

Austin Fire Department Wildfire Division Update on Council Resolution

Presented to
Public Safety Commission

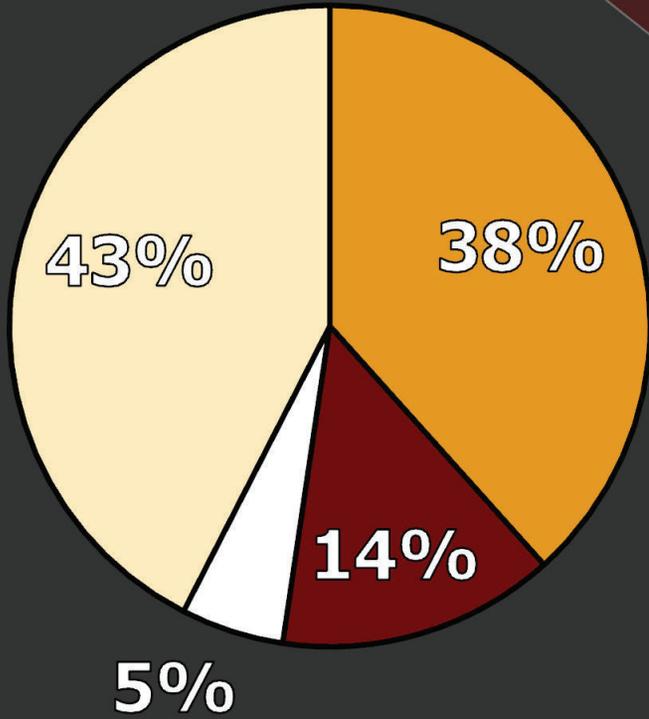
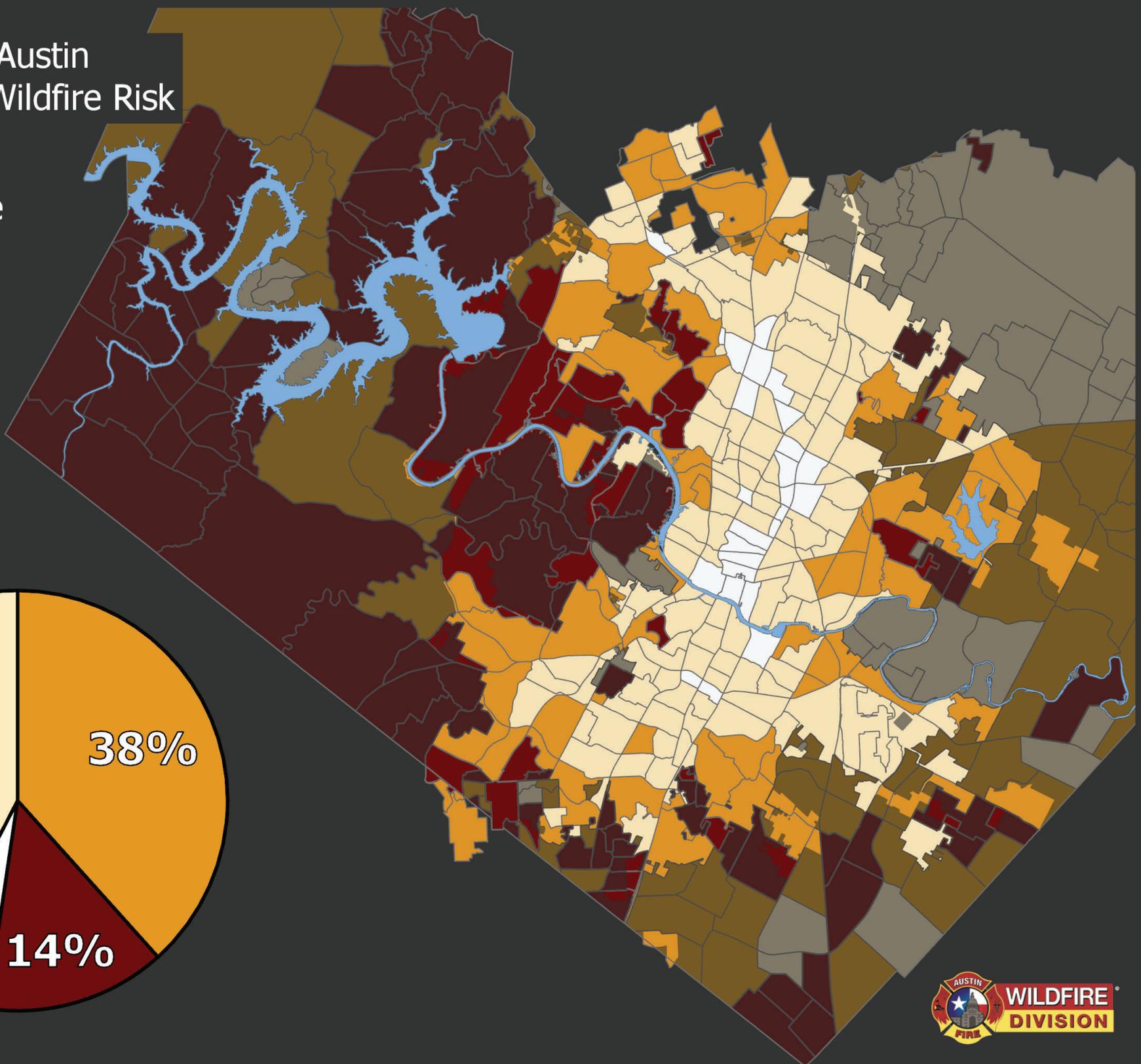
April 1, 2019

This report is a broad overview. Council District specific reports are available and will be provided upon request.



City of Austin Community Wildfire Risk

- Lowest
- Moderate
- Elevated
- High



Wildfire Risk Assessment

The first step in confronting the threat that wildfire poses to our community, is the clear understanding of the nature of the threat. This is most effectively accomplished through a rigorous science based approaches to quantifying wildfire risk. To this effect we have conducted one of the most rigorous assessments of wildfire risk in the nation. While the result of the risk analysis paints an ominous picture of potential wildfire impacts, we believe that our communities can survive wildfire if properly prepared.

Table 1. Wildfire risk and structures identified as within the wildland urban interface by City of Austin Council District.

