



STRENGTHENING THE SURVIVABILITY AND INSURABILITY OF ARIZONA HOMES

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WHY?

Severe weather disrupts lives, displaces families, and drives financial loss. IBHS delivers top-tier science and translates it into action so we can prevent avoidable suffering, strengthen our homes and businesses, inform the insurance industry and support thriving communities.







RIDGEVIEW COUNTRY ESTATES

Los Angeles Times

latimes.com

THURSDAY, JANUARY 9, 2025

\$3.06 DESIGNATED AREAS HIGHER © 2025

‘LIKE A THOUSAND FIRES’

WIND-DRIVEN BLAZES DESTROY HOMES; AT LEAST 5 DEAD

PALISADES FIRE: Some residents who fled are anxious to see if houses survived

EATON FIRE: 32,500 told to evacuate as 10,600 acres burn in Altadena, Pasadena



ROBERT GAYTHER, Los Angeles Times

ARE

INCEVILLE

RUSTIC CANYON

W Sunset Blvd

W Sunset Blvd

W Sunset Blvd

Laurel Blvd



2000 ft

An aerial photograph showing a city with a large, dark, and desolate lava flow in the background. The lava flow is a massive, dark expanse that has advanced towards the city. The city itself is a mix of residential and commercial buildings, some of which appear to be damaged or destroyed. The sky is overcast, and the overall scene is one of devastation.

CONFLAGRATION:

**Uncontrollable
Structure-to-Structure
Fire Spread**

Conflagrations follow:



