Community Risk Assessment/ Standards of Cover (CRA/SOC)

Spring Fire Department/Harris County Emergency Services District No. 7
656 East Louetta Rd.
Spring, TX
USA 77373

This Report Prepared
By
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Dated December 2, 2024

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Introduction

This Community Risk Assessment (CRA) for the Spring Fire Department comprehensively evaluates the risks posed to the Spring community by both natural and man-made hazards. Utilizing data from a variety of sources, including demographic information from the U.S. Census Bureau, fire and EMS incident reports, historical weather data, and special hazards and critical infrastructure assessments, this report provides a foundational understanding of the community's risk profile.

Key sections of this CRA include:

Organizational history and demographics: This section provides an overview of the Spring Fire Department's history, mission, and organizational structure. Additionally, it includes demographic data on the department's personnel, such as age, gender, and experience level.

Community profile: This section presents a comprehensive overview of the Spring community, including its population, geography, socioeconomic status, and infrastructure. It also highlights any unique characteristics or vulnerabilities that may impact the community's risk profile.

Demographic information: This section delves deeper into the demographic characteristics of the community, such as age distribution, ethnicity, and income levels. This information is essential for understanding the needs and vulnerabilities of different population segments.

Incident response data: This section analyzes historical fire and EMS incident data to identify trends, patterns, and common causes of emergencies. This data is used to assess the effectiveness of current response strategies and identify areas for improvement.

Weather-related risks: This section evaluates the potential impact of various weather-related hazards, such as hurricanes, tornadoes, floods, and wildfires, on the community. It identifies vulnerable areas and assesses the department's preparedness for responding to these events.

Unique and special hazards: This section focuses on identifying and assessing any unique or non-traditional hazards that may pose a risk to the community. These hazards could include industrial facilities, hazardous materials storage, or infrastructure vulnerabilities.

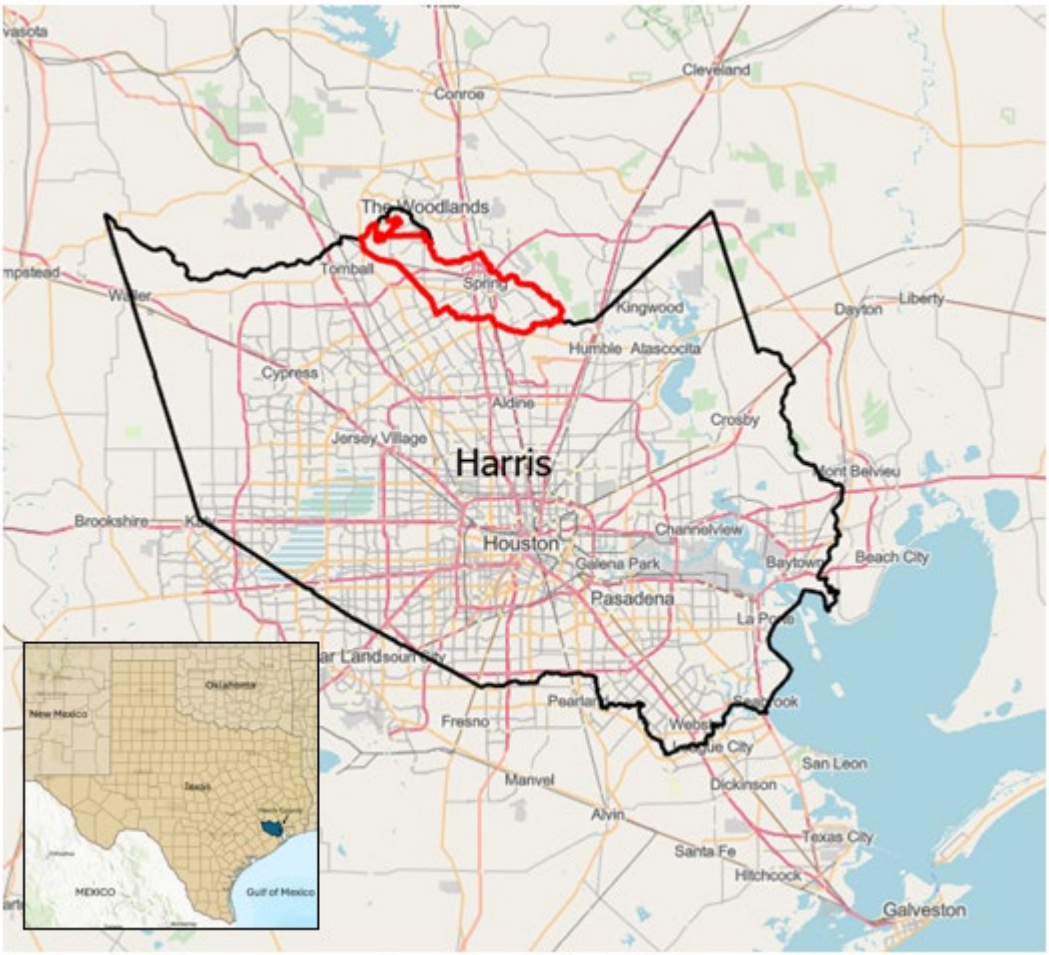
Critical infrastructure: This section examines the community's critical infrastructure, such as power plants, water treatment facilities, and transportation networks. It assesses the potential risks associated with these infrastructure components and identifies strategies for protecting them from disruptions

It is important to note that this CRA is a dynamic document subject to ongoing updates and revisions. As the assessment evolves, it will refine the identification of risks specifically relevant to the scope of fire and emergency service delivery. While this document does not exhaustively examine every potential risk within the community, its primary objective is to foster informed discussions on risk mitigation strategies and facilitate data-driven decision-making regarding the most effective allocation of resources to address community risks.

By providing a comprehensive data-driven foundation, this CRA serves as a valuable starting point for developing and implementing Community Risk Reduction plans.

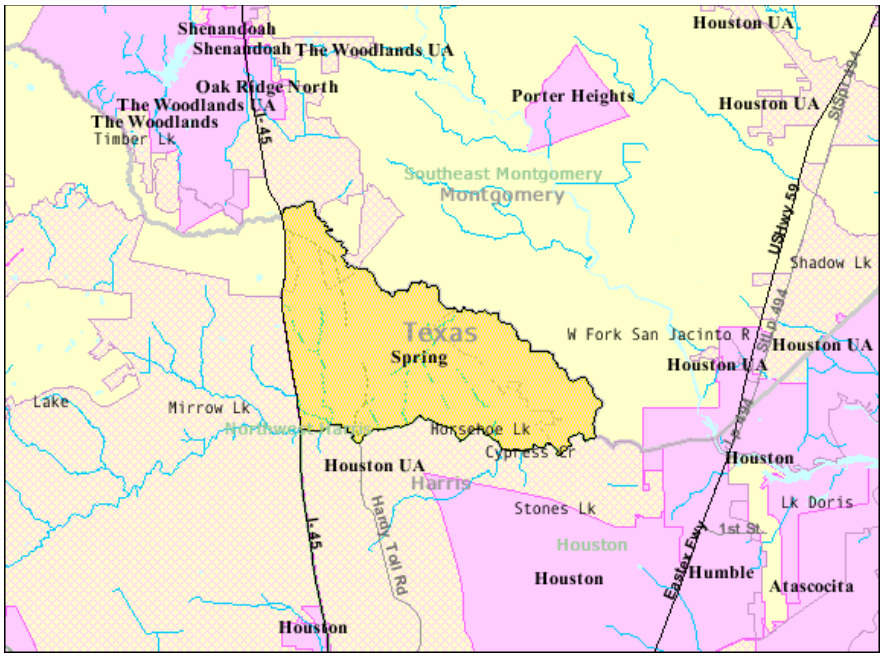
Community Governance

Spring, Texas is located nominally 25 miles north of Houston, Texas. It is part of the Houston-The Woodlands-Sugar Land metropolitan area and is located in northern Harris County. It is situated on the low relief coastal plain approximately 60 miles from the Gulf of Mexico.



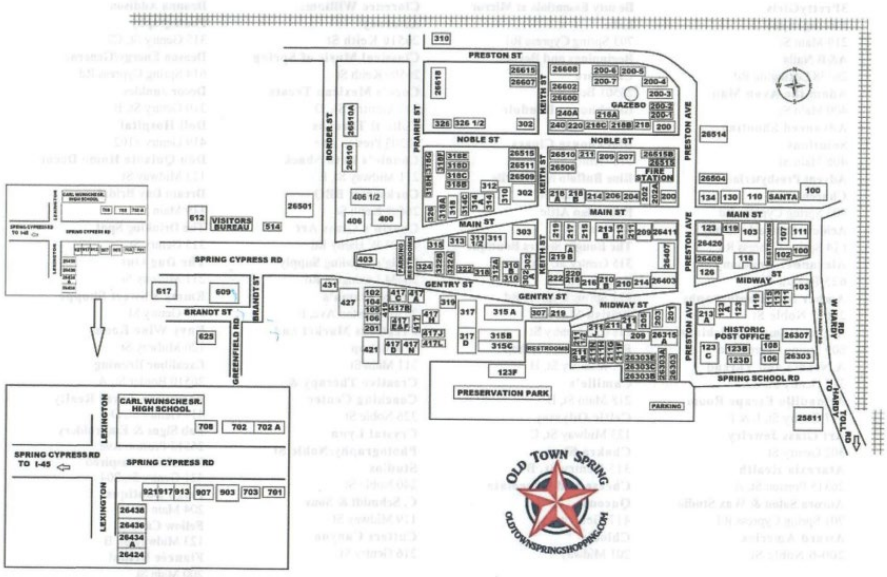
Map 1: Spring Fire Territory in red overlayed with Harris County boundary

Spring is a census-designated place (CDP) located within the extraterritorial jurisdiction of Houston, Texas. While the name "Spring" is commonly used to refer to a larger area in northern Harris County and a smaller area in southern Montgomery County, the original town occupies a relatively small area.



Map Of Spring CDP (Census Designated Place, as of 2000)

The original town of Spring, now known as Old Town Spring, is at the intersection of Spring-Cypress and Hardy roads and covers about 1 square kilometer.



Old Town Spring is an old town with over 150 shops, restaurants, and art galleries. Many of the original buildings, some over 100 years old, now house places to eat and drink or to buy antiques, collectibles, clothing, and gifts.

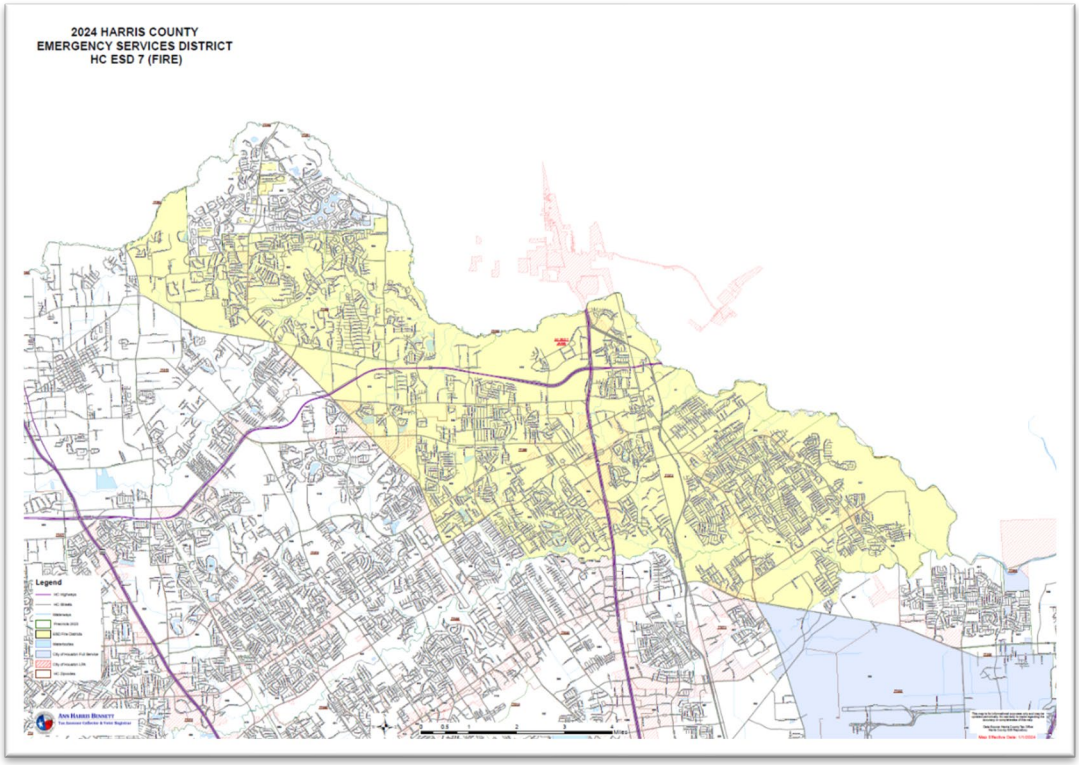
The Wunsche Brothers Saloon was the first two-story building erected in Old Town Spring and remains open for business today.

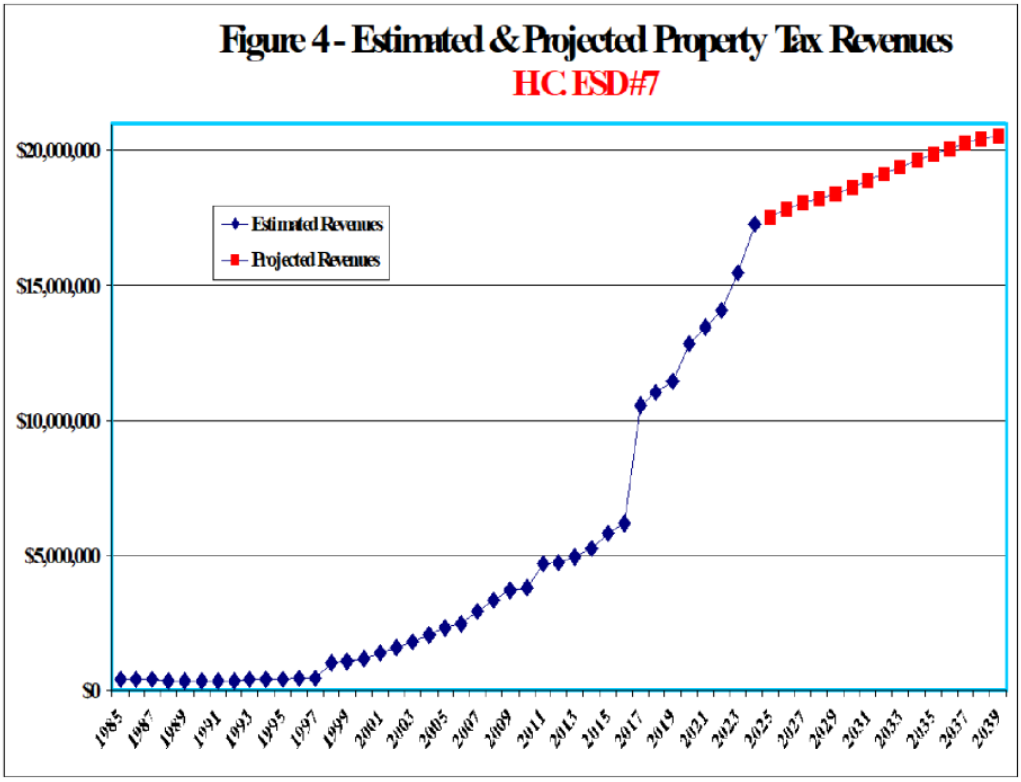
There is no local governance, however as a subdivision of the State of Texas, ESD 7 is governed by a Board of Directors discussed below.

Community Financial Basis

The majority of ESD-7's funding comes from ad valorem (property) tax and a 1 cent Sales and Use Tax from all business sales within our territory. There is an exception when businesses are located in a Municipal Utility District (MUD) with a prior agreement with the City of Houston. In those cases, The City of Houston collects the 1 cent sales tax and agrees not to annex property within that MUD, then the City of Houston returns 1/2 of the sales tax collected to the MUD because under current Texas law, a MUD cannot collect a Sales and Use Tax.

Tax Assessor Territory Map





Source: Update to Comprehensive Review- ESD-7, Municipal Information Services, March 2024

History of the Community

Early Settlement and Growth

The area now known as Spring, Texas, was originally inhabited by the Orcoquisac Native American tribe who depended on the area's abundant hunting and fishing. French and Spanish traders were the first merchants to establish Trading Posts here. Trade between the arriving settlers and the Native Americans flourished well into the early 1800s. Stephen F. Austin's colonists began arriving in the 1820s. After achieving independence from Mexico at the Battle of San Jacinto on March 2, 1836, more settlers poured in increasing trade and the growth of the area named for its natural springs.

In 1840 the Agrarian Census put the population of Spring at 153 people, according to local historian Margaret M. Smith's 2024 book *It Really Happened in Spring: True Tales of a Texas Town*.

Statehood and The Civil War

Texas was annexed by the United States on December 29, 1845, becoming the 28th state the same day. As Mexico continued to recognize Texas are either an independent republic or a U.S. state, the annexation led to the Mexican-American War which lasted until 1948.

Texas would secede from the union on March 2, 1861, the seventh southern state to join the confederacy. Only 18 of 122 counties were against the move. Governor Sam Houston reluctantly called a convention and predicted an "ignoble defeat." He was replaced when he refused to swear an oath to the confederacy. After the Civil War, on March 30, 1870, President Ulysses S. Grant signed the act readmitting Texas as a state.

Railroad Boom Town

Spring's growth continued with the arrival of the railroad in 1871. "Camp Spring" began appearing on International – Great Northern (I&GN) Railroad maps when the International Railroad and the Houston and Great Northern Railroad merged on September 30, 1873.

As Spring grew, "Camp" was dropped from the name and Spring became a base of operations for railroad workers, lumber yards and farmers. Jobs and opportunities abounded for new immigrants to the area.

At the crossroads of two intersecting railroad lines, the I&GN made Spring a major switching point -- a roundhouse was added and 14 track yards. In 1902, Charlie and Dell Wunsche built a hotel, brothel and saloon with lumber from their nearby family mill. There were several thriving businesses in Spring including an opera house, hospital and hotels.

1910...The depot sat in the heart of the town, it's pulsing traffic nourishing the boom around it. Courtesy of John Robinson

Business flourished until 1923 when the railroad relocated their base of operations to Houston, crippling the local economy and forcing many businesses to close. Adding insult to injury prohibition from 1920 – 1933 caused saloons to close. The Great Depression of the 1930's reduced Spring to a small settlement and remained dormant until the late 1960's. Merchants started locating around the Spring Cafe (Wunsche Bros.) to take advantage of Houston's oil boom through the 1970's and 1980's.

From Boom to Bust

By 1910, 1200 people called Spring home and it was still very much the wild west. On April 14, 1915, Spring's 6'6" tall Constable W. Clint Harless was shot by an escaped burglar and died a day later in the hospital. Smith says a $100,000 reward led to the shooter's arrest, conviction and hanging which did not occur in Spring.

Spring had a one-room schoolhouse called the Spring School Annex in 1918. At one point a bucket brigade was formed to douse the flames when a fire broke out in the annex.

The 1920s were hard times for Spring, thriving saloons died out when the Prohibition hammer came down on January 17, 1920, and the Missouri-Pacific Railroad decision to move their roundhouse to Houston "almost destroyed Spring." Many businesses were forced to close, and the PTA stepped up to raise enough money to pay teachers.

Many Spring residents switched to bootlegging which continued well past Prohibition and the subsequent Great Depression reduced Spring to a small, dormant settlement.

On January 6, 1933, Spring State Bank teller Homer Brown grabbed a gun when he realized a couple of men planned to rob the bank. Brown emptied his pistol and then grabbed a shotgun. When the would-be robbers fled, he followed in hot pursuit saving the bank's money but losing the culprits. For his tenacity, the Harris County Sheriff gave Brown a Special Deputy's Commission and $1 a year.

WWII

World War II meant money and supplies were scarce in the early 1940s. In 1945, only two Spring students graduated. By 1947, Spring's population had fallen to 700 people as much of the U.S. was experiencing a post-war building boom.

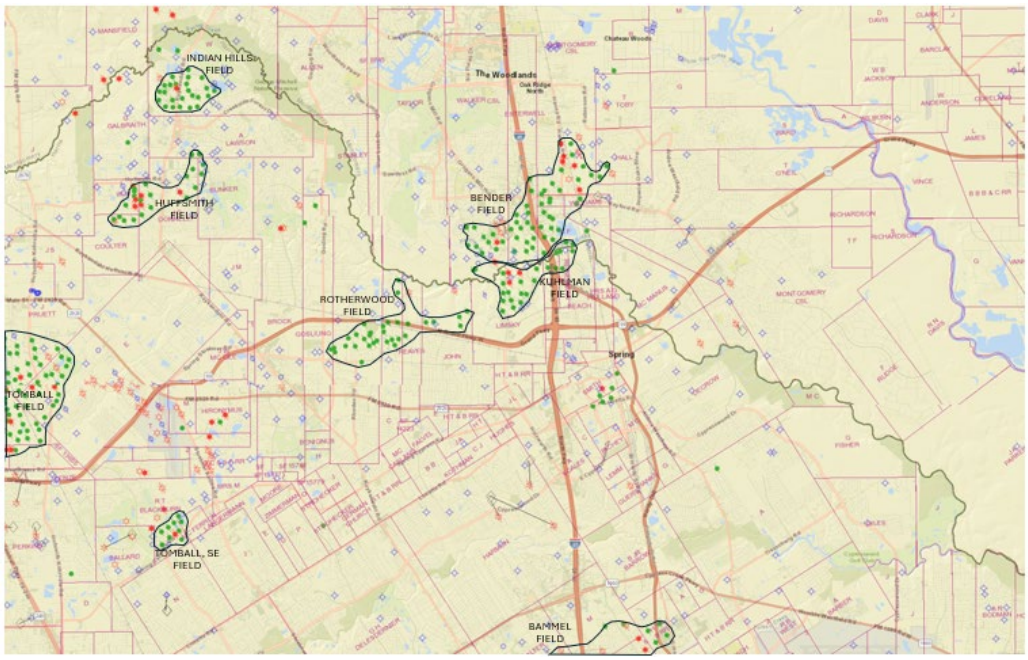
In the 1950s the Southwell school burned and was replaced. Spring Elementary school was built next to Wunsche High in 1959.

The 1960s saw Spring High Schools integrate. In 1964, Spring's African-American high school students ceased being bussed to Aldine's Carver High School. By 1966, integration was completed and in 1969, a new Spring High School opened on the Interstate access road at Cypresswood.

The Texas Oil Boom

By the late 1960s merchants saw Spring as a way to take advantage of Houston's oil boom. That continued on through the 1970s and 1980s with the development of the Old Town Spring shopping area and construction of many neighborhoods such as Bridgestone, Lexington Woods, Northampton, Timberlane and others.

Exploration for oil and gas led to the development of three oil fields within Spring. Produced from the Wilcox Formation at depths of 6,000 –7,000 feet, the fields have since been depleted, plugged and abandoned.



Texas Railroad Commission, Public GIS Viewer

Spring Takes to the Air

From 1969 to 1992, Goodyear's airship *America* was based in Spring. Its large hangar was just off Interstate 45. Motorists frequently pulled over to watch the blimp takeoff and land. In 1992 The *America* moved to Akron, Ohio and the massive hangar was eventually torn down.

Houston Chronicle Article, Dec. 23, 2021

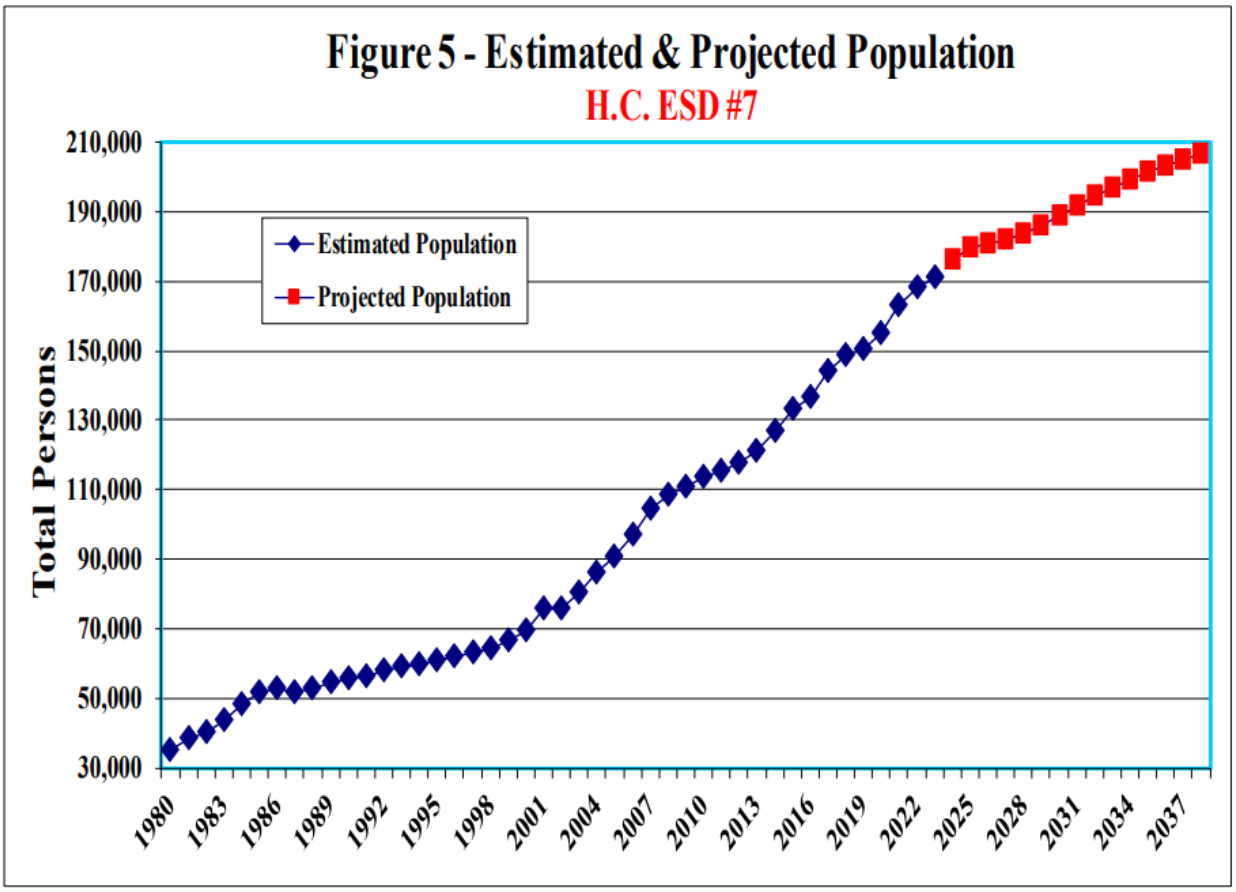
20th Century and Beyond

During the latter half of the 20th century, Spring continued evolving. Significant population growth occurred as Houston expanded northward. Spring's proximity to downtown, Intercontinental Airport and affordable housing made Spring an attractive community for many families.

When George Mitchell founded The Woodlands in 1974, additional growth along Interstate 45 North began and continues to this day.

Spring has seen its share of severe weather and flooding during Hurricane Alicia in 1983, Tropical Storm Frances in 1998, Tropical Storm Allison in 2001, Hurricane Ike in 2008, the Tax Day and Memorial Day Floods in 2016, Hurricane Harvey in 2017 and Hurricane Beryl in 2024. Spring Firefighters assisted residents in all these natural disasters.

As development continues across our community, the population served by Spring Firefighters is projected to reach nearly 200,000 people by 2030.



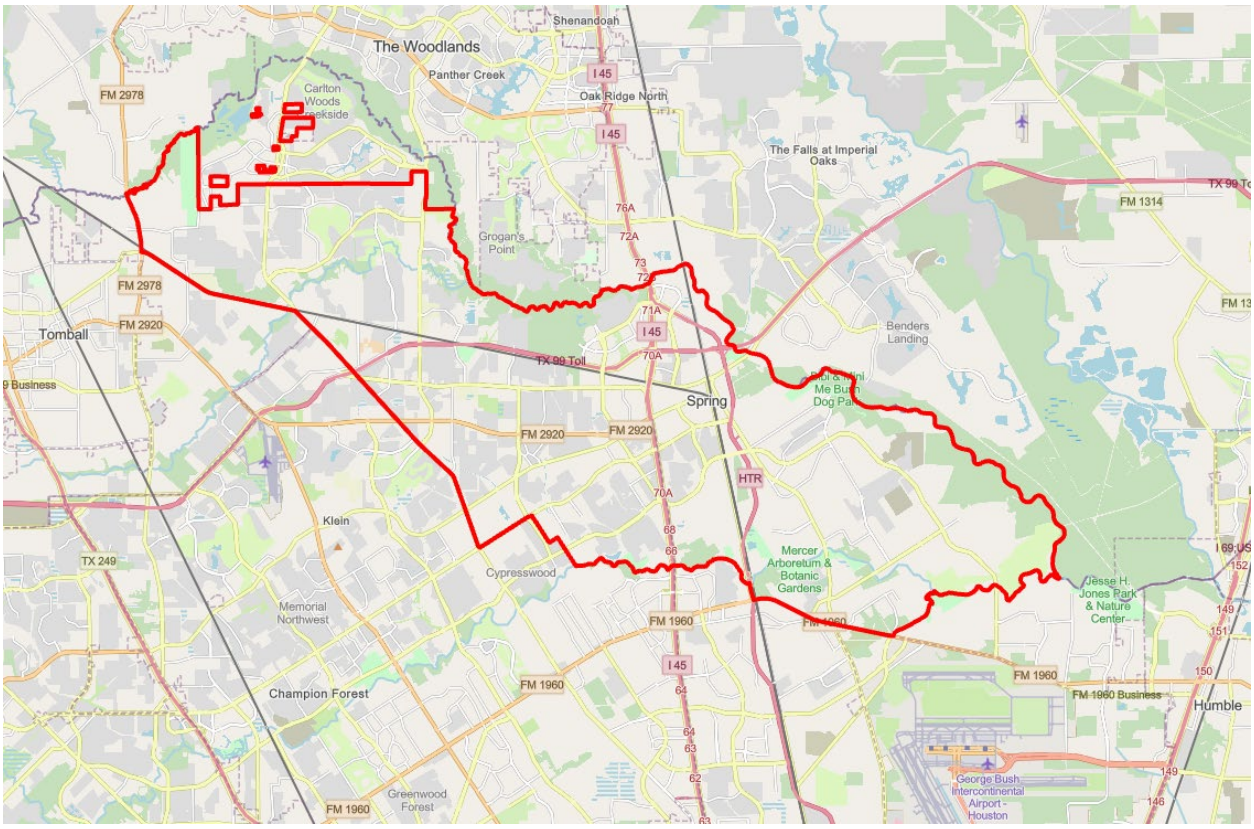
Source: Update to Comprehensive Review- ESD-7, Municipal Information Services, March 2024

Spring Today

Today, Spring is a vibrant community with a mix of residential neighborhoods, commercial businesses, green spaces, recreational facilities, and the City Place urban center, home to the headquarters of ExxonMobil, HP, HP Enterprise, Southwestern Energy, Twin Eagle Energy and others. Spring's rich history and modern amenities provide an enduring appeal

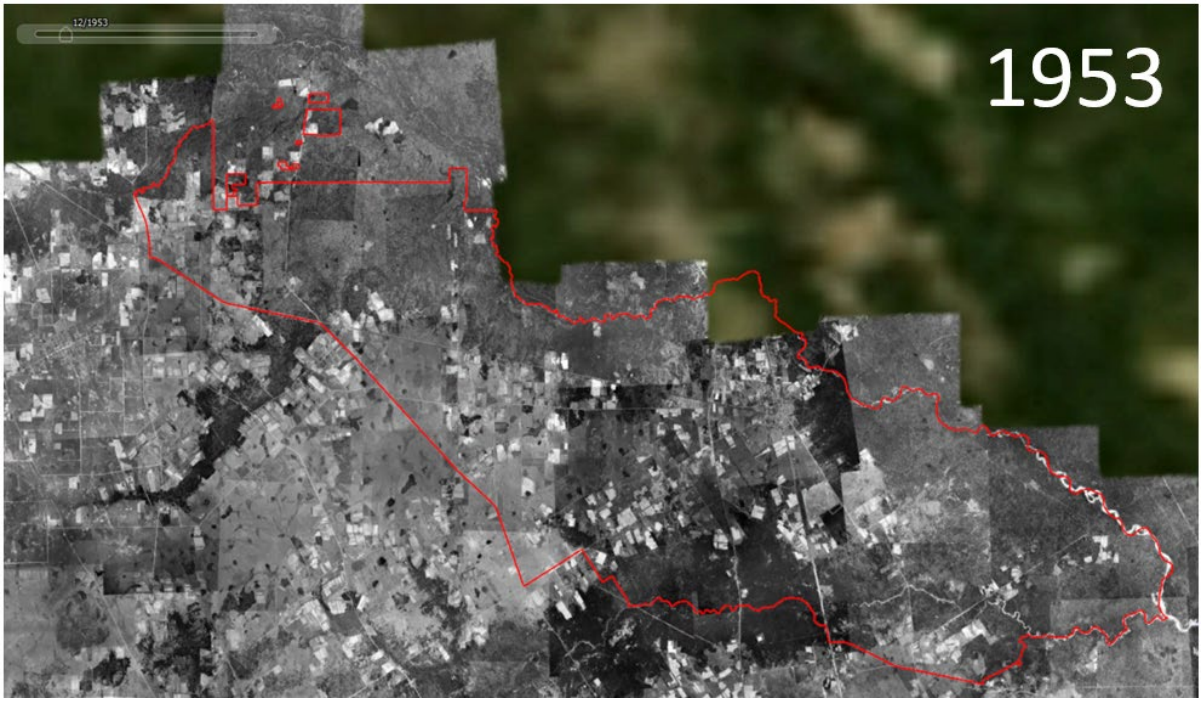
Community Boundaries

Much of the northern and southern boundaries of ESD-7 follow the centerlines of Spring Creek and Cypress Creek / Turkey Creek, respectively. Portions of the southern and southwestern boundary follow the centerlines of FM-1960, Kuykendahl Road, Huffsmith-Kuykendahl Road, and FM-2978. Except for an addition to west and a loss to the north due to Annexation, these boundaries were established with the original formation of Rural Fire Protection District 1 (see History of the Agency below).



History of the Agency

Spring Fire Department has a rich heritage that began in 1953 with 1 fire truck and 25 volunteers and has evolved into a combination department with 30 volunteer, 10 part-time, and 117 full-time firefighters along with 17 support personnel responding from 9 fire stations with 49 apparatus and 174 personnel.



Spring Volunteer Fire Association

In 1953 major fires at the Immanuel Church in Old Town Spring and the Bayer lumberyard prompted a small group of Spring residents to create a volunteer fire department.

From May 29, 1953 through April 1, 1978 all money to fund the fire department was raised by bake sales, steer auctions, other community events, personal donations by persons in the community, and even by donations from members of the department including their own money to put gas in the fire trucks.

Creation of RFPD in 1978

Rural Fire Prevention District #1 was formed in 1978 and was the first of its kind in Harris County which allowed for the collection of Ad Valorem tax (property tax) at a rate of 3 cents per $100 valuation.

ORDER OF HARRIS COUNTY UPON CANVASS OF THE RETURNS OF THE BALLOTS CAST IN THE ELECTION TO CONFIRM THE CREATION OF THE PROPOSED HARRIS COUNTY RURAL FIRE PREVENTION DISTRICT NO. ONE

WHEREAS, notice of this meeting of the Commissioners Court of Harris County, Texas, has been given in the manner and for the time required by law; and

WHEREAS, at an election duly and regularly held on the 1st day of April, A.D. 1978, within that portion of Harris County, State of Texas, described as:

Beginning at the intersection of the centerline of Louetta Road and centerline of Kuykendahl Road;

THENCE in a Northwesterly direction along the centerline of Kuykendahl Road extended to the centerline of Spring Creek;

THENCE in a Southeasterly direction along the centerline meanders of Spring Creek to its intersection with Cypress Creek;

THENCE in a Westerly direction along the centerline meanders of Cypress Creek to its intersection with Turkey Creek;

THENCE in a Southwesterly direction along the centerline meanders of Turkey Creek to its intersection with the centerline of FM 1960 (Humble-Westfield Road);

THENCE in a Westerly direction along the centerline of FM 1960 (Humble-Westfield Road) to its intersection with the centerline of Hardy Road;

THENCE in a Northerly direction along the centerline of Hardy Road to its intersection with the centerline meanders of Cypress Creek;

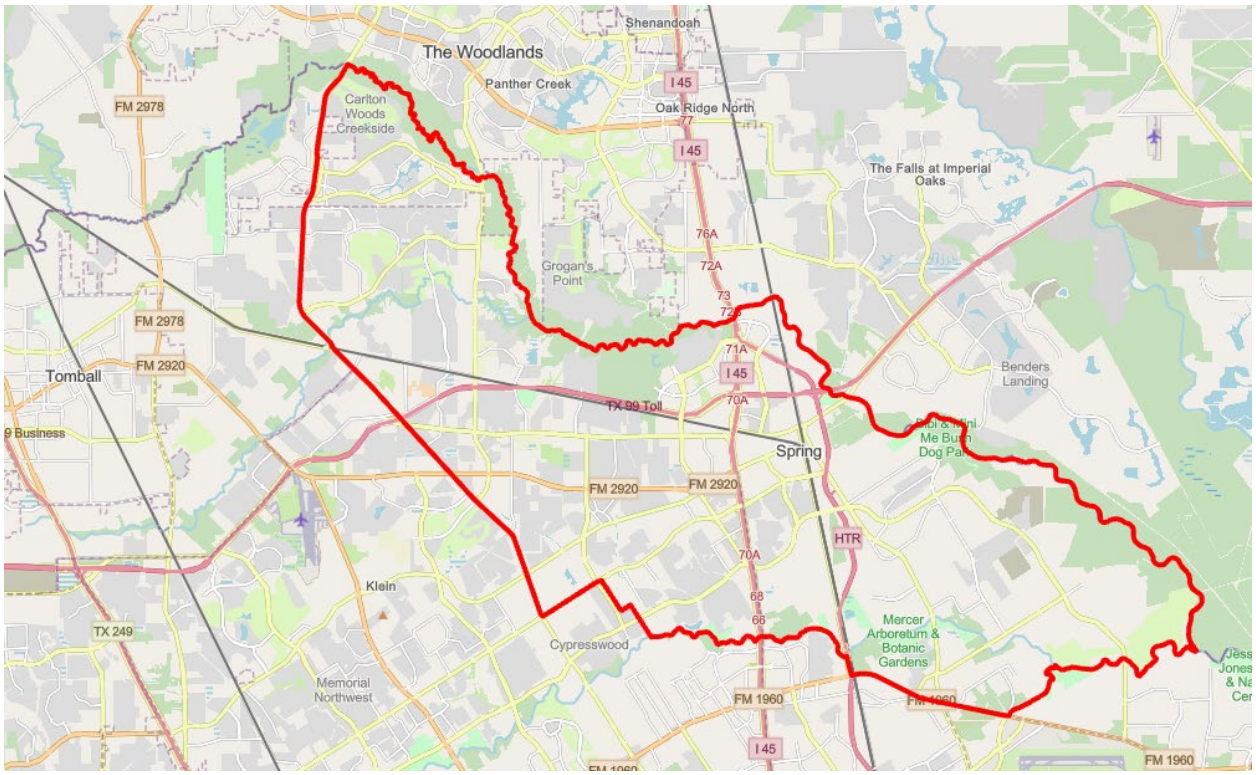
THENCE in a Westerly direction along the centerline meanders of Cypress Creek to its intersection with the most Southerly Southeast corner of the Klein Public Utility District located in the Daniel Harmon Survey (A-315);

THENCE in a Northwesterly direction along the East boundary line of Klein Public Utility District located in the Daniel Harmon Survey (A-315) to the Northeast corner of that same tract;

THENCE along an extension of the East boundary line of the Klein Public Utility District Located in the Daniel Harmon Survey (A-315) in a Northwesterly direction to an intersection with the centerline of Louetta Road;

THENCE in a Southwesterly direction along the centerline of Louetta Road to its intersection with Kuykendahl Road and the POINT OF BEGINNING;

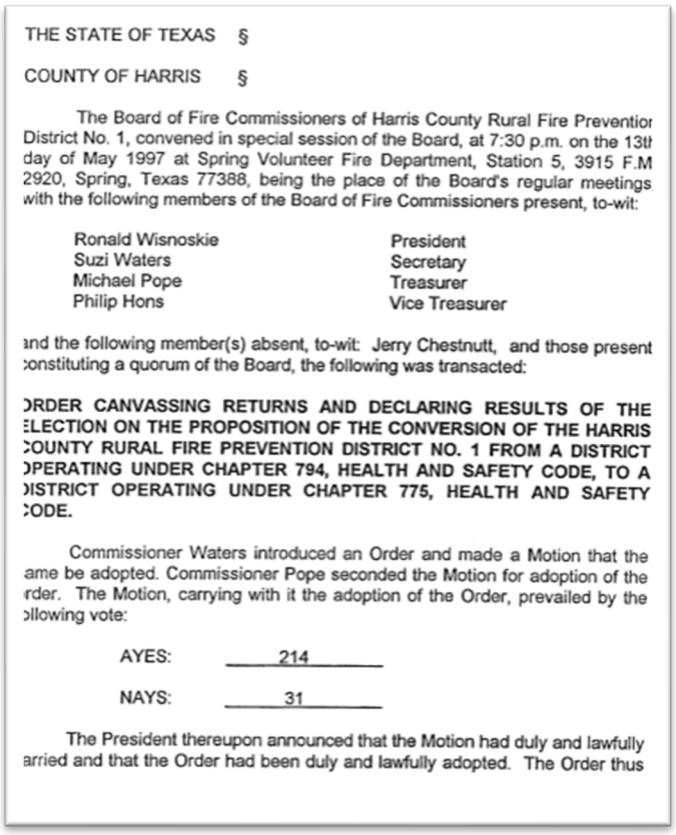
SAVE and EXCEPT: A ten foot strip on both sides of Interstate Highway 45 as described in City of Houston Ordinance #63-1219.



Harris County Rural Fire Protection District #1

Conversion of RFPD to ESD

Harris County Emergency Services District No. 7 was created on May 10, 1997 by converting RFPD #1 into HC ESD-7. Emergency Services Districts (ESDs) are authorized by the Texas Constitution, Article 3, Section 48-e, and Chapter 775 of the Texas Health & Safety Code. ESDs are political subdivisions of the State of Texas. The State Legislature has given ESDs the legal authority to levy ad-valorem (property) taxes and allows the collection of Sales and Use Tax as well.



THE STATE OF TEXAS §

COUNTY OF HARRIS §

The Board of Fire Commissioners of Harris County Rural Fire Prevention District No. 1, convened in special session of the Board, at 7:30 p.m. on the 13th day of May 1997 at Spring Volunteer Fire Department, Station 5, 3915 F.M 2920, Spring, Texas 77388, being the place of the Board's regular meetings with the following members of the Board of Fire Commissioners present, to-wit:

Ronald Wisnoskie	President
Suzi Waters	Secretary
Michael Pope	Treasurer
Philip Hons	Vice Treasurer

and the following member(s) absent, to-wit: Jerry Chestnutt, and those present constituting a quorum of the Board, the following was transacted:

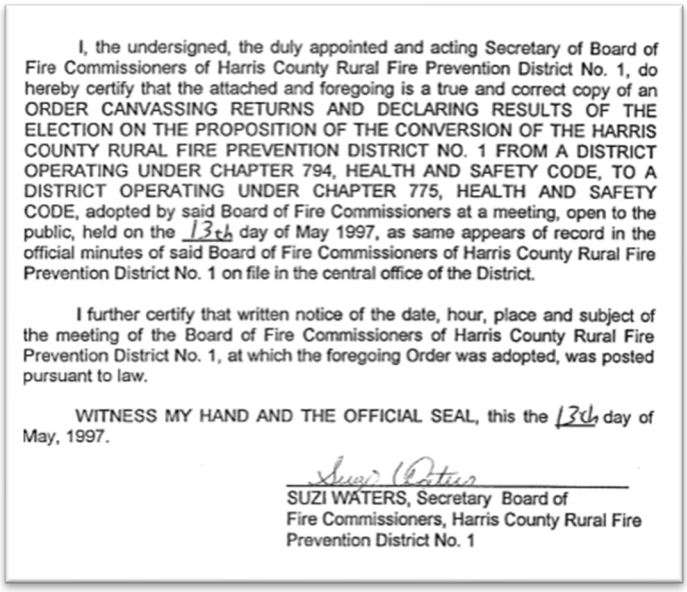
ORDER CANVASSING RETURNS AND DECLARING RESULTS OF THE ELECTION ON THE PROPOSITION OF THE CONVERSION OF THE HARRIS COUNTY RURAL FIRE PREVENTION DISTRICT NO. 1 FROM A DISTRICT OPERATING UNDER CHAPTER 794, HEALTH AND SAFETY CODE, TO A DISTRICT OPERATING UNDER CHAPTER 775, HEALTH AND SAFETY CODE.

Commissioner Waters introduced an Order and made a Motion that the same be adopted. Commissioner Pope seconded the Motion for adoption of the Order. The Motion, carrying with it the adoption of the Order, prevailed by the following vote:

AYES: 214

NAYS: 31

The President thereupon announced that the Motion had duly and lawfully carried and that the Order had been duly and lawfully adopted. The Order thus



I, the undersigned, the duly appointed and acting Secretary of Board of Fire Commissioners of Harris County Rural Fire Prevention District No. 1, do hereby certify that the attached and foregoing is a true and correct copy of an ORDER CANVASSING RETURNS AND DECLARING RESULTS OF THE ELECTION ON THE PROPOSITION OF THE CONVERSION OF THE HARRIS COUNTY RURAL FIRE PREVENTION DISTRICT NO. 1 FROM A DISTRICT OPERATING UNDER CHAPTER 794, HEALTH AND SAFETY CODE, TO A DISTRICT OPERATING UNDER CHAPTER 775, HEALTH AND SAFETY CODE, adopted by said Board of Fire Commissioners at a meeting, open to the public, held on the 13th day of May 1997, as same appears of record in the official minutes of said Board of Fire Commissioners of Harris County Rural Fire Prevention District No. 1 on file in the central office of the District.

I further certify that written notice of the date, hour, place and subject of the meeting of the Board of Fire Commissioners of Harris County Rural Fire Prevention District No. 1, at which the foregoing Order was adopted, was posted pursuant to law.

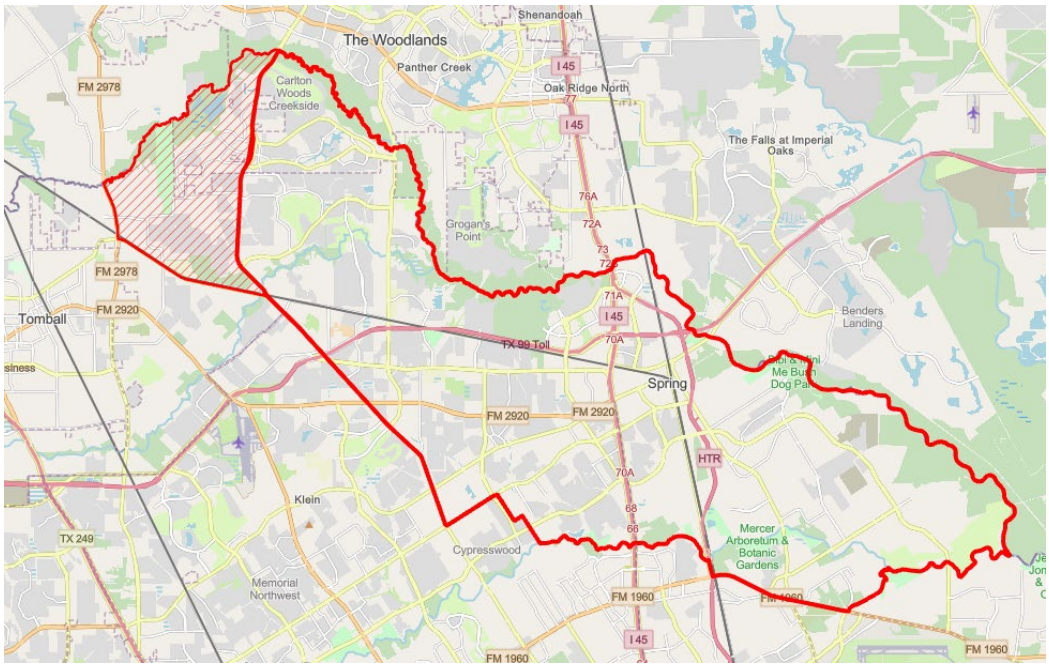
WITNESS MY HAND AND THE OFFICIAL SEAL, this the 13th day of May, 1997.

