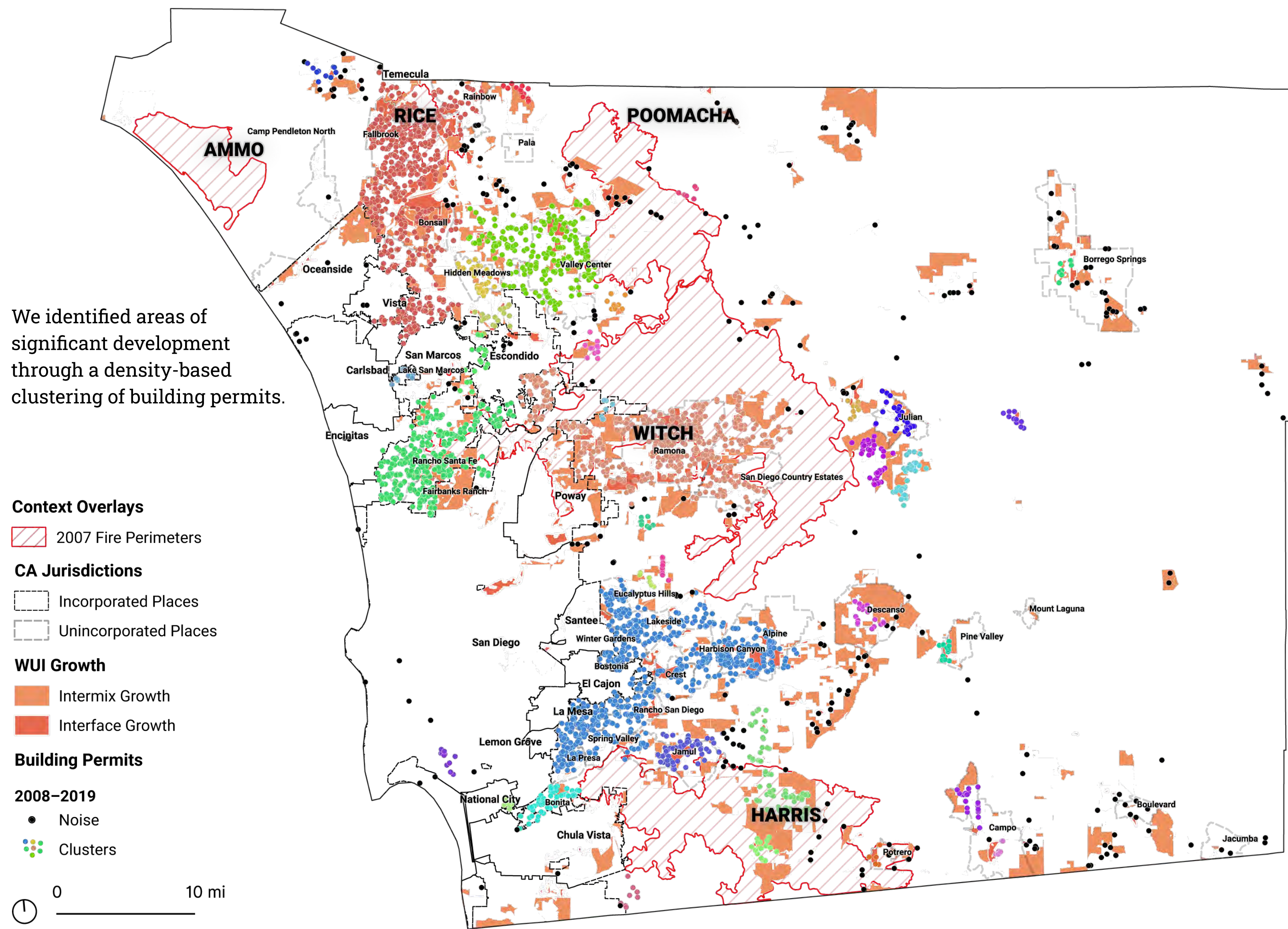


A “Wicked Problem”: Post-Wildfire Restructuring in Exurban San Diego

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Did recovery after the 2007 San Diego County Firestorm create new spatial compositions of development and social structures?

As climate change causes wildfires to increase in frequency and severity, building and community patterns become a critical policy concern. This study identified that new building permits collocated with the Wildland Urban Interface (WUI), which is expanding toward the perimeters of the 2007 San Diego County Firestorm—one of the most destructive wildfire seasons in San Diego history.



