

Resiliency and Mitigation Council

Wednesday, January 8, 2025

1:00 P.M.

I. Welcome and Opening Remarks

General Meeting Logistics

- This meeting is being broadcast online and is being recorded.
- The recording and associated meeting materials will be posted on the Council's webpage. Comments in the chat will not be recorded.
- For Council members online, please use the hand raise feature to speak.
- Except for public comment periods, only Council members online will be able to unmute themselves and turn on their camera.
- If public comments are taken, each speaker's time will be limited to provide everyone who wishes to comment the opportunity to do so.
- To comment, fill out a speaking slip or the Google Form (if you are online).

II. Fire Districts Overview

FIRE DISTRICTS OVERVIEW



ARIZONA FIRE
DISTRICT ASSOCIATION



RANDY CHEVALIER

FIRE CHIEF – TIMBER MESA FIRE AND MEDICAL DISTRICT

**AREA ONE REPRESENTATIVE (NAVAJO AND APACHE
COUNTIES)**

ARIZONA FIRE DISTRICTS ASSOCIATION



WHAT IS A FIRE DISTRICT

- Political subdivision established under ARS Title 48 Special Taxing Districts
- Elected five-person Board of Directors – Board Chair, Clerk and 3 members
- Required to meet monthly
- Primarily funded by property tax assessments*
- Other revenue sources may include:
 - Ambulance transports revenue
 - Wildland response through a Cooperative Fire Rate Agreement with the AZ DFFM
 - Fee for services
 - Grants
 - Misc



FIRE BOARD RESPONSIBILITIES

- Appoint a Fire Chief
 - Delegate operational responsibilities to the Fire Chief
- Fiduciary responsibilities
 - Adoption of an annual budget
 - Approval of expenditures
 - Ensure financial solvency
- Authorization of policy



A FIRE DISTRICT MAY:

- Assess and Levy property tax
- Adopt a resolution establishing a fee schedule*
- Employ personnel for fire protection and preservation of life
- Provide ambulance transportation services when authorized by Title 36, Chapter 21.1, article 2 (Certificate of Necessity)
- Enforce the adopted fire code and assist the Office of the State Fire Marshal in enforcement the of state adapted fire code
- Enter into Intergovernmental Agreements
- May merge, consolidate, or a joint powers authority*



FIRE DISTRICTS

- Over 140 Fire Districts across the state with over 4,000 trained personnel that provides fire (including wildland), rescue, and EMS services*
- Fire Districts range from very small all volunteer organizations to large all career organizations
- Population served is over 1.5 million residents
- Covers over 15,000 square miles for fire protection and over 27,000 square miles of EMS services*
- Fire District vs Fire Department
 - Fire Departments are part of a municipal governments and funded through the city/town's general fund
 - Fire Districts are special taxing districts and are independent from any city or county government



AZ FIRE DISTRICT ASSOCIATION

- Established in 1982
- Critical function is to provide a common voice with representation and advocacy at the Arizona Legislature
- John Flynn serving as the Executive Director
- Board of Directors
 - President Pat Moore from Bullhead City Fire District
 - Vice President Danny Johnson from Verde Valley Fire District
 - Treasure Jim Morgan from Pinetop Fire District
 - Immediate Past President Mary Dalton from Arizona Fire and Medical Authority
 - Eight Area Directors that represent Fire Districts from all counties across the state



MITIGATION EFFORTS

- Number one priority is preservation of life and saving homes
- Aggressive emergency response
- Educating residents on Firewise and Fire Adaptive Communities
- Perform hazard ignition zone surveys
- Recommend mitigation strategies
- Seek grant funding such as Healthy Forest Initiative Funds for fuel mitigation
 - Some organizations have internal fuel crews (Bear Jaw in Highlands Fire District, Pinetop Fuels Crew, etc.)
 - Other utilize private contractors*



CONCERNS

- Mitigation efforts occur regularly but do they align with insurance risk matrix?
 - Increasing insurance rate despite mitigation efforts
 - Policy cancellations
 - Subpar insurance with wildfire exclusions
 - Home sale transactions being affected due to inability to obtain insurance
 - Concerns of de-valuation of properties
-
- February 4th
 - Battalion Chief Paul Oltrogge and Captain Neil Chapman



QUESTIONS

- Thank you!



III. Presentation from FireBreak Risk



AI-Powered Mitigation Data for Insurance



Presentation to Arizona Resilience and Mitigation Council
January 8, 2025



Kate Stillwell
co-founder

Most Homes Are Lost Due to Ember Cast



Ember storm in Wenatchee, WA during the 2015 Sleepy Hollow Fire. Photo: Don Seabrook / AP

That's Why Home Hardening Reduces Risk

Screenshots of IBHS video January 2023

Two otherwise-identical houses 15 ft. apart. Left one has ember zone combustibles (fence, shrubbery)



Fire is started at property line



Ignition path via wooden fence



Right side house does not burn



Camp Fire

Fire-hardened homes are 40%
more likely to survive...

