

Wildland-Urban Interface Code

Building and Fire Code

Board of Appeals

October 2, 2019



Corelogic 2019 Wildfire Risk Report

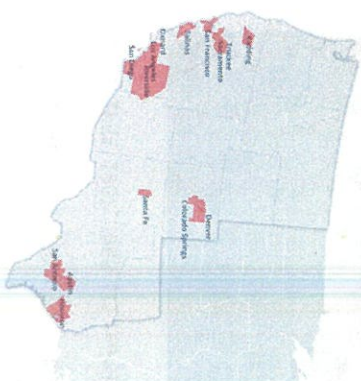


Table 3: Top 15 Metropolitan Areas for Wildfire Risk
Sorted by Population (City Value in Brackets)

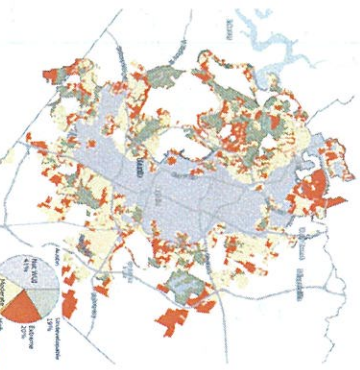
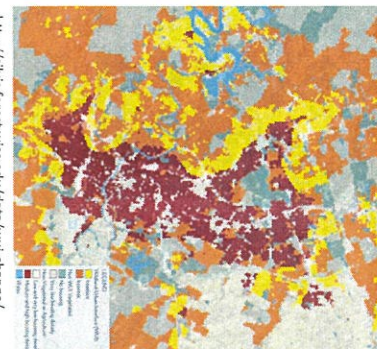
Metropolitan Area	Rank	Pop. (City Value)	High-Risk Area (sq. mi.)	High-Risk Area (pop. %)
Los Angeles, CA	1	12,659	87,000	8.0%
Phoenix, AZ	2	10,297	80,900	7.8%
San Diego, CA	3	75,000	45,400	6.0%
San Antonio, TX	4	1,400,000	427,000	3.0%
San Francisco, CA	5	1,000,000	100,000	1.0%
San Francisco, CA	6	10,114	10,114	0.1%
Denver, CO	7	40,734	19,332	4.7%
Tucson, AZ	8	11,987	10,885	9.0%
Orlando, FL	9	19,555	10,107	5.1%
Charlotte, NC	10	10,333	9,300	9.0%
San Jose, CA	11	10,000	10,000	1.0%
San Jose, CA	12	10,000	10,000	1.0%
San Jose, CA	13	10,000	10,000	1.0%
San Jose, CA	14	10,000	10,000	1.0%

Sylvis labs WUI Areas



<http://sylvilabs.org/wui-change/>

Sylvilabs and AFD WUI Areas



<http://sylvilabs.org/wui-change/>

<http://arcgis.com/arcgis>

Historic large fires, 500 to 4,000 acre plus

1959, 1961, 1962, 1968, (21 years) 1989, 1993, 1994, and 2011.



Austin's Wildfire Environment

Local fire environment creates risk to property but is also part of our fire adapted community

CWPP identified ecological values: wildlife habitat, water, parks, and preserves

Silvis labs map shows development in WUI decade by decade since 1990

Firefighting resources can be limited if multiple starts occur in high fire risk conditions



Cedar Fire About Out

The Austin Statesman (1911-1975), May 13, 1949

Producers Historical Newspapers: The Austin American Statesman

Cedar Fire About Out

A cedar brake fire, which threatened about 10,000 acres of land in Northwest Travis County late Tuesday, was under control and practically out Wednesday morning, Warren S. Freund, commission of Precinct 2, announced.

The fire started in the area where a fire was burning in the canyon where it often was the case, Freund said.

"For all practical purposes" the fire is over.

He could make no report on property damages or acreage burned, but said he had not heard of any building being destroyed.

Freund estimated that at least 100 persons volunteered to fight the flames, which were fanned by a strong wind from the north. The danger was to homes and ranches in the canyon areas from flying embers.

Freund said that a recent hail storm beat a heavy carpet of leaves to the ground and that the fire fed on leaves and undergrowth in the canyon. The fire started in the Boy Scout camp, on Bull Creek, was not damaged.

Joe Frowse, assistant city recreation department director, said the fire had swung to the right and threatened the Lake Austin Municipal Park on Lake Austin, contrary to previous reports.

The fire started shortly after noon Tuesday and volunteer firefighters, including a bulldozer operator and a machine, moved in immediately to fight the fire. The fire was in the fire's path.

<https://nwaacn.org/wp-content/uploads/2015/09/1948-03-11-Wildfire-Article.pdf>

Wildfire Impact

Corelogic Report released September 12 ranks Austin 5th at risk of property loss from wildfire, previous 2015 report had similar findings

Historic large fires, 500 to 4,000 acre plus, have occurred in the years 1959, 1961, 1962, 1968, 1989, 1993, 1994, and 2011

Structure Hardening through ignition resistant construction is a first priority for public safety



WUI Code

Technical Building Code
2015 IWUIC

LDC 25-1-501 – Initiation of Amendment
Council Resolution 20160512-016

LDC 25-1-502 - Amendment; Review

(D) For a proposed amendment to or repeal of a technical code in Chapter 25-12 (*Technical Codes*), review by the appropriate technical board, if any, is required.

