TULSA FIRE DEPARTMENT

Community Risk Assessment

2024

Acknowledgements

The Tulsa Fire Department would like to sincerely thank the individuals and the organizations that have provided important input, data analysis, assistance and support in developing this Community Risk Assessment and partners that support our Community Risk Reduction programs.

Fire Chief Michael Baker

Fire Marshal Deputy Chief Charles French II

Director Of EMS Chief Justin Lemery

Planning Officer Captain Bryan Beall

Assistant Fire Marshal Captain Bryan Runyan

City of Tulsa GIS Coordinator Matt Parsell

City of Tulsa Senior GIS Analyst Chaya Balsinger

Tulsa Local 176

American Red Cross

Tulsa Chamber of Commerce

Safe Kids Tulsa

Ascension St. John

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Summary

TULSA FIRE DEPARTMENT STRATEGIC PLAN

PURPOSE

The purpose of the Tulsa Fire Department is to respond to and reduce the risk of problems that impact the quality of life within our community.

VISION

1. Develop and maintain a cadre of professional and community engaged leaders so that the Tulsa Fire Department can attract, educate, and retain the nation's best fire service personnel.
2. Support an organizational culture that effectively delivers World Class service through proactive Community Risk Reduction (CRR) activities.
3. Promote a safe workplace environment that reduces occupational hazards and builds effective teams.
4. Strive to become an agile, not fragile, organization that is financially and functionally resilient.
5. Reframe the definition of the "Fire Department" as a collaborative community partner to aid in solving Tulsa's challenges.

MISSION

The Tulsa Fire Department's mission is to protect the life of Tulsa through excellence in fire, rescue, and community healthcare services.

STATEMENT OF VALUES

We are committed to providing the highest possible level of service to our community. Through leadership development and professional education, we will ensure the quality service our community deserves. Through training, we will acquire the skills and teamwork necessary to safely perform the tasks required of us. We will recognize the value of community involvement in providing diversity within our organization. Honesty and integrity will be the underpinning of all interactions we have within and outside of our organization. Ultimately, we are built upon a foundation of trust.

EXECUTIVE SUMMARY

This report summarizes the findings of a Community Risk Assessment (CRA) conducted by the Tulsa Fire Department, following NFPA 1300 standards. The assessment analyzed incident data from 2019-2023 to identify and prioritize risks, enabling strategic resource allocation and program development to mitigate those risks.

Key Risk Areas and Response Programs:

- **Fire Deaths:** The CRA revealed a concerning trend of fire deaths, particularly in single-family dwellings. To combat this, the **T.U.L.S.A. (Tulsa Utilizing Life Saving Alarms)** program was utilized. This program collaborates with the Red Cross "Sound the Alarm" initiative to provide and install free smoke alarms in homes, educating residents on fire safety.
- **Unwanted Fire Alarms:** A high volume of unwanted fire alarms, often caused by malfunctioning systems or improper use, burdens resources and response times. The **Fire Alarm Non-Compliance program** focuses on inspections, education, and code enforcement to reduce these incidents by 30% by 2026.
- **High 9-1-1 Utilization & Vulnerable Populations:** Analysis identified a pattern of high 9-1-1 usage by individuals with complex needs, including those experiencing homelessness, mental health issues, and substance abuse. The **TFD CARES (Community Assistance Referrals and Education Services)** program, funded by [Funding Source, e.g., a partnership with a local hospital], provides case management to connect these individuals with appropriate community resources, reducing reliance on emergency services.
- **Mental/Behavioral Health Crises:** Recognizing the increasing need for specialized response to mental and behavioral health emergencies, the **CRT (Community Response Team)** was formed. This team comprises a paramedic, police officer, and mental health clinician, providing on-scene assessment, de-escalation, and connection to appropriate care. The success of the CRT led to the creation of **ART-1 (Alternate Response Team)**, a paramedic-clinician team fully funded by grants, offering a dedicated response to mental health calls.
- **Homelessness:** The growing homeless population presents unique challenges, including increased medical needs and limited access to care. **ART-2 (Alternate Response Team)**, another grant-funded initiative, addresses this by deploying a paramedic and case manager to provide on-site medical assistance and connect individuals with shelters, social services, and other resources.
- **Drug Overdose:** With the rise in opioid overdoses, the **ORT (Overdose Response Team)** was established to provide immediate medical intervention and reduce overdose deaths. This team, consisting of a paramedic and a peer recovery specialist, also focuses on connecting individuals with treatment and recovery programs. This program is fully funded through grants.

Conclusion:

This CRA provides valuable insights into the community's risks and vulnerabilities. The Tulsa Fire Department is committed to addressing these challenges through proactive programs and collaborative partnerships. By leveraging resources, securing grant funding, and implementing innovative approaches, these initiatives aim to improve community safety, health, and overall well-being.

ASSESSMENT OVERVIEW

The Tulsa Fire Department's community risk assessment focuses on identifying and addressing various hazards within the community, using data-driven strategies to prioritize and mitigate risks. This assessment includes analyzing both natural and human-made risks, such as fires, floods, and hazardous materials incidents, among others.

Key elements of the assessment involve examining specific risk factors like building occupancy, fire load, and demographic data, which are crucial for determining areas most vulnerable to fires and other emergencies. Data from Computer-Aided Dispatch (CAD) systems, station response zones, and census data are used to evaluate the risk profile across different areas of Tulsa.

Geospatial Information Systems (GIS) are also leveraged to visualize risks and optimize resource allocation, ensuring that emergency responses are as efficient as possible. By identifying high-risk areas and integrating this information into proactive community risk reduction plans, the Tulsa Fire Department can better protect residents and infrastructure from significant losses.

ORGANIZATIONAL PROFILE

The Tulsa Fire Department (TFD) was established as a volunteer organization in June of1900 following a major fire in downtown Tulsa in 1897, which highlighted the need for organized fire protection. TFD quickly expanded as Tulsa grew, and by 1913, it became the first fire department west of the Mississippi River to be fully motorized, eliminating the need for horse-drawn equipment. In 1919, TFD firefighters formed Firefighters Local 176, joining the International Association of Firefighters.

Today, Tulsa's response area is approximately 201 square miles in size, with a residential population estimated at approximately 413,066 citizens. The department has an authorized strength of 731 sworn positions and 17 civilian positions. Tulsa has 30 fire stations located in five geographic response districts housing 30 engines, 14 Ladders, 5 District Chiefs, 1 Heavy Rescue Unit and 2 Hazardous Material Response Units. Firefighters in field operations work a 24-hour tour of duty followed by 48 hours off duty. The Tulsa Fire Department also has 40-hour Staff Personnel in the Support and Safety Services section. The 2023-2024 annual operational budget of the department is $73.6 million(FY23/24). The department currently responds to just under 70,000 incidents annually, of which 72 percent are EMS-related calls. The Tulsa Fire Department is an ISO Class 1 department led by Chief Michael Baker who was appointed to the position June16th, 2020, by Mayor GT Bynum. The following are four critical components driving the risk initiatives of the Tulsa Fire Department:

FIRE PREVENTION

The Community Risk Reduction section provides Fire Prevention Inspection and Fire Code Enforcement, Plan Review, Investigation, and Public Education Operations including a Youth Fire setting intervention program. Tulsa has over 41,000 businesses, 131 schools and 99 senior living and care facilities throughout the city.

FIRE SUPPRESSION

Fire Firefighting personnel provide a variety of services, primarily responding to emergencies, such as fires, vehicle accidents and rescues from dangerous or hazardous situations. They maintain their fire station, fire apparatus and equipment in a state of readiness to respond to any type of emergency. Along with responding to emergencies, firefighters provide fire prevention and education in schools, places of worship and workplaces throughout the community.

EMERGENCY MEDICAL RESPONSE

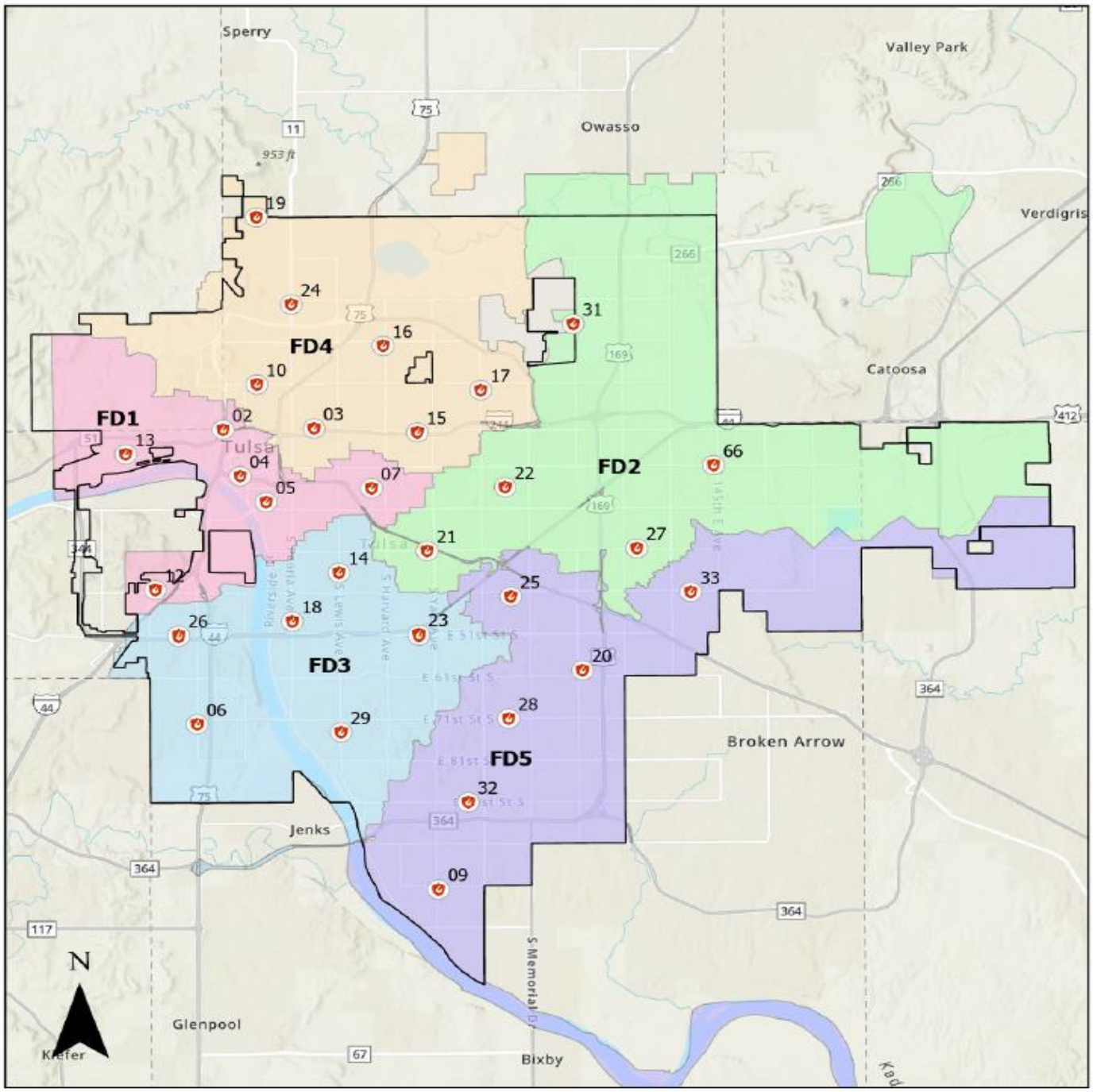
Tulsa Firefighters are trained EMT's and Paramedics who provide lifesaving first-response medical care to its citizens using ALS and BLS apparatus response. Medical incidents make up 72% of total incidents TFD responds to annually. EMS has embraced technological advancements through community risk reduction programs aimed to improve community health outcomes there by reducing the number of non-emergency 911 calls. EMS officers also deliver the training and recertification of EMT's and Paramedics annually.

TRAINING

The Tulsa Fire Safety Training Center is a cutting-edge facility that opened in 2015 housing a six-story drill tower, a mock fire station and burn chambers that simulate realistic conditions. The Chief of Training, overseeing a training staff of seven officers, can replicate residential, commercial and industrial fire settings, allowing firefighters to gain hands-on experience in environments encountered in the field. New cadet academies run simultaneously with required annual company drill training, technical rescue training, hazardous materials and relief fire equipment operator training.

LOCATION OF FIRE DISTRICTS AND STATIONS

The Tulsa Fire Department is comprised of 5 fire districts with 30 fire stations housing 48 manned apparatus. Sixteen(16) engine companies and one(1) ladder company provide Advanced Life Support (ALS) medical response while the remaining thirty(30)engine and ladder companies provide Basic Life Support(BLS) medical response.



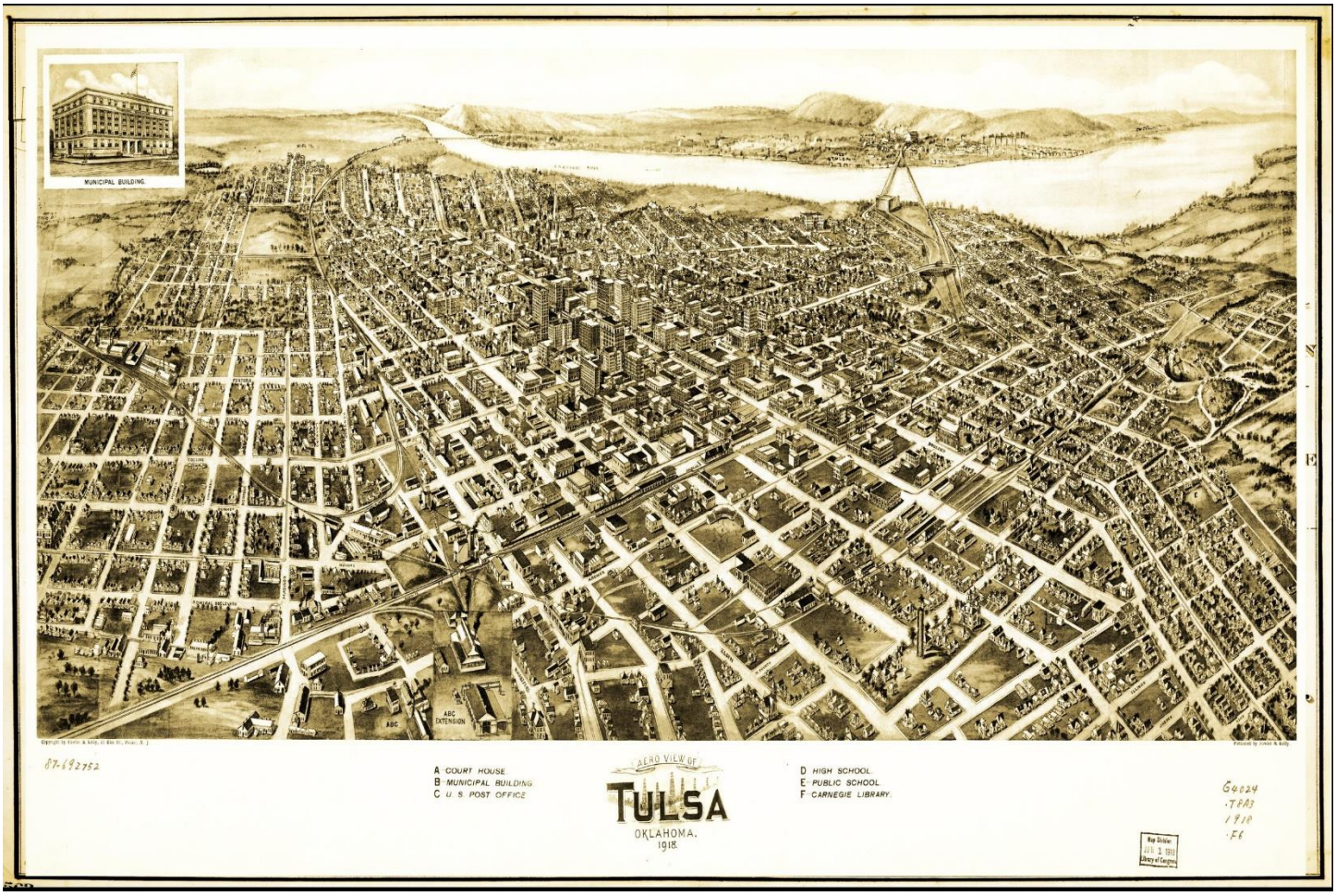
COMMUNITY PROFILE

Brief History

Built on the banks of the Arkansas river, Tulsa has a mix of urban and suburban communities, with significant cultural influences from Native American heritage, African American communities, and a growing Hispanic population. The city continues to expand in both population and economic activity, particularly in sectors like energy, aerospace, and healthcare.

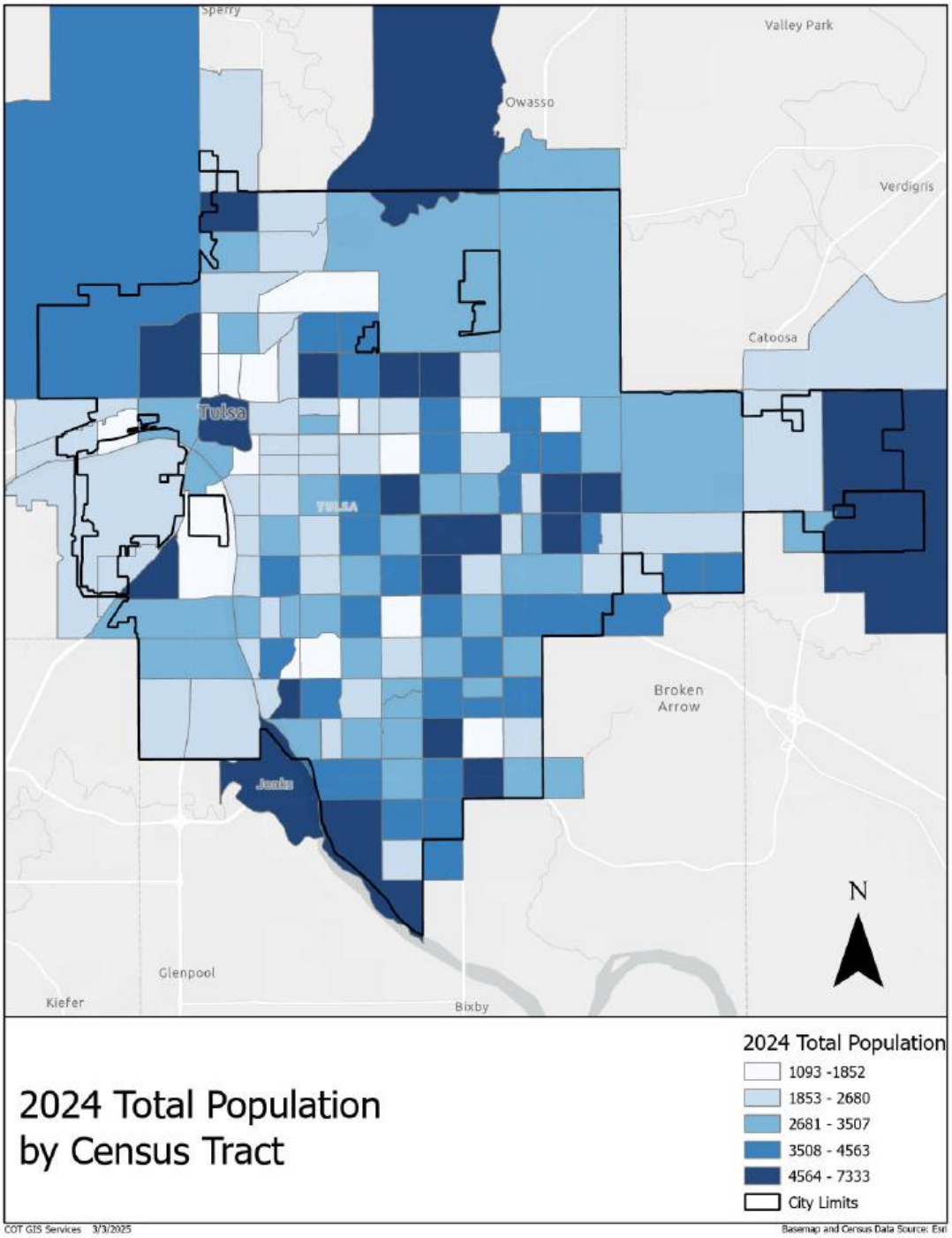
Tulsa, Oklahoma, has a rich and complex history shaped by Native American heritage, oil-driven economic booms, and significant cultural events. The early 20th century brought a transformative period for Tulsa, with the discovery of oil in the region, particularly with the 1901 strike in Red Fork, a community just outside Tulsa. This discovery launched the city into an economic boom, earning it the title "Oil Capital of the World."

Today, Tulsa continues to honor its cultural heritage while striving for economic diversification. This history has contributed to its unique character as a city with deep roots in Native American culture, a legacy of resilience, and a forward-looking vision for growth.



Population

Tulsa, Oklahoma is the second largest city in the state and is the 48th-most-populous city in the United States. Tulsa is a hub of cultural, economic, and historical significance and has a diverse population. As of the 2020 U.S. Census, the city had a population of approximately 413,066 with the median age in Tulsa being around 35 years. 23.6% of the population is under the age of 18, while 14.4% is 65 years or older. About 89% of Tulsa residents aged 25 or older have a high school diploma, and roughly 31% hold a bachelor's degree or higher. The median household income in Tulsa is approximately $50,854, with about 18.4% of the population living below the poverty line.



ECONOMIC PROFILE

Industry

Tulsa's economic profile is grounded in several key industries, reflecting both historical strengths and modern diversification. Energy through the oil and natural gas industry has been integral to the economy. Companies like Williams and Magellan Midstream Partners lead the energy sector, contributing significantly to the city's GDP. Aerospace and aviation have been prominent as well with American Airlines maintenance base located at the Tulsa Airport.

Employment

Tulsa's employment landscape shows steady growth and currently supports a labor force of around 515,000 individuals, with an employment figure around 499,000 as of recent data and an unemployment rate that has remained stable around 3.5%. Tulsa's leading industries include healthcare, education, professional services and manufacturing with a growing technology sector which is attracting tech firms and startups due to local incentives.

Major Community Events

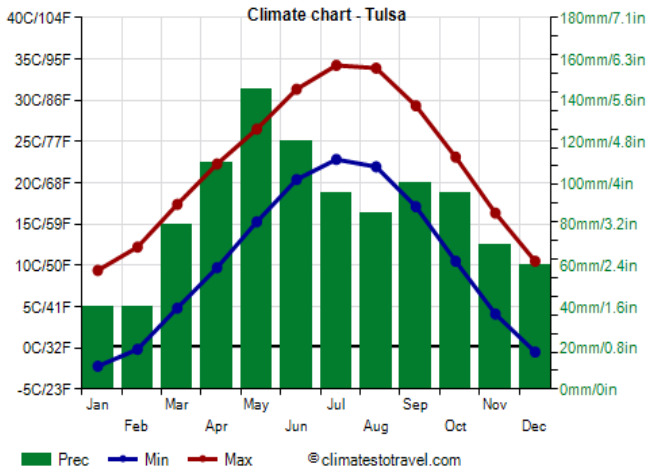
Tulsa hosts several major community events each year, showcasing its vibrant cultural diversity and community spirit. The Tulsa State Fair is one of the largest and most popular events, bringing over 1 million visitors to the Tulsa fairgrounds. Other events include Tulsa Tough, a popular weekend cycling event bringing nearly 50,000 visitors, Tulsa's Octoberfest, ranked #1 Octoberfest in America by USA today, boasts 140,000 square feet of tents and stages averaging 60,000 visitors. The Tulsa Juneteenth Festival typically attracts 35,000–50,000 people over the course of the three-to-four-day event.

Attractions

Tulsa offers a range of attractions that showcase a unique blend of cultural, historical, and natural attractions. Tulsa's downtown Art Deco collection is considered one of the most prominent in the United States. Greenwood Historic District , historically known as Black Wall Street, is home to Greenwood Rising, a history center commemorating the 1921 Tulsa Race Massacre. Another downtown attraction is the world-famous Cains Ballroom, this venue has been hosting famous acts since 1920. The Philbrook Museum of Art and Gilcrease Museum boasts extensive collection of American, Native American, European and Western art. At 66.5 acres and $465 million, The Gathering Place is the largest public park ever built with private funds. Located along the Arkansas river, the park saw over 300,000 visitors in its first month and is celebrating 5 years and 11.4 million visitors.