Suzi Waters

SUZI WATERS, Secretary Board of Fire Commissioners, Harris County Rural Fire Prevention District No. 1

Westward Extension

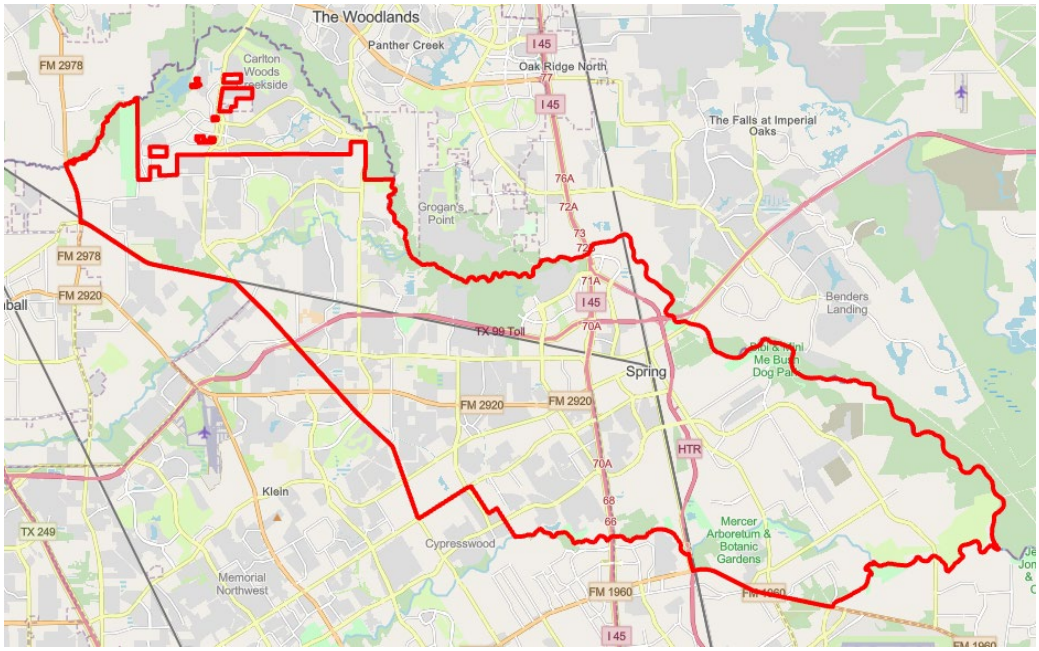
After the formation of ESD-15 in 2004 failed to capture the area between Kuykendahl and FM 2978, ESD-7 distributed a petition, conducted a vote, and successfully incorporated that area into ESD-7.



Harris County ESD #7 – Westward Expansion

The Woodlands Annexation

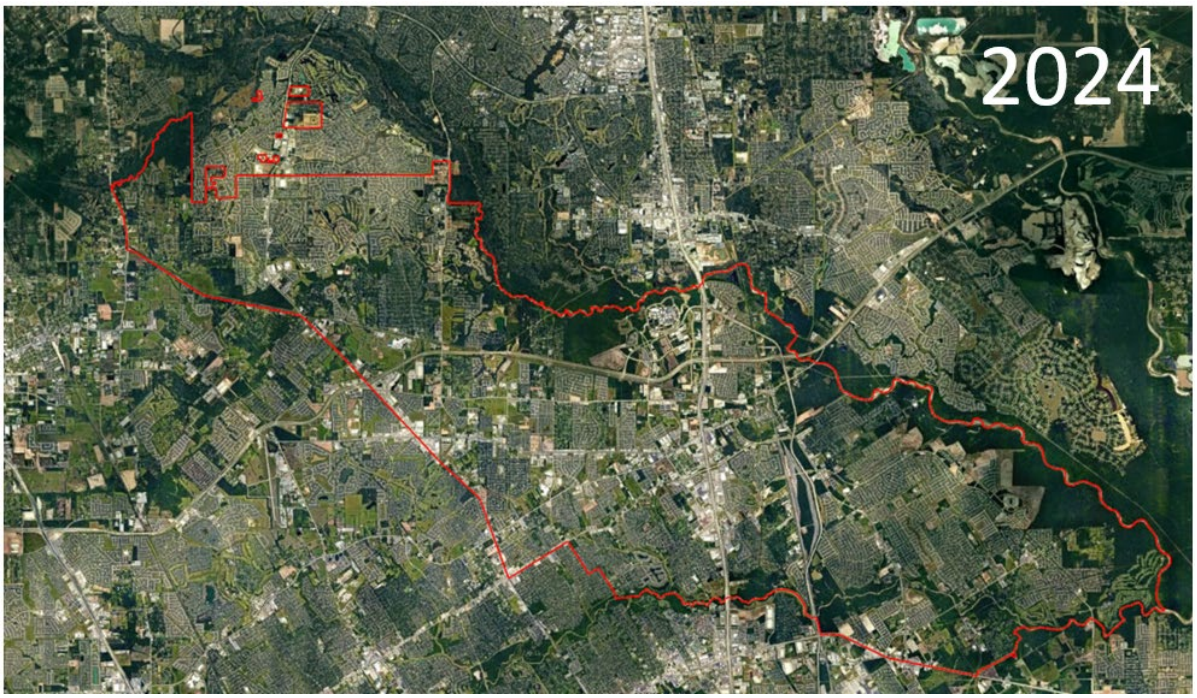
In 2008, The Woodlands Township successfully annexed a largely undeveloped portion of ESD-7 effectively reducing the ESD-7 service area by about 9 square miles. A few outlying properties were excluded from that annexation and remain part of ESD-7, though not physically contiguous.



Harris County ESD #7 After Woodlands Annexation – Present Day Extent

Harris County Emergency Services District No. 7 is a fire only ESD district, which means it is only charged with providing fire suppression, prevention, and rescue services to the community. ESD 7 also provides first responder services for Harris County Emergency Services District 11 Mobile Healthcare which is charged with providing EMS services within ESD 11 which completely encompasses ESD 7.

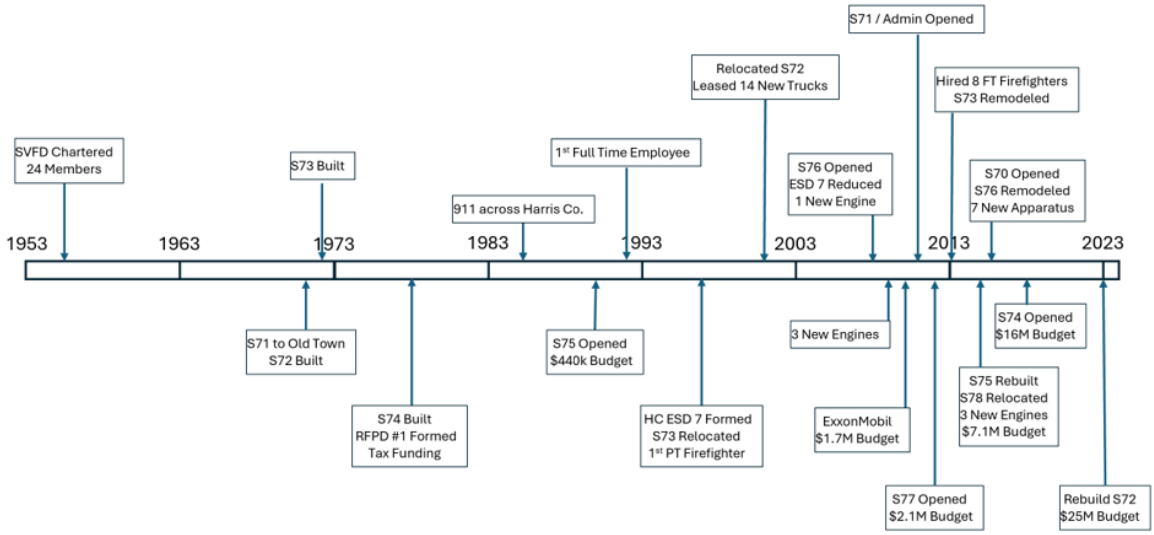
Harris County Emergency Services District No. 7 provides these services directly and is governed by an elected board of five commissioners. The commissioners are dedicated to the fiscal stewardship of taxpayer dollars in supporting the brave men and women who dedicate their time in service to the Spring, TX community.



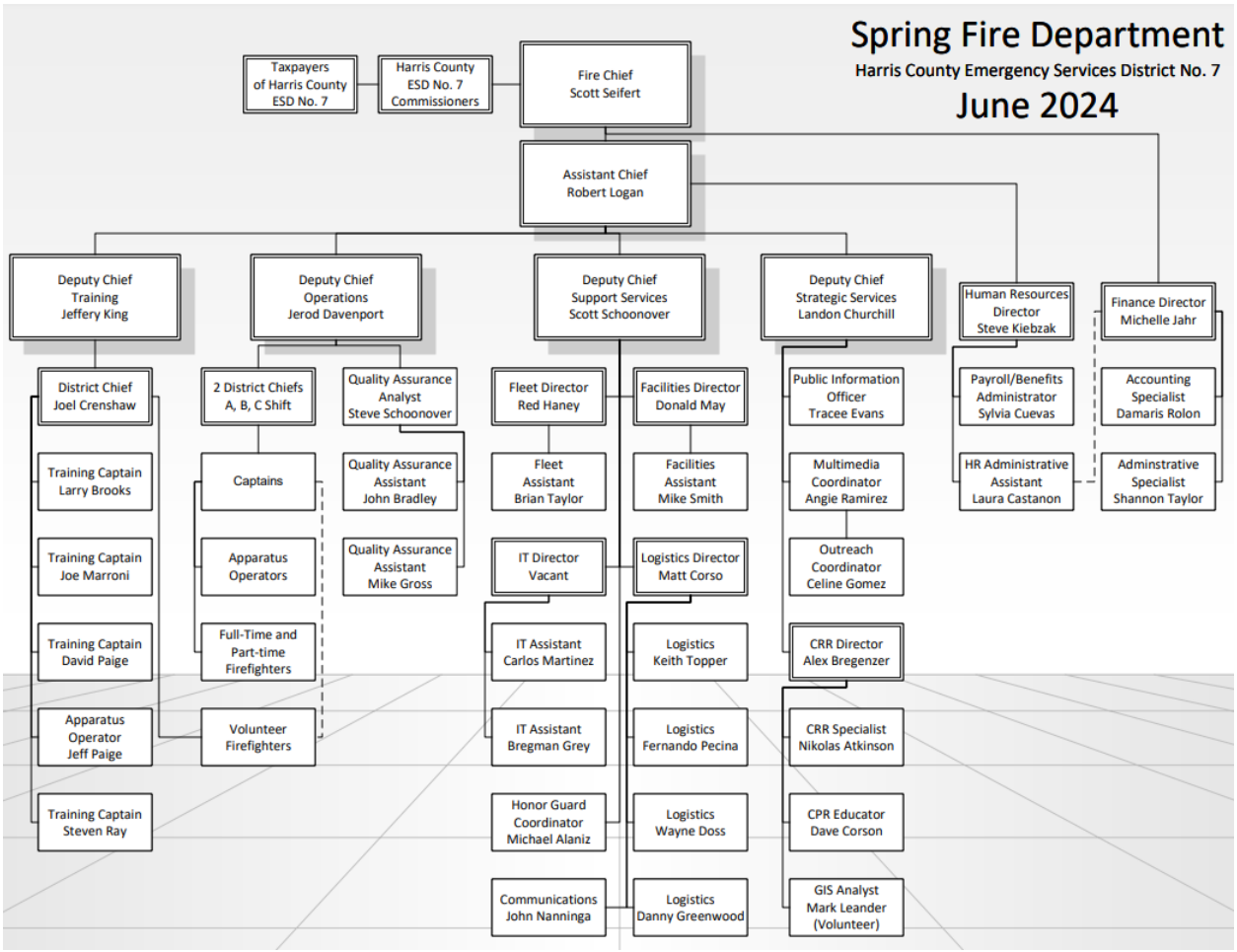
Spring Fire is committed to safeguarding the lives and property of our community members. While a significant portion of our operations involve responding to emergencies and providing immediate assistance, we are also dedicated to a proactive approach to risk reduction. Through Community Risk Reduction initiatives, we strive to identify and mitigate potential hazards, thereby enhancing the safety and well-being of our residents, firefighters, businesses, and visitors.

Figure 2 Push-in Ceremony for Engine 71

Major Historical Milestones of the Department



Current Organization, Divisions, Programs, and Services

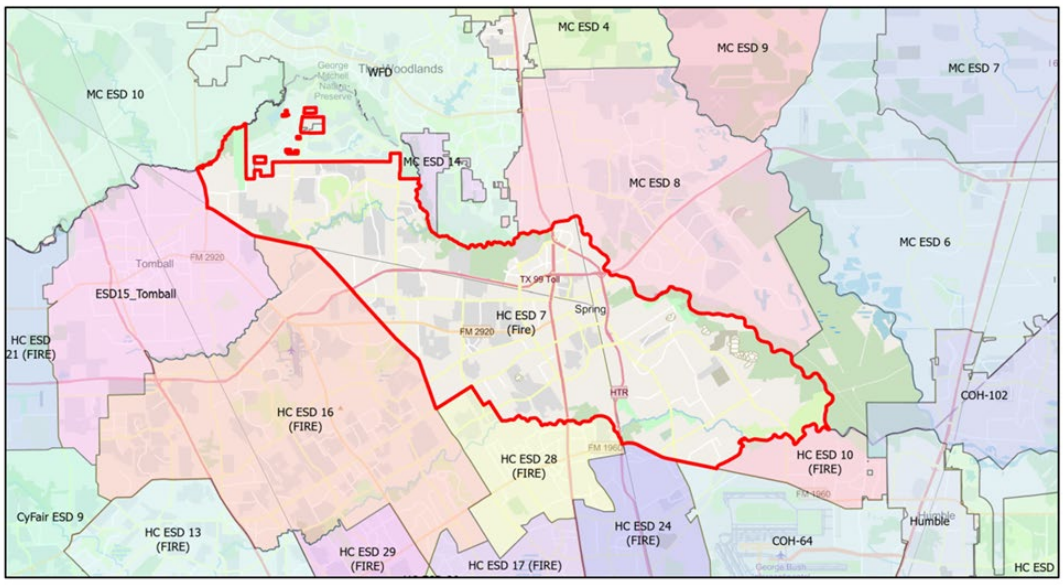


Service Area Boundaries

ESD-7, as a subdivision of the state operating under Chapter 775 of the Texas Health and Safety Code has service area boundaries that define our “community”. This boundary was identified and documented (including its legal basis) above in “History of the Agency”.

Mutual Aid

Spring Fire has no contractual agreements giving us primary response responsibilities outside of our primary response area (ESD-7). We do however, frequently offer and receive mutual aid to and from our surrounding ESD’s (see map below)



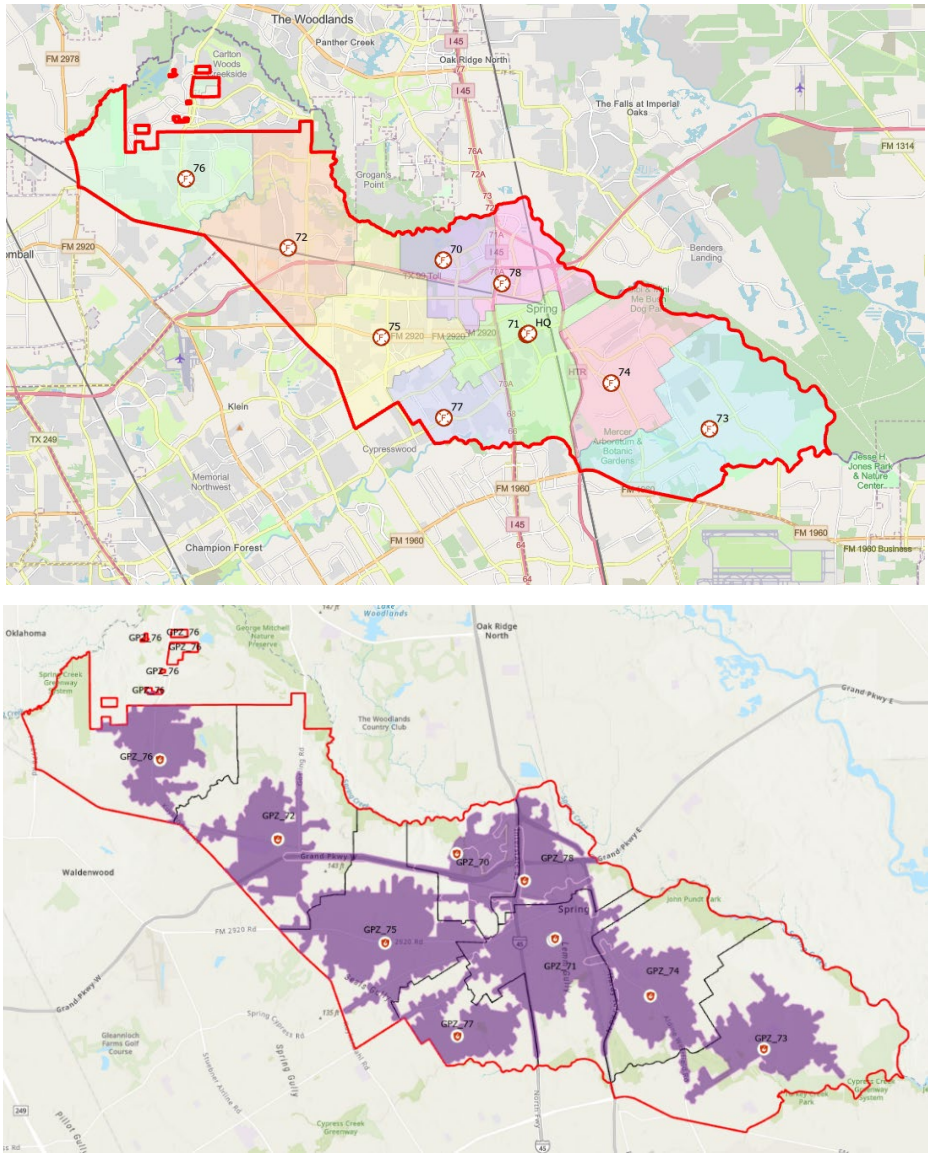
Station Locations

Spring Fire currently serves our community through 9 fire stations scattered throughout ESD-7 (Stations 70-78). Administration, Logistics and Training will soon be occupants of the new Cotton Weaver Training Facility, now under construction.

Geographical Planning Zones (GPZ's)

Methodology

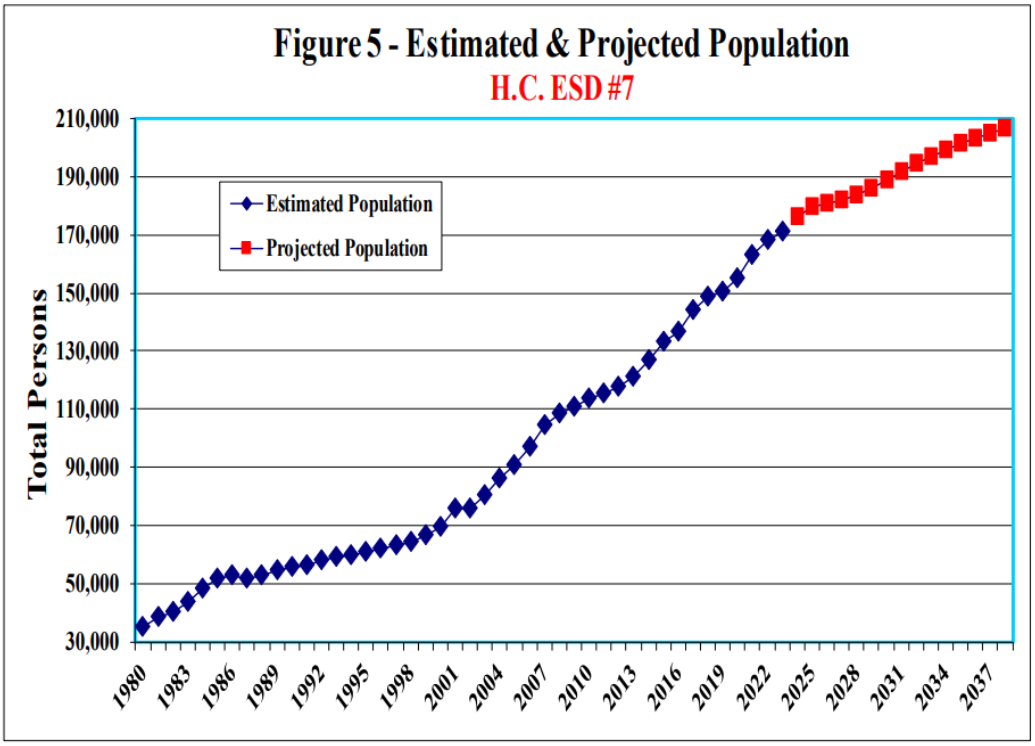
GPZ's have been drawn based largely on the estimated driving times from each station. These were then extended and expanded following natural boundaries, barriers, and transportation routes. These GPZ's are aligned with the original responsibility areas for each Station, thus each GPZ contains one station.



Purple polygons show limits of 4-minute drive times around each station location. Black lines show GPZ boundaries.

Community Population/Population Densities

The 2020 US Census reported a total ESD 7 population of 167,943.



Source: Update to Comprehensive Review, Municipal Information Services, March 2024

Current projections suggest that the population of ESD-7 could rise to 200,000 by 2035. Examining vacant land suitable for future development, this growth in population will likely occur across all GPZ's.

Urban vs Rural

The US Census definitions of Urban and Rural are based on Housing and Population Density.

US Census Definition	Housing Density	Population Density
Urban	>2,000 per GPZ	>5,000 per GPZ
Rural	<2,000 per GPZ	<5,000 per GPZ

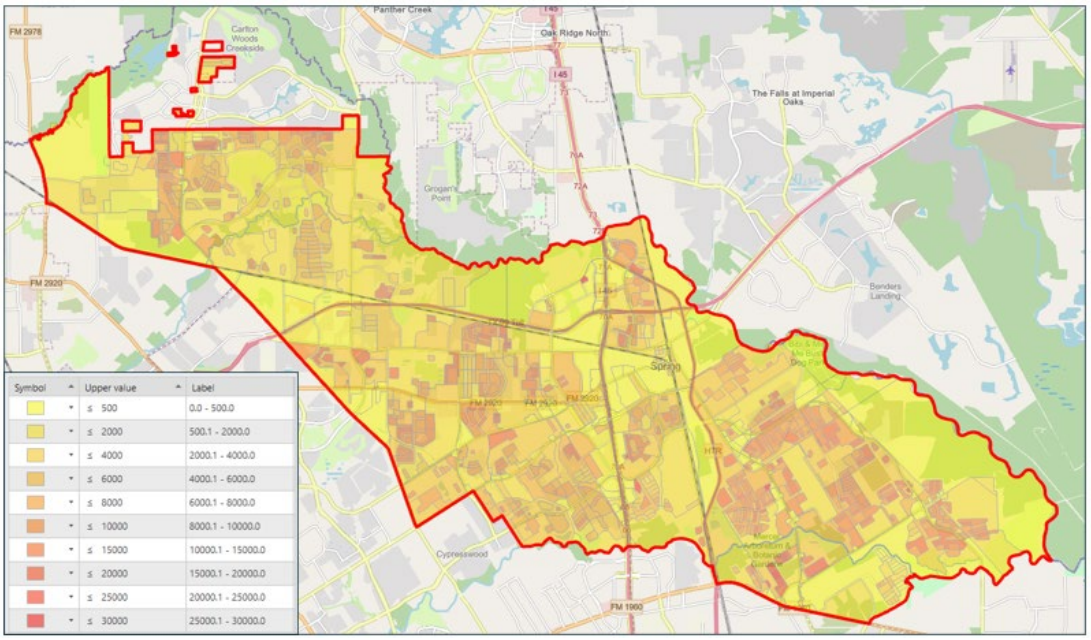
Housing and Population Densities and US Census Classification by GPZ

GPZ	Housing20	Population20	Urban / Rural
GPZ-70	992	1709	Rural*
GPZ-71	3382	9144	Urban
GPZ-72	4547	12872	Urban
GPZ-73	7737	23404	Urban
GPZ-74	7368	21434	Urban

GPZ-75	6544	19395	Urban
GPZ-76	5180	14466	Urban
GPZ-77	3411	9485	Urban
GPZ-78	2504	5893	Urban

*All of ESD-7 GPZ's are defined by these criteria as Urban except for GPZ-70 which has lower housing and population density. That being said, we will not treat it any differently as it contains the only true high-rise buildings and has a daytime population pushing population density far beyond the urban criterion. Between the ExxonMobil campus, two HP office facilities, and Southwestern Energy nearly 20,000 employees are present during the workday. Additionally, four apartment complexes with a total of 1,631 units have been built and occupied since the last Census driving the population density very close to the 5,000 threshold.

As such, a single set of response time standards will be developed and applied across all GPZ's.

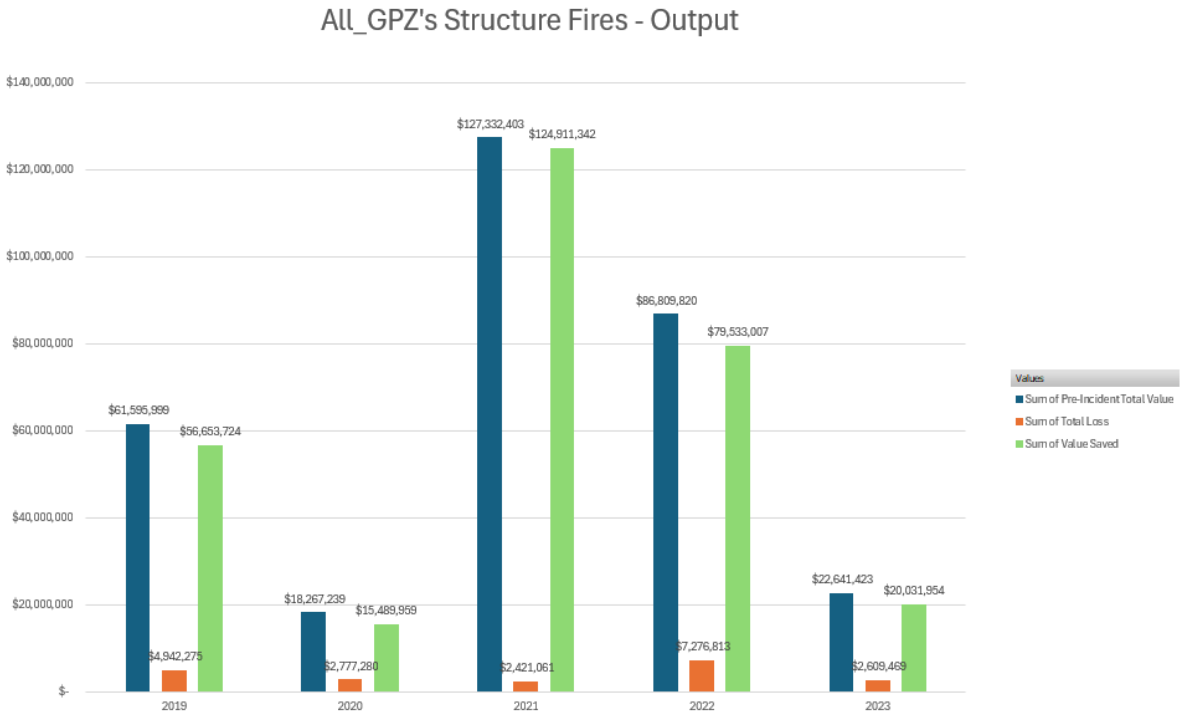


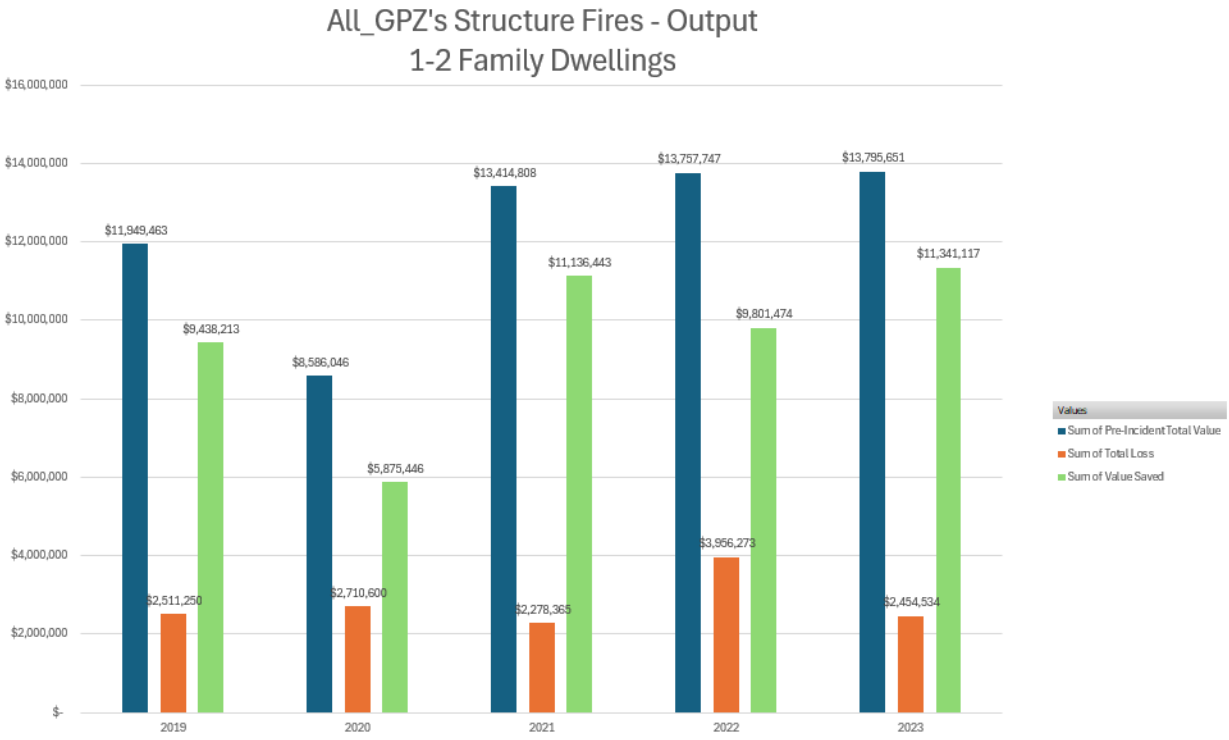
Population Density (US Census 2020)

Asset Preservation/Loss

Examining all structure fires during the period from 2019 to 2023, the total value of loss was $20,026,898 with a total value saved of $296,619,986. There were no fatalities experienced with these structure fires, with a total of 13 fire service injuries and 7 civilian injuries.

Looking at 1-2 family dwellings only for the same period, the total value of loss was $13,911,022 with a total value saved of $47,592,693. Of the fire service injuries noted above 10 were suffered during 1-2 family dwelling incidents where 5 civilian injuries were also experienced.



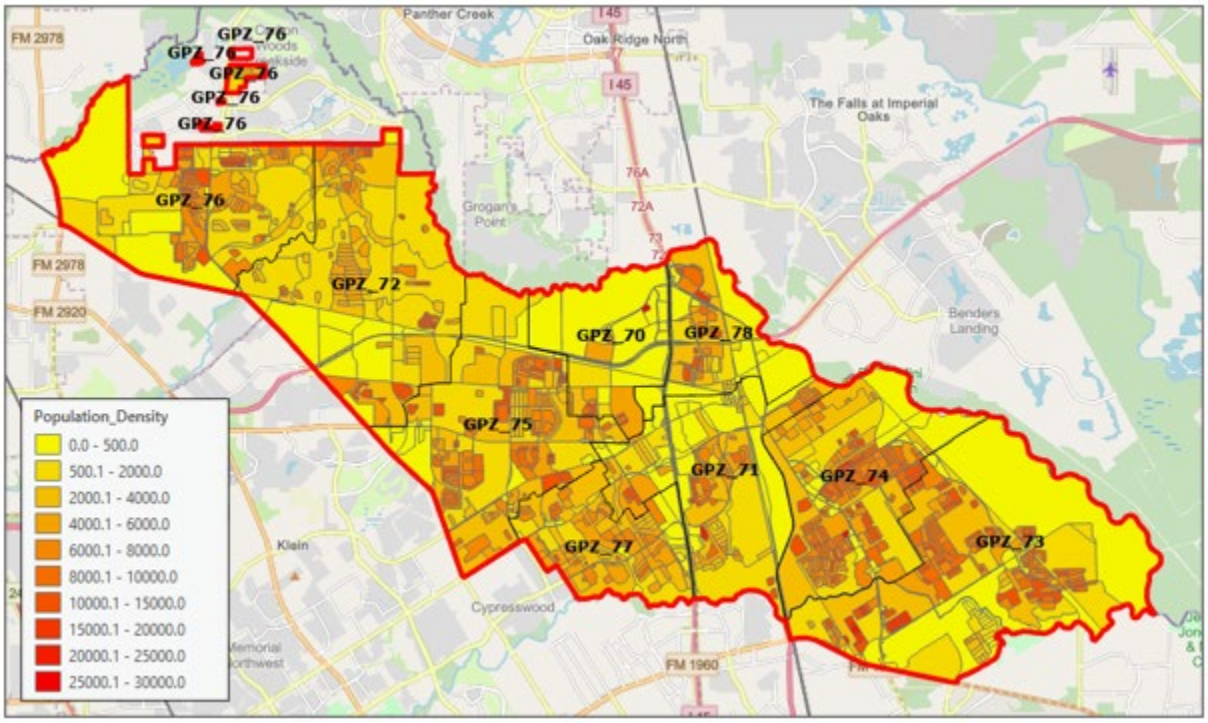


Graphs of structure fire outputs within each GPZ are included in Appendix A – Structure Fire Outputs for Each GPZ

Characteristics of the Community

Population

The 2020 US Census reported a total ESD 7 population of 167,943. Current projections suggest that the population of ESD-7 could rise to 200,000 by 2035.



Population Density based on US Census 2020

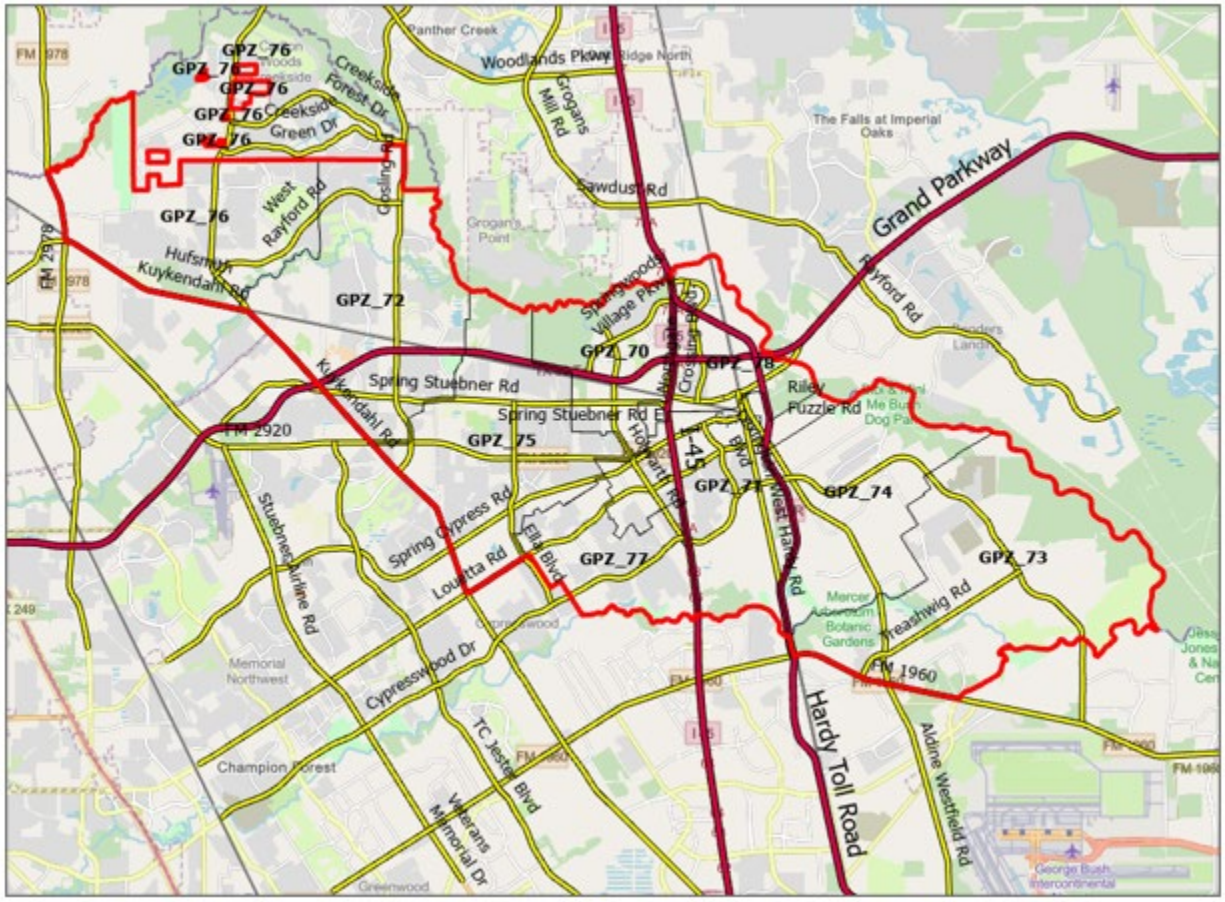
Transportation

Highways

ESD-7 is nearly bisected by Interstate 45 that connects Dallas, Houston, and Galveston. Also known as the North Freeway, I-45 consists of 8 main lanes, 2 HOV lanes, and 6 lanes of frontage roads. Traffic counts provided by the Texas Department of Transportation estimate that about 190,000 vehicles travel I-45 through Spring every year (2023 estimate).

Nearly parallel to I-45 to its east is the Hardy Tollway. With limited access and egress and 6 main lanes, “The Hardy” helps expedite travel between Houston and Spring and The Woodlands. TxDOT estimates that about 70,000 vehicles travel The Hardy each year (2023 estimate). The Hardy Tollway is managed by the Harris County Toll Road Authority.

Cutting across ESD-7 from west to east is the Grand Parkway (TX-99). With limited access and egress,4 main lanes, and 4 lanes of frontage road, the Grand Parkway forms the nearly complete outer loop around Houston. TxDOT estimates that about 78,000 vehicles travel the Grand Parkway each year (2023 estimate). The Grand Parkway is managed by TxDOT.



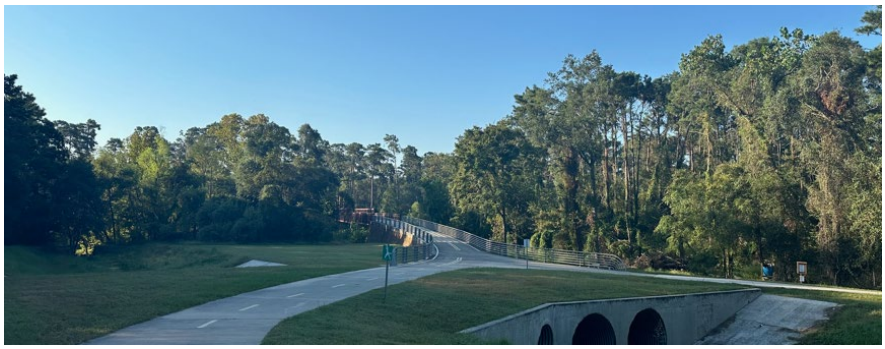
Highways and Main Roads, throughout ESD-7

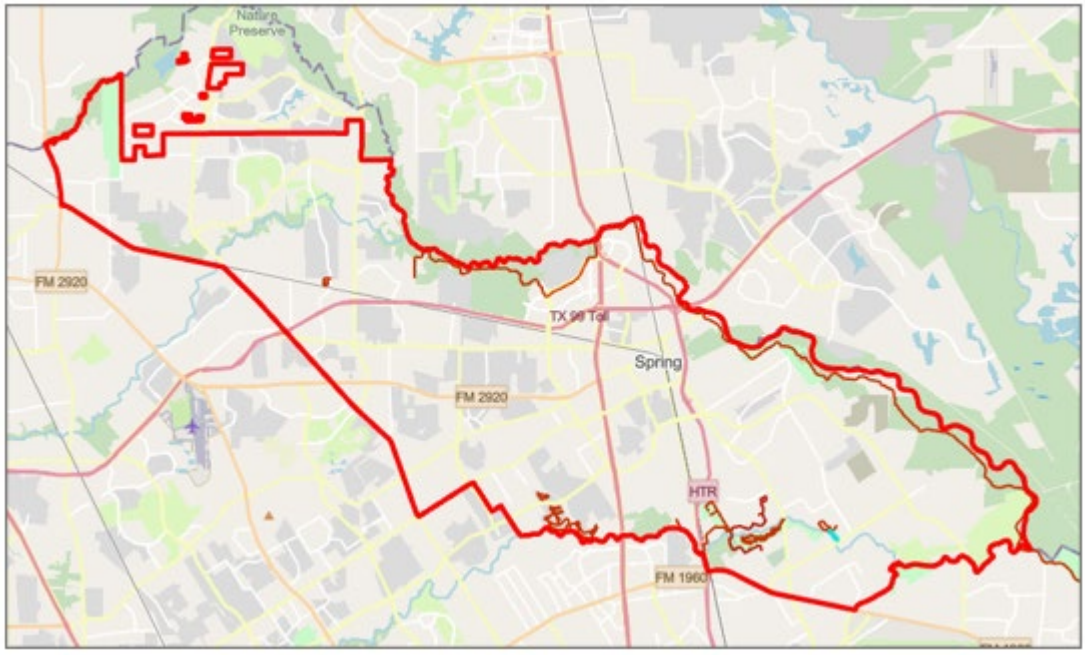
Main Roads

Main roads across the district are generally 4 lanes (often divided) with speed limits of 35-45 mph. In recent years median barriers have been added to FM-2920 and FM-1960 restricting cross-traffic turning and reducing traffic accidents.

Hike & Bike Trails

A growing number of Hike & Bike Trails have been built mostly along the margins of ESD-7. Commissioner's Precinct 3 has plans to extend this system of trails along Cypress Creek all along the southern margin of ESD-7. Currently, 24 miles of paved multi-purpose trail connects I-69 to I-45 and beyond. Trails like these play an important role in the quality of life for our citizens.





Hike and Bike Trails

Railroad

While passenger trains do not serve the Spring community, Spring is along a major freight-hauling route of the Union Pacific Railroad. It is situated at the confluence of the Navasota and Palestine Subdivisions of the Union Pacific Railroad and contains the Lloyd Yard where hundreds of train cars are parked along the sidings on any given day. Union Pacific has a response plan in place to integrate with an incident command system and aid/facilitate response to an incident at Lloyd Yard.

Source: https://www.flickr.com

Airports

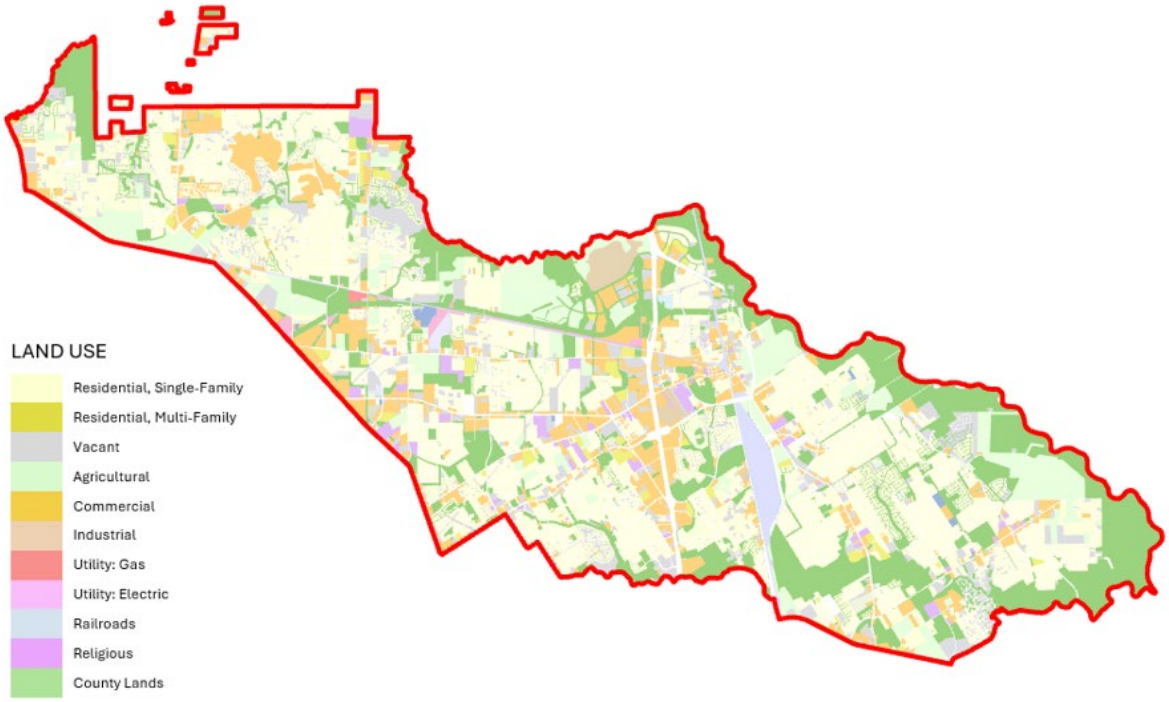
While no airports exist within ESD-7, there are two airports just outside our coverage area. The David Wayne Hooks (DWH) airport is just west of our coverage area. It is privately owned and is one of the busiest General Aviation airports in the country.

George Bush Intercontinental Airport (IAH) is just south of our coverage area. It covers approximately 10,000 acres, has five runways and serves as one of the largest hubs for United Airlines. It is the busiest airport in Texas for international passenger traffic.

Public Transportation

While there are no public transportation routes that serve the ESD-7 coverage area, there is a Metro Park-n-Ride facility just outside of the area to the south that provides bus transportation in and out of Houston.

Land Use



Based on parcel data from the Harris County Appraisal District about 30% of ESD-77 land area is devoted to residential properties, about 30% is classified as agricultural, 25% are (generally forested) county lands, and about 10% is devoted to commercial and industrial uses.

This Nearmap© image shows the variety of land use across the area. It also shows the location of Station 71, Administration, and the Cotton Weaver Training Center (under construction in the center of the image).

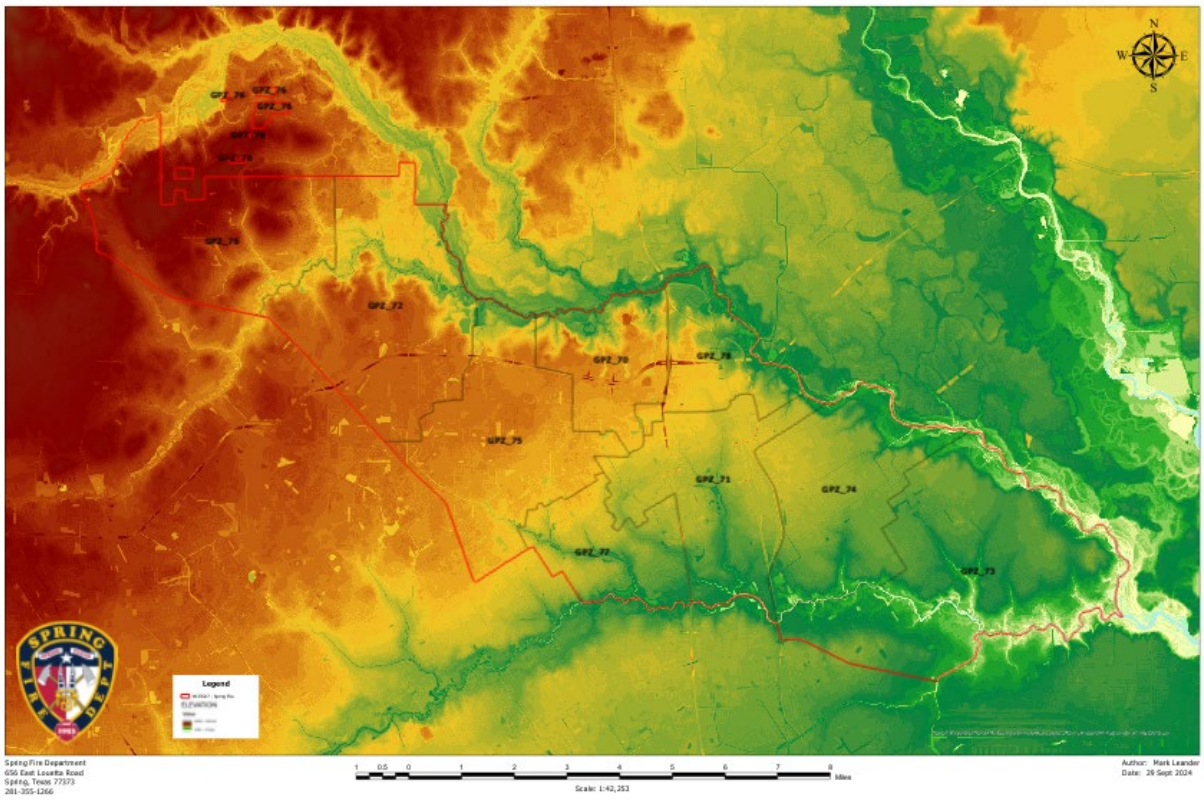
Topography

Spring, TX, and northern Harris County, TX, are situated within the Gulf Coastal Plain, a geomorphic province characterized by its low elevation and gentle slopes. This region is primarily composed of sediments deposited by ancient rivers, seas, and deltas.

Elevations

The elevations in this area are generally low, ranging from sea level to approximately 100 feet above sea level. This low elevation is a result of the region's geologic history, which has been dominated by depositional processes rather than uplift.