JULY
2018

...even if only partially-hardened!

 FireBreak

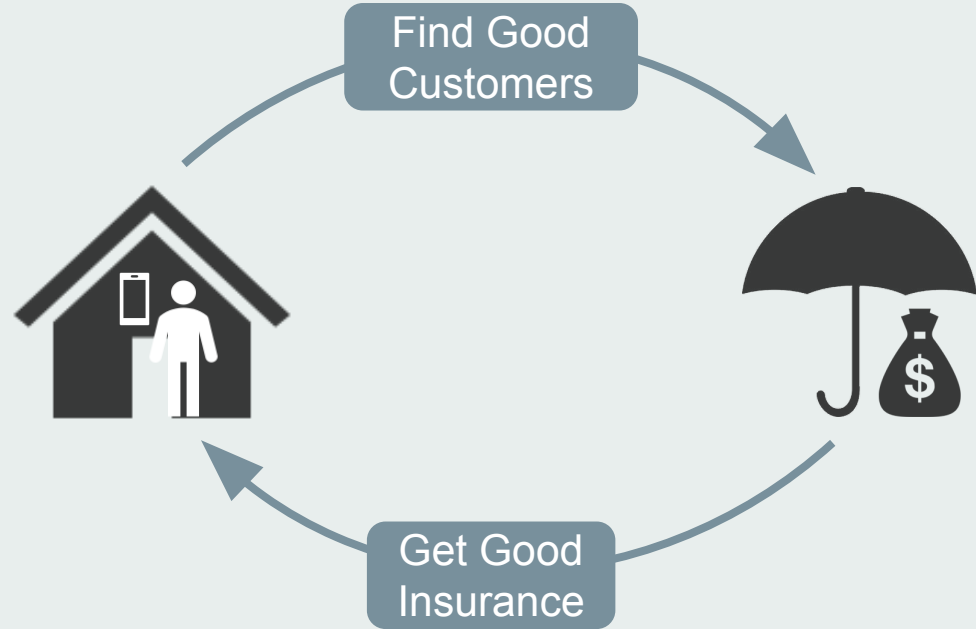
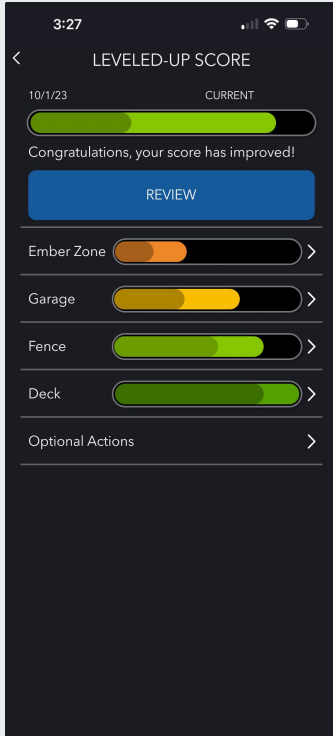
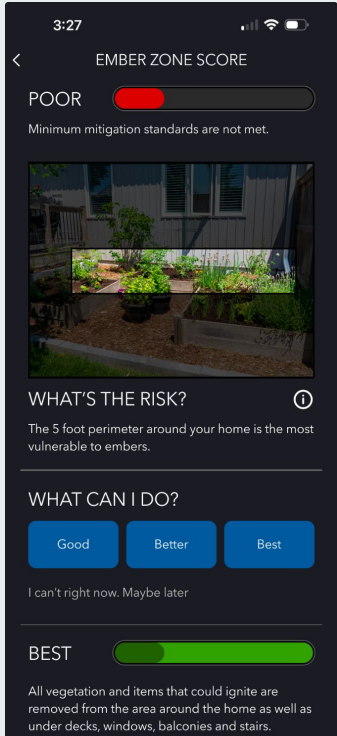


**FireBreak provides
original mitigation data...**

**so insurers can cover
more homes**

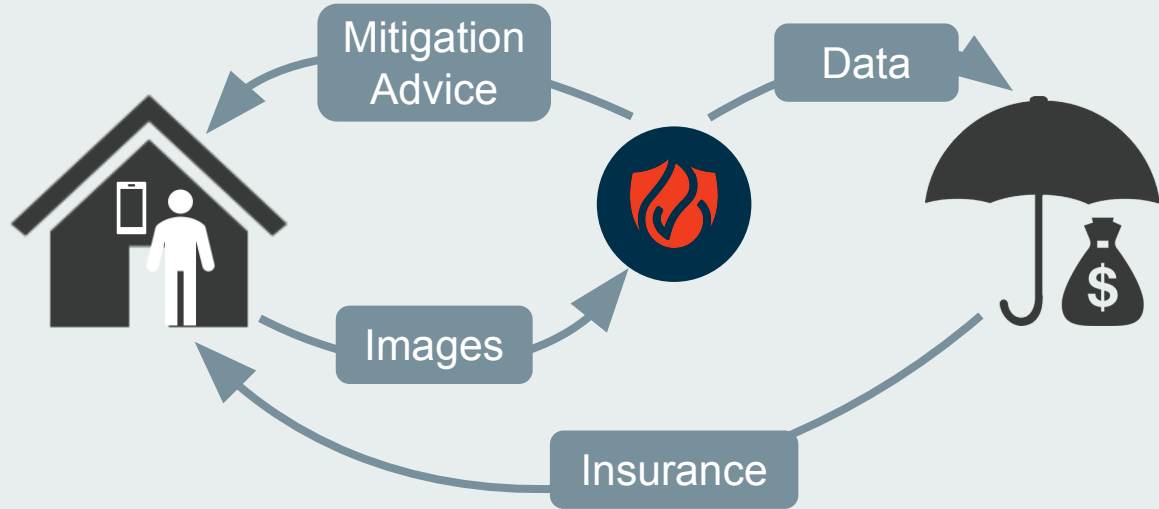
- Identify mitigated homes
- Provide mitigation discounts
- Offer insurance when it was previously “uninsurable” - filling gaps