GEOGRAPHIC PROFILE

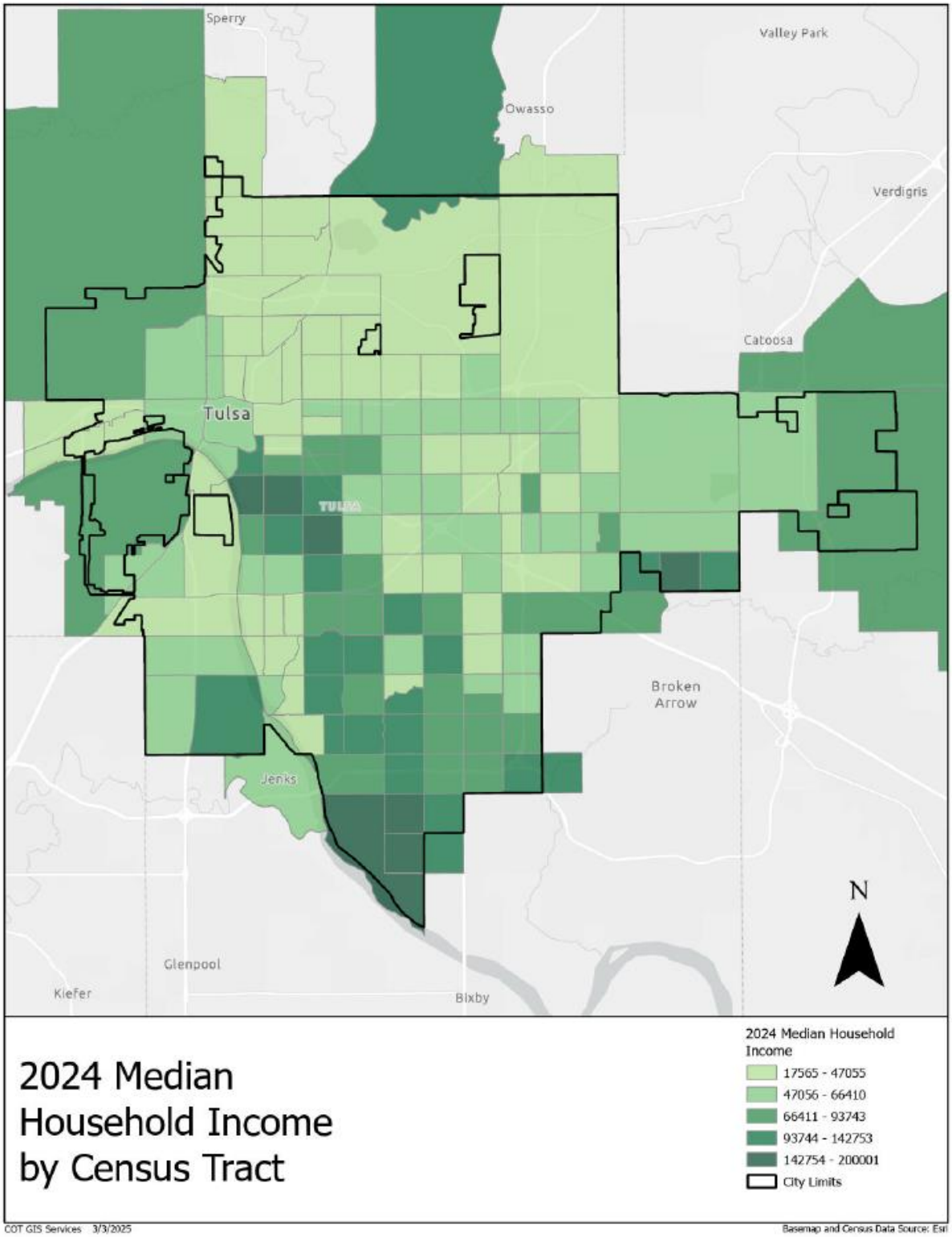
A geographic profile provides an analysis of the physical and spatial characteristics of an area, which helps in understanding how geography impacts various aspects like infrastructure, risk assessment, emergency response, and planning. In Tulsa, the Arkansas River is a prominent feature, which can affect flooding risks, transportation, and land use planning. Tulsa has a humid subtropical climate with hot summers, mild winters, and occasional severe weather, including tornadoes, impacting community preparedness and infrastructure resilience. In Tulsa, highways like I-44 and US-75 are key transportation arteries, influencing traffic patterns and emergency response routes. Located in the heart of Tornado Alley, Tulsa lends itself vulnerable to natural hazards like floods, tornadoes, and earthquakes. The Fathers' Day derecho of 2023, crippled Tulsa delivering 100mph straight line winds significantly damaging and downing trees, disrupting electric and natural gas service, costing the city $16.6 million in cleanup cost.



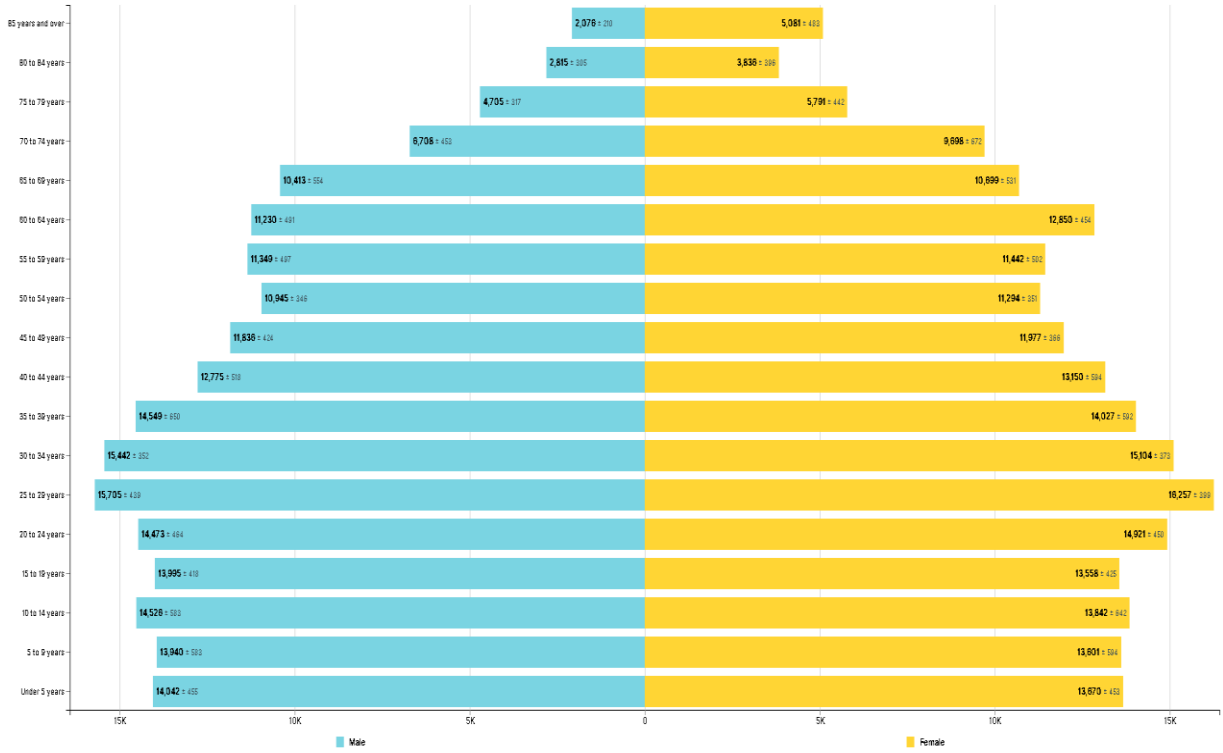
DEMOGRAPHIC PROFILE

A "demographic profile" refers to a detailed breakdown of the population characteristics within a specific community, including factors like age, gender, race/ethnicity, income level, education attainment, housing type, and language spoken, used to identify potential vulnerabilities and areas of concern when assessing community risks related to hazards or emergencies. A demographic profile is important in a community risk analysis as it identifies vulnerable populations disproportionately impacted by specific risks due to factors like age, income, or language barriers. Understanding the demographics allows for tailored interventions and outreach programs to address the needs of specific populations. It also allows us to target areas or populations in greatest need of intervention strategies. And finally, we are able to identify areas with high concentrations of vulnerable individuals so we can optimize resources and prioritize our response efforts.

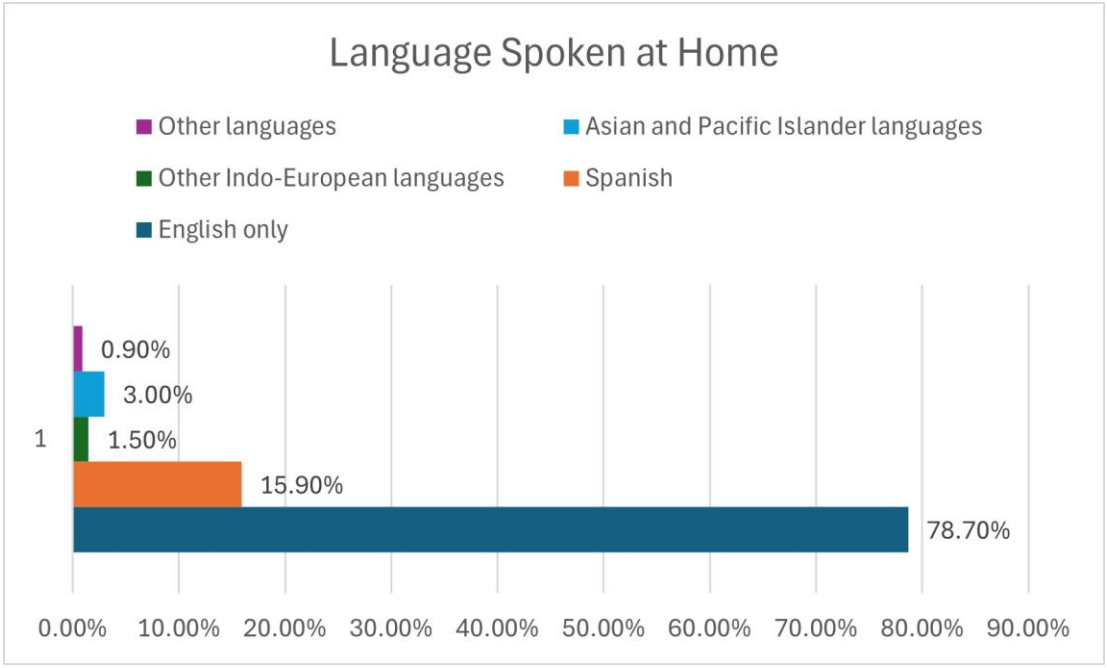
Median Household Income



Population Pyramid by Age and Sex

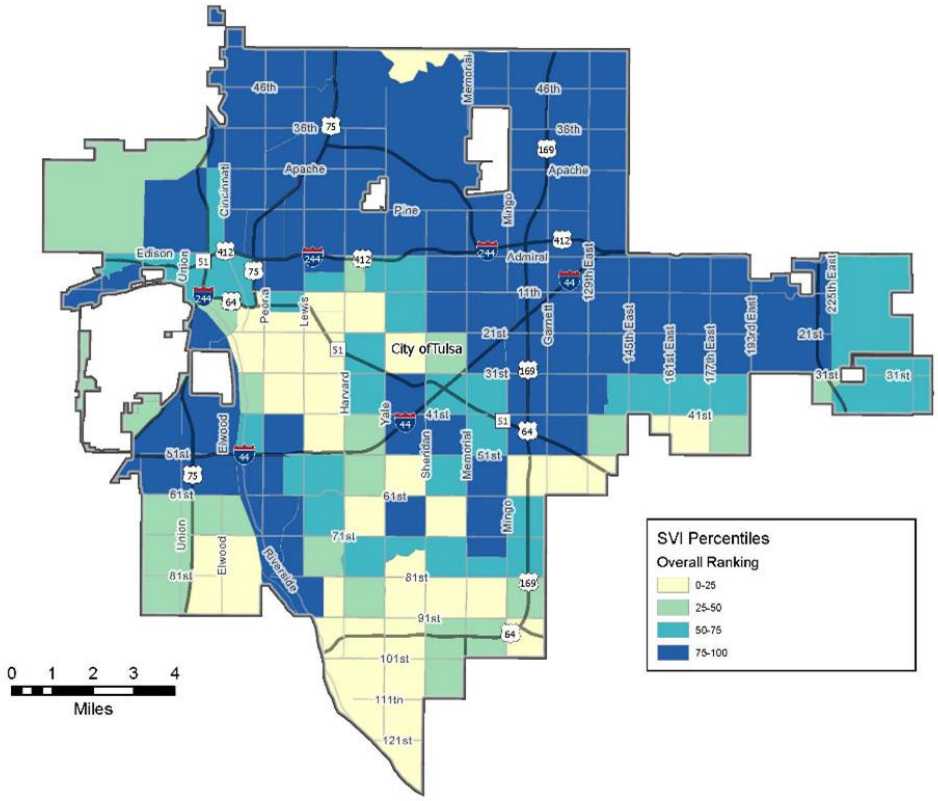


Language Spoken at Home



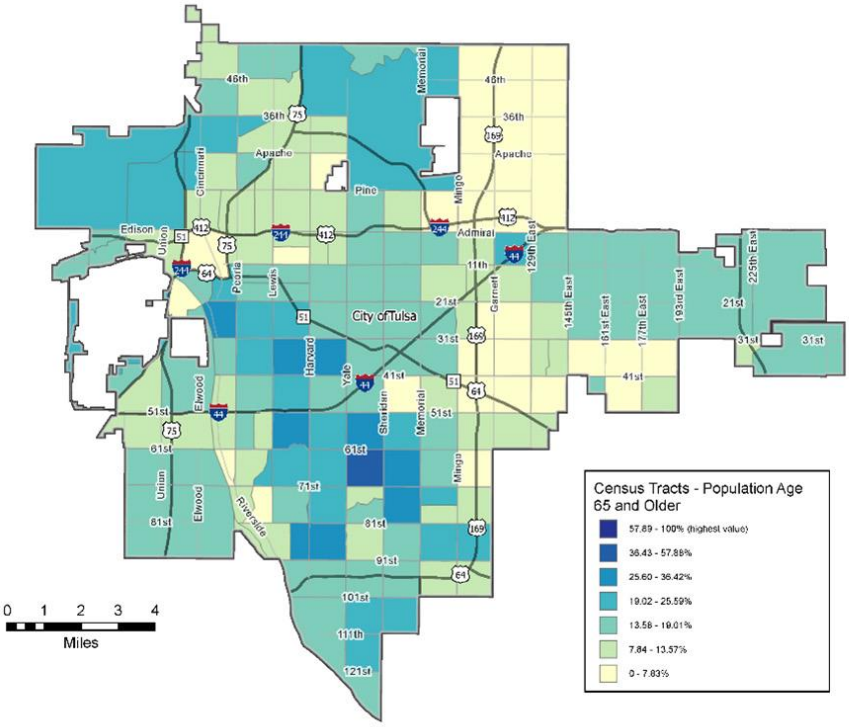
City of Tulsa Social Vulnerability Index

Social vulnerability refers to the demographic and socioeconomic factors (such as poverty, lack of access to transportation, and crowded housing) that adversely affect communities that encounter hazards and other community-level stressors. These stressors can include natural or human-caused disasters.



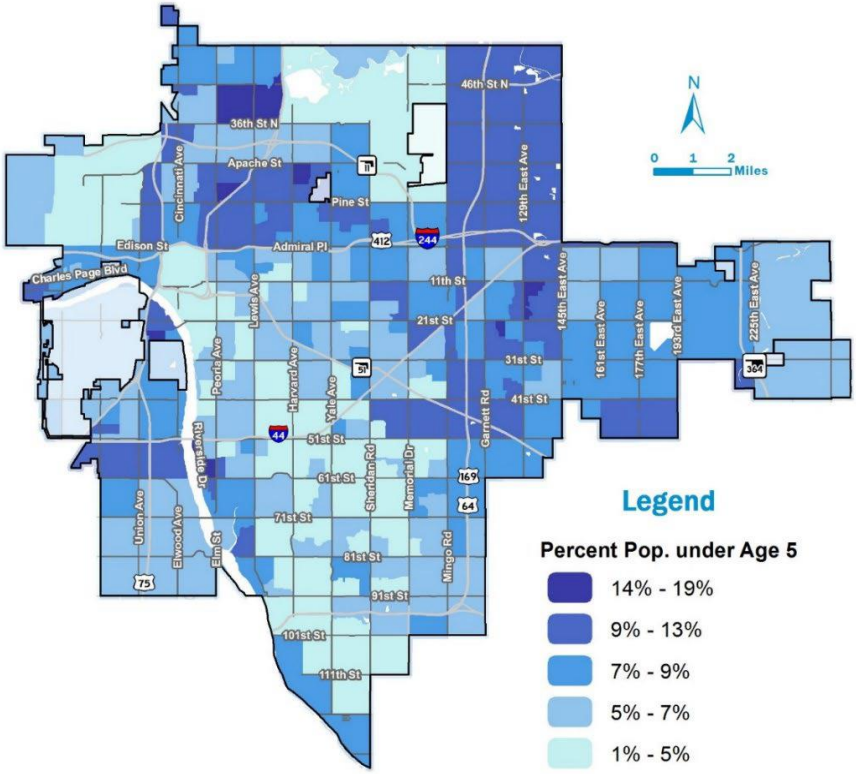
Percentage of Population age 65 years & Over

Age is associated with increased cardiovascular risk factors and cardiovascular disease, which constitutes the leading cause of morbidity and mortality in elderly population. This population accounts for the majority of “lift assist” incidents averaging 3091(2019-2023) calls per year or 8.6 per 24-hour duty shift.



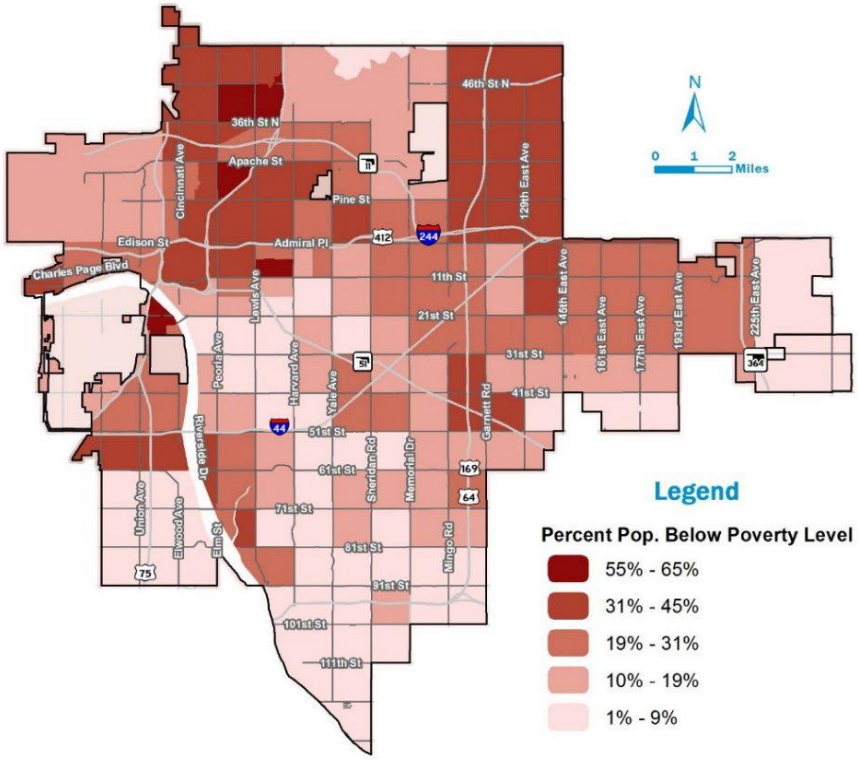
Percentage of Population Under Age 5

The population age 5 and below is a crucial factor because it directly indicates the future growth potential of a society, as this age group represents the next generation of births and directly influences the overall population size in the coming years; a large number of children under 5 signifies a potential for rapid population growth, while a smaller number suggests a potential for population decline or stabilization. It is also used as a risk factor in the areas of childhood obesity, language development and social-emotional development.



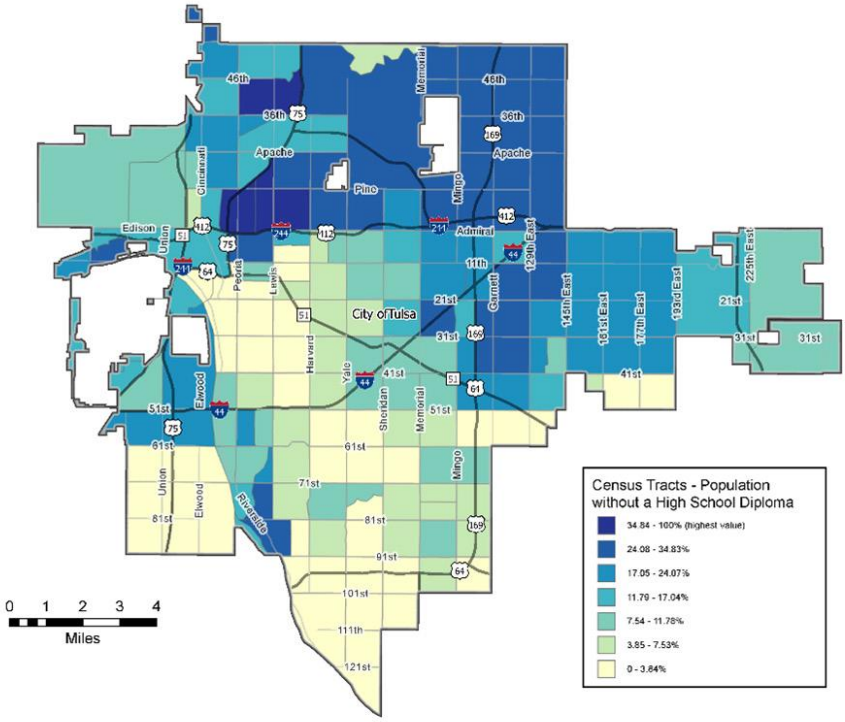
Percentage of Population Below Poverty Level

The poverty rate is important because it serves as a crucial indicator of societal well-being. It highlights the number of people who lack the income necessary to meet basic needs, thus informing policy decisions about social programs, economic strategies, and areas where targeted interventions are needed to address issues like healthcare access, education opportunities, and overall quality of life.



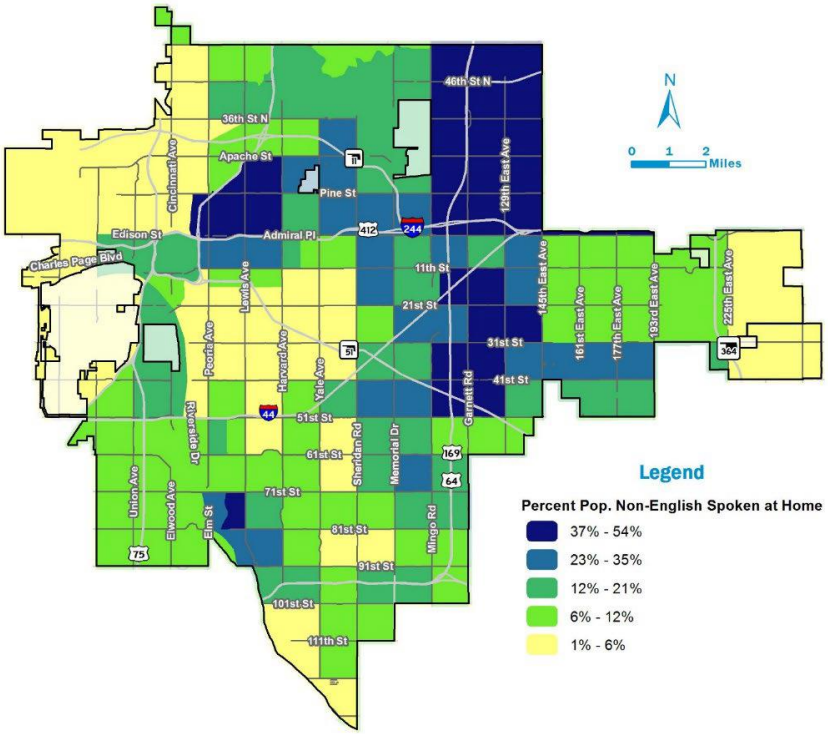
Percent of Population Non-High School Graduates

The population of non-high school graduates is considered an important factor because it can significantly impact a society's economic health, social well-being, and overall quality of life. Factors like limited employment opportunities, lower income levels, increased reliance on social services, and poorer health outcomes for individuals due to a lack of a high school diploma.



Percentage of Population Non-English Speaking at Home

The population of non-English speakers in a household is an important factor. It indicates the need for translated services and information to ensure effective communication in areas like healthcare, education, government services, voting, and community engagement, allowing individuals who don't speak English fluently to fully participate in society and access vital information.



BUILDING STOCK PROFILE

A building stock provides an overview of the occupancies in the community by identifying the risk factors such as type, age, use, and conditions of buildings allowing the fire department the ability to assess the risks affiliated with such occupancies.

