

REFLECTING ON

BASTROP

With over 34,000 acres burned and losses totaling \$325 million, the Bastrop County Complex Fire remains the most destructive wildfire in Texas history. What can communities around **Texas** and the country learn from **Bastrop**?

by Wesley Miller and N. Lee May



For 26 days in September 2011, the Bastrop County Complex Fire (BCCF) burned over 34,000 acres, destroyed more than 1,600 structures, and resulted in two fatalities. As of 2025, it remains the most destructive wildfire in Texas history, with insured losses totaling \$325 million.

Most of the destruction occurred within a forested suburban landscape that grew substantially between 1990 and 2010, a period when Bastrop County, located in the Austin-Round Rock Metropolitan Statistical Area, doubled in population to almost 75,000. Much of the land within the fire perimeter was—and remains—classified as wildland-urban interface (WUI), a zone of transition between unoccupied land and human development where structures and people intermix with wildland that can fuel a fire. These zones carry complex challenges in terms of wildfire suppression and fuel management, as demonstrated by the recent wildfires in Southern California. The WUI carries an increased likelihood of ignition as well as higher rates of building loss during a wildfire when compared to other landscape types, such as denser development or uninhabited natural land.

Over 87 percent of Bastrop County residents live in the WUI as of 2022, according to a county report. Despite the dangers associated with this landscape, this fact matches a trend seen in post-wildfire rebuilding throughout the United States.

Communities generally engage in the rapid rebuilding of destroyed structures in the aftermath of a disaster, often without large-scale strategic adaptation. Most recovery efforts focus on a “return to normal” following a wildfire, with “normal” being defined

as the pre-disaster community and environment. Therefore, the spatial arrangement of neighborhoods following a destructive fire is rarely modified, despite its important effect on wildfire vulnerability.

Instead, the most common community adaptations focus on building material standards and lot-scale vegetation management. A comprehensive reduction of wildfire vulnerability in a WUI community, however, would require modification of the spatial arrangement of buildings, vegetation, and infrastructure—actions that would transform these zones into a less flammable environment. Few, if any, examples of WUI redevelopment exist, and instead, the WUI is the fastest-growing land-use type in the conterminous U.S.

Single-Family Home Rebuilding in the Fire Perimeter, 2011-21

The 2011 Bastrop fire affected 6,964 lots, representing 12.6 percent of all Bastrop County lots at the time. Of these, 2,958 lots (42.5 percent) were developed residential or commercial/industrial, including 2,139 (72.3 percent) as single-family homes. Single-family and manufactured home lots made up the vast majority (98.6 percent) of all destroyed residential lots, with single-family homes accounting for over 70 percent. Of the single-family home lots within the perimeter, 993 (46.4 percent) lost at least one building.

Most single-family home rebuilding occurred in the two years following the fire. By 2013, there were 459 single-family homes rebuilt on destroyed single-family home lots, which accounted for 46 percent of the 2011 stock and represented 75 percent of the total rebuilding from 2012 to 2021. From 2014 to 2021, the rebuilding of homes on destroyed single-family



appeared annually from 2013 to 2021 on undestroyed, vacant lots within the fire perimeter. By 2018, the total number of single-family home lots within the fire perimeter surpassed the 2011 total, and by 2021, there were 2,471 single-family home lots, representing a 15.5 percent increase over the 2011 stock.

Bastrop County Single-Family Home Transactions, 2011-21

Location and destruction status influenced the likelihood of a single-family lot being sold in Bastrop County from 2011 to 2021, especially early on. In 2012, single-family home lots inside the fire perimeter, regardless of destruction status, were over twice as likely to be sold than those outside. Of these, single-family home lots that suffered the destruction of at least one building were over 2.5 times more likely to be sold than those within the fire perimeter that did not.

By 2021, 47.8 percent of the destroyed lots had been sold at least once, compared to 37.9 percent of surviving lots within the fire perimeter and 31.9 percent of lots outside of the perimeter. From 2013 to 2021, with the outlying 2012 year removed, destroyed and surviving lots within the fire perimeter were still 1.18 times more likely to be sold than those outside. When comparing only surviving single-family home lots with those outside from 2012 to 2021, surviving single-family home lots were 1.19 times more likely to be sold, and from 2013 to 2021 they were still 1.17 times more likely to be sold. Even if all the structures on a lot survived the fire, simply being located within the fire perimeter increased its likelihood of being sold.

The BCCF occurred in the middle of a booming Bastrop economy, and the county

home lots slowed considerably, averaging less than 20 per year. New development outpaced rebuilding during this period due to the greater number of vacant lots available compared to destroyed single-family home lots.

The reconstruction of homes on destroyed single-family lots occurred at a disproportionately higher rate when the quantity of available lots was factored in. This likely represents a substantial number of residents rebuilding their destroyed homes in the first few years, while in later years it may reflect a preference for destroyed lots over vacant lots for construction because destroyed lots can contain serviceable existing foundations, driveways, utilities, and/or other infrastructure that reduce the cost of construction. This suggests that ease of construction seems to offset residents' fears for building on a lot that has been shown to be vulnerable to wildfire destruction.

New single-family home development within the fire perimeter continued alongside the rebuilding of destroyed lots, and today there are more homes within the fire perimeter than there were at the time of the fire. An average of 81 new single-family home lots



continued to grow during the entire decade of observation following the wildfire. While lingering effects of the Great Recession were still palpable, Bastrop was not experiencing economic contraction in 2011, and, given that the fire destroyed only a few buildings on industrial or commercial lots, the disaster did not abruptly eliminate thousands of jobs. This may show that the increased post-fire sales transactions were a case of residents moving to avoid future disaster, choosing to divest, or lacking the means to rebuild.

Growing Safely in a Flammable Environment

Growing WUI communities that rebuild after a wildfire like Bastrop County—with a greater number of single-family homes in a near-identical spatial layout—are likely to suffer from future destructive wildfires unless additional mitigation measures are implemented. Most effective would be a shift in residential construction from WUI to higher density development within Bastrop's urban core, which suffered little damage in the fire and could still efficiently satisfy the growing community's housing needs. If done in conjunction with urban investment, converting large WUI developments into more open farms, ranchettes, parks, or managed wilderness areas would lower the likelihood of wildfire ignition, frequency, and destruction, while still accommodating housing and development needs. Fewer landowners in the open spaces would also increase the feasibility of using prescribed fire to manage fuel loads.

Accomplishing such a transition, however, is difficult. Many residents prefer to live on large, vegetated suburban lots

and reject new development in their community. Legislative barriers also prevent such an overhaul, despite its effectiveness at wildfire risk reduction.

If the WUI is to remain, property-scale risk reduction methods, such as roof and gutter maintenance, the removal of vegetation near structures, the use of noncombustible construction materials, and the installation of ember-proof exterior vents, are essential. Importantly, Bastrop County communities could consider joining in the National Fire Protection Association's Firewise USA program, which has been shown to mitigate property loss during wildfire compared to other communities. **TG**

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