

Insurance Institute for Business & Home Safety

 WILDFIRE
PREPARED
— A PROGRAM OF IBHS —



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Insurance Institute for
Business & Home Safety



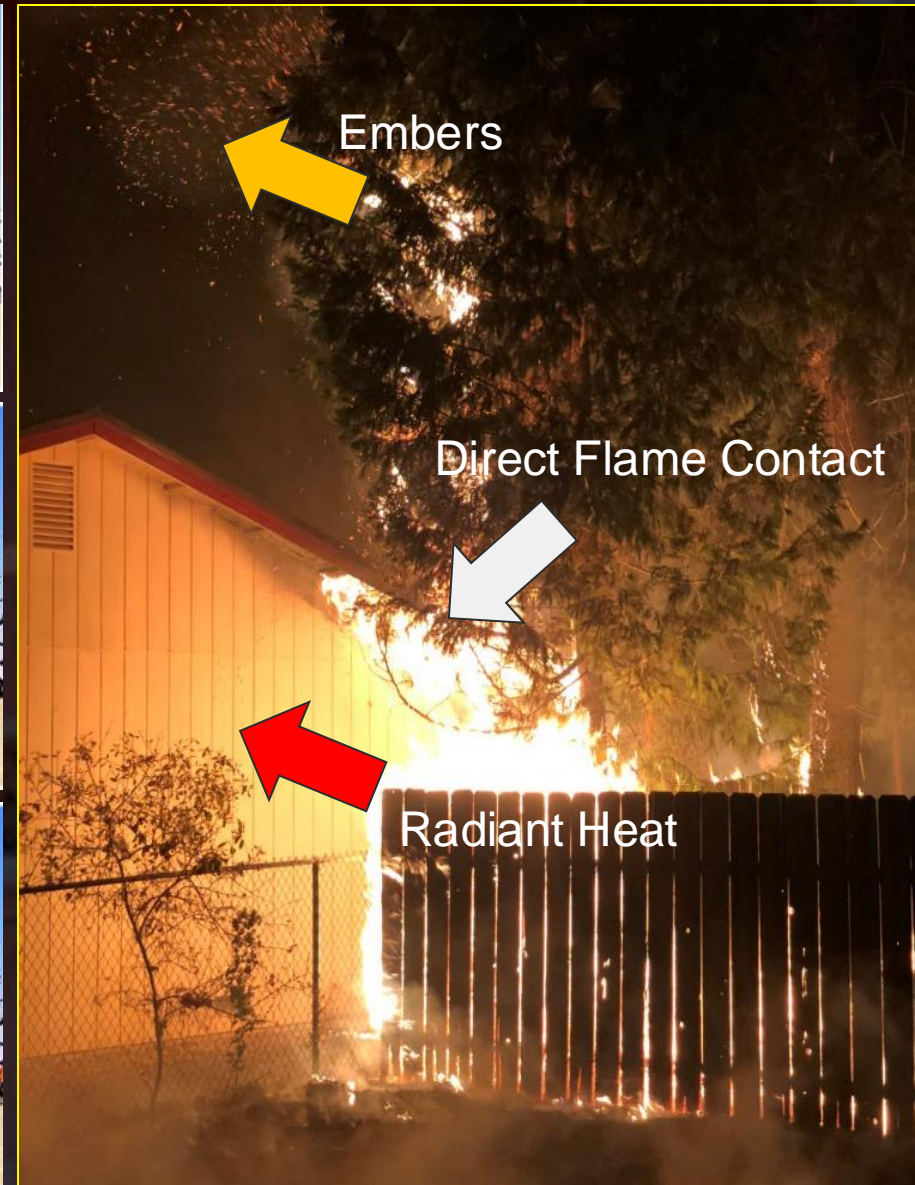
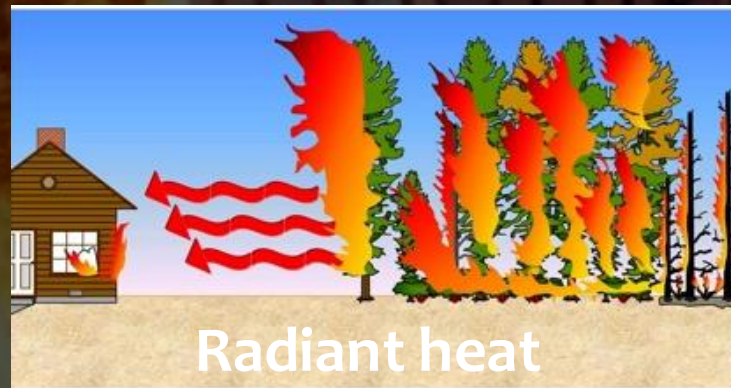
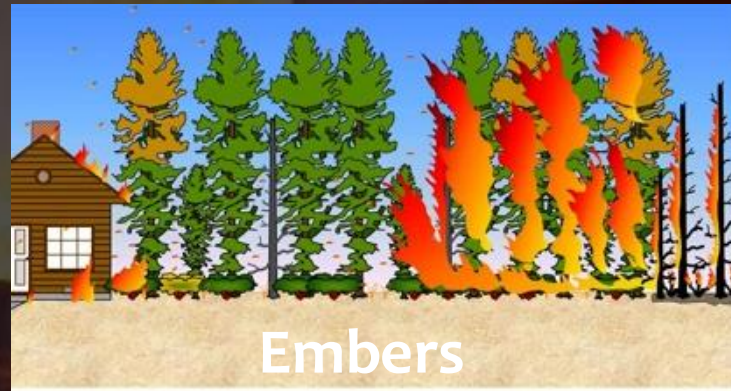
WHY?