Humans

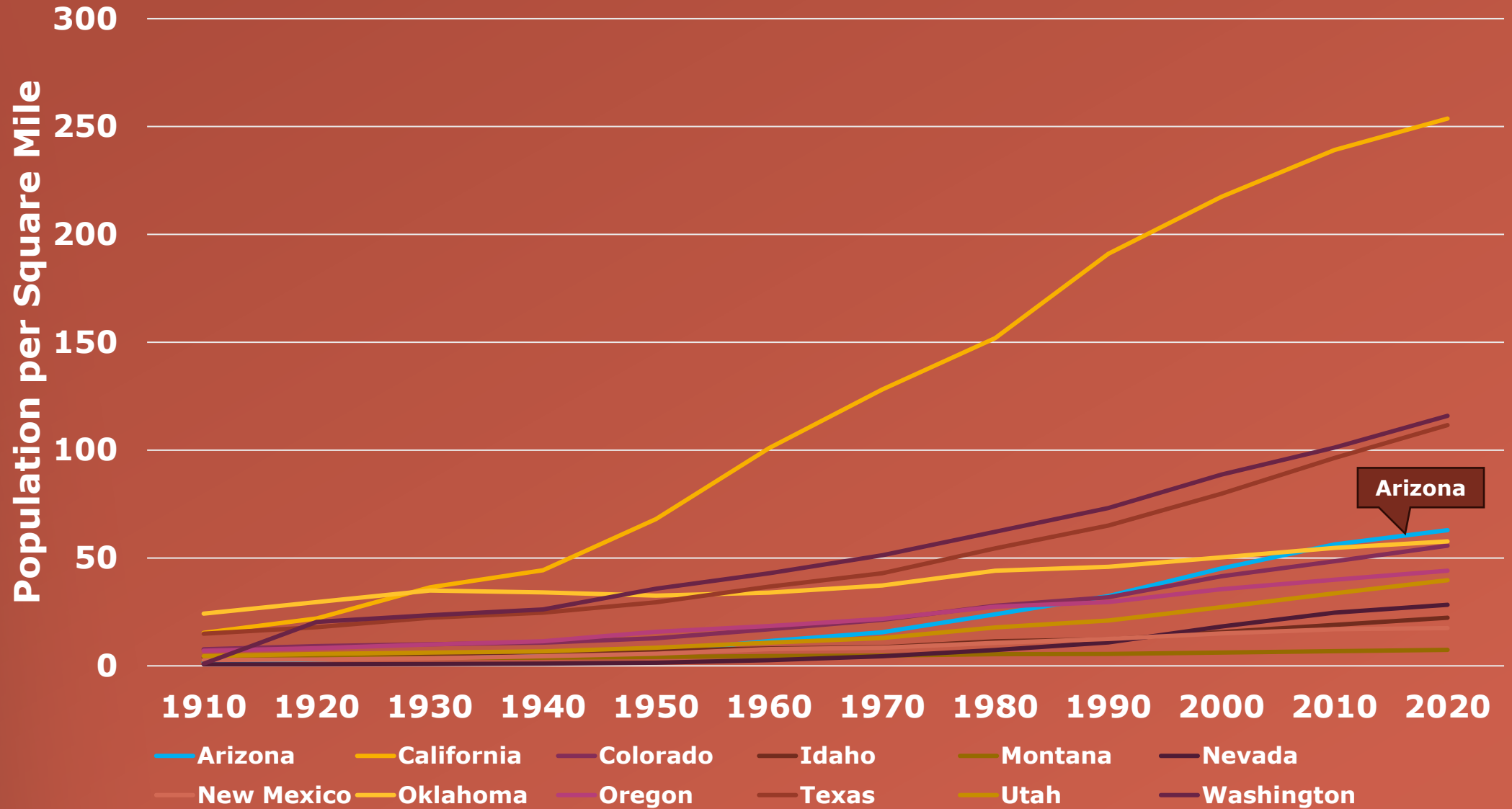


Drought



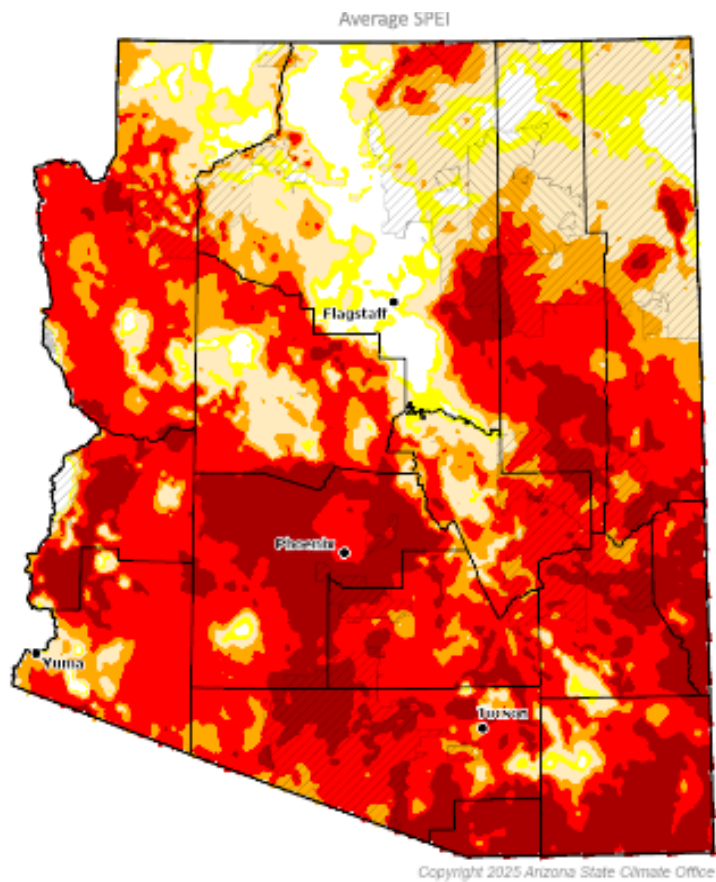
Wind

Population Boom in the West