Occupancies

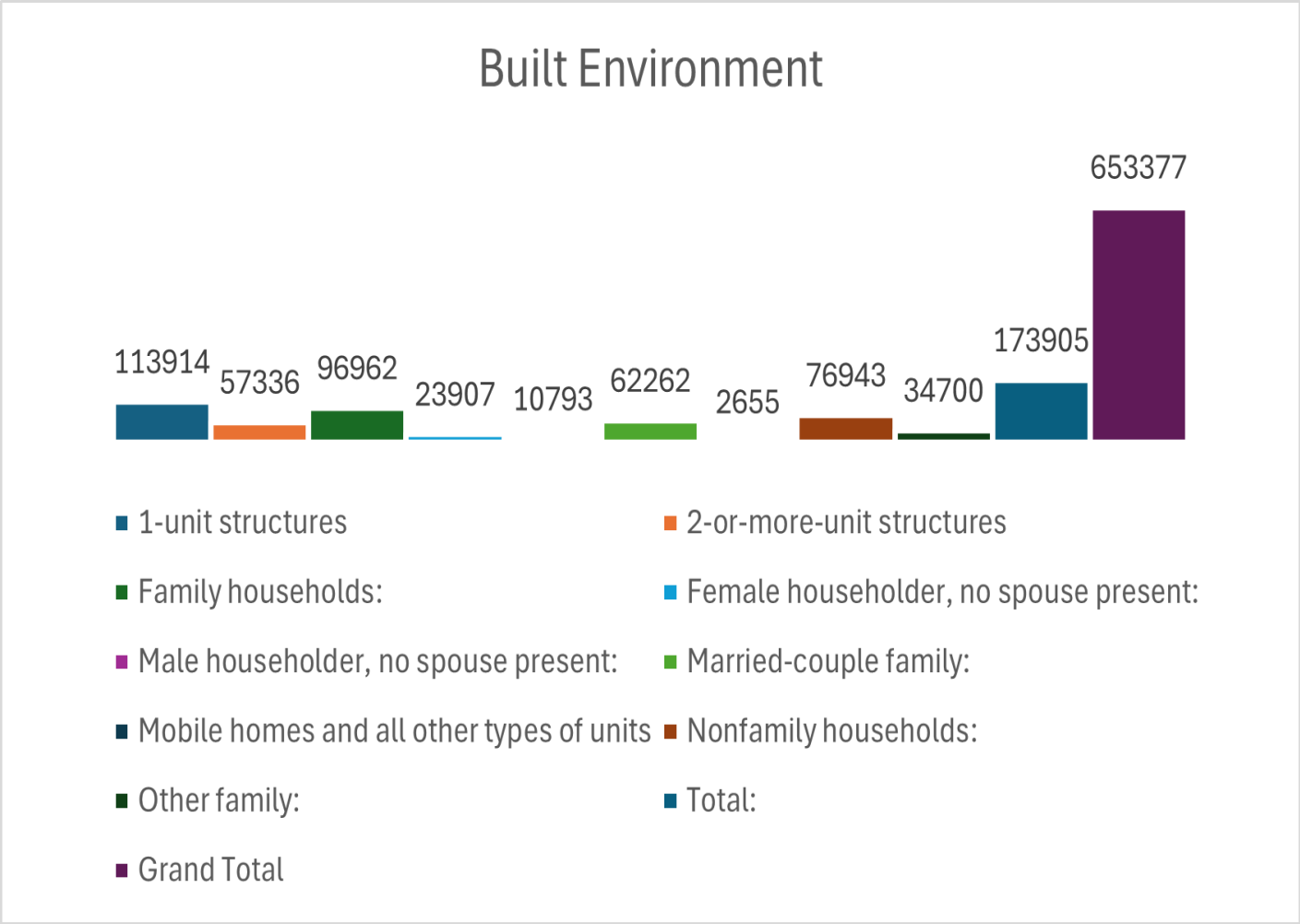
Building Type	Sum of Count
Apartments	427
Assemblies	775
Business	328
Day Cares	109
Educational	746
High Hazard Occupancy	4
Hotel and Motels	134
Industrial	175
Mercantile	3199
Senior Living & Group Homes	105
Storage	157
Grand Total	6159

City of Tulsa Built Environment

The residential housing built environment is the physical spaces that surround a home, including the building itself, the neighborhood, and the transportation and utility systems that support it.

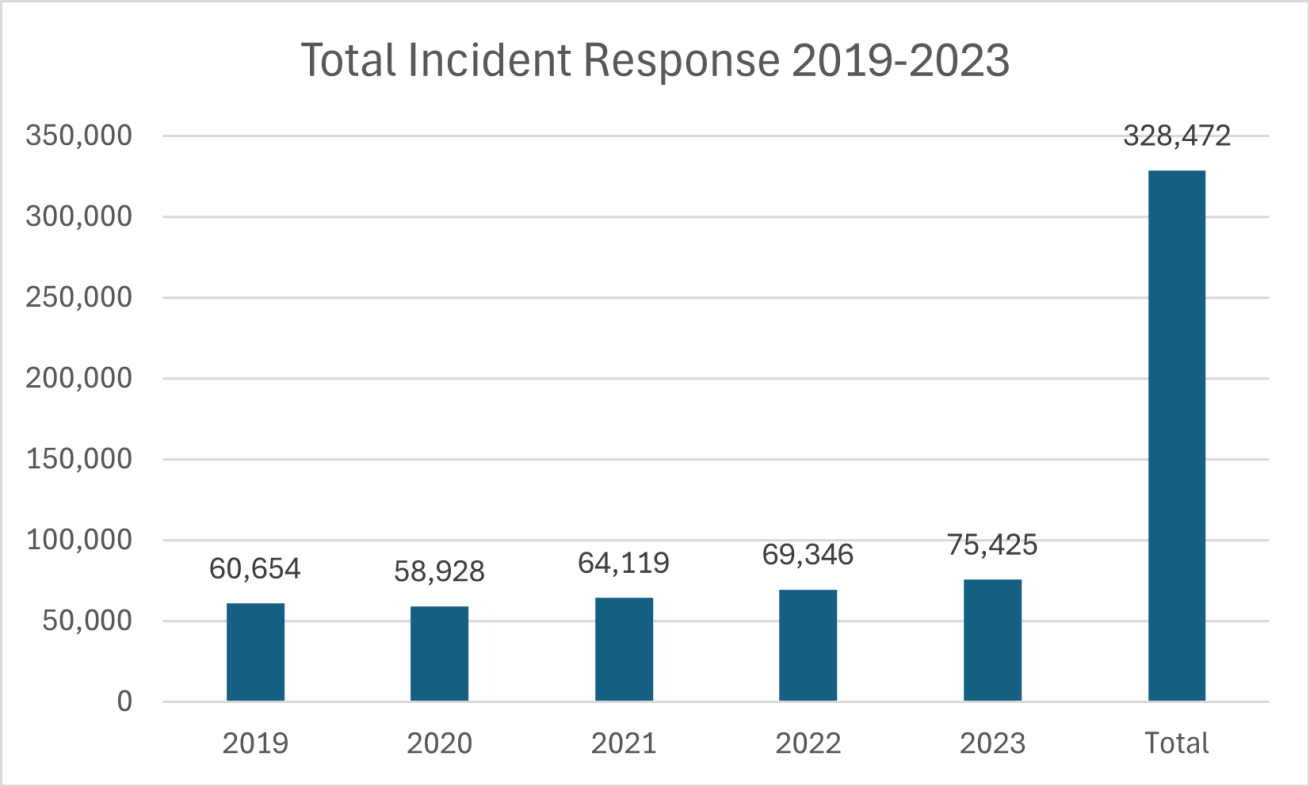
Structure Type	Number	Est. Market Value
Residential Single-Family	108,496	$15,926,918,521
Residential Multi-Family	9,499	$2,444,388,739
Commercial	7,439	$8,320,803,789
Other	4,435	$221,055,048
Total	**129,869**	**$26,913,166,098**

Residential Housing



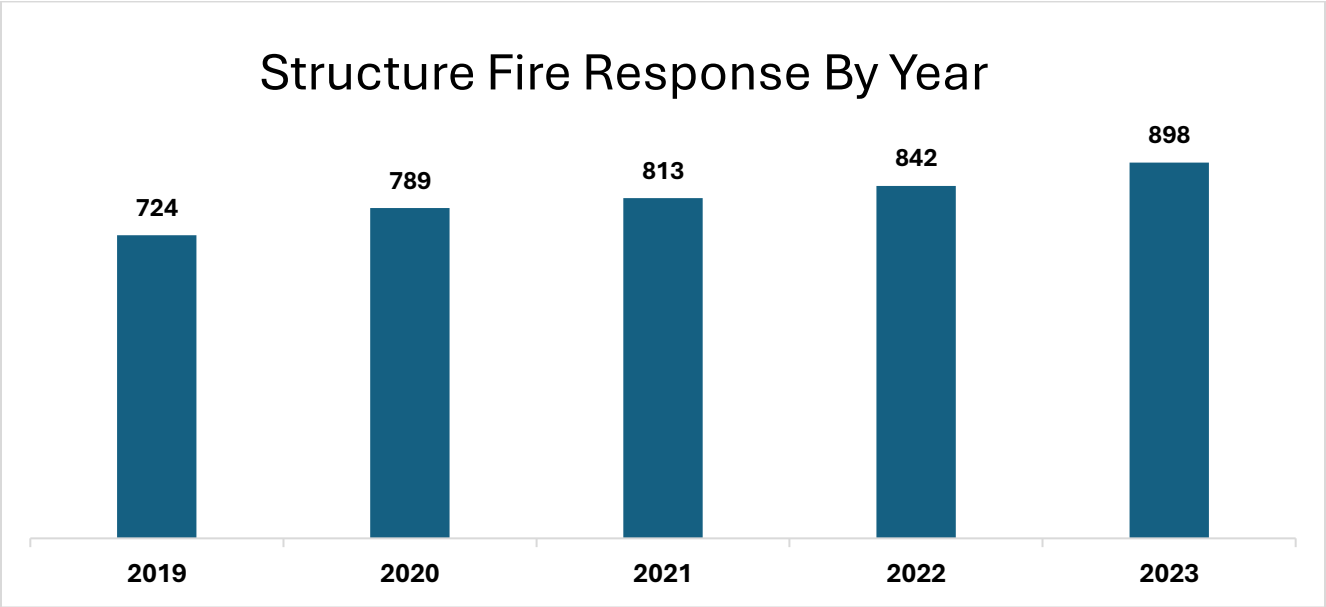
INCIDENT RESPONSE PROFILE 2019-2023

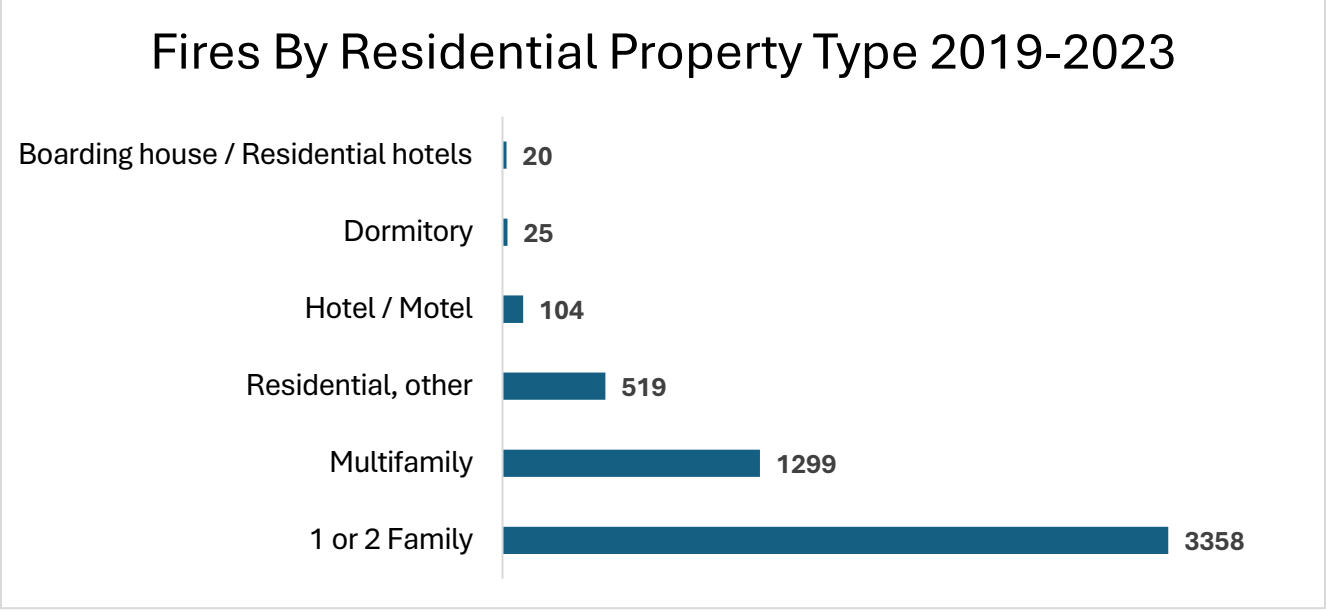
Tulsa Fire Department is responding to an ever-increasing number of incidents. The fire department “incident response profile" refers to a statistical breakdown of the types of calls the department receives, including the frequency of fire incidents, medical emergencies, false alarms, rescue operations, and other related calls. This data provides insight into the operational demands within a specific fire district’s jurisdiction. It is vital to resource allocation, where we assign personnel, equipment or even fire station placement. It identifies training needs to prepare us for prevalent call types and tracks the efficiency and effectiveness of our response. This data is reported to the National Fire Incident Reporting System(NFIRS) which is used to identify trends and patterns in incident response activity.

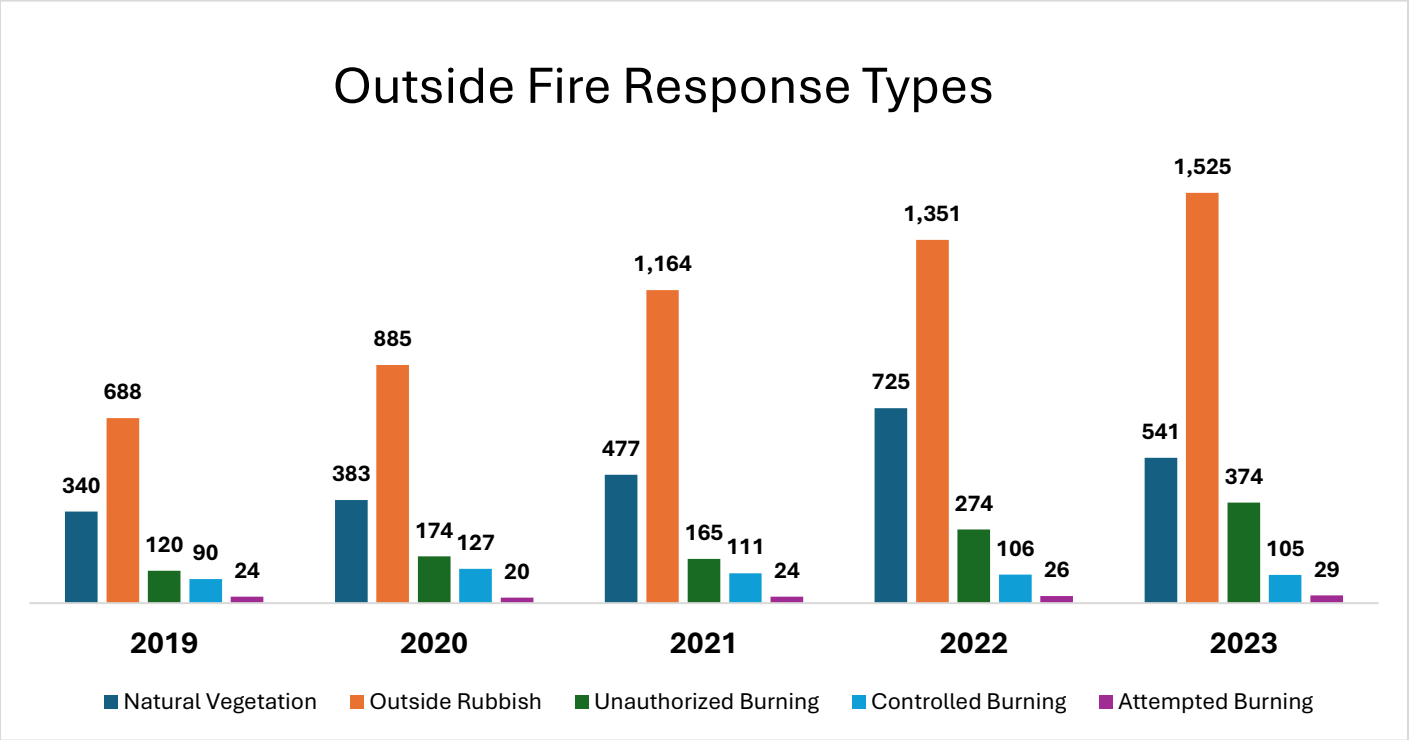


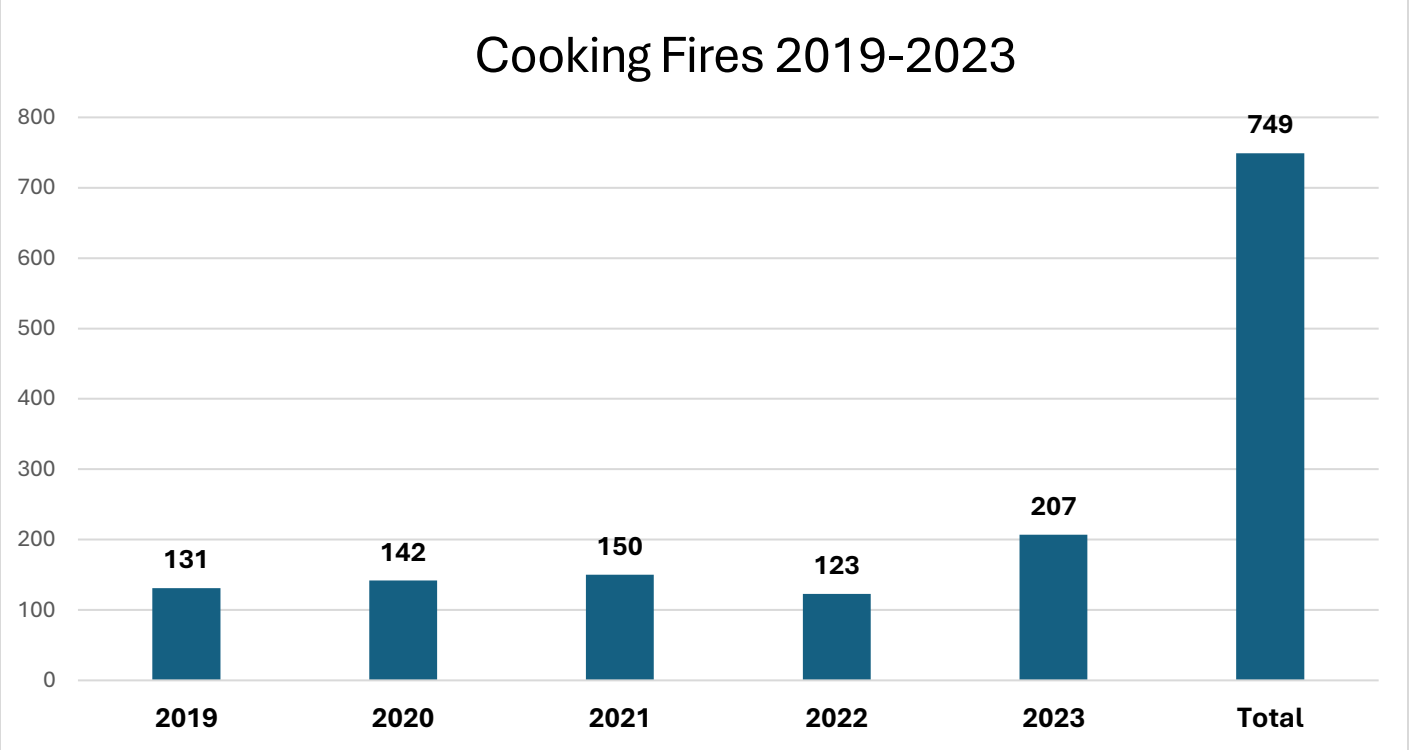
FIRE RESPONSE PROFILE

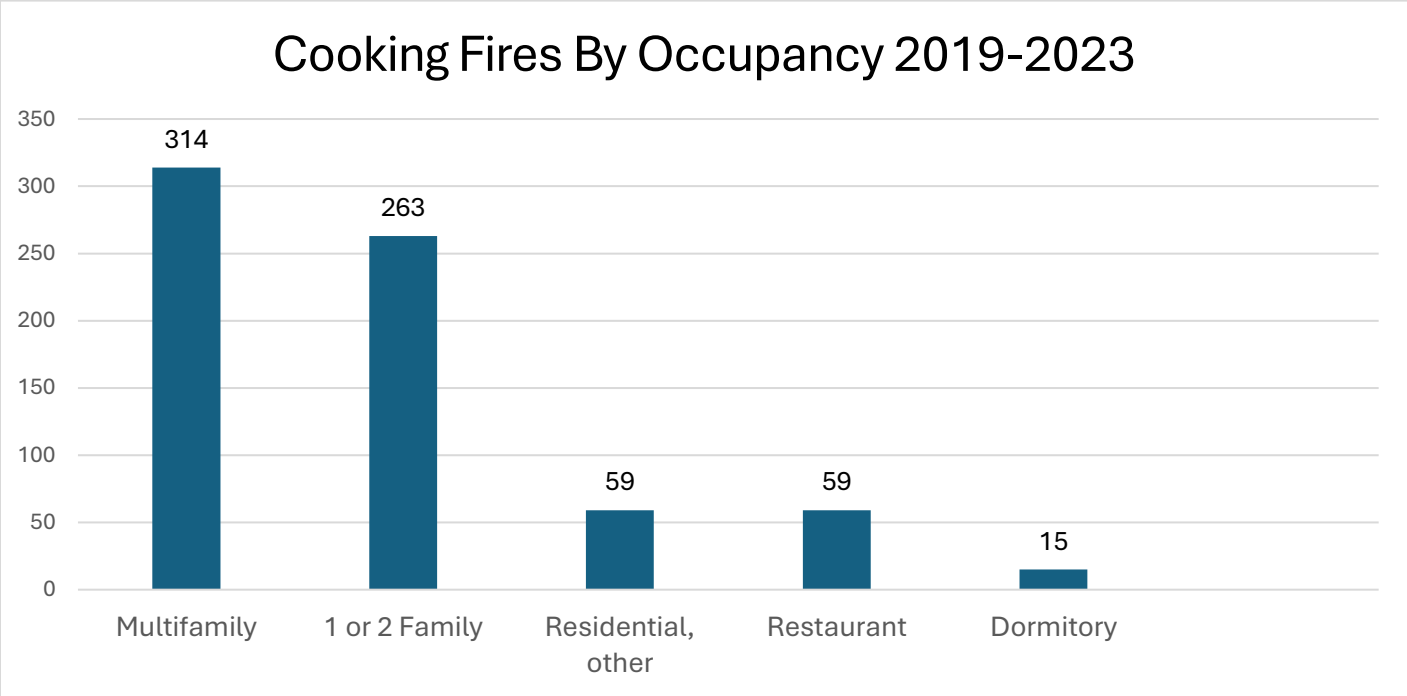
A fire response profile is a record of the types of fire incidents a fire department responds to annually. It can also include the number of calls a fire department receives and the type of services required. Most fire response profiles include an overall run profile which records the types of fire incidents a fire department responded to each year while comparing response times to the standard set by NFPA 1710. This data considers factors like station locations, response times, available apparatus, staffing levels, and the community's unique geographic features, which ultimately determines the potential effectiveness of fire suppression efforts in that area.