Data-Powered Feedback Loop: Mitigation + Insurability

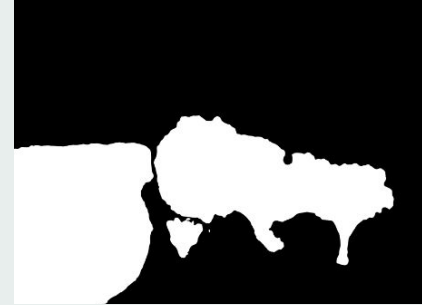
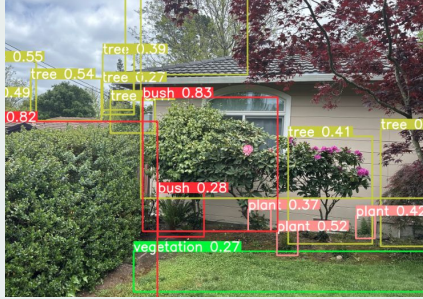


Data-Powered Feedback Loop: Mitigation + Insurability

- Residents self-inspect
- Top actions to mitigate
- Insurers license our software
- Identify mitigated homes
- Property attributes from user-provided data



AI-Powered Underwriting Data from Images



1. Detect Objects:

- Off-the-shelf models such as GroundingDINO
- Compare to custom-trained models such as YOLOWorld

2. Segmentation:

- Categorize objects using computer vision
- Rank risk level using in-house knowledge
- Use LLMs to append images with property attributes

3. Masking:

- In this example...
- Ember zone
 - Combustibles
 - Ignition paths

4. In-Paint:

- GenAI models need training.
- They seem to want in-paint with more combustibles!
- "What it should look like"
- Helps guide residents how to mitigate

Rigorous Rating Process

1. **Sort** each property attribute into one of 4 ratings
2. **Select Standard** for underwriting: existing or custom
3. **Mapping:** Each standard maps to a specific set of FireBreak ratings.
4. **Mitigation:** When a policyholder mitigates and re-inspects, we auto-update their ratings.

Property Attribute	Poor	Good	Better	Best
Eaves	Lorem ipsum dolor sit amet, consectetur adipiscing.	Quisque ut lobortis nibh, vel iaculis lacus.	Donec bibendum fermentum ex ac aliquet.	Nam pharetra in magna eu convallis.
Fence	Praesent sollicitudin vehicula diam, in auctor.	In hac habitasse platea dictumst.	Mauris vel viverra massa, sit amet congue nunc.	Integer vitae velit metus.
Deck	Aenean scelerisque euismod leo vel mattis.	Nam eleifend aliquam ipsum, in euismod elit vehicula ac.	Fusce mollis gravida tellus, eu tempus tellus eget.	Pellentesque bibendum placerat lacus ac hendrerit.
Gutter	Duis vulputate efficitur sapien, non pellentesque arcu pretium.	Etiam finibus rhoncus egestas. Integer finibus aliquam fermentum.	Morbi quis tortor cursus, auctor sem at, commodo tortor.	Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere.
Vents	Donec a semper ex.	Ut id placerat dui.	Duis quis ex augue.	Suspendisse sit amet mattis.
Windows	Duis tempor nisl, sit amet lobortis lacus.	Nunc pellentesque vel ipsum vitae feugiat.	Praesent faucibus id est quis tempus.	Fusce ut massa pulvinar, accumsan risus in, gravida.
etc.				

Step 1: Rate Property Attributes

1. **Sort** each property attribute into one of 4 ratings
2. **Select Standard** for underwriting: existing or custom
3. **Mapping:** Each standard maps to a specific set of FireBreak ratings.
4. **Mitigation:** When a policyholder mitigates and re-inspects, we auto-update their ratings.