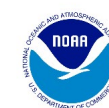
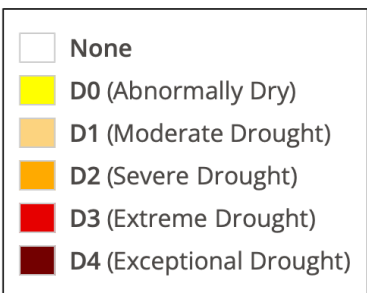
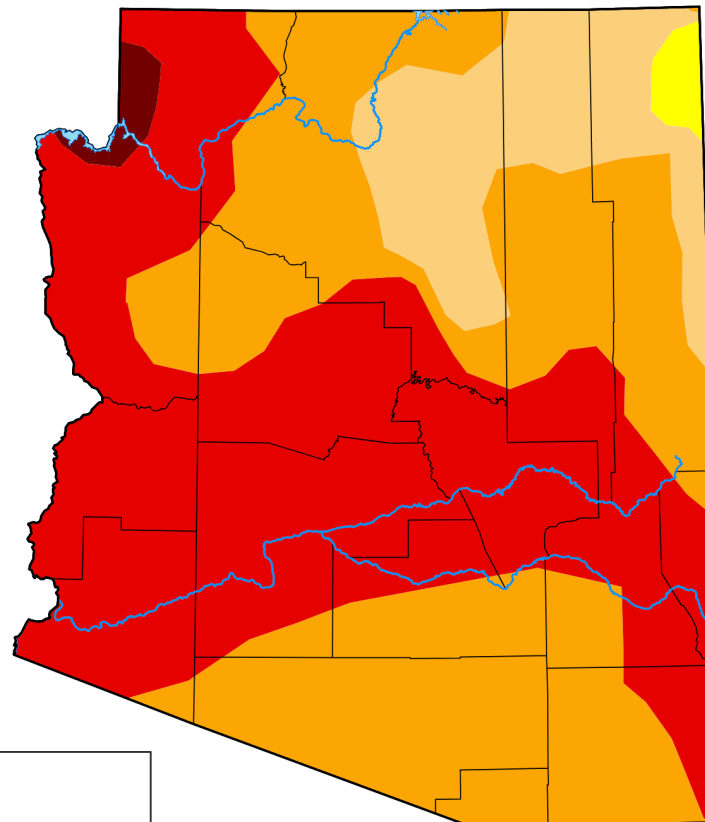
Long-Term Drought