District	At-Risk Structures					Total	% Structs Interface	% Area Wildlands	Wildland/ Structure Interface (miles)	Wildfire Risk Score	Relative Risk Rank	Risk Classification
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5							
CD1	5,567	5,868	7,770	8,180	9,666	37,051	73.9	47.9	93.5	38	4 th	Elevated
CD2	4,822	5,998	10,051	7,628	6,539	35,038	81.3	44.0	73.8	38	5 th	Elevated
CD3	1,710	2,107	4,178	3,689	16,314	27,998	41.7	10.3	26.4	31	7 th	Elevated
CD4	313	532	1,329	4,122	19,173	25,469	24.7	0.5	3.1	21	9 th	Moderate
CD5	3,920	5,245	8,315	11,736	9,805	39,021	74.9	21.6	57.7	37	6 th	Elevated
CD6	4,314	3,864	6,108	11,611	4,713	30,610	84.6	41.9	88.6	41	3 rd	High
CD7	2,171	2,383	5,062	2,109	27,026	38,751	30.3	14.6	41.4	29	8 th	Moderate
CD8	7,145	7,610	11,822	5,855	998	33,430	97.0	43.9	129.5	44	1 st	High
CD9	211	419	1,298	317	23,635	25,880	8.7	0.7	3.6	21	10 th	Moderate
CD10	5,652	4,395	6,849	7,307	10,404	34,607	69.9	32.0	129.1	42	2 nd	High
Total	35,825	38,421	62,782	62,554	128,273	327,855	60.9	27.2	646.7	36		

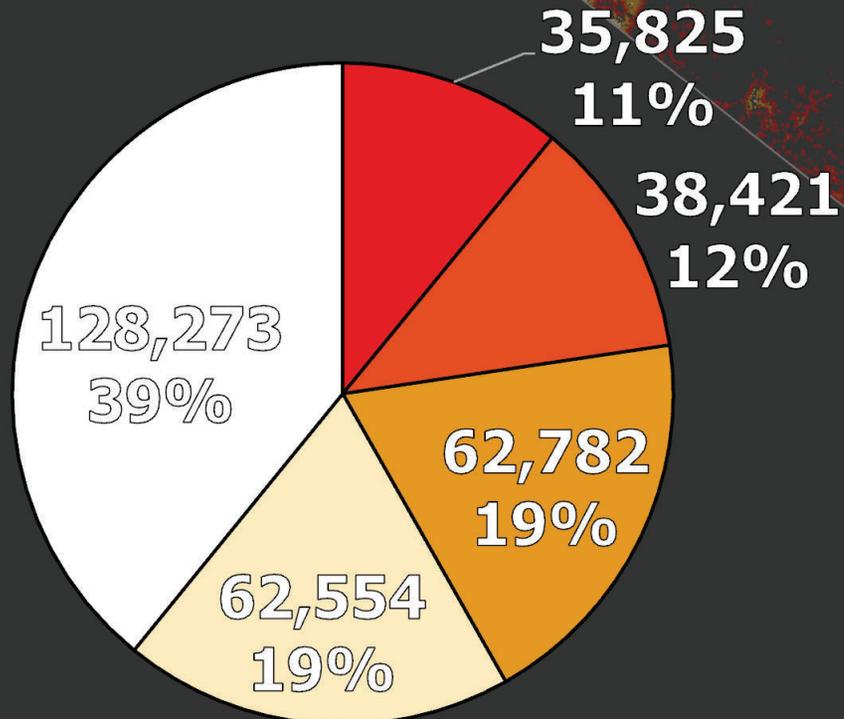
For a comprehensive understanding of the concepts behind these data, please explore our new interactive [Wildfire Risk](#) map portal at [ATXFire.com](#).



City of Austin Wildland Urban Interface

Structure Proximity to Wildlands

- Within 150 feet (Interface)
- Within 400 feet (Interface)
- Within 1,000 feet (Interface)
- Within 1.5 miles (Ember Zone)
- Greater than 1.5 miles



Community Wildfire Protection Plans

The City of Austin is the first major municipality to have a comprehensive Community Wildfire Protection Plan (CWPP) in place. The [Austin Travis County CWPP](#) is actively being implemented by multiple stakeholders, from local, state and federal agencies all doing their part to combat the threat of wildfire. The CWPP was built upon the framework of the National Cohesive Wildfire Strategy, which focuses on Fire Adapted Communities, Fire Resilient Landscapes and an effective response to wildland fire. The Austin Travis County CWPP serves as a model for wildfire planning in the complex ecological and social environment that is Austin. The CWPP was adopted in November of 2014 and has served as a springboard for executing Wildfire Preparedness.

In Austin we feel it is important that the CWPP concept is implemented at all levels of community. We are utilizing data, information and partnerships to support our communities in preparing for wildfire at the local level. In that regard we provide proactive communities with a clear understanding of risk, support the implementation of wildfire related vegetation management planning and provide information they can use to prepare their properties and families to survive a wildfire. Austin leads the state in the number of communities that are nationally recognized for their wildfire preparedness efforts. We call these Firewise Communities, and they serve as a model for other Austin communities at risk that are willing to put in the time, resources and effort into preparing themselves, with our help, for wildfire.

Included in this report is an overview of the communities actively engaged in developing and implementing local level CWPPs, prioritization of communities in need of a plan, percentage of high-risk wildland urban Interface areas needing plans.