Property Attribute	Poor	Good	Better	Best
Eaves	Lorem ipsum dolor sit amet, consectetur adipiscing.	Quisque ut lobortis nibh, vel iaculis lacus.	Donec bibendum fermentum ex ac aliquet.	Nam pharetra in magna eu convallis.
Fence	Praesent sollicitudin vehicula diam, in auctor.	In hac habitasse platea dictumst.	Mauris vel viverra massa, sit amet congue nunc.	Integer vitae velit metus.
Deck	Aenean scelerisque euismod leo vel mattis.	Nam eleifend aliquam ipsum, in euismod elit vehicula ac.	Fusce mollis gravida tellus, eu tempus tellus eget.	Pellentesque bibendum placerat lacus ac hendrerit.
Gutter	Duis vulputate efficitur sapien, non pellentesque arcu pretium.	Etiam finibus rhoncus egestas. Integer finibus aliquam fermentum.	Morbi quis tortor cursus, auctor sem at, commodo tortor.	Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere.
Vents	Donec a semper ex.	Ut id placerat dui.	Duis quis ex augue.	Suspendisse sit amet mattis.
Windows	Duis tempor nisl, sit amet lobortis lacus.	Nunc pellentesque vel ipsum vitae feugiat.	Praesent faucibus id est quis tempus.	Fusce ut massa pulvinar, accumsan risus in, gravida.
etc.				

Step 3: Mapping of Standards

1. **Sort** each property attribute into one of 4 ratings
2. **Select Standard** for underwriting: existing or custom
3. **Mapping:** Each standard maps to a specific set of FireBreak ratings.
4. **Mitigation:** When a policyholder mitigates and re-inspects, we auto-update their ratings.

Property Attribute	CDI - Safer From Wildfires	IBHS Wildfire Prepared Home	Custom Criteria
Eaves	Lorem ipsum dolor sit amet, consectetur adipiscing.	Quisque ut lobortis nibh, vel iaculis lacus.	Donec bibendum fermentum ex ac aliquet.
Fence	Praesent sollicitudin vehicula diam, in auctor.	In hac habitasse platea dictumst.	Mauris vel viverra massa, sit amet congue nunc.
Deck	Aenean scelerisque euismod leo vel mattis.	Nam eleifend aliquam ipsum, in euismod elit vehicula ac.	Fusce mollis gravida tellus, eu tempus tellus eget.
Gutter	Duis vulputate efficitur sapien, non pellentesque arcu pretium.	Etiam finibus rhoncus egestas. Integer finibus aliquam fermentum.	Morbi quis tortor cursus, auctor sem at, commodo tortor.
Vents	Donec a semper ex.	Ut id placerat dui.	Duis quis ex augue.
Windows	Duis tempor nisl, sit amet lobortis lacus.	Nunc pellentesque vel ipsum vitae feugiat.	Praesent faucibus id est quis tempus.
etc.			

Example Mapping to CDI Standard

Attribute	FireBreak Rating	CDI – Safer From Wildfires
Ember Zone	No vegetation within 5 feet	Cleared combustibles within 5 feet
	Vegetation contained in planters	
	Less-flammable vegetation	
Fence	Open fence	Non-combustible Fence
	Non-combustible fence	
	Coated/painted fence	
Deck	Coated or non-combustible, plus skirt	Cleared Combustibles from underneath
	Open space enclosed by skirt or mesh	
	Combustibles removed from underneath	
etc.		

E&S First-Adopters will accelerate admitted-market adoption

- Specialty MGAs
- Admitted Carriers
 - Missing data on mitigation status
 - Compliance for mitigation discounts and reporting
- Any use case
 - Wind
 - Flood
 - not just Fire



The diagram features a large teal gear in the center with the text "Admitted Carriers". Surrounding it are several smaller, light blue gears. One gear at the top right contains the text "Specialty MGAs". Another gear to its left contains a red flame icon. A third gear at the top left contains an icon of a person standing in a house with a smartphone. The background is a dark blue field of many small, faint gear shapes.