Outside Fire Response Types
340
688
120
90
24
383
885
174
127
20
477
1,164
165
111
24
725
1,351
274
106
26
541
1,525
374
105
29
2019
2020
2021
2022
2023
Natural Vegetation
Outside Rubbish
Unauthorized Burning
Controlled Burning
Attempted Burning

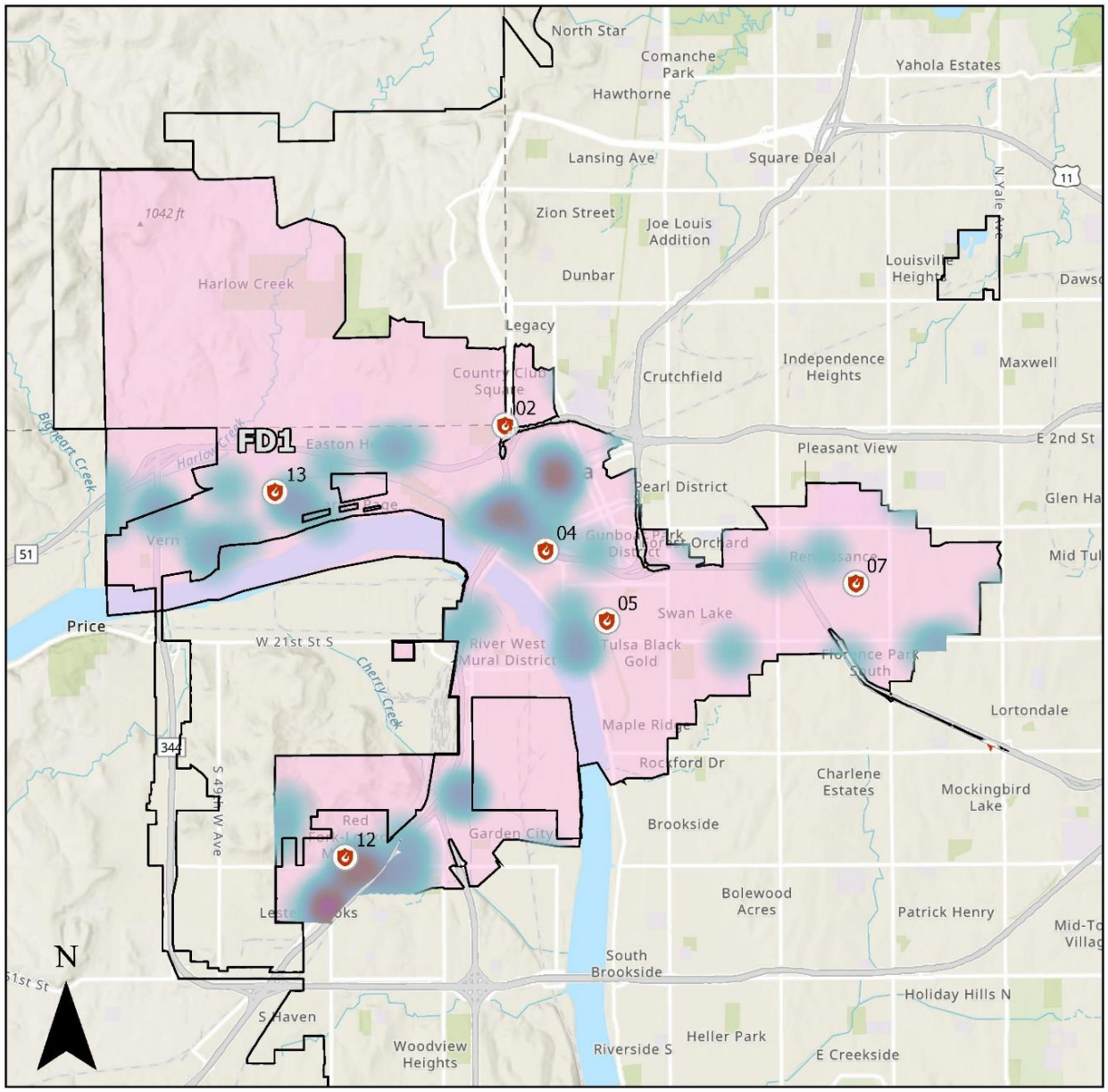

Cooking Fires 2019-2023
800
700
600
500
400
300
200
100
0
131
142
150
123
207
749
2019
2020
2021
2022
2023
Total



TOP 50 ADDRESS RESPONSES 2019-2023	
Address	Number of Incidents
102 N DENVER Avenue , Tulsa, OK 74103	1367
1725 SOUTHWEST Boulevard , TULSA, OK 74107	1053
415 W ARCHER Street , Tulsa, OK 74103	1049
901 N ELGIN Avenue , TULSA, OK 74106	907
420 S LAWTON Avenue , TULSA, OK 74127	724
828 S WHEELING Avenue , TULSA, OK 74104	702
506 N CHEYENNE Avenue , Tulsa, OK 74103	638
6565 S NEWPORT Avenue , TULSA, OK 74136	631
300 N DENVER Avenue , Tulsa, OK 74103	608
8555 S LEWIS Avenue , Tulsa, OK 74137	590
4203 S 109TH E Avenue , TULSA, OK 74146	571
6333 E SKELLY Drive , TULSA, OK 74135	569
6800 S GRANITE Avenue , TULSA, OK 74136	561
7777 E APACHE Street , Tulsa, OK 74115	523
5721 S LEWIS Avenue , Tulsa, OK 74105	523

6202 E 61ST Street S, Tulsa, OK 74135	459
6655 S YALE Avenue , Tulsa, OK 74136	450
2425 S MEMORIAL Drive , Tulsa, OK 74129	442
6566 E 21ST Place S, Tulsa, OK 74129	440
1443 S DENVER Avenue , Tulsa, OK 74119	425
7401 Riverside Parkway , TULSA, OK 74136	420
8330 RIVERSIDE Parkway , Tulsa, OK 74137	415
1340 E 61ST Street S, Tulsa, OK 74105	406
8222 S YALE Avenue , Tulsa, OK 74137	400
600 CIVIC Center , TULSA, OK 74103	378
7707 S MEMORIAL Drive , Tulsa, OK 74133	376
3701 MARTIN LUTHER KING JR Boulevard , Tulsa, OK 74106	357
319 S DENVER Avenue , Tulsa, OK 74103	342
2019 E 81ST Street S, Tulsa, OK 74136	341
4145 E 21ST Street S, Tulsa, OK 74112	337
1022 S UTICA Avenue , TULSA, OK 74120	332
9524 E 71ST Street S, TULSA, OK 74133	320
1741 S BALTIMORE Avenue , TULSA, OK 74119	320
2154 S 85TH E Avenue , Tulsa, OK 74129	314
777 W CHEROKEE Street , CATOOSA, OK 74015	305
5170 S VANDALIA Avenue , Tulsa, OK 74135	297
519 N SHERIDAN Road , TULSA, OK 74115	285
4650 E ADMIRAL Place , Tulsa, OK 74115	282
6333 S 91ST E Avenue , Tulsa, OK 74133	270
207 S MEMORIAL Drive , Tulsa, OK 74112	269
10912 E 14TH Street S, Tulsa, OK 74128	267
1937 S 68TH E Avenue , TULSA, OK 74112	266
7878 E ADMIRAL Place , Tulsa, OK 74112	250
2217 E 59TH Street S, TULSA, OK 74105	241
1700 RIVERSIDE Drive , Tulsa, OK 74119	227
7345 S 99TH E Avenue , TULSA, OK 74133	226
727 S HUDSON Avenue , TULSA, OK 74112	220
2323 S HARVARD Avenue , TULSA, OK 74114	218
1055 S HOUSTON Avenue , Tulsa, OK 74127	215
3901 E 21ST Street S, TULSA, OK 74112	213

District 1 Fire Incidents by location 2019-2023



Tulsa Fire Incidents: FD1

Fire Stations

City Limits

Fire Incidents (2019-2023) Per Square Mile

Sparse

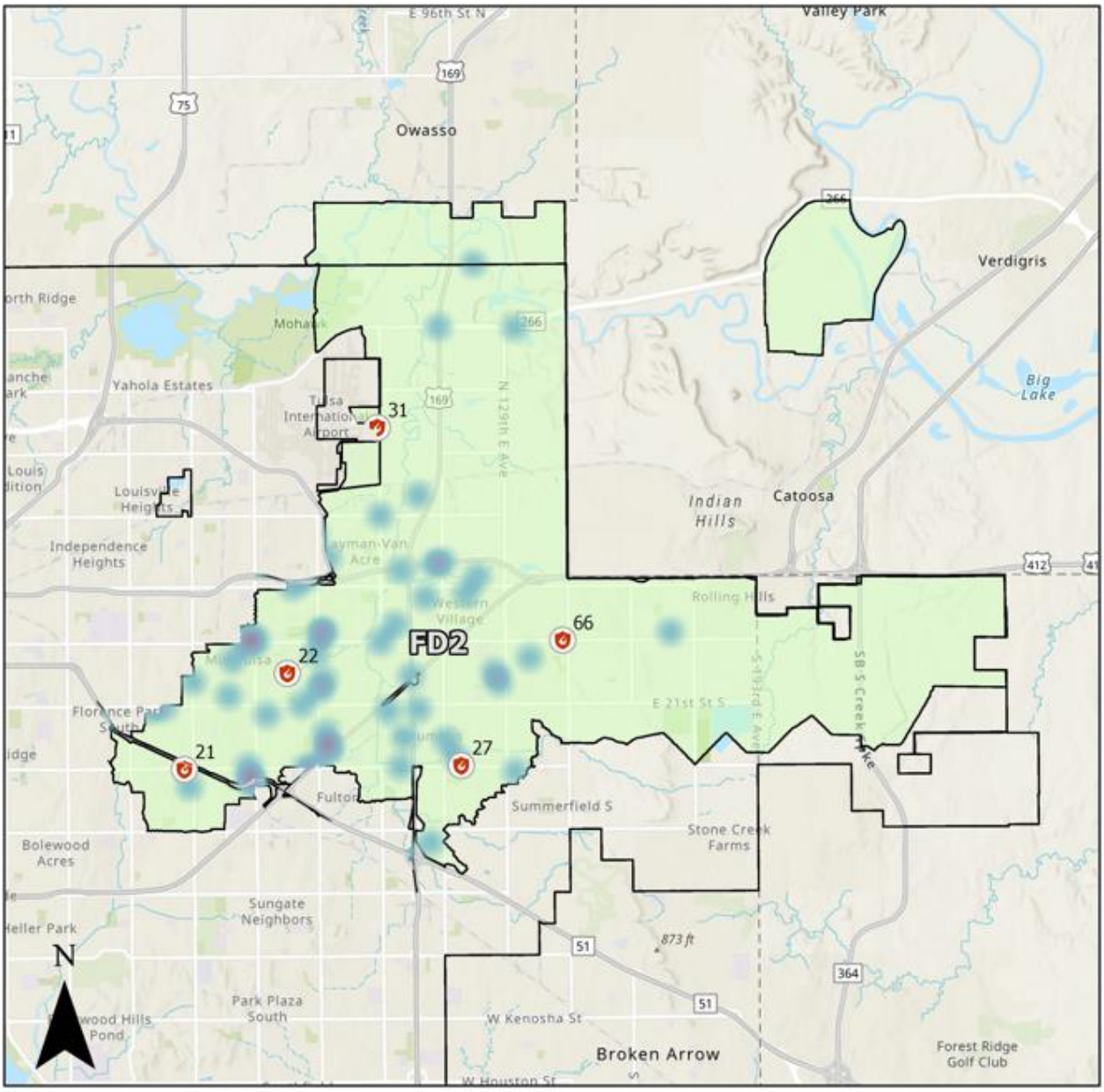
Dense

Fire Divisions

FD1

Tulsa GIS Services 10/29/2024

District 2 Fire Incidents by location 2019-2023



Tulsa Fire Incidents: FD2

Fire Stations

City Limits

Fire Incidents (2019-2023) Per Square Mile

Sparse

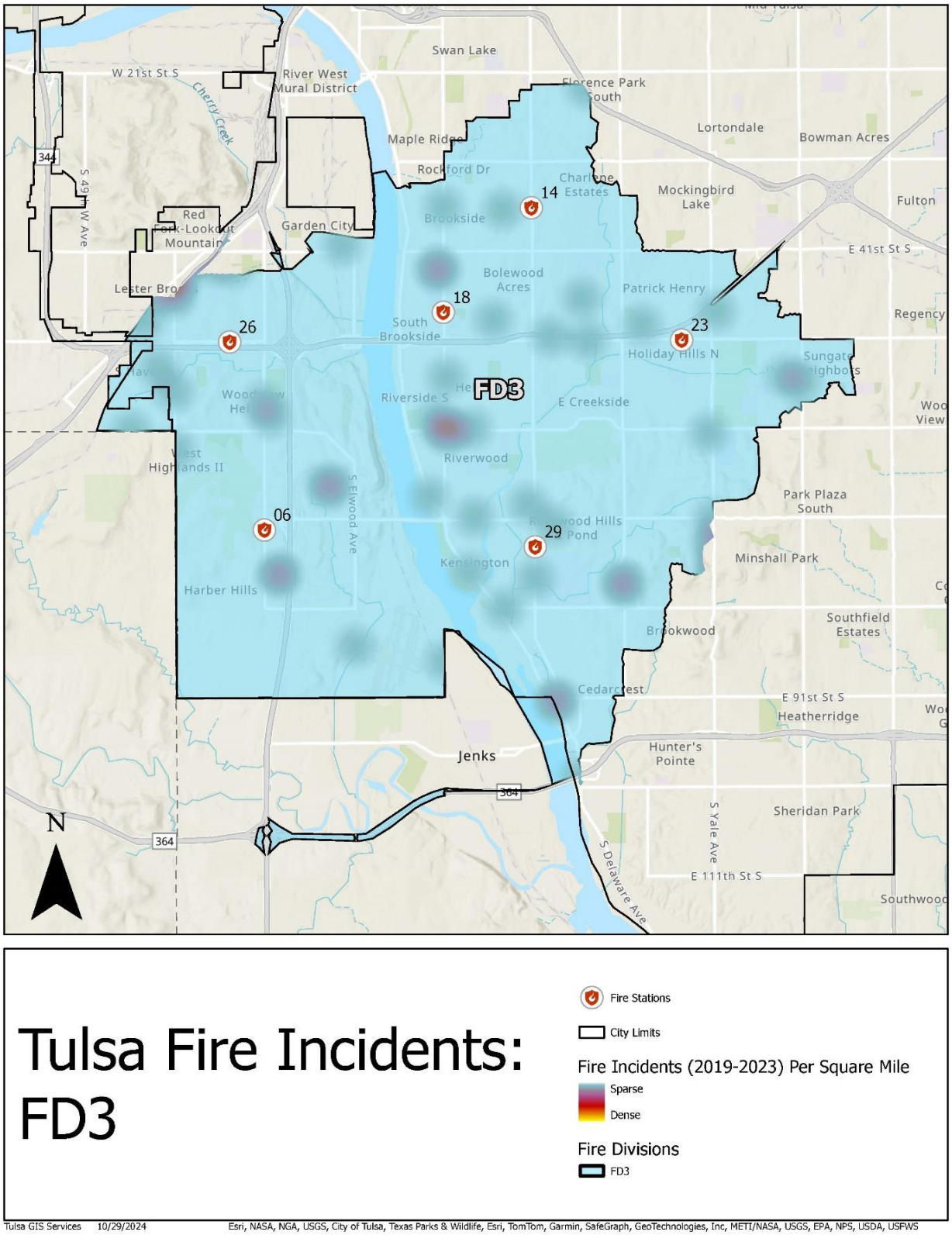
Dense

Fire Divisions

FD2

Tulsa GIS Services 10/29/2024

District 3 Fire Incidents by location 2019-2023



Tulsa Fire Incidents: FD3

Fire Stations

City Limits

Fire Incidents (2019-2023) Per Square Mile

Sparse

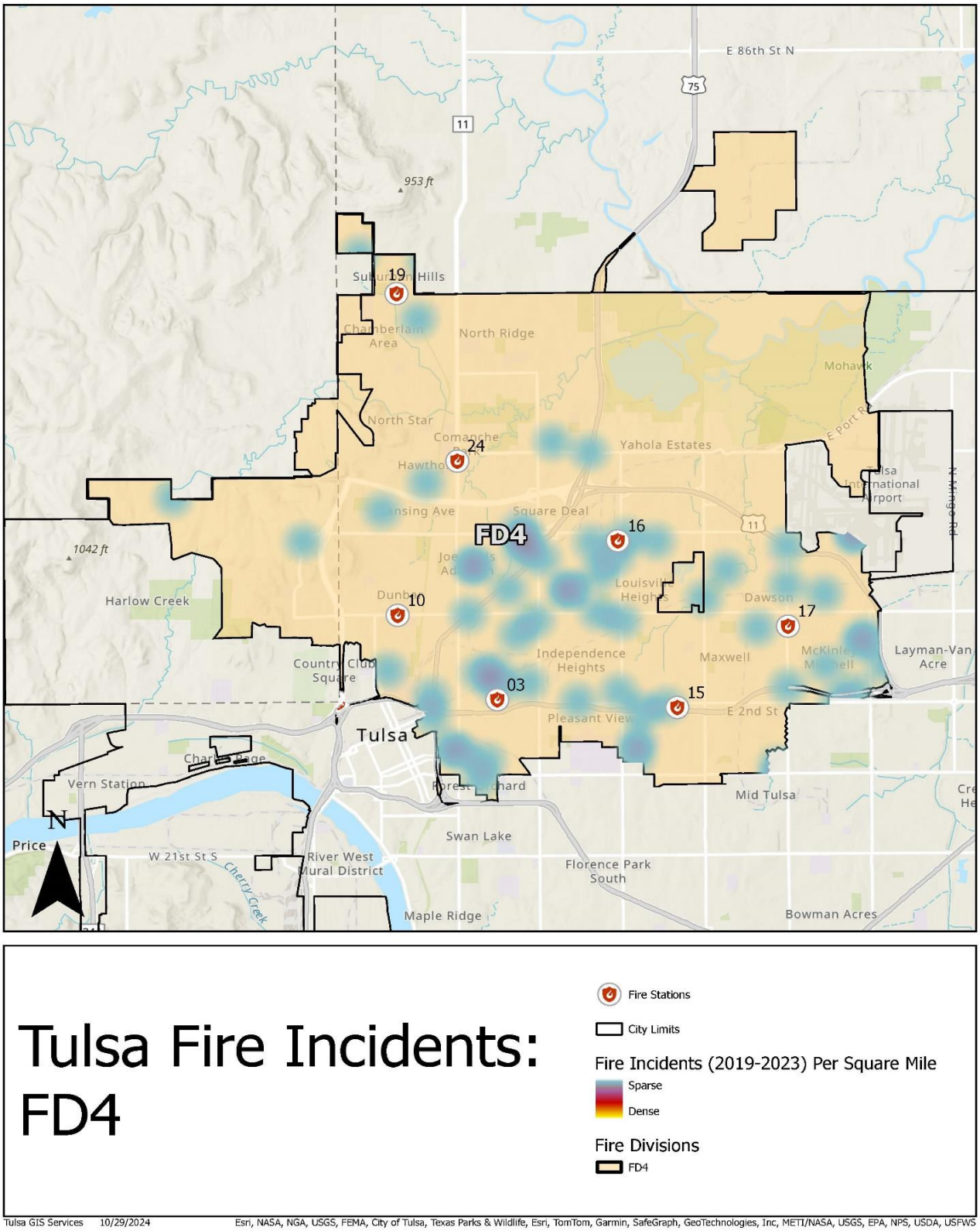
Dense

Fire Divisions

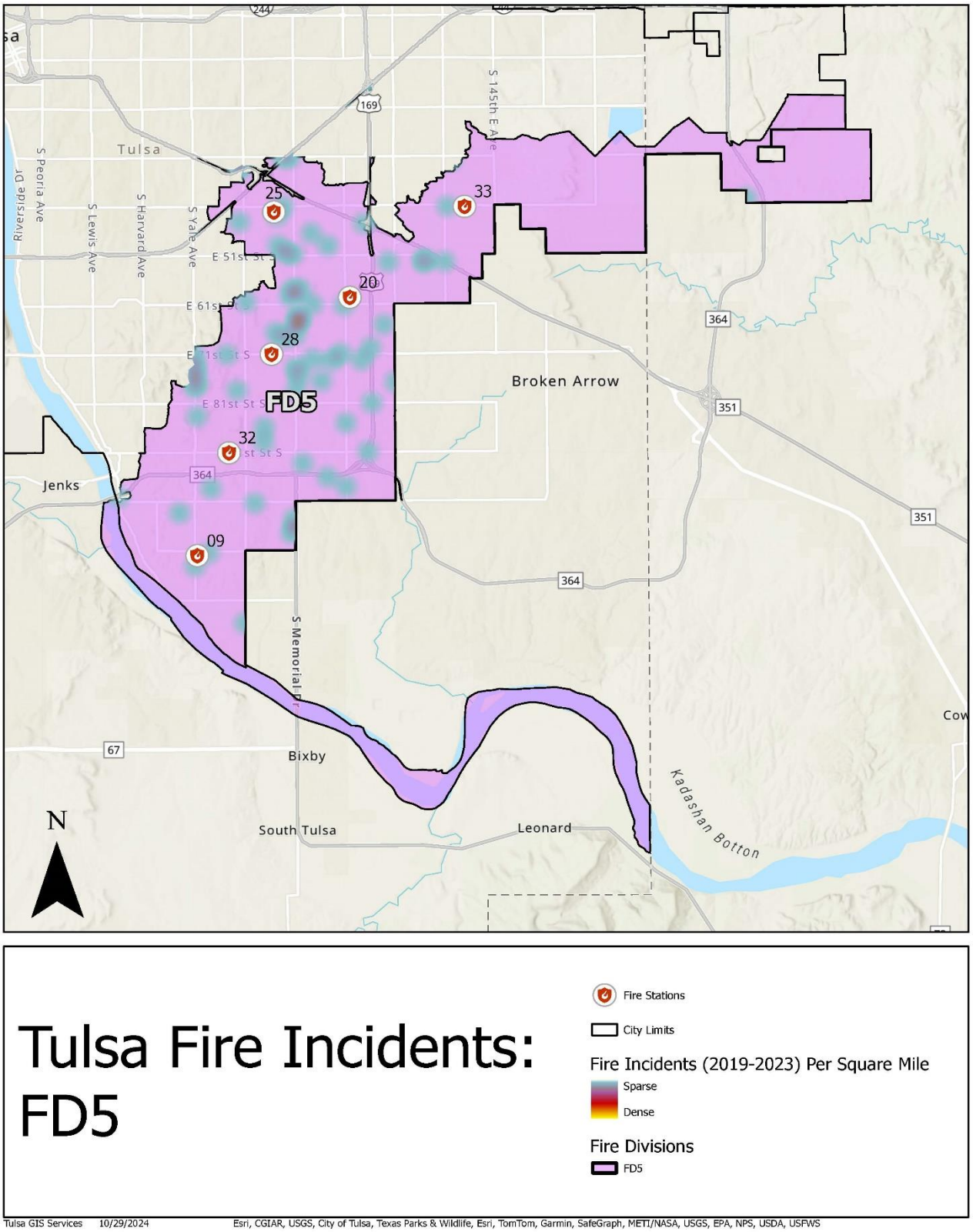
FD3

Tulsa GIS Services 10/29/2024

District 4 Fire Incidents by location 2019-2023

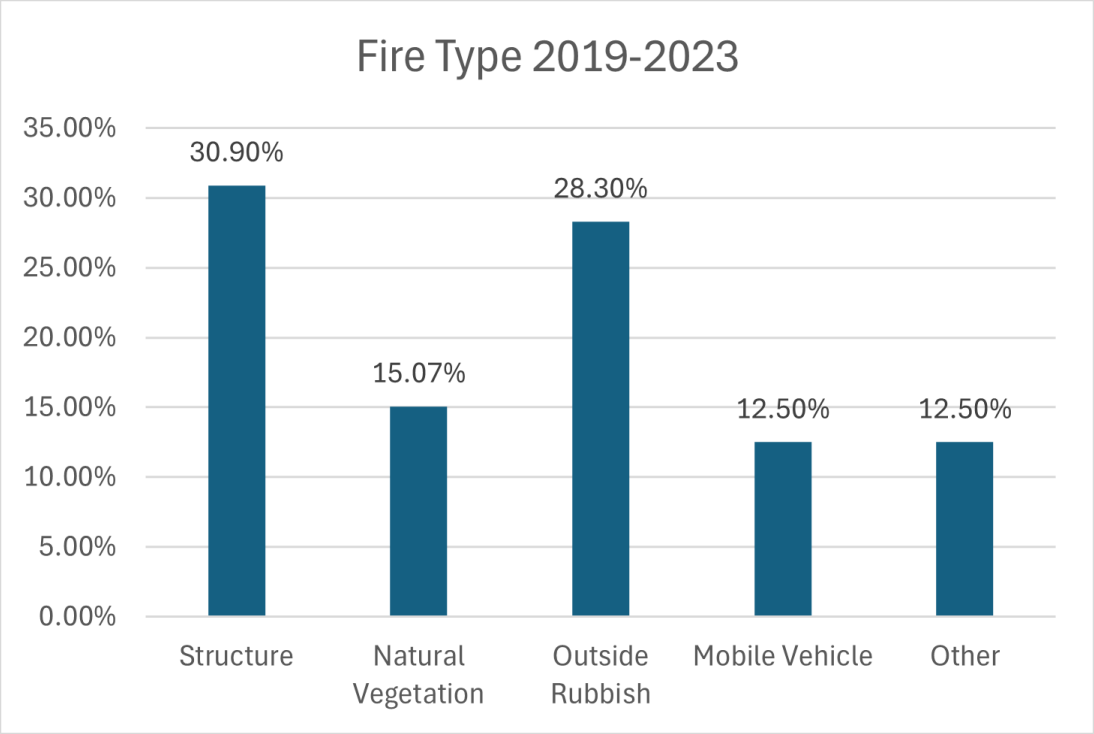


District 5 Fire Incidents by location 2019-2023

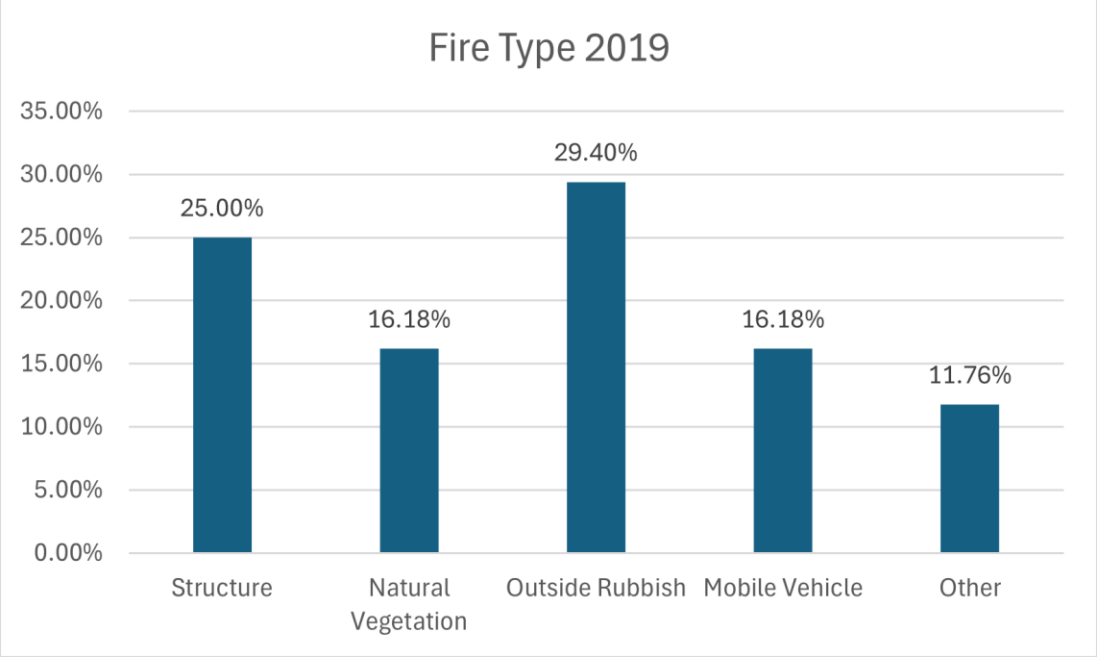


Top Five Fire Response Types

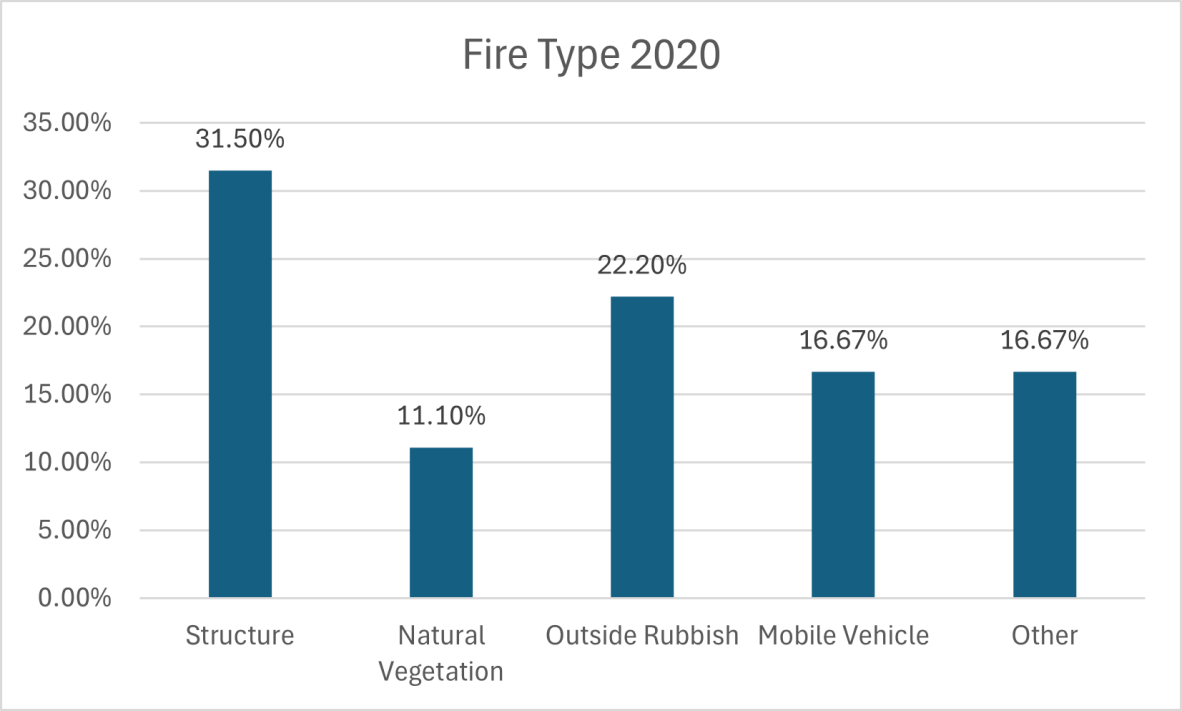
Percentage of Fires by Type All Years 2019-2023