City of Austin

Active & Engaged Communities

Active & CWPP

Engaged

Completed Fuels Projects

2016

2017

2018

2019

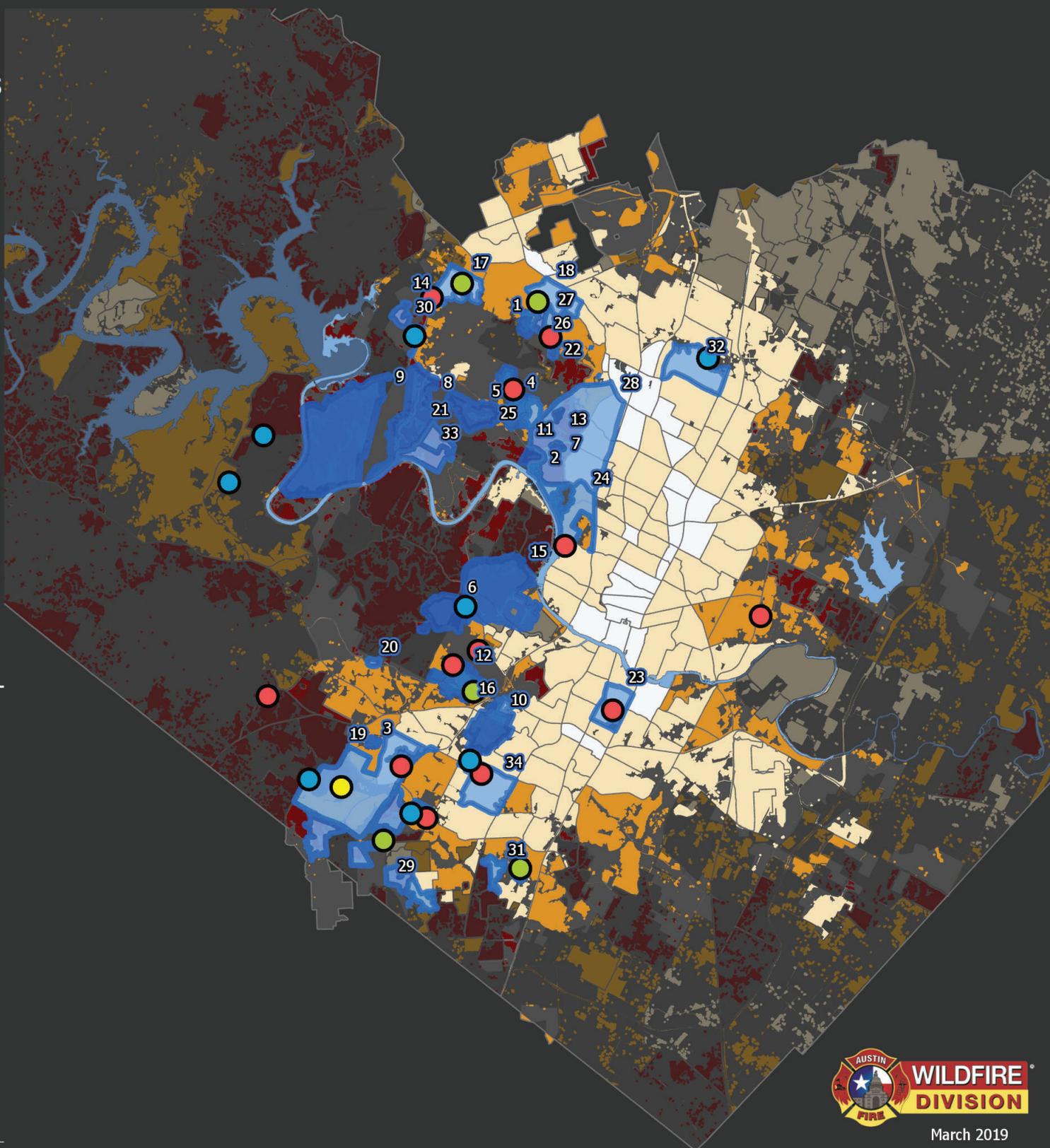
Wildfire Risk Class

Lowest

Moderate

Elevated

High



FireWise Communities

Engaged Communities

Canyon Mesa	1	Barton View	16
Courtyard	2	Canyon Creek	17
Estates of Shadowridge	3	Canyon Vista	18
Jester Estates	4	Circle C	19
Long Canyon	5	Escondera	20
Lost Creek	6	Glenlake	21
Meadow Mountain	7	Great Hills West	22
River Place	8	Greater South River City	23
Steiner Ranch	9	HPWBANA	24
Sunset Valley	10	Lakewood	25
The Estates at the Overlook	11	Northview Hills	26
Travis Country	12	Northwest Hills Ranch	27
Valburn Circle	13	NWACA	28
Versante Canyon	14	Shady Hollow	29
West Lake Hills	15	The Parke	30
		Twin Creeks	31
		Walnut Creek	32
		Westminster Glen	33
		Whispering Oaks	34

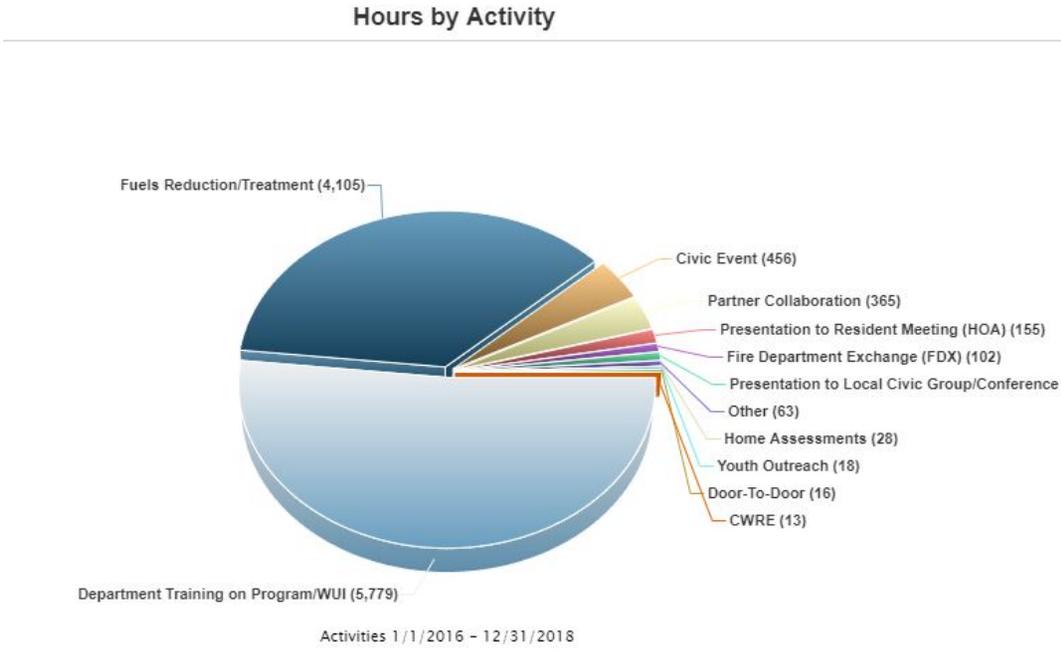


Wildfire Education and Outreach

The Austin Fire Department places a high priority on wildfire awareness and education. This is one of the most important aspects of our program. The empowerment of residents, of the public, our partner departments as well as our own department is critical to the resiliency of our community. Through public presentations, trainings, social and traditional media mechanisms we aggressively promote wildfire awareness. The Austin Fire Department is consistently ranked as one of the leading departments in the nation, based on the hours dedicated to wildfire education and training.

