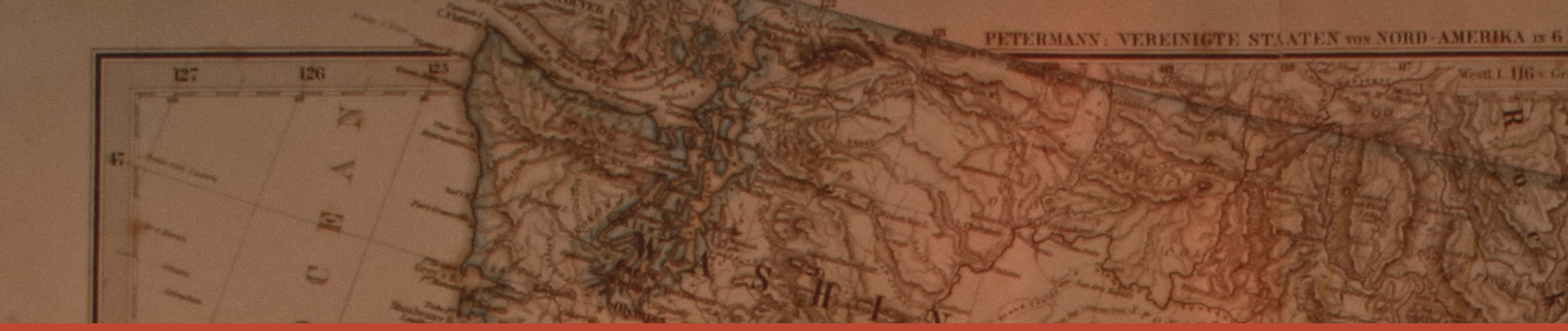


LIVING WITH WILDFIRE

Vulnerabilities and Readiness Across the Western United States

RESEARCH REPORT

Insurance Institute for Business & Home Safety
National Fire Protection Association® (NFPA®) Wildfire and Research Divisions
Verisk Analytics, Inc.

October 2023

CONTENTS

INTRODUCTION

Wildfire disasters occur when wildfire flames and embers enter communities and destroy hundreds or thousands of homes. Multi-billion-dollar property losses in single wildfire events have become recurrent in the American West over the past three decades. An estimated 45 million residential buildings across the US are at risk of destruction from wildfires. This is a result of a combination of factors including:

- Historic population growth
- Unregulated building in wildfire-exposed areas
- Overgrowth of forests and rangelands
- The effects of climate change

These disasters affect not only lives and property, but the safety and effectiveness of the fire service, the ability of businesses and local governments to recover, and the insurance industry's ability to provide a financial safety net that makes it possible for people to rebuild their lives and livelihoods.

The Insurance Institute for Business & Home Safety (IBHS), in collaboration with the National Fire Protection Association (NFPA) and Verisk, examined the vulnerability of communities in the western United States and explored measures of wildfire readiness in and around the wildland-urban interface (WUI) at the state and county level. While wildfires burn regularly across most of North America, the regions west of the Great Plains generally experience larger wildfires of higher intensities, with more risk to the built environment. The results presented in this report suggest that many communities in this region are both vulnerable and unprepared.

Key Findings

- Few states and counties with the greatest risk of wildfire disasters are using sound regulatory approaches backed up by consistent enforcement. Outside of California and Utah, there are no enforced, statewide codes addressing wildfire exposures to residential and commercial property; code use and enforcement at the local level remains limited.
- The separation of wildfire safety elements from traditional building codes and the absence of clear guidance on how such elements can be integrated into building codes has resulted in limited use by state and local officials.
- A few local jurisdictions have taken proactive approaches across a range of wildfire safety concerns, but they stand in sharp counterpoint to the majority of counties and local communities that largely fail to address wildfire risks to life and property in a comprehensive manner.
- Despite incentives to financially support wildfire mitigation and response capabilities in areas adjacent to national forests and rangelands, one in four high-risk counties studied had no Community Wildfire Protection Plans (CWPPs). Seventeen percent of the counties studied had not updated their plans in over ten years.
- Data on fire service capability, response, and outreach activities in the wildfire arena is difficult to obtain and is highly variable in its form. These inconsistencies make it difficult for comparison or evaluation of the effectiveness of these activities in a meaningful way.