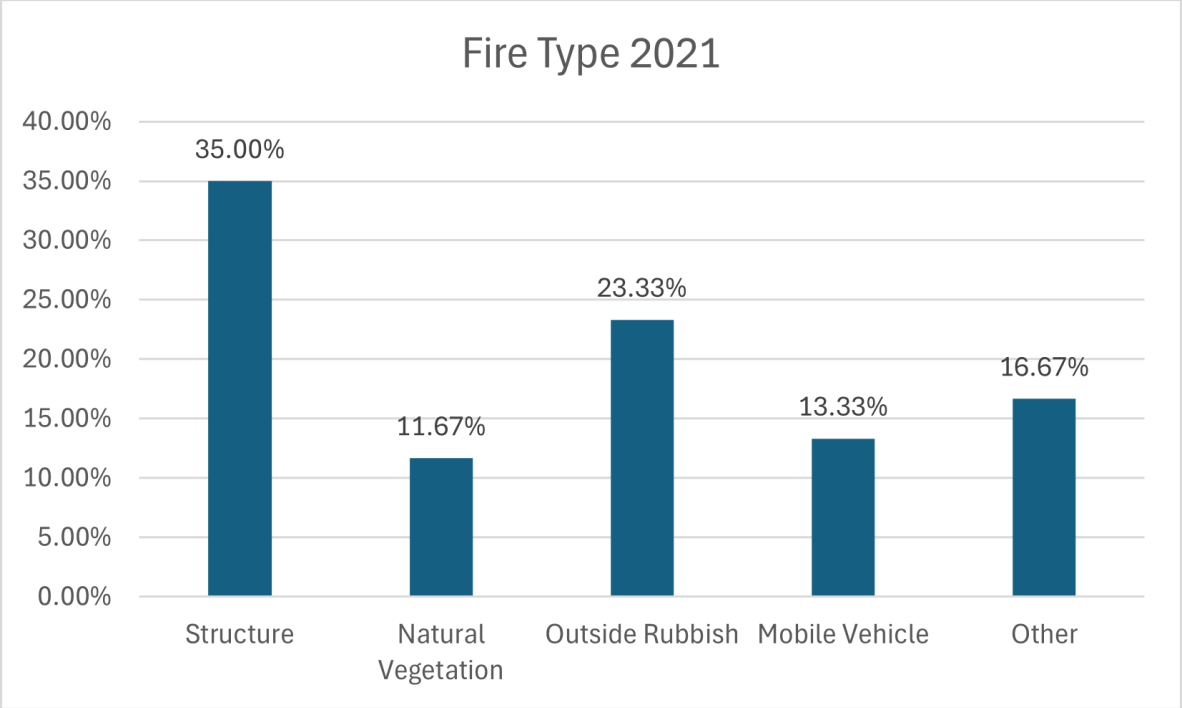
Percentage of Fires by Type 2019



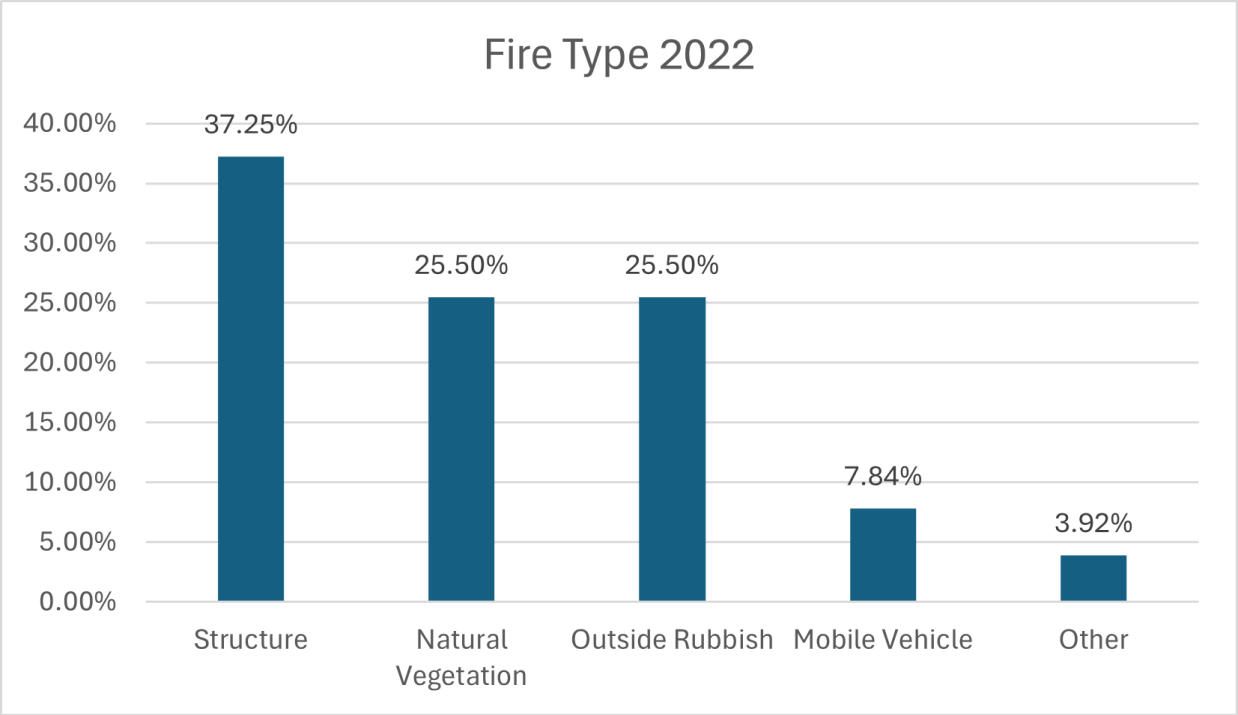
Percentage of Fires by Type 2020



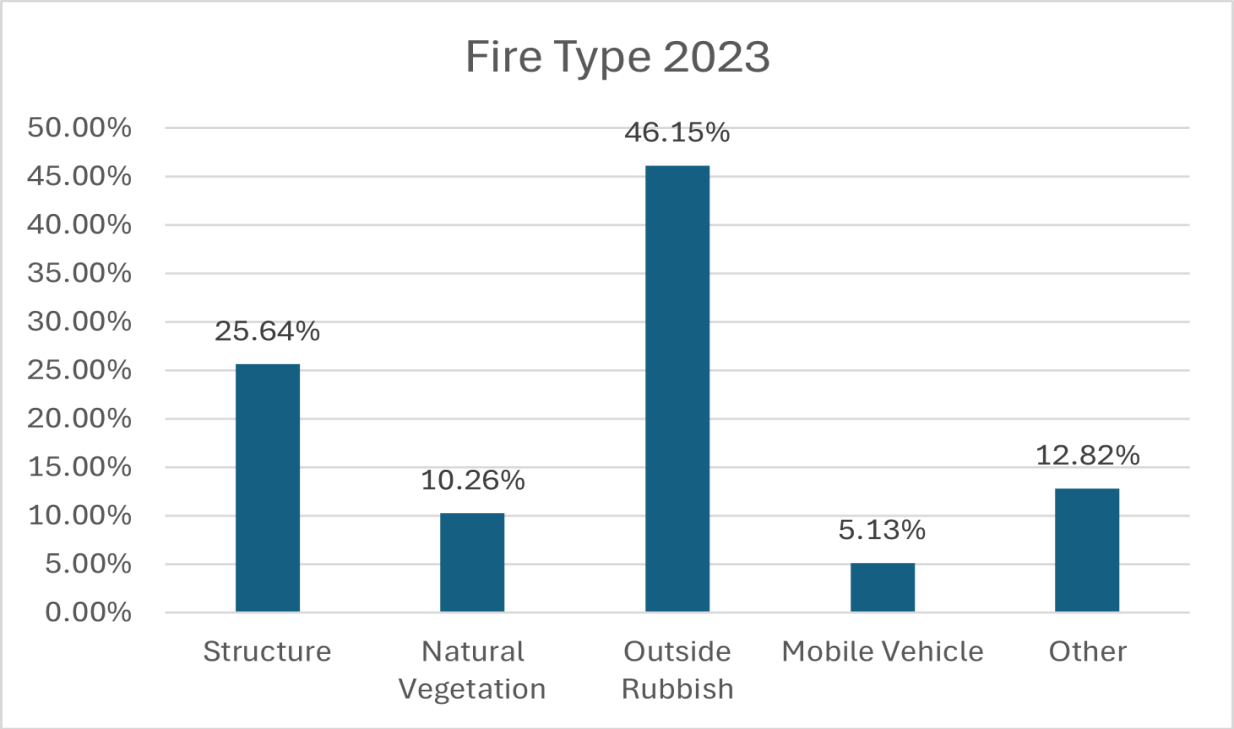
Percentage of Fires by Type 2021



Percentage of Fires by Type 2022

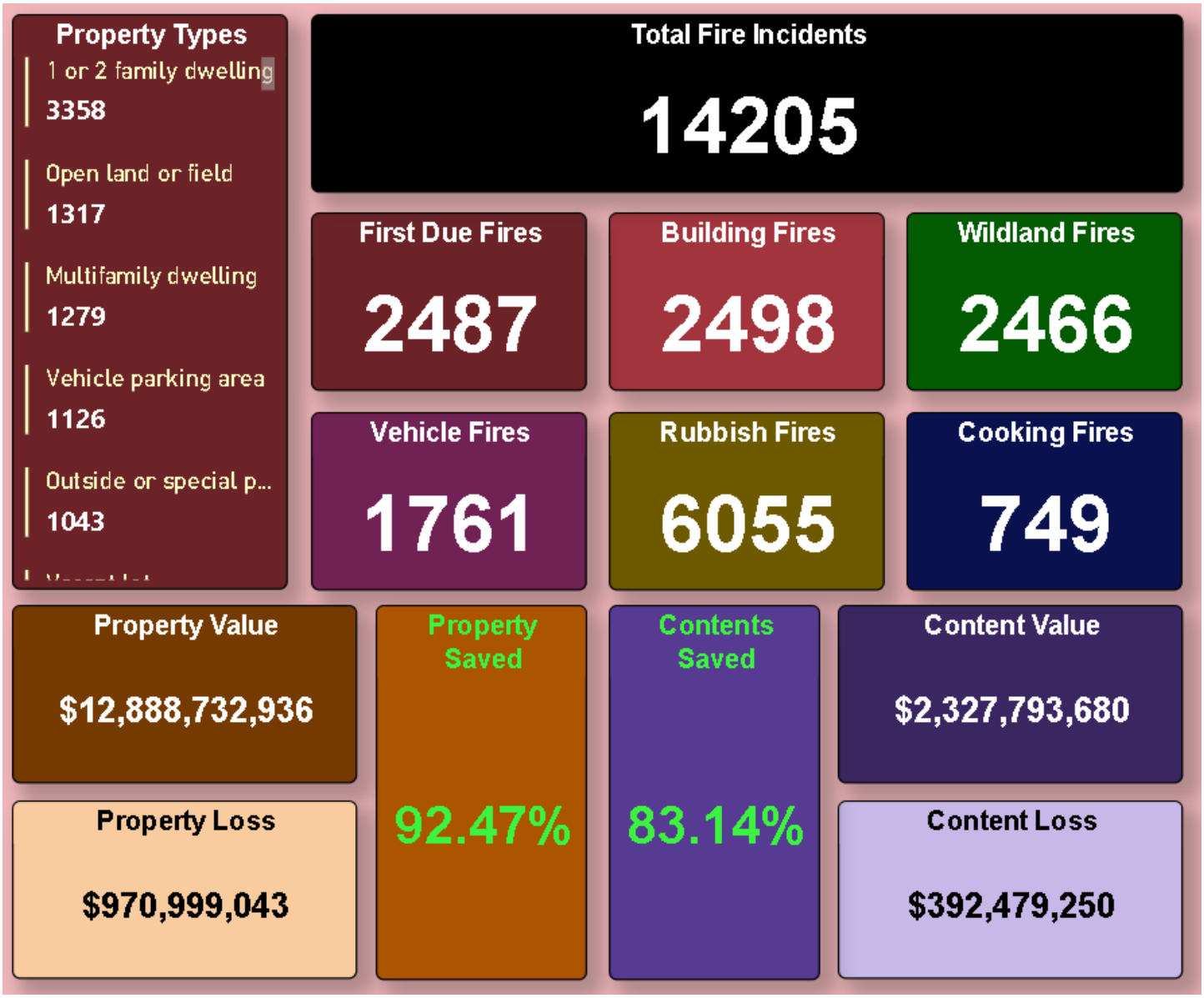


Percentage of Fires by Type 2023

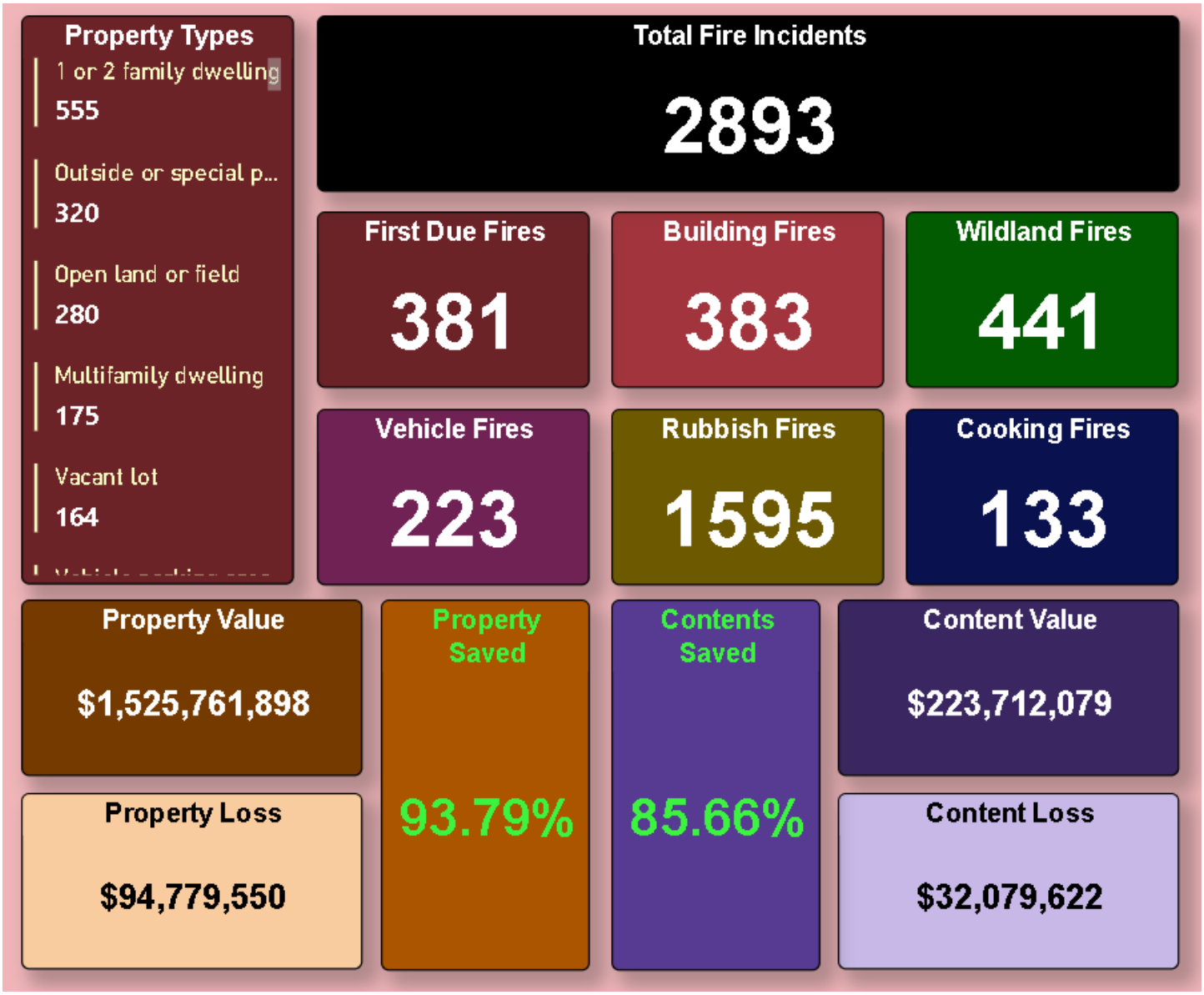


Fire Incident Dashboard for 2019-2023

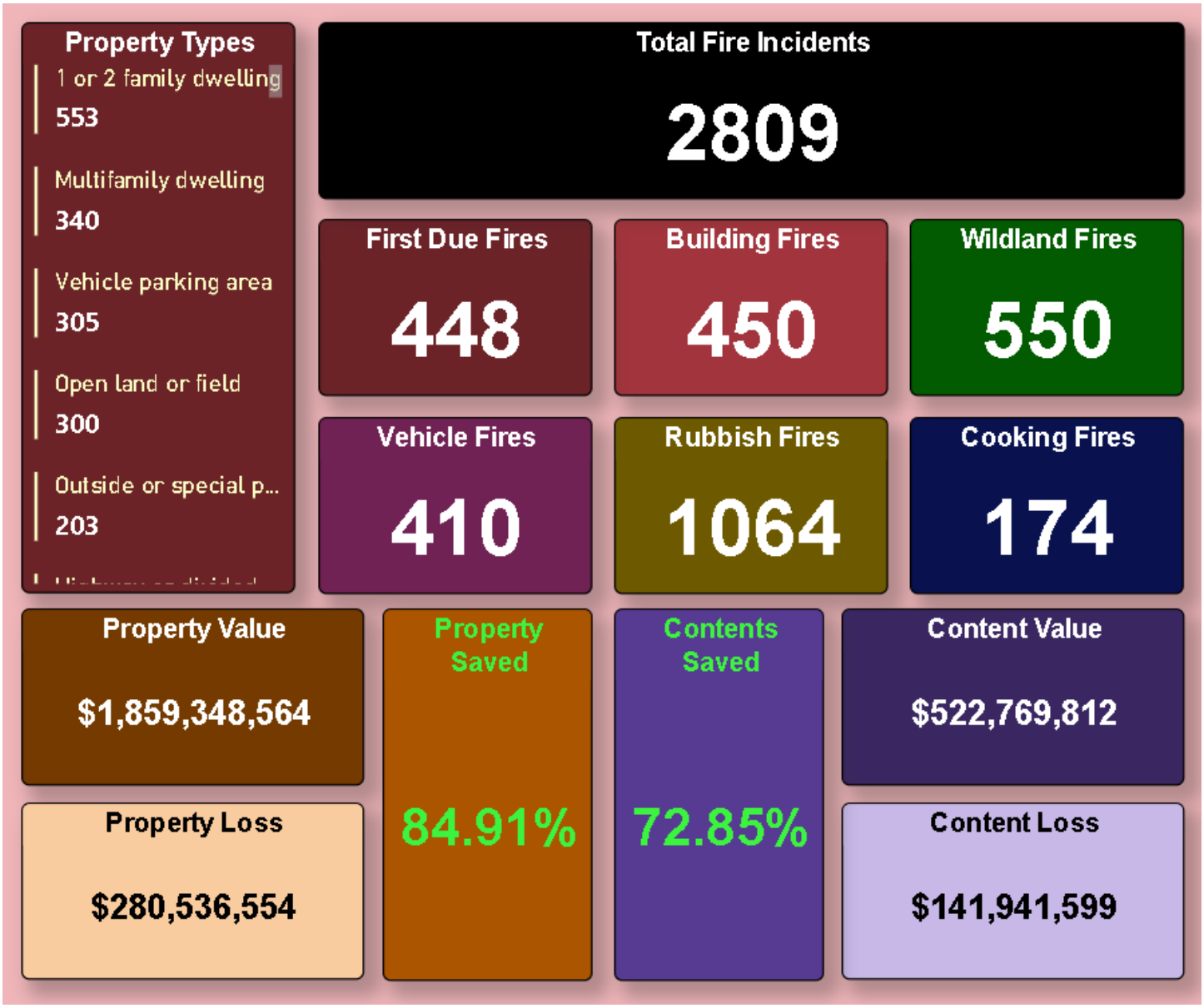
This data set captures “dispatched incidents” to fire calls which could be a single apparatus response, up to five or more apparatus responsing. Each District’s response data includes total first due fires, building fires, wildland fires, vehicle fires, rubbish fire and cooking fires. Also listed is estimated property and content loss data and a list of the top 5 property types where fire incidents occurred. Dispatch incident data is the “type of call” assigned to an incident, understand that there is a reconcilliation between “dispatch data” and actual “incident reported data”. (Example, you can be initally dipatched to a structure fire and upon investigation it is steam releasing from a vent pipe).