Table 3. A summary of community engagement hours by activity type from January 1, 2016 through December 31, 2018.

Activity	Aggregate Hours	% of Total
Department Training on Program/WUI	5,779	51.67%
Fuels Reduction/Treatment	4,105	36.70%
Civic Event	456	4.08%
Partner Collaboration	365	3.26%
Presentation to Resident Meeting (HOA)	155	1.39%
Fire Department Exchange (FDX)	102	0.91%
Presentation to Local Civic Group/Conference	84	0.75%
Other	63	0.56%
Home Assessments	28	0.25%
Youth Outreach	18	0.16%
Door-To-Door	16	0.14%
CWRE	13	0.12%
Total	11,184	100%



Fire Resilient Landscapes and Hazardous Fuels Mitigation

One important component of wildfire preparedness is the mitigation of vegetation hazards adjacent to communities at risk. This means implementing mitigation measures on city owned properties and providing technical assistance to private landowners. For the Austin Fire Department, identifying where the intersection of communities and risk lies is the first step. We have completed a comprehensive assessment of both the amount of wildland Urban Interface and the percentage of that interface that falls under the responsibility of the City of Austin.

These data are publicly available to explore at <http://arcg.is/y00Su0>.



City of Austin Wildland Urban Interface

Structure Proximity to Wildlands

- Within 150 feet (Interface)
- Within 400 feet (Interface)
- Within 1,000 feet (Interface)
- Within 1.5 miles (Ember Zone)
- Greater than 1.5 miles
- Wildlands (27% COA Area)

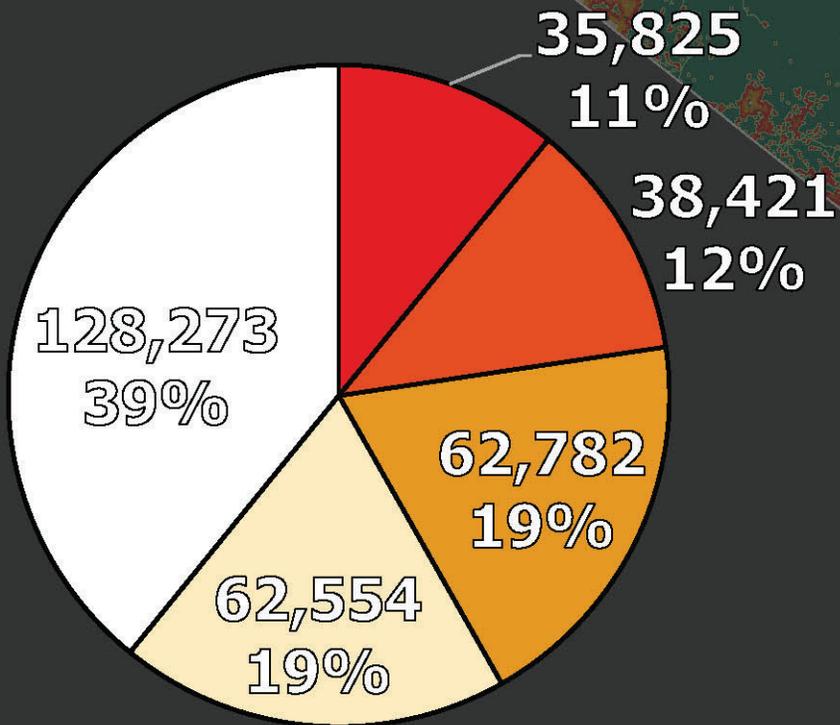
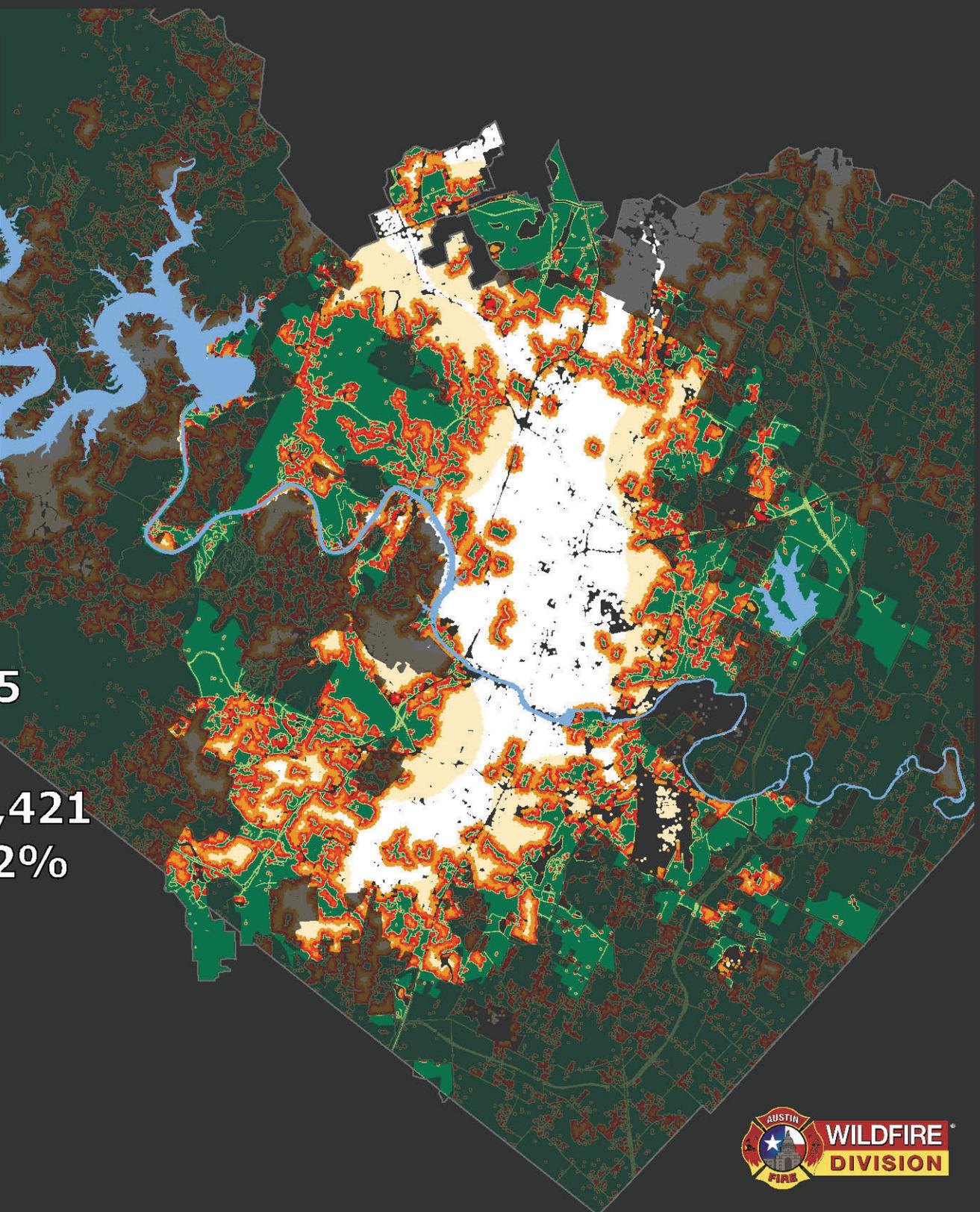