- Local fire departments serve as a vital and trusted communications link for communities to understand how to reduce risk. However, support for inspection and outreach programs is highly variable across the West because local fire departments often lack both trained staff and financial resources.
- There is no correlation between the amount counties spend on wildfire-related activities and the use of WUI codes or community wildfire preparedness plans in those counties, based on Verisk's county-level analysis. Put simply, the investment of public dollars does not necessarily equate to strong codes or planning efforts.

BACKGROUND

For decades, wildfire was viewed as a risk to just a small percentage of homes located in rural communities, limited in both severity and geographic reach. The US population growth between 1990 and 2000 drove significant development in Western region[1].

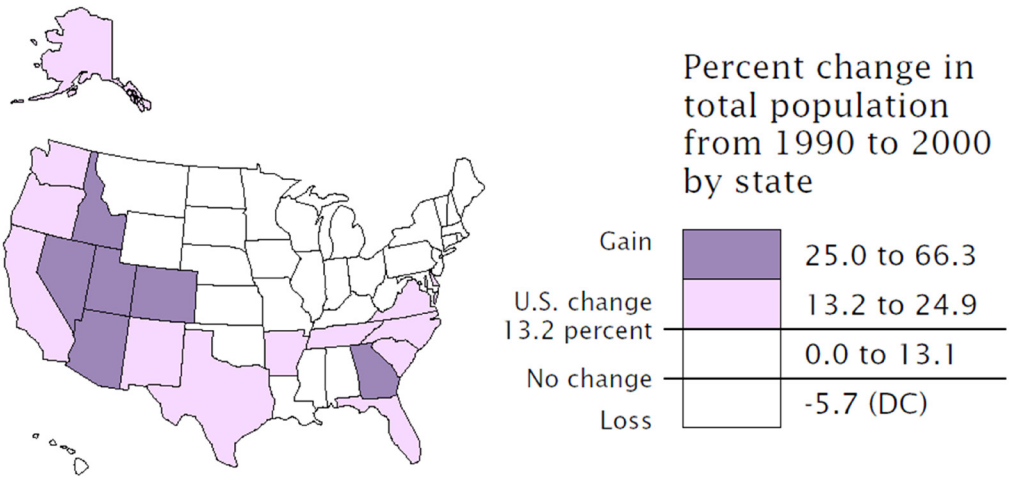


Figure 1: US population gains by state from 1990–2000 (source: US Census Bureau)

This rapid development occurred in most locations without the benefit of wildfire codes and standards. The development of model building codes proceeded with few provisions intended to halt ignitions on the exterior of structures, and little-to-no consideration for managing fuels around a structure.

Local jurisdictions rarely viewed home vulnerability to wildfire threats with a comprehensive approach to both the structure and its surroundings. This is reflected in the common situation today of a divided local authority on these issues, with one governmental body responsible for regulations concerning the structure and another responsible for fuel management around the structure.

However, the prevailing wisdom concerning the severity and scope of wildfire risk has been proven wrong. Figure 2 shows wildfires across the US from 1910-2021, illustrating the risk faced by states across the Western US. During the last three

1 Perry, M. J., & Mackun, P. J. (2001). Population Change and Distribution 1990 to 2000 Census 2000 Brief. Washington, DC: US Census Bureau.

decades, the situation in America's western regions exposed to wildfire has changed dramatically. Across the American West, wildfires with the most impact to lives and property have been those that spread into residential communities, even suburban subdivisions and urban corridors. From the Tunnel Fire in 1991 (a.k.a. Oakland Hills Fire), to the 2003 and 2007 conflagrations in San Diego County, the 2017–2018 Wine Country Fires, the 2018 Camp Fire, and the 2021 Marshall Fire, each of those wildfires spread from wildlands into developed areas.

According to US Census data, the population growth of 32.7 million people between 1990 and 2000 represents the largest census-to-census increase in American history (Perry & Mackun, 2001). The national percentage change of 13.2% masks the regional variability of this growth, with a nearly 20% increase in the West, and a 17.3% increase in the South during the 1990s.

Continued property development into areas susceptible to wildfire, coupled with an increased frequency and longevity of droughts, increases the potential for catastrophic losses. The period from 2017–2018 saw $33 billion dollars in wildfire-driven loss, putting this peril on par with landfalling hurricanes and severe convective storms. The Marshall Fire, late in 2021 exceeded $2 billion dollars in damage, with nearly $230 million of those losses in Louisville, Colorado.