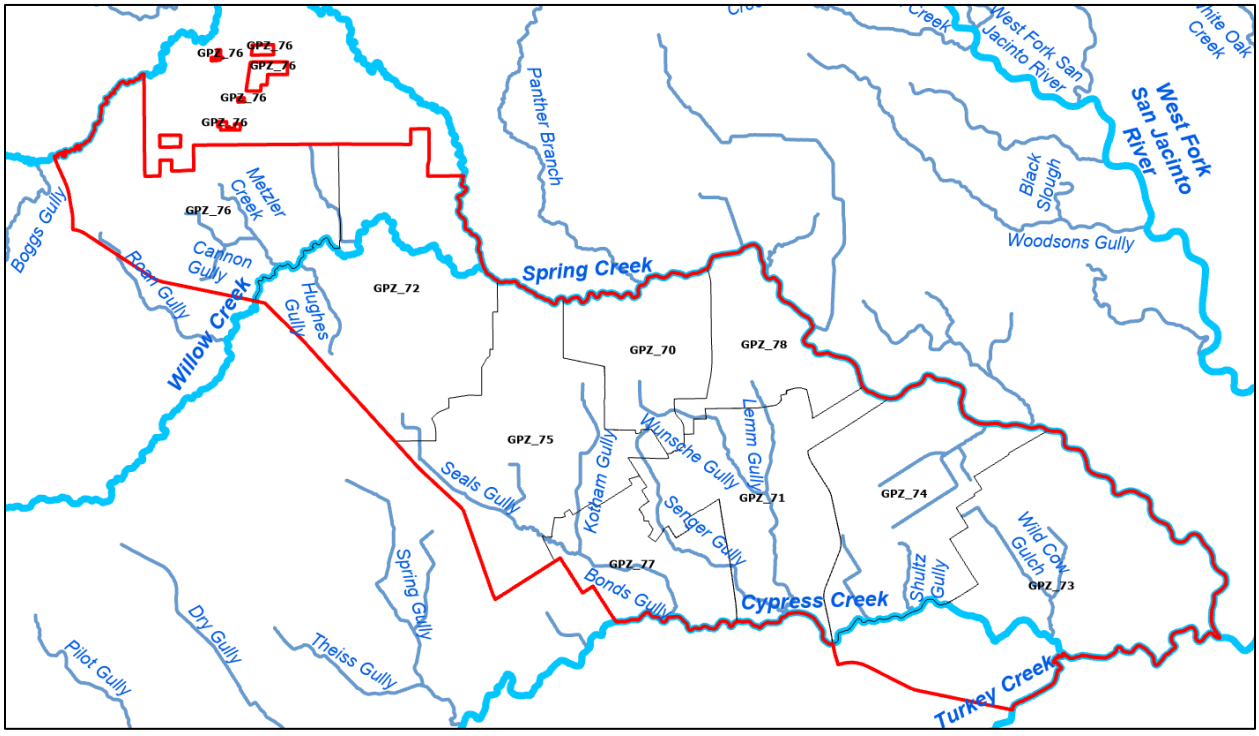
Digital Elevation Model (USGS)



Physiography & Drainage

The physiography of ESD-7 is largely characterized by flat lands of the coastal plains with slightly higher elevations to the northwest and lower to the southeast. The entire service area is part of the Spring Creek and Cypress Creek watersheds which flow into the San Jacinto River, Galveston Bay, and ultimately the Gulf of Mexico.

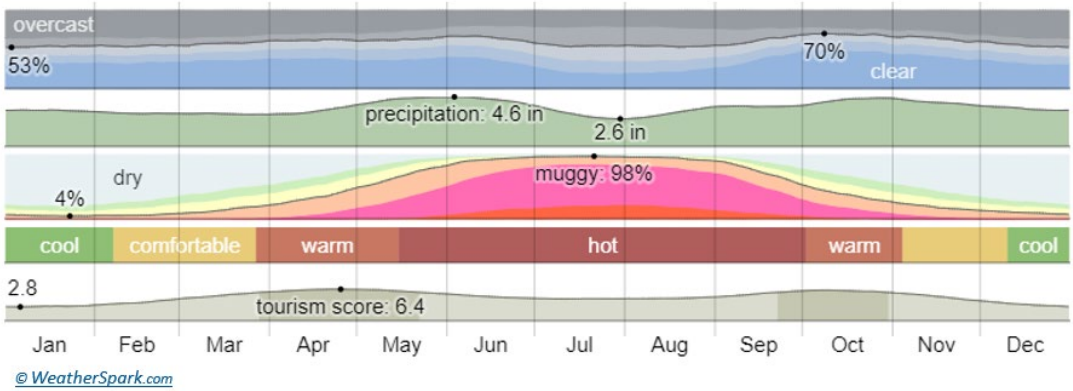
Within the service area, gullies (largely maintained by the Harris County Flood Control District) deliver drainage to the creeks, and a number of retention ponds are designed to capture and hold runoff as a flood control measure.



Major Creeks and Gully's that drain surface water in the Gulf of Mexico

Climate and Average Weather Year-Round

In Spring, the summers are long, hot, and oppressive; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from *44°F* to *94°F* and is rarely below *31°F* or above *98°F*.



Our warming climate is pushing these historic averages higher. Every year of late we see an increasing number of days with highs exceeding 100°F. Extreme weather events are tending to be more extreme

with higher rainfalls and stronger winds, which stresses our natural environment. More details related to weather and climate can be found in Appendix A – Community Climate and Weather Data.

Community Ecosystems & Vegetation

Introduction

Spring, TX, and northern Harris County, TX, are situated within the broader Piney Woods region of Texas. This ecological province is characterized by its dense forests, dominated by pine trees, and is a significant component of the Gulf Coastal Plain. This region has a unique blend of ecosystems due to its proximity to both the Gulf of Mexico and the interior of the continent, resulting in a diverse array of vegetation and wildlife.

Piney Woods Ecosystem

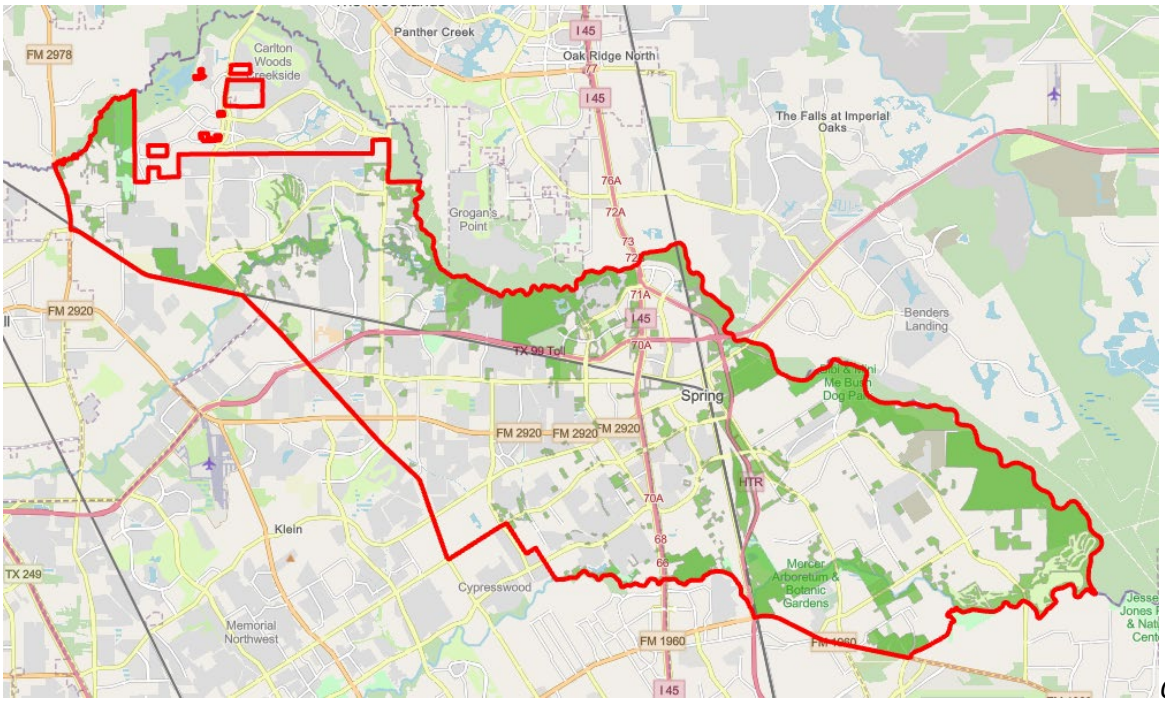
The dominant ecosystem in this area is the Piney Woods. This ecosystem is characterized by its dense stands of loblolly pine (Pinus taeda) and longleaf pine (Pinus palustris). These trees, along with various oak species, form a canopy that provides shade and shelter for a diverse understory of plants, including ferns, vines, and shrubs. The Piney Woods is also home to a variety of wildlife, including white-tailed deer, wild hogs, and various bird species.

Wetlands and Bottomlands

In addition to the Piney Woods, Spring and northern Harris County are home to a variety of wetlands and bottomlands. These areas are characterized by their low-lying topography and their proximity to water sources, such as creeks, rivers, and lakes. Wetlands play a crucial role in the region's ecology, providing habitat for a variety of aquatic and semi-aquatic species. Common wetland types in this area include swamps, marshes, and bayous.

Land Cover Estimation

Woodland Areas

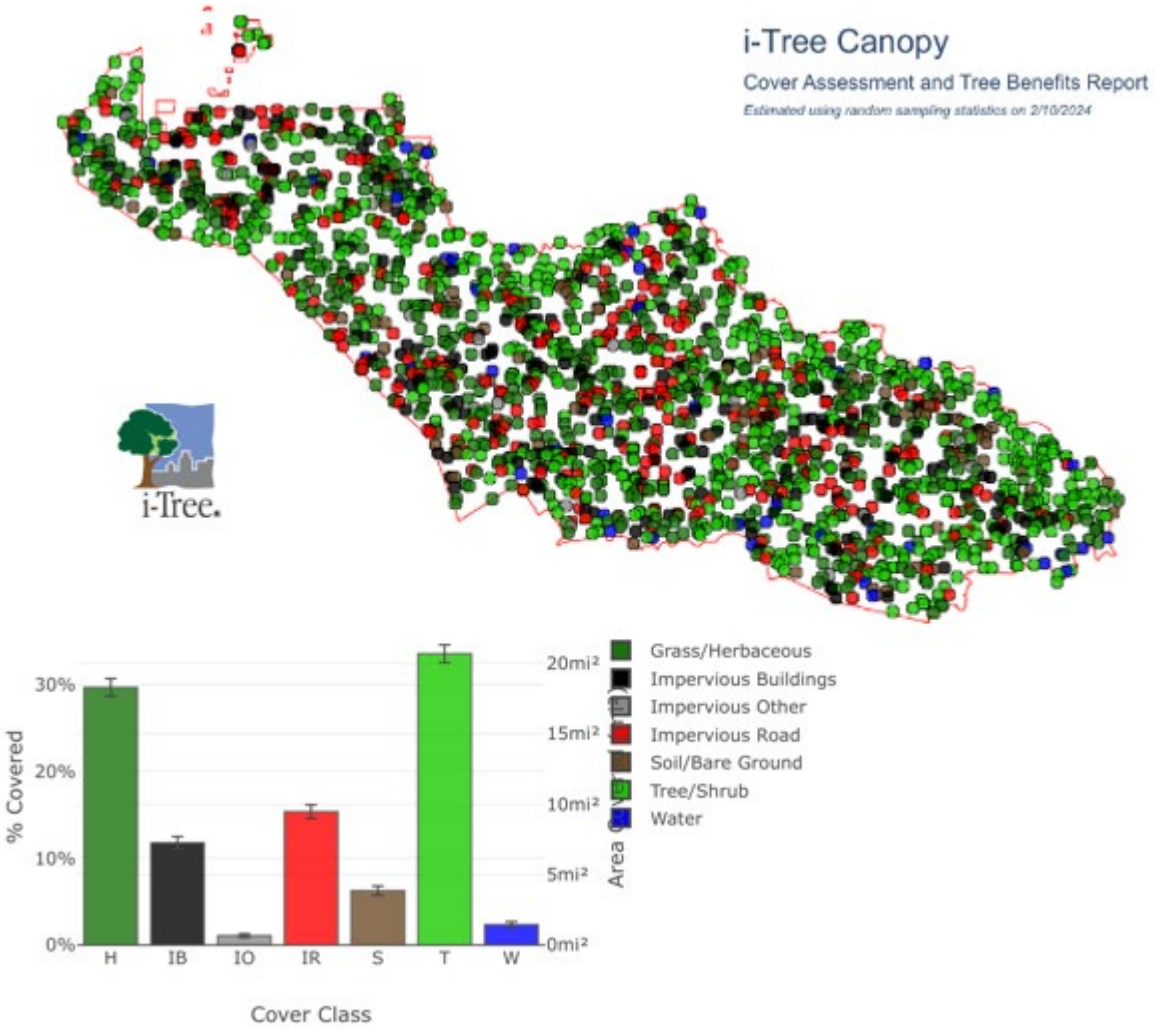


Original Mapping based on Google Imagery – Mark Leander

Contiguous woodland is only part of the "tree story" for ESD-7. In addition to these patches of forest many of the neighborhoods throughout the service area have mature trees that tower above homes (and powerlines). This Urban Tree Canopy makes wind-related severe weather (hurricanes, tornados, and derechos) of particular concern as fallen trees damage structures and cause power grid interruptions.

Urban Tree Canopy

In an effort to characterize the Urban Tree Canopy (UTC) across ESD 7 a statistical approach was applied using the US Forest Service's iTree software. Three thousand spatially random points were classified by inspection using satellite imagery into a number of land cover categories. This adds to the delineation of contiguous woodland those areas where mature trees are scattered throughout older neighborhoods.



Risks Facing Our Community

We have used data, assessments, and vulnerability estimates from a number of outside entities to inform our understanding of the risks faced by different elements of our community. These outside entities included:

- US Census Bureau
- Center for Disease Control (CDC)
- Health Resource and Services Administration (HRSA)
- Federal Emergency Management Agency (FEMA)
- Broadstreet.io
- CRAIG1300

FEMA National Risk INdex

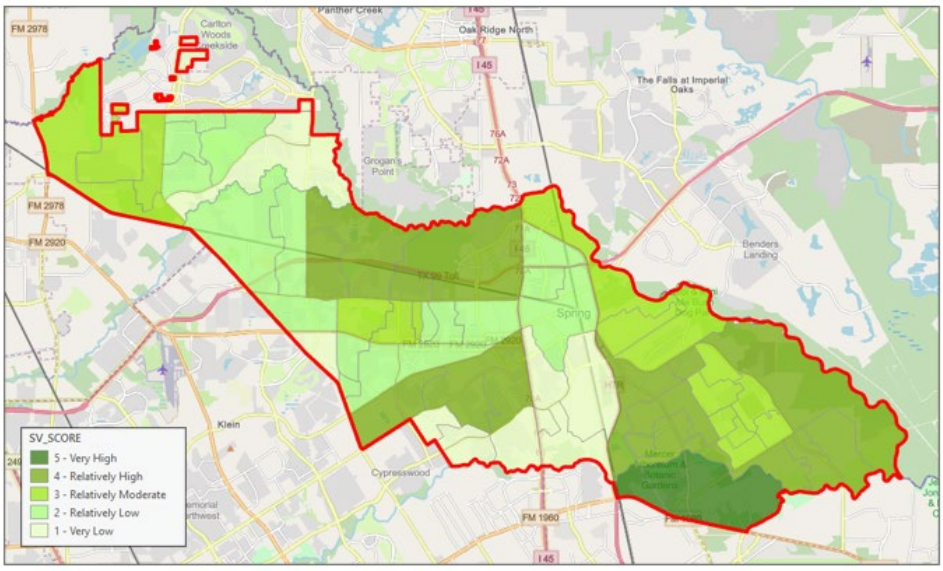
FEMA has developed a dataset and application to identify areas most at-risk for natural hazards. The NRI (National Risk Index) leverages data from various sources for 18 natural hazards such as flooding, earthquakes, and wildfires. Combining these risks with estimates of social vulnerability and community resilience provides overall risk estimates at state, county, and census tract scales.

$$\text{Risk Index} = \frac{\text{Expected Annual Loss} * \text{Social Vulnerability}}{\text{Community Resilience}}$$

Considering all 18 natural hazards included in the FEMA NRI, the main natural risks that threaten the Spring area are limited to:

- Hurricanes
- Lightning
- Tornados
- Riverine flooding.

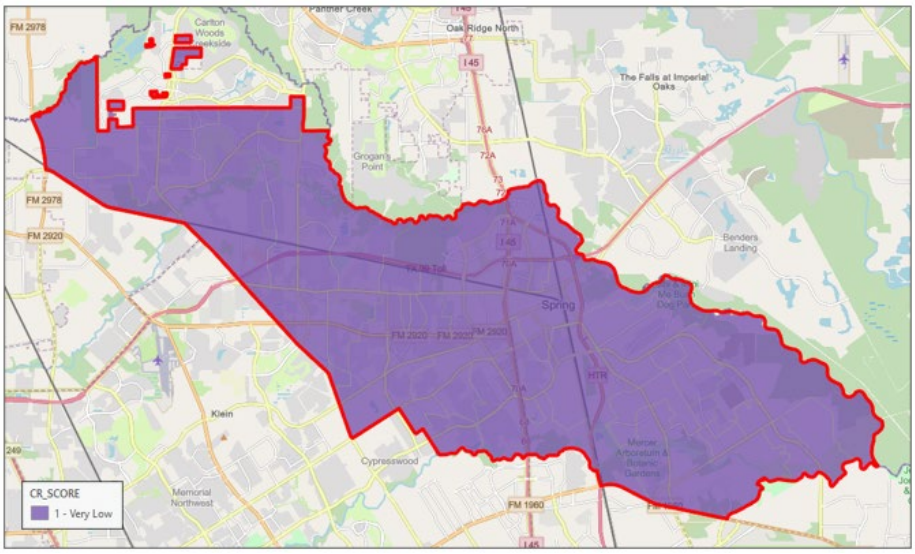
Social Vulnerability



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Social vulnerability refers to how easily a group of people can be negatively affected by natural disasters. This includes things like higher death rates, injuries, property loss, and job disruptions. Factors like social status, income, age, and housing conditions can make some communities more vulnerable than others. These factors affect how well a community can prepare for, handle, and recover from disasters.

Community Resilience



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Community Resilience is defined by FEMA as the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions. Low Community Resilience across ESD-7 indicates that our community is ill-prepared for anticipated natural hazards, does not adapt well to changing conditions, and is unable to withstand or rapidly recover from disruptions due to natural hazards.

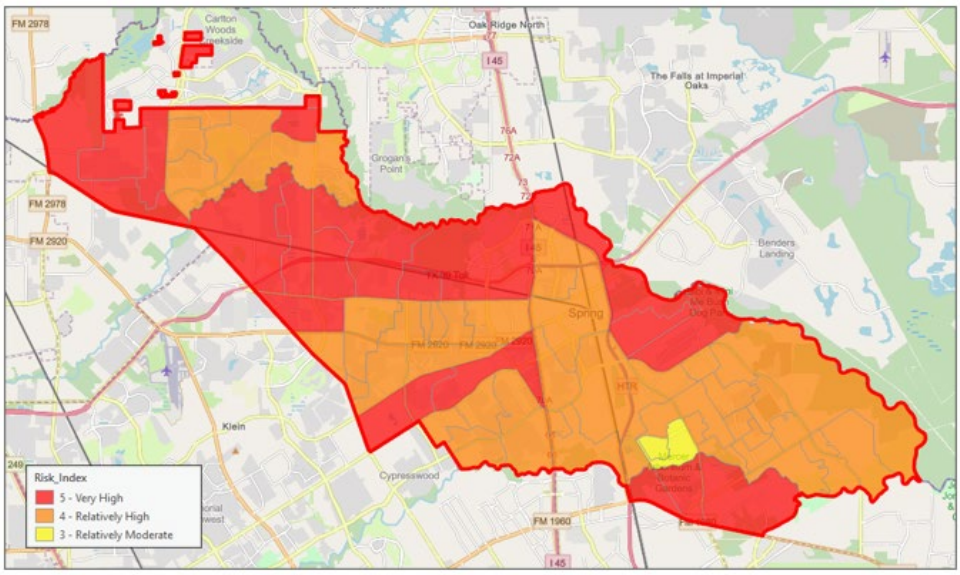
Hurricanes

Along this portion of the Texas Gulf Coast hurricanes are an annual risk (June-October) and a reasonably frequent occurrence. Spring is nominally 60 miles inland from the closest possible landfall of a hurricane or tropical storm. While this insulates the area from storm surge flooding and bay head flooding it is not far enough to expect a hurricane making a landfall near Galveston to lessen in strength appreciably before impacting Spring. As such the main risks presented by hurricanes include hurricane and tropical storm force winds, tropical tornados and lightning associated with the outer rain bands, and riverine flooding due to heavy rainfall.

High winds related to hurricanes present risks to property and the electrical grid. The entire Spring area has a lot of mature trees that are often two to three times as tall as residential properties as well as the above ground electrical distribution network. Fallen trees cause structural damage to buildings and the electrical grid and can block roads challenging emergency response.

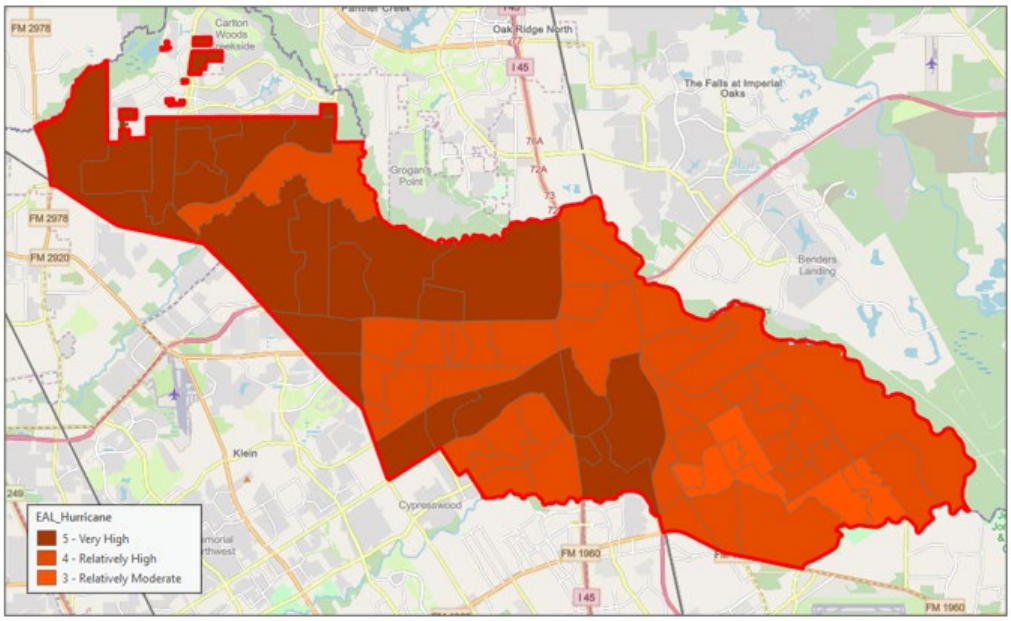
Heavy rains associated with hurricanes and tropical storms can cause local riverine flooding damaging structures and flooding roadways affecting wheeled response.

Hurricane – Risk Index



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Hurricane – Expected Annual Loss

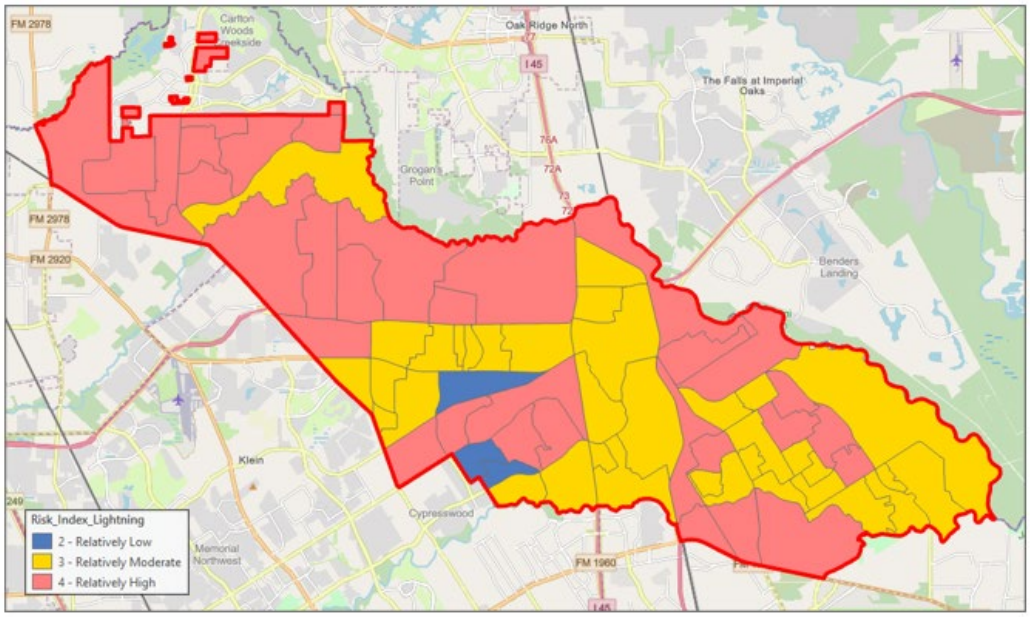


Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Lightning

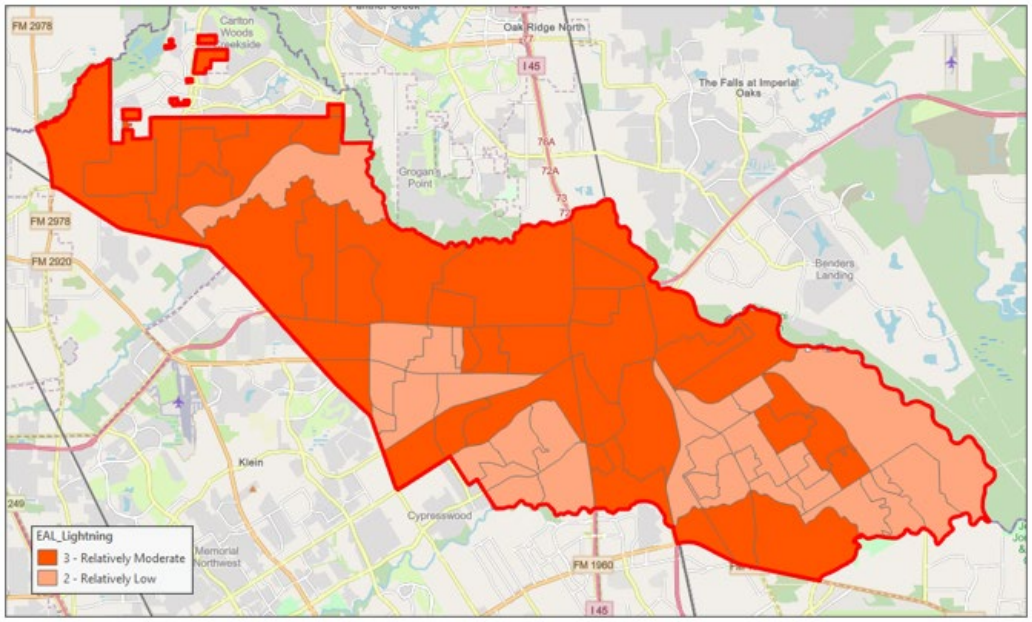
While lightning is a frequent occurrence with seasonal thunderstorms, lightning is often associated with thunderstorms training in the outer rain bands of hurricanes and tropical storms. Lightning poses a risk to people, property, and the electrical infrastructure.

Lightning – Risk Index



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Lightning – Expected Annual Loss

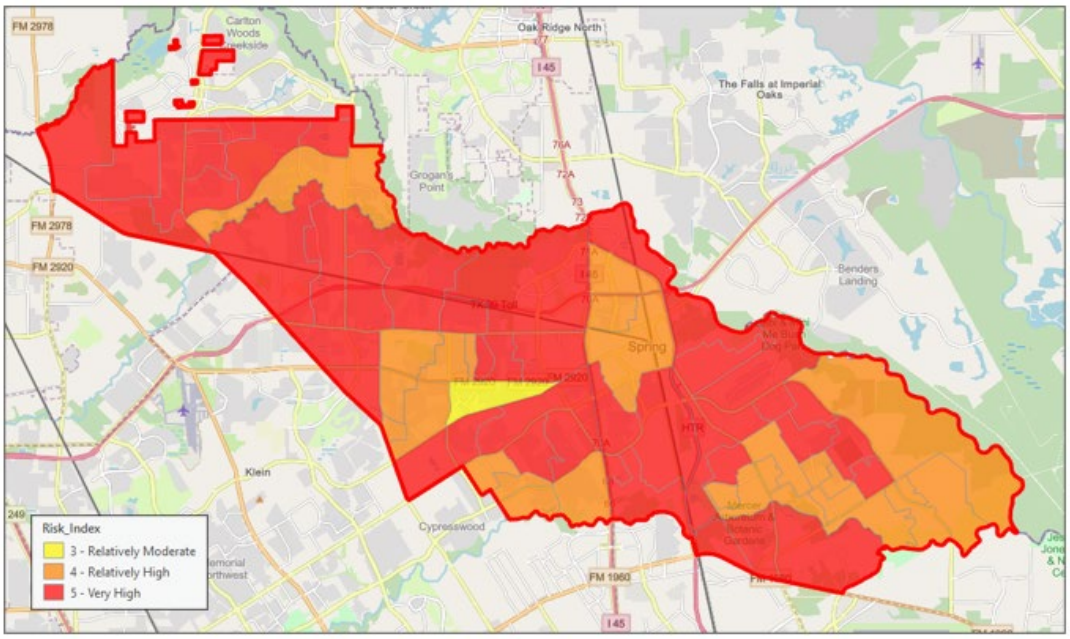


Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Tornados

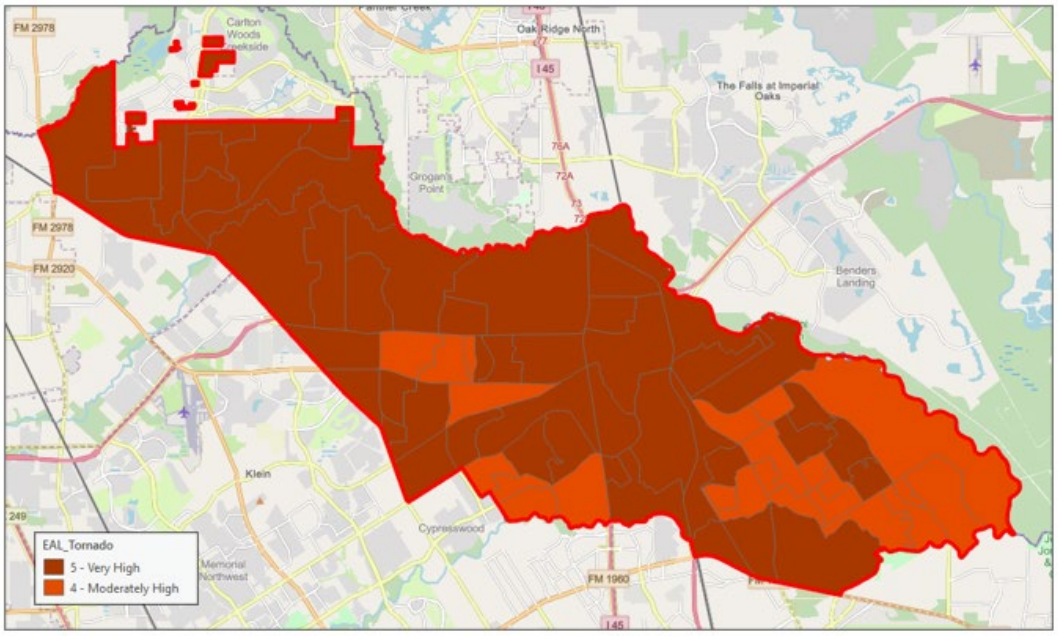
Tornados are frequently observed with seasonal thunderstorms and, as discussed, are often present in the thunderstorms training along the outer rain bands of hurricanes and tropical storms. While tornados often carve a rather narrow path across a community the extreme winds damage structures, trees, and the electrical grid causing disruptions to a larger area.

Tornado – Risk Index



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Tornado – Expected Annual Loss



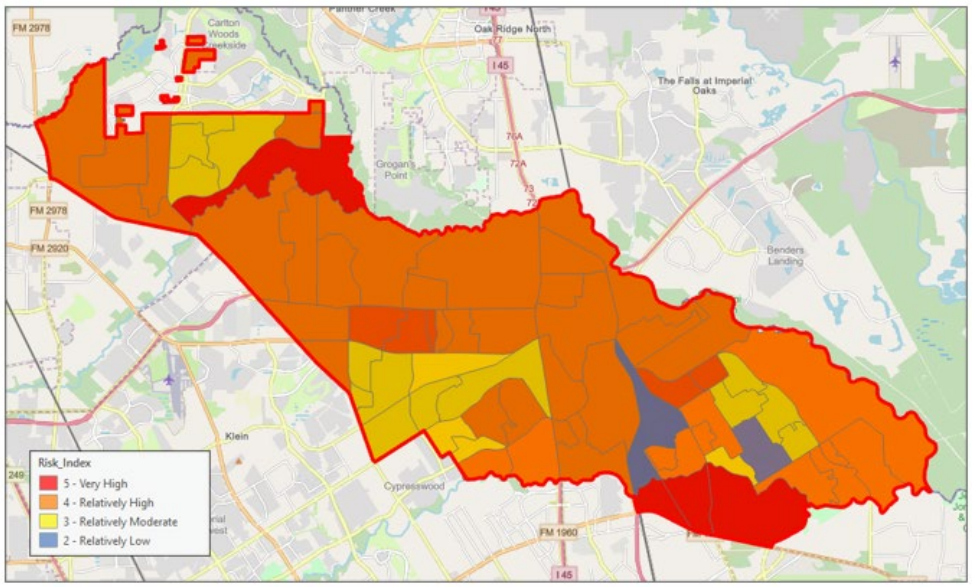
Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

While the occurrence of lightning and tornados are spatially unpredictable, damages from these events can be dramatic and challenge our resilience. More widespread high winds and heavy rains associated with a hurricane can have more widespread effects on the community as a whole.

Riverine Flooding

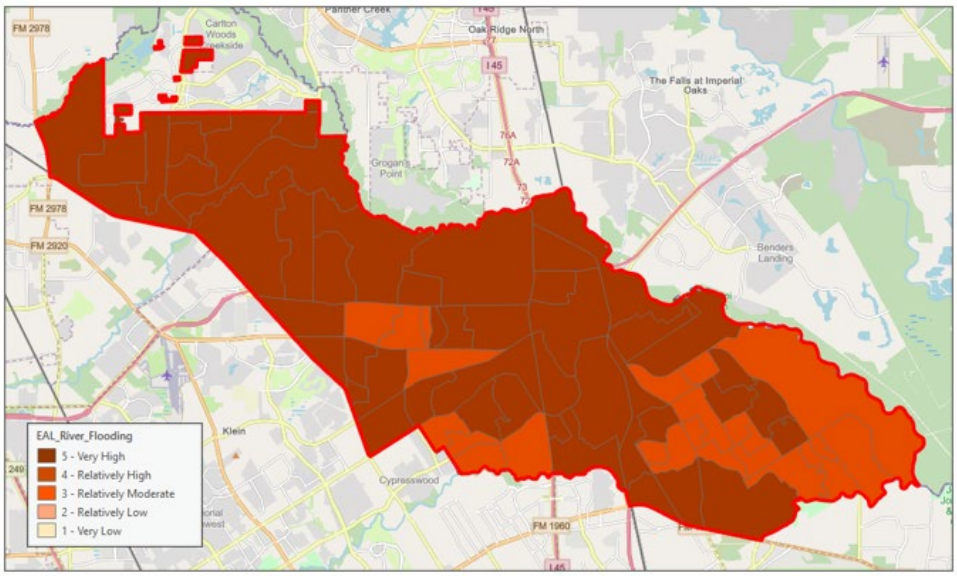
By far, the biggest and most probable natural risks to our community is flooding, which can occur as a product of tropical storms and hurricanes, or simply from the frequent seasonal thunderstorms common across the region.

Riverine Flooding – Risk Index



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

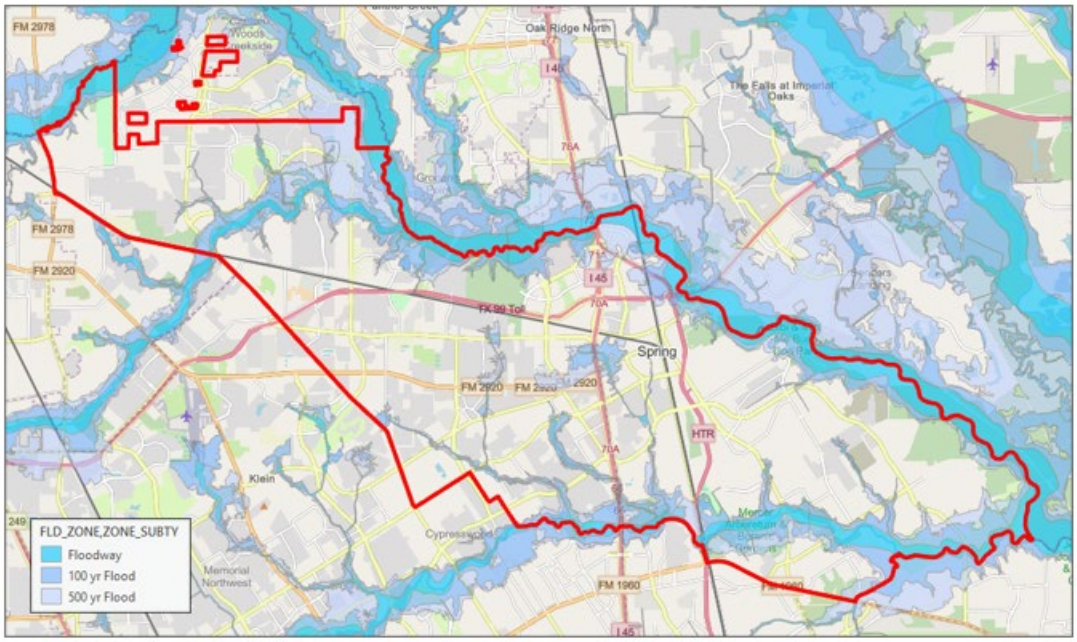
Riverine Flooding – Expected Annual Loss



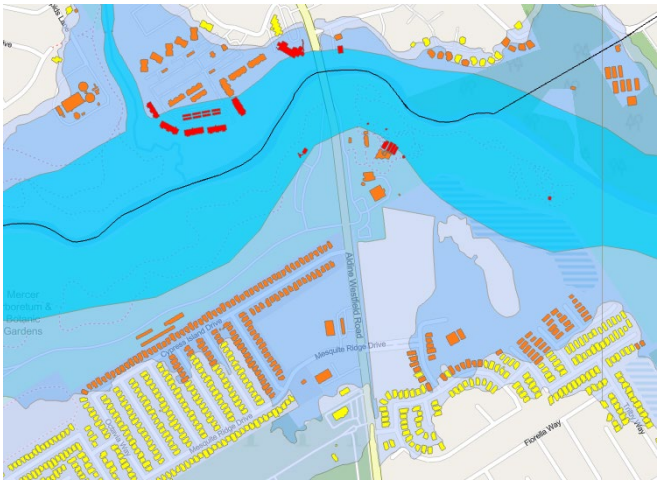
Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Knowledge of our drainage network of creeks and gullies, coupled with flood plain mapping by FEMA can support a prediction of the potential impact of flooding on structures across our community.

Mapped SFD Flood Zones



FEMA Floodway, 100 yr, and 500 yr Flood Zones – Mark Leander



Mapping of all built structures across our community allows us to predict which structures will be potentially affected by different levels of flooding. Red building outlines depict buildings potentially affected by the mapped floodway, orange by the mapped extent of a 100yr flood event, and yellow by a 500yr flood event.

Structural Flood Risk Mapping – Mark Leander

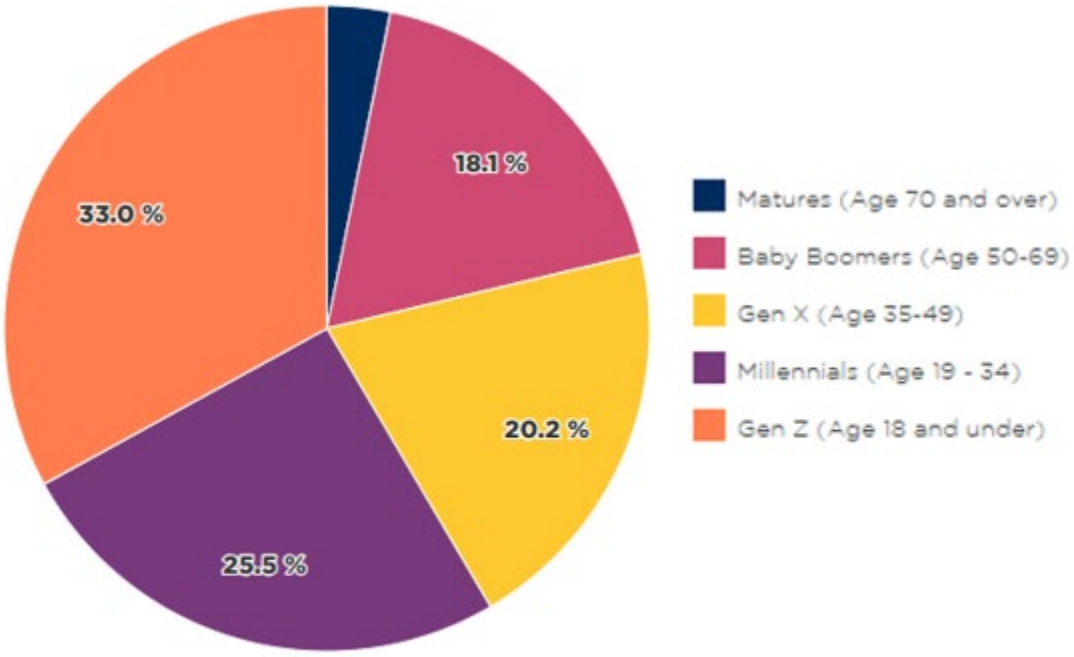
By tallying up the number of buildings affected by each level of flooding, supports estimating the structural exposure to flooding damage within each GPZ. The following table shows the number of structures within each GPZ that are potentially affected by the different levels of flooding, based on FEMA flood zone mapping.

GPZ	Floodway	100 yr	500 yr	Total
70	0	12	63	75
71	31	350	685	1066
72	17	296	1732	2045
73	70	647	1546	2263
74	45	191	307	543

75	15	124	493	632
76	2	207	146	355
77	38	242	479	759
78	9	76	681	766
Totals	227	2145	6132	8504

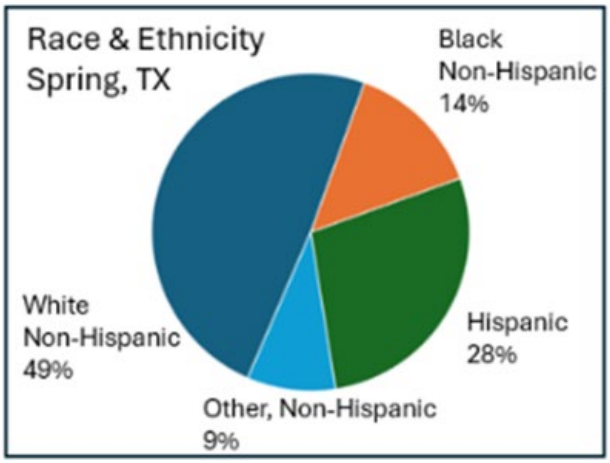
Community Demographics

A good word to describe Spring demographics would be DIVERSITY - diversity of race and ethnicity, diversity of age, diversity of language, diversity of social status, etc.



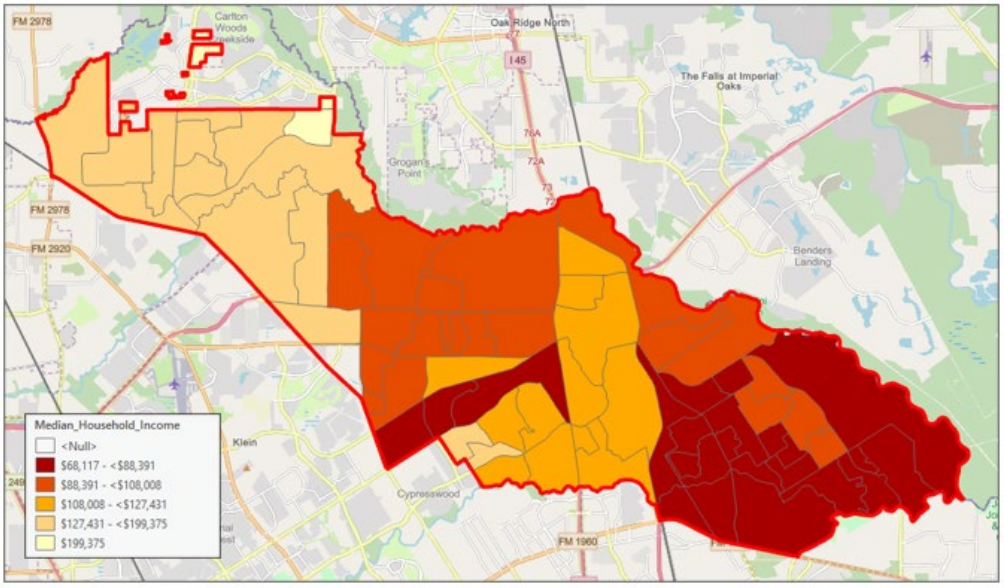
Spring FD

Sources: US Census Bureau ACS 5-year 2018-2022



Sources: broadstreet.io and ACS 2016-2019

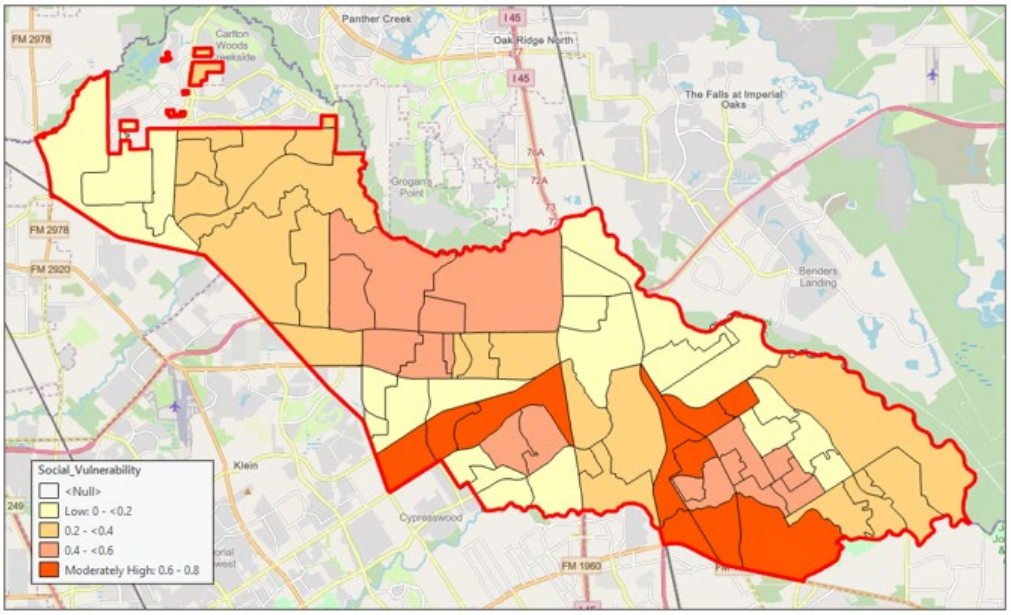
Median Household Income



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

One reason for understanding the demographics of our community is to identify vulnerable elements of our population. Measuring vulnerability is complex. Different measures of vulnerability are arrived at by examining a myriad of demographic indicators as well as potential loss and overall resilience.

CDC Social Vulnerability (Housing & Transportation)



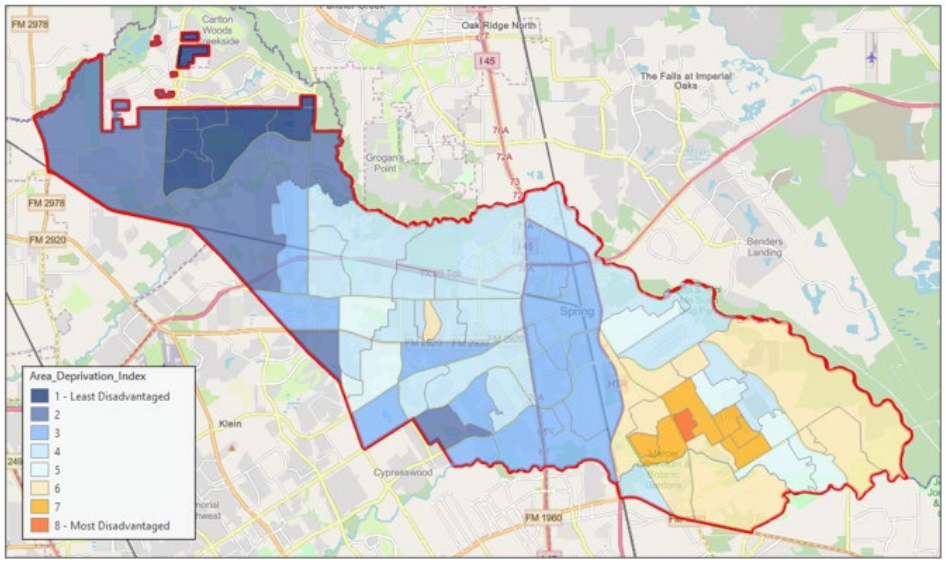
Sources: CDC ASTDR SVI 2022

This dataset represents the relative housing and transportation social vulnerability of census block groups, ranking them against all census block groups within a state. The values are percentile rankings on a scale

from 0 to 1, where values near 1 indicate high housing and transportation social vulnerability and values near zero indicate low housing and transportation social vulnerability.