We identified areas of significant development through a density-based clustering of building permits.

How is San Diego County planning for future wildfires?

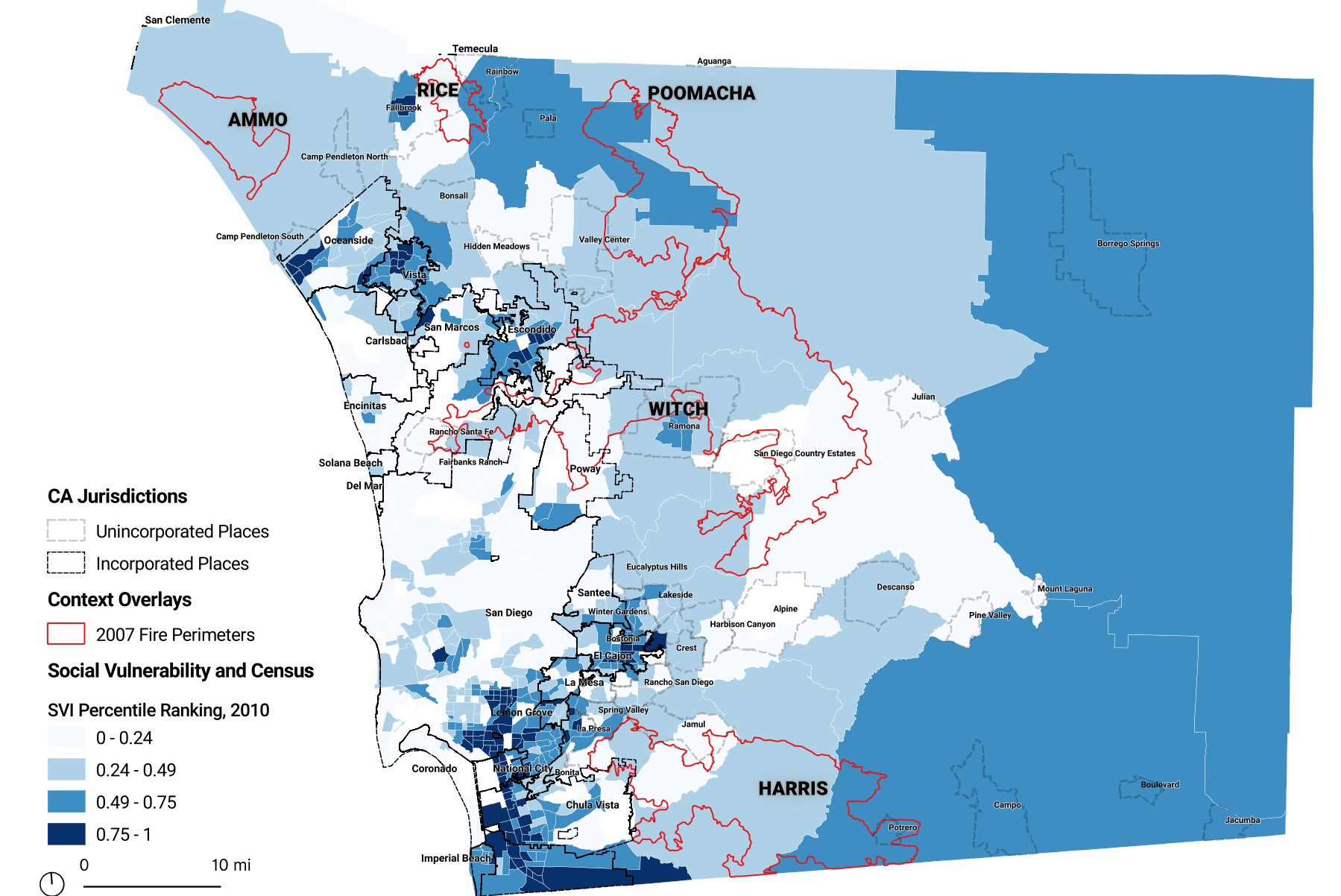
Although the state has made attempts to regulate sprawl, land use is decentralized, giving private landowners and local communities decision power. Regulation is focused on creation of “fire-adapted communities” in which use of fire-resistant building materials is used to help existing communities and infrastructure withstand wildfire damage. Shelter-in-Place (SIP) seeks to create defensible spaces and provide alternatives to evacuation or relocation.

