

Mapping the Wildland-Urban Interface and Projecting its Growth to 2030



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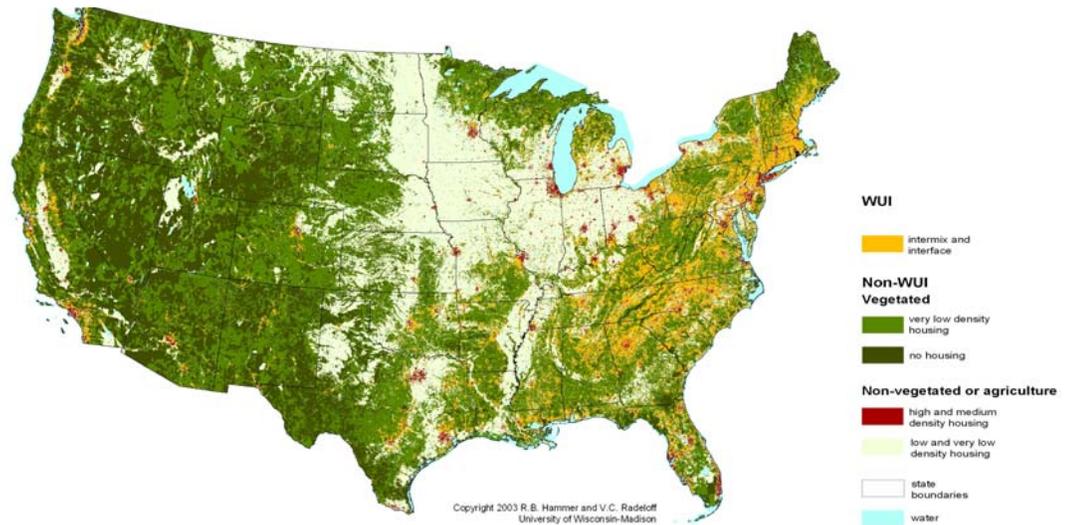
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Wildland-Urban Interface 2000



The Wildland-Urban Interface (WUI), defined as “the area where structures and other human developments meet or intermingle with undeveloped wildland,” is a magnet for development. Housing growth in the U.S. has outpaced population growth for decades, and the most popular building sites are those near natural amenities and public lands. **Between 1990 and 2000, 60% of all new housing units built in the US were located in the WUI.** This trend has major significance for fire suppression and use; more people, homes, and infrastructure are at risk than ever before. As the WUI grows, fire fighters have more people and property to protect. Where fire use is integral to resource management, the growing number of houses and residents adds complexity to managing smoke and fires. This fine-scale map of the WUI can improve the Federal government’s ability to coordinate and prioritize hazard mitigation projects and to assist states and communities in their fire use, prevention and suppression efforts. **This project maps, analyzes and summarizes the size and extent of the WUI in the lower 48 states for the period 1940 to 2030.** We combine U.S. Census data and the National Land Cover Dataset (NLCD) to map and characterize the WUI at high spatial resolution across the coterminous U.S. Our methods for estimating housing density at a sub-county scale over a long time period (1940-2030) allow us to locate the WUI and to determine how many homes and how much land lies within the WUI. As the 2000 map (above) shows, the WUI is now extensive, covering 9% of the land area in the lower 48 states, and encompassing 38% of all homes. Major WUI areas are located along the West Coast, the Colorado Front Range, southeast Texas, the Great Lakes States, and across the southeast. WUI is common at the fringe of major metropolitan centers and also in rural areas rich in natural amenities. **The WUI map is designed for integration with other GIS data** such as fire regime condition classification and wildland fuels being compiled for the LANDFIRE project. Because the WUI map is based on census (not sample) data, fine-scale zoom-ins are fully supported. By itself, the WUI map does not indicate fire risk; some WUI areas and homes are at risk from wildland fire, some are not. The WUI map provides land managers essential social data to form a scientific basis for comprehensive fire management planning. WUI maps, data, statistics, and an interactive map server are available on the web, at http://silvis.forest.wisc.edu/projects/WUI_Main.asp.