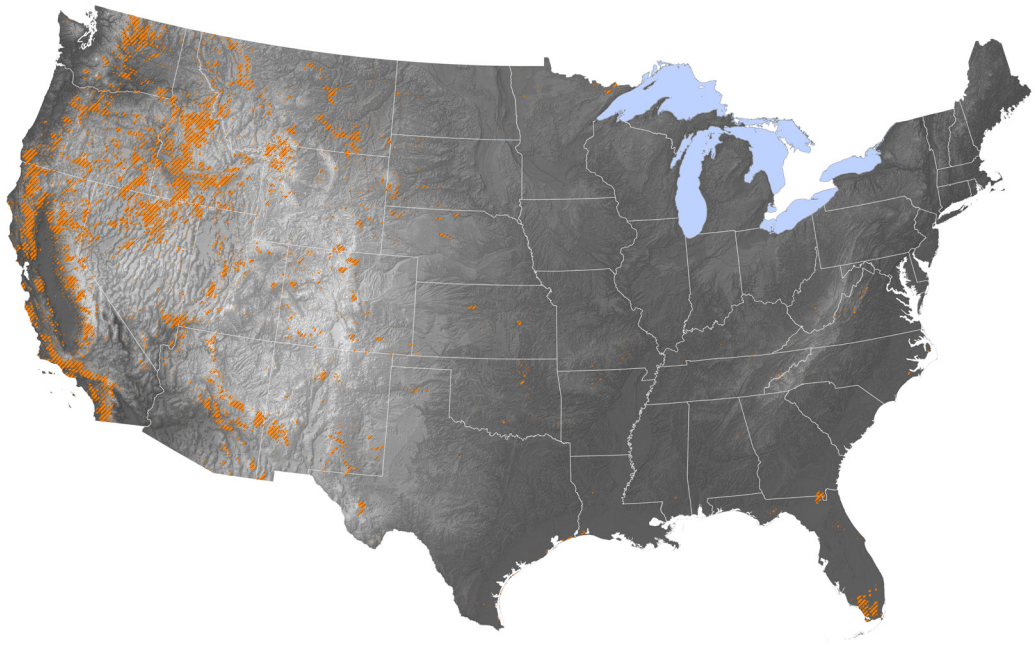


Figure 2: Map of all wildfires (orange-hatched) across the lower 48 states from 1910 to 2021[2].

2 Data source: National Interagency Fire Center

METHODOLOGY

To assess local as well as state-level wildfire readiness, IBHS, NFPA and Verisk selected high risk counties for each of the thirteen western states. To select the analyzed counties, the authors used Verisk's FireLine® analysis to identify the number and percentage of housing units that fell into the Extreme or High wildfire risk categories for each county selected from the thirteen western states.

FireLine® helps insurers effectively assess wildfire risk at the property address level with detailed, current information based on advanced remote sensing and digital mapping technology. The tool examines direct exposure to damage from wildfire burning, including property-specific scores that reflect the following key risk components:

- **Vegetative fuels**
- **Terrain and slope**
- **Road access**

FireLine® also identifies California properties located in Special Hazard Interface Areas–risks exposed to wind-borne embers. FireLine® Special Hazard Zones identify smoke and ash damage, as well as urban conflagration exposure in the Western United States.

For each state, counties were stratified and ranked by the total number of housing units in the two risk categories, then by the percentage of housing units that were in the High or Extreme risk categories. Using both criteria, the top 10 most at-risk counties were identified. From these two lists, the two counties in each state that spent the highest and lowest per capita on code enforcement activities were selected for analysis [based on Building Code Effectiveness Grading Schedule (BCEGS)]. The BCEGS program evaluates a community's adherence to building code enforcement across three key domains:

- Code administration
- Review of plans
- On-site inspections

As discussed elsewhere in this report, wildfire mitigation and response activities and spending on these activities was highly variable despite the similar risk categorization.