Table 2. Austin Fire Department Wildfire Division fuels reduction projects from January 2016 through March 2019. Structures within 150 feet of the treatment zone are classified as protected.

Project ID	District	Site	Length (ft)	Acres Treated	Structures Protected	Values Protected	Mgt	Status	FY Year Completed	Date Completed
1-1	1	AFD Headquarters	306	0.5	1	\$16,194,978	Fire	Completed	2016	8/18/16
5-1	5	Stephenson Preserve 1	1,000	1.4	26	\$4,070,735	PARD	Completed	2017	9/18/16
5-2	5	Mary Moore Seawright	4,730	5.9	69	\$23,056,842	PARD	Completed	2018	10/30/18
5-3	5	Stephenson Preserve 2	5,675	4.9	66	\$30,397,565	PARD	In Progress	2019	
6-1	6	Versante Canyon	2,508	3.8	31	\$3,445,640	HOA	Completed	2016	2/13/16
6-2	6	Vista Parke	1,800	0.8	6	\$35,121,281	COA	Completed	2017	11/17/16
6-3	6	Canyon Vista	3,985	1.0	1	\$81,398,260	RISD	Completed	2018	12/27/17
6-4	6	Canyon Creek	276	0.3	1	N/A	AISD	Completed	2018	4/9/18
7-1	7	Walnut Creek Phase 1	3,605	5.1	30	\$13,023,640	PARD	Completed	2017	8/22/17
8-1	8	Barton Creek	14,520	1.9	0	\$61,924,852	PARD	Completed	2016	2/5/16
8-2	8	Brodie Wild		4.6	1	\$531,216	WCD	Completed	2016	5/26/16
8-3	8	Moon Shadow	716	1.0	11	\$8,558,962	WCD	Completed	2016	2/27/16
8-4	8	Hitcher Bend	1,024	1.4	13	\$4,749,015	PARD	Completed	2016	11/19/15
8-5	8	Lost Creek	1,310	1.5	7	\$4,240,777	PARD	Completed	2017	12/14/16
8-6	8	Bowie HS	432	0.7	11	\$21,462,068	AISD	Completed	2017	1/16/17
8-7	8	Circle C Metro Park	2,319	7.4	73	\$31,946,438	WCD	Completed	2019	2/27/19
8-8	8	Alta Mira	1,532	2.1	8	\$4,136,312	WCD	Completed	2017	5/5/17
8-9	8	J-17		7.6	20	\$102,867,787	WCD	Completed	2018	11/21/17
8-10	8	Travis Country SE	2,506	6.3	47	\$22,155,603	PARD	Completed	2018	3/1/18
9-1	9	Blunn Creek	4,023	11.4	60	\$107,904,052	PARD	Completed	2016	8/24/16
10-1	10	Mayfield Park	2,319	0.9	5	\$35,324,798	PARD	Completed	2016	7/20/16
10-2	10	Laurel Mountain		4.3	9	\$6,096,195	RISD	Completed	2016	3/19/16
10-3	10	Jester Redbay	333	0.5	4	\$1,995,984	COA	Completed	2016	2/4/16
0-1	0	Parkhouse WQPL	1,200	2.0	2	\$1,534,753	WCD	Completed	2016	9/30/16
0-2	0	Gebron	780	1.0	4	\$1,116,726	WCD	Completed	2017	1/5/17
0-3	0	Kollmeyer	1,440	1.8	10	\$3,284,672	WCD	Completed	2017	1/24/17
			11 Miles	74	516	\$626,539,151				



Identification of Community Protection Zones and Project Prioritization

Some city property cannot be mitigated due to factors such as topography, critical environmental features and access to the area. Potential treatment zones are defined as City of Austin property boundaries where mitigation treatments are Possible under these criteria. This excludes boundaries without proximate structures, boundaries with hardened substrates and areas with slope above 25%. The result of our analysis is the identification of potential treatable areas on City property and the prioritization of where mitigation could occur to have the greatest impact on reducing risk.

These data are publicly available to explore at <http://arcg.is/4rXii>.

Table 3. Wildland Urban Interface with potential treatment zones on public lands identified by Council District.

District	Wildland/ Structure Interface (miles)	Percent Public	COA Adjacent Interface (Miles)	Potential Treatment Zone (Miles)	Treated (Miles)
Other			22.9	13.2	0.6
CD1	93.5	22.2	20.8	7.8	0.1
CD2	73.8	28.6	21.1	7.8	0.0
CD3	26.4	44.7	11.8	5.8	0.0
CD4	3.1	54.8	1.7	1.2	0.0
CD5	57.7	23.7	13.7	10.1	2.2
CD6	88.6	15.1	13.4	9.6	1.6
CD7	41.4	24.6	10.2	4.2	0.7
CD8	129.5	30.7	39.7	23.6	4.6
CD9	3.6	77.8	2.8	0.4	0.8
CD10	129.1	18.8	24.3	13.9	0.5
Total	646.7	28.2	182.4	97.6	11.1