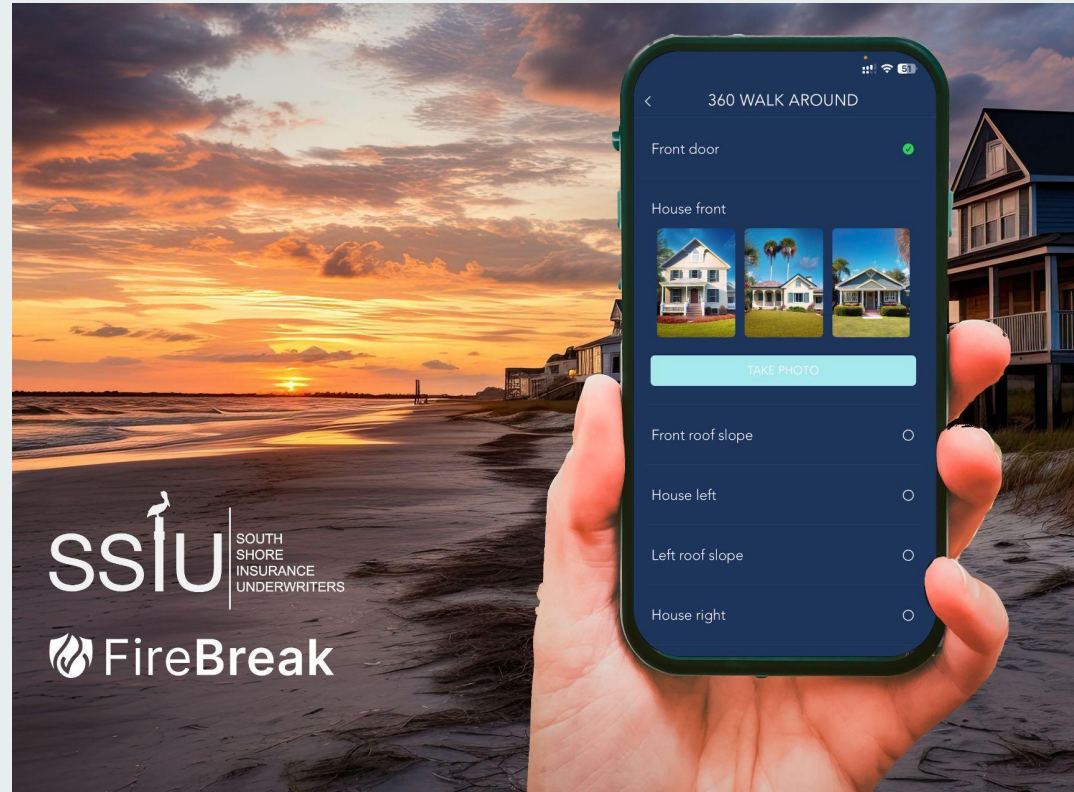
Admitted Carriers

Specialty
MGAs

PROOF POINT

First Insurer Clients already see value

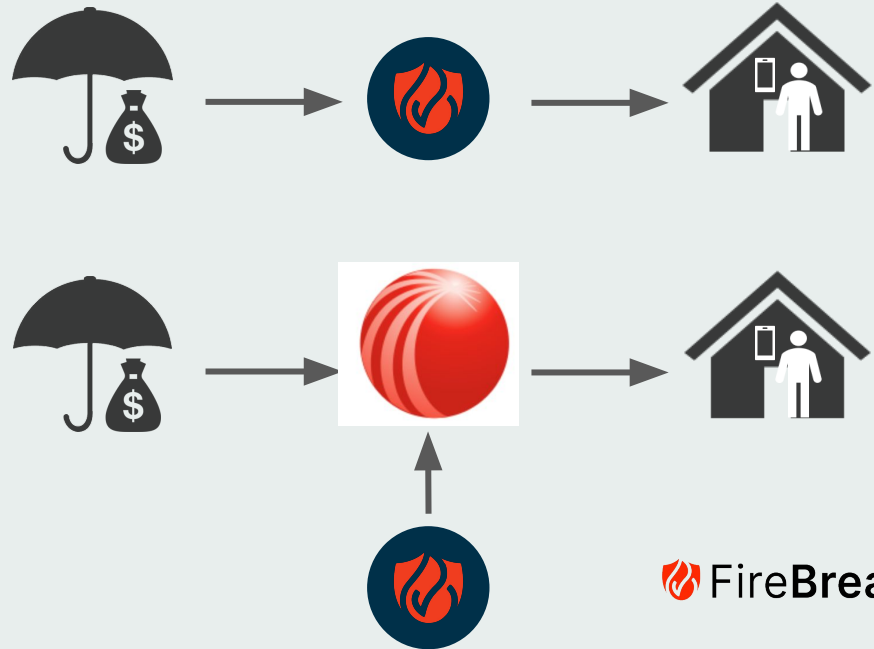
- Product is built
 - Launched in Beta
- Provides Underwriter Comfort
- Value proposition
 - **Efficiency:** 30x faster inspections
 - **Underwriting:** Reduced Risk
 - **Engagement:** Policyholders feel empowered



Working with FireBreak: Directly or via Data Vendors

First, set your underwriting criteria and data needs.
Then...

1. Co-Branded:
 - Customize inspection questions
 - Your policyholders self-inspect
 - Software subscription fees
2. Access our data through aggregators
 - Data licensing fees






AI-Powered Mitigation Data for Insurance



Presentation at NAIC Fall National Meeting
November 19, 2024



Kate Stillwell
kate@firebreakrisk.com

IV. Presentation from the NFPA



Engaging residents in wildfire preparedness

An overview of Firewise USA

January 8, 2025 | Megan Fitzgerald-McGowan | Firewise USA Program Manager

About the National Fire Protection Association

Global, self-funded non-profit devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards.

- Support for development, adoption, and enforcement of codes and standards
- Research and data analysis
- Technical training and certification
- Public education
- Outreach and advocacy

FAST

FACTS

- Founded in 1896
- More than 40,000 members
- 6,000 volunteers
- 275+ technical code development committees
- 300 codes and standards
- 300 employees



NFPA and Wildfire

- Structures and residents are at risk to fire anywhere.
- NFPA's vision focuses on life safety and property-loss elimination.
- Engaged in WUI risk reduction since U.S. wildfire season of 1985.

