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Reducing risk in a fire-prone state

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The onset of this year's fire season will no doubt be accompanied by a firestorm of finger pointing. Some commentary is quick to pit environmental safeguards against community protection, setting up an either/or situation and ignoring years of scientific research that proves you can have both. The Governor's Blue Ribbon Fire Commission last year stated the real problem in a very straightforward way; "California is a fire-prone state." The question is not how to prevent wildfire, but how to best manage the risk and reduce the severity when it occurs. One thing is clear, finger-pointing won't get the job done.

Forest scientists widely agree that the most hazardous fuels in the forest are surface fuels - dry grass, pine needles, tree limbs and brush. Once they catch fire, they can create enough heat to scorch trees to a height of 150 feet. Over time, these fuels have dramatically increased in many California forests. Most wildfires spread quickly as a result of these fuels, and they should be the first priority of any fuels management plan.

Because fire behavior is contingent upon local conditions, a "one-size-fits-all" prescription is not the answer. However, the focus must be on reducing those fuels most important to ignition and spread of wildfire. They are, in order of importance, surface fuels, and "ladder" fuels - small diameter trees and saplings that carry fire into the tree canopy. Large, older trees should remain because they are resistant to fire and maintain favorable moisture conditions on the forest floor.

Indiscriminate logging is not the answer to reducing wildfire risk. Logging often increases fire danger by leaving more combustible material on the forest floor. Loss of tree canopy encourages the growth of brush, increases wind speed and air temperature and decreases the humidity in the forest, making fire conditions even worse.

Decades of fire suppression, grazing, and logging have changed the condition of many forests, causing large wildfires to occur more frequently, burn hotter, and spread farther and faster than they might naturally. These practices have left some of California's forests primed for high severity wildfires. What forest managers did not understand at the time was that in the long-term, disrupting the natural fire regime made forests more flammable and that careful use of fire was a necessary part of the mix to keep California landscapes fire resilient.

Hazardous fuel reduction cannot be about producing fireproof forests; that is an unrealistic goal. We need to make better decisions about building in fire-prone areas to protect public health and safety. When homes are built in places vulnerable to fire, homeowners need to shoulder the responsibility for making their property defensible. In terms of forest management, the goal should be to target the most dangerous fuels in the forest, and protect people and their homes.

State and federal governments must prioritize fire management dollars for the wildland/urban interface where people live, and not in remote areas where there is no threat to private property. Planning based on these principles cannot bring back the lives, homes and communities lost in years past. It might, however, make a difference in the future.

Norman Christensen is professor of ecology and founding dean of the Nicholas School of the Environment and Earth Sciences at Duke University. A native of Fresno, he has written widely on and served on numerous advisory panels on the ecology and management of wildfire, including the Sierra Nevada Ecosystem Project, a cooperative research agreement of the Forest Service and University of California.

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