ABSTRACT

The expansion of low-density residential development into wildlands places a variety of stresses on Earth's natural systems. Urban sprawl is one of the many factors contributing to water shortages, higher resource costs, and increasingly destructive storms, all of which fit under the umbrella of global climate change (Gencer 2013). In California, it is wildfires that capture the headlines during the summer and fall months. With wildfires becoming a common occurrence within the California landscape, it is crucial that local government and agencies work to create proactive approaches to mitigate the severity of these events. The areas of chief concern occur where structures and infrastructure are intermixed or adjacent to wildland fuels; this area is known as the wildland-urban interface (WUI). Mapping the WUI is a useful resource for assessing which communities and developed areas are most vulnerable to wildfire. County cadastral data was used to assess the spatial extent of the WUI within Lassen County, California. This method is a large improvement to past studies because it eliminates the need to estimate the areas where housing is located. California Department of Forest and Fire Protection (CAL FIRE) Fire Hazard Severity Zone Maps were then overlaid to identify the areas in most need of emergency planning and preventative action. Results show that in 2015, the spatial extent of Lassen County's WUI was 1,016.67 sq. km. (392.54 sq. mi) and accounted for 101,666.68 hectares (251, 222.83 acres) or 8.32% of the study area. The WUI area included 5,456 residential structures (49.51% of the total housing), which was a 13.22% increase and a 1.89 percentage point increase from 2000. 81% of the WUI occurs on private lands.