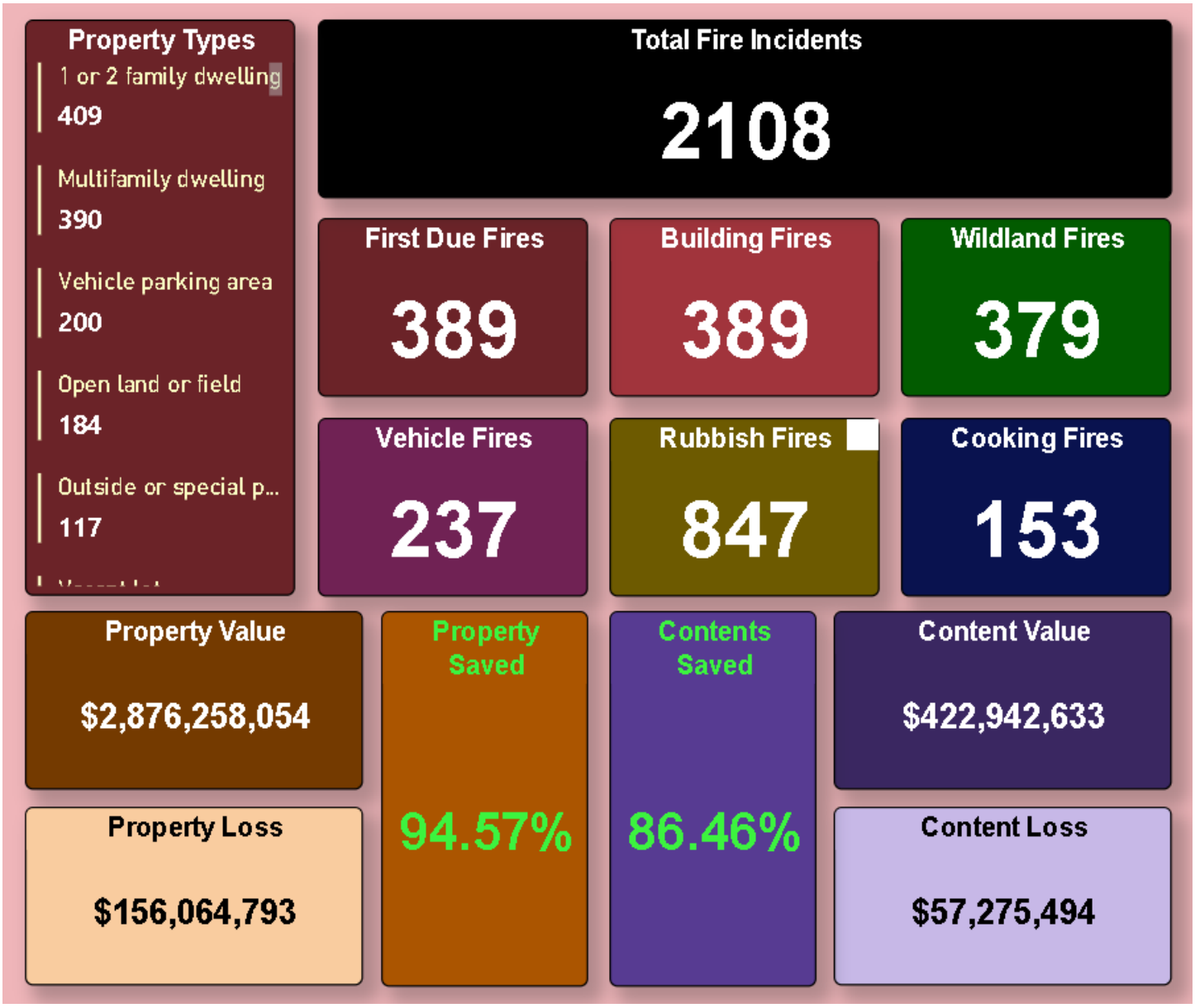
Total Fire Incidents for District 1 2019-2023



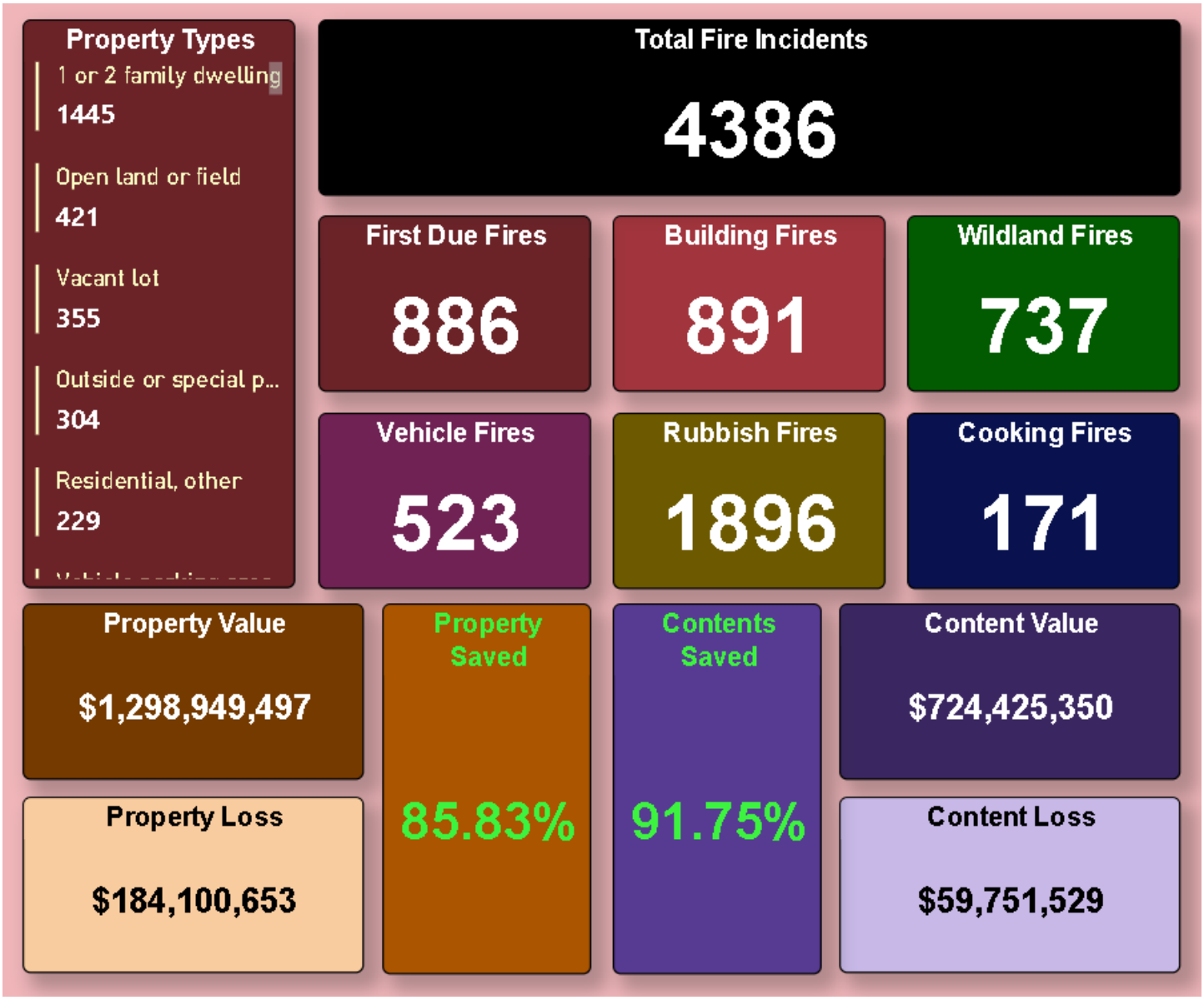
Total Fire Incidents for District 2 2019-2023



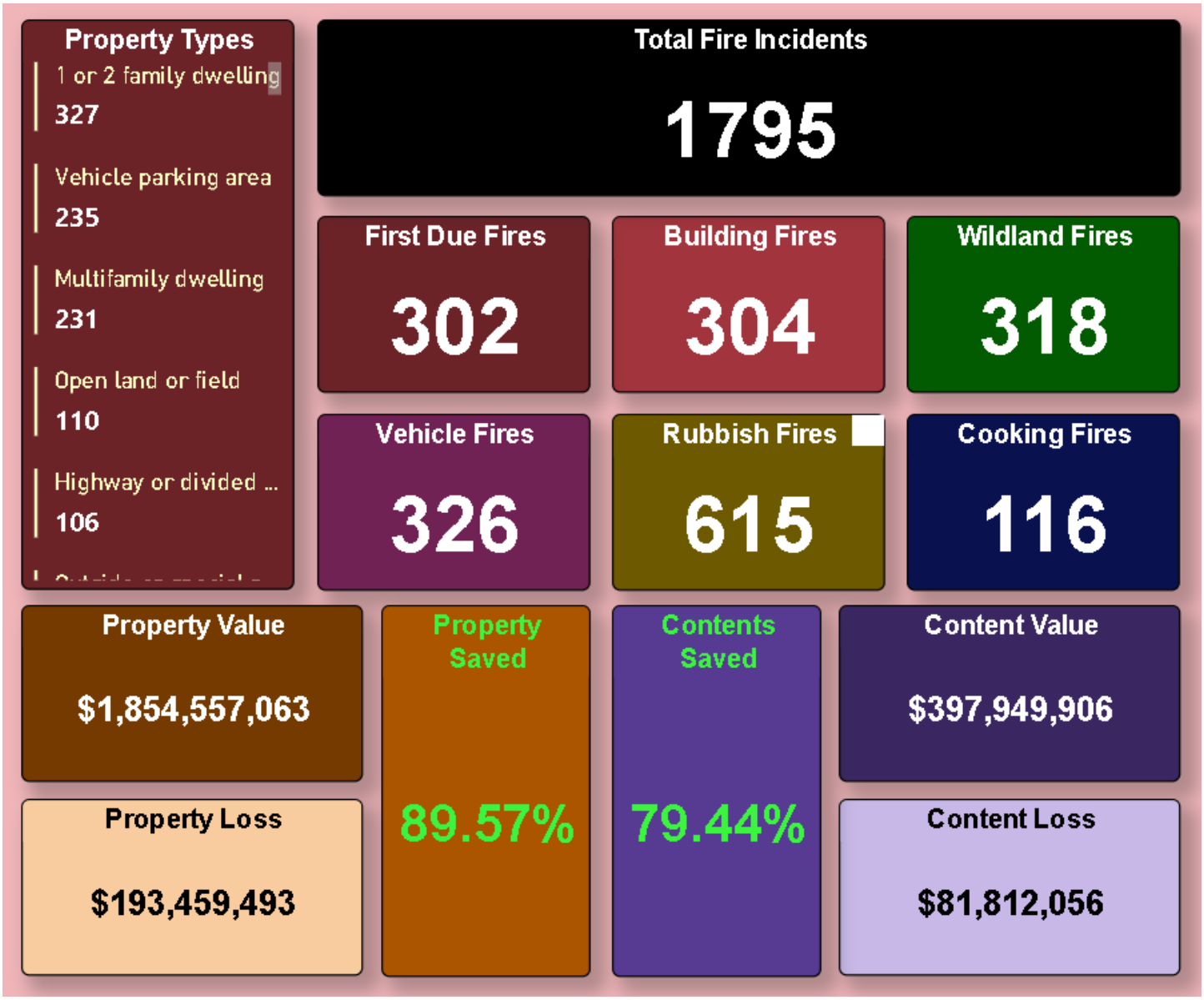
Total Fire Incidents for District 3 2019-2023



Total Fire Incidents for District 4 2019-2023

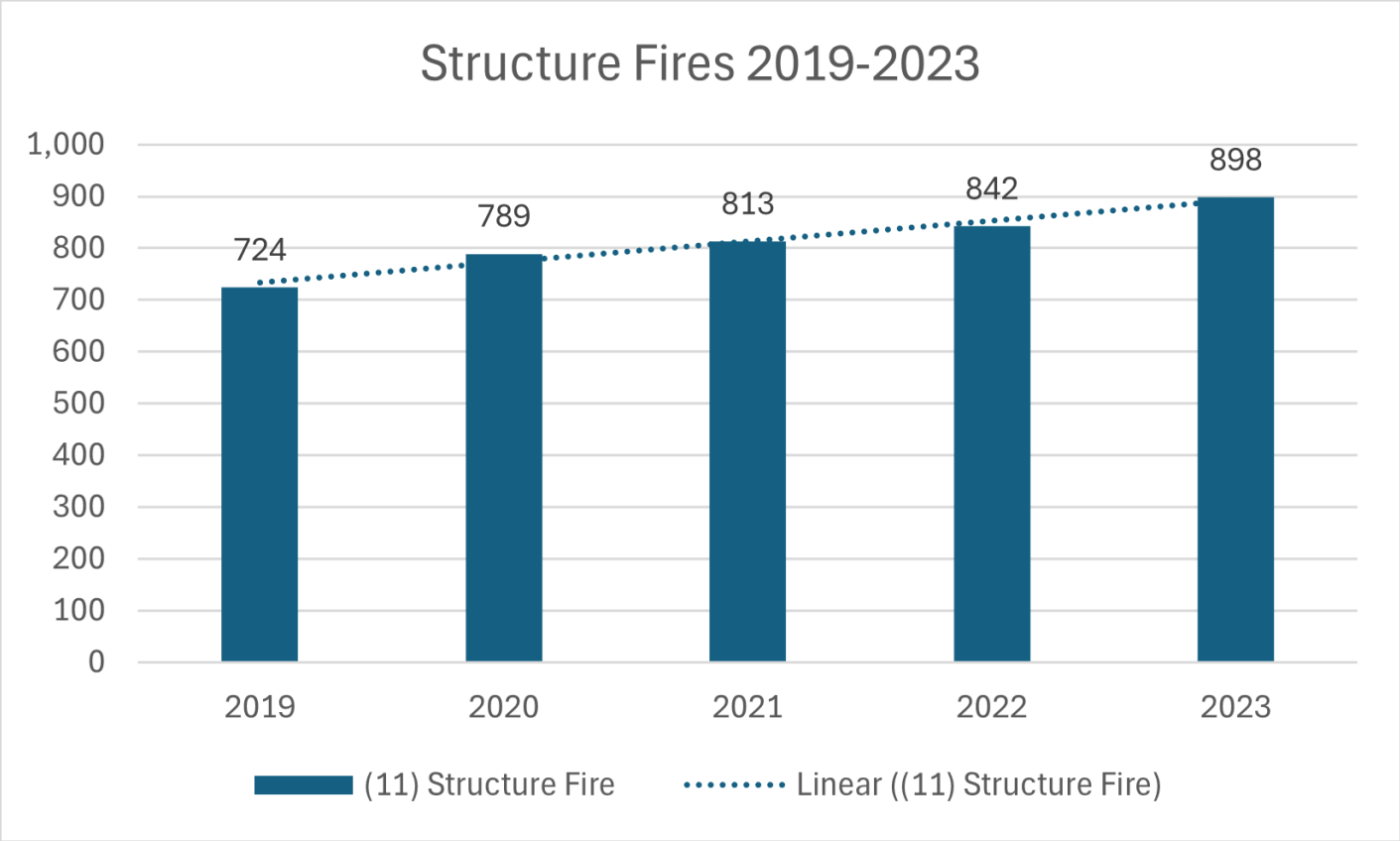


Total Fire Incidents for District 5 2019-2023



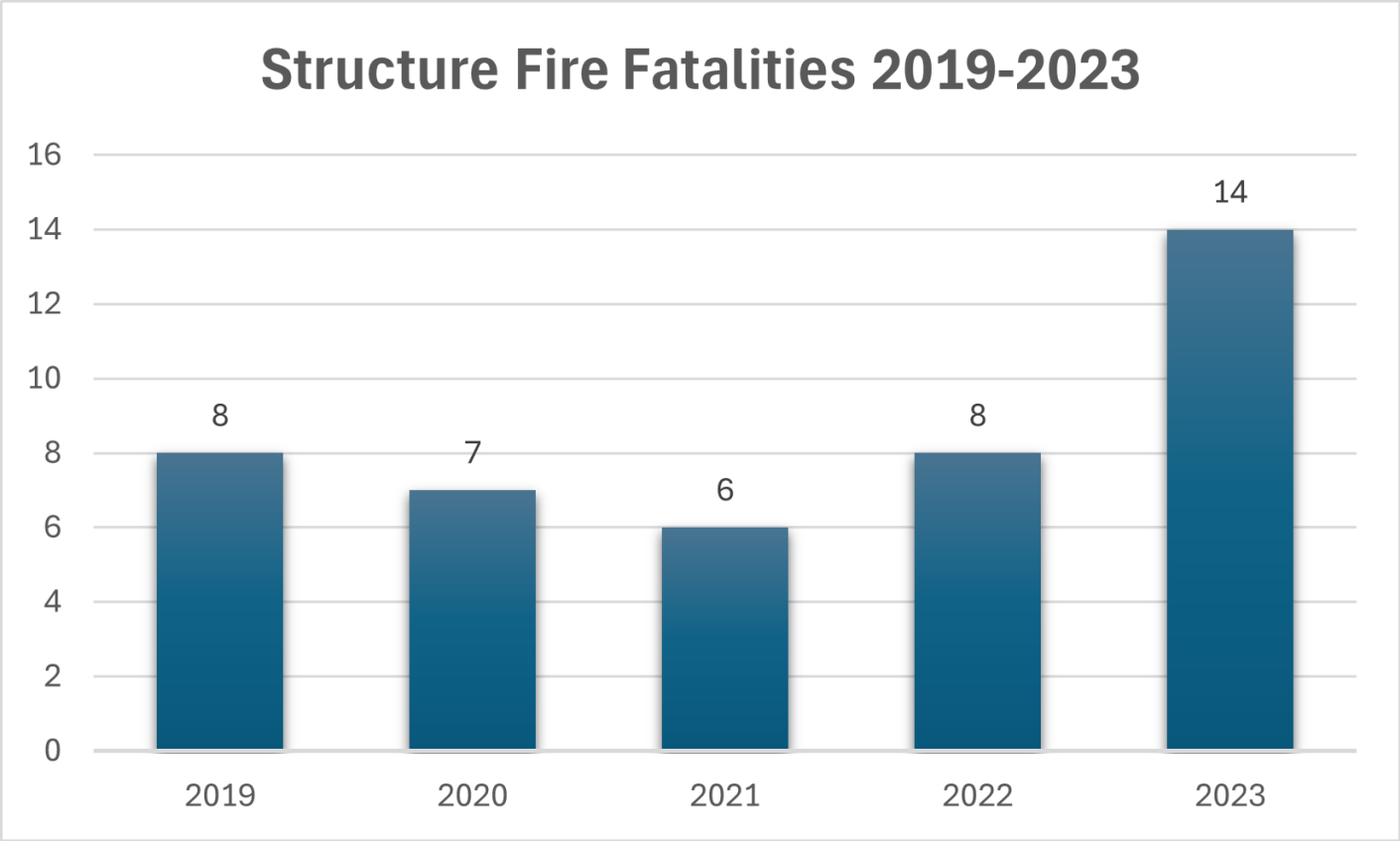
Total Structure Fire Incidents 2019-2023

This structure fire data set is the total confirmed fire incident responses as reported by TFD in NFIRS.



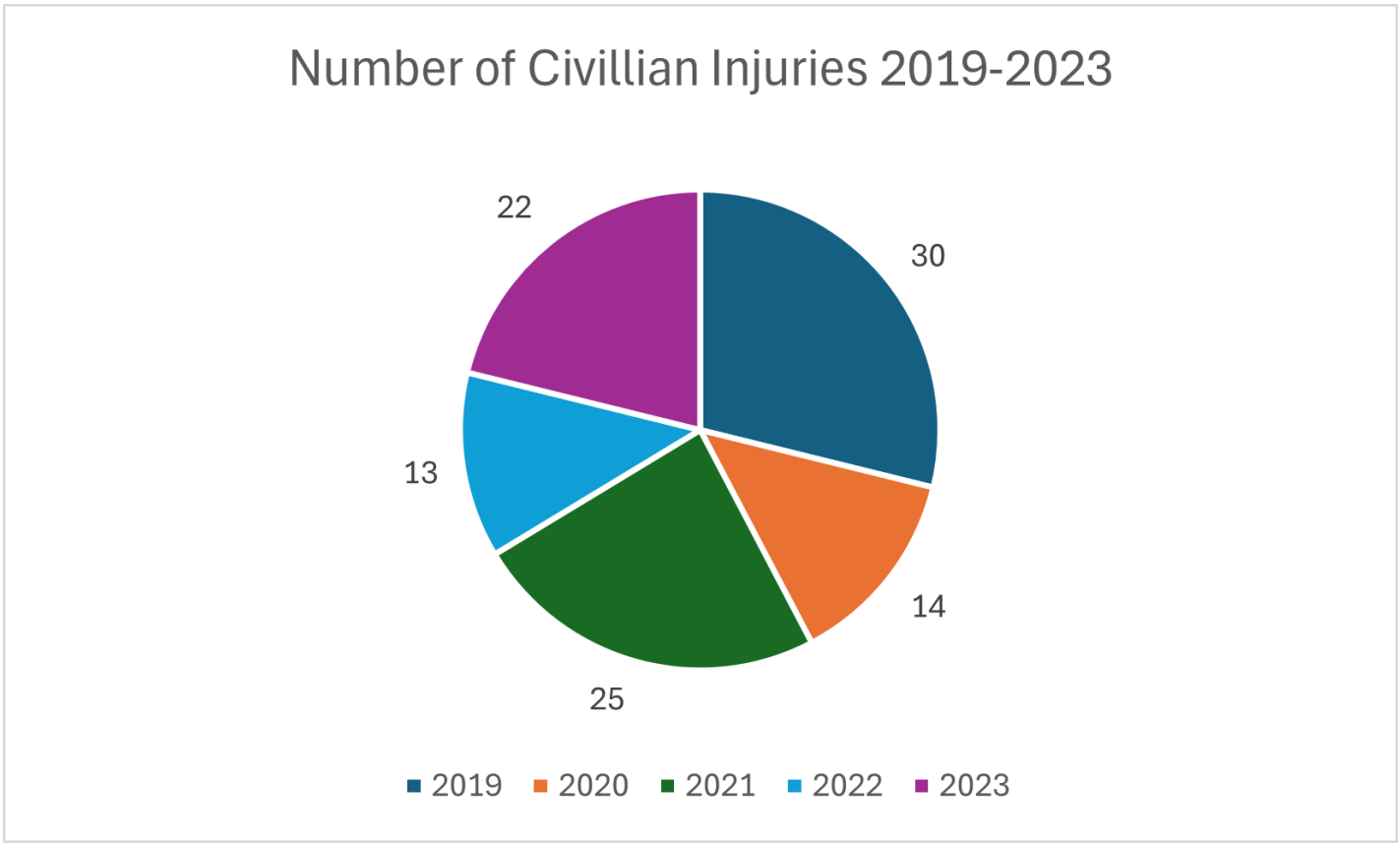
Fire Deaths 2019- 2023

This table shows the number of fire fatalities that occurred in a structure. This accounts for victims who were rescued, however sadly succumbed to injuries sustained from the effects of fire. According to data from the U.S. Fire Administration, the national fire death rate from 2019-2023 averaged around 11.4 deaths per million population. Tulsa's population was recorded as 411,893 in 2023.

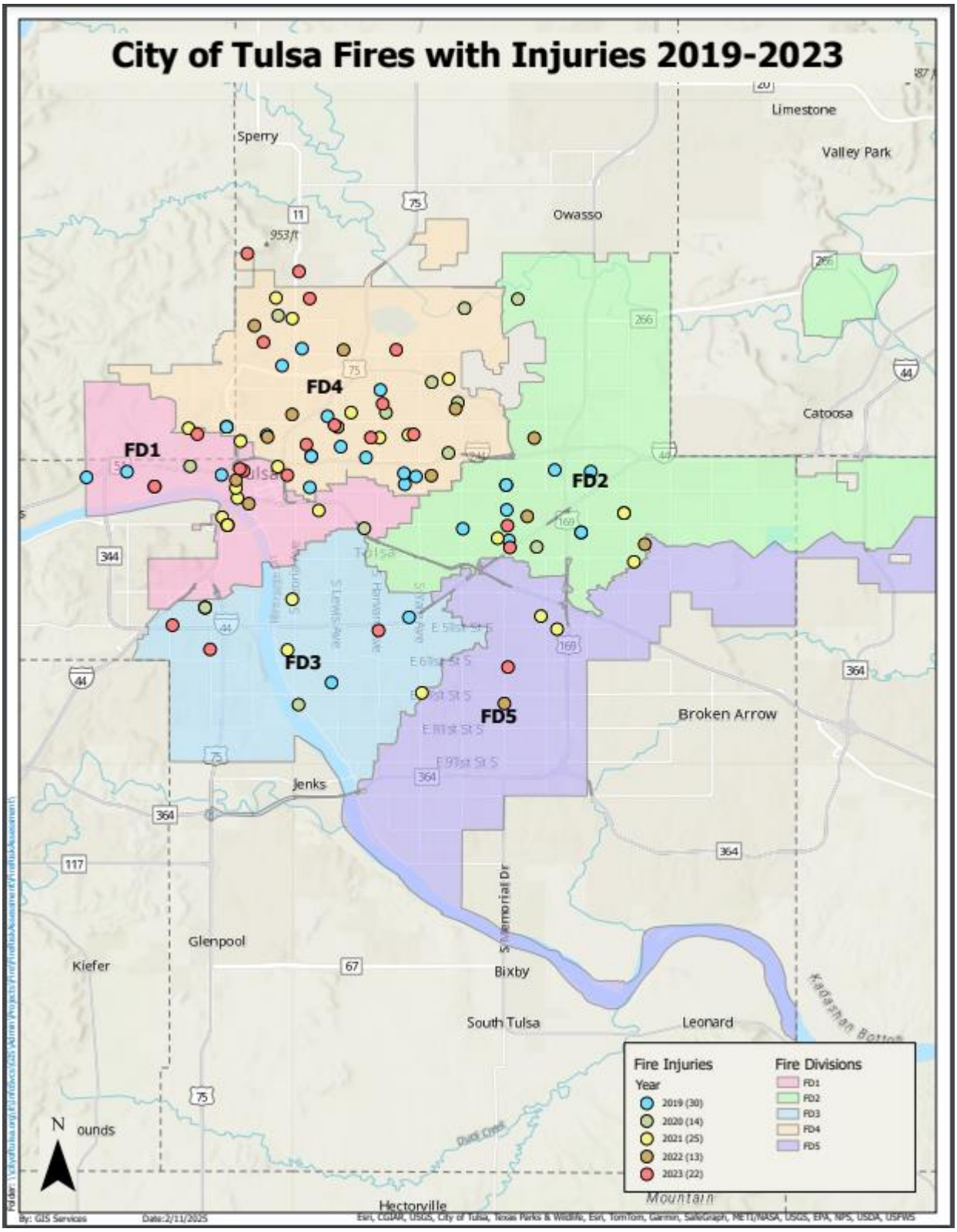


Structure Fire Civilian Injuries

Thermal burns and smoke inhalation are the primary injuries sustained in structure fires, often causing respiratory complications and damage to the airway. A large percentage of civilian fire injuries occur in residential buildings, with cooking being a leading cause of these fires. The severity of injuries can depend on factors like the fire's intensity, the location of the fire within the structure, and the individual's ability to escape quickly. Many injuries occur while people are attempting to escape a burning building, including injuries from falls, burns from contact with flames, and smoke inhalation. The graph below indicates the number of injuries that occurred from structure fire incidents between 2019 and 2023.