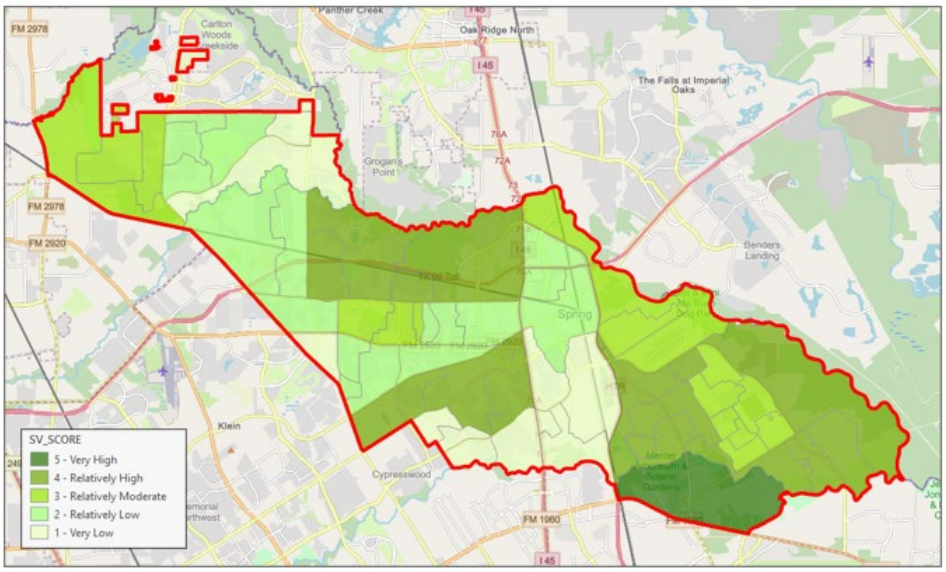
HRSA Area Deprivation Index

The Area Deprivation Index (ADI) is based on a measure created by the Health Resources & Services Administration (HRSA) and further extended by the Center for Health Disparities Research at the University of Wisconsin. Popularized by the Neighborhood Atlas it is a quick summary of neighborhood socioeconomic status and combines 17 indicators of employment, education, poverty, and housing.



Source: Neighborhood Atlas - www.neighborhoodatlas.medicine.wisc.edu

FEMA Social Vulnerability (Natural Disasters)



Source: FEMA National Risk Index, 2024 - hazards.fema.gov/nri/map#

Social vulnerability (FEMA) refers to how easily a group of people can be negatively affected by natural disasters. This includes things like higher death rates, injuries, property loss, and job disruptions. Factors like social status, income, age, and housing conditions can make some communities more vulnerable than others. These factors affect how well a community can prepare for, handle, and recover from disasters.

Overall Vulnerability

In a general sense the most vulnerable segments of our community are east of the Hardy Tollway in GPZ-73 and GPZ-74. The most affluent and least vulnerable segments of our community are north of the Grand Parkway in GPZ-76 and GPZ-72. The targeting of prevention programs, public education, and other forms of community risk reduction require a comparison of incident data with specific elements of community demographics. A more complete set of demographic data and maps from the US Census and CRAIG1300 as well as FEMA Risk Index and Expected Annual Loss maps are included in Appendix B – Demographics and Vulnerability.

Safety and Remediation Programs

Community Risk Reduction Program

Smoke Alarm Safety Program

The Spring Fire Department's Smoke Alarm program is a community initiative designed to enhance fire safety by ensuring that residents have functioning smoke alarms in their homes. The program offers free smoke alarm check-ups, battery replacements, and installations for residents who either lack a working smoke alarm or cannot afford one. This service is targeted at vulnerable populations, including the elderly, those with disabilities, and low-income households. By providing and installing these life-saving devices, the Spring Fire Department aims to reduce fire-

related injuries and fatalities in the community. In 2023 alone, more than 95 smoke detectors were installed across our community.

Cars Seat Program

The Spring Fire Department offers a Car Seat Safety program aimed at ensuring the proper installation and use of child car seats. This program, in partnership with Texas Children's Childhood Injury Prevention Center and Safe Kids Greater Houston, provides free car seat safety checks by appointment and free car seats to qualifying families. Certified Child Passenger Safety Technicians (CPSTs) guide parents and caregivers through the correct installation process, addressing common questions and concerns. The program emphasizes the importance of using car seats correctly to prevent injuries and fatalities in motor vehicle accidents, which are a leading cause of death among young children. By offering these services, the Spring Fire Department helps to enhance the safety and well-being of children in the community. One hundred and five car seat inspections and installation were performed in 2023.

After the Fire Initiative

The Spring Fire Department's "After the Fire" program provides crucial support to residents affected by fires. This initiative offers immediate assistance, including temporary housing and essential supplies to help families recover and rebuild their lives after a fire incident. The program also connects victims with local resources and services for long-term recovery, ensuring they receive the necessary emotional and practical support during a challenging time. Through this compassionate approach, the Spring Fire Department demonstrates its commitment to the well-being of the community beyond emergency response.

Fire Safety Education Programs

The Spring Fire Department offers a variety of Fire Safety Education Programs aimed at promoting risk reduction and safety awareness within the community. The department conducts fire station tours, allowing residents to learn about firefighting equipment and operations firsthand. Additionally, they offer community presentations on topics such as home fire safety, emergency preparedness, and the proper use of fire extinguishers. These educational efforts are designed to equip residents with the knowledge and skills needed to prevent fires and respond effectively in case of an emergency. Connections were made with over 1000 citizens at safety events last year and more than 300 citizens received training in the proper use of fire extinguishers.

Fall Prevention Program

The Spring Fire Department's Fall Prevention Program is dedicated to reducing the risk of falls among older adults in the community. This program offers home safety assessments and modifications, such as installing grab bars, improving lighting, and removing tripping hazards. Additionally, the department provides educational workshops that teach balance exercises and strategies to prevent falls. By addressing both environmental and physical factors, the program aims to enhance the safety and independence of older residents, ultimately reducing fall-related injuries and hospitalizations.

Firework Safety Program

The Spring Fire Department's Firework Safety Program is dedicated to educating the community on the safe use of fireworks, especially around holidays like July 4th, New Years, and Diwali. The program includes public safety announcements and demonstrations on proper firework handling and disposal. Community Risk Reduction personnel emphasize the importance of reading instructions, keeping children at a safe distance, and having a water source nearby in case of emergencies. They also provide free firework buckets to the community as part of Spring Fire's Bucket Brigade. These buckets are used to reduce the likelihood of a fire starting due to fireworks that were improperly disposed of. Over 100 buckets were distributed on July 4th this year and over 900 are on-hand ready to be distributed for New Year's and beyond.

Battery Disposal Program

The Spring Fire Department has implemented an effective battery disposal program in collaboration with Call2Recycle. As part of this initiative, they utilize Call2Recycle's MAX Barrels, which are designed to safely collect and store used batteries of all types. This program aims to ensure that batteries are disposed of responsibly, preventing potential battery related fires. Residents can drop off their used batteries at all Spring Fire Department Stations, contributing to a safer and cleaner community.

Hurricane Preparedness

The Spring Fire Department's Hurricane Preparedness Program is designed to ensure the safety and well-being of the community during and after hurricanes. A key component of this program is the utilization of the State of Texas Emergency Assistance Registry (STEAR). This registry helps local emergency planners and responders identify residents who may need additional assistance during emergencies, such as those with disabilities, limited mobility, or other special needs. By leveraging STEAR, the Spring Fire Department can efficiently check on and provide necessary support to vulnerable residents following a disaster, ensuring that everyone receives the help they need. Currently there are 107 residents in the STEAR registry within the SFD coverage area.

CERT Program

The Community Emergency Response Team (CERT) at the Spring Fire Department plays a crucial role in enhancing community resilience and preparedness. This program educates volunteers about disaster preparedness and trains them in essential skills such as fire safety, light search and rescue, team organization, and disaster medical operations. By empowering residents with these skills, CERT helps ensure that the community can effectively respond to and recover from emergencies.

Public Education Program

CPR/AED/First Aid Courses

The Spring Fire Department offers comprehensive CPR, AED, and First Aid courses certified by the American Health & Safety Institute (HSI). These courses are designed to equip community members with essential life-saving skills. Participants learn CPR techniques, how to use an

Automated External Defibrillator (AED), and basic first aid procedures for adults, children, and infants. The training covers critical areas such as choking response, injury prevention, and emergency care, aiming to preserve life, alleviate suffering, and promote recovery. Classes are scheduled regularly, ensuring accessibility for all interested individuals. In 2023, 30 community CPR classes were held, and 121 students were certified in CPR and First Aid.

Safe Babysitting Course

The Spring Fire Department currently offers the Safe Sitter® program, a specialized babysitting course aimed at middle school students. This program equips young babysitters with essential skills to care for children of various age groups safely and responsibly. Participants receive a student handbook covering topics such as childcare techniques, emergency response, and basic first aid & CPR. In 2023, this initiative helped 33 young babysitters gain confidence and competence in their caregiving roles.

Fire Investigation, Origin and Cause Program

Spring Fire relies on the Harris County Fire Marshall's Office (HCFMO) for all investigations. HCFMO provides investigative services for over 56 fire departments in the area of Harris County. HCFMO investigators respond to calls for service from fire, police and other municipal and government agencies to investigate fires for origin and cause. Harris County Fire Marshal investigators are certified through the Texas Commission on Fire Protection and the Texas Commission on Law Enforcement. Fire Marshal Investigators are certified Peace Officers.

Accelerant Detection Teams assist fire investigators in locating areas for collection of evidence samples for laboratory analysis at fire scenes. An ignitable liquid is an accelerant when it is intentionally used to start a fire or increase the growth or spread of a fire. HCFMO canine handler teams are used to detect possible evidence of accelerant use at a fire scene. HCFMO canines are trained to indicate to the trace presence of 14 ignitable liquids. HCFMO canine teams are certified through the North American Police Work Dog Association, The Texas State Fire Marshal's Office, and the Canine Accelerant Detection Association. Both HCFMO K9s were donated by K9s4Cops. (Source: Harris County Fire Marshall's Office, hcfmo.net/Divisions/Investigations)

Domestic Preparedness Program

Recognizing the scale of incidents related to natural risks (hurricanes, flooding, etc.), possible terrorist threats, and the scope of potential responses to and mitigation of impact of these events the Harris County Office of Homeland Security and Emergency Management initiated a Multi-Jurisdictional Hazard Mitigation Plan.

Participants in the plan include the Harris County Flood Control District, many incorporated towns and cities within the Houston Metropolitan area, as well as local school districts, colleges, and universities.

ESD-7 does not contain any incorporated towns or cities, but instead covers unincorporated portions of Harris County. As such, ESD-7 has not elected to participate in the planning phases of this effort. Instead, we accept the plan and mitigating actions of the participating entities to cover our interests.

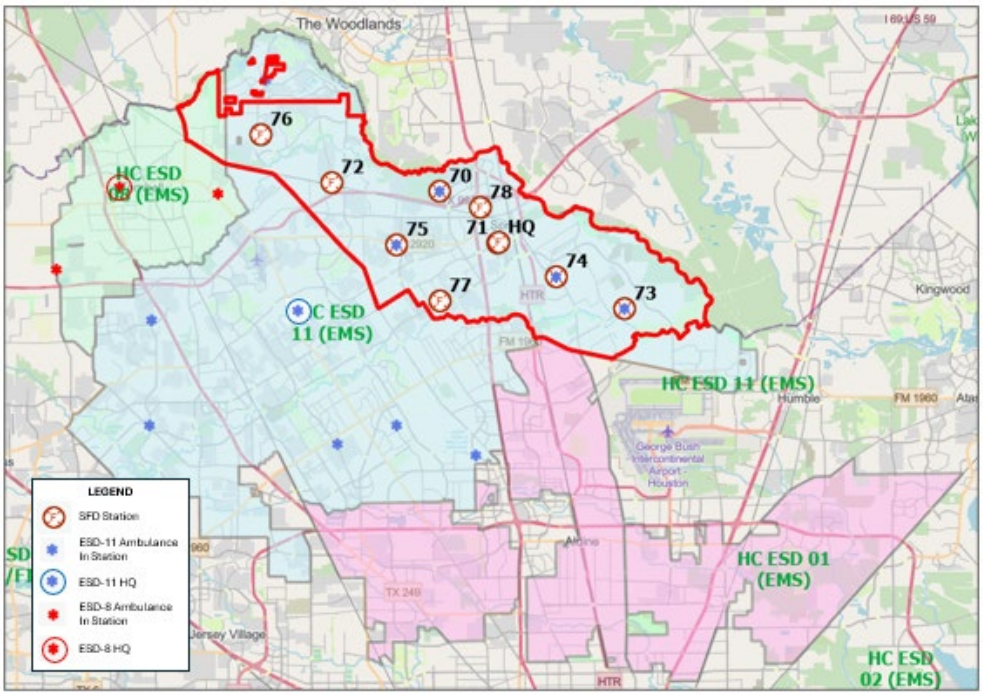
An example of how SFD interests are being protected by the plan and actions of participating entities can be found in the group's actions following Hurricane Harvey. The Harris County Flood Control District in particular has enacted plans, secured grants/funding, and executed flood control and flood mitigation projects throughout the county increasing our collective resilience to hurricanes and major rain events across the area.

Fire Suppression

Spring Fire Department provides all-hazards fire suppression for structure fires in single-family and multi-family residential structures, commercial structures, and industrial environments. Spring Fire Department is also trained and equipped to manage wildland fire and wildland and urban interface incidents. Coverage is provided 24 hours per day, 7 days per week, 365 days per year from 9 staffed stations equipped with 58 pieces of firefighting apparatus, including 1 platform, 2 straight ladders, 6 frontline pumpers, 2 reserve pumpers, 1 heavy rescue, 1 reserve rescue, 2 tankers, and 3 booster (type 6 brush) trucks. These apparatuses are staffed by trained and certified full-time, part-time, and volunteer firefighters, with 139 full-time firefighters, 6 part-time firefighters, and 19 volunteer firefighters.

Emergency Medical Services (EMS) – Harris County ESD 11 Partnership

Emergency Medical Services are provided by ESD-11 which covers 177 square miles of Harris County, and ESD-8 which covers an additional 32 square miles around the City of Tomball.



ESD 11 uses a hybrid approach to deployment. This approach allows for geographic and volume coverage. This approach uses ten station-based ambulances to provide geographic coverage to the 177-square-mile district. The other seven to seventeen ambulances are centrally deployed and are used to manage their

volume, often in concentrated areas. These units are strategically deployed to areas where previous 911 calls have occurred on other days around specific times. The predictive nature of a dynamically resourced system grows more accurate with time and experience. This dynamic resource management has been proven to dramatically reduce costs and improve efficiency, thus providing a highly reliable service for the district's residents, guests, and visitors.

ESD-11 ambulances and crews are housed in 4 Spring Fire Department stations with an additional deployment at The Woodlands Fire Station 7 just outside of ESD-7 coverage.

ESD-8 through Northwest Community Health serves approximately 32 square miles of Harris County, Texas, in the Tomball area. The estimated population of the service area in 2020 was 22,000 with projected growth of 50% by 2030. Northwest also serves a large commuter population along State Highway 249 - Tomball Toll Road and State Highway 99 - Grand Parkway, as well as thousands of visitors to Tomball's festivals and events.

The agency currently staffs four Mobile Intensive Care Units with capacity to staff up to seven ambulances during mass-gathering events and disasters. Most of the agency's operations are based at the ESD 8 facility in central Tomball. Ambulances are also strategically positioned at satellite stations through our partnership with Tomball Fire Department.

Additionally, all Spring firefighters are EMT or Paramedic certified and can provide Level 1 medical care upon arrival on scene.

Technical Rescue

Spring Fire has an extremely well-trained and well-equipped technical rescue team, prepared to respond to:

- high-angle rope rescue
- trench rescue
- cell tower rescue
- confined space rescue
- technical elevator rescue
- Big Rig rescue
- structural collapse stabilization and rescue
- Man vs. Machine extrication

and can respond to many other specialized incidents. We have a dedicated staff of 21 rescue specialists – 7 per shift. Rescue apparatuses include a Heavy Rescue truck, a technical rescue trailer to support trench and structural collapse, a utility terrain vehicle (UTV) for remote location extrication, heavy utility vehicles, and six boats.



Nearly all of Spring Fire Department's staff are swift water rescue certified, and boats are staged at 4 different stations.

Hazardous Materials

While SFD firefighters have the training and equipment to handle small-scale (Low Risk) hazardous materials incidents (like gasoline spills), the Harris County Fire Marshall's office responds to more major and risky HazMat incidents.

The Harris County Hazardous Materials Response Team (HCHMRT) was created following the events of September 11, 2001, as a division of the Harris County Fire Marshall's Office. Every HCHMRT technician has received many hours of specialized training and is supported by state-of-the-art apparatus and equipment.

M-1 is used as the primary response vehicle to incidents involving hazardous materials and suspected incidents of homeland security, including chemical, biological, radiological, and other emergencies. The vehicle, including built-in equipment, was manufactured by Pierce Manufacturing in Appleton, WI, at a cost of almost $1.2 million. Funding was provided through a federal UASI (Urban Area Security Initiative) grant. The truck, put in service early 2015, has a tremendous range of capabilities. It has more storage, analytical capabilities, and the ability to link 'live' with Transtar and the Harris County EOC.

In May 2008, Harris County HCHMRT added HM-2 and HazMat Marine-1 to the fleet. HM-2, a specially constructed FEMA, Type 1 Foam Tender, is designed to respond to large flammable and combustible liquid incidents in order to protect critical infrastructure and our environment.

In 2010 a Talon Hazardous Materials Robot was purchased with grant funds from the Department of Homeland Security. The robot leverages technology with a 7-instrument detection platform and provides a means for non-human entry into extremely hazardous environments.

HM-1 Capabilities

- Two cameras – one video & one thermal – on a 65 ft. Mast
- Truck-mounted weather station
- Three workstations, complete with computer monitors, satellite TV receivers, HD TV monitors & NVR, digital phone system, and ceiling-mounted HD data projector

HM-2 Capabilities:

- A 1500 GPM pump and a balanced-system foam delivery unit, allowing foam delivery at varying concentrations from multiple outlets simultaneously
- Carries 500 gallons of Alcohol Resistant AFFF firefighting foam, 40 gallons of hydrocarbon dispersant, and 300 gallons of water
- Carries an assortment of foam delivery hoses and a variety of adapters and fittings
- Atmospheric air monitoring instruments and spill control/leak stop equipment

(Source: Harris County Fire Marshall's Office (hcfmo.net/Divisions/Emergency-Operations)

Wildland Fire Services

The Spring Wildland Team was initiated in 2022 and deployed for the first time as a part of the Texas Intrastate Fire Mutual Aid System (TIFMAS) program to the Eastland Complex Fire. Since then, the team has grown to 25 active members that have gone beyond the basic training and have chosen to be a part of the team. Spring Fire currently has 1 fully qualified Engine Boss and 2 Engine Boss trainees. Training of other Wildland Team members working to obtain their FF1 qualification is not being rushed. This is done deliberately to make sure that every team member that deploys locally or out of jurisdiction is competent and capable of fulfilling their role on the fire ground.

Within our team we have several members who are qualified sawyers or working to become certified. These advanced timber felling skills are a necessity on the fire line as well as at home for the safe removal of downed trees or hazard trees. This upcoming year, we will begin to work with the local parks department to assist in hazard tree mitigation/removal in order to make sure our numerous hiking trails are safe for pedestrians. Our specialized training was put to use during hurricane Beryl when SFD deployed 3 specially trained sawyers to clear downed trees blocking the roadways, so that fire apparatus could make access to citizens in need.

Our wildland firefighters are equipped with top-of-the-line PPE. WE currently have two (Type 6) brush trucks with a third in the selection/design phase. SFD wildland team maintains a supply cache of wildland

specific equipment that is a requirement to deploy through the TIFMAS organization. This includes 4 STIHL 500i chainsaws with 30" bars, wildland hose, several appliances and adapters, drip torches, and hand tools.

Deployments and Responses

The SFD Wildlands Team has participated in 8 in-state (TIFMAS) deployments and one out of state. Their specialized skills were brought to bear in our response to Hurricane Beryl and (numerous) natural vegetation fires within our Coverage Area.

Community Critical Infrastructure

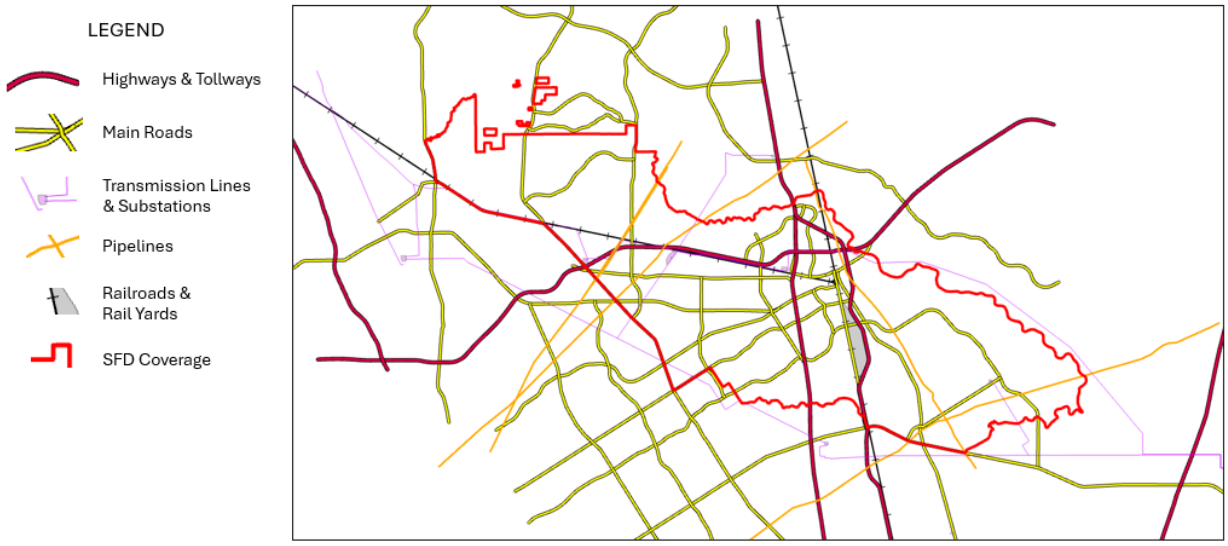
Transportation & Utilities

As discussed previously three major highways transect ESD-7 (Interstate 45, the Hardy Tollway, and the Grand Parkway (Hwy 99)), in addition to neighborhood streets 16 main thoroughfares provide good access to all corners of our coverage area.

The electrical grid in ESD-7 consists of 5 major transmission lines connecting 5 major substations. Much of the distribution network is carried throughout the coverage area on above-ground power lines which are frequently impacted by falling trees during severe weather events. Centerpoint Energy is the sole operator of the local power grid.

Five major (buried) pipelines cross through ESD-7 carrying natural gas and hydrocarbon liquids.

Railroads (discussed earlier) carry a large number of freight trains across our coverage area on the Union Pacific Navasota and Palestine Subdivisions. The Llyod Yard is a major switching station that frequently has hundreds of rail cars parked along its sidings.

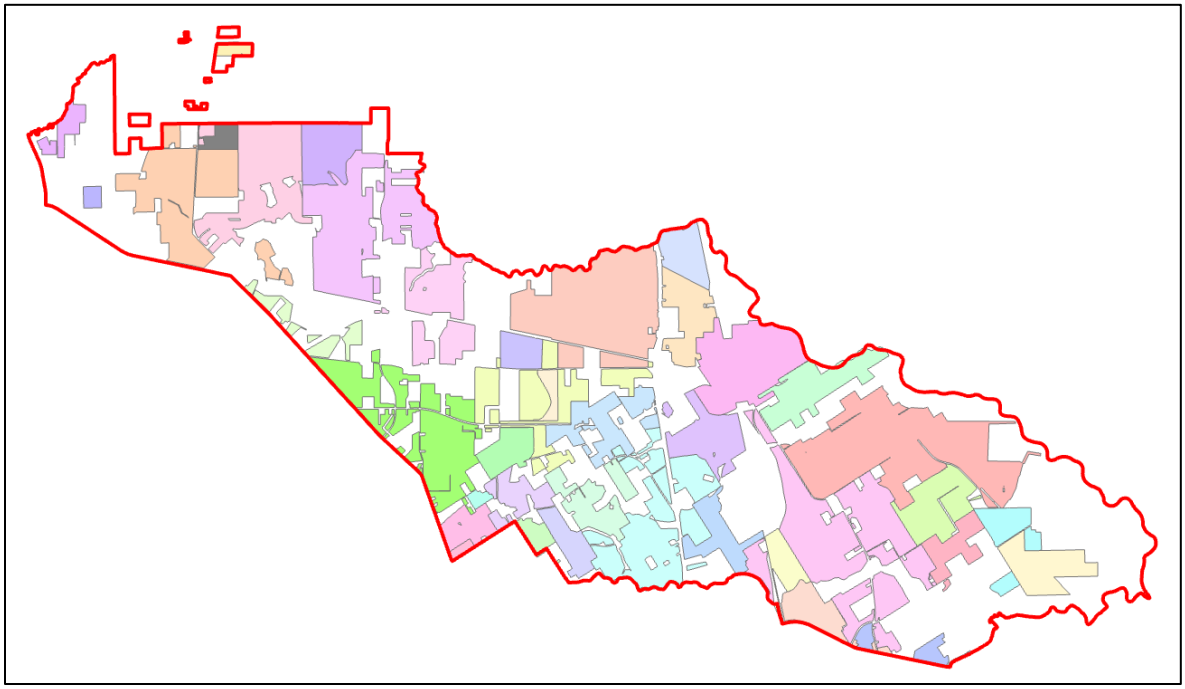


Critical Transportation and Utilities Infrastructure

Water Supply

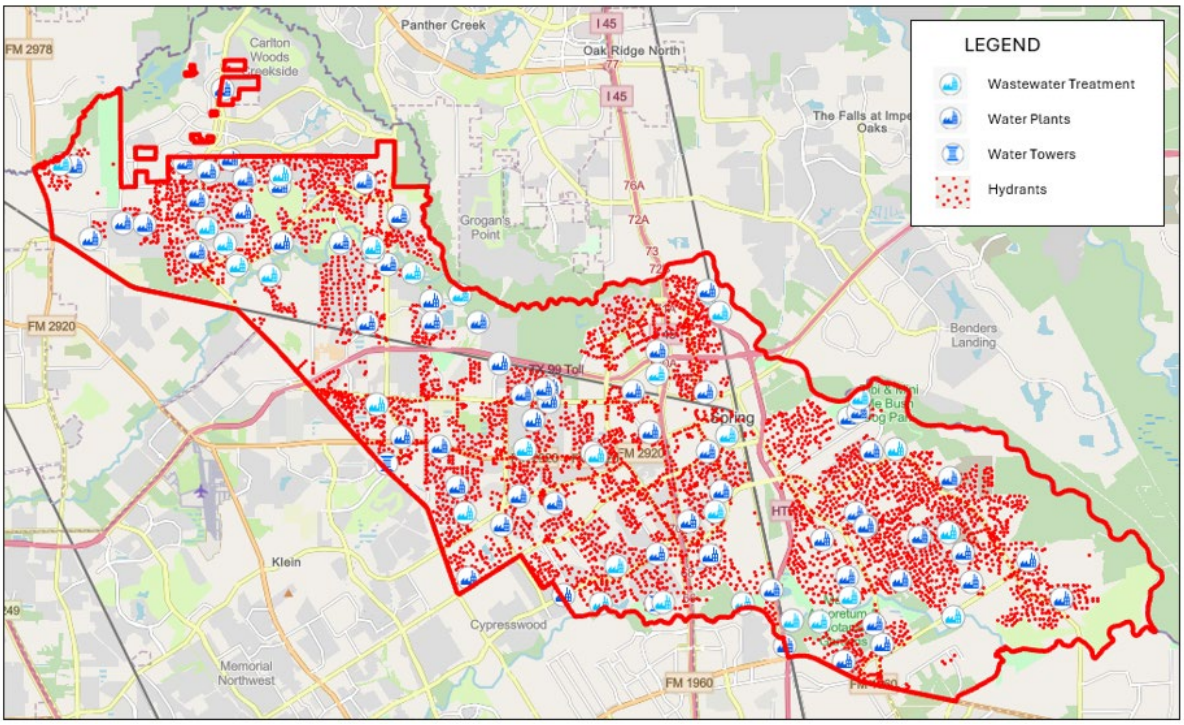
Potable water and that supplied to hydrants for fire suppression is provided by 33 Utility Districts across all of ESD 7. Water is supplied by 73 water wells and 5,572 hydrants.

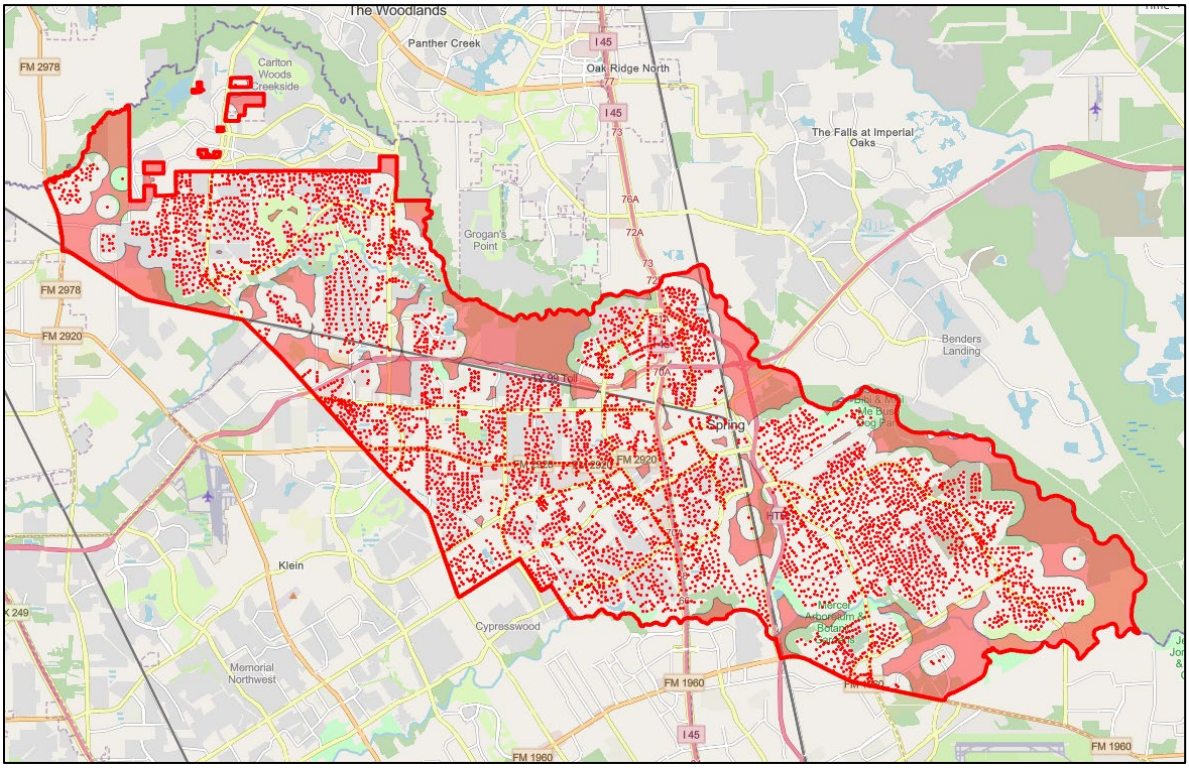
Utility Districts



Utility Districts Supplying Water to Our Community

Fire Hydrants, Water Plants, and Wastewater Treatment Plants

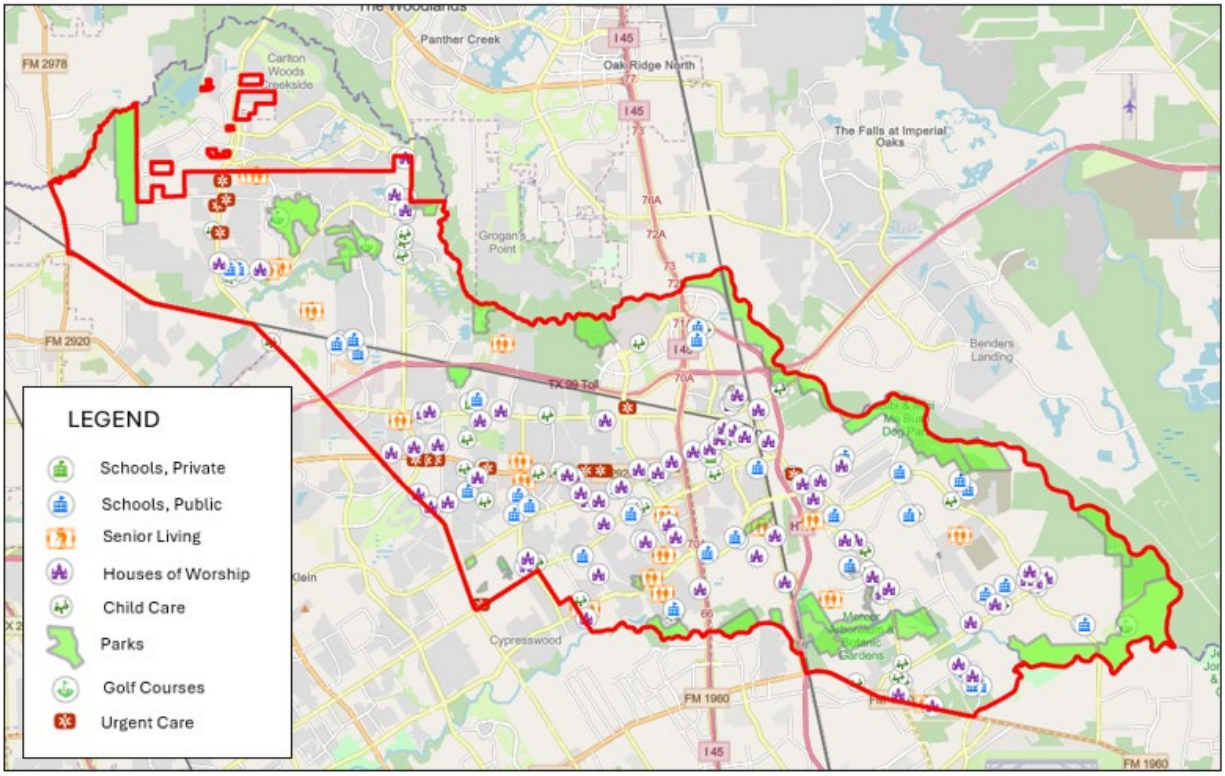




Fire Hydrant Coverage Gaps

The red polygons above highlight zones within our coverage area that are not within 1000’ of the nearest fire hydrant. Almost 4% of the 65,000 buildings within ESD-7 are within these gaps in hydrant coverage

Community Infrastructure



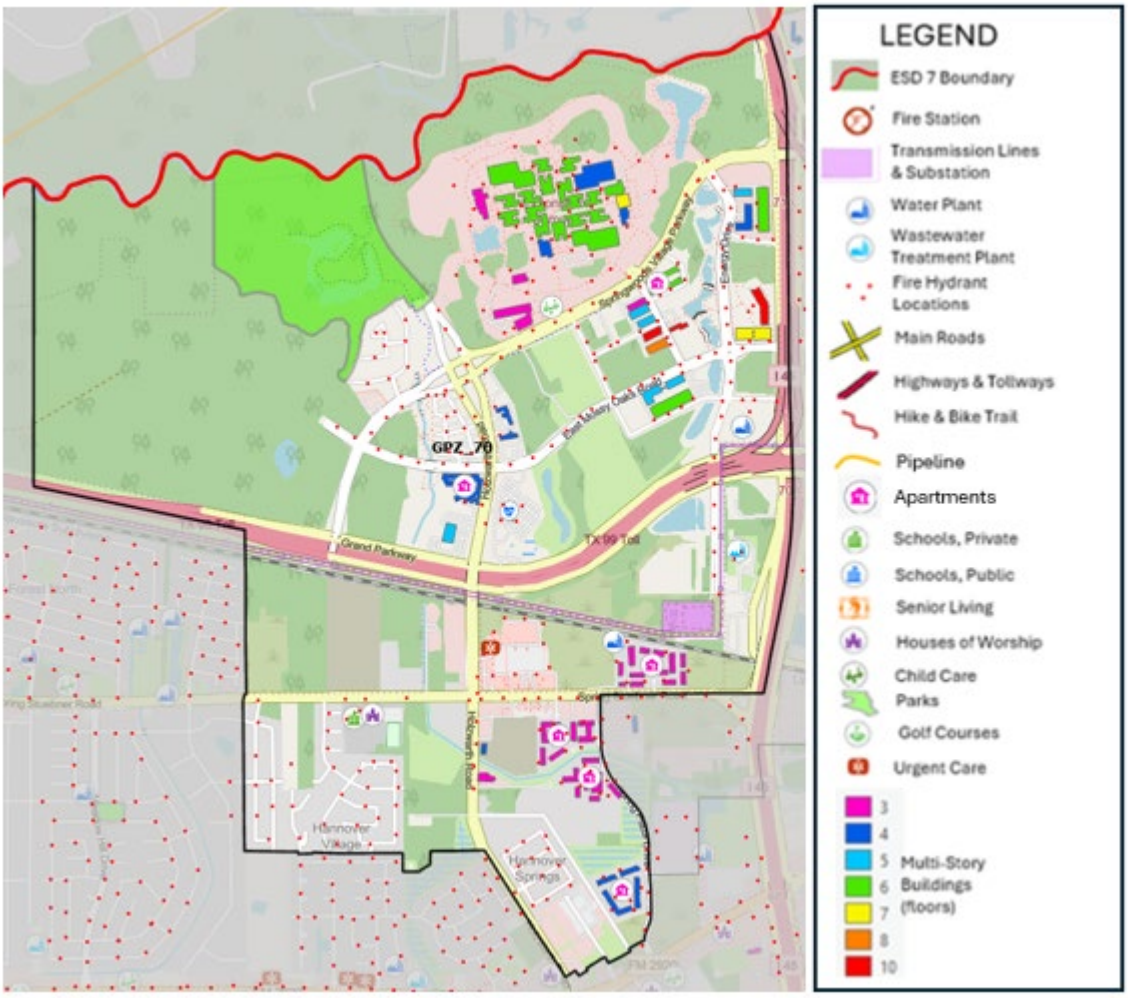
Sources: Hazus, GoogleMaps, and original mapping by Mark Leander

Community infrastructure within ESD-7 includes 41 schools, 63 childcare centers, 21 senior living and nursing facilities, 14 urgent care centers, 34 parks, and 69 places of worship. All are explicitly enumerated within each GPZ later in this document. While there are no hospitals within ESD-7 there are numerous hospitals just outside of our coverage area to the north, south, and west.

Critical Infrastructure by Geographical Planning Zone

Each Geographical Planning Zone (GPZ) is mapped, graying out the surrounding area. The attached Legend provides a key to the symbols used to identify elements of Critical Infrastructure. A tabular listing of Critical Infrastructure within each GPZ is included in Appendix C – Critical Infrastructure by GPZ

GPZ_70


GPZ_70
Grand Parkway
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Apartments
Schools, Private
Schools, Public
Senior Living
Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
3
4
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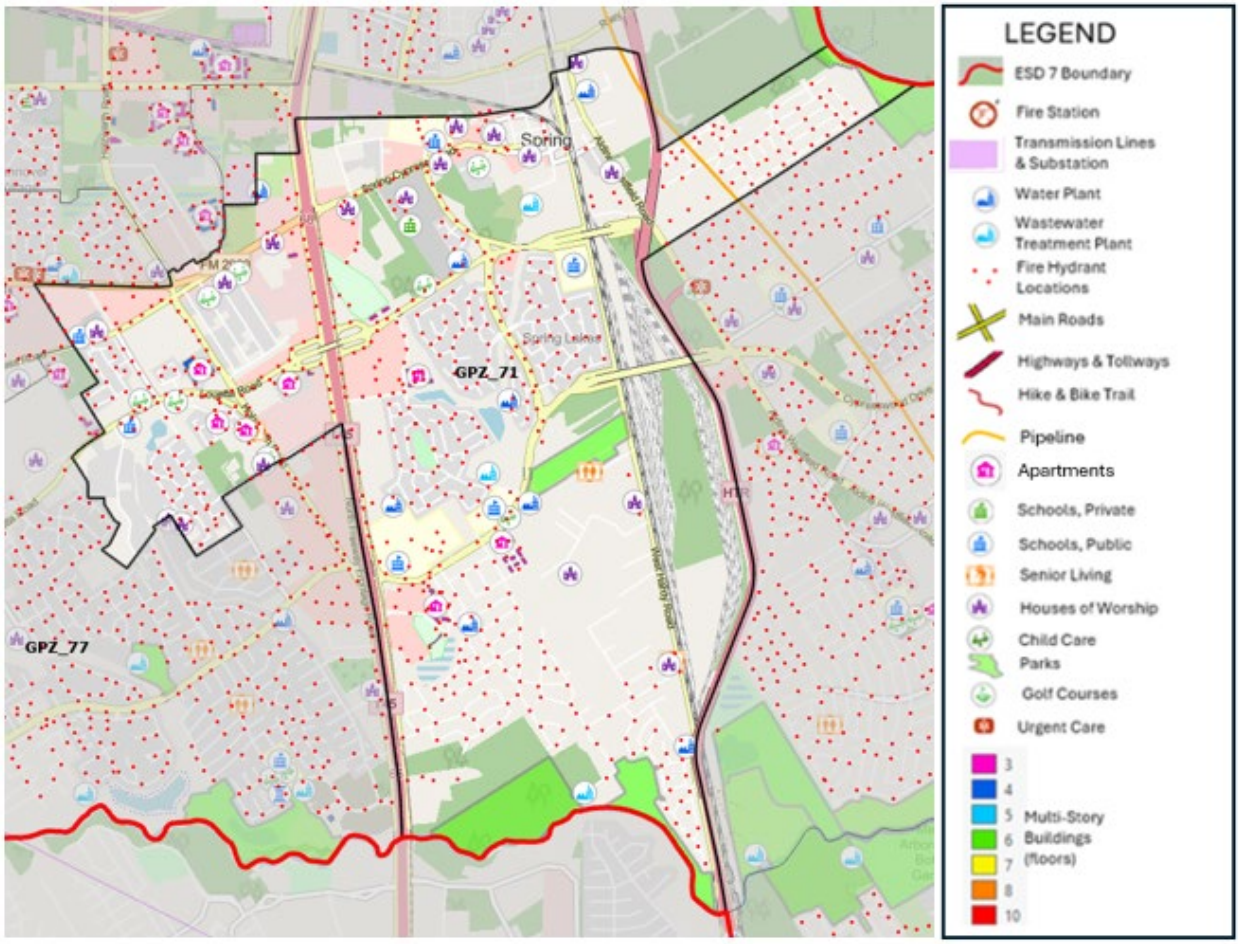
Multi-Story Buildings (floors)

GPZ_71


Soring
GPZ_71
GPZ_77
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Apartments
Schools, Private
Schools, Public
Senior Living
Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
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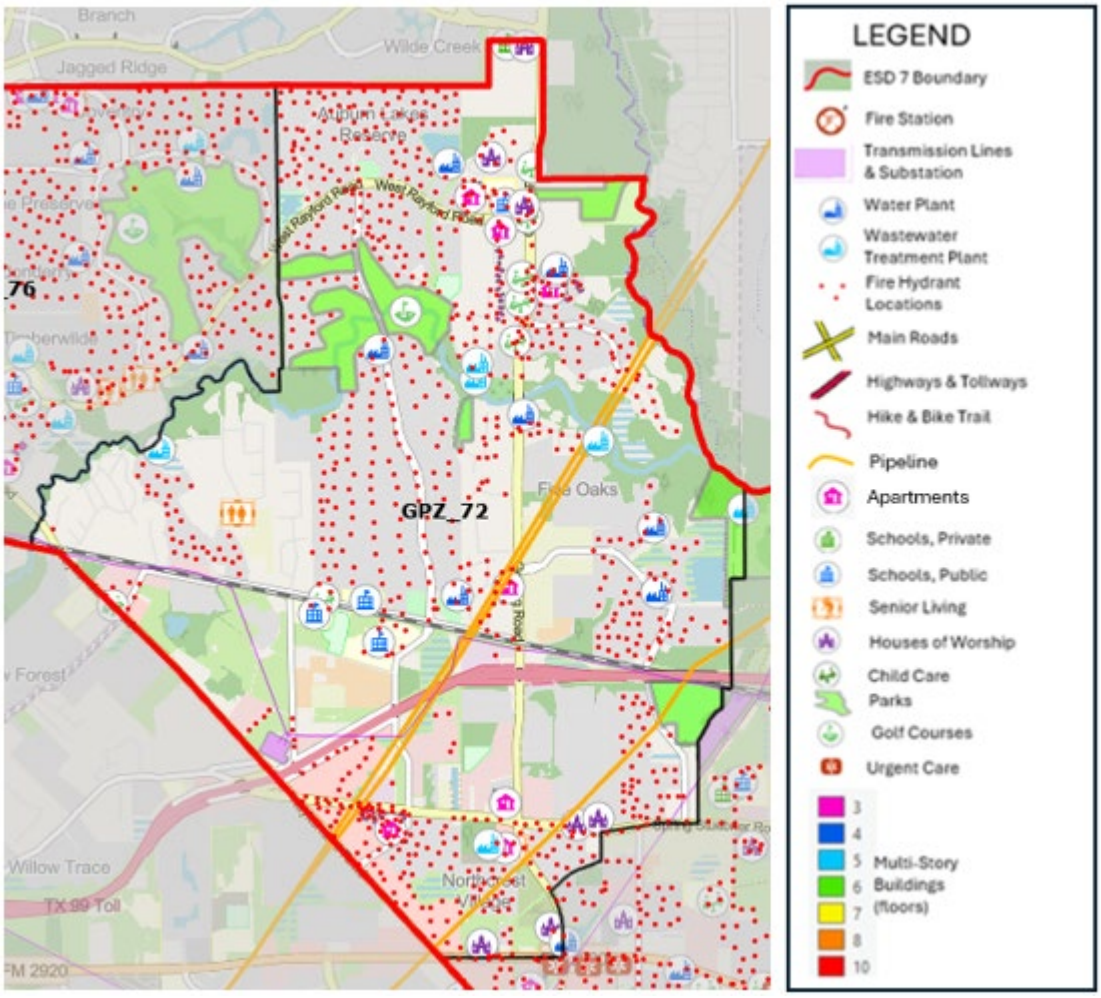
Multi-Story Buildings (floors)