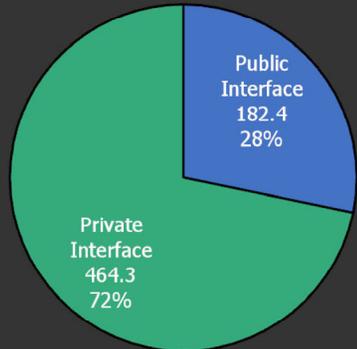
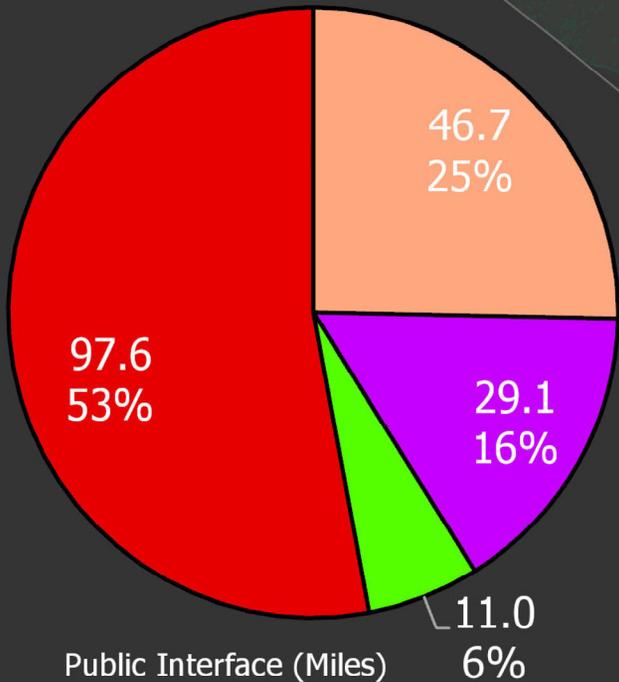
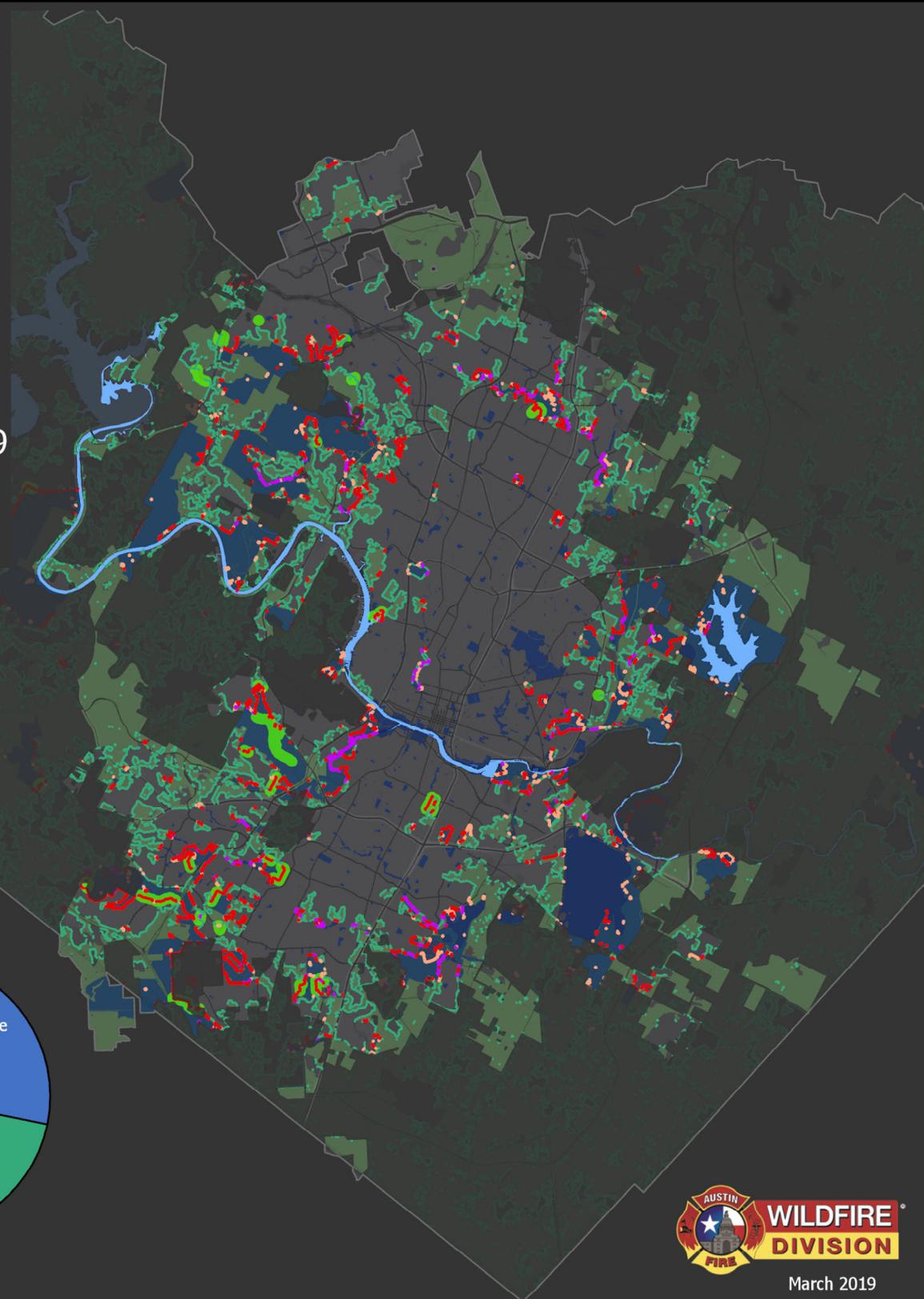


City of Austin Community Protection Zones

Wildland Urban Interface Boundary

Status

- Treatment Criteria Not Met
- Treatment Criteria Met - CWQZ
- All Criteria Met - Potential Treatment Zone
- Privately Managed
- Treated by AFD Wildfire Division 2016 - 2019
- Wildlands
- COA Managed Property



Wildland-Urban Interface Code

A Wildland-Urban Interface, WUI, Code for Austin would reduce risks of structure ignition potential from wildfire by authorizing the Fire Chief to require new building and vegetation management regulations. The approach of following an international model code, as opposed to integrating into existing land use and building codes, was agreed to after reviewing comments from previous adoption attempts and an information meeting with close to 100 internal stakeholders representing Austin and Travis County agencies and departments. The initial evaluation process turned out to be more extensive than originally anticipated which led to a delay in delivering the plan and timeline for adoption.