Civilian Injuries by District 2019-2023



Smoke Alarm Installations by Station 2021-2023

The Tulsa Fire Department offers a free smoke detector program to Tulsa residents who can't afford a smoke alarm or can't install one. The program is available to homeowners, families, adults, and seniors. The following chart displays the total number of installations and batteries replaced by each station for 2021, 2022 and 2023.

TULSA Program Implementation

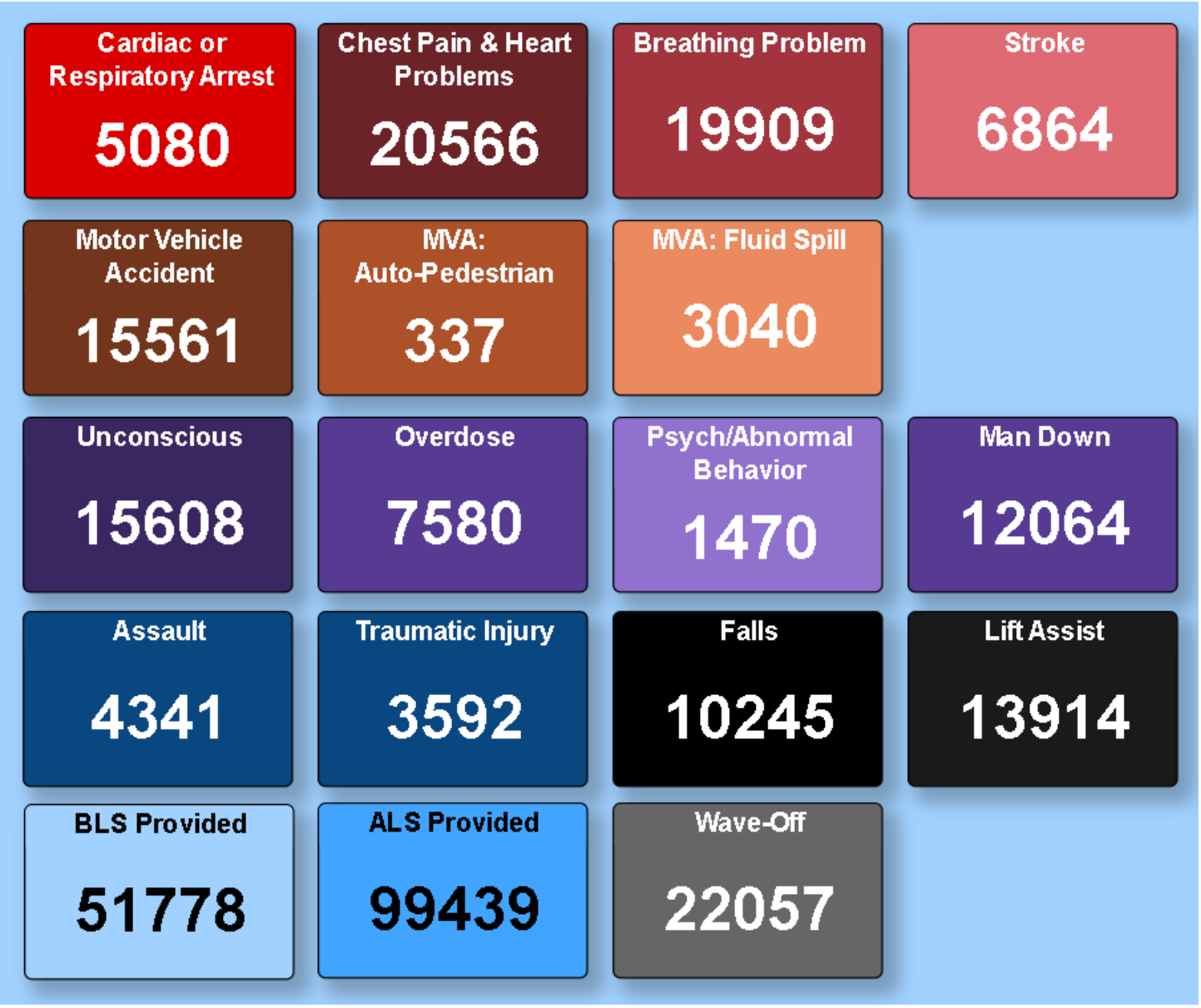
2021 through 2023

	Smoke Detectors Installed					Batteries Replaced				
	2021	2022	2023	Total	Average	2021	2022	2023	Total	Average
Station 2	9	4	86	99	33	0	1	1	2	1
Station 3	9	11	32	52	17	0	0	1	1	0
Station 4	1	2	3	6	2	0	3	1	4	1
Station 5	2	2	15	19	6	1	0	1	2	1
Station 6	2	2	5	9	3	1	0	0	1	0
Station 7	8	9	20	37	12	2	2	0	4	1
Station 9	0	0	3	3	1	4	4	1	9	3
Station 10	24	14	99	137	46	3	2	3	8	3
Station 12	3	2	8	13	4	0	0	0	0	0
Station 13	4	9	83	96	32	0	2	1	3	1
Station 14	1	5	17	23	8	1	3	2	6	2
Station 15	13	14	55	82	27	0	0	1	1	0
Station 16	11	23	36	70	23	0	2	0	2	1
Station 17	13	27	43	83	28	2	2	0	4	1
Station 18	12	12	48	72	24	1	2	2	5	2
Station 19	33	25	57	115	38	1	0	1	2	1
Station 20	6	5	28	39	13	3	1	1	5	2
Station 21	13	5	38	56	19	1	2	0	3	1
Station 22	24	27	56	107	36	2	3	2	7	2
Station 23	7	7	34	48	16	1	1	2	4	1
Station 24	24	24	89	137	46	2	0	1	3	1
Station 25	3	3	23	29	10	2	2	1	5	2
Station 26	7	14	8	29	10	2	2	2	6	2
Station 27	15	22	79	116	39	5	7	7	19	6
Station 28	3	12	14	29	10	5	5	4	14	5
Station 29	4	2	46	52	17	2	2	0	4	1
Station 31	1	2	11	14	5	1	1	0	2	1
Station 32	5	5	37	47	16	1	3	4	8	3
Station 33	0	0	3	3	1	0	0	3	3	1
Station 66	18	13	37	68	23	2	0	3	5	2

EMERGENCY MEDICAL RESPONSE

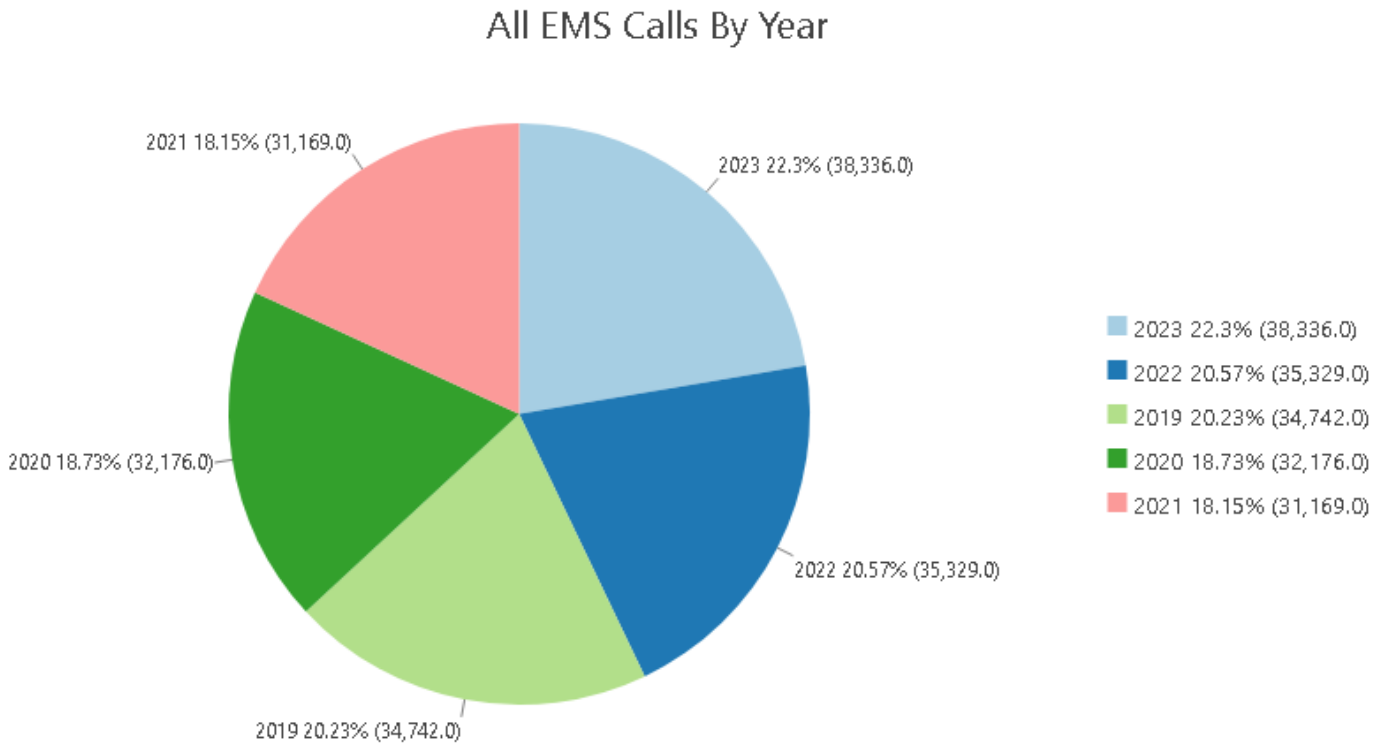
Emergency Medical Service Incident Dashboard 2019-2023

This dashboard data set captures eighteen(18) of our most dispatched medical emergencies. Medical Emergencies account for 72% of overall dispatched incidents the TFD responds to annually.



Medical Emergency Incidents 2019-2023

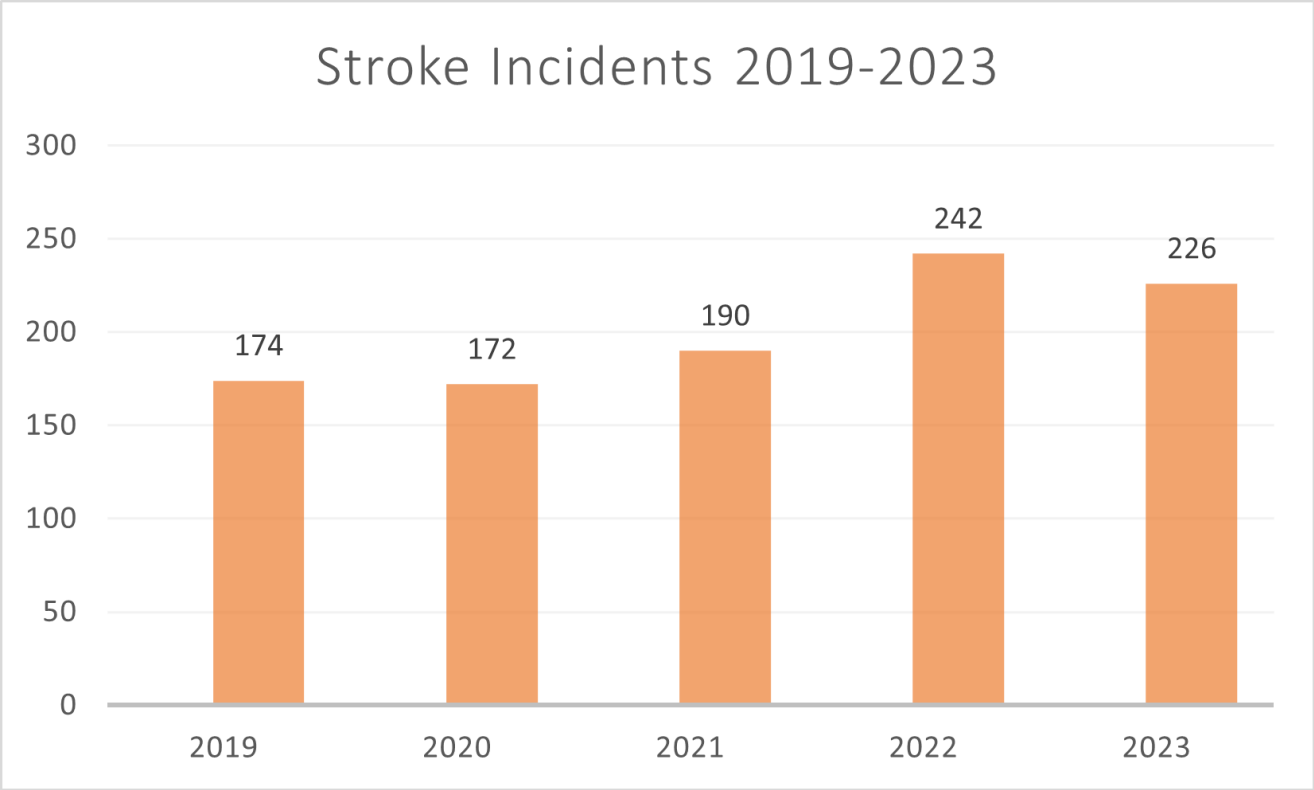
This chart contains incident data from Medical Assists and EMS calls. Both are sub-categories within Rescue & EMS, which contain eight sub-categories. These are coded as 311's and 321's within the National Fire Incident Reporting System(NFIRS).



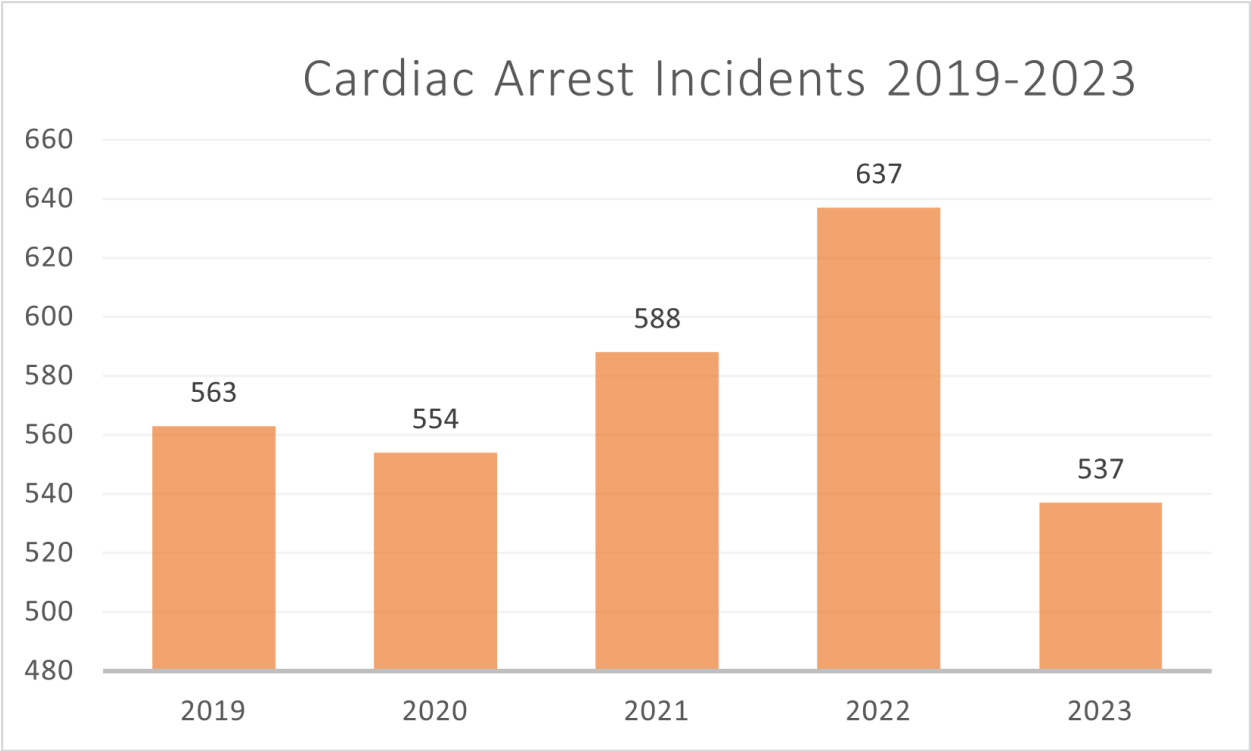
High risk emergency medical call types

The following call types fall under "high acuity medical emergency calls". These are critical medical calls requiring immediate Advanced Life Support (ALS) capabilities, such as cardiac arrest, heart attack, major trauma, stroke with significant neurological deficits, or a situation with rapidly deteriorating vital signs.

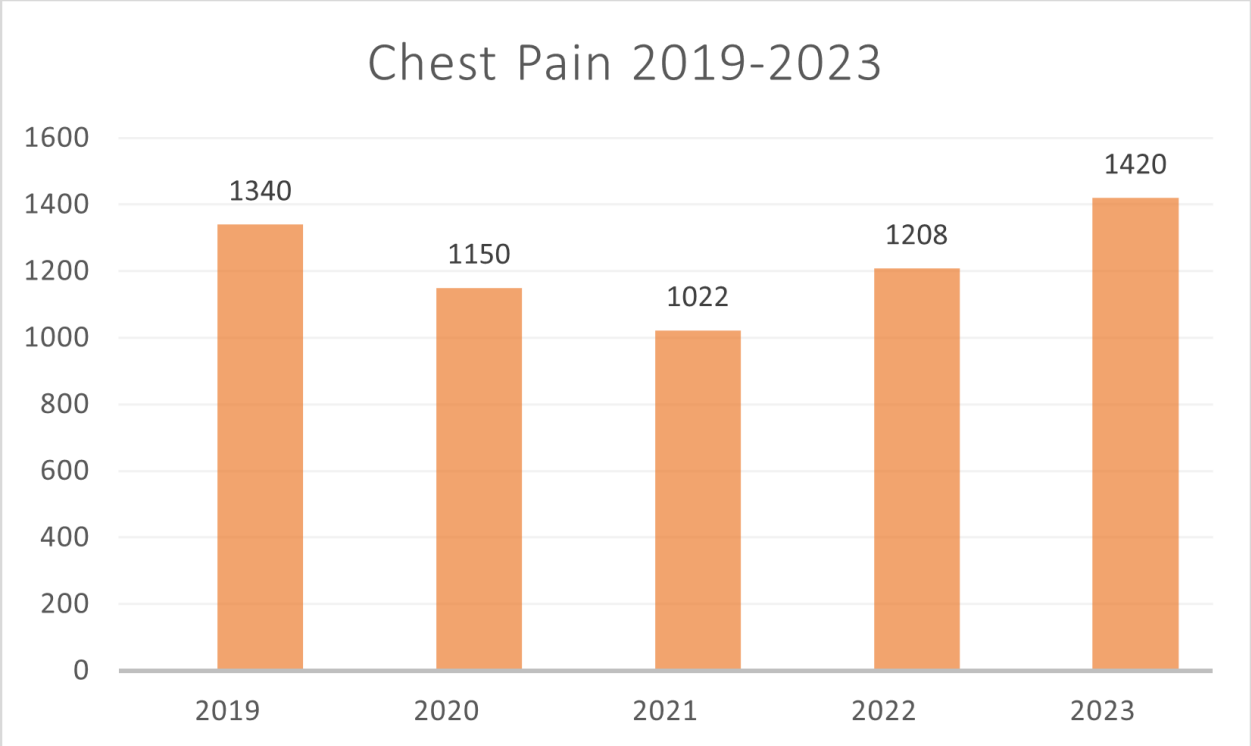
Stroke Incidents 2019-2023



Cardiac Arrest Incidents 2019-2023

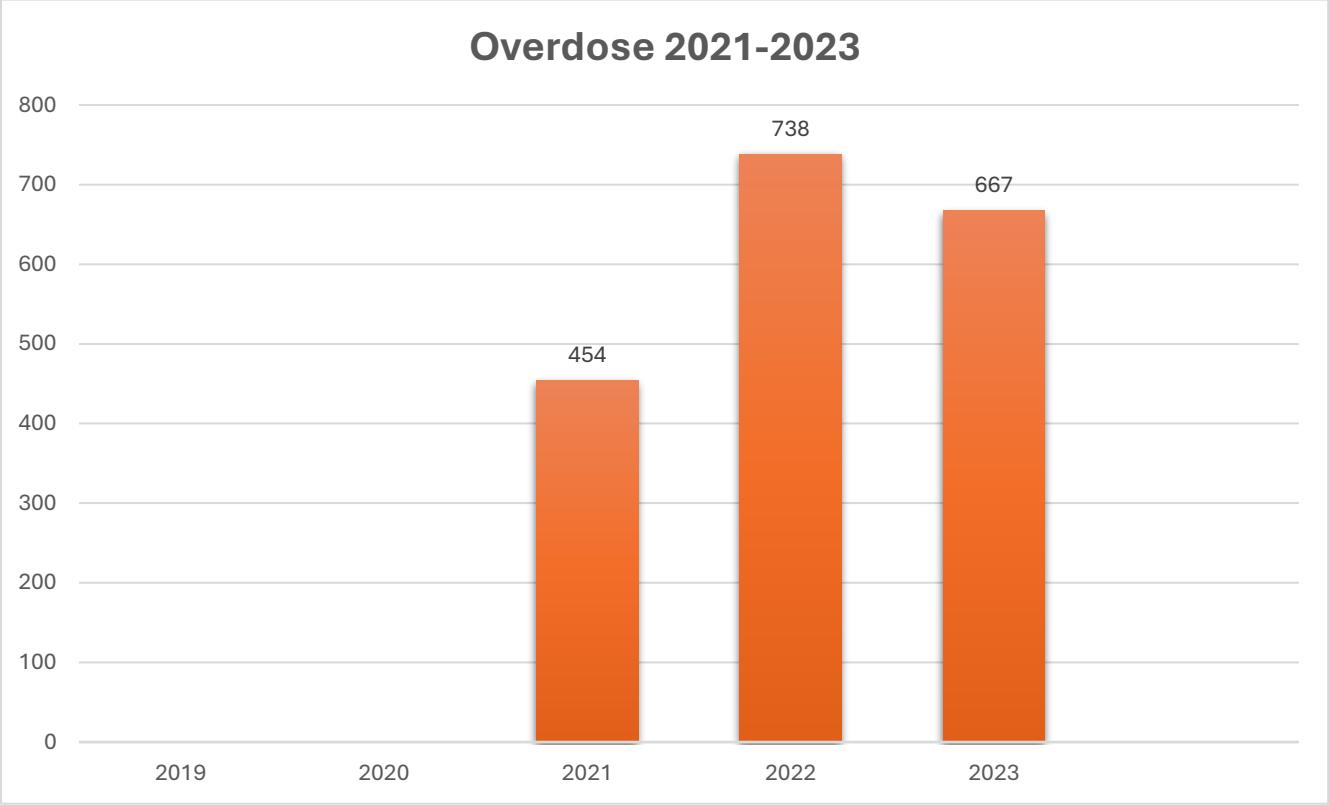


Chest Pain Incidents 2019-2023



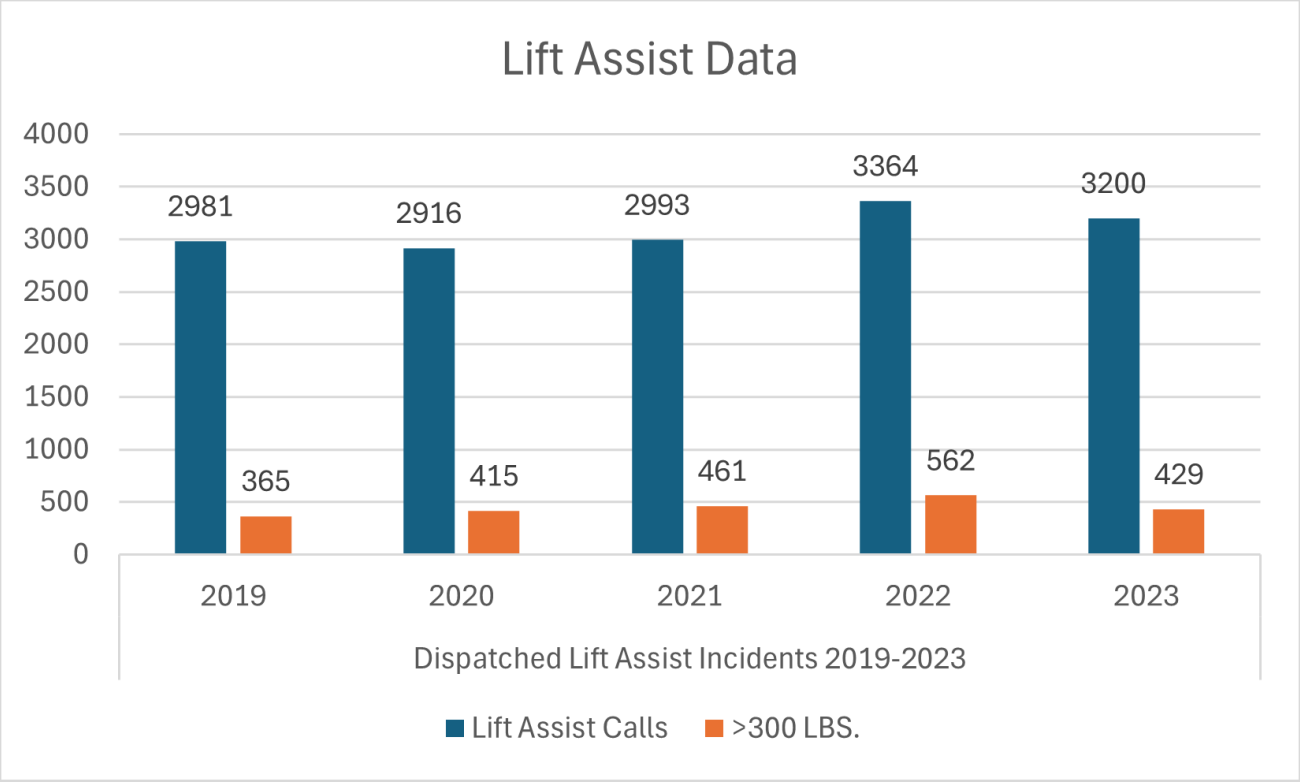
Overdose* (Data collection of overdose incidents began in 2021)

Due to an increasing number of opioid overdose incidents, the Tulsa Fire Department initiated a community risk reduction(CRR) program to address the opioid crisis through the availability and administration of medication to counter the effects of opioid overdose.