As of January 2025



Short-Term Drought

As of Feb 13, 2025



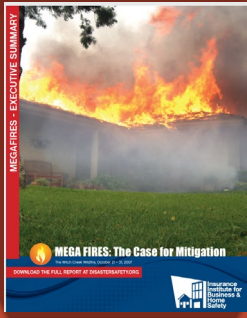


A RED FLAG WARNING is issued when winds of 20+ mph and low relative humidity occur, along with increased thunderstorm activity after a prolonged dry period.

Hot and dry conditions present early in the monsoon season can allow fires to spread quickly by thunderstorms that produce little rain, but gusty winds and lightning.

THE RACE IS ON

Witch Creek Fire Investigation



2007



Waldo Canyon Fire Investigation

Ember Attack & Radiant Heat



2012



Vents

2013



Ember Characterization

2014



Vulnerability of Decks

2015



Fire Spread

2016

SCIENCE IS CATCHING UP

Coatings & Gels



2017



Wine Country Fires & Camp Fire Investigations



Home Hardening



2018



2019

Roof Cover Performance



2020



2021

Structure Separation & Wind-driven Fire



2022



2023

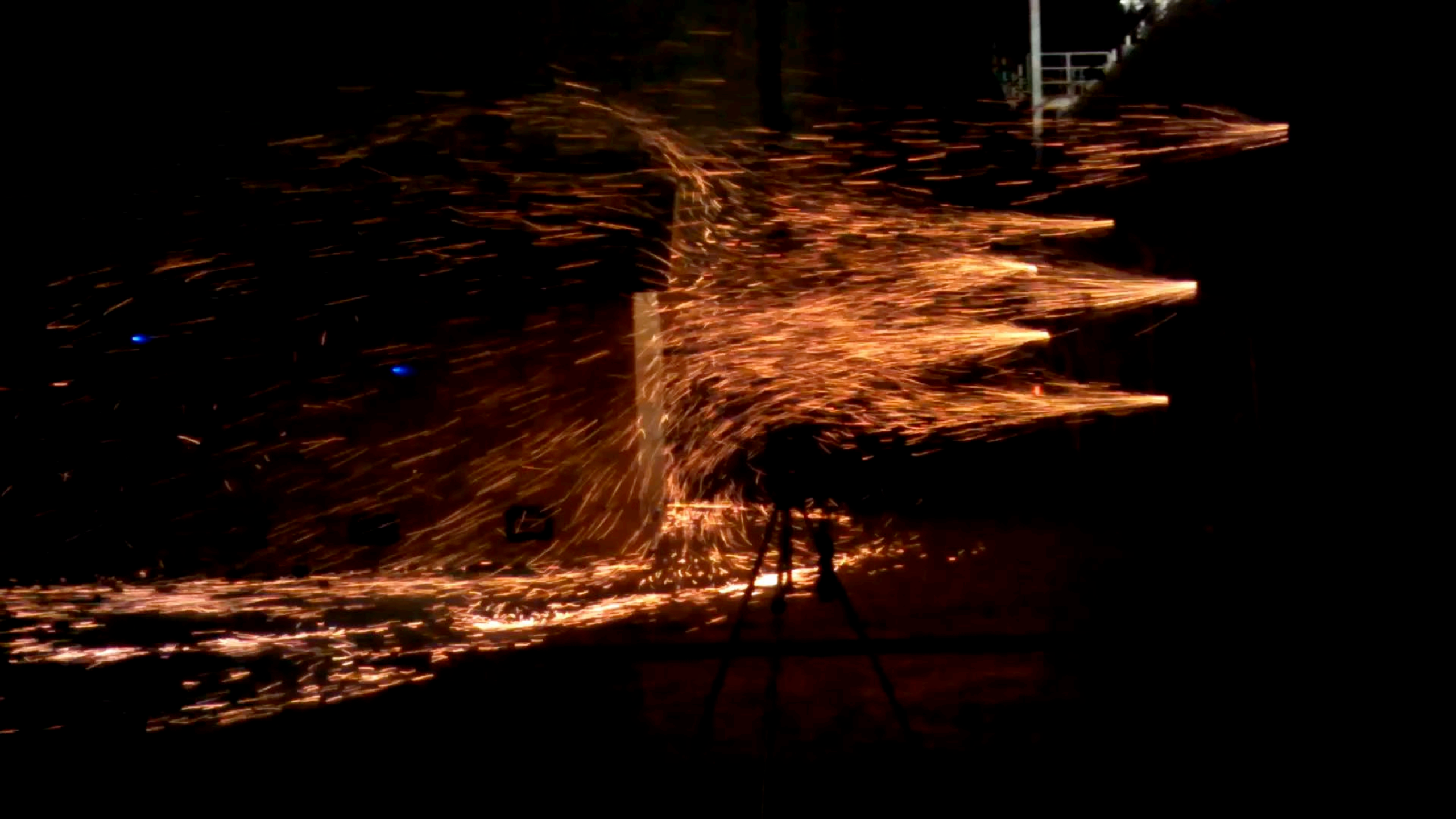
Maui Fire Investigation



Marshall Fire Investigation

Fuel Breaks

Home Ignition Zone





***PARCEL
LEVEL
ACTIONS***

EMBERS

RADIANT HEAT

FLAMES



CRITICAL ACTIONS

ROOF

- ✓ Class A fire-rated roof

BUILDING FEATURES

- ✓ Ember resistant vents

BUILDING FEATURES

- ✓ 6-inch vertical noncombustible clearance at base of wall

DEFENSIBLE SPACE

- ✓ Replace combustible fencing

DEFENSIBLE SPACE

- ✓ Maintain yard clear of debris

DEFENSIBLE SPACE

- ✓ Maintain underdeck

DEFENSIBLE SPACE

- ✓ Enclose underdecks

DEFENSIBLE SPACE

- ✓ Maintain home ignition zone (0-5 ft)

DEFENSIBLE SPACE

- ✓ Maintain trimmed trees and removal of branches overhanging home ignition zone and roof

DEFENSIBLE SPACE

- ✓ No outbuildings near home



5 feet

Zone 0



***NEIGHBORHOOD
LEVEL
ACTIONS***

A large fire is burning at night in front of a building and a shipping container. The fire is very intense, with bright orange and yellow flames. The building on the left has a dark roof and a window. The shipping container on the right is white with vertical ridges. In the background, there are trees and a tall structure with lights. A fire hose is visible on the ground in the foreground.

Modeling

Field Observations

Experimental Testing



An aerial photograph of a coastal city, likely Honolulu, showing extensive fire damage. The foreground and middle ground are covered in ash and charred debris. A large, multi-story building on the right side of the image appears to be a school or institutional building, with its roof and walls partially destroyed. The background shows a blue ocean with many sailboats and a distant city skyline under a clear blue sky. The text "CONFLAGRATION FACTORS" is overlaid on the left side of the image in a dark red banner.