In November of 2016 AFD Chief Kerr provided the plan and timeline for adoption of the WUI code through a memo with the recommendation to use the International Code Council WUI Code as a model with local amendments similar to how Austin adopts other technical building codes. The recommendation included a description of the evaluation and a timeline with a target adoption date of January 2018. This target date was contingent on completion of interim steps including ongoing stakeholder engagement, local risk analysis, review of affordability impacts, review and integration with land development code changes, and inclusion of wildfire risk in the Imagine Austin 5 year review and update. Most importantly has been coordination with a major external stakeholder, the Greater Austin Home Builders Association, HBA. Leaders from the HBA met with AFD to develop building standards that would provide a high level of protection for public safety while not being onerous in terms of permitting processes or excessive impact to housing affordability. This effort, along with development of local risk analysis to support this new code, extended the adoption target date through 2018.



Wildland-Urban Interface Code (continued)

AFD Wildfire and Engineering Divisions have been coordinating completion of a final draft of the WUI code to include permitting processes, the local amendments developed with the HBA, and predictable standards for vegetation management. This final draft, along with estimates of numbers of permits and inspections, is being used to determine resources needed for implementation, and final stakeholder engagement. Due to extensive engagement with key partners and anticipated continued support from the Public Safety Commission a reasonable target for Council adoption would be early summer of this year, May or June, with actual implementation as early as January 2020. Implementation will be contingent on approval of program funding, hiring, training, and acquiring supporting resources for a WUI code permitting and inspection team.

The WUI code, like other technical building codes, establishes minimum standards for public safety. While it will go a long way to meeting the framework of the National Cohesive Strategy used to build the Austin and Travis County Community Wildfire Protection Plan, it will not replace the need for comprehensive planning and for individual property owners to take actions to reduce risks of property loss or personal injury from wildfire.

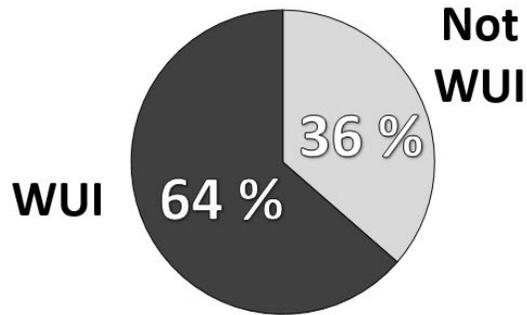
The following graphics show critical components of the WUI code, areas where the regulations would apply, and hazard severity to determine level of structure ignition resistant construction and vegetation management. These areas and hazard severity levels form the basis for application of the WUI code.



Wildland-Urban Interface Code (continued)

WUI Areas

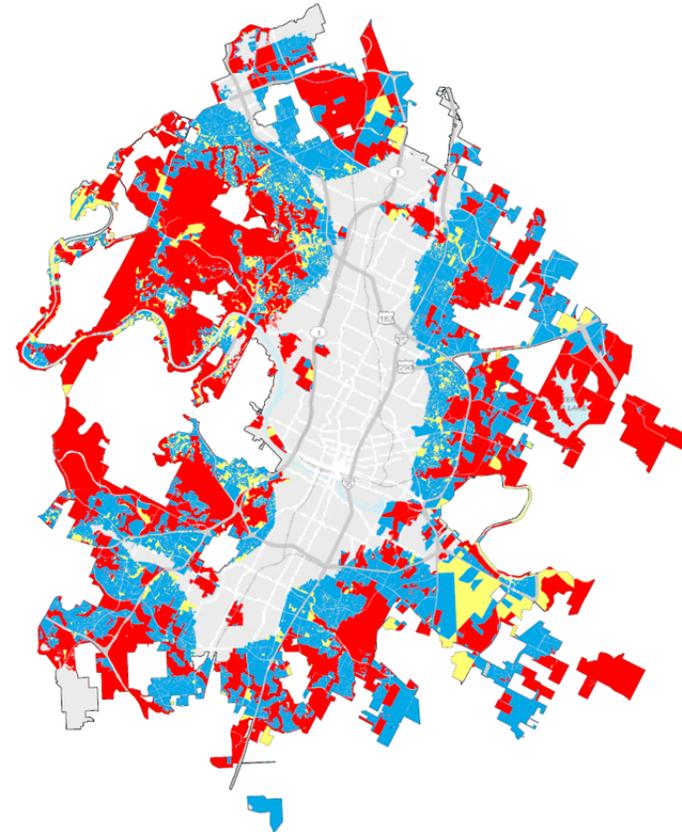
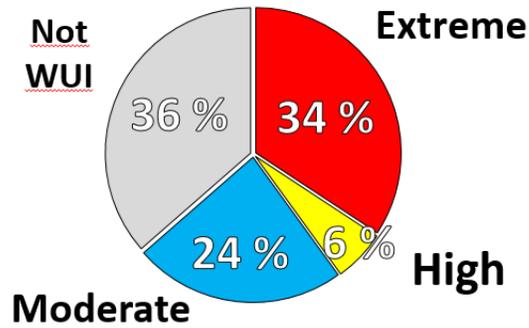
City of Austin Zoning Jurisdiction
Full and Limited Purpose



Wildland-Urban Interface Code (continued)

WUI Hazard Severity

Fuel Model ^b	Proximity to 10 Acre Wildland Areas					
	150' to 1.5 miles			< 150'		
	Slope (%)					
	< 10	10 to 25	> 25	< 10	10 to 25	> 25
Light	M	M	M	M	M	H
Medium	M	M	H	E	E	E
Heavy	H	H	H	E	E	E



Wildfire Evacuation Planning

Most Wildfire related fatalities occur during the evacuation phase; Thus, it is through wildfire evacuation planning that we will have the greatest impact on the preservation of life. The City of Austin partnered with Travis County to develop the first Wildfire Evacuation Plan in Texas. The plan outlines how cooperators will manage the complexities of a wildfire evacuation. Extensive efforts have been taken to educate the public on their role and responsibilities before, during and after a wildfire evacuation. The combination of the city plan and informed public gives us the best opportunity to move populations out of harm's way and into safety in the shortest distance and time possible. To facilitate a safe and efficient evacuation, GIS analysis has been conducted that identifies key factors related to evacuation complexity. All communities with limited ingress and egress, areas along evacuation routes that could be hazardous and areas that could serve as temporary community refuge have been identified. In addition, we are providing communities with increased evacuation complexity maps tailor to their specific evacuation issues.

