex Fire unscathed, with no homes lost.

Wildland fire organizations can help by featuring Firewise success stories, acknowledging the corresponding accomplishments, and giving awards. Organizing an event featuring the Firewise community of Pine Creek, for example, might have shifted the focus and changed the story of the Canyon Creek Complex Fire, saving firefighters from undeserved blame. ■

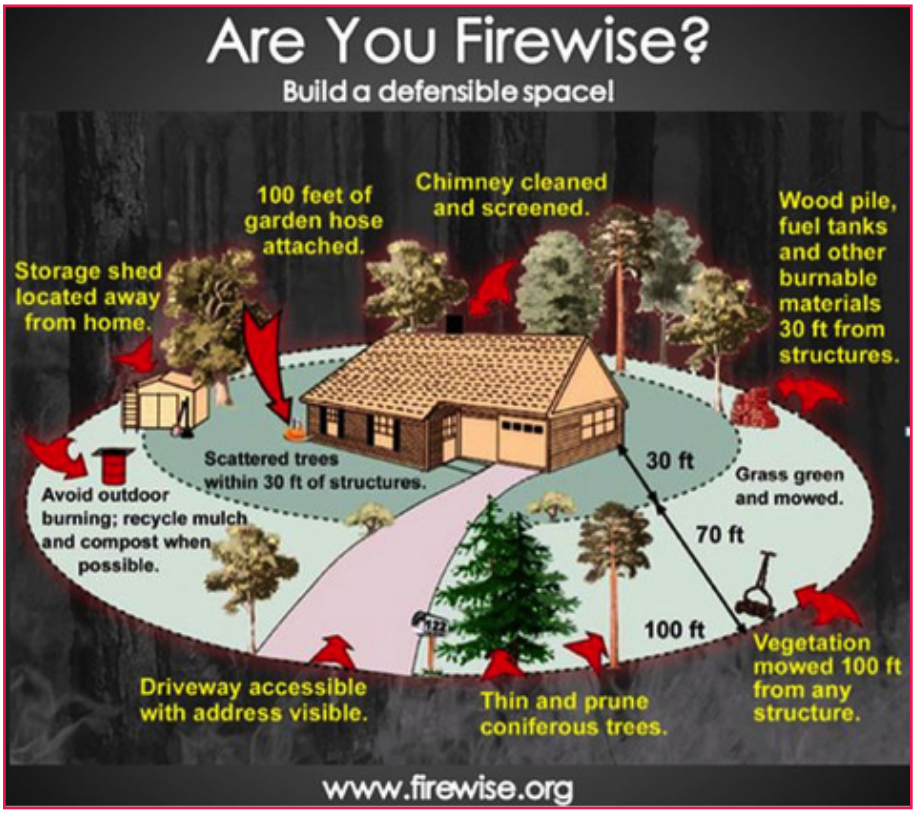

Figure 3—*Measures for managing fuels within a 100-foot (30-m) home ignition zone, as prescribed by the Firewise program. Source: Gabbert (2015).*

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