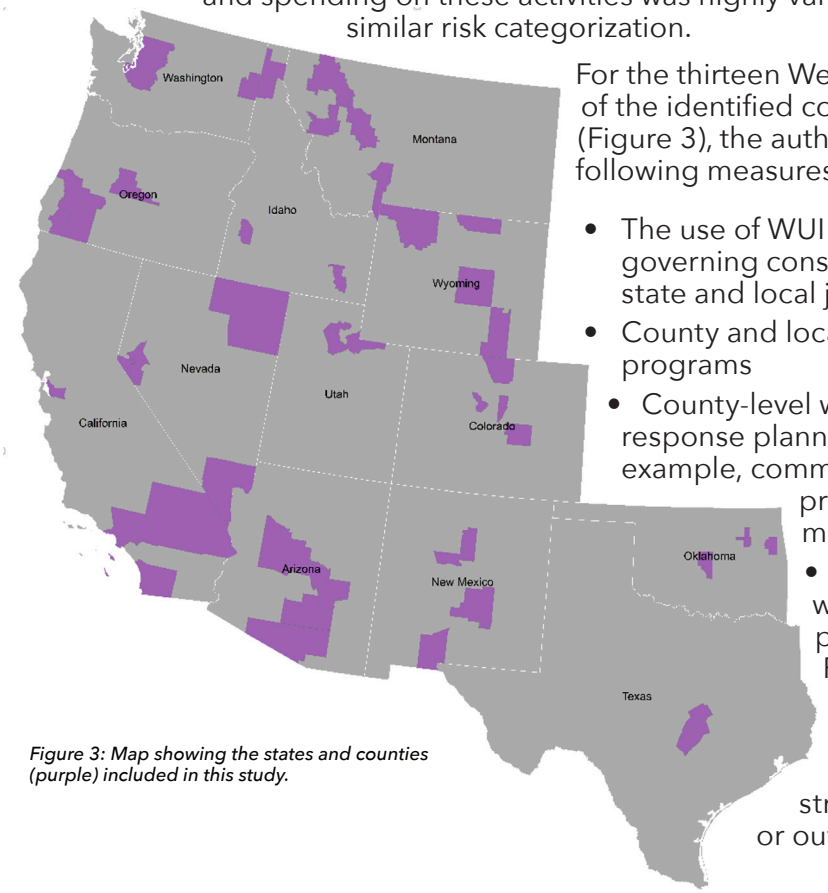


Figure 3: Map showing the states and counties (purple) included in this study.

For the thirteen Western states and each of the identified counties in each state (Figure 3), the authors considered the following measures of readiness:

- The use of WUI codes or standards governing construction, both at the state and local jurisdiction level
- County and local fuel management programs
- County-level wildfire risk and response planning activities (for example, community wildfire protection plan, hazard mitigation plan, etc.)
- Use and scope of wildfire mitigation programs, such as Firewise USA®
- County-level fire department resources and response structure, and education or outreach activities

State-Level Wildfire Readiness Through Use of Codes and Standards

The use and enforcement of state building codes, especially those specifically designed for wildfire-exposed areas, is the key factor in reducing the potential for wildfire disasters. These codes are commonly referred to as "WUI codes".

The three primary building code standards in use that currently address construction in wildfire-exposed areas are:

- International Code Council (ICC) International Wildland-Urban Interface Code (IWUI)[3]
- California's building codes (most notably Chapter 7A of the California Building Code, Section R337 of the California Residential Code, and Chapter 49 of the California Fire Code)[4]
- NFPA 1144, Standard for Wildland Fire Protection[5]

While there are some differences across each, they provide sound requirements for specific building materials, product approval specifications, and defensible space recommendations to reduce the vulnerability of structures that are built to these standards.

CALIFORNIA

It is no surprise that California, with 2.4 million residents living in high or extreme wildfire risk areas, is a leader in wildfire readiness[6]. The California Building Code is enforced state-wide and its Chapter 7A, Chapter 49 of the California Fire Code, and Section R337 of the California Residential Code govern construction in WUI areas. The California Department of Forestry and Fire Protection (CAL FIRE) is the state's agency responsible for maintaining Chapter 7A and Chapter 49. In addition, CAL FIRE implements various wildfire preparedness, training, and outreach programs all focused on reducing vulnerability to communities and homes. California, via CAL FIRE, also leads the way nationally in participation in the Firewise USA program administered by NFPA, reaching over 700 active sites across the state in mid-2023.