GPZ_72


GPZ_72
Jagged Ridge
Wilde Creek
Autumn Lakes Reserve
West Rayford Road
Five Oaks
Willow Trace
TX-99 Toll
FM 2920
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Apartments
Schools, Private
Schools, Public
Senior Living
Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
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4
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8
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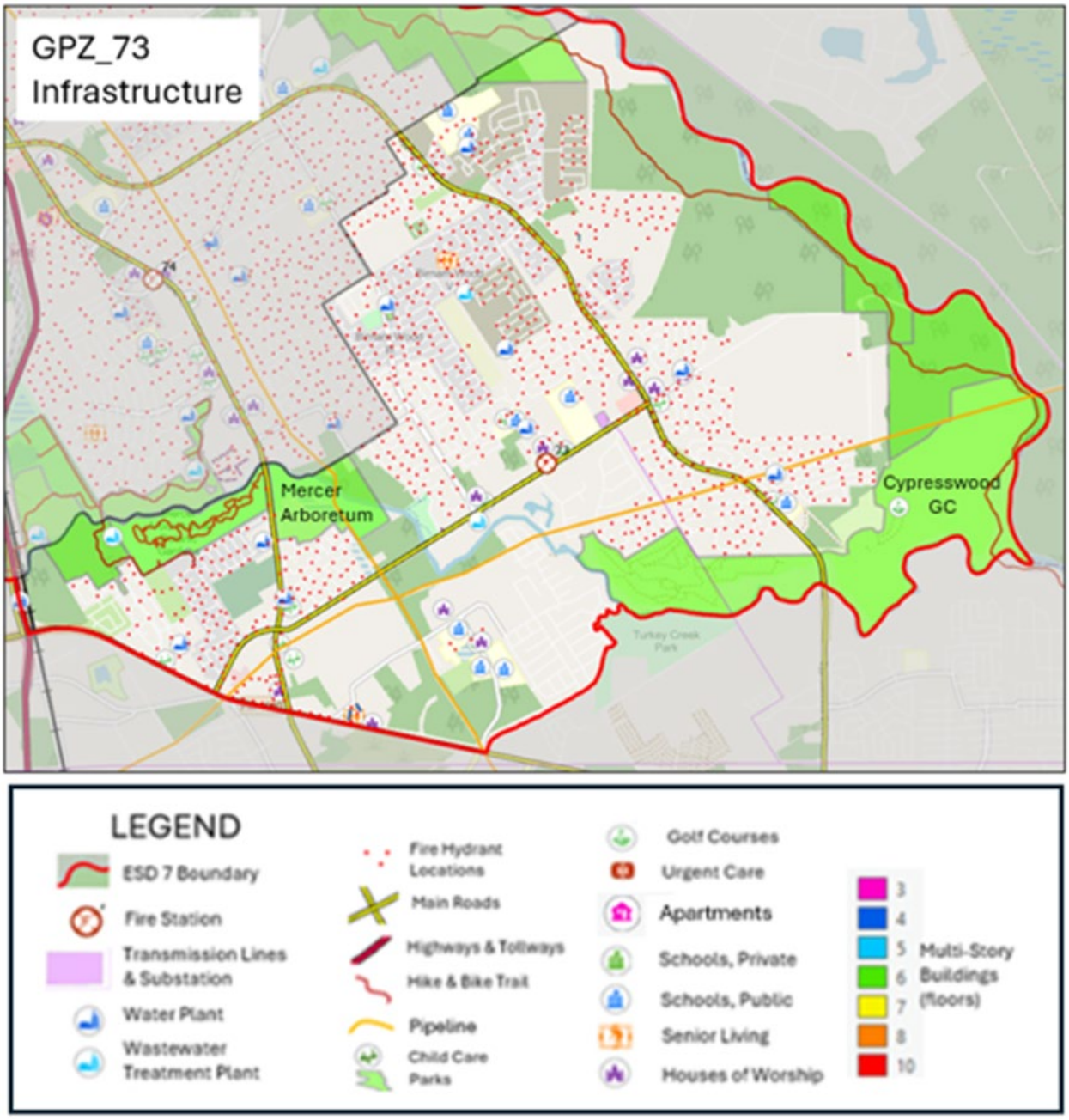
Multi-Story Buildings (floors)

GPZ_73


GPZ_73
Infrastructure
Mercer
Arboretum
Cypresswood
GC
Turkey Creek
Park
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines
& Substation
Water Plant
Wastewater
Treatment Plant
Fire Hydrant
Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Child Care
Parks
Golf Courses
Urgent Care
Apartments
Schools, Private
Schools, Public
Senior Living
Houses of Worship
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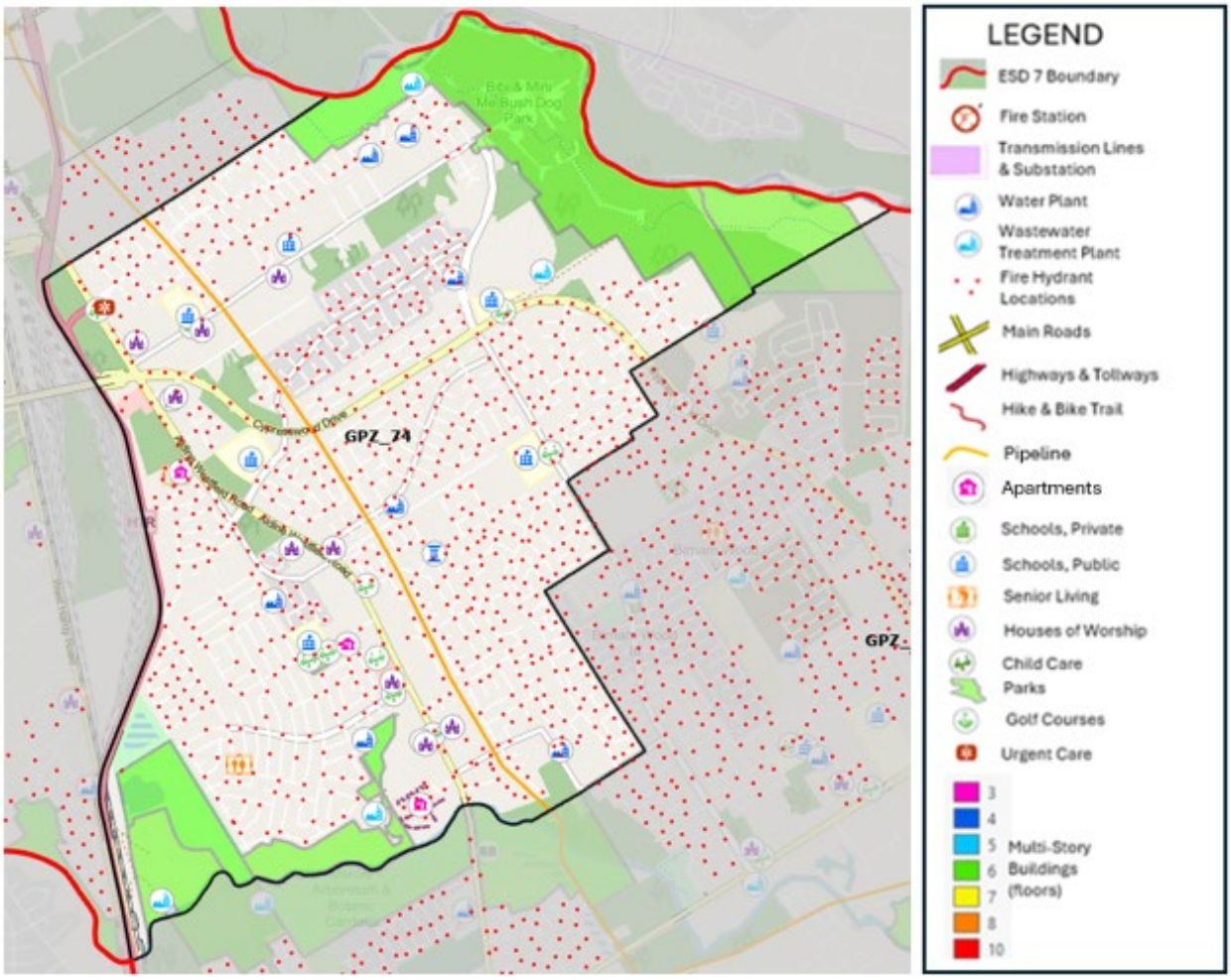
8
10
Multi-Story
Buildings
(floors)

GPZ_74


GPZ_74
GPZ_
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Apartments
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Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
3
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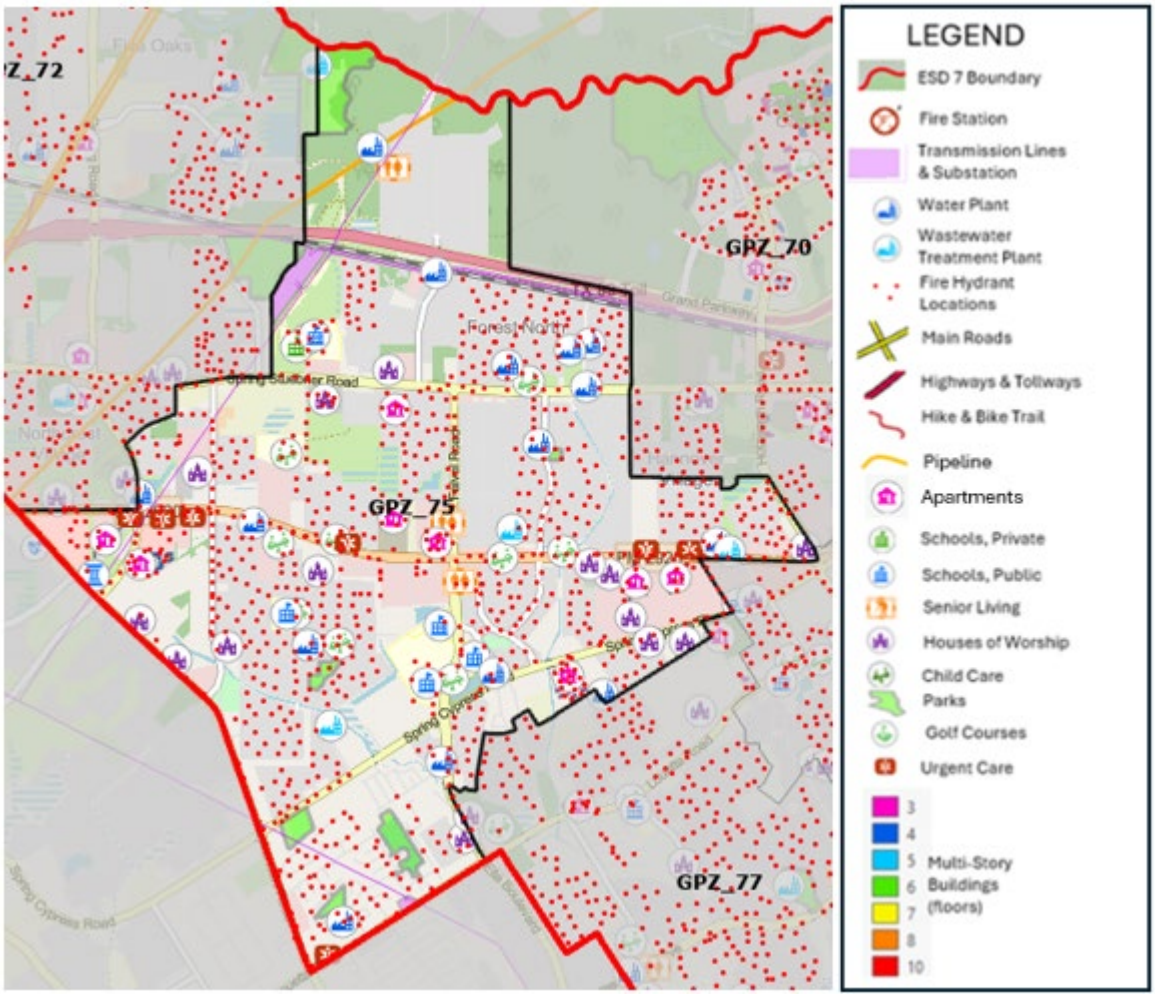
Multi-Story Buildings (floors)

GPZ_75


GPZ_72
GPZ_70
GPZ_75
GPZ_77
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
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Pipeline
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Schools, Public
Senior Living
Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
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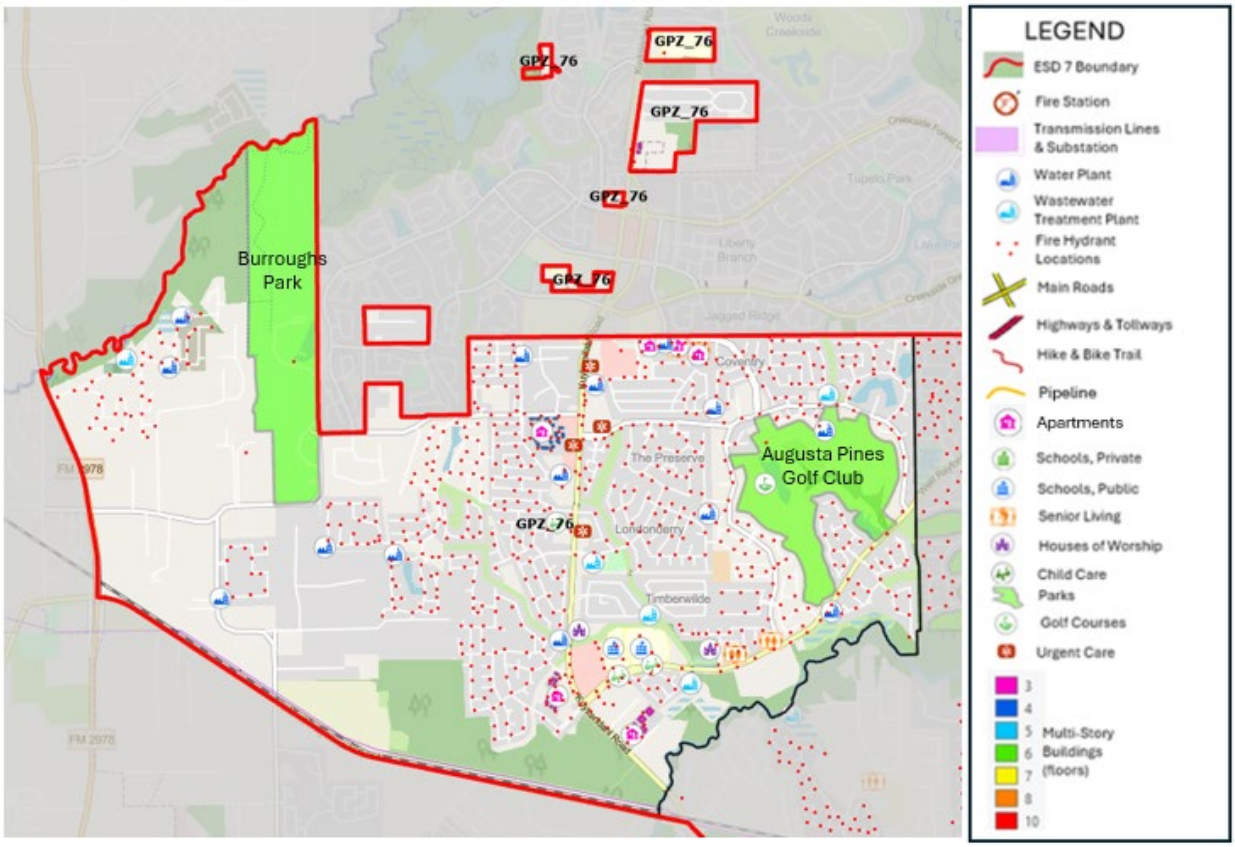
8
10
Multi-Story Buildings (floors)

GPZ_76


GPZ_76
GPZ_76
GPZ_76
GPZ_76
GPZ_76
GPZ_76
Burroughs Park
Augusta Pines Golf Club
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Apartments
Schools, Private
Schools, Public
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Golf Courses
Urgent Care
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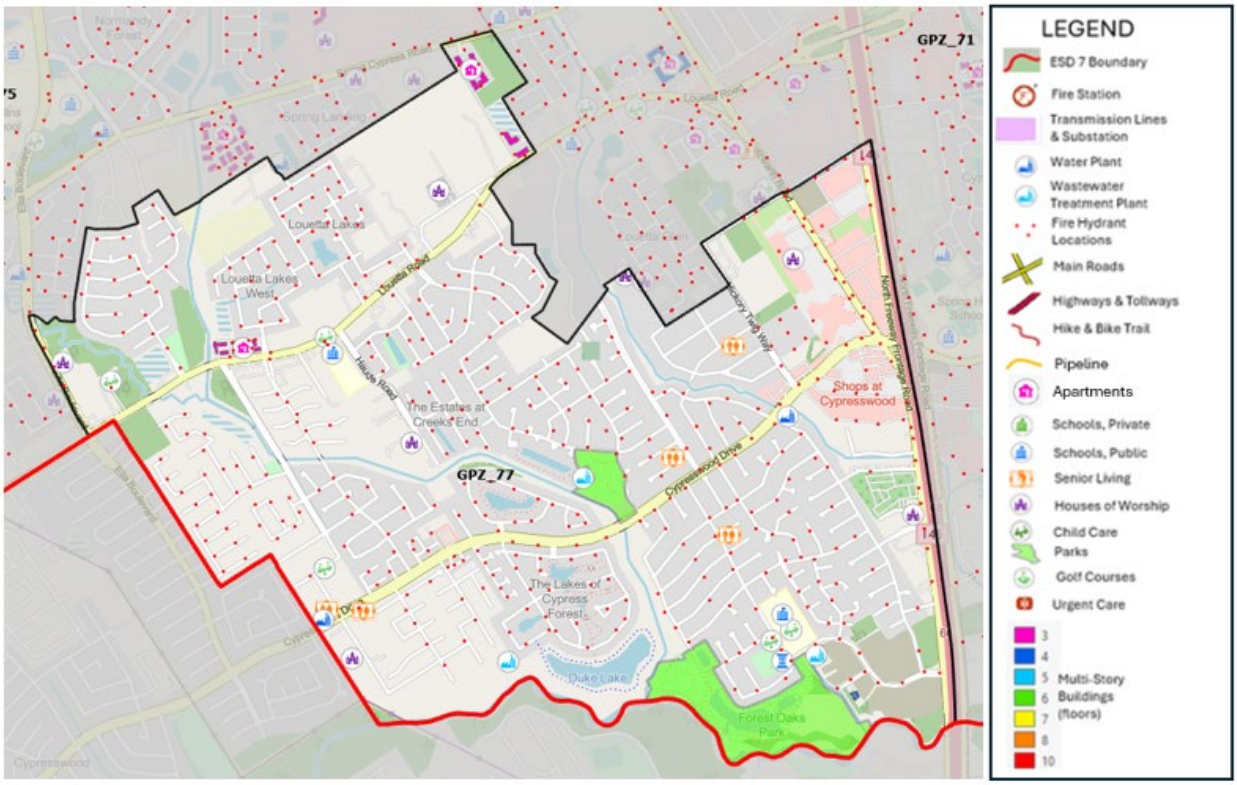
7
8
10
Multi-Story Buildings (floors)

GPZ_77


GPZ_71
GPZ_77
Louetta Lakes
Louetta Lakes West
Louetta Road
House Road
The Estates at Creeks End
Cypresswood Drive
Shops at Cypresswood
The Lakes of Cypress Forest
Duke Lake
Forest Oaks Park
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
Pipeline
Apartments
Schools, Private
Schools, Public
Senior Living
Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
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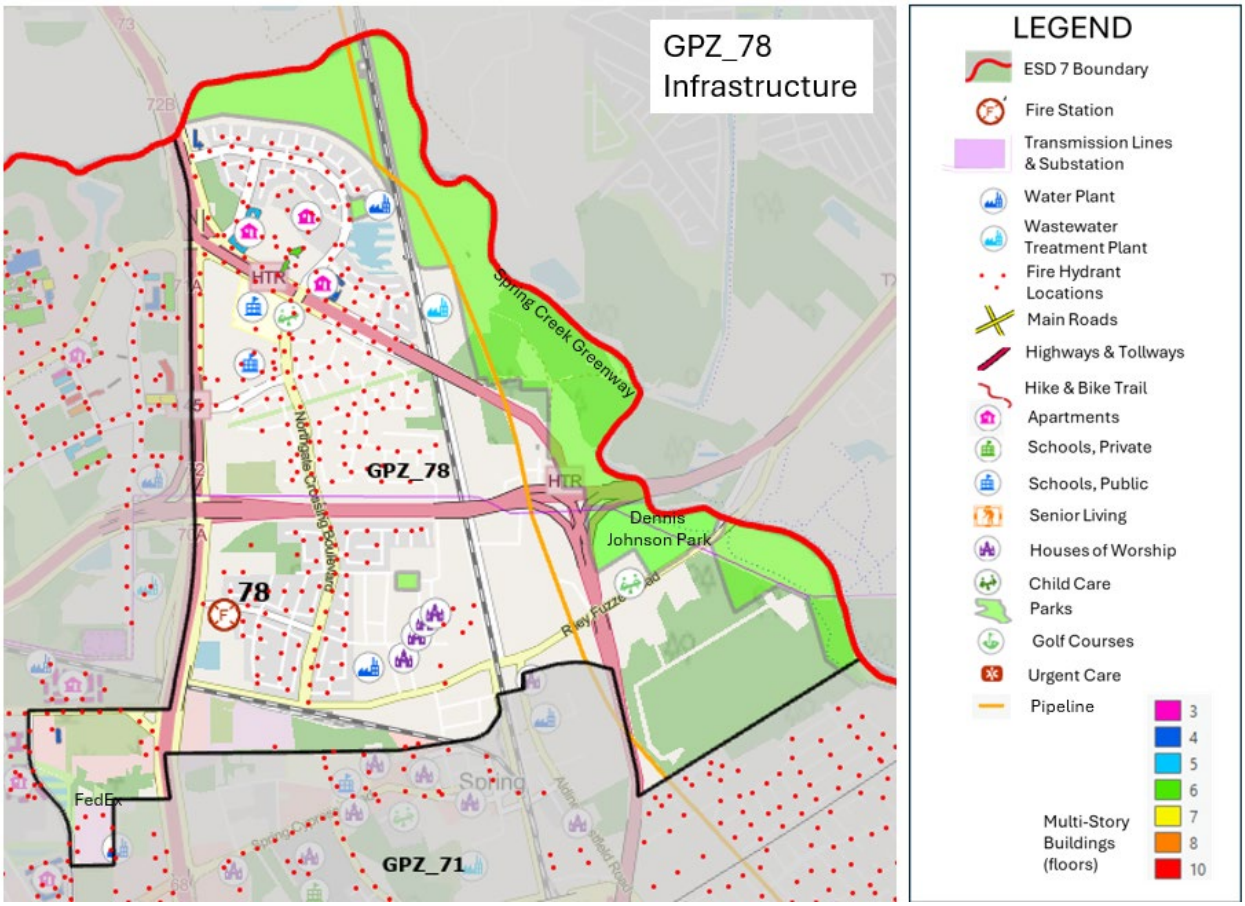
Multi-Story Buildings (floors)

GPZ_78


GPZ_78
Infrastructure
LEGEND
ESD 7 Boundary
Fire Station
Transmission Lines & Substation
Water Plant
Wastewater Treatment Plant
Fire Hydrant Locations
Main Roads
Highways & Tollways
Hike & Bike Trail
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Schools, Private
Schools, Public
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Houses of Worship
Child Care
Parks
Golf Courses
Urgent Care
Pipeline
Multi-Story Buildings (floors)
3
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6
7
8
10
Spring Creek Greenway
Dennis Johnson Park
GPZ_78
GPZ_71
78
FedEx
HTR

Historical Service Demands

The table below shows historic service demands for different incident categories for years 2019-2023. Also shown in light gray are predictions for service demands for years 2024-2027, based on a linear regression of historic data. Rows highlighted with darker gray apply the mean number of historic incidents, as the linear regression resulted in a negative slope. This is a prudent prediction as a linear regression of 5 datapoints isn't particularly robust, especially across an area with predicted continuing population growth and property development.

Incident Types by Year and GPZ

All GPZ's	2019	2020	2021	2022	2023	2024	2025	2026	2027
1 - Building Fire	98	93	87	125	110	114	125	131	136
1 - Other Fire	193	209	233	263	253	265	300	317	335
3 - EMS	3497	2813	2681	1723	2132	2569	2569	2569	2569
3 - Technical Rescue	42	28	29	30	42	35	35	35	35
4 - Hazmat/Explosions	229	212	280	278	406	365	449	491	533
5 - Service Calls	208	200	266	188	175	207	207	207	207
6 - Good Intent Calls	596	688	863	873	1050	1033	1251	1361	1470
7 - False Alarms	455	398	518	532	570	567	640	677	713
8 - Severe Weather	8	8	4	7	55	16	16	16	16
9 - Citizen Complaint	8	6	7	23	8	14	17	19	21
Grand Total	**5334**	**4655**	**4968**	**4042**	**4801**	5184	5609	5822	6035

GPZ-70	2019	2020	2021	2022	2023	2024	2025	2026	2027
1 - Building Fire	7	3	5	10	11	10	13	15	16
1 - Other Fire	8	9	7	17	17	17	22	25	27
3 - EMS	141	119	160	138	124	136	136	136	136
3 - Technical Rescue	3	2	2	1	8	5	7	8	9
4 - Hazmat/Explosions	4	8	20	13	18	19	26	29	32
5 - Service Calls	11	11	16	12	12	13	14	14	14
6 - Good Intent Calls	35	29	47	68	81	78	104	118	131
7 - False Alarms	46	39	53	59	52	56	63	66	69
8 - Severe Weather	0	0	0	1	1	1	2	2	2
9 - Citizen Complaint	0	0	0	0	1	1	1	1	1
Grand Total	**255**	**220**	**310**	**319**	**325**	336	387	412	438

GPZ-71	2019	2020	2021	2022	2023	2024	2025	2026	2027
1 - Building Fire	10	8	9	19	14	16	20	22	23
1 - Other Fire	24	24	42	30	41	40	48	52	56
3 - EMS	429	382	345	250	299	341	341	341	341
3 - Technical Rescue	8	3	4	4	6	5	5	5	5
4 - Hazmat/Explosions	28	22	33	36	57	50	64	71	78
5 - Service Calls	22	27	27	24	16	23	23	23	23
6 - Good Intent Calls	76	88	126	131	131	141	172	187	202
7 - False Alarms	49	40	63	67	64	68	79	85	91
8 - Severe Weather	1	0	0	2	9	6	10	11	13

9 - Citizen Complaint	0	1	1	4	1	2	3	4	4
Grand Total	**647**	**595**	**650**	**567**	**638**	692	765	801	838

GPZ-72	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	9	12	8	14	11	12	13	14	14
1 - Other Fire	23	30	21	35	38	36	43	47	50
3 - EMS	388	327	298	148	257	284	284	284	284
3 - Technical Rescue	2	5	3	3	4	4	4	4	5
4 - Hazmat/Explosions	34	29	42	41	50	48	57	61	66
5 - Service Calls	24	26	42	21	15	26	26	26	26
6 - Good Intent Calls	62	78	92	83	113	107	128	139	150
7 - False Alarms	51	53	56	38	69	58	62	64	66
8 - Severe Weather	1	2	0	0	6	3	5	6	7
9 - Citizen Complaint	0	1	2	6	0	3	4	4	5
Grand Total	**594**	**563**	**564**	**389**	**563**	581	627	649	672

GPZ-73	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	12	19	12	17	18	18	20	21	22
1 - Other Fire	34	30	27	48	35	39	43	45	47
3 - EMS	628	539	455	262	307	438	438	438	438
3 - Technical Rescue	11	6	4	7	4	6	6	6	6
4 - Hazmat/Explosions	31	41	37	31	50	44	49	52	55
5 - Service Calls	47	42	40	25	28	36	36	36	36
6 - Good Intent Calls	105	121	130	114	154	143	161	170	179
7 - False Alarms	61	45	62	76	68	71	80	85	89
8 - Severe Weather	0	1	2	0	5	3	5	6	7
9 - Citizen Complaint	3	1	0	1	0	1	1	1	1
Grand Total	**932**	**845**	**769**	**581**	**669**	799	839	860	880

GPZ-74	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	26	17	20	27	16	21	21	21	21
1 - Other Fire	38	50	55	46	38	45	45	45	45
3 - EMS	794	603	607	381	491	575	575	575	575
3 - Technical Rescue	3	4	5	7	9	9	12	13	15
4 - Hazmat/Explosions	48	36	58	59	88	78	99	109	120
5 - Service Calls	40	36	44	41	40	41	42	43	43
6 - Good Intent Calls	133	150	177	195	213	215	256	276	297
7 - False Alarms	82	78	99	114	108	114	131	140	149
8 - Severe Weather	4	2	1	1	9	5	7	8	9
9 - Citizen Complaint	2	1	1	4	2	3	3	4	4
Grand Total	**1170**	**977**	**1067**	**875**	**1014**	1105	1191	1234	1277

GPZ-75	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	16	14	13	18	15	16	16	16	16
1 - Other Fire	34	32	46	40	39	42	45	47	49
3 - EMS	554	380	360	230	264	358	358	358	358

3 - Technical Rescue	7	5	5	4	6	5	5	5	5
4 - Hazmat/Explosions	44	32	37	37	60	49	57	61	64
5 - Service Calls	24	25	44	31	27	33	35	36	37
6 - Good Intent Calls	86	106	131	123	143	144	170	183	196
7 - False Alarms	77	70	87	66	85	79	82	83	84
8 - Severe Weather	2	1		1	9	6	9	10	12
9 - Citizen Complaint	2	1	3	3	2	3	3	3	3
Grand Total	**846**	**666**	**726**	**553**	**650**	734	780	803	826

GPZ-76	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	9	7	7	9	10	9	10	10	11
1 - Other Fire	14	14	16	19	23	22	26	29	31
3 - EMS	246	191	198	108	182	185	185	185	185
3 - Technical Rescue	6	1	1	2	1	2	2	2	2
4 - Hazmat/Explosions	19	19	23	28	33	32	39	43	47
5 - Service Calls	19	10	28	14	19	19	20	20	20
6 - Good Intent Calls	47	50	69	61	93	85	105	116	126
7 - False Alarms	36	34	48	46	65	60	74	81	88
8 - Severe Weather	0	1	0	0	7	4	7	8	9
9 - Citizen Complaint	1	1	0	1	1	1	1	1	1
Grand Total	**397**	**328**	**390**	**288**	**434**	418	469	494	520

GPZ-77	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	7	12	5	9	11	10	11	11	12
1 - Other Fire	12	12	17	12	9	12	12	12	12
3 - EMS	199	195	176	126	142	168	168	168	168
3 - Technical Rescue	1	2	4	2	2	3	3	3	3
4 - Hazmat/Explosions	15	14	21	24	41	35	48	54	60
5 - Service Calls	12	18	16	13	8	13	13	13	13
6 - Good Intent Calls	38	51	63	59	81	77	96	105	115
7 - False Alarms	31	23	36	41	34	38	43	45	47
8 - Severe Weather	0	1	0	2	9	6	10	12	14
9 - Citizen Complaint	0	0	0	3	1	2	3	3	4
Grand Total	**315**	**328**	**338**	**291**	**338**	364	406	427	448

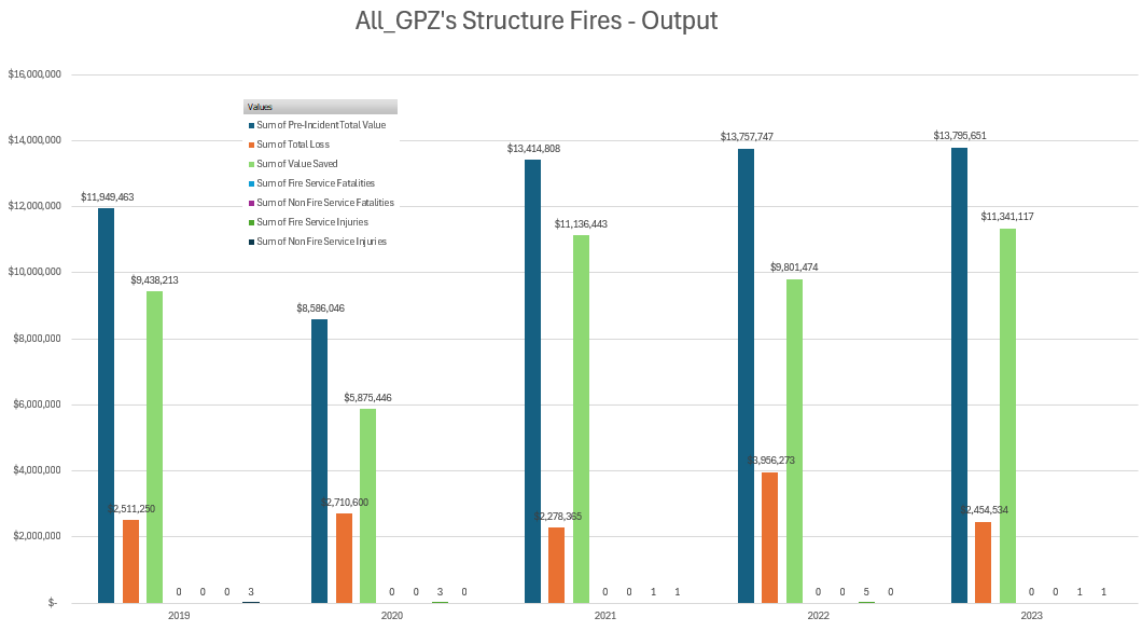
GPZ-78	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
1 - Building Fire	2	1	8	2	4	4	5	6	6
1 - Other Fire	6	8	2	16	13	13	18	20	22
3 - EMS	118	77	82	80	66	85	85	85	85
3 - Technical Rescue	1	0	1	0	2	1	2	2	2
4 - Hazmat/Explosions	6	11	9	9	9	10	10	11	11
5 - Service Calls	9	5	9	7	10	9	10	10	10
6 - Good Intent Calls	14	15	28	39	41	43	59	66	74
7 - False Alarms	22	16	14	25	25	23	26	28	29
8 - Severe Weather	0	0	1	0	0	0	0	0	0
9 - Citizen Complaint	0	0	0	1	0	0	1	1	1
Grand Total	**178**	**133**	**154**	**179**	**170**	189	216	229	242

Outputs and Outcomes

The histogram below depicts the values of properties, property loss, and property saved for all structure fires from 2019 to 2023 across the SFD Coverage Area. Also shown are fatalities (Fire service and civilian) – zero for all years, and injuries of fire service personnel and civilians (10 and 5, respectively in total).

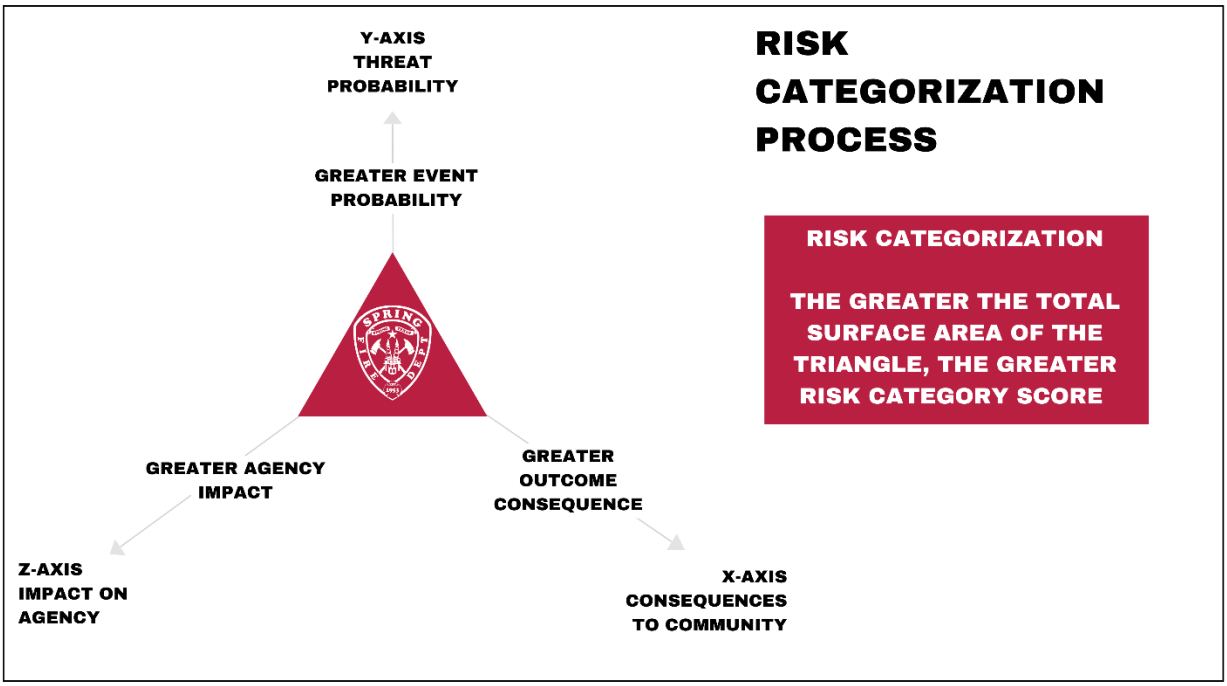
In summary, for the five-year period from 2019 – 2023, $460,683,666 of total property value was involved in structure fire incidents, with losses totaling $30,070,576. During that five-year period the efforts of SFD personnel saved $430,613,090 of property value.

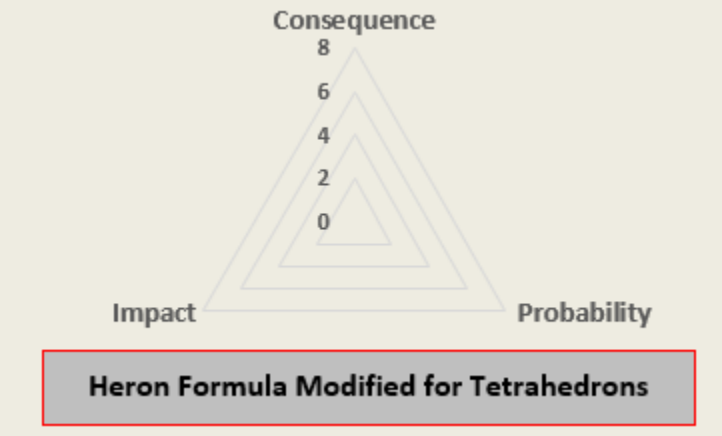
Appraisals from 2022 estimate total property value within ESD-7 to be $20,226,846,197.



Similar histograms documenting Output and Outcomes for each GPZ are included in Appendix D – Structure Fire Outputs for Each GPZ

Risk Assessment Methodology





Score	Consequences to the Community
2	**Minor Consequences** (minor casualty - small loss)
4	**Moderate Consequences** (moderate casualty - moderate loss)
6	**Major Consequences** (high casualty - high loss)
8	**Severe Consequences** (extreme casualties - extreme losses)

Score	Probability or Likelihood of Incident
2	**0 - 10 annual average over five years**
4	**11 - 100**
6	**101 - 500**
8	**> 500**

Score	Impact Against Operational Forces - Critical Tasking
2	**Single Resource**
4	**2 - 4 Resources**
6	**5 - 10 Resources**
8	**10+ Resources**

Risk Classification and Categories

Risk Scoring Table

Class	NFIRS		P	C	I	Risk Score	RISK BAND
Structure Fires	111	Building Fire	6	6	6	44.09	3 - HIGH
Other Fires	100	Fire - General	2	2	2	4.90	1 - LOW
	112	Fires in structures other than a building	2	2	2	4.90	1 - LOW
	113	Cooking fire, confined to container	4	2	2	8.49	1 - LOW
	114	Chimney or Flue fire, confined to chimney or flue	2	2	2	4.90	1 - LOW
	116	Fuel Burner/boiler malfunction, fire contained	2	2	2	4.90	1 - LOW
	117	Commercial compactor fire, confined to rubbish	2	2	2	4.90	1 - LOW
	118	Trash or rubbish fire in a structure, no flame damage	2	2	2	4.90	1 - LOW
	120	Fire in a Mobile Property used as a Fixed Structure	2	2	2	4.90	1 - LOW
	121	Fire in Mobile Home used as a fixed residence	2	4	4	13.86	2 - MOD
	122	Fire in motor home, camper, or recreational vehicle	2	4	4	13.86	2 - MOD
	123	Fire in Portable Building, fixed location	2	4	4	13.86	2 - MOD
	130	Mobile Property (Vehicle) Fire	2	2	2	4.90	1 - LOW
	131	Passenger Vehicle Fire	2	2	2	4.90	1 - LOW
	132	Road Freight or Transport Vehicle Fire	4	4	4	19.60	2 - MOD
	133	Rail Vehicle Fire	2	8	8	48.00	4 - MAX
	134	Water Vehicle Fire	2	4	4	13.86	2 - MOD
	135	Aircraft Vehicle Fire	2	6	6	28.14	3 - HIGH

	136	Self-propelled Motor Home or RV Fire	2	2	2	4.90	1 - LOW
	137	Camper or RV Fire	2	2	2	4.90	1 - LOW
	138	Off-Road Vehicle or Heavy Equipment Fire	2	2	2	4.90	1 - LOW
	140	Natural Vegetation Fire	2	2	2	4.90	1 - LOW
	141	Forest, Woods, or Wildland Fire	2	4	4	13.86	2 - MOD
	142	Brush or Brush/Grass mixture Fire	4	2	2	8.49	1 - LOW
	143	Grass Fire, includes Fire confined to area	4	2	2	8.49	1 - LOW
	150	Outside Rubbish Fire	2	2	2	4.90	1 - LOW
	151	Outside Rubbish, Trash, or Waste Fire	4	2	2	8.49	1 - LOW
	152	Garbage Dump or Sanitary Landfill Fire	2	2	2	4.90	1 - LOW
	153	Construction or Demolition Landfill Fire	2	2	2	4.90	1 - LOW
	154	Dumpster or Other Outside Trash Receptacle Fire	4	2	2	8.49	1 - LOW
	155	Outside Stationary Compactor/Compacted Trash Fire	2	2	2	4.90	1 - LOW
	160	Outside Rubbish Fire	2	2	2	4.90	1 - LOW
	161	Outside Storage Fire on Residential or Commercial/Industrial Property	2	2	2	4.90	1 - LOW
	162	Outside Equipment Fire	2	4	4	13.86	2 - MOD
	163	Outside Gas or Vapor Combustion Explosion	2	2	2	4.90	1 - LOW
	164	Outside Mailbox Fire	2	2	2	4.90	1 - LOW
	170	Outside Rubbish Fire	2	2	2	4.90	1 - LOW
	171	Cultivated Grain or Crop Fire	2	2	2	4.90	1 - LOW
	172	Cultivated Orchard or Vineyard Fire	2	2	2	4.90	1 - LOW
	173	Cultivated Trees or Nursery Stock Fire	2	2	2	4.90	1 - LOW
EMS	300	Rescue and EMS - General	2	2	2	4.90	1 - LOW
	311	Medical assist, assisting EMS crew	8	2	2	16.25	2 - MOD
	320	Medical Assist	4	2	2	8.49	1 - LOW
	321	EMS call, excluding vehicle accident with injury	8	2	2	16.25	2 - MOD
	322	Vehicle accident with injuries	6	4	4	26.53	3 - HIGH
	323	Motor Vehicle/pedestrian accident (MVPed)	4	4	4	19.60	2 - MOD
	324	Motor vehicle accident with no injuries	6	2	2	12.33	2 - MOD
	331	Lock-in, includes vehicles	4	2	2	8.49	1 - LOW
	381	Rescue or EMS Standby; hazardous conditions	2	2	2	4.90	1 - LOW
Technical Rescue	341	Search for person on land	2	2	6	12.33	2 - MOD
	342	Search for person in water	2	4	4	13.86	2 - MOD
	343	Search for person underground	2	6	6	28.14	3 - HIGH
	350	Extrication, Rescue	2	2	2	4.90	1 - LOW
	351	Extrication of victim(s) from building/structure	2	4	4	13.86	2 - MOD
	352	Extrication of victim(s) from vehicle	4	4	4	19.60	2 - MOD
	353	Removal of victim(s) from stalled elevator	4	2	2	8.49	1 - LOW
	354	Trench/below grade Rescue	2	4	4	13.86	2 - MOD
	355	Confined Space Rescue	2	4	6	19.80	2 - MOD
	356	High Angle Rescue	2	4	4	13.86	2 - MOD
	357	Extrication of victim(s) from machinery	2	4	4	13.86	2 - MOD
	361	Swimming/recreational water areas rescue	2	2	2	4.90	1 - LOW
	362	Ice Rescue	2	2	2	4.90	1 - LOW

	363	Swift Water Rescue	2	4	6	19.80	2 - MOD
	370	Electrical Rescue	2	2	2	4.90	1 - LOW
	371	Electrocution or potential electrocution	2	4	4	13.86	2 - MOD
	372	Trapped by Power Lines	2	2	2	4.90	1 - LOW
Hazmat & Explosions	200	Overpressure & Explosion - General	2	4	4	13.86	2 - MOD
	210	Overpressure rupture from Steam (no fire)	2	4	4	13.86	2 - MOD
	211	Overpressure rupture of steam pipe or pipeline	2	4	4	13.86	2 - MOD
	212	Fires in structures other than a building	2	4	4	13.86	2 - MOD
	213	Cooking Fire, confines to container	2	4	4	13.86	2 - MOD
	221	Overpressure rupture of air or gas pipe/pipeline	2	6	8	36.77	3 - HIGH
	222	Overpressure ruptures of boiler from air or gas	2	4	4	13.86	2 - MOD
	223	Air or gas rupture of pressure or process vessel	2	4	4	13.86	2 - MOD
	231	Chemical reaction rupture of pressure or process vessel	2	4	4	13.86	2 - MOD
	241	Munitions or bomb explosions (no fire)	2	6	8	36.77	3 - HIGH
	242	Blasting agent explosion (no fire)	2	6	8	36.77	3 - HIGH
	243	Fireworks explosion - all classes of fireworks (no fire)	2	6	4	19.80	2 - MOD
	244	Dust explosion (no fire)	2	4	8	25.92	3 - HIGH
	251	Excessive heat, scorch burns with no ignition	2	2	2	4.90	1 - LOW
	400	Hazardous Condition - No Fire	2	2	2	4.90	1 - LOW
	410	Combustible / Flammable Spills and Leaks	2	2	2	4.90	1 - LOW
	411	Gasoline or Other Flammable liquid spill, Class 1	4	2	2	8.49	1 - LOW
	412	Gas Leak (Natural Gas or LPG)	6	4	4	26.53	3 - HIGH
	413	Oil or other combustible liquid spill, Class II or III	2	2	2	4.90	1 - LOW
	420	Chemical Release, Reaction or Tozic Condition	2	2	2	4.90	1 - LOW
	421	Chemical Hazard (no spill or leak)	2	2	2	4.90	1 - LOW
	422	Chemical Spill or Leak	2	4	4	13.86	2 - MOD
	423	Refrigeration Leak	2	2	2	4.90	1 - LOW
	424	Carbon Monoxide incident	4	2	2	8.49	1 - LOW
	430	Radioactive Condition	2	6	8	36.77	3 - HIGH
	431	Radiation Leak, Radioactive Material	2	8	8	48.00	4 - MAX
	440	Electrical Wiring / Equipment Problem	4	2	2	8.49	1 - LOW
	441	Heat from short circuit (wiring), defective/worn insulation	2	2	2	4.90	1 - LOW
	442	Overheated Motor or Wiring	2	2	2	4.90	1 - LOW
	443	Breakdown of Light Ballast	2	2	2	4.90	1 - LOW
	444	Power Line Down	4	2	2	8.49	1 - LOW
	445	Arcing, Shorted Electrical Equipment	4	2	2	8.49	1 - LOW
	451	Biological Hazard, confirmed or collapsed	2	8	8	48.00	4 - MAX
	460	Accident, Potential Accident	2	2	2	4.90	1 - LOW
	461	Building or Structure Weakened or Collapsed	2	2	2	4.90	1 - LOW
	462	Aircraft Standby	2	2	2	4.90	1 - LOW
	463	Vehicle Accident, General Cleanup	2	2	2	4.90	1 - LOW
	471	Explosive Bomb Removal	2	4	4	13.86	2 - MOD
	480	Attempted Burning, Illegal Action	2	2	2	4.90	1 - LOW

481	Attempted to Burn	2	2	2	4.90	1 - LOW
482	Threat to Burn	2	2	2	4.90	1 - LOW

A description and three-axis diagrams of incident risks can be found in Appendix E – Incident Risk Characterization.

Historic Occurrence of Risk-Banded Incidents

The historic occurrence of risk banded incidents across the entire coverage area is shown in the following chart:

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	98	93	87	125	110	513

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	181	193	222	252	231	1079
2 - MOD	12	16	11	11	22	72
Grand Total	**193**	**209**	**233**	**263**	**253**	**1151**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	93	34	36	41	38	242
2 - MOD	2947	2332	2176	1246	1705	10406
3 - HIGH	457	447	469	436	389	2198
Grand Total	**3497**	**2813**	**2681**	**1723**	**2132**	**12846**

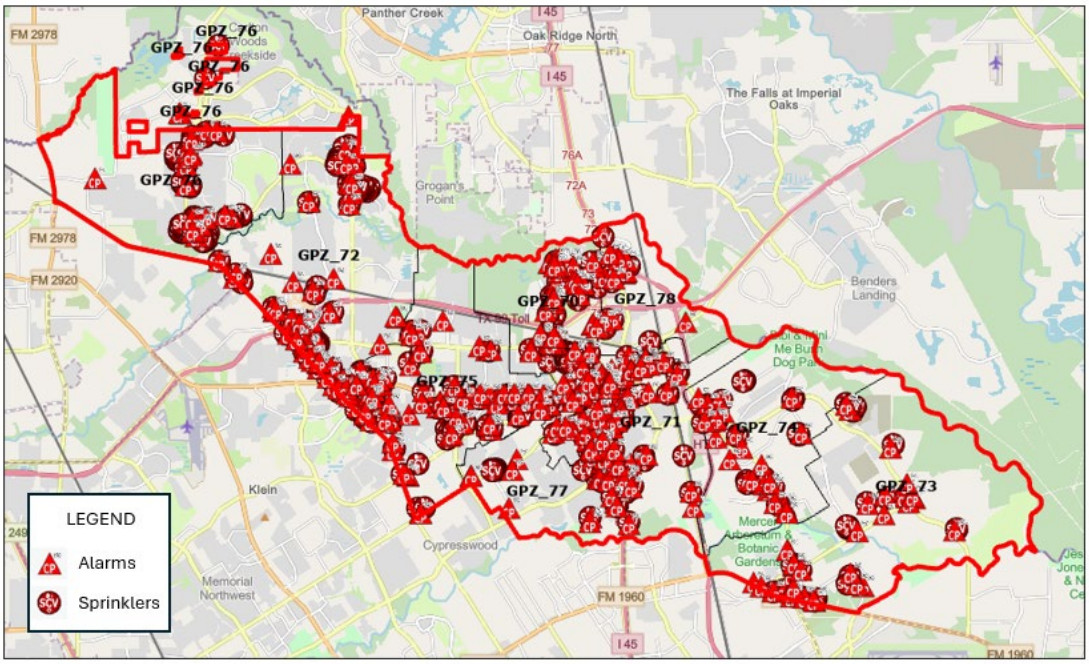
Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	11	7	16	11	19	64
2 - MOD	31	21	13	19	23	107
Grand Total	**42**	**28**	**29**	**30**	**42**	**171**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	142	105	127	129	265	768
2 - MOD	3	5	5	3	3	19
3 - HIGH	84	101	147	146	138	616
4 - MAX	0	1	1	0	0	2
Grand Total	**229**	**212**	**280**	**278**	**406**	**1405**

For a breakdown of Historic Occurrence of Risk-Banded Incidents by individual GPZ's, please visit Appendix F - Historic Occurrence of Risk-Banded Incidents by GPZ.