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.



Structure Exposure from Wildfire

- How structures are exposed to wildfire
 - Embers –Are responsible for up to about 90% of home and business ignitions
 - Direct
 - Indirect
 - Direct Flame Contact
 - Radiant Heat



CAL FIRE Damage Inspection Data

California Wildland-Urban Interface Fires 2014-2022

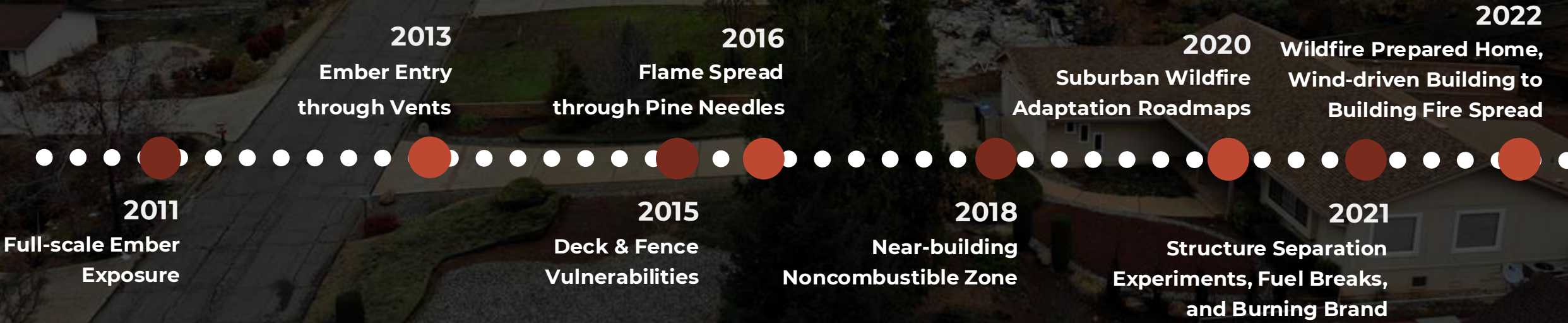
Years	Category of Damage	Structure Type						Total	% of Residential Structures Damaged and Destroyed	% of All Structures Damaged and Destroyed
		Single Family Residences	Multifamily Residences	Mixed Residential Commercial	Nonresidential Commercial	Other Minor Structures	Infrastructure			
2014—2022	Destroyed	35148	313	100	1764	14887	82	52294	92.17%	91.88%
	Major	201	8	1	31	221	23	485	0.54%	0.85%
	Minor	534	15	4	78	272	16	919	1.43%	1.61%
	Affected	2182	72	3	213	711	39	3220	5.86%	5.66%
	TOTAL	38065	408	108	2086	16091	160	56918	100.00%	100.00%