Fire Protection and Prevention for Summer Homes in Forested Areas

Prepared by the Forest Committee
of the National Fire Protection Association
Adopted 1935

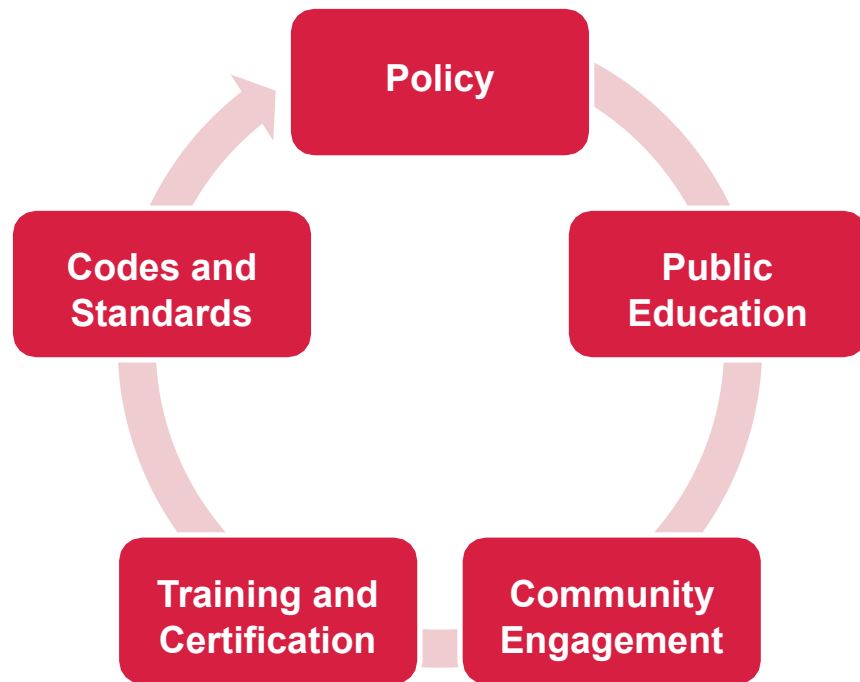
Price: Ten Cents

National Fire Protection Association
International
60 Batterymarch Street
Boston, Mass., U.S.A.





NFPA Wildfire Safety Work



NFPA.ORG

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FIREWISE USA[®]
RESIDENTS REDUCING WILDFIRE RISKS

Firewise USA is a voluntary recognition program that provides a framework to help residents get organized, find direction, and take action to increase the ignition resistance of their homes and community.



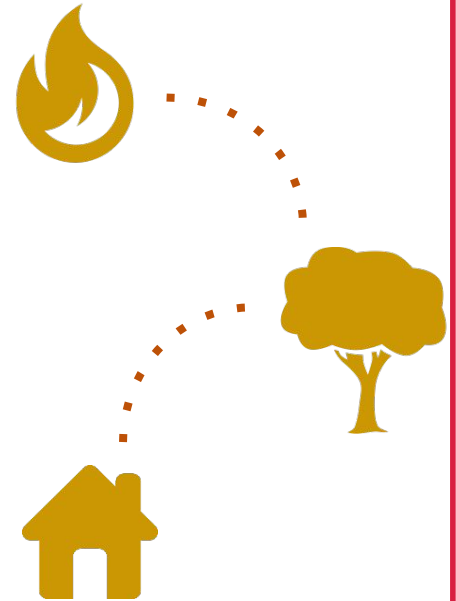


- Started in 2002
- 12 original pilot sites, 9 are still active
- Partnership between NFPA, USFS, DOI, and NASF.

Goal:
Preventing the destruction of homes during a wildfire event

Program based in science

- Research by Dr. Jack Cohen (USFS, retired)
 - Fire does not engulf everything in its path
 - Fire only advances to locations that meet requirements of combustion
 - Altering the type, size, quantity, and spacing of vegetation and other fuels will reduce likelihood of combustion
- Research by the Insurance Institute for Business and Home Safety



Community/Grass
Roots

Individuals/communities

Local practitioners

Local state
or federal
office

Fire
Department

Fire Safe
Councils

Other SMEs

State Liaison

Arizona Department of Forestry
and Fire Management

National program

NFP
A





Why Firewise USA®?