Fire Protection Systems Considerations

The distribution of fire protection systems (alarms and sprinklers) has been incorporated into our assessment of consequence and impact in our three-axis risk model. Below is a district-wide map showing the locations of fire protection systems also carried aboard in our pre-plan via Responder360.



Critical Infrastructure Capabilities and Capacities

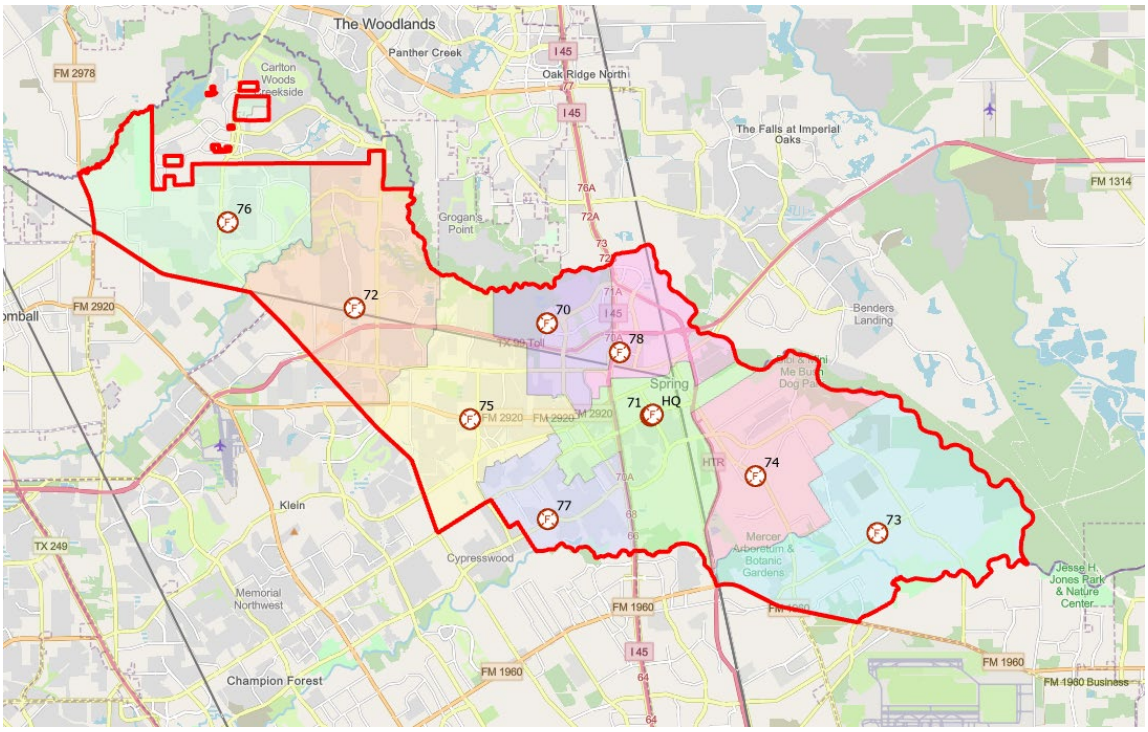
GPZ	Area (mi^2)	2020 Housing	2020 Population	Multi-Story Structures	Apartment Complexes	Commercial Properties	Single-Family Homes	Structures in Hydrant Gaps	Structures in Flood Risk Areas		
									Floodway	100 yr Flood	500 yr Flood
GPZ-70	3.8	992	1709	74*	6	52	677	0	0	12	63
GPZ-71	6.5	3382	9144	35	7	348	3765	178	31	350	685
GPZ-72	9.4	4547	12872	85	7	160	6261	642	17	296	1732
GPZ-73	11.9	7737	23404	4	1	142	9609	554	70	647	1546
GPZ-74	6.9	7368	21434	18	3	77	9668	5	45	191	307
GPZ-75	7.9	6544	19395	88	8	357	8005	372	15	124	493
GPZ-76	7.8	5180	14466	38	6	153	5183	549	2	207	146
GPZ-77	3.8	3411	9485	15	2	130	4104	13	38	242	479
GPZ-78	3.4	2504	5893	6	3	89	1738	176	9	76	681

* GPZ-70 contains the only high-rise buildings higher than 4 stories in the SFD Coverage Area, hence the location of Tower70.

Current Deployment and Performance

Deployment Methodology

Resources are deployed strategically to meet the needs of each GPZ. Tankers are deployed near zones with fewer or no hydrants, ladders and towers are deployed in areas with a concentration of multi-story buildings, and chief officers and safety officers are deployed with distribution in mind to ensure that there is adequate coverage across the district. Specialized apparatus like rescue trucks, boats, UTVs, and booster/brush engines are typically distributed across the district for coverage or centralized if there is only one. Stations are located with considerations to risk types and call density, with some increased station density in areas that have more frequent calls, such as the southeast portion of the territory.



GPZ's and Sation Locations

Points of Service Delivery (Station Locations, Response Areas)

			Personnel		
Location	Address	Apparatus	A Shift	B Shift	C Shift
Administration	656 E. Louetta Road, Spring, TX 77373				
Station 70	22306 Springwoods Village Pkwy, Spring TX 77389	Tower 70, Booster 70, Heavy Utility Vehicle 70, Heavy Rescue 70, Rescue Boat, 70 Evac. Boat 70, UTV 70, Rehab 70	6	6	6
Station 71	646 E. Louetta Road, Spring, TX 77373	Engine 71, Rescue 71, Heavy Utility Vehicle 71, Technical Rescue Trailer 71, Rescue Boat 71, Evac. Boat 71, Squad 71	7	7	7
Station 72	23000 Northcrest Drive, Spring, TX 77389	Engine 72, Tanker 72	4	4	4
Station 73	4923 Treaschwig Road, Spring, TX 77373	Engine 73, Booster 73, Rescue Boat 73	4	4	4
Station 74	23803 Aldine Westfield Road, Spring, TX 77373	Ladder 74, Tanker 74, District Chief 72	4	4	4
Station 75	3975 FM 2920, Spring TX 77388	District Chief 71, Ladder 75, Reserve Engine F210	4	4	4

Station 76	8407 London Way Drive, Spring, TX 77389	Engine 76, Booster 76, Rescue Boat	4	4	4
Station 77	2900 Cypresswood Drive, Spring, TX 77388	Engine 77	4	4	4
Station 78	1225 Booker Road, Spring, TX 77373	Engine 78, Safety 70, Reserve Rescue, Reserve Chief F111	4	4	4
Training	26511 Preston Ave, Spring, TX 77373	Technical Rescue 70, District Chief 70, Reserve Engine F205			

Emergency Response Performance Methodology

The performance of the deployment model is monitored daily with response time reports to all command staff. Any response times outside of the time targets require an exception report detailing the cause of the delay. These data are compiled quarterly and evaluated for trends and themes to identify possible methods for improving performance.

Critical Task Analysis

A critical task analysis was completed by Command Staff in 2024, evaluating each risk class and category and coming to group consensus on the minimum required resources to initially mitigate the hazard.

Low Risk – Structure Fire This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Command	1st	Chief	1	1
Accountability	1st	Chief	-	-
Investigation	1st	Engine	1	1
Safety	1st	ISO	1	1
Pump Operations	1st	Engine	-	1
Search and Rescue	2nd	Engine	1	4
Fire Attack	1st	Engine	-	2
Water Supply	1st	Engine	-	-
Ventilation	1st	Aerial	1	2
Forcible Entry	1st	Engine	-	-
Utilities	1st	Engine	-	-
On Deck/RIT	3rd	Engine	1	4
Back-up Line	3rd	Engine	-	-
Aerial Operations	1st	Aerial	-	2
Medical	1st	Ambulance	1	2
Total:	-	-	7	20

Moderate Risk – Structure Fire This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Command	1st	Chief	1	1
Division Supervisor	2nd	Chief	1	1
Accountability	1st	Chief	-	-
Investigation	1st	Engine	1	1
Safety	1st	ISO	1	1
Pump Operations	1st	Engine	-	1
Search and Rescue	2nd	Aerial	1	3

Fire Attack	1st	Engine	-	2
Fire Attack	2nd	Engine	1	4
Water Supply	1st	Engine	-	-
Ventilation	1st	Aerial	1	2
Forcible Entry	1st	Aerial	-	2
Utilities	1st	Engine	-	-
On Deck/RIT	3rd	Engine	1	2
Back-up Line	3rd	Engine	-	2
Aerial Operations	2nd	Aerial	-	1
Medical	1st	Ambulance	1	2
Total:	-	-	9	25

High Risk – Structure Fire This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Command	1st	Chief	1	1
Division Supervisor	2nd	Chief	1	1
Accountability	1st	Chief	-	-
Investigation	1st	Engine	1	1
Safety	1st	ISO	1	1
Pump Operations	1st	Engine	-	1
Search and Rescue	2nd	Aerial	1	3
Fire Attack	1st	Engine	-	2
Fire Attack	2nd	Engine	1	4
Exposure Protection	4th	Engine	1	4
Water Supply	1st	Engine	-	-
Ventilation	1st	Aerial	1	2
Forcible Entry	1st	Aerial	-	2
Utilities	1st	Engine	-	-
On Deck/RIT	3rd	Engine	1	2
Back-up Line	3rd	Engine	-	2
Aerial Operations	2nd	Aerial	-	1
Medical	1st	Ambulance	1	2
Total:	-	-	10	29

Max Risk – Structure Fire This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Command	1st	Chief	1	1
Lobby Control	2nd	Chief	1	1
Division Supervisor	3rd	Chief	1	1
Accountability	1st	Chief	-	-
Investigation	1st	Engine	1	1
Safety	1st	ISO	1	1
Pump Operations	1st, 5th	Engine	-	2
Search and Rescue	2nd	Aerial	1	3
Search and Rescue	5th	Engine	1	3
Fire Attack	1st	Engine	-	2
Fire Attack	2nd	Engine	1	4
Floor Above Fire	4th	Engine	1	4
Water Supply	1st	Engine	-	-
Ventilation	3rd	Aerial	1	4
Forcible Entry	1st	Aerial	1	4
Utilities	1st	Engine	-	-
RIT	3rd	Engine	1	2
On Deck	6th	Engine	1	4
Back-up Line	3rd	Engine	-	2
Aerial Operations	2nd	Aerial	-	1
Medical	1st	Ambulance	1	2
Total:	-	-	14	42

Low Risk – Other Fire This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Command	1st	Engine	1	1
Accountability	1st	Engine	-	-
Investigation	1st	Engine	-	-
Safety	1st	Engine	-	-

Pump Operations	1st	Engine	-	1
Search and Rescue	1st	Engine	-	-
Fire Attack	1st	Engine	-	2
Water Supply	1st	Engine	-	-
Ventilation	1st	Engine	-	-
Forcible Entry	1st	Engine	-	-
Utilities	1st	Engine	-	-
On Deck/RIT	N/A	N/A	N/A	N/A
Back-up Line	N/A	N/A	N/A	N/A
Aerial Operations	N/A	N/A	N/A	N/A
Total:	-	-	1	4

Moderate Risk – Other Fire

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.

Critical Task	Due	Type	Unit #	Personnel #
Command	1st	Engine	1	1
Accountability	1st	Engine	-	-
Investigation	1st	Engine	-	-
Safety	1st	Engine	-	-
Pump Operations	1st	Engine	-	1
Search and Rescue	1st	Engine	-	-
Fire Attack	1st	Engine	-	2
Water Supply	2nd	Engine	2	2
Ventilation	1st	Engine	-	-
Forcible Entry	1st	Engine	-	-
Utilities	1st	Engine	-	-
On Deck/RIT	N/A	N/A	N/A	N/A
Back-up Line	2nd	Engine	1	2
Aerial Operations	N/A	N/A	N/A	N/A
Total:	-	-	2	8

High Risk – Other Fire

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.

Critical Task	Due	Type	Unit #	Personnel #

Command	1st	Engine	1	1
Accountability	1st	Engine	-	-
Investigation	1st	Engine	-	-
Safety	1st	Engine	-	-
Pump Operations	1st	Engine	-	1
Search and Rescue	2nd	Engine	1	4
Fire Attack	1st	Engine	-	2
Water Supply	1st	Engine	-	-
Ventilation	1st	Engine	-	-
Forcible Entry	1st	Rescue	1	4
Utilities	1st	Engine	-	-
On Deck/RIT	4th	Engine	1	4
Back-up Line	3rd	Engine	1	4
Aerial Operations	1st	Aerial	1	4
Total:	-	-	6	24

Max Risk – Other Fire

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models.

Critical Task	Due	Type	Unit #	Personnel #
Command	1st	Engine	1	1
Accountability	1st	Engine	-	-
Investigation	1st	Engine	-	-
Safety	1st	Engine	-	-
Pump Operations	1st	Engine	-	1
Search and Rescue	2nd	Engine	1	4
Fire Attack	1st	Engine	-	2
Water Supply	5th	Engine		4
Ventilation	1st	Engine	-	-
Forcible Entry	1st	Rescue	1	4
Utilities	1st	Engine	-	-
On Deck/RIT	4th	Engine	1	4
Back-up Line	3rd	Engine	1	4
Aerial Operations	1st	Aerial	1	4
Total:	-	-	7	28

Low Risk – EMS

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Patient Assessment	1st	Ambulance or Engine	1	2
Patient Treatment	1st	Ambulance or Engine	-	-
Patient Movement	1st	Ambulance or Engine	-	-
Patient Transport	1st	Ambulance	-	-
Documentation	1st	Ambulance	-	-
Total:	-	-	1	2

Moderate Risk – EMS This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Patient Assessment	1st	Ambulance or Engine	1	2
Patient Treatment	1st	Ambulance or Engine	-	2
Patient Movement	1st	Ambulance or Engine	-	-
Patient Transport	1st	Ambulance	-	-
Documentation	1st	Ambulance	-	-
Total:	-	-	1	4

High Risk – EMS This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Patient Assessment	1st	Ambulance or Engine	1	2
Patient Treatment	1st	Ambulance or Engine	-	2
Patient Movement	1st	Ambulance or Engine	-	-
Patient Transport	1st	Ambulance	-	-
Documentation	1st	Ambulance	-	-
Total:	-	-	1	4

Max Risk – EMS This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models

Critical Task	Due	Type	Unit #	Personnel #
Incident Command	1st	Chief	1	1
Medical Branch Director	1st	EMS Supervisor	1	1
Triage Group Supervisor	1st	Engine	1	1
Treatment Group Supervisor	2nd	EMS Supervisor	1	1
Transport Group Supervisor	3rd	EMS Supervisor	1	1
Safety Officer	6th	ISO	1	1
Rescue Task Force	1st	Engine	-	3
Triage	1st	Ambulance	1	2
Treatment	2nd	Ambulance	1	2
Transport	3rd	Ambulance	1	2
Transport	4th	Ambulance	1	2
Transport	5th	Ambulance	1	2
Total:	-	-	11	19

Max Risk – (Confined Space) Rescue

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models

Critical Task	Due	Type	Unit #	Personnel #
Incident Command	1st	Chief	1	1
Safety	2nd	Chief	1	1
Operations	1st	Engine	1	1
System Riggers / Haul Team	1st	Rescue	1	2
Entry Team	1st	Rescue	-	2
Back-up Team	1st	Engine	-	2
Attendants	2nd	Engine	1	2
Communications	2nd	Engine	-	1
Supplied Air	2nd	Engine	-	1
Air Monitoring	1st	Engine	-	1
Subtotal: TRT Operations Personnel				14
Decon/HM	3rd	Engine	1	4
Rehab	4th	Engine	1	1
Lighting	4th	Engine	-	1
Top Side Support	5th	Engine	1	6
Subtotal: Support Personnel				12
Total:	-	-	8	26

High Risk – (Trench or Complex SAR) Rescue This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Incident Command	1st	Chief	1	1
Safety	2nd	Chief	1	1
Trench Boss / Operations	1st	Rescue	1	1
Rescue Team	1st	Rescue	-	2
Back-up Team	1st	Rescue	-	1
Back-up Team	1st	Engine	1	1
System Riggers	2nd	Rescue	1	4
System Riggers	1st	Engine	-	2
Subtotal: TRT Operations Personnel				13
Decon/HM	1st	Engine	-	1
Rehab	2nd	Engine	1	1
Air Monitoring	2nd	Engine	-	1
Lighting	2nd	Engine		1
Top Side Support	2nd	Engine	-	1
Top Side Support	3rd	Engine	1	4
Subtotal: TRT Support Personnel				9
Total:	-	-	7	22

Moderate Risk – (Swift and Still Water) Rescue This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Incident Command	1st	Chief	1	1
Operations	2nd	Chief	1	1
Safety	1st	Engine	1	1
Downstream Spotters	1st	Rescue	1	2
System Riggers	1st	Rescue	-	2
System Riggers	2nd	Rescue	1	2
Boat Team	2nd	Rescue	-	2
Subtotal: TRT Operations Personnel				11
Upstream Spotters	1st	Engine	-	3

Upstream Spotters	2nd	Engine	1	1
Decon/HM	2nd	Engine	-	2
Rehab	2nd	Engine	-	1
Subtotal: TRT Support Personnel				7
Total:	-	-	6	18

Low Risk – (Rope) Rescue This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Incident Command	1st	Chief	1	1
Operations	1st	Engine	1	1
Safety	1st	Engine	-	1
Rescuers	1st	Rescue	1	2
Edge Tenders	1st	Engine	-	1
Edge Tenders	1st	Engine	-	1
System Riggers	1st	Rescue	-	2
Belay Line Tenders	2nd	Engine	1	2
Subtotal: TRT Operations Personnel				11
Lights	2nd	Engine	-	1
Rehab	3rd	Engine	1	1
Equipment Support	3rd	Engine	-	2
Equipment Support	3rd	Engine	-	2
Subtotal: TRT Support Personnel				6
Total:	-	-	5	17

Low Risk – Hazardous Materials This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Incident Command	1st	Engine/Hazmat	1	4
Operations Section	1st	Engine/Hazmat	-	-
Safety	1st	Engine/Hazmat	-	-
Isolation	1st	Engine/Hazmat	-	-
Entry Team	1st	Engine/Hazmat	-	

Backup Team	1st	Engine/Hazmat	-	-
Decontamination	1st	Engine/Hazmat	-	-
Identification	1st	Engine/Hazmat	-	-
Scene Support	1st	Engine/Hazmat	-	-
Medical	1st	Engine/Hazmat	-	-
Total:			1	4

Moderate Risk – Hazardous Materials

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models

Critical Task	Due	Type	Unit #	Personnel #
Incident Command	1st	Chief	1	1
Operations Section	1st	Engine/Hazmat	1	4
Safety	1st	Engine/Hazmat	-	-
Isolation	1st	Engine/Hazmat	-	-
Entry Team	2nd	Engine/Hazmat	1	4
Backup Team	1st	Engine/Hazmat	-	-
Decontamination	1st	Engine/Hazmat	-	-
Identification	1st	Engine/Hazmat	-	-
Scene Support	1st	Engine/Hazmat	-	-
Medical	1st	Engine/Hazmat	-	-
Total:			3	9

High Risk – Hazardous Materials

This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models

Critical Task	Due	Type	Unit #	Personnel #
Incident Command	1st	Chief	1	1
Operations Section	2nd	Chief	1	1
Safety	1st	Safety	1	1
Isolation	1st	Engine/Hazmat	-	-
Entry Team	2nd	Engine/Hazmat	1	4
Backup Team	3rd	Engine/Hazmat	1	4
Decontamination	4th	Engine/Hazmat	1	4
Identification	1st	Engine/Hazmat	-	-

Scene Support	1st	Engine/Hazmat	-	-
Medical	1st	Ambulance	1	2
Total:			7	17

Max Risk – Hazardous Materials This ERF represents the minimum amount of resources that is capable of *initial* hazard mitigation, it does not indicate optimum or desired staffing, or deployment models				
Critical Task	**Due**	**Type**	**Unit #**	**Personnel #**
Incident Command	1st	Chief	1	1
Operations Section	2nd	Chief	1	1
Safety	1st	Safety	1	1
Isolation	1st	Engine/Hazmat	-	-
Entry Team	2nd	Engine/Hazmat	1	4
Backup Team	3rd	Engine/Hazmat	1	4
Decontamination	4, 5 6th	Engine/Hazmat	3	12
Identification	7th	Engine/Hazmat	-	-
Scene Support	1st	Engine/Hazmat	-	-
Medical	1st	Ambulance	1	2
Total:			9	22

Response Time Components

We use a variety of methods to track performance, and track those metrics in the entire territory for all risk classes and categories, and in all GPZs. These performance metrics include:

Alarm Handling Time	The time from the initial receipt of alarm to the dispatch. This represents how long it takes the dispatch center
Turnout Time	The time from the dispatch to the time the first unit begins to respond from the station or posting location.
First Due Travel	The time that the first unit takes to travel from the station or posting location to the incident location
ERF Travel	The time that the effective response force takes to travel from their stations or posting locations to the incident scene.

First Due Total Response Time	The total amount of time that the first unit takes to respond, including both turout and travel time.
ERF Total Response Time	The total amount of time that the effective response force takes to respond, including both turout and travel time.

Performance Improvement Efforts

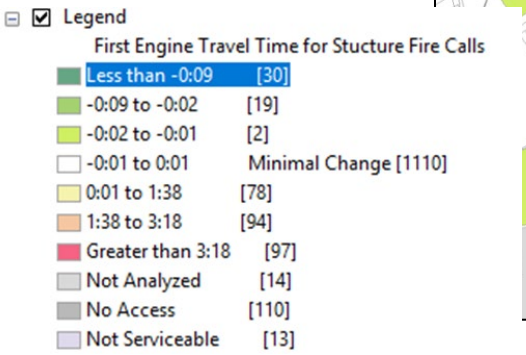
The agency receives response time reports on a daily basis showing which calls are within or outside of time targets. All responses outside of time targets are required to submit an exception report with a reason for the delayed response. This information is then analyzed to determine the root cause of the delay and to identify system adjustments to optimize response.

In the future, we will be expanding the CRA risk methodology to include Property Use codes underneath the 111 NFIRS code for risk analysis to add more granularity to the risk analysis. EMS type NFIRS codes will also be stratified using ProQA.

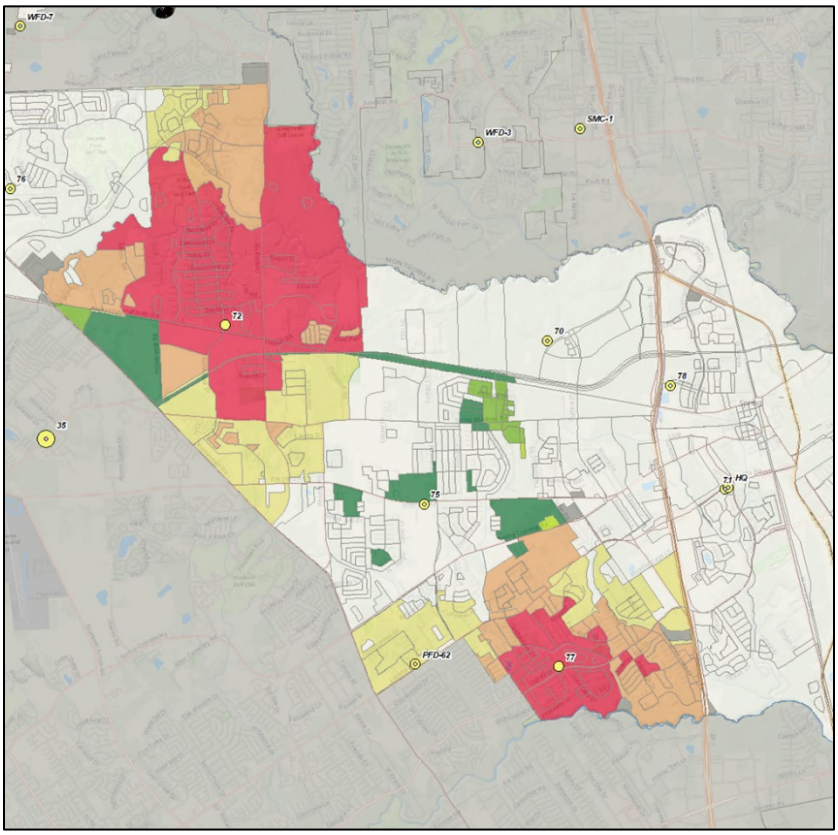
Plan for Maintaining and Improving Response Capabilities

Performance Assessment Methodology

Time targets are measured and analyzed on a daily basis to ensure that response is adequate and consistent. Major events and incidents are analyzed carefully to assess for system impacts and efficacy of the deployment model, including drawdown and move-up implications. On a quarterly basis, time metrics are compiled and root cause analysis is performed to optimize the deployment system. Local developments are considered when planning for future service needs and demands, including additional staffing or stations, such as the future station 79, which is modeled to improve response times in the area by approximately 3 minutes, with cascading positive impacts in neighboring GPZs.



A further example is the analysis performed during station remodels, ensuring that time targets can still be met while a crew and apparatus are temporarily displaced.



Legend

First Engine Travel Time for Stucture Fire Calls

Less than -0:09	[30]
-0:09 to -0:02	[19]
-0:02 to -0:01	[2]
-0:01 to 0:01	Minimal Change [1110]
0:01 to 1:38	[78]
1:38 to 3:18	[94]
Greater than 3:18	[97]
Not Analyzed	[14]
No Access	[110]
Not Serviceable	[13]

Performance Evaluation

Each program is assessed annually to ensure that it is meeting or attempting to meet performance standards that are consistent with industry best practices.

Distribution Factors

This is a study of the first unit arrival. Stations are located strategically to meet first due time targets. Reference the above content in the CRA for the demographics and call data that supports station locations.

Concentration Factors

This is a study of effective response force (ERF) arrival. Stations are strategically located an adequate density and proximity to one another so that an ERF can be assembled within expected time targets.

Reliability Factors

Reliability is measured during deployment assessments, and unit workload is considered along with local risk and call density. Reliability studies are conducted annually to determine whether the units are working primarily in their primary response area or consistently outside of it. Mutual aid is also assessed and considered. Adjustments are made to ensure that resources are covering their primary response areas as intended. This map shows the workloads of the district geographically.

Performance Analysis and Modeling

Spring Fire has engaged Deccan International to support on-demand performance monitoring, analysis, and risk modeling to ensure that our deployment scheme is aligned with the needs of the community and that our performance targets are being met. These tools and reports enable us to quickly react and remediate any shortcomings identified from real-time data and analytics, and to model the effects on the community of station remodels and new station construction.

Monitoring Changes Affecting Performance

By subscribing to Nearmap© Aerial Imagery, which provides updates 3-4 times per year, we are able to quickly identify new developments, changes in land use, and changes to the built and natural environment that may apply pressure to meeting our performance objectives. This enables us to make adjustments in a timely manner to mitigate these pressures.

Performance Objectives – Benchmarks

Structure Fire Suppression Benchmark Statements

Low Risk Structure Fire Benchmarks

For 90 percent of all Low-Risk Structure Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all Low-Risk Structure Fires, the total response time for the arrival of the effective response force (ERF), staffed with 20 firefighters and officers, shall be: 7 minutes and 30 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Moderate Risk Structure Fire Benchmarks

For 90 percent of all Moderate Risk Structure Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all Moderate Risk Structure Fires, the total response time for the arrival of the effective response force (ERF), staffed with 25 firefighters and officers, shall be: 7 minutes and 30 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

High Risk Structure Fire Benchmarks

For 90 percent of all High Risk Structure Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all High Risk Structure Fires, the total response time for the arrival of the effective response force (ERF), staffed with 29 firefighters and officers, shall be: 9 minutes in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Max Risk Structure Fire Benchmarks

For 90 percent of all Max Risk Structure Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all Max Risk Structure Fires, the total response time for the arrival of the effective response force (ERF), staffed with 42 firefighters and officers, shall be: 17 minutes and 30 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Other Fire Suppression Benchmark Statements

Low Risk Other Fire Benchmarks

For 90 percent of all Low-Risk Other Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all Low-Risk Other Fires, the total response time for the arrival of the effective response force (ERF), staffed with 4 firefighters and officers, shall be: 7 minutes and 30 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Moderate Risk Other Fire Benchmarks

For 90 percent of all Moderate Risk Other Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all Moderate Risk Other Fires, the total response time for the arrival of the effective response force (ERF), staffed with 8 firefighters and officers, shall be: 7 minutes and 30 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

High Risk Other Fire Benchmarks

For 90 percent of all High-Risk Other Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all High-Risk Other Fires, the total response time for the arrival of the effective response force (ERF), staffed with 24 firefighters and officers, shall be: 9 minutes in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Max Risk Other Fire Benchmarks

For 90 percent of all Max Risk Other Fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all Max Risk Other Fires, the total response time for the arrival of the effective response force (ERF), staffed with 28 firefighters and officers, shall be: 17 minutes and 30 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Emergency Medical Services Benchmark Statements

Low Risk EMS Benchmarks

For 90 percent of all Low-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); and assisting transport personnel with packaging the patient.

For 90 percent of all Low-Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with 2 firefighters and/or officers, shall be: 7 minutes and 30 seconds. The ERF shall be capable of: providing incident command and producing related documentation; appointing a site safety officer; completing patient assessment; providing appropriate treatment; performing AED; initiating cardio-pulmonary resuscitation (CPR); and assisting transport personnel with packaging the patient.

The department relies upon ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Moderate Risk EMS Benchmarks

For 90 percent of all Moderate-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); and assisting transport personnel with packaging the patient.

For 90 percent of all Moderate-Risk, EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with 4 firefighters and/or officers, shall be: 7 minutes and 30 seconds. The ERF shall be capable of: providing incident command and producing related documentation; appointing a site safety officer; completing patient assessment; providing appropriate treatment; performing AED; initiating cardio-pulmonary resuscitation (CPR); and assisting transport personnel with packaging the patient.

The department relies upon ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

High Risk EMS Benchmarks

For 90 percent of all High-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); and assisting transport personnel with packaging the patient.

For 90 percent of all High-Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with 4 firefighters and/or officers, shall be: 14 minutes and 30 seconds. The ERF shall be capable of: providing incident command and producing related documentation; appointing a site safety officer; completing patient assessment; providing appropriate treatment; performing AED; initiating cardio-pulmonary resuscitation (CPR); and assisting transport personnel with packaging the patient.

The department relies upon ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Max Risk EMS Benchmarks

For 90 percent of all Max-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); and assisting transport personnel with packaging the patient.

For 90 percent of all Max-Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with 19 firefighters and officers, shall be: 19 minutes. The ERF shall be capable of: providing incident command and producing related documentation; appointing a site safety officer; completing patient assessment; providing appropriate treatment; performing AED; initiating cardio-pulmonary resuscitation (CPR); and assisting transport personnel with packaging the patient.

The department relies upon ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Technical Rescue Benchmark Statements

Low Risk Tech Rescue Statements

For 90 percent of all Low-Risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all Low-Risk technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 17 firefighters and officers including the technical response team, shall be: 14 minutes in all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Moderate Risk Tech Rescue Statements

For 90 percent of all Moderate-Risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all Moderate-Risk technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 18 firefighters and officers including the technical response team, shall be: 14 minutes in all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

High Risk Tech Rescue Statements

For 90 percent of all High-Risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all High-Risk technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 22 firefighters and officers including the technical response team, shall be: 16 minutes in all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Max Risk Tech Rescue Statements

For 90 percent of all Max-Risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all Max-Risk technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 26 firefighters and officers including the technical response team, shall be: 18 minutes in all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Hazardous Materials Benchmark Statements

Low Risk HazMat Statements

For 90 percent of all Low-Risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all Low-Risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 4 firefighters and officers, shall be: 7 minutes and 30 seconds in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Moderate Risk HazMat Statements

For 90 percent of all Moderate-Risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all Moderate-Risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 9 firefighters and officers, shall be: 17 minutes in all areas. The ERF shall be capable of:

appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

High Risk HazMat Statements

For 90 percent of all High-Risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all High-Risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 17 firefighters and officers, shall be: 22 minutes in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Max Risk HazMat Statements

For 90 percent of all Max Risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 30 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all Max Risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 22 firefighters and officers, shall be: 30 minutes in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Summary Benchmark and Baseline Metrics

STRUCTURE FIRES		Max Risk Structure Fires		High Risk Structure Fires		Mod Risk Structure Fires		Low Risk Structure Fires	
		Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark
Alarm Handling Time	Pick-Up to Dispatch	N/A	1:04	2:18	1:04	4:22	1:04	1:49	1:04
Turnout Time	1st Unit Turnout	N/A	1:20	1:28	1:20	2:09	1:20	1:11	1:20
Travel Time	1st Unit Distribution	N/A	5:30	7:01	5:30	8:28	5:30	3:56	5:30
	ERF Concentration	N/A	7:30	14:37	7:30	5:31	5:30	N/A	4:30
Total Response Time	1st Unit Distribution	N/A	7:30	9:50	7:30	13:09	7:30	12:32	7:30
	ERF Concentration	N/A	17:30	28:18	9:00	14:31	7:30	N/A	7:30

ALL FIRES		Max Risk All Fires		High Risk All Fires		Mod Risk All Fires		Low Risk All Fires	
		Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark
Alarm Handling Time	Pick-Up to Dispatch	N/A	1:04	2:13	1:04	2:48	1:04	1:34	1:04
Turnout Time	1st Unit Turnout	N/A	1:20	1:26	1:20	1:29	1:20	1:26	1:20
Travel Time	1st Unit Distribution	N/A	5:30	7:03	5:30	8:59	5:30	9:57	5:30
	ERF Concentration	N/A	16:00	14:37	7:30	5:31	5:30	N/A	4:30
Total Response Time	1st Unit Distribution	N/A	7:30	9:50	7:30	11:46	7:30	12:30	7:30
	ERF Concentration	N/A	17:30	4:18	9:00	14:31	7:30	N/A	7:30

EMS		Max Risk EMS		High Risk EMS		Mod Risk EMS		Low Risk EMS	
		Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark
Alarm Handling Time	Pick-Up to Dispatch	0:54	1:04	1:05	1:04	1:50	1:04	1:22	1:04
Turnout Time	1st Unit Turnout	2:21	1:00	1:25	1:00	1:21	1:00	1:28	1:00
Travel Time	1st Unit Distribution	13:31	5:30	7:33	5:30	8:21	5:30	8:41	5:30
	ERF Concentration	N/A	17:00	12:28	15:00	8:07	13:00	8:47	12:00
Total Response Time	1st Unit Distribution	14:18	7:30	9:25	7:30	10:43	7:30	10:46	7:30
	ERF Concentration	N/A	19:00	13:27	14:30	15:38	7:30	9:38	7:30

RESCUE		Max Risk Rescue		High Risk Rescue		Mod Risk Rescue		Low Risk Rescue	
		Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark
Alarm Handling Time	Pick-Up to Dispatch	N/A	1:04	3:00	1:04	1:32	1:04	1:24	1:04
Turnout Time	1st Unit Turnout	N/A	1:20	0:55	1:20	1:25	1:20	1:30	1:20
Travel Time	1st Unit Distribution	N/A	5:30	5:02	5:30	8:02	5:30	8:24	5:30
	ERF Concentration	N/A	16:00	9:41	14:00	8:21	12:00	7:33	12:00
Total Response Time	1st Unit Distribution	N/A	7:30	11:45	7:30	9:24	7:30	10:51	7:30
	ERF Concentration	N/A	18:00	11:50	16:00	0:27:52	14:00	9:54	14:00

HAZMAT		Max Risk Hazmat		High Risk Hazmat		Mod Risk Hazmat		Low Risk Hazmat	
		Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark	Baseline	Benchmark
Alarm Handling Time	Pick-Up to Dispatch	N/A	1:04	0:49	1:04	0:30	1:04	0:29	1:04
Turnout Time	1st Unit Turnout	N/A	1:20	1:33	1:20	1:24	1:20	1:34	1:20
Travel Time	1st Unit Distribution	N/A	5:30	5:59	5:30	8:02	5:30	7:40	5:30
	ERF Concentration	N/A	28:00	22:19	20:00	10:07	15:00	8:33	5:31
Total Response Time	1st Unit Distribution	N/A	7:30	7:16	7:30	9:43	7:30	10:30	7:30
	ERF Concentration	N/A	30:00	0:58:18	22:00	13:02	17:00	10:29	7:31

Performance Objectives – Baselines

Structure Fire Suppression Baseline Statements

Spring Fire Department's structure fire baseline statements reflect actual performance during 2021 to 2024. The department relies on the use of automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of our mutual aid response system. The department's actual baseline service level performance is as follows:

Low Risk Structure Fire Statements

For 90 percent of Low-Risk Structure Fires during this time period, the total response time for arrival of the first unit is: 12 minutes and 32 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established in the agency standard operating procedures

For 90 percent of Low-Risk Structure Fires, the total response time for the arrival of the ERF, staffed with 20 firefighters and officers, is unknown as there is not enough data to fully assess the scenario. The ERF used during this period is capable of the following actions: establishing formal command and division supervision, uninterrupted water supply, fire attack, search and rescue, ventilation, rapid intervention team (RIT), safety, and medical care. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation Low StructFire 21-24

Total Incidents based off data received:

8

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:49	50%	00:01:49	6
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:49	83.33%	00:01:49	6
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:42	100%	00:01:11	5
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:02:17	100%	00:03:56	3
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:07:03	75%	00:12:32	4
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:02:17	100%	00:03:56	3
First Unit Total Response Time	00:07:30	00:06:56	75%	00:12:32	4
First Engine Travel Time	00:05:30	00:02:34	100%	00:03:56	3

First Engine Total Response Time	00:07:30	00:07:03	75%	00:12:32	4
First Aerial Travel Time	00:09:00	00:01:54	100%	00:02:05	2
First Aerial Total Response Time	00:11:00	00:07:48	50%	00:12:32	2
First Rescue Travel Time	00:12:00	00:01:42	100%	00:01:42	1
First Rescue Total Response Time	00:14:00	00:12:32	100%	00:12:32	1
First District Chief Travel Time	00:07:30	00:01:13	100%	00:01:13	1
First District Chief Total Response Time	00:09:30	00:02:37	100%	00:02:37	1
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:02:34	100%	00:03:56	3
First Basic or Advanced HAZMAT Total Response Time	00:07:30	00:07:03	75%	00:12:32	4
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	N/A	N/A	N/A	N/A
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	N/A	N/A	N/A	N/A
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	N/A	N/A	N/A	N/A
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	N/A	N/A	N/A	N/A
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	N/A	N/A	N/A	N/A
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	N/A	N/A	N/A	N/A
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	N/A	N/A	N/A	N/A
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	N/A	N/A	N/A	N/A

Moderate Risk Structure Fire Statements

For 90 percent of Moderate-Risk Structure Fires during this time period, the total response time for arrival of the first unit is: 13 minutes and 09 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures

For 90 percent of Moderate-Risk Structure Fires, the total response time for the arrival of the ERF, staffed with 25 firefighters and officers, is: 14 minutes and 31 seconds. The ERF used during this period is capable of the following actions: establishing formal command, uninterrupted water supply, fire attack, search and rescue, ventilation, rapid intervention team (RIT), safety, and medical care. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation Mod StructFire 21-24

Total Incidents based off data received:

8

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:01:49	50%	00:04:22	8
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:01:49	62.50%	00:04:22	8
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:01:09	85.71%	00:02:09	7
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:05:48	50%	00:08:28	4
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:06:39	60%	00:13:10	5
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:13:51	0%	00:13:51	1
First Unit Travel Time	00:05:30	00:05:48	50%	00:08:28	4
First Unit Total Response Time	00:07:30	00:06:36	60%	00:13:09	5
First Engine Travel Time	00:05:30	00:05:38	50%	00:07:55	4
First Engine Total Response Time	00:07:30	00:06:39	60%	00:13:10	5
First Aerial Travel Time	00:09:00	00:06:46	100%	00:08:49	3
First Aerial Total Response Time	00:11:00	00:07:31	50%	00:13:50	4
First Rescue Travel Time	00:12:00	00:05:11	100%	00:08:23	3
First Rescue Total Response Time	00:14:00	00:05:36	100%	00:11:34	4
First District Chief Travel Time	00:07:30	00:06:00	66.67%	00:08:28	3
First District Chief Total Response Time	00:09:30	00:10:01	50%	00:13:09	4
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	00:06:33	100%	00:06:33	1
First Tanker Total Response	00:14:00	00:09:11	100%	00:09:11	1
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A

First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	00:12:48	100%	00:12:48	1
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:05:38	50%	00:07:55	4
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:39	60%	00:13:10	5
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	00:03:42	100%	00:03:42	1
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	00:13:51	0%	00:13:51	1
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	00:05:31	0%	00:05:31	1
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	00:14:31	0%	00:14:31	1
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	00:07:23	100%	00:07:23	1
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	00:19:41	0%	00:19:41	1
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	N/A	N/A	N/A	N/A
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	N/A	N/A	N/A	N/A

High Risk Structure Fire Statements

For 90 percent of High-Risk Structure Fires during this time period, the total response time for arrival of the first unit is: 9 minutes and 50 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established in the agency standard operating procedures

For 90 percent of High-Risk Structure Fires, the total response time for the arrival of the ERF, staffed with 29 firefighters and officers, is: 28 minutes and 18 seconds. The ERF used during this period is capable of the following actions: establishing formal command and division supervision, uninterrupted water supply, fire attack, search and rescue, ventilation, rapid intervention team (RIT), safety, and medical care. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation High StructFire 21-24

Total Incidents based off data received:

852

Response Criteria

	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:52	73.08%	00:02:18	821
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:52	82.58%	00:02:18	821
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:51	86.48%	00:01:28	784
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:04:36	43.25%	00:07:01	770
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:06:27	65.06%	00:09:56	770
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:10:55	17.69%	00:14:30	130
First Unit Travel Time	00:05:30	00:04:36	72.99%	00:07:01	770
First Unit Total Response Time	00:07:30	00:06:23	73.20%	00:09:50	776
First Engine Travel Time	00:05:30	00:04:42	71.13%	00:07:09	762
First Engine Total Response Time	00:07:30	00:06:27	72.99%	00:09:56	770
First Aerial Travel Time	00:09:00	00:06:18	81.94%	00:10:10	454
First Aerial Total Response Time	00:11:00	00:08:17	79.69%	00:13:02	458
First Rescue Travel Time	00:12:00	00:05:08	99%	00:07:52	603
First Rescue Total Response Time	00:14:00	00:06:49	97.69%	00:10:07	605
First District Chief Travel Time	00:07:30	00:06:07	68.11%	00:10:29	392
First District Chief Total Response Time	00:09:30	00:09:06	59.95%	00:14:10	412
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:04:38	80%	00:09:48	5
First Booster Total Response Time	00:11:00	00:16:19	14.29%	00:30:08	7
First Tanker Travel	00:12:00	00:08:24	90.32%	00:11:45	31
First Tanker Total Response	00:14:00	00:13:47	64.86%	00:23:44	37
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:06:37	33.33%	00:10:32	3
First HUT Total Response	00:11:00	00:21:57	0%	00:26:12	4
First Rehab Travel Time	00:12:00	00:11:31	53.61%	00:17:10	97
First Rehab Total Response Time	00:14:00	00:18:03	37.25%	00:28:37	102
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:42	71.04%	00:07:09	763
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:27	72.99%	00:09:56	770

StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	00:09:02	3.45%	00:13:01	87
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	00:13:25	1.06%	00:18:57	94
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	00:09:17	6.17%	00:13:01	81
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	00:13:49	0%	00:20:47	89
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	00:10:23	14.29%	00:14:37	28
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	00:17:50	0%	00:28:18	37
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	00:16:36	50%	00:18:48	2
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	00:42:48	0%	00:49:47	2

Max Risk Structure Fire Statements

For 90 percent of Max Risk Structure Fires during this time period, the total response time for arrival of the first unit is unknown as there were no Max Risk Structure Fire Incidents during this period.

For 90 percent of Max Risk Structure Fires, the total response time for the arrival of the ERF, staffed with 42 firefighters and officers, is unknown as there were no Max Risk Structure Fires during this period. The ERF used during this period is capable of the following actions: establishing formal command and division supervision, uninterrupted water supply, fire attack, search and rescue, ventilation, rapid intervention team (RIT), safety, and medical care. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation Max StructFire 21-24

Total Incidents based off data received:

0

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	N/A	N/A	N/A	N/A
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A

NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Unit Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Engine Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Engine Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Aerial Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Aerial Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Rescue Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rescue Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First District Chief Travel Time	00:07:30	N/A	N/A	N/A	N/A
First District Chief Total Response Time	00:09:30	N/A	N/A	N/A	N/A
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	N/A	N/A	N/A	N/A
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	N/A	N/A	N/A	N/A
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	N/A	N/A	N/A	N/A
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	N/A	N/A	N/A	N/A
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	N/A	N/A	N/A	N/A
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	N/A	N/A	N/A	N/A
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	N/A	N/A	N/A	N/A
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	N/A	N/A	N/A	N/A

StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	N/A	N/A	N/A	N/A

Other Fire Baseline Statements

Low Risk Other Fires Statements

For 90 percent of Low-Risk Other Fires during this time period, the total response time for arrival of the first unit is: 12 minutes and 30 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established in the agency standard operating procedures

For 90 percent of Low-Risk Other Fires, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, is unknown as there is not enough data to fully assess the scenario. The ERF used during this period is capable of the following actions: establishing formal command, pump operations, and fire attack. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation Low AllFire 21-24

Total Incidents based off data received:

1515

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:44	79.58%	00:01:34	1386
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:44	93.15%	00:01:34	1386
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:49	86.08%	00:01:26	1322
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:06:05	23.90%	00:09:57	1113
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:07:54	44.80%	00:12:16	1096
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:16:24	0%	00:24:43	3
First Unit Travel Time	00:05:30	00:06:05	50.31%	00:09:57	1113
First Unit Total Response Time	00:07:30	00:08:03	57.64%	00:12:30	1126
First Engine Travel Time	00:05:30	00:06:01	50.97%	00:09:55	1083
First Engine Total Response Time	00:07:30	00:07:54	58.76%	00:12:16	1096
First Aerial Travel Time	00:09:00	00:05:38	89.14%	00:09:23	267

First Aerial Total Response Time	00:11:00	00:07:40	88.48%	00:11:18	269
First Rescue Travel Time	00:12:00	00:06:05	96%	00:09:55	575
First Rescue Total Response Time	00:14:00	00:08:19	92.77%	00:12:41	581
First District Chief Travel Time	00:07:30	00:10:58	20.83%	00:17:05	96
First District Chief Total Response Time	00:09:30	00:15:00	9.09%	00:21:48	99
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:07:57	58.54%	00:14:04	41
First Booster Total Response Time	00:11:00	00:11:12	57.14%	00:16:24	42
First Tanker Travel	00:12:00	00:17:14	14.29%	00:22:41	14
First Tanker Total Response	00:14:00	00:23:23	7.14%	00:28:40	14
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	00:02:35	100%	00:02:35	1
First HUT Travel	00:09:00	00:11:34	66.67%	00:20:00	3
First HUT Total Response	00:11:00	00:14:52	33.33%	00:23:12	3
First Rehab Travel Time	00:12:00	00:09:57	100%	00:11:48	2
First Rehab Total Response Time	00:14:00	00:15:02	50%	00:19:04	2
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:06:02	50.64%	00:09:56	1094
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:07:57	58.63%	00:12:16	1107
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	N/A	N/A	N/A	N/A
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	N/A	N/A	N/A	N/A
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	N/A	N/A	N/A	N/A
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	N/A	N/A	N/A	N/A
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	N/A	N/A	N/A	N/A
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	N/A	N/A	N/A	N/A
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	N/A	N/A	N/A	N/A
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	N/A	N/A	N/A	N/A

Moderate Risk Other Fires Statements

For 90 percent of Moderate-Risk Other Fires during this time period, the total response time for arrival of the first unit is: 11 minutes and 46 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established in the agency standard operating procedures

For 90 percent of Moderate-Risk Other Fires, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, is: 14 minutes and 31 seconds. The ERF used during this period is capable of the following actions: establishing formal command, pump operations, and fire attack. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation Mod AllFire 21-24

Total Incidents based off data received:

3484

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:01:17	50.07%	00:02:48	3337
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:01:17	69.55%	00:02:48	3337
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:51	86.36%	00:01:29	3232
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:05:47	24.22%	00:08:59	2956
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:08:01	35.64%	00:11:44	2957
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:28:14	0%	00:58:17	4
First Unit Travel Time	00:05:30	00:05:47	52.71%	00:08:59	2956
First Unit Total Response Time	00:07:30	00:08:01	48.67%	00:11:46	2979
First Engine Travel Time	00:05:30	00:05:48	52.35%	00:09:00	2940
First Engine Total Response Time	00:07:30	00:08:01	48.56%	00:11:44	2957
First Aerial Travel Time	00:09:00	00:05:49	90.84%	00:08:46	830
First Aerial Total Response Time	00:11:00	00:08:16	85.87%	00:11:47	835
First Rescue Travel Time	00:12:00	00:05:52	97.32%	00:08:54	1456
First Rescue Total Response Time	00:14:00	00:08:13	95.17%	00:11:48	1469
First District Chief Travel Time	00:07:30	00:06:53	61.70%	00:14:36	47
First District Chief Total Response Time	00:09:30	00:16:24	34.62%	00:32:55	52
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:07:25	72.73%	00:12:30	176
First Booster Total Response Time	00:11:00	00:10:46	66.67%	00:17:39	189
First Tanker Travel	00:12:00	00:06:56	92.31%	00:10:23	13
First Tanker Total Response	00:14:00	00:20:45	38.46%	00:48:59	13
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:08:31	61.76%	00:14:03	34

First HUT Total Response	00:11:00	00:12:24	47.37%	00:19:07	38
First Rehab Travel Time	00:12:00	00:08:39	100%	00:11:16	3
First Rehab Total Response Time	00:14:00	00:19:47	25%	00:29:41	4
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:05:47	52.41%	00:09:00	2944
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:08:01	48.60%	00:11:44	2961
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	00:03:42	100%	00:03:42	1
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	00:13:51	0%	00:13:51	1
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	00:05:31	0%	00:05:31	1
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	00:14:31	0%	00:14:31	1
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	00:07:23	100%	00:07:23	1
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	00:19:41	0%	00:19:41	1
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	N/A	N/A	N/A	N/A
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	N/A	N/A	N/A	N/A

High Risk Other Fires Statements

For 90 percent of High-Risk Other Fires during this time period, the total response time for arrival of the first unit is: 9 minutes and 50 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established in the agency standard operating procedures

For 90 percent of High-Risk Other Fires, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, is: 28 minutes and 18 seconds. The ERF used during this period is capable of the following actions: establishing formal command, pump operations, and fire attack All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation High AllFire 21-24

Total Incidents based off data received:

916

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:51	73.33%	00:02:13	881

NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:51	83.09%	00:02:13	881
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:50	86.68%	00:01:26	841
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:04:37	43.48%	00:07:03	828
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:06:28	64.78%	00:09:59	829
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:10:55	17.42%	00:14:28	132
First Unit Travel Time	00:05:30	00:04:37	72.34%	00:07:03	828
First Unit Total Response Time	00:07:30	00:06:25	72.69%	00:09:50	835
First Engine Travel Time	00:05:30	00:04:43	70.73%	00:07:09	820
First Engine Total Response Time	00:07:30	00:06:28	72.50%	00:09:59	829
First Aerial Travel Time	00:09:00	00:06:14	82.59%	00:10:05	471
First Aerial Total Response Time	00:11:00	00:08:13	80.42%	00:12:48	475
First Rescue Travel Time	00:12:00	00:05:08	99.05%	00:07:52	630
First Rescue Total Response Time	00:14:00	00:06:51	97.63%	00:10:06	633
First District Chief Travel Time	00:07:30	00:06:09	67.41%	00:10:42	405
First District Chief Total Response Time	00:09:30	00:09:13	59.15%	00:14:16	426
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:07:41	56.25%	00:10:55	16
First Booster Total Response Time	00:11:00	00:15:10	44.44%	00:32:17	18
First Tanker Travel	00:12:00	00:08:24	88.57%	00:12:37	35
First Tanker Total Response	00:14:00	00:13:52	63.41%	00:23:04	41
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:08:06	45.45%	00:10:32	11
First HUT Total Response	00:11:00	00:18:29	25%	00:34:39	12
First Rehab Travel Time	00:12:00	00:11:31	53.61%	00:17:10	97
First Rehab Total Response Time	00:14:00	00:18:03	37.25%	00:28:37	102
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:43	70.52%	00:07:09	821
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:28	72.50%	00:09:59	829
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	00:09:02	3.45%	00:13:01	87
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	00:13:25	1.06%	00:18:57	94
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	00:09:17	6.17%	00:13:01	81
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	00:13:49	0%	00:20:47	89
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	00:10:23	14.29%	00:14:37	28
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	00:17:50	0%	00:28:18	37

StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	00:16:36	50%	00:18:48	2
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	00:42:48	0%	00:49:47	2

Max Risk Other Fires Statements

Spring Fire Department's Other Fire baseline statements reflect actual performance during 2021 to 2024. The department relies on the use of automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of our mutual aid response system. The department's actual baseline service level performance is as follows:

For 90 percent of Max Risk Other Fires during this time period, the total response time for arrival of the first unit is unknown as there were no Max Risk Structure Fire Incidents during this period.

