



Communities in wildfire prone areas can apply a variety of development standards to increase wildfire resiliency: Avoid steep slopes; create a defensible fuel break around the development; cluster lots in areas with lower fuel loads; provide multiple points of ingress and egress, and use ignition-resistant building materials such as metal roofing and cement walls (and avoid wooden decks and siding).



## RESEARCH YOU CAN USE

# FIRE-RESILIENT COMMUNITY DESIGN: A NEW PLANNING SUBFIELD?

**M**Y AUGUST/SEPTEMBER 2016 column was about active living, a subfield of planning that began in 2000 and has matured to the point where dozens of planners have written hundreds of articles on the subject. This month, I am focusing on a new potential subfield that has yet to get much attention from planners—fire-resilient community design.

True, planning scholars are researching climate adaptation (a topic for a future column), which has an obvious link to wildfires as the frequency of large fires is increasing as the planet warms up. But fire-resilient communities have yet to make the list of climate adaptation strategies. Planners, myself included, are researching the costs of suburban sprawl, which also has a fire element since low-density development is encroaching

on fire-adapted ecosystems. But to my knowledge, no one has yet even listed the cost of fire suppression and associated property damage as a cost of sprawl.

One of my sons-in-law, Kevin Maier, has been working as a wildland firefighter since 2001. He was a smokejumper for 12 years and now works for the U.S. Forest Service's Technology and Development branch, with an aim to provide practical solutions to help the Forest Service do its work more safely and efficiently. Kevin and I have had many lively conversations about fire, as my grandchildren played at our feet. His perspective is so different from the popular view of wildfires that I suggested we coauthor this column.

### Inconvenient truths

Wildfire is frequently in the news these days, and the stories are almost always

negative. Within society's current wildfire suppression narrative, wildfires are the villain—burning homes, destroying resources, and threatening lives. An entire culture of professional wildland firefighters has been created in response. It is a multibillion-dollar war against wildfire. In fact, the portion of the U.S. Forest Service's annual budget that is spent on controlling wildfires has gone from 13 percent in 1991 to 52 percent today. Kevin and I both foresee a day, given climate change, when we lack the resources to fight many large wildland fires.

However, there are other wildfire narratives. For one, wildfire is an essential component of the earth system, redistributing nutrients and supporting the lifecycles of countless species, including humans. Many of the fire risk areas in North America were historically fire-

adapted ecosystems, but have now been thrown out of balance by 100 years of fire exclusion.

It is an “inconvenient truth” that average annual global temperatures have risen each of the past three years (2016 will replace 2015 as the hottest year on record, which replaced 2014). As a result, Western fire seasons are now averaging two months longer than the historic norm. In North America, the 2015 fire season set a new record for total area burned—10.1 million acres.

Another inconvenient truth is that human communities are sprawling farther into forests and rangelands every year, creating areas of intermediate population density called the Wildland-Urban Interface. Most accidental human-caused ignitions occur in these WUI areas, where flammable vegetation meets residential development.

### Preliminary research

For this month’s column, I have increasingly drawn on articles from journals other than urban planning’s mainstays, the *Journal of the American Planning Association* and the *Journal of Planning Education and Research*. This month, my journal of choice is *BioScience*, the furthest afield so far.

A quick aside: My active living column in August/September 2016 featured the *Journal of Transport and Health*, which though new, already has an impact factor over 2. A journal’s impact factor is a measure of how frequently its articles are cited. The urban planning journal with highest impact factor right now is *Landscape and Urban Planning*, with an impact factor of 3.6 (featured in this column in August/September 2014). *BioScience* has an impact factor over 4. If planning scholars want to increase their impact on scholarship and society, they may want to look beyond our traditional journals.

In February 2016, *BioScience* published “The Science of Firescapes: Achieving Fire-Resilient Communities” by Alistair Smith and too many coauthors to name. They recognize this “wicked” wildfire

problem and provide new insight on how to reconcile these disparate wildfire narratives. A paradigm shift is needed, they say, “from a system where communities are predominately passively affected by fires to one where they actively work hand in hand with land management planners, architects, and agencies to coexist with wildland fires.”

Fire requires fuel, heat, and oxygen to burn. Simply put, keeping homes out of the fuel category will preclude them from burning. At the “firescape” level, this requires a careful examination of fuel type, local weather patterns, and topography, because these factors are very good predictors of potential fire behavior.

There is no one-size-fits-all solution. Ignition-resistant building materials are available (metal roofing, cement walls, double-paned windows, etc.), and are key for achieving fire resilience. Also, important is careful attention to fuel-free areas, or “defensible space,” around homes and communities; xeriscaping is ideal here, especially into a future of water-use restrictions. Many communities in wildfire-prone areas are already using these principles to transform into “fire adapted communities” (see PAS Report 529/530, *Planning for Wildfires*, [planning.org/publications/book/9026859/](http://planning.org/publications/book/9026859/)), but not nearly enough to have an impact.

What to call this new planning sub-field? Fire-resilient or fire-adapted community design is one possibility. There is even an organization by that name with its own logo ([fireadapted.org](http://fireadapted.org)). For a while in the 1970s through the 1990s, planning scholars were interested in crime prevention through environmental design. The subfield even had its own acronym, CPT-ED. How about fire prevention through environmental design, or FPTED? It has a ring to it.

—Reid Ewing and Kevin Maier

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### LETTERS

#### Vacant lots . . . for play

I found David Silverman’s article (“It’s Time to Rethink Temporary Use,” July 2016) very interesting. In addition to the short-term uses he mentioned (mobile food vendors, festivals, flea markets, gardens, etc.), I suggest adding recreational uses to the list.

Vacant lots or underused parking lots may be used temporarily for recreation by setting up sports equipment like basketball hoops, soccer goals, and portable skate ramps. Underserved communities in south Los Angeles are home to numerous vacant or underused parking lots, some of which may be used as temporary recreation areas in the evenings, on weekends, or whenever they are not needed for their primary use.

Obviously, to make this happen, we would have to overcome various challenges: temporary use regulations, coordination, logistics, and liability (see my article, “It’s OK to Play in the Streets” at [cp-dr.com/articles/node-3124](http://cp-dr.com/articles/node-3124)). But this should not stop us from trying. After all, given the link between public health and the availability of recreational options, it is critical that public agencies responsible for parks and recreation look for creative solutions, even if they may be temporary.

—Clement Lau, AICP

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### LIBRARY

#### How much did Sandy matter?

Hurricane Sandy’s trail of destruction from Cuba to Connecticut “harmed many, reinforced concerns for some, and transformed a few”—but those few have had little leadership from government or other institutions to help them understand and act on it as a transformative event.

That’s the one-sentence summary of the anthology *Taking Chances: The Coast After Hurricane Sandy* (2016);