

# Anthropogenic Refugia in the Wildland-Urban Interface: A Case Study



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## Background

Wildfire preparation and response is a growing topic in the western US. Season after season brings intense wildfires closer and closer to home for many people, particularly those living in the wildland urban interface (WUI). Many of these residents find themselves unprepared to evacuate or are notified too late.



## Knowledge Gap

While it is well known that fuel treatments can be used to create defensible space in the WUI, no research has been done to formally identify preexisting areas on the WUI landscape that don't readily burn. The term "**anthropogenic refugia**" is used here to describe these areas.



## "Anthropogenic refugia"

borrowed from the ecological term "fire refugia," defined as places on the natural landscape that either don't burn or burn less severely than surrounding areas. Anthropogenic refugia can be specifically defined as places where WUI residents can go in the case of a wildfire when evacuation is not an option.

## Methods

In this study, potential anthropogenic refugia will be identified using high-resolution post-fire **satellite imagery** of areas affected by the Holiday Farm Fire of 2020. Fuels in and around the potential anthropogenic refugia will be identified by satellite imagery and researched for parameters relating to human survivability.

## Desired Outcomes

Identifying and ranking these anthropogenic refugia will provide a basis for future research hypotheses. This research initiates the filling of a knowledge gap in community wildfire preparedness and will pave the way for similar studies, all contributing to an emerging field occupying the growing grey area between field and urban forestry.