For 90 percent of Max Risk Other Fires, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, is unknown as there were no Max Risk Other Fires during this period. The ERF used during this period is capable of the following actions: establishing formal command, pump operations, and fire attack. All the operations described above are based on Spring Fire Department standard operating procedures.

Scenario:

Accreditation Max AllFire 21-24

Total Incidents based off data received:

0

Response Criteria	CITY Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	N/A	N/A	N/A	N/A
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Unit Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Engine Travel Time	00:05:30	N/A	N/A	N/A	N/A

First Engine Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Aerial Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Aerial Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Rescue Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rescue Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First District Chief Travel Time	00:07:30	N/A	N/A	N/A	N/A
First District Chief Total Response Time	00:09:30	N/A	N/A	N/A	N/A
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	N/A	N/A	N/A	N/A
StruFire Low ERF Travel (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:04:30	N/A	N/A	N/A	N/A
StruFire Low ERF Total Response (2 ENG, 1 LAD, 1 CHIEF, 1 MED, 15FF)	00:06:00	N/A	N/A	N/A	N/A
StruFire Mod ERF Travel (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:05:30	N/A	N/A	N/A	N/A
StruFire Mod ERF Total Response (3 ENG, 1 LAD, 1 CHIEF, 1 MED, 19FF)	00:07:00	N/A	N/A	N/A	N/A
Strufire High ERF Travel (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:07:30	N/A	N/A	N/A	N/A
StruFire High ERF Total Response (4 ENG, 2LAD, 2 CHIEFS, 1 MED, 28 FF)	00:09:00	N/A	N/A	N/A	N/A
StruFire Max ERF Travel (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:16:00	N/A	N/A	N/A	N/A
StruFire Max ERF Total Response (8 ENG, 3 LAD, 1 RESCUE, 1 REHAB, 3 CHIEFS, 2 MED, 55 FF)	00:17:30	N/A	N/A	N/A	N/A

Emergency Medical Services Baseline Statements

The department's baseline statements reflect actual performance during 2021 to 2024. Spring Fire Department relies on the use of EMS Services from Harris County ESD-11 to provide transportation and higher medical care services. These resources are available as part of a seamless response system. The department's actual baseline service level performance is as follows:

Low Risk EMS Statements

For 90 percent of Low-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with at least 1 firefighter and 1 officer, is: 10 minutes and 46 seconds. The first-due unit is capable of: establishing command; maintaining scene safety; evaluating the need for additional resources; initiating basic life support and early defibrillation; and assisting transportation of the patient to the appropriate receiving facility.

For 90 percent of Low-Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of 2 personnel and includes ambulance transport, is: 9 minutes and 38 seconds. The ERF is capable of: maintaining command and scene safety; delivering advanced life support including the appropriate treatment; and transporting the patient to the appropriate receiving facility. Spring Fire Department relies upon Harris County ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Scenario:

Accreditation Low EMS 21-24

Total Incidents based off data received:

1174

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:37	85%	00:01:22	1073
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:37	94%	00:01:22	1073
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	00:00:51	72%	00:01:28	1031
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:05:28	31%	00:08:41	1068
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	00:05:28	31%	00:08:41	1068
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:05:28	61%	00:08:41	1068
First Unit Total Response Time	00:07:30	00:07:01	67%	00:10:46	1084
First Engine Travel Time	00:05:30	00:05:29	61%	00:08:47	1060
First Engine Total Response Time	00:07:30	00:07:02	67%	00:10:50	1071
First Aerial Travel Time	00:09:00	00:04:53	93%	00:08:07	231
First Aerial Total Response Time	00:11:00	00:06:28	93%	00:10:09	236
First Rescue Travel Time	00:12:00	00:05:15	99%	00:08:24	539
First Rescue Total Response Time	00:14:00	00:06:53	98%	00:10:23	544

First District Chief Travel Time	00:07:30	00:07:44	33%	00:10:16	15
First District Chief Total Response Time	00:09:30	00:10:16	30%	00:17:03	20
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:04:05	100%	00:08:10	4
First Booster Total Response Time	00:11:00	00:07:37	100%	00:09:36	4
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	00:15:56	0%	00:18:10	3
First UTV Total Response	00:14:00	00:21:40	0%	00:22:58	4
First HUT Travel	00:09:00	00:09:26	49%	00:15:48	70
First HUT Total Response	00:11:00	00:13:47	35%	00:19:47	83
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:05:29	61%	00:08:46	1071
First Basic or Advanced HAZMAT Total Response Time	00:07:30	00:07:02	67%	00:10:50	1083
EMS Low ERF Travel (1 MED, 2FF)	00:12:00	00:05:03	97%	00:08:47	664
EMS Low ERF Total Response (1MED, 2FF)	00:14:00	00:04:30	98%	00:09:38	1089
EMS Mod ERF Travel (1MED, 2FF)	00:13:00	00:07:38	88%	00:13:44	526
EMS Mod ERF Total Response (1MED, 2FF)	00:15:00	00:05:47	93%	00:13:40	965
EMS High ERF Travel (1MED, 2FF)	00:15:00	00:07:38	93%	00:13:44	526
EMS High ERF Total Response (1MED, 2FF)	00:17:00	00:05:47	96%	00:13:40	965
EMS Max ERF Travel (6MED, 12FF)	00:17:00	N/A	N/A	N/A	N/A
EMS Max ERF Total Response (6MED, 12FF)	00:19:00	N/A	N/A	N/A	N/A

Moderate Risk EMS Statements

For 90 percent of Moderate-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with at least 1 firefighter and 1 officer, is: 10 minutes and 43 seconds. The first-due unit is capable of: establishing command; maintaining scene safety; evaluating the need for additional resources; initiating basic life support and early defibrillation; and assisting transportation of the patient to the appropriate receiving facility.

For 90 percent of Moderate-Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of 2 personnel and includes ambulance transport, is: 15 minutes and 38 seconds. The ERF is capable of: maintaining command and scene safety; delivering advanced life support including the appropriate treatment; and transporting the patient to the appropriate receiving facility. Spring Fire Department relies upon Harris County ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider

unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Scenario:

Accreditation Mod EMS 21-24

Total Incidents based off data received:

1546

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:48	77%	00:01:50	1462
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:48	89%	00:01:50	1462
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	00:00:49	74%	00:01:21	1392
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:04:53	42%	00:08:21	1456
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	00:04:53	42%	00:08:21	1456
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:04:53	70%	00:08:21	1456
First Unit Total Response Time	00:07:30	00:06:32	72%	00:10:43	1479
First Engine Travel Time	00:05:30	00:04:56	70%	00:08:32	1455
First Engine Total Response Time	00:07:30	00:06:35	72%	00:10:46	1468
First Aerial Travel Time	00:09:00	00:04:32	93%	00:08:03	299
First Aerial Total Response Time	00:11:00	00:06:24	91%	00:10:33	303
First Rescue Travel Time	00:12:00	00:04:35	98%	00:07:54	625
First Rescue Total Response Time	00:14:00	00:06:19	96%	00:10:05	634
First District Chief Travel Time	00:07:30	00:04:16	89%	00:11:20	9
First District Chief Total Response Time	00:09:30	00:07:58	75%	00:18:35	12
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:03:26	100%	00:05:38	3
First Booster Total Response Time	00:11:00	00:10:27	67%	00:18:17	3
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	00:09:30	100%	00:09:30	1
First UTV Total Response	00:14:00	00:13:00	100%	00:13:00	1
First HUT Travel	00:09:00	00:10:09	45%	00:16:23	169
First HUT Total Response	00:11:00	00:14:05	33%	00:21:12	203
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	00:01:38	100%	00:01:38	1

First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:56	70%	00:08:32	1463
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:35	72%	00:10:46	1477
EMS Low ERF Travel (1 MED, 2FF)	00:12:00	00:04:37	98%	00:08:07	1302
EMS Low ERF Total Response (1MED, 2FF)	00:14:00	00:05:36	98%	00:09:53	1490
EMS Mod ERF Travel (1MED, 2FF)	00:13:00	00:07:41	86%	00:14:06	1105
EMS Mod ERF Total Response (1MED, 2FF)	00:15:00	00:08:20	88%	00:15:38	1319
EMS High ERF Travel (1MED, 2FF)	00:15:00	00:07:41	92%	00:14:06	1105
EMS High ERF Total Response (1MED, 2FF)	00:17:00	00:08:20	93%	00:15:38	1319
EMS Max ERF Travel (6MED, 12FF)	00:17:00	N/A	N/A	N/A	N/A
EMS Max ERF Total Response (6MED, 12FF)	00:19:00	N/A	N/A	N/A	N/A

High Risk EMS Statements

For 90 percent of High-Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with at least 1 firefighter and 1 officer, is: 9 minutes and 25 seconds. The first-due unit is capable of: establishing command; maintaining scene safety; evaluating the need for additional resources; initiating basic life support and early defibrillation; and assisting transportation of the patient to the appropriate receiving facility.

For 90 percent of High-Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of 2 personnel and includes ambulance transport, is: 13 minutes and 27 seconds. The ERF is capable of: maintaining command and scene safety; delivering advanced life support including the appropriate treatment; and transporting the patient to the appropriate receiving facility. Spring Fire Department relies upon Harris County ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Scenario:

Accreditation High EMS 21-24

Total Incidents based off data received:

2254

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:31	90%	00:01:05	2222
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:31	96%	00:01:05	2222
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	00:00:51	71%	00:01:25	2158
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:04:51	40%	00:07:33	2202

NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	00:04:51	40%	00:07:33	2202
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:04:51	71%	00:07:33	2202
First Unit Total Response Time	00:07:30	00:06:14	79%	00:09:25	2223
First Engine Travel Time	00:05:30	00:04:51	72%	00:07:35	2154
First Engine Total Response Time	00:07:30	00:06:13	79%	00:09:24	2173
First Aerial Travel Time	00:09:00	00:04:41	95%	00:07:04	487
First Aerial Total Response Time	00:11:00	00:06:11	95%	00:09:09	491
First Rescue Travel Time	00:12:00	00:04:41	99%	00:07:30	1146
First Rescue Total Response Time	00:14:00	00:06:06	98%	00:09:20	1154
First District Chief Travel Time	00:07:30	00:04:24	88%	00:08:44	67
First District Chief Total Response Time	00:09:30	00:07:52	69%	00:12:29	71
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:05:21	93%	00:07:30	27
First Booster Total Response Time	00:11:00	00:08:07	82%	00:15:26	28
First Tanker Travel	00:12:00	00:07:03	100%	00:07:03	1
First Tanker Total Response	00:14:00	00:09:16	100%	00:09:16	1
First UTV Travel	00:12:00	00:04:20	100%	00:04:20	1
First UTV Total Response	00:14:00	00:12:25	67%	00:16:39	3
First HUT Travel	00:09:00	00:10:16	38%	00:17:11	65
First HUT Total Response	00:11:00	00:14:21	25%	00:21:12	83
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:51	72%	00:07:35	2181
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:14	79%	00:09:25	2199
EMS Low ERF Travel (1 MED, 2FF)	00:12:00	00:04:33	99%	00:07:23	2047
EMS Low ERF Total Response (1MED, 2FF)	00:14:00	00:05:32	99%	00:08:39	2228
EMS Mod ERF Travel (1MED, 2FF)	00:13:00	00:07:21	92%	00:12:28	1838
EMS Mod ERF Total Response (1MED, 2FF)	00:15:00	00:08:02	93%	00:13:27	2054
EMS High ERF Travel (1MED, 2FF)	00:15:00	00:07:21	96%	00:12:28	1838
EMS High ERF Total Response (1MED, 2FF)	00:17:00	00:08:02	96%	00:13:27	2054
EMS Max ERF Travel (6MED, 12FF)	00:17:00	N/A	N/A	N/A	N/A
EMS Max ERF Total Response (6MED, 12FF)	00:19:00	N/A	N/A	N/A	N/A

Max Risk EMS Statements

For 90 percent of Max Risk EMS responses, the total response time for the arrival of the first-due unit, staffed with at least 1 firefighter and 1 officer, is: 14 minutes and 18 seconds. The first-due unit is

capable of: establishing command; maintaining scene safety; evaluating the need for additional resources; initiating basic life support and early defibrillation; and assisting transportation of the patient to the appropriate receiving facility.

For 90 percent of Max Risk EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of 21 personnel including firefighters and officers, is unknown as there is insufficient data to assess the ERF response. The ERF is capable of: maintaining command and scene safety; delivering advanced life support including the appropriate treatment; and transporting the patient to the appropriate receiving facility. Spring Fire Department relies upon Harris County ESD11, a third-party provider, to complete the effective response force (ERF) component of its EMS program. The initial arriving fire department company shall have the capabilities of providing first responder medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire department company shall provide support as needed.

Scenario:

Accreditation Max EMS 21-24

Total Incidents based off data received:

10

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:29	100%	00:00:54	10
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:29	100%	00:00:54	10
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	00:01:02	70%	00:02:21	10
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:07:22	10%	00:13:31	10
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	00:07:22	10%	00:13:31	10
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:07:22	40%	00:13:31	10
First Unit Total Response Time	00:07:30	00:08:53	40%	00:14:48	10
First Engine Travel Time	00:05:30	00:07:22	40%	00:13:31	10
First Engine Total Response Time	00:07:30	00:08:53	40%	00:14:48	10
First Aerial Travel Time	00:09:00	00:04:38	100%	00:04:58	3
First Aerial Total Response Time	00:11:00	00:06:45	100%	00:07:56	3
First Rescue Travel Time	00:12:00	00:06:13	100%	00:08:22	4
First Rescue Total Response Time	00:14:00	00:07:54	100%	00:09:14	4
First District Chief Travel Time	00:07:30	00:04:28	100%	00:04:28	1
First District Chief Total Response Time	00:09:30	00:09:13	100%	00:09:13	1

First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:07:22	40%	00:13:31	10
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:08:53	40%	00:14:48	10
EMS Low ERF Travel (1 MED, 2FF)	00:12:00	00:06:54	80%	00:12:41	10
EMS Low ERF Total Response (1MED, 2FF)	00:14:00	00:08:13	90%	00:13:59	10
EMS Mod ERF Travel (1MED, 2FF)	00:13:00	00:08:27	100%	00:12:01	7
EMS Mod ERF Total Response (1MED, 2FF)	00:15:00	00:09:24	100%	00:13:37	7
EMS High ERF Travel (1MED, 2FF)	00:15:00	00:08:27	100%	00:12:01	7
EMS High ERF Total Response (1MED, 2FF)	00:17:00	00:09:24	100%	00:13:37	7
EMS Max ERF Travel (6MED, 12FF)	00:17:00	N/A	N/A	N/A	N/A
EMS Max ERF Total Response (6MED, 12FF)	00:19:00	N/A	N/A	N/A	N/A

Technical Rescue Baseline Statements

The department's baseline statements reflect actual performance during 2021 to 2024. The department relies on the use of automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The department's actual baseline service level performance is as follows:

Low Risk Technical Rescue Statements

For 90 percent of Low-Risk Technical Rescue Incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 2 firefighters and 1 officer, is: 10 minutes and 51 seconds. The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of Low-Risk Technical Rescue Incidents, the total response time for the arrival of the effective response force (ERF), staffed with 17 firefighters and officers including the technical response team, is: 9 minutes and 54 seconds. The ERF is capable of: appointing a site safety officer; hazard control; and patient stabilization and transport.

Scenario:

Accreditation Low Resc 21-24

Total Incidents based off data received:

779

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:35	86.66%	00:01:24	712
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:35	93.82%	00:01:24	712
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:51	84.16%	00:01:30	688
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:05:24	31.32%	00:08:24	661
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:07:18	54.08%	00:10:48	662
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:05:24	61.27%	00:08:24	661
First Unit Total Response Time	00:07:30	00:07:21	67.76%	00:10:51	670
First Engine Travel Time	00:05:30	00:05:23	61.26%	00:08:22	653
First Engine Total Response Time	00:07:30	00:07:18	67.98%	00:10:48	662
First Aerial Travel Time	00:09:00	00:05:11	91.43%	00:08:26	210
First Aerial Total Response Time	00:11:00	00:07:13	90.09%	00:10:47	212
First Rescue Travel Time	00:12:00	00:05:19	99.43%	00:08:22	351
First Rescue Total Response Time	00:14:00	00:07:27	95.77%	00:10:47	355
First District Chief Travel Time	00:07:30	00:09:42	33.33%	00:14:46	3
First District Chief Total Response Time	00:09:30	00:26:51	0%	00:40:01	3
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:03:19	100%	00:03:19	1
First Booster Total Response Time	00:11:00	00:15:31	0%	00:15:31	1
First Tanker Travel	00:12:00	00:22:41	0%	00:22:41	1
First Tanker Total Response	00:14:00	00:28:40	0%	00:28:40	1
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:14:14	50%	00:20:00	2
First HUT Total Response	00:11:00	00:18:16	0%	00:23:12	2
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:05:23	61.15%	00:08:24	659
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:07:21	67.96%	00:10:48	668
TechRescue Low ERF Travel (1 RES)	00:12:00	00:05:06	100%	00:07:33	34

TechRescue Low ERF Total Response (1 RES)	00:14:00	00:06:32	100%	00:09:54	34
TechRescue Mod ERF Travel (1 ENG, 1 RES)	00:12:00	00:05:06	100%	00:07:33	34
TechRescue Mod ERF Total Response (1 ENG, 1 RES)	00:14:00	00:06:34	100%	00:09:54	34
TechRescue High ERF Travel (1 ENG, 2 RES)	00:14:00	00:06:38	100%	00:08:48	13
TechRescue High ERF Total Response (1 ENG, 2 RES)	00:16:00	00:07:57	100%	00:09:51	13
TechRescue Max ERF Travel (2 ENG, 2 RES)	00:16:00	N/A	N/A	N/A	N/A
TechRescue Max ERF Total Response (2 ENG, 2 RES)	00:18:00	N/A	N/A	N/A	N/A

Moderate Risk Technical Rescue Statements

For 90 percent of Moderate-Risk Technical Rescue Incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 2 firefighters and 1 officer, is: 9 minutes and 24 seconds. The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of Moderate-Risk Technical Rescue Incidents, the total response time for the arrival of the effective response force (ERF), staffed with 18 firefighters and officers including the technical response team, is: 27 minutes and 52 seconds. The ERF is capable of: appointing a site safety officer; hazard control; and patient stabilization and transport.

Scenario:

Accreditation Mod Resc 21-24

Total Incidents based off data received:

198

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:35	85.80%	00:01:32	176
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:35	92.05%	00:01:32	176
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:49	88.02%	00:01:25	167
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:04:54	36.48%	00:08:02	159
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:06:47	67.09%	00:09:43	158
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:04:54	70.44%	00:08:02	159
First Unit Total Response Time	00:07:30	00:06:44	79.50%	00:09:24	161
First Engine Travel Time	00:05:30	00:04:59	69.23%	00:08:02	156
First Engine Total Response Time	00:07:30	00:06:47	79.11%	00:09:43	158
First Aerial Travel Time	00:09:00	00:05:25	88.24%	00:09:05	34
First Aerial Total Response Time	00:11:00	00:06:47	91.43%	00:09:48	35
First Rescue Travel Time	00:12:00	00:05:09	98.75%	00:08:14	80

First Rescue Total Response Time	00:14:00	00:07:02	96.39%	00:09:48	83
First District Chief Travel Time	00:07:30	00:02:44	100%	00:06:37	5
First District Chief Total Response Time	00:09:30	00:05:16	100%	00:07:26	5
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	00:02:19	100%	00:02:19	1
First Booster Total Response Time	00:11:00	00:05:39	100%	00:05:39	1
First Tanker Travel	00:12:00	00:08:03	100%	00:08:03	1
First Tanker Total Response	00:14:00	00:46:49	0%	00:46:49	1
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:07:35	80%	00:12:11	5
First HUT Total Response	00:11:00	00:10:08	60%	00:13:19	5
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	00:01:38	100%	00:01:38	1
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:59	69.62%	00:08:02	158
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:47	79.38%	00:09:33	160
TechRescue Low ERF Travel (1 RES)	00:12:00	00:05:56	100%	00:08:21	15
TechRescue Low ERF Total Response (1 RES)	00:14:00	00:10:45	87.50%	00:27:52	16
TechRescue Mod ERF Travel (1 ENG, 1 RES)	00:12:00	00:05:59	100%	00:08:21	15
TechRescue Mod ERF Total Response (1 ENG, 1 RES)	00:14:00	00:10:46	87.50%	00:27:52	16
TechRescue High ERF Travel (1 ENG, 2 RES)	00:14:00	00:10:49	75%	00:17:08	4
TechRescue High ERF Total Response (1 ENG, 2 RES)	00:16:00	00:12:28	75%	00:18:03	4
TechRescue Max ERF Travel (2 ENG, 2 RES)	00:16:00	N/A	N/A	N/A	N/A
TechRescue Max ERF Total Response (2 ENG, 2 RES)	00:18:00	N/A	N/A	N/A	N/A

High Risk Technical Rescue Statements

For 90 percent of High-Risk Technical Rescue Incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 2 firefighters and 1 officer, is: 11 minutes and 45 seconds. The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of High-Risk Technical Rescue Incidents, the total response time for the arrival of the effective response force (ERF), staffed with 22 firefighters and officers including the technical response team, is: 11 minutes and 50 seconds. The ERF is capable of: appointing a site safety officer; hazard control; and patient stabilization and transport.

Scenario:

Accreditation High Resc 21-24

Total Incidents based off data received:

8

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:01:23	42.86%	00:03:00	7
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:01:23	71.43%	00:03:00	7
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:37	100%	00:00:55	7
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:04:17	28.57%	00:05:02	7
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:06:58	37.50%	00:11:45	8
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:08:33	0%	00:08:33	1
First Unit Travel Time	00:05:30	00:04:17	100%	00:05:02	7
First Unit Total Response Time	00:07:30	00:06:58	75%	00:11:45	8
First Engine Travel Time	00:05:30	00:04:17	100%	00:05:02	7
First Engine Total Response Time	00:07:30	00:06:58	75%	00:11:45	8
First Aerial Travel Time	00:09:00	00:04:50	100%	00:05:02	4
First Aerial Total Response Time	00:11:00	00:07:24	100%	00:08:33	4
First Rescue Travel Time	00:12:00	00:04:44	100%	00:05:17	7
First Rescue Total Response Time	00:14:00	00:06:54	100%	00:08:03	7
First District Chief Travel Time	00:07:30	00:05:52	75%	00:10:12	4
First District Chief Total Response Time	00:09:30	00:08:57	75%	00:11:51	4
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	00:26:16	0%	00:26:16	1
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:17	100%	00:05:02	7
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:58	75%	00:11:45	8
TechRescue Low ERF Travel (1 RES)	00:12:00	00:04:45	100%	00:05:17	6

TechRescue Low ERF Total Response (1 RES)	00:14:00	00:07:06	100%	00:08:03	6
TechRescue Mod ERF Travel (1 ENG, 1 RES)	00:12:00	00:04:45	100%	00:05:17	6
TechRescue Mod ERF Total Response (1 ENG, 1 RES)	00:14:00	00:07:06	100%	00:08:03	6
TechRescue High ERF Travel (1 ENG, 2 RES)	00:14:00	00:06:51	100%	00:09:41	3
TechRescue High ERF Total Response (1 ENG, 2 RES)	00:16:00	00:09:21	100%	00:11:50	3
TechRescue Max ERF Travel (2 ENG, 2 RES)	00:16:00	00:06:51	100%	00:09:41	3
TechRescue Max ERF Total Response (2 ENG, 2 RES)	00:18:00	00:09:21	100%	00:11:50	3

Max Risk Technical Rescue Statements

For 90 percent of Max Risk Technical Rescue Incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of 2 firefighters and 1 officer, is unknown as there were no Max Risk (Confined Space) Rescue Incidents during this time period. The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of Max Risk Technical Rescue Incidents, the total response time for the arrival of the effective response force (ERF), staffed with 26 firefighters and officers including the technical response team, is unknown as there were no Max Risk (Confined Space) Rescue Incidents during this time period. The ERF is capable of: appointing a site safety officer; hazard control; and patient stabilization and transport.

Scenario:

Accreditation Max Resc 21-24

Total Incidents based off data received:

0

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	N/A	N/A	N/A	N/A
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Unit Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Engine Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Engine Total Response Time	00:07:30	N/A	N/A	N/A	N/A

First Aerial Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Aerial Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Rescue Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rescue Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First District Chief Travel Time	00:07:30	N/A	N/A	N/A	N/A
First District Chief Total Response Time	00:09:30	N/A	N/A	N/A	N/A
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	N/A	N/A	N/A	N/A
TechRescue Low ERF Travel (1 RES)	00:12:00	N/A	N/A	N/A	N/A
TechRescue Low ERF Total Response (1 RES)	00:14:00	N/A	N/A	N/A	N/A
TechRescue Mod ERF Travel (1 ENG, 1 RES)	00:12:00	N/A	N/A	N/A	N/A
TechRescue Mod ERF Total Response (1 ENG, 1 RES)	00:14:00	N/A	N/A	N/A	N/A
TechRescue High ERF Travel (1 ENG, 2 RES)	00:14:00	N/A	N/A	N/A	N/A
TechRescue High ERF Total Response (1 ENG, 2 RES)	00:16:00	N/A	N/A	N/A	N/A
TechRescue Max ERF Travel (2 ENG, 2 RES)	00:16:00	N/A	N/A	N/A	N/A
TechRescue Max ERF Total Response (2 ENG, 2 RES)	00:18:00	N/A	N/A	N/A	N/A

Hazardous Materials Baseline Statements

The department's baseline statements reflect actual performance during 2021 to 2024. The department relies on the use of automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The department's actual baseline service level performance is as follows:

Low Risk HazMat Statements

For 90 percent of Low-Risk Hazardous Materials incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: 10 minutes and 30 seconds. The first-due unit shall be capable of: establishing command; evaluating the need for additional resources;

establishing the initial isolation distance; and assessing the situation to determine the presence of a potential hazardous material or explosive device.

For 90 percent of Low-Risk Hazardous Materials incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 4 firefighters and officers, is: 10 minutes and 29 seconds. The ERF is capable of: providing a dedicated incident safety officer; emergency or mass decontamination; defensive containment measures; and the knowledge, skills, and abilities to mitigate a hazardous materials incident.

Scenario:

Accreditation Low Haz 21-24

Total Incidents based off data received:

57

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:23	97.96%	00:00:29	49
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:23	97.96%	00:00:29	49
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:52	85.42%	00:01:34	48
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:05:35	21.57%	00:07:40	51
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:08:08	39.22%	00:10:29	51
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	00:05:35	52.94%	00:07:40	51
First Unit Total Response Time	00:07:30	00:08:28	67.92%	00:10:30	53
First Engine Travel Time	00:05:30	00:05:32	54%	00:08:15	50
First Engine Total Response Time	00:07:30	00:08:08	70.59%	00:10:29	51
First Aerial Travel Time	00:09:00	00:06:06	87.50%	00:16:48	8
First Aerial Total Response Time	00:11:00	00:07:05	87.50%	00:18:51	8
First Rescue Travel Time	00:12:00	00:05:50	96.30%	00:09:16	27
First Rescue Total Response Time	00:14:00	00:07:02	96.30%	00:10:12	27
First District Chief Travel Time	00:07:30	N/A	N/A	N/A	N/A
First District Chief Total Response Time	00:09:30	00:14:37	33.33%	00:25:06	3
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A

First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:06:34	100%	00:08:21	4
First HUT Total Response	00:11:00	00:10:12	50%	00:12:23	4
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:05:36	52.94%	00:08:33	51
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:08:09	69.23%	00:10:29	52
HazMat Low ERF Travel (1 BASIC HAZMAT)	00:05:30	00:05:36	52.94%	00:08:33	51
HazMat Low ERF Total Response (1 BASIC HAZMAT)	00:07:30	00:08:09	69.23%	00:10:29	52
HazMat Mod ERF Travel (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:15:00	00:06:53	100%	00:06:53	1
HazMat Mod ERF Total Response (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:17:00	00:07:38	100%	00:07:38	1
HazMat High ERF Travel (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:20:00	N/A	N/A	N/A	N/A
HazMat High ERF Total Response (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:22:00	N/A	N/A	N/A	N/A
HazMat Max ERF Travel (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:28:00	N/A	N/A	N/A	N/A
HazMat Max ERF Total Response (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:30:00	N/A	N/A	N/A	N/A

Moderate Risk HazMat Statements

For 90 percent of Moderate-Risk Hazardous Materials incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: 9 minutes and 43 seconds. The first-due unit shall be capable of: establishing command; evaluating the need for additional resources; establishing the initial isolation distance; and assessing the situation to determine the presence of a potential hazardous material or explosive device.

For 90 percent of Moderate-Risk Hazardous Materials incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 9 firefighters and officers, is: 13 minutes and 02 seconds. The ERF is capable of: providing a dedicated incident safety officer; emergency or mass decontamination; defensive containment measures; and the knowledge, skills, and abilities to mitigate a hazardous materials incident.

Scenario:

Accreditation Mod Haz 21-24

Total Incidents based off data received:

604

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:24	94.79%	00:00:30	595
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:24	96.64%	00:00:30	595
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:49	88.25%	00:01:24	587
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:05:15	29.44%	00:08:02	591
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:06:36	59.09%	00:09:43	594
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:28:18	0%	00:28:18	1
First Unit Travel Time	00:05:30	00:05:15	62.10%	00:08:02	591
First Unit Total Response Time	00:07:30	00:06:33	72.39%	00:09:43	594
First Engine Travel Time	00:05:30	00:05:18	61.08%	00:08:03	591
First Engine Total Response Time	00:07:30	00:06:36	71.72%	00:09:43	594
First Aerial Travel Time	00:09:00	00:05:08	96.50%	00:07:17	143
First Aerial Total Response Time	00:11:00	00:06:41	94.48%	00:09:17	145
First Rescue Travel Time	00:12:00	00:05:29	98.36%	00:08:14	304
First Rescue Total Response Time	00:14:00	00:07:01	98.05%	00:09:54	308
First District Chief Travel Time	00:07:30	00:05:37	77.22%	00:09:38	79
First District Chief Total Response Time	00:09:30	00:07:25	78.75%	00:11:18	80
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	00:06:58	100%	00:06:58	1
First Tanker Total Response	00:14:00	00:31:33	0%	00:31:33	1
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	00:08:46	50%	00:09:30	2
First HUT Total Response	00:11:00	00:20:42	0%	00:29:13	2
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:05:18	61.08%	00:08:03	591
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:06:36	71.72%	00:09:43	594
HazMat Low ERF Travel (1 BASIC HAZMAT)	00:05:30	00:05:18	61.08%	00:08:03	591

HazMat Low ERF Total Response (1 BASIC HAZMAT)	00:07:30	00:06:36	71.72%	00:09:43	594
HazMat Mod ERF Travel (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:15:00	00:06:59	98.51%	00:10:07	67
HazMat Mod ERF Total Response (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:17:00	00:09:53	92.75%	00:13:02	69
HazMat High ERF Travel (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:20:00	00:14:48	100%	00:14:48	1
HazMat High ERF Total Response (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:22:00	00:28:18	0%	00:28:18	1
HazMat Max ERF Travel (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:28:00	N/A	N/A	N/A	N/A
HazMat Max ERF Total Response (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:30:00	N/A	N/A	N/A	N/A

High Risk HazMat Statements

For 90 percent of High-Risk Hazardous Materials incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: 7 minutes and 16 seconds. The first-due unit shall be capable of: establishing command; evaluating the need for additional resources; establishing the initial isolation distance; and assessing the situation to determine the presence of a potential hazardous material or explosive device.

For 90 percent of High-Risk Hazardous Materials incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 17 firefighters and officers, is: 58 minutes and 18 seconds. The ERF is capable of: providing a dedicated incident safety officer; emergency or mass decontamination; defensive containment measures; and the knowledge, skills, and abilities to mitigate a hazardous materials incident.

Scenario:

Accreditation High Haz 21-24

Total Incidents based off data received:

78

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	00:00:29	92.11%	00:00:49	76
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	00:00:29	96.05%	00:00:49	76
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	00:00:52	84.51%	00:01:33	71
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	00:03:58	55.84%	00:05:59	77
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	00:05:28	83.33%	00:07:16	78

NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	00:38:03	0%	00:58:15	2
First Unit Travel Time	00:05:30	00:03:58	85.71%	00:05:59	77
First Unit Total Response Time	00:07:30	00:05:22	90.91%	00:07:16	77
First Engine Travel Time	00:05:30	00:04:04	85.90%	00:05:59	78
First Engine Total Response Time	00:07:30	00:05:28	91.03%	00:07:16	78
First Aerial Travel Time	00:09:00	00:05:04	94.64%	00:07:41	56
First Aerial Total Response Time	00:11:00	00:06:31	92.86%	00:09:26	56
First Rescue Travel Time	00:12:00	00:04:34	100%	00:06:37	66
First Rescue Total Response Time	00:14:00	00:05:56	98.51%	00:08:36	67
First District Chief Travel Time	00:07:30	00:05:02	91.67%	00:07:15	48
First District Chief Total Response Time	00:09:30	00:06:42	86%	00:09:58	50
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A
First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	00:01:50	100%	00:01:50	1
First Tanker Total Response	00:14:00	00:04:51	100%	00:04:51	1
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	00:04:04	85.90%	00:05:59	78
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	00:05:28	91.03%	00:07:16	78
HazMat Low ERF Travel (1 BASIC HAZMAT)	00:05:30	00:04:04	85.90%	00:05:59	78
HazMat Low ERF Total Response (1 BASIC HAZMAT)	00:07:30	00:05:28	91.03%	00:07:16	78
HazMat Mod ERF Travel (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:15:00	00:05:22	100%	00:06:37	52
HazMat Mod ERF Total Response (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:17:00	00:07:19	98.08%	00:08:29	52
HazMat High ERF Travel (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:20:00	00:22:19	0%	00:22:19	1
HazMat High ERF Total Response (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:22:00	00:58:15	0%	00:58:15	1
HazMat Max ERF Travel (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:28:00	N/A	N/A	N/A	N/A
HazMat Max ERF Total Response (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:30:00	N/A	N/A	N/A	N/A

Max Risk HazMat Statements

For 90 percent of Max Risk Hazardous Materials incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is unknown as there were no Max Risk Hazardous Materials Incidents during this time period. The first-due unit shall be capable of: establishing command; evaluating the need for additional resources; establishing the initial isolation distance; and assessing the situation to determine the presence of a potential hazardous material or explosive device.

For 90 percent of Max Risk Hazardous Materials incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 22 firefighters and officers, is unknown as there were no Max Risk Hazardous Materials Incidents during this time period. The ERF is capable of: providing a dedicated incident safety officer; emergency or mass decontamination; defensive containment measures; and the knowledge, skills, and abilities to mitigate a hazardous materials incident.

Scenario:

Accreditation Max Haz 21-24

Total Incidents based off data received:

0

Response Criteria	CITY	Average	Percent	Fractile	# of Incidents
NFPA 1225 Call Answering Time with 90% compliance	00:01:04	N/A	N/A	N/A	N/A
NFPA 1225 Call Answering Time with 95% compliance	00:01:46	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (EMS Calls)	00:01:00	N/A	N/A	N/A	N/A
NFPA 1710 Turnout Time (Fire Calls)	00:01:20	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (All Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Unit Travel Time (EMS Calls)	00:04:00	N/A	N/A	N/A	N/A
NFPA 1710 First Engine Company Total Response Time (1E+4FF) (Fire Calls)	00:06:35	N/A	N/A	N/A	N/A
NFPA 1710 Full Alarm Total Response Time (1E + 16FF)	00:08:00	N/A	N/A	N/A	N/A
First Unit Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Unit Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Engine Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Engine Total Response Time	00:07:30	N/A	N/A	N/A	N/A
First Aerial Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Aerial Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Rescue Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rescue Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First District Chief Travel Time	00:07:30	N/A	N/A	N/A	N/A
First District Chief Total Response Time	00:09:30	N/A	N/A	N/A	N/A
First Boat Travel Time	00:14:00	N/A	N/A	N/A	N/A

First Boat Total Response Time	00:16:00	N/A	N/A	N/A	N/A
First Booster Travel Time	00:09:00	N/A	N/A	N/A	N/A
First Booster Total Response Time	00:11:00	N/A	N/A	N/A	N/A
First Tanker Travel	00:12:00	N/A	N/A	N/A	N/A
First Tanker Total Response	00:14:00	N/A	N/A	N/A	N/A
First UTV Travel	00:12:00	N/A	N/A	N/A	N/A
First UTV Total Response	00:14:00	N/A	N/A	N/A	N/A
First HUT Travel	00:09:00	N/A	N/A	N/A	N/A
First HUT Total Response	00:11:00	N/A	N/A	N/A	N/A
First Rehab Travel Time	00:12:00	N/A	N/A	N/A	N/A
First Rehab Total Response Time	00:14:00	N/A	N/A	N/A	N/A
First Basic or Advanced HAZMAT Travel Time	00:05:30	N/A	N/A	N/A	N/A
First Basic or AdvancedHAZMAT Total Response Time	00:07:30	N/A	N/A	N/A	N/A
HazMat Low ERF Travel (1 BASIC HAZMAT)	00:05:30	N/A	N/A	N/A	N/A
HazMat Low ERF Total Response (1 BASIC HAZMAT)	00:07:30	N/A	N/A	N/A	N/A
HazMat Mod ERF Travel (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:15:00	N/A	N/A	N/A	N/A
HazMat Mod ERF Total Response (1 BASIC HAZMAT, 1 ADVANCED HAZMAT)	00:17:00	N/A	N/A	N/A	N/A
HazMat High ERF Travel (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:20:00	N/A	N/A	N/A	N/A
HazMat High ERF Total Response (2 BASIC HAZMAT, 2 ADVANCED HAZMAT)	00:22:00	N/A	N/A	N/A	N/A
HazMat Max ERF Travel (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:28:00	N/A	N/A	N/A	N/A
HazMat Max ERF Total Response (2 BASIC HAZMAT, 3 ADVANCED HAZMAT)	00:30:00	N/A	N/A	N/A	N/A

Performance Gaps

Performance gaps are considered through the baseline and benchmark metrics. Each metric is considered through the lens of how often the system meets the target performance, and gaps are identified in all cases that do not meet the time target.

All responses that do not meet time targets are reviewed by the District Chief on duty and fowarded to Operations and Strategic services for causal analysis. On a quarterly basis, this data is parsed to consider trends and consistent challenges that are causing delays.

Continuous Improvement Plan and Strategy

Exception reports form the basis of the improvement strategy, specifically to determine root cause of response delays. Each delayed response is connected to an exception report from the crew involved in

order to capture the details of the situation and begin forming a picture of the consistent response challenges and delays. These data are then utilized to craft interventional strategies to reduce the performance gap, such as moving crew quarters, removing screensavers from MDTs, and installing IP dispatching.

There are several areas of the CRA/SOC that will receive improved versions, specifically the risk methodology, which will include a stratified risk model for structure fire using NFIRS property codes and a stratified EMS model utilizing ProQA determinants. This will allow for a more granular look at those risk classes.

Recommendations for Improved Effectiveness in Deployment and Coverage

Spring Fire has identified two opportunities to apply engineering solutions to improve response times for incidents occurring on the main lanes of the Hardy Tollway, specifically to address two problems:

Problem 1: Because there are a limited number of on-ramps and exits it is difficult for motorists to report their location to 9-1-1 with any precision, often only able to say “northbound, between 1960 and Cypresswood”, spanning about 3½ miles of tollway.

> Solution 1: Work with Harris County partners and the Harris County Toll Road Authority to install high-visibility numbers on the existing lightpoles nominally spaced at ¼ mile intervals. More precise locations reported by motorists will enable dispatch to more efficiently dispatch units to respond.

Problem 2: There is only one on-ramp providing northbound access to the Hardy Tollway at the southern limit of the Spring Fire Coverage Area. Responding to any northbound incidents on the nearly 8 mile stretch of the Hardy, requires responding units to drive several miles to enter the tollway.

> Solution 2: Working with Harris County partners and the Harris County Toll Road Authority, an Emergency Vehicle Access Point could be added beneath the Cypresswood Road overpass providing quick access to the northern half of the tollway, about a mile from two fire stations, markedly reducing the response time needed for on-scene arrival. This solution could benefit all emergency responders including fire, EMS, and Law Enforcement.

Authority Having Jurisdiction (AHJ) Notifications

This CRA/SOC will be presented to the Harris County ESD 7 Board of Commissioners at the January 2025 board meeting.

The performance gaps and system performance are included in the annual report for the Board of Commissioners each year, available at www.springfd.org

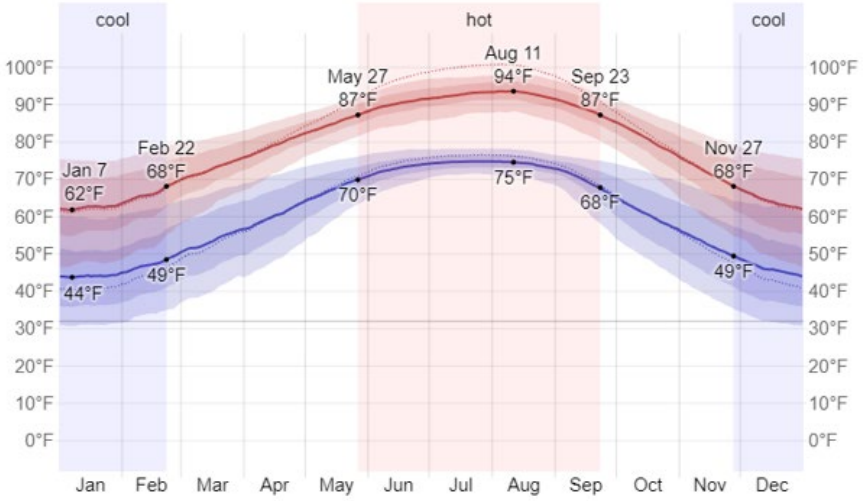
Appendices

Appendix A – Community Climate and Weather Data

Average High and Low Temperature

The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

© WeatherSpark.com

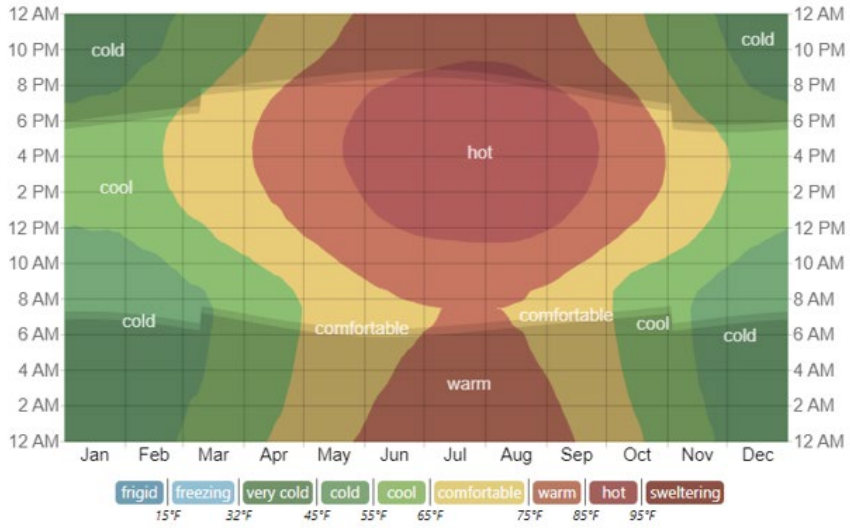


Average	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High	63°F	66°F	73°F	79°F	85°F	90°F	93°F	93°F	89°F	81°F	72°F	64°F
Temp.	52°F	55°F	62°F	69°F	76°F	81°F	83°F	83°F	78°F	70°F	61°F	54°F
Low	44°F	47°F	54°F	60°F	68°F	73°F	75°F	74°F	69°F	61°F	52°F	46°F

Average Hourly Temperature

The average hourly temperature, color coded into bands. The shaded overlays indicate night and civil twilight.