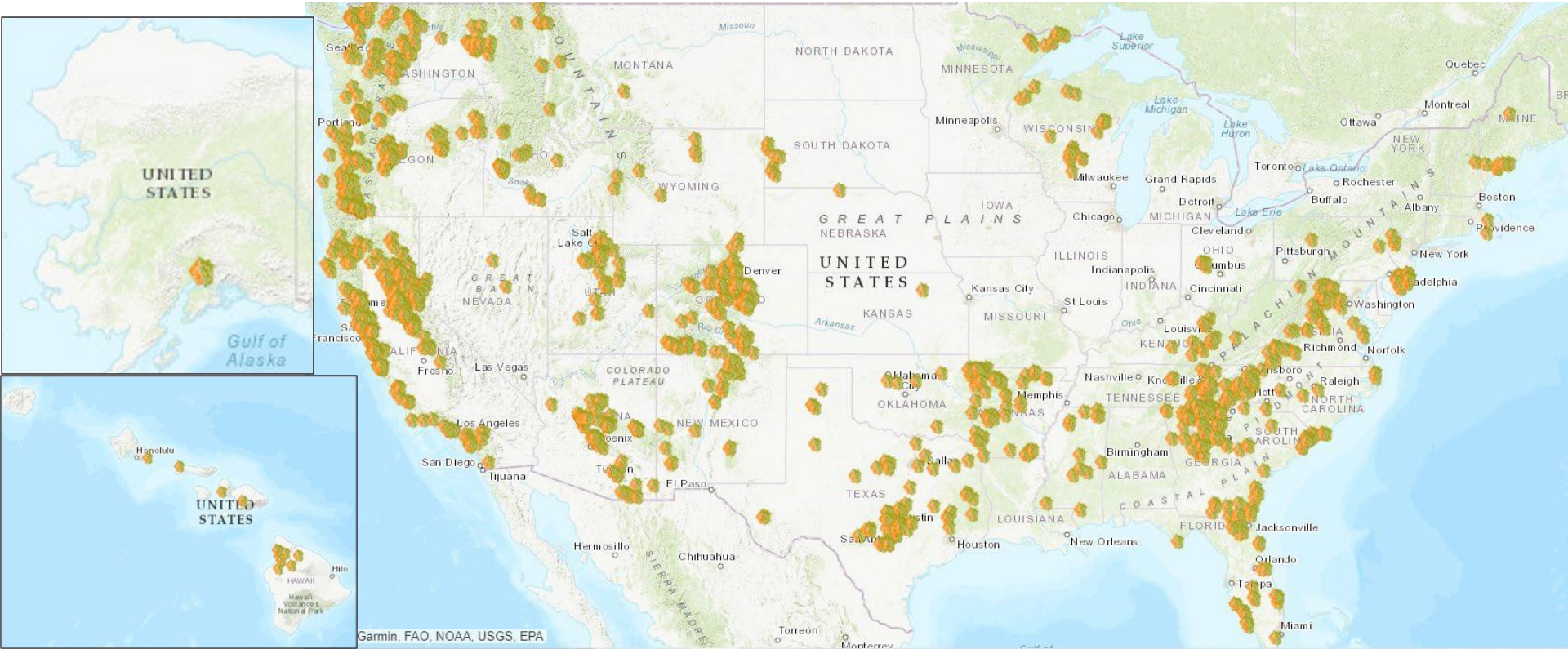
- Wildfires are part of the ecosystem and will continue
- Most homes are located on private property
- Homeowners have the right to make choices about their property
- Often, they are under the impression that there is nothing they can do