Total	2014		2015		2016		2017		2018		2019		2020		2021		2022		2014—2022	
Structures Destroyed	240	96.77%	3141	96.56%	1223	94.44%	10922	90.56%	22704	93.71%	555	69.20%	9494	89.39%	3243	91.74%	772	88.13%	52294	91.88%
Structures Damaged	8	3.23%	112	3.44%	72	5.56%	1139	9.44%	1523	6.29%	247	30.80%	1127	10.61%	292	8.26%	104	11.87%	4624	8.12%
Structures Damaged and Destroyed	248		3253		1295		12061		24227		802		10621		3535		876		56918	

- **90 - 95% of all structures that catch fire will be destroyed**
- **70% of all structures destroyed are residential structures**

Growing impacts of wildfire demand a solution.

PARCEL + COMMUNITY



Bending down vulnerability to Wildfire



IBHSRESEARCH

WILDLAND FIRE EMBERS AND FLAMES: Home Mitigations That Matter
Faraz Hedayati, PhD
Stephen L. Quarles, PhD
Steven Hawks
February 2023

NONCOMBUSTIBLE ZONE 0: MINIMIZING PATHWAYS TO HOME IGNITION

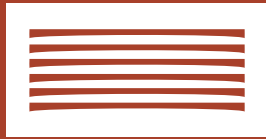
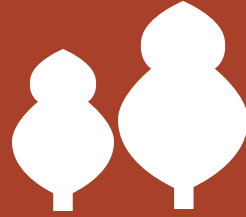
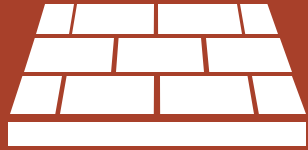
SUBURBAN WILDFIRE ADAPTATION ROADMAPS
A PATH TO COEXISTING WITH WILDFIRES

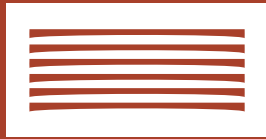
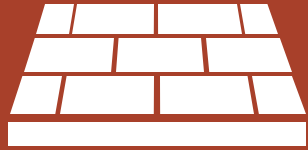
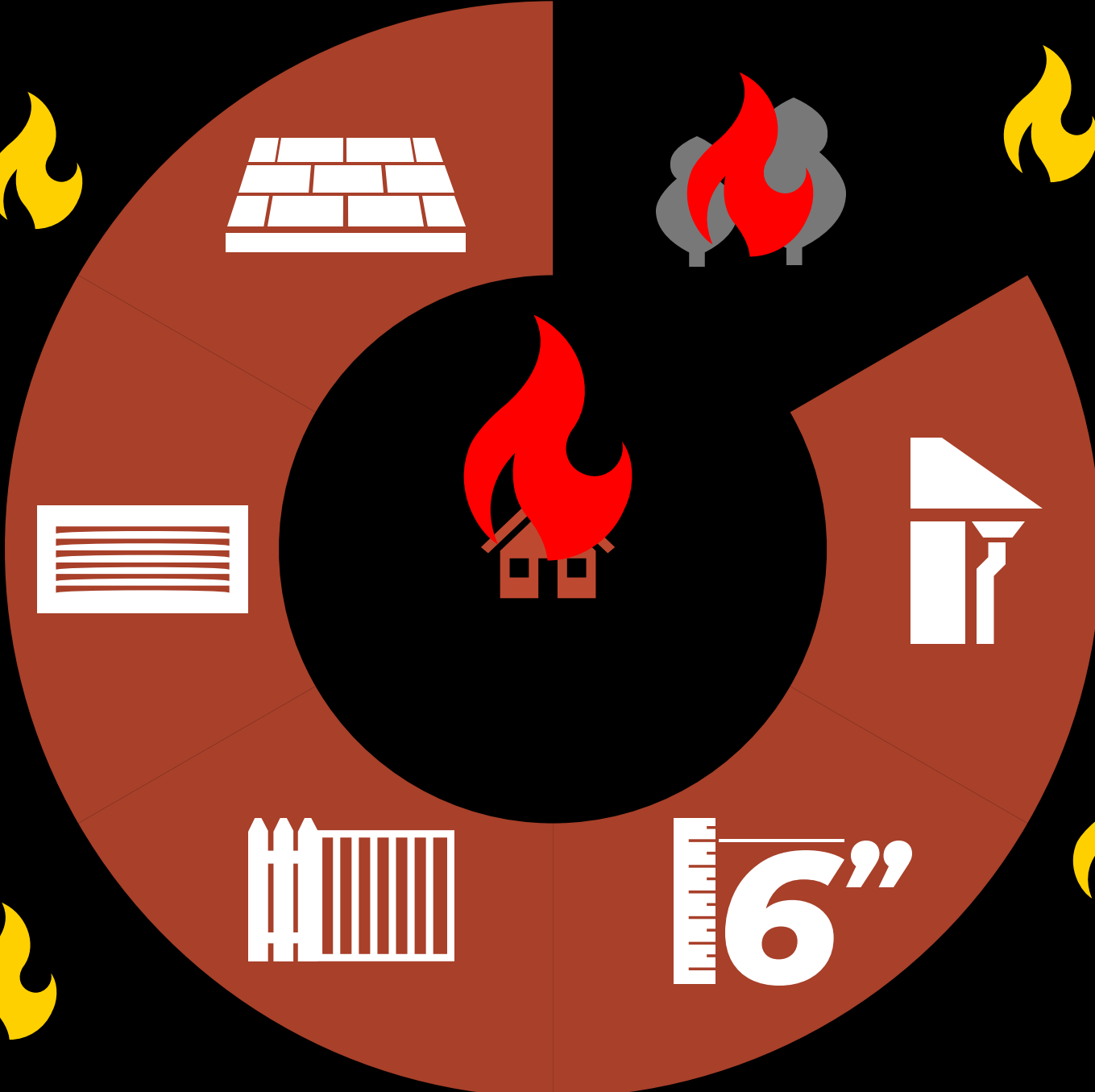
Wildfire Research
Rebuilding Noncombustible Zone
December 2018

