

More Americans Building in Fire-prone Natural Areas

by NAMIC

As Americans build more homes in natural wild land areas across the country, they face increased levels of fire risk, according to a new national study by Colorado State University researchers.

"The wild land-urban interface has grown to an area larger than the state of California, placing an estimated 12.5 million homes at risk of high severity wildfires," said Dave Theobald, a landscape ecologist at Colorado State University.

The wild land-urban interface, or WUI, is the area where homes and urban sprawl press against wild lands.

Since the 1970s, expansion of rural residential development at the WUI has grown into a major concern among natural resource managers and is a primary factor influencing the management of national forests.

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"The current approach to managing the WUI is reactive and is regarded mostly as a public lands problem. Yet even in the 'public-land states' in the West, only 35 percent of the WUI is publicly owned and only 10 percent nationwide is publicly owned," Theobald said. "This means that public dollars may be increasingly spent protecting houses on private land in the WUI."

The majority of WUI nationwide - 89 percent - is dominated by private land owners.

Theobald and Romme found that the WUI in 2000 has expanded by 52 percent since 1970, and they expect that it will continue to expand by at least another 10 percent by 2030.

The researchers defined three wildfire hazard classes based on vegetation type in their study. Vegetation types identified as high severity indicate that fires burn at high intensity, often through shrub crowns, and are difficult to contain or suppress. The low severity classification indicates most fires burn at relatively low intensity through surface fuels, with little potential to spread into tree or shrub crowns, and is reasonably easy to contain or suppress.

A third class, which has been identified as high severity (historically low or variable) - applies to vegetation types in which fires historically were of low or variable intensity but have recently burned at high intensity because of a century of fire exclusion.

Nationwide, roughly 35 percent of the WUI occurring in wild land vegetation types is considered to be low in wildfire severity, 17 percent in high severity, and 48 percent in high severity (historically low or variable).

Potential wildfire treatments can be considered restoration for forests with high (historically low or variable) severity such as ponderosa pine forests, while treatments in high severity forest types such as lodgepole pine can only reasonably be considered mitigation. In Colorado, treatments in roughly 28 percent of the WUI would be considered restoration, while 50 percent of the WUI would be considered mitigation.

The study results also reveal that the WUI occurs disproportionately in the eastern United States. Sixty percent of the country's land mass is in the East but the region has 83 percent of the WUI.

Eleven Western states occupy about 40 percent of the continental United States, but only contain about 17 percent of the total WUI. However, forests in the West are more likely to experience devastating fires because more than half of the West's WUI is in the high severity class, whereas only 10 percent in the East is classified as high severity.

Colorado, along with California, has suffered severe wildfires in the past, and the study results show that nearly 50 percent of each state's WUI is within high severity areas. More than three-quarters of Colorado's WUI is within high (or variable) severity zones.

Western states, including Colorado, had the greatest proportion of WUI expansion from 1970 to 2000. Researchers predict that Colorado, Nevada, Arizona, Montana, Utah, and Idaho will likely expand the most from 2000 to 2030.

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