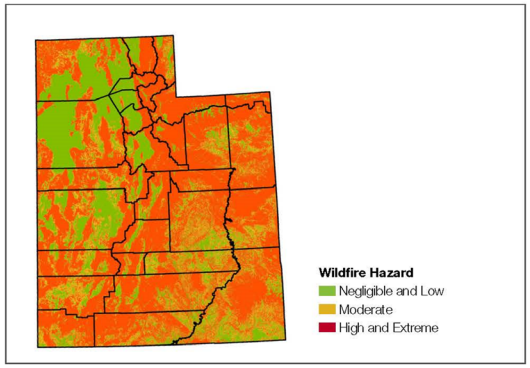
UTAH

While California's efforts are highly visible and well-publicized, Utah has also quietly and proactively applied building codes at the state-wide level, including provisions for WUI areas. The state saw two of its most active fire years within a ten-year span. In 2007, nearly 500,000 acres burned in Utah and the state saw its largest fire on record, the Milford Flat Fire. In 2012, over 400,000 acres burned. These active fire years, coupled with continued expansion into Utah's WUI areas, drove policymakers to begin reducing Utah's vulnerability to wildland fire (see Figure 4).

3 *International Code Council https://codes.iccsafe.org/content/IWUIC2021P2/arrangement-and-format-of-the-2021-iwuic*
4 *California Building Standards Commission https://www.dgs.ca.gov/BSC/Codes*
5 *National Fire Protection Association https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1144 Verisk Fireline Wildfire Risk Analysis*
6 *Verisk Fireline Wildfire Risk Analysis*

Wildfire Risk at a Glance	
Number of Housing Units[1]	979,700
Number and Percentage of Housing Units at High and Extreme Risk	136,000 14%
Number of Acres Burned in 2018[2]	439,000
Largest Historical Wildfire[2]	Milford Flat (2007) 363,100 acres burned

Sources: 1. U.S. 2010 Census, 2. National Interagency Fire Center (NIFC)



According to U.S. Census data, Utah has 979,700 housing units. The following is a breakdown of the percentage and number of housing units broken out into the low, moderate, and high wildfire risk categories.

Negligible and Low		Moderate		High and Extreme	
Percentage	Number	Percentage	Number	Percentage	Number
72%	706,500	14%	137,100	14%	136,000

Figure 4: Verisk Fireline Utah analysis.

Currently only about 7% of Utah's land with significant wildfire hazard has been developed, but expansion into the WUI has accelerated. By 2021, over 14% of housing units were located within high or extreme wildfire risk areas[7]. Utah's mitigation success story began with its development of a state-wide version of the IWUI code in 2006, based on the 2003 version of the ICC IWUI code. This version of the Utah Wildland Urban Interface code is still enforced across all 29 counties in the state through the Utah Cooperative Wildfire System[8].

In 2011, the state launched its Ready, Set, Go! preparedness program. Following the prolific fire seasons of 2007 and 2012, the state took further actions in 2016 with the development of its Catastrophic Wildfire Reduction Strategy, which was adopted by the state legislature and signed by the governor. Consistent with the National Wildfire Fire Management Cohesive Strategy, the goals within the state's strategy were to develop improved wildfire response across all county and municipal governments, restore and maintain landscapes, and to develop fire-adapted communities where the population and the built environment can withstand wildfire without catastrophic loss of life and property. The legislation created the Catastrophic Fire Reduction Fund, which uses financial support from federal, state, local, and private sector programs to fund wildfire mitigation projects across the state.

Utah continued working through its strategy with a new wildland policy agreement in 2017, to move from a reactive fire suppression approach to proactive risk reduction. The program requires participating jurisdictions to maintain a community wildfire protection plan, allows participating counties and local jurisdictions to support each other's response capability, and offset costs with state funding support. Utah has seen voluntary programs, such as the NFPA Firewise program, grow. As of February 2023, the state had 31 active Firewise communities.

7 *Verisk Fireline Wildfire Risk Analysis*
8 *Utah Cooperative Wildfire System*

ACTIONS BY OTHER STATES

Outside of California and Utah, use and enforcement of comprehensive statewide WUI codes does not exist. Instead, county, and local governments bear the responsibility for wildfire readiness across much of the western United States.

Although Oregon recently adopted a specific WUI code, at the time of this study, adoption is left to the discretion of local jurisdictions.

Washington and Arizona have adopted state-wide building codes based on the IRC and IBC but excluded and did not adopt any WUI-based codes at the state level.

Other states, such as Colorado, Montana, and Nevada, have adopted some provisions from the WUI code and apply them in limited situations, but also exclude many elements. In addition, these states also have limited enforcement at a statewide level.

Texas and Idaho provide recommendations to local jurisdictions for both WUI codes and preparedness activities, but they do not require or enforce any provisions at the state level.