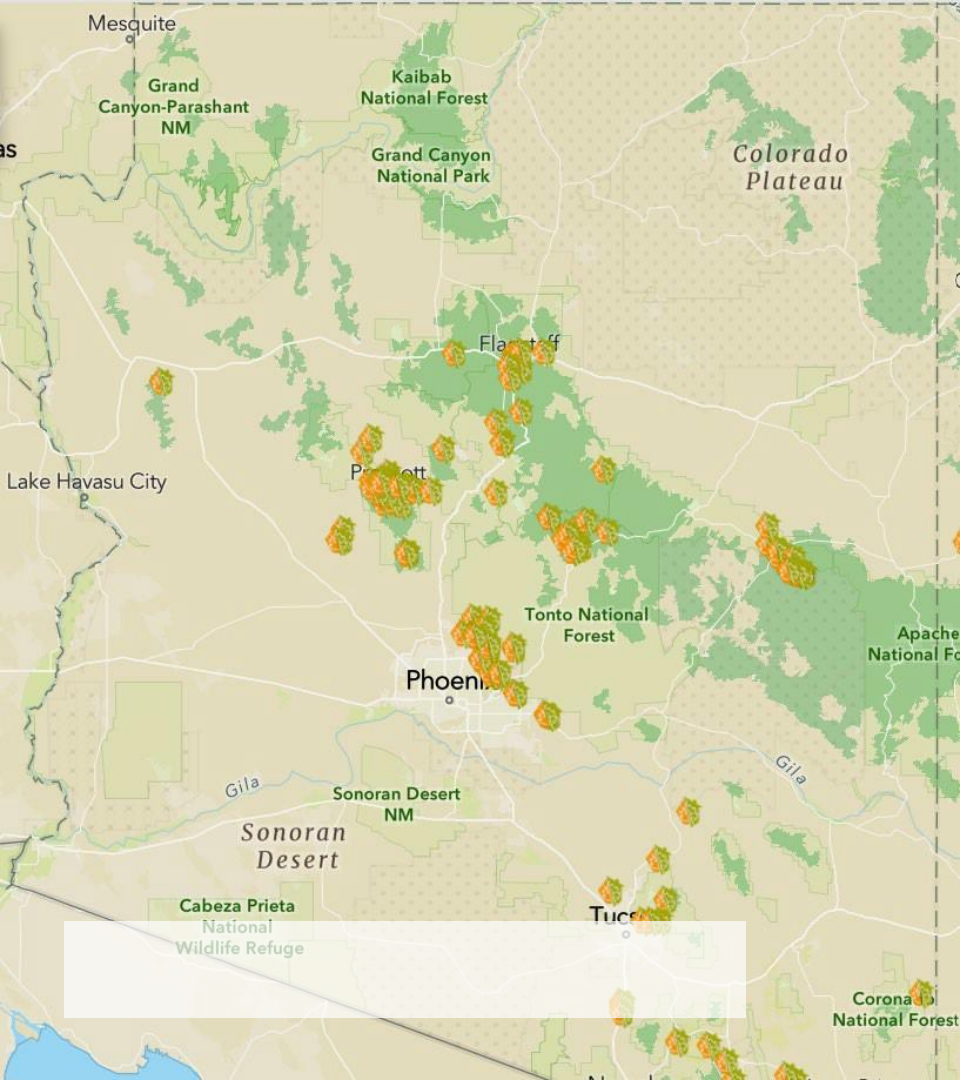


NFPA.ORG

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Firewise USA[®] Recognition Today





Arizona Participation

- 180 communities “In Good Standing”
- Oldest community: Timber Ridge, Prescott, 2002



NFPA.ORG

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“Having a Firewise sign in front of your neighborhood doesn’t mean you’re done. It means you admit you have a problem.... They don’t understand it means that we are a neighborhood that is working to become Firewise.”

Home risk assessments in 7-R Ranch conducted by the Texas A&M Forest Service.



NFPA.ORG

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- Individual responsibility
- Encourages neighbors to work together
- Voluntary participation
- A means to decrease risk for residents and first responders



Steps to Achieving National Recognition

- ORGANIZE IT
 - Form a board/committee comprised of residents and other wildfire stakeholders
 - Obtain a wildfire risk assessment
 - Determine size and boundary: min 8 and max 2500 dwelling units
- PLAN IT
 - Develop a multi-year action plan based on the site's risk reduction priorities
- DO IT
 - Host a minimum of one wildfire risk reduction educational outreach event
 - Meet the minimum wildfire risk reduction investment
- TELL US ABOUT IT
 - Create a Firewise USA[®] Portal account and submit an application to your state Firewise USA liaison

Steps to Maintaining National Recognition

To remain “In Good Standing,” Firewise sites must submit an annual renewal application. Due in November.

- Application is completed via the portal, www.portal.Firewise.org
- Similar steps to initial application
 - Verify risk assessment and action plan are still current, update if prompted
 - Report educational outreach efforts
 - Meet risk reduction investment criteria (1 hour of work per home per year or the monetary equivalent)

Fire Adapted Communities

- Firewise USA is a tool for wildfire adaptation
- Community (self-defined) level
- Every community's needs are different



Insurance and Incentives

- USAA partnership – discount for their members living in Firewise USA sites in 10 western states, including AZ
- Working with data providers who service the insurance industry to provide yes/no determinations
 - Mainly California, response to Safer From Wildfires regulation (CDI)

Questions?



IT'S A BIG WORLD.
LET'S PROTECT IT TOGETHER.®

V. Council Remarks & Discussion

VI. Public Comments

Public Comment Logistics

- If you have not done so, please fill out a speaking slip or the Google Form (if you are online) to comment.
- Online comments will be taken after in-person comments.
- Online attendees will be able to unmute themselves and turn on their camera.
- When providing comments, please first identify yourself and who you are representing, if applicable.
- The Council will not be answering any questions during the public comment period but may request that any matters presented be reviewed by Council staff or placed on an upcoming agenda.

VII. Closing Remarks and Next Meeting Logistics

Next Meeting Logistics

- The Council will normally meet monthly on the second Wednesday of each month at 1:00 P.M., **unless otherwise noted in the agenda**. The following scheduled meetings will **not** be held on the second Wednesday of the month:
 - Tuesday, February 4, 2025 (next meeting)
 - Tuesday, April 8, 2025
 - Thursday, May 15, 2025
 - Tuesday, July 8, 2025
- The next Council meeting is scheduled for February 4th at 1:00 P.M. (NOTE DATE CHANGE).
- We will continue the discussion around on the ground risk and mitigation efforts.

Contact Information

For inquiries or written comments, please contact Resiliency and Mitigation Council Staff: RMCouncil@difi.az.gov

Council Webpage: <https://difi.az.gov/resiliency-and-mitigation-council>*

* Includes a link to sign up for the Council's mailing list.