Building and Fire Code Board of Appeals



Local Amendments

June 3 draft endorsed by Public Safety Commission

- Sections deferred to Fire Code:
- Permits for activities, operations, practices, or functions
- Permit and inspection processes
- Subdivision access and water supply
- Hazard severity based on local analysis
- Ignition resistant construction simplified to one class



Stakeholder Engagement

11 Boards and Commission meetings

4 presentations to Public Safety Commission, endorsed draft on June 3, 2019

3 meetings Environmental Commission, conditions addressed in final draft

20 External Stakeholder meetings

6 Greater Austin Homebuilders Association, local amendment to ignition resistant construction standards

11 Internal Stakeholder meetings

9 Ongoing engagement with internal City and County program teams

Local Amendments

Final draft from stakeholder input

- Page 1 and 2 – table revised
- Page 3 – Retroactivity exception deleted
- Page 3 – Comment to address concerns re: overriding regulations
- Page 7 – Comment to describe findings of fact
- Page 10 – Ignition resistant construction table deleted
- Page 11 – Revised to remove ambiguity over attachments (fences)
- Page 13 – Scope revised to delete existing development
- Page 13 – Groundcover revised to allow understory plants, mulch, etc.
- Page 13 – Trees revised to address standards of care, rules process



WUI Code Map

TABLE 502.1
FIRE HAZARD SEVERITY

FUEL MODEL ^b	CRITICAL FIRE WEATHER FREQUENCY					
	≤ 1 Day ^a		2 to 7 days ^a		≥ 8 days ^a	
	Slope (%)		Slope (%)		Slope (%)	
Light fuel	≤ 40	41-60	≤ 61	≥ 61	≤ 40	≥ 41
Medium fuel	M	M	M	M	M	H
Heavy fuel	H	H	H	H	E	E

M – Moderate Hazard H – High Hazard E – Extreme Hazard

a – days pre annum
b – where required by the code official, historic fuel type for the area

WUI Code

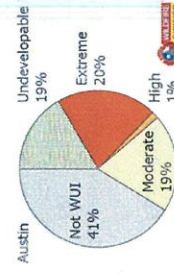
Ignition Resistant Construction - New & Remodeled Structures

TABLE 503.1
IGNITION-RESISTANT CONSTRUCTION^a

DEFENSIBLE SPACE ^c	FIRE HAZARD SEVERITY					
	Moderate Hazard		High Hazard		Extreme Hazard	
	Water Supply ^b	Nonconforming ^d	Water Supply ^b	Nonconforming ^d	Water Supply ^b	Nonconforming ^d
Nonconforming	IR 2	IR 1	IR 1	IR 1	IR 1	Not Permitted
Conforming	IR 3	IR 2	IR 2	IR 1	IR 1	IR 1
1.5 x Conforming	Not Required	IR 3	IR 3	IR 2	IR 2	IR 1

a. Access shall be in accordance with Section 403.

WUI Code Map



Fuel Model ^b	Proximity to Contiguous (40 Acres) Wildland Fuels					
	150' to 1.5 miles		< 150'		< 150'	
	Slope (%)		Slope (%)		Slope (%)	
Light	≤ 10	10 to 25	≤ 10	10 to 25	≤ 10	10 to 25
Medium	M	M	M	M	M	M
Heavy	H	H	H	H	H	H

<https://area.irs1.com>

WUI Code

Ignition Resistant Construction - New & Remodeled Structures

DEFENSIBLE SPACE ^c	Fire Hazard Severity					
	Moderate Hazard		High Hazard		Extreme Hazard	
	Water Supply ^b	Nonconforming ^d	Water Supply ^b	Nonconforming ^d	Water Supply ^b	Nonconforming ^d
Nonconforming	R	R	R	R	R	R
Conforming	NR	R	R	R	R	R
1.5 x Conforming	NR	NR	NR	R	R	R

NR-not required

R-required

NP-not permitted

101.4 Retroactivity

- Conditions arising after adoption of code
- Conditions not legally in existence at adoption of code
- Conditions that, in the opinion of the code official, constitute a distinct hazard to life or property
 - Extreme hazard severity
 - Poor access
 - Poor water supply
 - Poor defensible space



Defensible Space Criteria

- WPD Publication "Before and After the Fire"
- Balcones Canyonlands Preserve Best Management Practices for wildfire fuels mitigation in Golden Cheek Warbler habitat
- Texas A&M Forest Service recommendations for Firewise Landscaping
- American National Standards Institute standard for tree pruning, ANSI A300



Hazard Severity

Appendix C points based categories, 75+ is extreme hazard

- Subdivision design
- Vegetation
- Topography
- Roofing material
- Fire protection – water source
- Existing building construction materials
- Utilities (gas and/or electric)



Schedule

- Building and Fire Code Board of Appeals – October 2, 2019
- City Council – December 5, 2019
- Implementation – May 5, 2020, 6 months after adoption



Staff

Dedicated review and inspection team in AFD

- 4 Engineer reviewers
- 4 AFD officer inspectors
- 1 AFD Captain Supervisor
- 1 WUI Specialist

\$307 permit review and inspection fee would cover program costs