One of the most problematic activities that occurs at the state level is the omission of WUI codes or specific exclusions of elements within WUI codes that can reduce vulnerability to wildfire. Across the United States, most states at least provide a recommendation for jurisdictions to use the International Residential Code (IRC), the International Building Code (IBC), and/or the International Fire Code (IFC). Seventeen US states enforce one or more of these codes at the state government level. Unfortunately, these model codes do not contain any systematic provisions related to reducing vulnerabilities to wildfires and the ignition threats they pose.

Since their development, WUI codes have always been treated separately from the other model building codes that are commonly used across the United States. Early in U.S. history when city and town ordinances first emerged to combat the growing threat of urban fire, they focused on life safety, interior fire ignitions, and decreasing the probability of urban fire spread, with little emphasis on wildland fires and ignitions from external sources. In addition, the IRC and IBC focus on the structure and rarely adopt provisions or recommendations that could be perceived as land-use requirements surrounding a building. Defensible space provisions fall into that category.

Currently, the IRC and IBC have no specific recommendations for wildfire, the use of WUI codes, or specific reference to areas that should enforce WUI codes. For example, 29% of Montana's housing units are in high or extreme wildfire risk areas, but the state adopted a state-wide WUI code that leaves enforcement to local jurisdictions[9].

Montana has a WUI code that is ineffective because it requires no review/permit/enforcement for new single-family homes. This virtually eliminates code enforcement even at the local level. Montana also excluded whole sections of the WUI Code, including all of Chapter 4 (water access and supply); Section 602 (provisions for automatic sprinkler systems); and, most crucially, Section 604 (maintenance of defensible space)[10].

9 Verisk Fireline https://www.verisk.com/siteassets/media/campaigns/gated/underwriting/fireline-state-risk-report/montana.pdf
10 Montana Department of Labor and Industry. https://bsd.dli.mt.gov/building-codes-permits/current-codes

County-Level Wildfire Readiness

For all but two of the western states included in this study, wildfire readiness activities are typically dealt with at the county and local level. For the purposes of this study, four of the most at-risk counties (based on the number of housing units at high or extreme wildfire risk) in each of the 13 western states were examined to understand their:

- Wildfire-related code activities
- Mitigation and outreach programs
- Fire department response activities

Table 1. Western states ranked based on number of units at high to extreme wildfire risk[11].

1	California	4	Arizona	7	Oklahoma	10	Utah	13	Nevada
	San Bernadino County		Yavapai County		Cherokee County		Davis County		Douglas County
	San Diego County		Pinal County		Cleveland County		Weber County		Lyon County
	Los Angeles County		Gila County		Oklahoma County		Summit County		Clark County
	Alameda County		Pima County		Tulsa County		Salt Lake County		Elko County
2	**Texas**	**5**	**Idaho**	**8**	**Oregon**	**11**	**New Mexico**		
	Bell County		Kootenai County		Douglas County		Santa Fe County		
	Williamson County		Ada County		Josephine County		Dona Ana County		
	Hays County		Bonner County		Deschutes County		Lincoln County		
	Travis County		Bannock County		Jackson County		Bernalillo County		
3	**Colorado**	**6**	**Washington**	**9**	**Montana**	**12**	**Wyoming**		
	Jefferson County		King County		Missoula County		Park County		
	Larimar County		Pierce County		Gallatin County		Albany County		
	El Paso County		Snohomish County		Lewis and Clark County		Sheridan County		
	Summit County		Spokane County		Flathead County		Natrona County		

Information was gathered through publicly available sources and through a supplemental data survey to fire departments. Forty (77%) of the fifty-two departments surveyed responded but the extent to which answers were provided was highly variable.

The rate of adoption of a WUI code was higher at the county level than at the state level, with 37% of the counties studied having adopted some form of the available WUI codes. Unfortunately, 33 of the 52 counties did not.

11 *Verisk Wildfire Risk Analytics used date from FireLine, accessed November 28, 2022.*

In this study, the presence of outreach programs and their support was evaluated through available public data, when present, and through the supplemental data survey when information was provided. From a wildfire planning perspective and outreach programs, 75% of the counties had developed a community wildfire preparedness plan (CWPP). Of those 39 counties with a CWPP, 25 had not been updated in 5 or more years and 9 were more than a decade old. There are also communities within these counties benefiting from programs such as Firewise USA, Ready, Set, Go! and Fire Safe Council.

Fire department readiness activities, including training and fire equipment resources, were evaluated through publicly available data and a supplemental survey. Obtaining information about the capabilities, responses, and outreach efforts of the fire service in the context of wildfires is challenging, and the way this data is presented varies widely. These disparities made it quantitatively difficult to meaningfully compare or assess the effectiveness of these activities.