This “stay-and-defend” approach has effectively privatized disaster prevention and management by shifting fire safety responsibility to homeowners and private contractors. Regardless of its effectiveness, its function as a replacement for public fire protection has major implications for sprawling development, thus creating a “wicked problem”: a positive feedback loop where the solution to the problem perpetuates other challenges.

Social Vulnerability in San Diego County

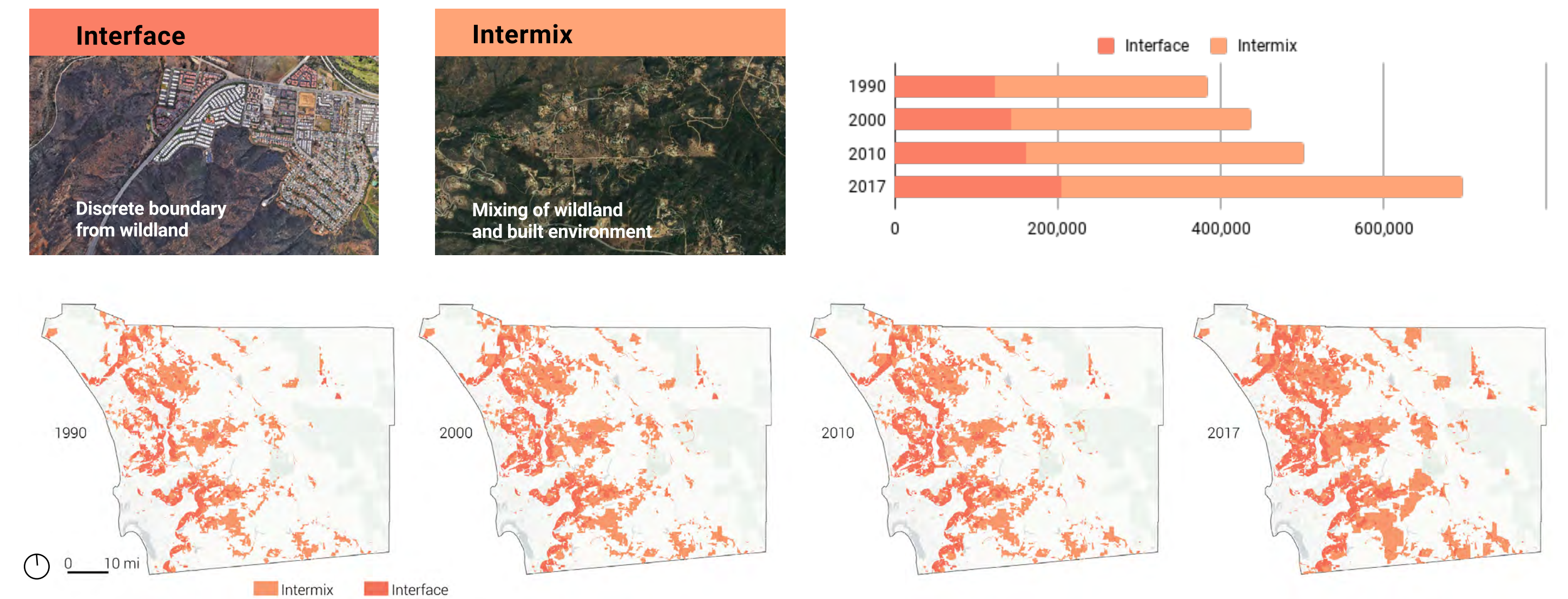
THE CENTERS FOR DISEASE CONTROL’S SOCIAL VULNERABILITY INDEX (SVI) is a metric computed from demographic data. It is based on themes: socioeconomic status, household composition, race/ethnicity/language, and housing/transportation. SVI is used to identify vulnerable populations that require attention in disaster preparedness, response, and recovery.

Ramona, Escondido, and Chula Vista have the highest social vulnerability in San Diego County. They are all located near the 2007 fire perimeters, in areas of high wildfire hazard.



Measuring Expansion of the Wildland-Urban Interface

THE WILDLAND-URBAN INTERFACE (WUI) is known as a zone of transition between wildland and human development and is the area where wildfires pose the greatest risk to people due to the proximity of flammable vegetation.



Research Methodology