Vulnerability of Vents to Wind-Blown Embers
August 2011

MEGA FIRES: The Case for Mitigation
For More-Than-Wildfire, Version 2.0 - 4/2017
Download the full report at www.fireproofyourhome.org

INSTITUTE FOR BUILDING STRATEGIES FOR DURABLE & HOME SAFETY





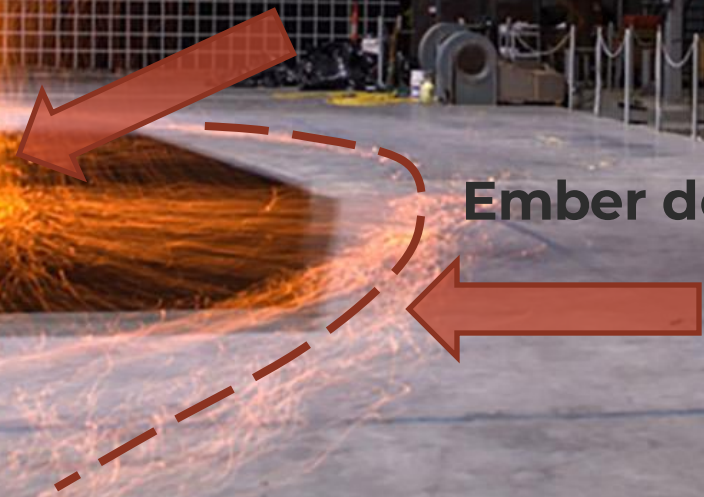


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Ember deposition



✓ Reducing vegetation in the 0-5 ft zone *nearly doubles* a homes wildfire survival rate



FIELD



IBHS



Dec 30, 2021 6:29:22 PM MST

Video from Holly Browarsky,
Emerson Lane

KUNA





Structure-to-Structure Fire Spread

First experiments looking at structure to structure fire spread with wind.

ROOF

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

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

BUILDING FEATURES

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

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
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Community

- **One of the biggest challenges we face**
- **Less developed science**
- **More variables**
 - **Planning documents**
 - **Codes/Public Policy**
 - **Notifications**
 - **Evacuation Routes**
 - **Emergency Response**
 - **Critical Infrastructure**
 - **Community Fuel breaks**
 - **Home Hardening**
 - **Defensible Space**
 - **Recovery**

Questions



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