The spectrum of wildfire-related readiness is wide, spanning very proactive counties to counties that have taken little to no action despite their risk. With the exceptions of California and Utah, local readiness was not correlated to the amount of state-level activity. An example of county and local level leadership is Santa Fe County in New Mexico, with its adopted WUI code, an updated CWPP, and active vegetative fuel management program that includes defensible space provisions despite limited financial resources (see box for greater detail).

Travis County in Texas, which includes the city of Austin, has also stepped forward as a leader in wildfire readiness activities. Travis County, which has the highest number of at-risk housing units in Texas, is also the highest per-capita spender in wildfire-related response and preparedness activities. However, like most Texas counties, building code adoption and enforcement is managed at the municipal level. For instance, the city of Austin has adopted the 2015 IWUI Code, but unincorporated areas are without the protection of modern codes. As of February 2023, the county also has 34 Firewise communities and 21 fire departments that are part of the Ready, Set, Go! program.

At the other end of Texas' county readiness spectrum is Bell County, which has no WUI code provisions (adopted or recommended), lacks a community wildfire protection plan, and relies on local, mostly volunteer, fire departments for wildfire support. Eleven of the fifteen local fire departments within the county are either solely volunteer-based or have only a limited number of full-time staff.

The national Firewise USA® recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. Any community that meets a set of voluntary criteria on an annual basis and retains an "In Good Standing Status" may identify itself as being a Firewise® Site.

The Firewise USA® program is administered by NFPA® and is co-sponsored by the USDA Forest Service and the National Association of State Foresters. While the NFPA® administers this program, individuals and communities participate on a voluntary basis.

At the state-level, New Mexico has a state-wide and enforced building code, but elected to exclude any WUI code provisions. Two of the largest fires in New Mexico history occurred within 20 miles of Santa Fe, the 2011 Las Conchas Fire and the Cerro Grande Fire in 2000. The Cerro Grande fire destroyed over 280 homes and damaged or destroyed 40 buildings at the Los Alamos National Laboratory. At the time, it was New Mexico's first billion-dollar wildfire and only the second billion-dollar wildfire event in the United States, following the Tunnel Fire/Oakland Hills fire of 1991[12].

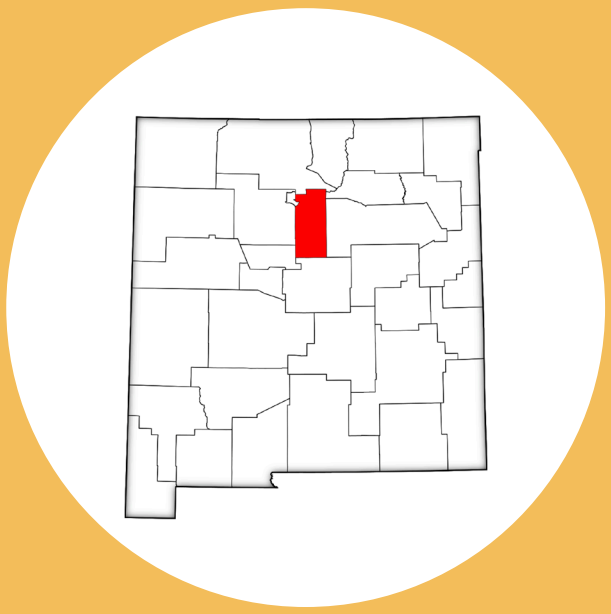


Figure 5: Santa Fe County, New Mexico

Santa Fe County has more than 25,000 housing units that are in high or extreme wildfire risk areas and has taken a proactive approach to mitigating their wildfire risk, despite limited financial resources[13]. The county adopted the 2015 IWUI building code and has included defensible space requirements (Ordinance No. 2001-4, Ordinance No. 2001-11) as part of their overall fuel management program and the county fire code[14]. These provisions are enforced through local inspections.

Their county-wide community wildfire protection plan was updated in 2020. Wildfire response, suppression, coordination, and training for fire services is consolidated under the county's Wildland Division of the county-wide fire department. The division is also responsible for overseeing the fuel management program, along with all education and outreach activities. Despite limited resources, Santa Fe County is an example of a proactive jurisdiction with a comprehensive system of wildfire protection, mitigation, and education activities in place.