CONFLAGRATION FACTORS

Structure Spacing

Connective Fuels

Building Materials

STRUCTURE SPACING



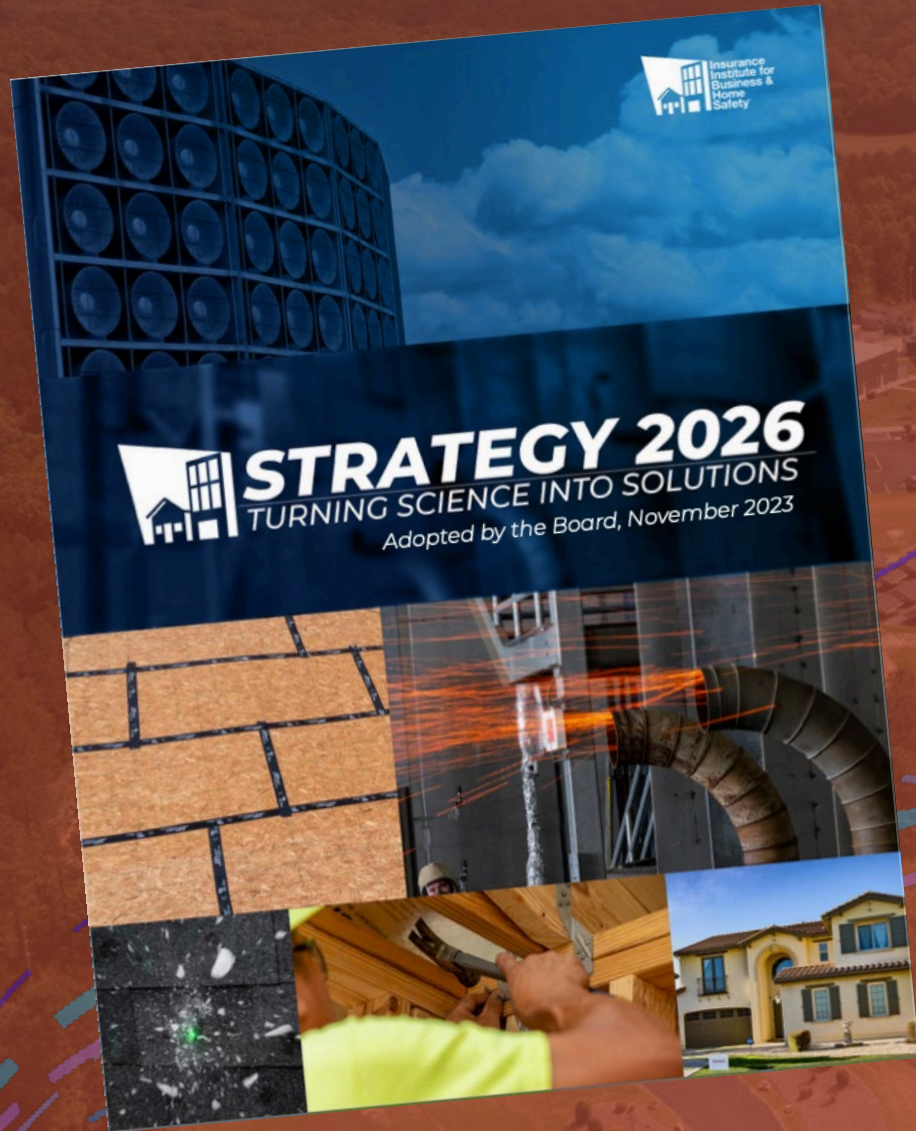
CONNECTIVE FUELS







*Exterior **BUILDING**
MATERIALS*



From **SCIENCE** to **SOLUTIONS**

ROOF

- ✓ Choose a Class A fire-rated roof maintained clear of debris
- ✓ Choose noncombustible gutters & downspouts

BUILDING FEATURES

- ✓ Install ember- & flame-resistant vents
- ✓ Ensure 6-inch vertical noncombustible clearance at base of wall

WILDFIRE PREPARED HOME + PLUS

ADDITIONAL MITIGATION

- ✓ Remove back-to-back fencing
- ✓ Eliminate combustible siding
- ✓ Enclose eaves
- ✓ Enclose under bay windows
- ✓ Upgrade to a wildfire-resistant deck
- ✓ Upgrade windows & doors
- ✓ Cover gutters
- ✓ Move outbuildings at least 30 feet away

DEFENSIBLE SPACE

- ✓ Create & maintain the home ignition zone (0-5 ft) including the removal of branches that overhang this area
- ✓ Clear & maintain the underdeck area; enclose low-elevation decks
- ✓ Maintain yard clear of debris
- ✓ Replace combustible fencing within 5 ft of the home


**WILDFIRE
PREPARED**
— A PROGRAM OF IBHS —



Wildfire Prepared Neighborhood

Develop a system of neighborhood protections that meaningfully reduces the probability of conflagration

Provide a benchmark for understanding the risk of conflagration in communities

Core Principles for Neighborhoods

Decrease probability of initial ignitions from direct flame/radiant heat

Protect the neighborhood from ember attack

Allow the neighborhood to act as a fuel break, not a dense fuel source

Slow fire spread within the neighborhood if ignitions do occur

An aerial photograph of a residential neighborhood, showing houses, trees, and streets. A semi-transparent red overlay covers the center of the image, containing text. The text is white and bold, with some parts in italics.

WILDFIRE PREPARED NEIGHBORHOOD *MITIGATION APPROACH*

EMBER ATTACK
EMBER RESISTANCE ZONE

DIRECT FLAME/RADIANT HEAT
FLAME RESISTANCE ZONE

External fuels

Connective fuels

Structure separation

Structure separation

Structure separation

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof

Class A Roof



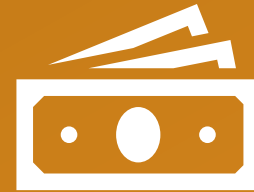
HARD MARKET DRIVERS

Events

Regulatory



Real Estate Value



Inflation





Science INFORMS Wildfire Policy



Michael Newman
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