Table 4. Identified communities with limited ingress and egress in the City of Austin.

Limited Access Communities							
Jester Estates	1	FREUND-KEEWORTH	14	MURFIN RD	27	RIVER POINTE	40
151 ACRE TRACT	2	FREUND SLEEPY HOLLOW	15	OAK SHORES	28	RIVERFRONT ESTATES	41
BARTON CREEK WEST	3	GLENLAKE	16	PANTHER HOLLOW	29	ROBIN ROAD ADDITION	42
BLUE HILLS ESTATES	4	GREENSHORES	17	PASCAL LN	30	SMOKY RIDGE	43
BOKROS BUFFER	5	IMPERIAL VALLEY	18	PEARCE ANNEX	31	STEINER RANCH	44
BRIARPATCH	6	INKS LANDING	19	PENN SUBDIVISION	32	SUNDOWN PARKWAY	45
BUCKNER RD	7	LAKESIDE TERRACE	20	RAVINE RIDGE TRAIL	33	SUNRISE TERRACE	46
CAPITOL VIEW ESTATES	8	LEIGH ADDITION	21	RESACA BLVD	34	TRAVAASA	47
CHIMNEY HILL	9	LONG CANYON	22	RIO VISTA	35	WESTCLIFF	48
COLDWATER	10	MANANA WEST	23	RIVER BEND	36	WESTON LN	49
COMMONS FORD RD	11	MARSHALL FORD VISTA	24	RIVER BEND AREA	37	WILD BASIN LEDGE	50
DRUMMOND	12	MONTVIEW ACRES	25	RIVER DANCE	38	WINDY RIDGE DR	51
FLEECIE PURNELL ESTATE	13	MT LARSON RD	26	RIVER PLACE	39	WOODS OF GREENSHORES	52
						YUCCA MOUNTAIN DR	53

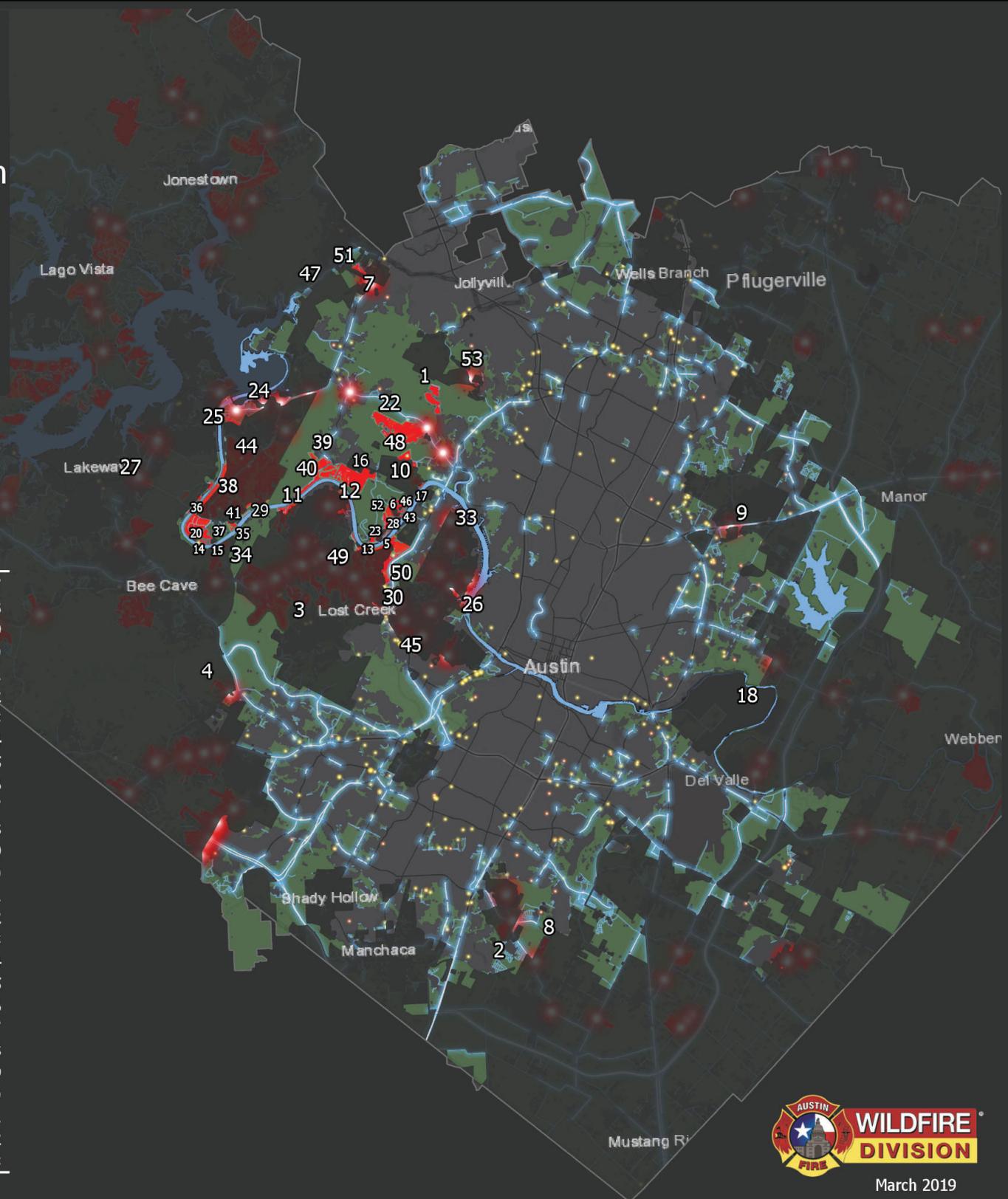


City of Austin Wildfire Evacuation Data

- Community Refuge Locations
- Evacuation PinchPoint Intersection

Threatened Roadways

- Evacuation Corridor
- Minor Road
- Limited Access Communities



Limited Access Communities

Jester	1	MURFIN RD	27
151 ACRE TRACT	2	OAK SHORES	28
BARTON CREEK WEST	3	PANTHER HOLLOW	29
BLUE HILLS ESTATES	4	PASCAL LN	30
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