12 NFPA Fire Incident Database
13 Verisk Fireline Wildfire Risk Analysis
14 Santa Fe County, New Mexico santafenm.gov

Across much of the western United States the bulk of wildfire readiness falls to the county level of government. Most counties analyzed in this study appeared to be aware of their risk, but actions varied. They ranged from highly proactive counties to those which had taken little to no action, even though all of them represented the top four most at-risk counties in their respective states.

Survey responses from county- and state-level fire departments did not provide enough robust data to make comparisons or to assess individual department readiness in this report. The NFPA *Fifth Needs Assessment of the US Fire Service* (2021) highlighted the extensive involvement of municipal fire departments, whether career, volunteer or combination, in protecting homes and businesses from wildfire threats.[15] The assessment indicates that 75% of local fire departments nationwide are specifically responsible for protecting structures from wildfire. However, 78% report having unmet needs for training, with this need being more prominent among smaller departments. Fully two-thirds of the fire departments responding to wildfires lack appropriate personal protective clothing for their firefighters. Seven out of ten of all fire departments would require mutual aid from the state government for a wildfire incident affecting more than 20 structures.

Past research by NFPA analyzing NFIRS data indicated that reported wildfires (aka brush, grass or forest fires) constituted nearly a quarter of all calls annually.[16] It is not difficult to conclude that municipal fire departments bear a significant burden of time and effort as well as a significant risk to their staff's health and safety, given the frequency of response required, and a mismatched investment in training and protective gear. In counties where little has been done to make communities ignition-resistant, fire departments increasingly face no-win situations when attempting to save vulnerable properties.

SUMMARY

The increasing damage, disruption, and displacement from wildfires across the Western United States has put a spotlight on Western communities' wildfire readiness level. At the state-wide level, some western states have developed wildfire guidelines to reduce the wildfire impact on communities and most are for voluntary use. These seven states have adopted statewide WUI codes with highly variable conditions attached:

- California
- Colorado
- Oregon
- Washington
- Montana
- Utah
- Nevada

15 Fifth Needs Assessment of the US Fire Service, NFPA, 2021
16 Response of Fire Departments to Brush, Grass and Forest Fires, NFPA, 2018

Yet only California and Utah enforce them uniformly at the state level. Outside of a few notable exceptions illustrated in this report, the use of building codes as a tool for wildfire mitigation is not accepted—to the detriment of millions of residents in this region. The stand-alone nature of WUI codes relative to the larger model building codes of the international residential, building, and fire codes has made it too easy for jurisdictions at all levels to overlook or exclude them.

The counties included in this study provided a look at the spectrum of readiness activities from what could be considered best practices to those that have demonstrated little to no meaningful action. With human-caused ignitions, growth of development in wildfire-exposed areas and our changing climate, the risk of wildfire disasters has never been greater, and continues to grow. Already, wildfire impacts appear to be outpacing the ability of local communities to plan and adapt. As has been shown across other regions of the country with other natural hazards, such as along the hurricane-prone coastline, statewide enforced building codes are a critical tool to reducing vulnerability and to support more resilient communities. In states that are reluctant to take this step, the burden falls to the county and local government levels. As shown in this report, some of the most at-risk counties are implementing proactive and innovative solutions.

For local fire departments, it was clear from this study that a spectrum of readiness exists, but unfortunately, there is no effective systematic way to quantify this aspect of wildfire readiness. Standardized fire district and/or departmental resource data is either not easily accessible or simply not available at all. While fire departments and districts remain a trusted source of information in their respective communities, funding for improving response capabilities and for wildfire education and outreach programs varies widely.

The increasing influence of humans on the wildfire hazard coupled with our changing climate has increased both the hazard and community's vulnerability, elevating risk across the western United States. The need for proactive approaches in response to this threat has never been more vital. Development of these approaches must span all levels of government so that a system of protections can help bend down the risk curve.

The authors agree that policymakers at all levels should work to establish much greater levels of wildfire readiness by:

- Using and enforcing the most recent model WUI codes for new residential and commercial construction.
- Requiring frequent updates of community wildfire mitigation plans.
- Incentivizing and encouraging wildfire risk reduction activities at the parcel and community level.
- Providing firefighters with the training, equipment, and other resources they need to be safe and effective in response, and serve as a valuable source of education for their communities.

TO LEARN MORE

- Verisk Fireline
- National Fire Protection Association
- Insurance Institute for Business & Home Safety

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