Lift Assist

The Tulsa Fire Department receives a significant number of lift assist calls, from elderly individuals living independently or in assisted living facilities. Data shows 1.22 lift assists per day are for people weighing 300 pounds or more. For the safety of our firefighting personnel, two fire companies are dispatched on these incidents, removing the availability of two apparatus from responding to higher acuity calls within their respective response areas.

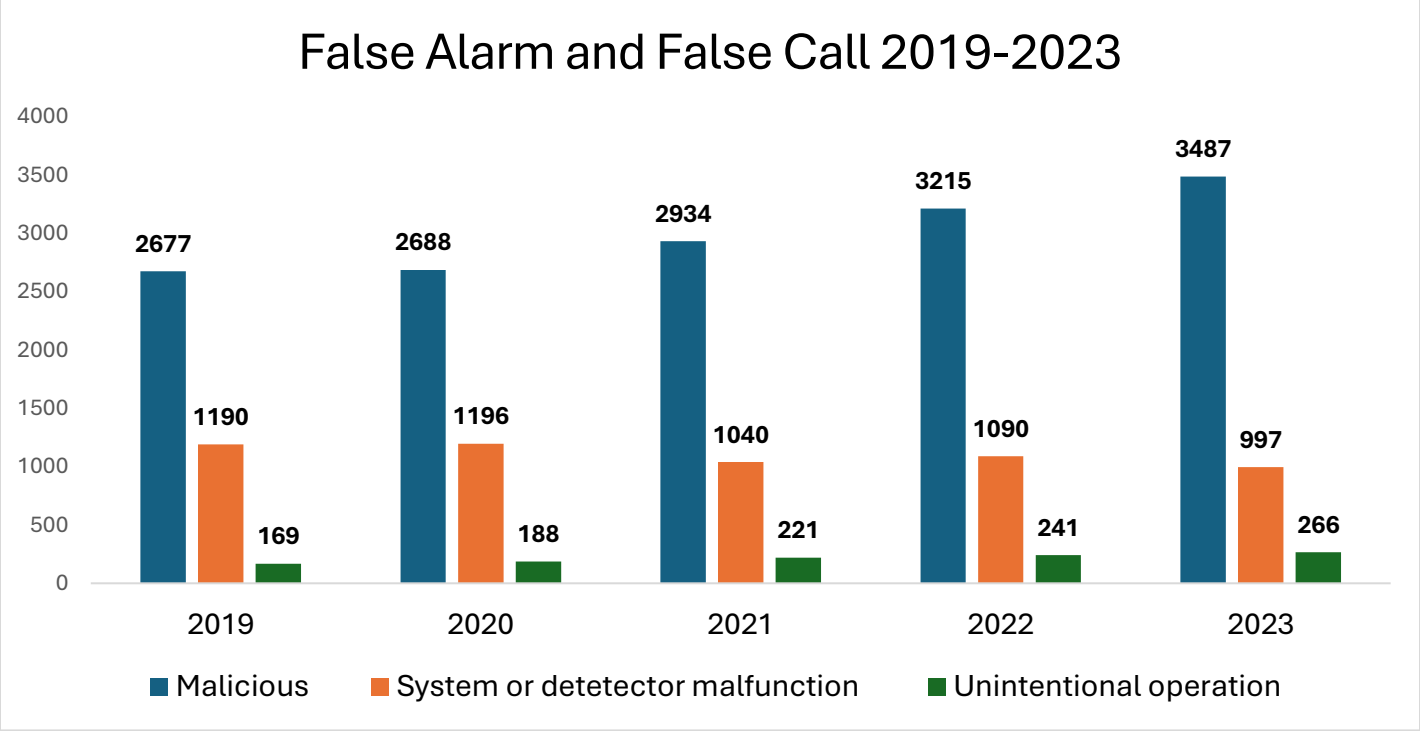


Non-Fire Incidents 2019-2023

This data table contains non-fire incidents the department responds to in addition to fire incidents. Most of these incidents involve an emergency response from a fire apparatus, signifying that the fire department is responding to a situation requiring lights and sirens, indicating a time-critical situation like a reported fire or rescue incident where immediate action is needed.

False Alarm and False Call

The Tulsa Fire Department responded to15,001 false alarm and false call incidents between 2019-2023. In 2023 alone, false alarms accounted for 9.5 dispatched incidents in a 24-hour shift period. High false alarm rates strain our fire department resources, diverting crews from potential emergency calls in their response districts.



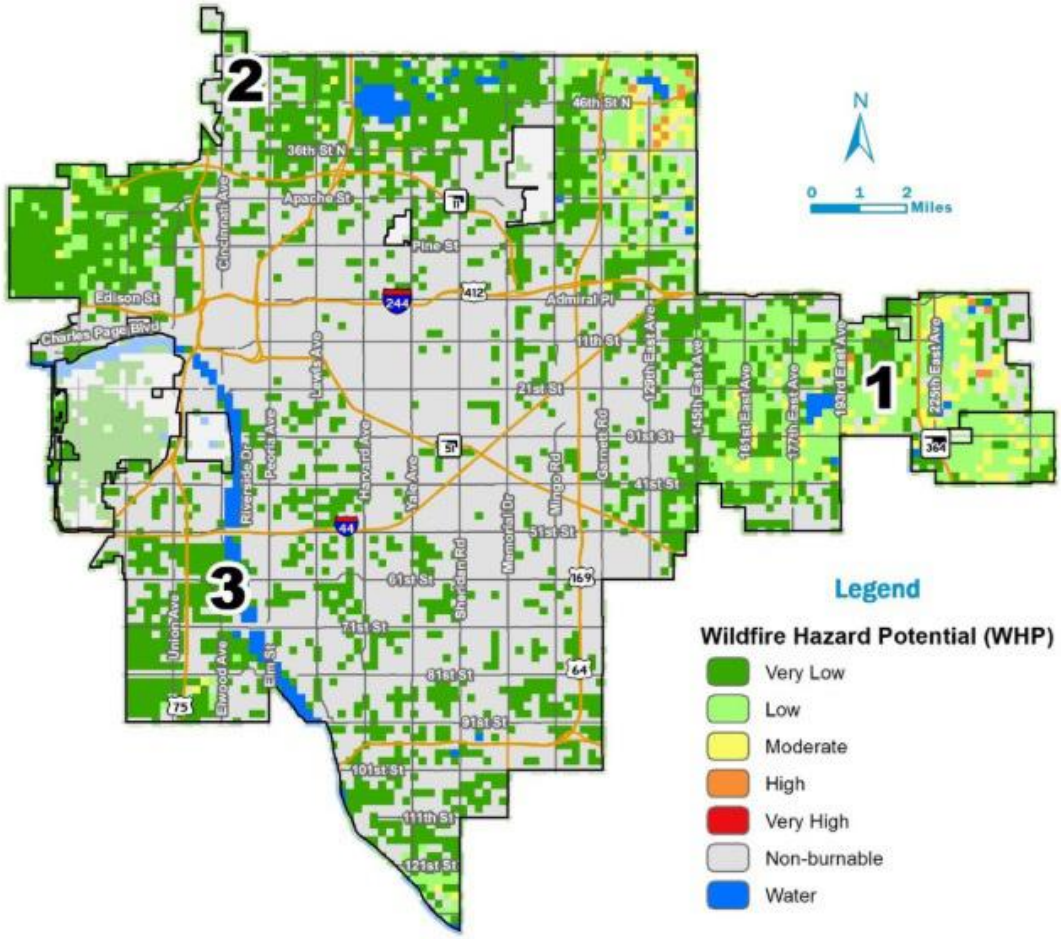
HAZARD PROFILE

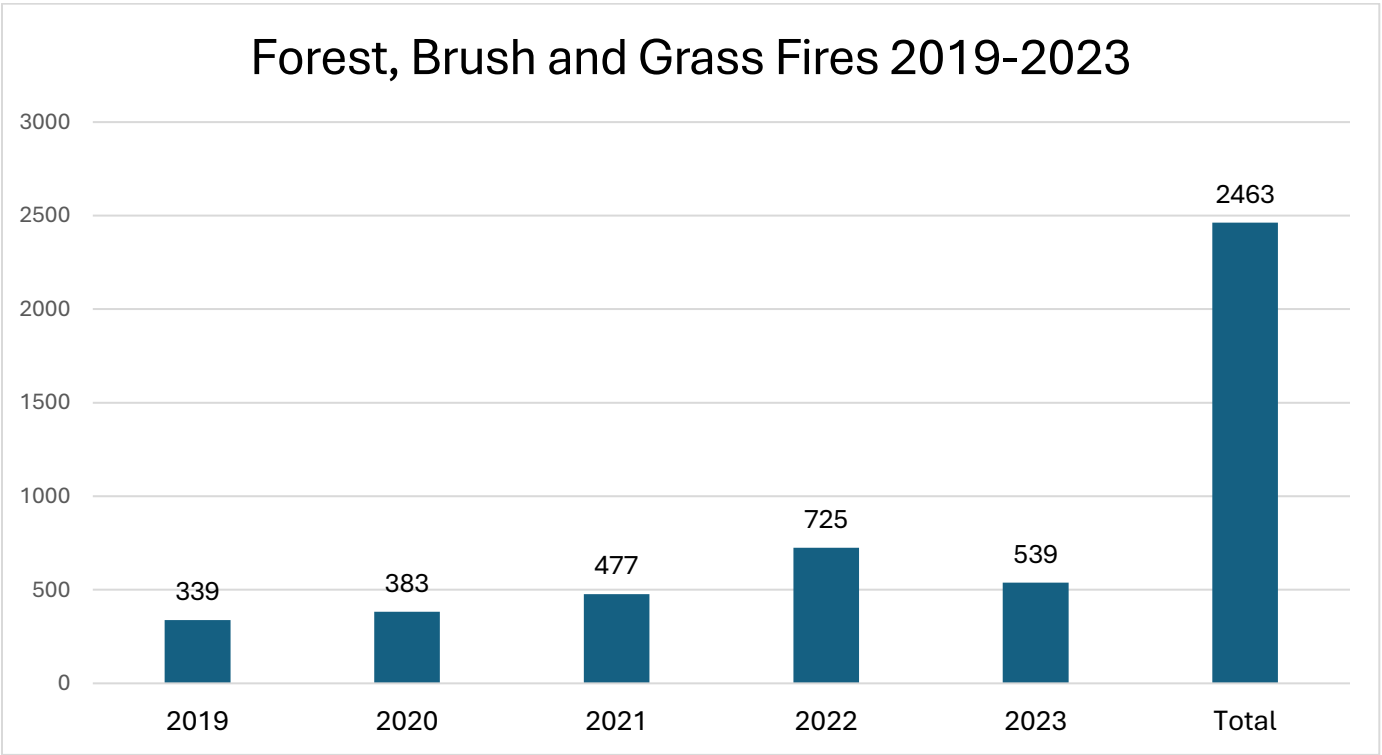
Natural Hazards Probability and Threat Level

This is a list of natural hazards that occur within the city of Tulsa based on probability and threat.

HAZARDS			THREAT LEVEL		
		Probability	High	Medium	Low
	Flooding	Likely			
	Severe Winter Storms	Likely			
	Tornado / High Winds / Derecho	Likely			
	Dam and Levee Incidents	Occasional			
	Extreme Heat	Highly Likely			
	Wildfire	Highly Likely			
	Hail	Highly Likely			
	Hazardous Materials	Likely			
	Drought	Highly Likely			
	Expansive Soils	Highly Likely			
	Lightning	Highly Likely			
	Earthquake	Unlikely			

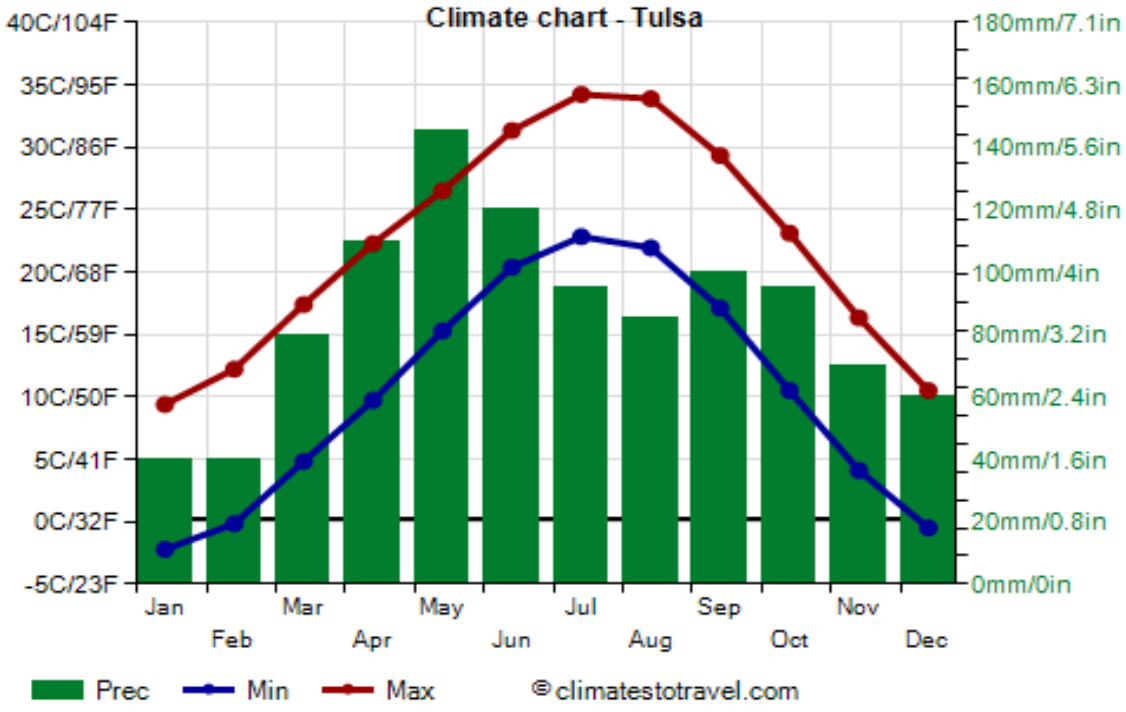
Wildfire Hazard Data



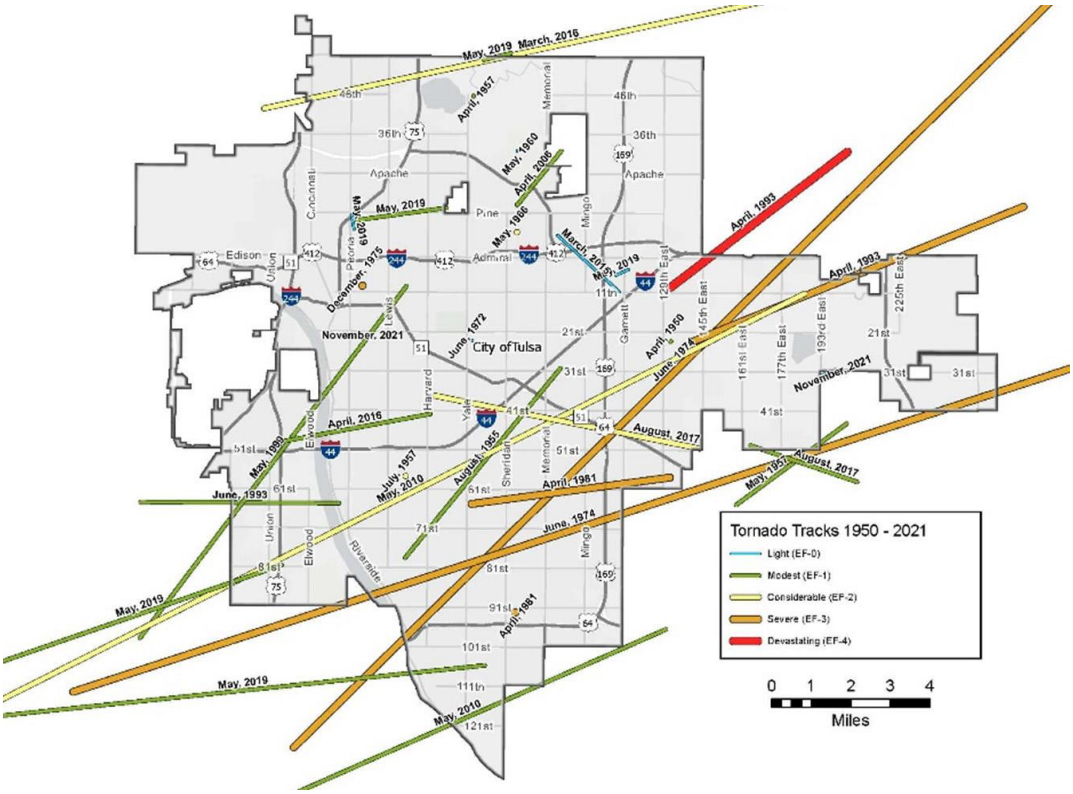


Weather


Wind Zones in the United States
Wind Zones
ZONE I
(130 mph)
ZONE II
(160 mph)
ZONE III
(200 mph)
ZONE IV
(250 mph)
Special Wind Region
Hurricane-Prone Region
FEMA wind zone map

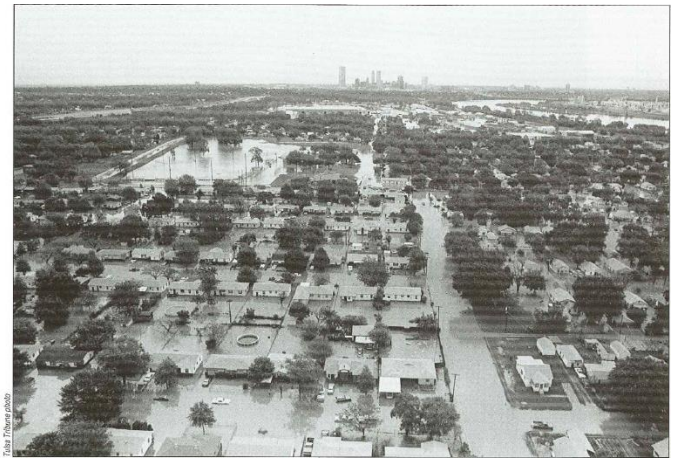

Climate chart - Tulsa
40C/104F
35C/95F
30C/86F
25C/77F
20C/68F
15C/59F
10C/50F
5C/41F
0C/32F
-5C/23F
180mm/7.1in
160mm/6.3in
140mm/5.6in
120mm/4.8in
100mm/4in
80mm/3.2in
60mm/2.4in
40mm/1.6in
20mm/0.8in
0mm/0in
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Prec
Min
Max
©climatestotravel.com

Tornado Tracts Tulsa 1950-2021



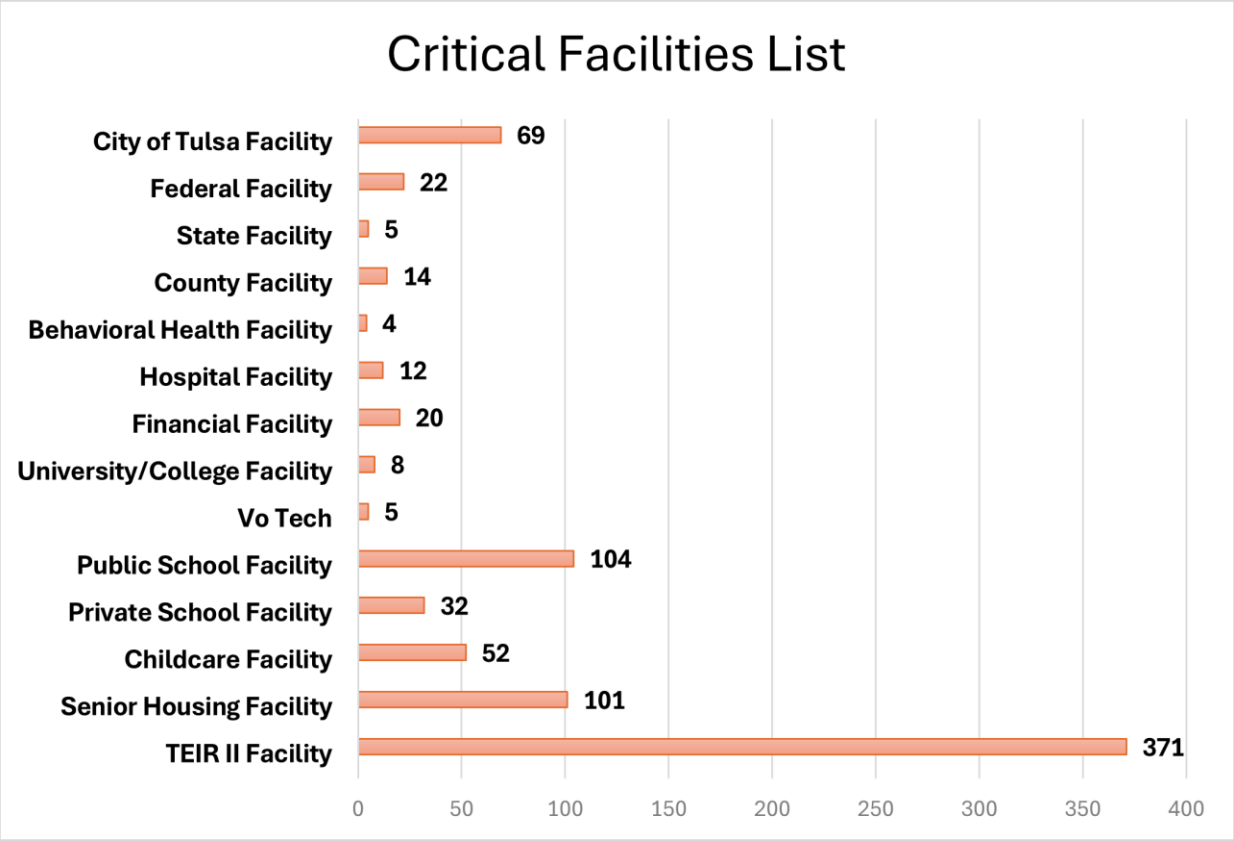
Flooding

The 1984 Memorial Day Flood killed 14, injured 288, damaged or destroyed nearly 7,000 buildings, and left $180 million in damages. Mingo Creek alone accounted for $125 million of the damage. In May of 2019 heavy rainfall led to the Arkansas River cresting at 23.51 feet on May the 29th and the Army Corps of Engineers released a maximum of 275,000 cubic feet per second (cfs) of water from the Keystone Dam which was the 2nd highest level the river's reached since 1894.



Critical Facilities

A critical facility inventory is a list of facilities and equipment that are essential to an organization's mission. Critical facilities can include hospitals, schools, police stations, and other facilities that are important for public safety and welfare. Facilities classified as Tier 2 must submit a "Tier II report" annually, which details the types and quantities of hazardous chemicals stored on-site.



Summary

A fire department risk assessment(CRA) is a comprehensive evaluation that identifies, defines, and prioritizes fire risks within a specific community. This allows the fire department to understand local fire safety needs and develop targeted strategies to reduce those risks by analyzing factors like demographics, building types, fire history, and potential hazards within the community, ultimately informing resource allocation and prevention programs to address the most significant risks. This risk assessment highlights the primary call types that are a high risk to our community as well as our fire department personnel. This assessment also identifies the specific call types overextending our resources, pulling them away from higher acuity emergency calls in their immediate run area, thus delaying initial pre-hospital care or aggressive intervention tactics by our firefighting personnel. Using our incident data from 2019-2023, we were able to identify areas of specific risk to target community risk reduction programs. Using Geographic Information System (GIS), we can identify areas of risk and prioritize our resources to address and reduce the impact these emergencies have on our department. We determined our identified risks by using the following elements to come to this conclusion. Data collection, risk identification, risk prioritization and strategy development. These were the key components to an effective community risk analysis. The benefits of developing a CRA allows our fire department to strategically allocate resources to address the most significant fire and non-fire risks in our community. Data-analysis decision making provides evidence-based information to guide prevention initiatives and policy development. Through community engagement, we develop a pathway to reach and educate the public about fire safety concerns and encourage community participation in our risk reduction efforts. Currently, the department is aligned with the highest areas of risk identified in this assessment. We are addressing fire injury and death with an aggressive smoke alarm installation program utilizing our community partners at the American Red Cross. The EMS division is currently staffing four mobile integrated health units aimed at reducing high volume 911 users, falls/lift assists, opioid overdose, and mental crisis response. Lastly, we identified a trend in the number of responses to false alarms in business, initiating the action of a CRR program aimed at reducing their occurrence.


TULSA FIRE DEPARTMENT
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