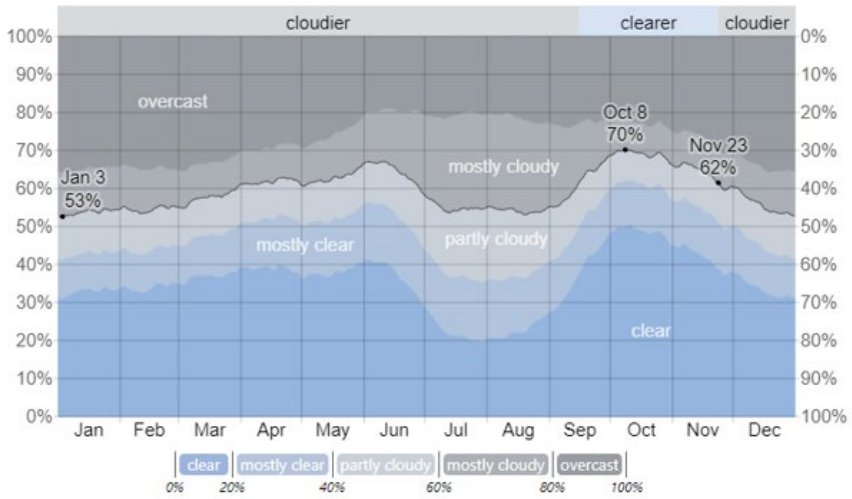
© WeatherSpark.com



Cloud Cover Categories

The percentage of time spent in each cloud cover band, categorized by the percentage of the sky covered by clouds

© WeatherSpark.com

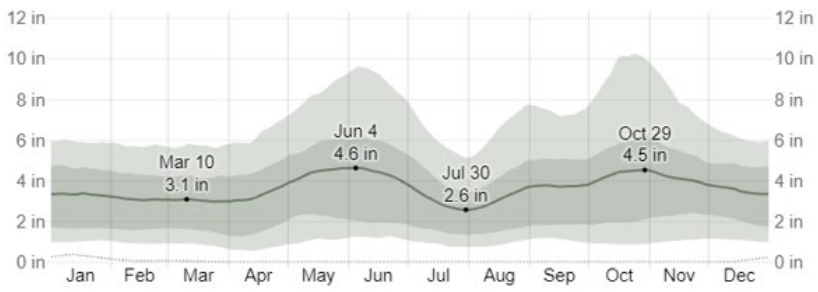


Fraction	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cloudier	46%	45%	42%	38%	37%	35%	45%	46%	39%	31%	36%	44%
Clearer	54%	55%	58%	62%	63%	65%	55%	54%	61%	69%	64%	56%

Average Monthly Rainfall

The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall.

© WeatherSpark.com

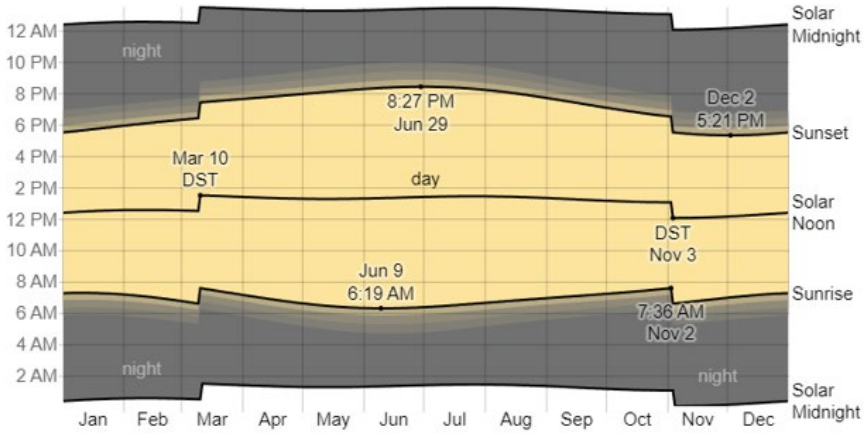


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall	3.4"	3.1"	3.1"	3.2"	4.5"	4.4"	2.9"	3.1"	3.7"	4.4"	4.1"	3.5"

Sunrise & Sunset with Twilight and Daylight-Saving Time

The solar day over the course of the year 2024. From bottom to top, the black lines are the previous solar midnight, sunrise, solar noon, sunset, and the next solar midnight. The day, twilights (civil, nautical and astronomical), and night are indicated by the color bands from yellow to gray. The transitions to and from daylight saving time are indicated by the 'DST' labels.

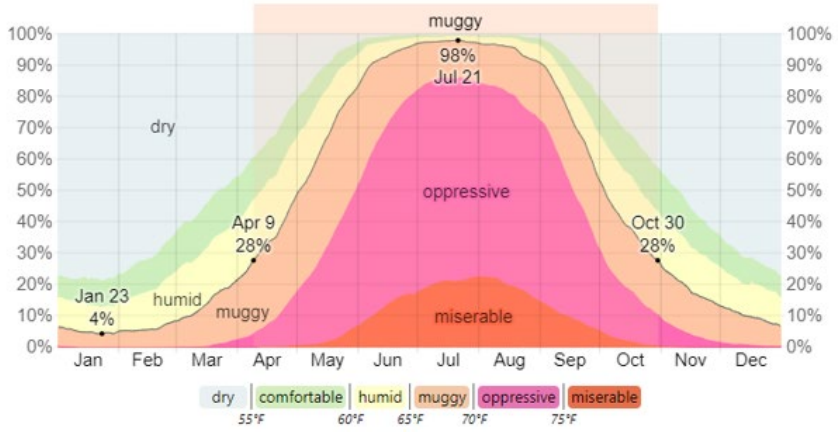
© WeatherSpark.com



Humidity Comfort Levels

The percentage of time spent at various humidity comfort levels, categorized by dew point.

© WeatherSpark.com

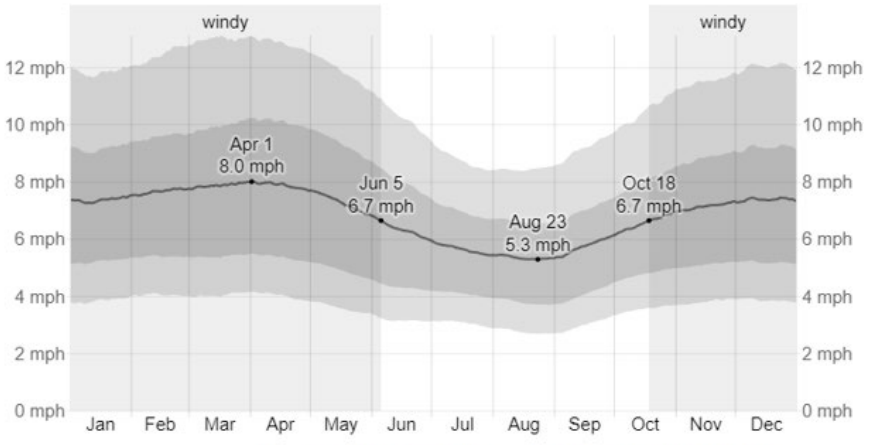


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Muggy days	1.5d	1.7d	4.4d	10.0d	20.7d	27.7d	30.2d	29.4d	22.2d	11.8d	5.6d	3.0d

Average Wind Speed

The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

© WeatherSpark.com

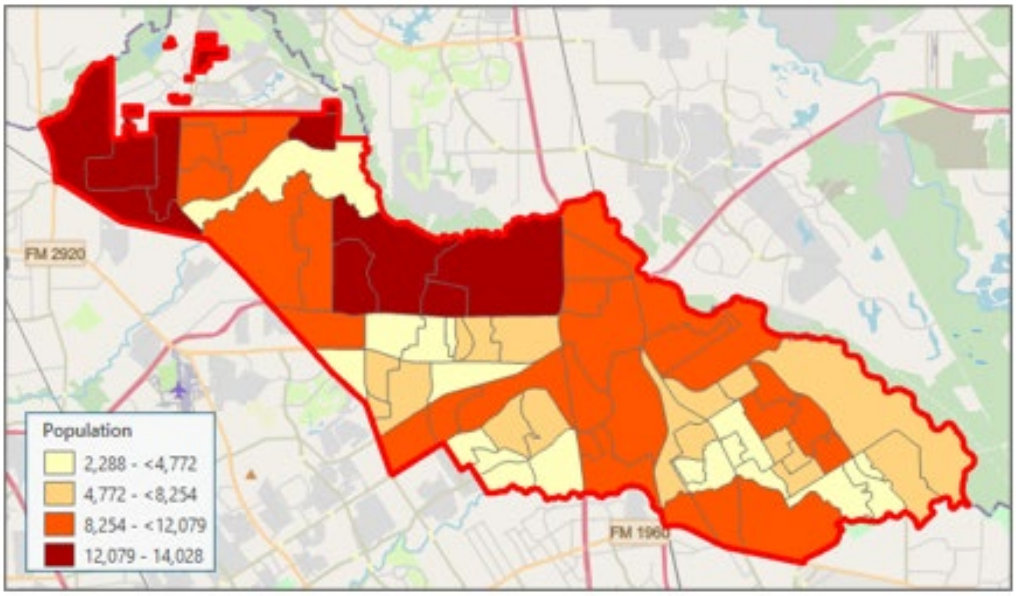


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wind Speed (mph)	7.4	7.7	7.9	7.9	7.3	6.4	5.7	5.4	5.8	6.6	7.1	7.4

Appendix B – Demographics and Vulnerability

Our People

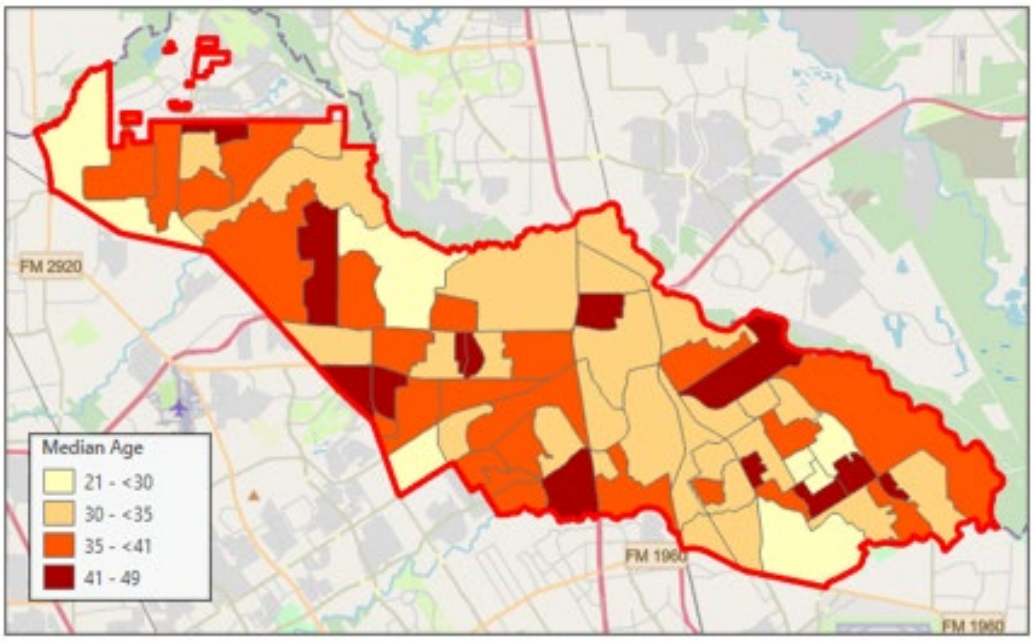
Population by Census Tract



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

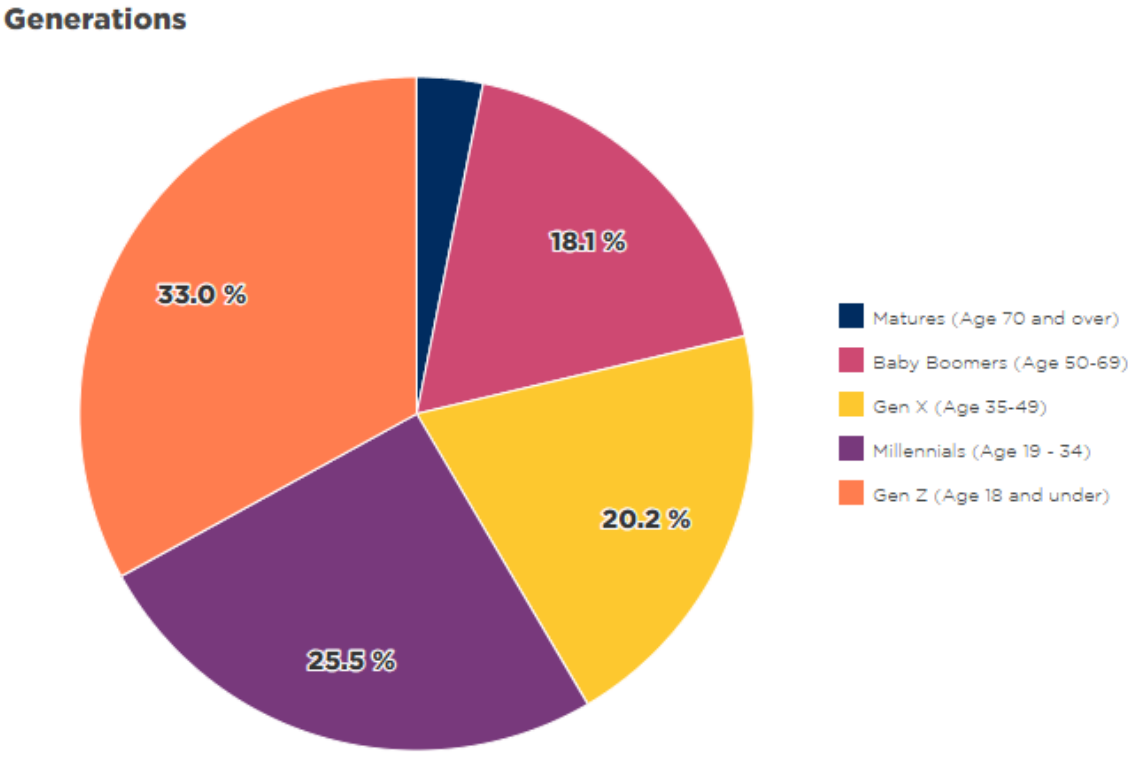
The Population Density map (in the previous section) clearly gives a higher fidelity picture of where our population is concentrated across our service area. Because the Census block groups vary so much in size, it gives a misleading picture of population distribution.

Median Age by Census Block Group



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

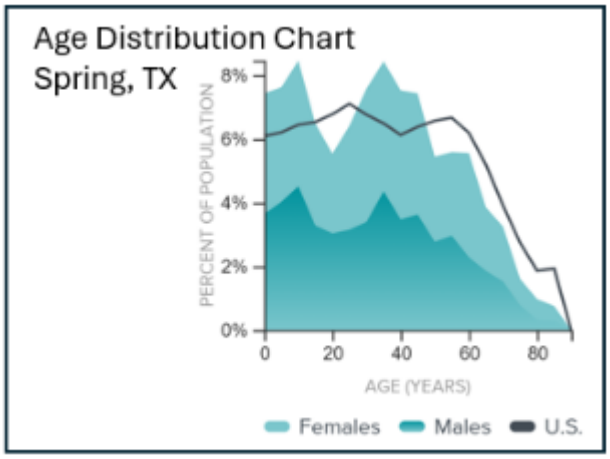
Distribution of Generations

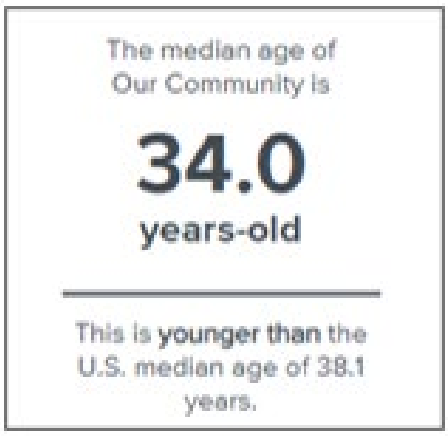


Spring FD

Sources: US Census Bureau ACS 5-year 2018-2022

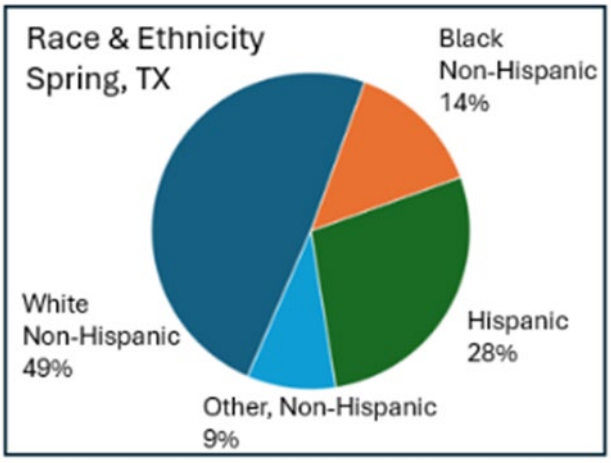
Age Distribution





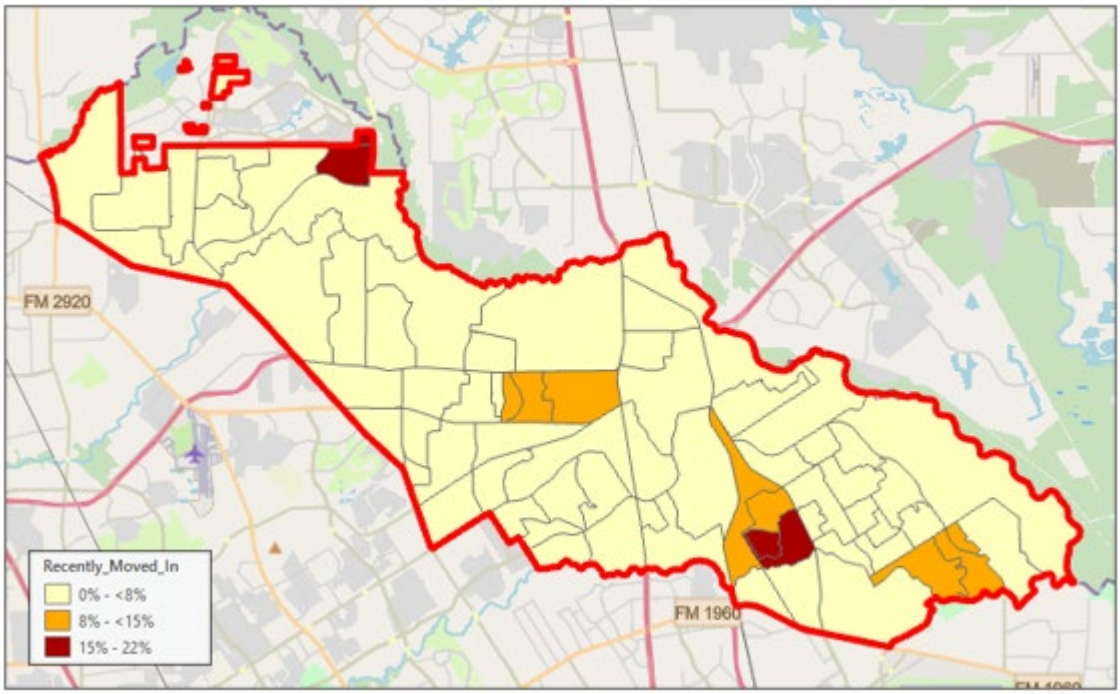
Sources: broadstreet.io and ACS 2016-2019

Race, Ethnicity, and Languages



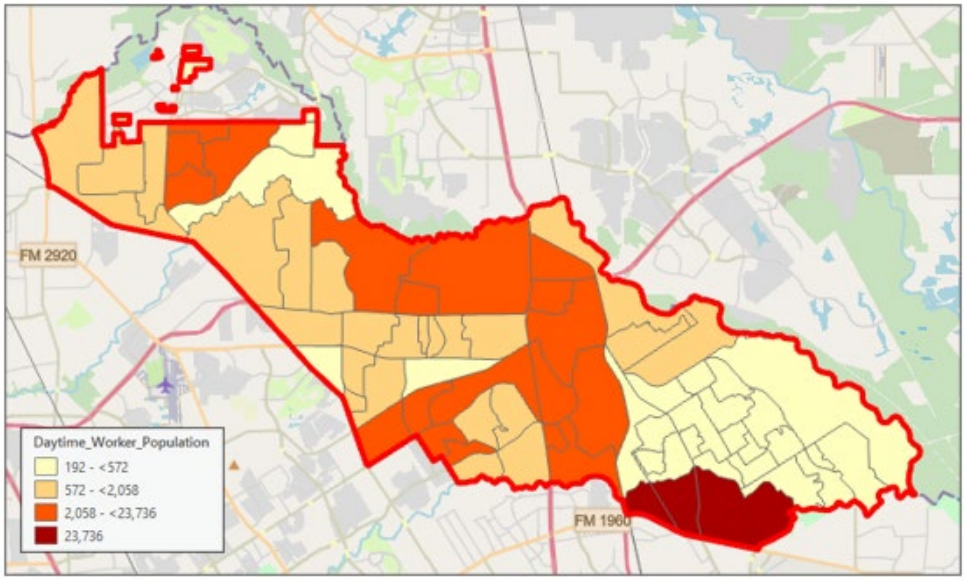
Sources: broadstreet.io and ACS 2016-2019

Recently Moved into ESD-7



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Where We Work

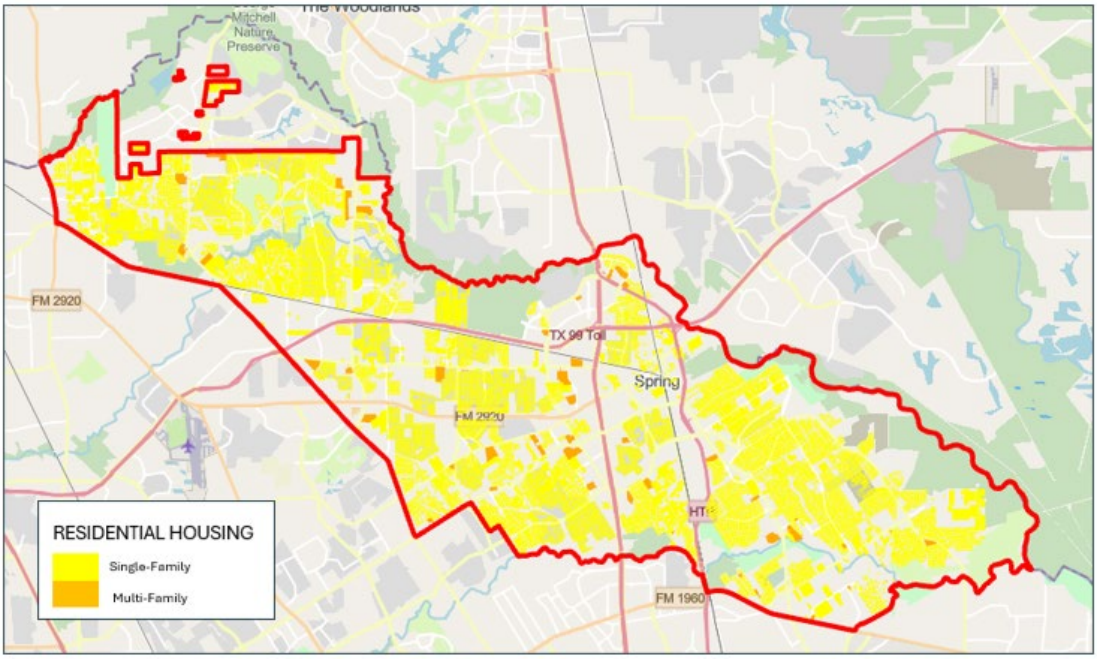


Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Built Environment

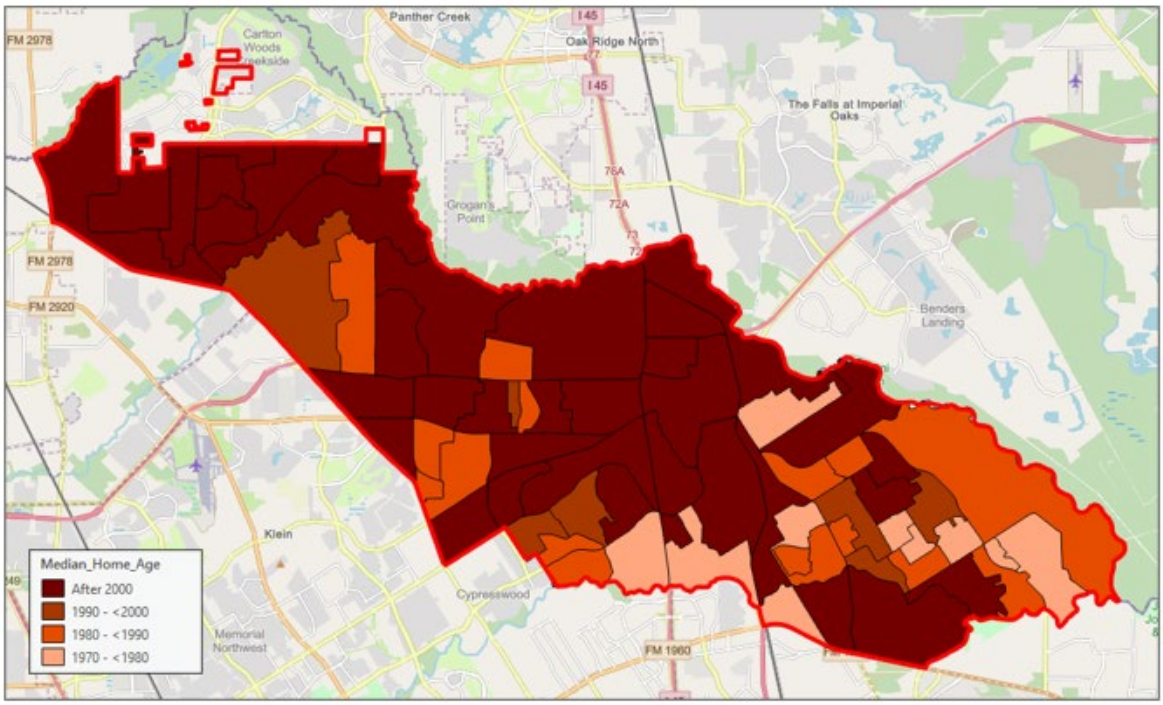
Single-Family vs Multi-Family Housing

Most residents live in single-family homes but new multi-family complexes are being built every year.



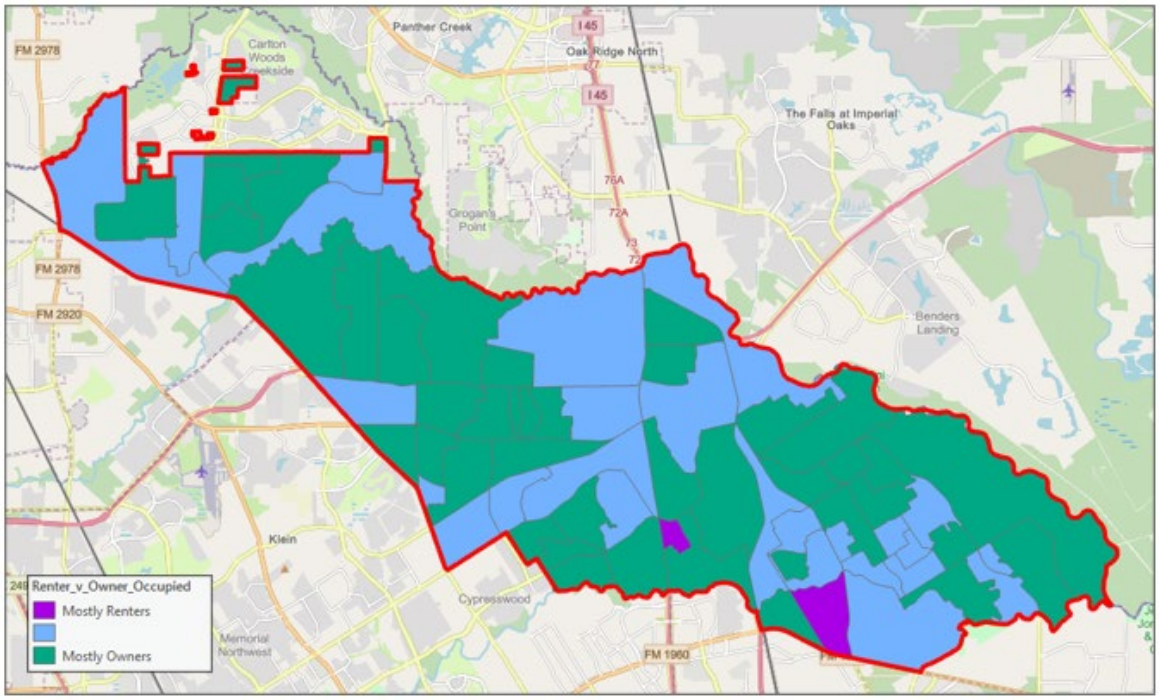
Sources: Harris Central Appraisal District, 2022

Median Home Age



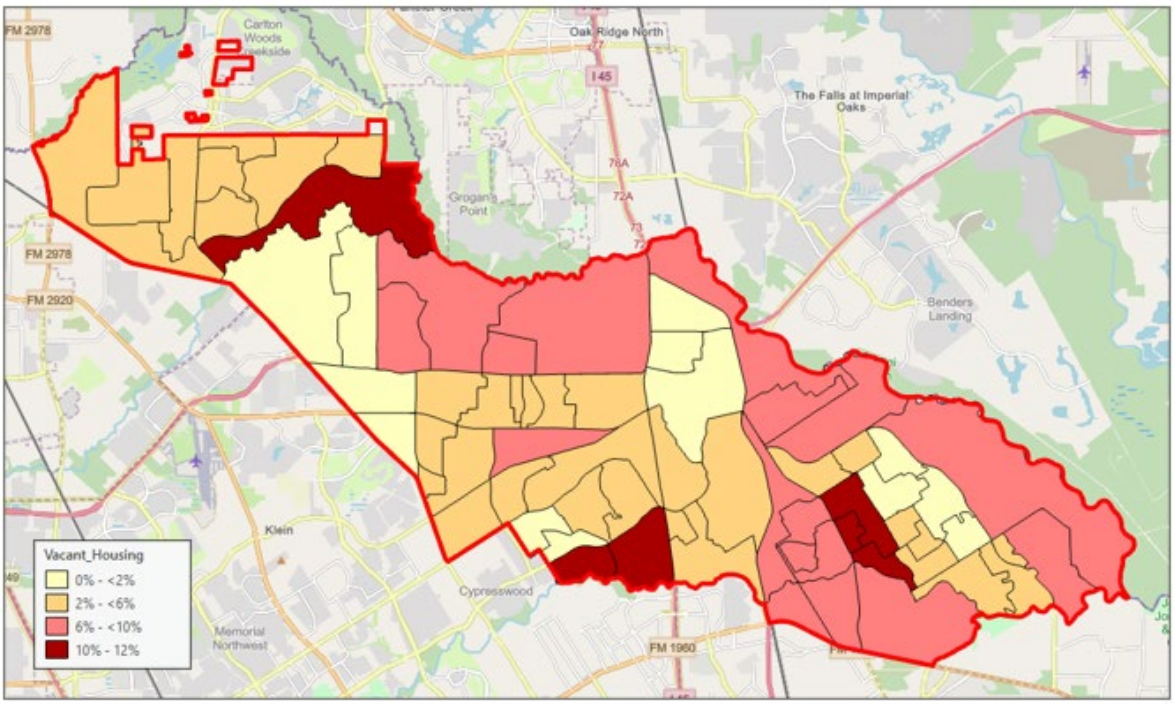
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Renter vs Owner Occupied



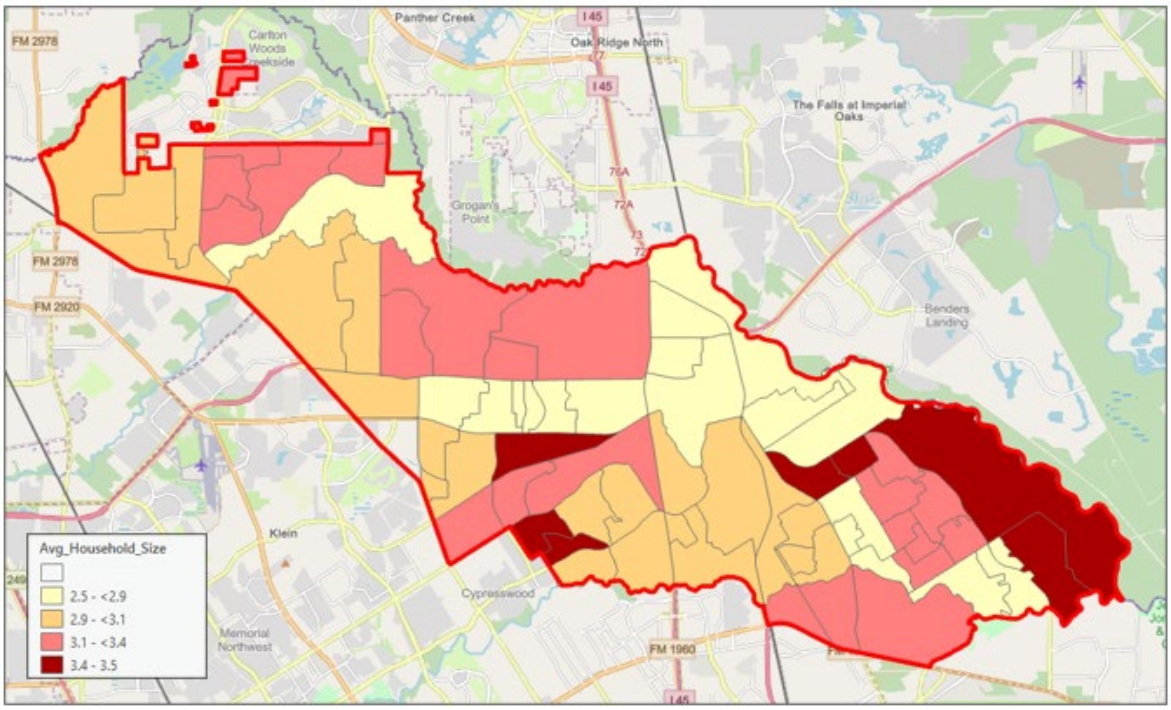
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Vacant Housing



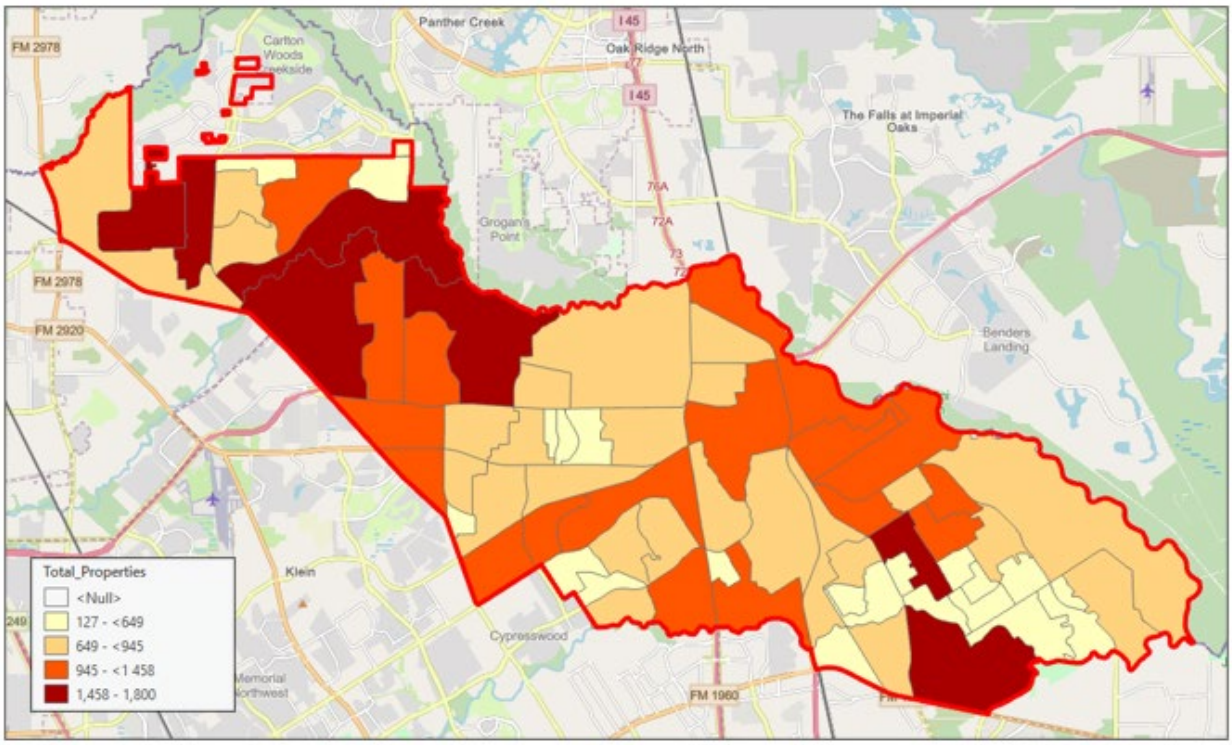
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Average Household Size



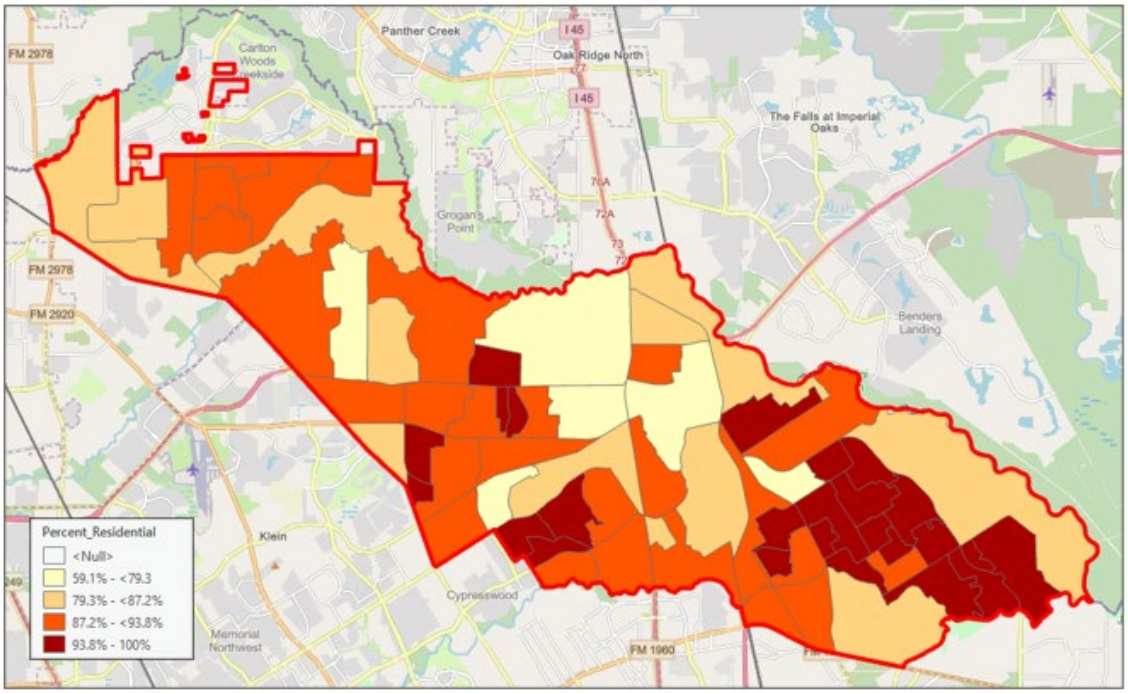
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Total Properties



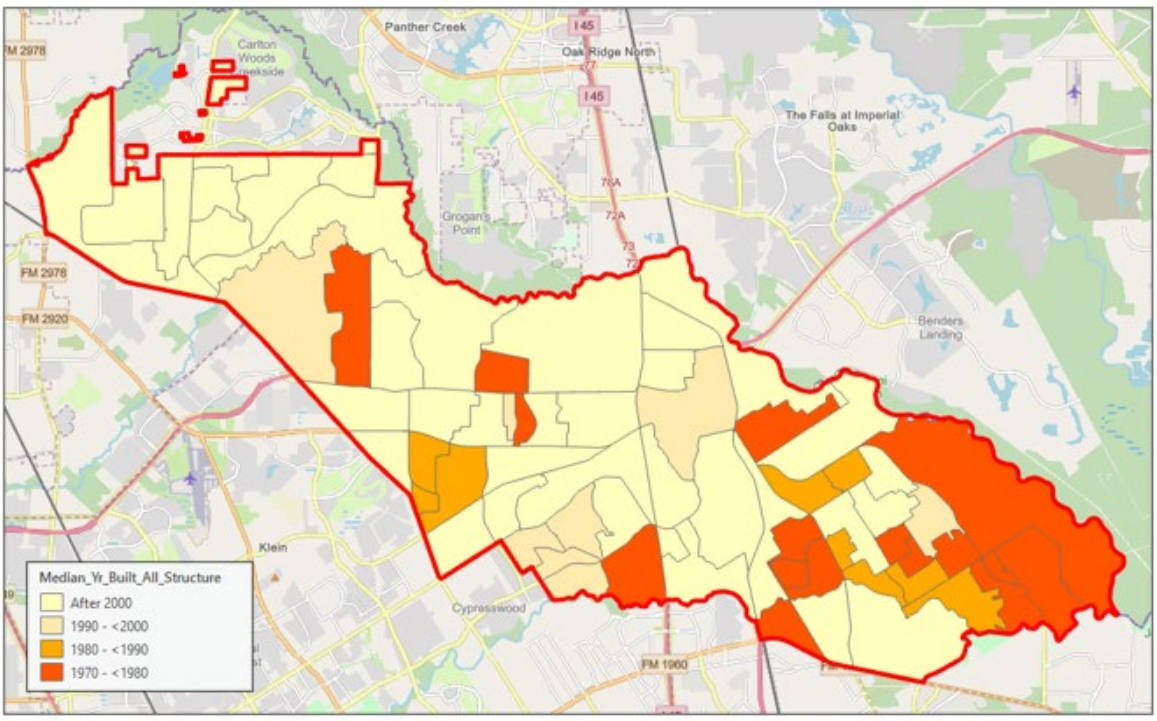
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Percentage Residential



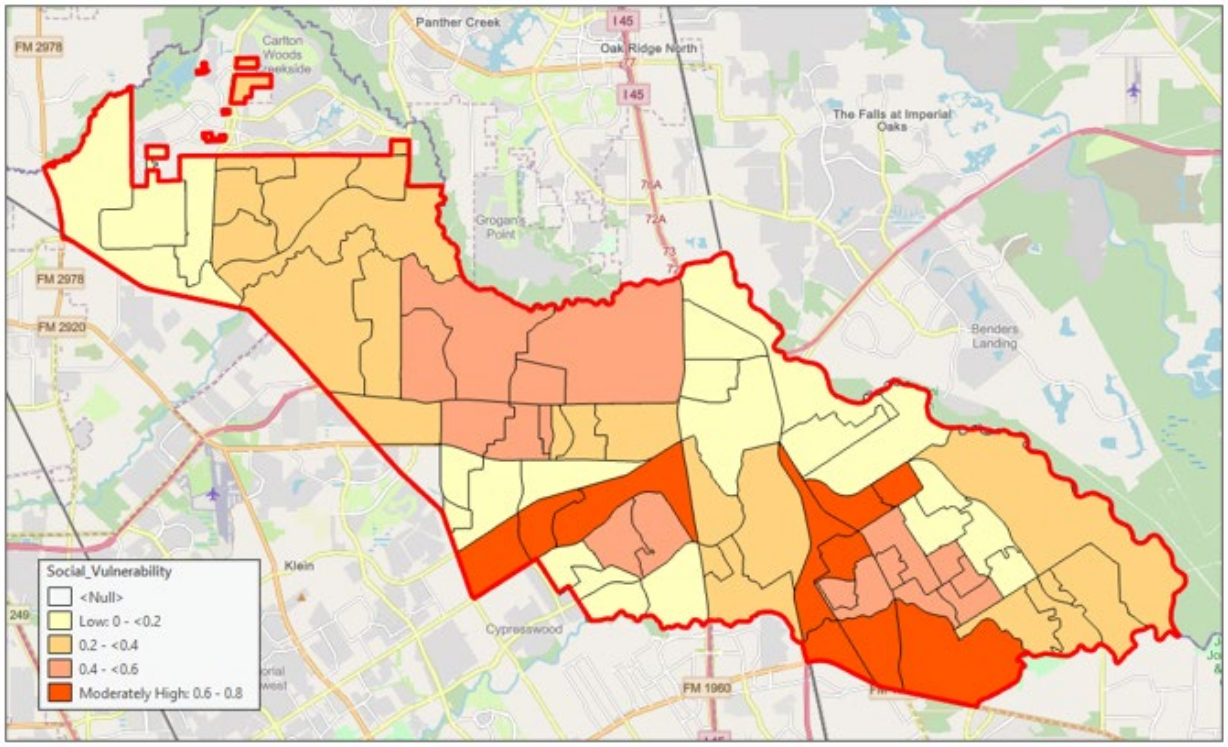
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Median Year Built – All Structures



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Social Vulnerability



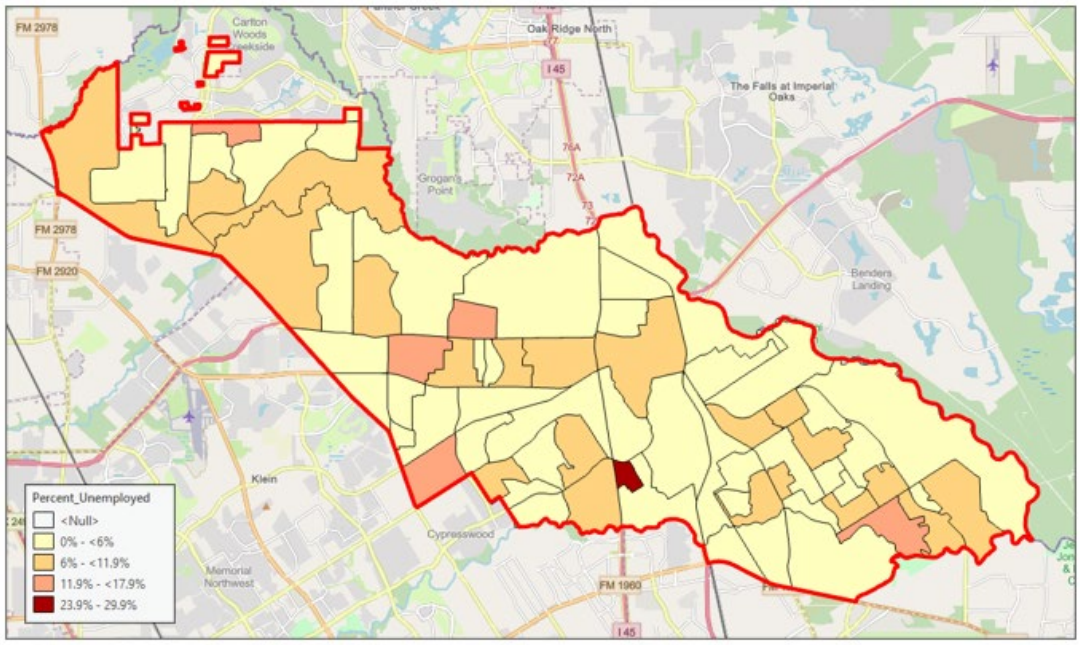
Sources: CDC ASTDR SVI 2022

This dataset represents the relative housing and transportation social vulnerability of a census tract/county, ranking them against all census tracts/counties within a state. The values are percentile rankings on a scale from 0 to 1, where values near 1 indicate high housing and transportation social vulnerability and values near zero indicate low housing and transportation social vulnerability.

Employment and Job Access

Joblessness places a lot of stress on individuals and their families. People without jobs often don't seek medical attention until conditions become critical. When faced with replacing a spent fire extinguisher or putting food on the table, necessity will prevail. Unemployment contributes a lot to vulnerability.

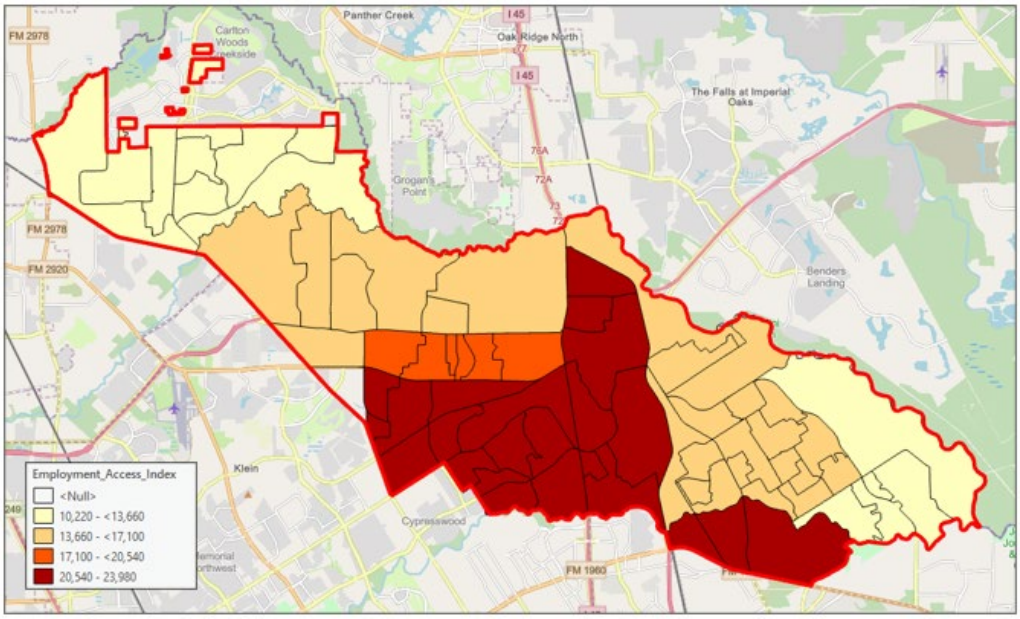
Percent Unemployed



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

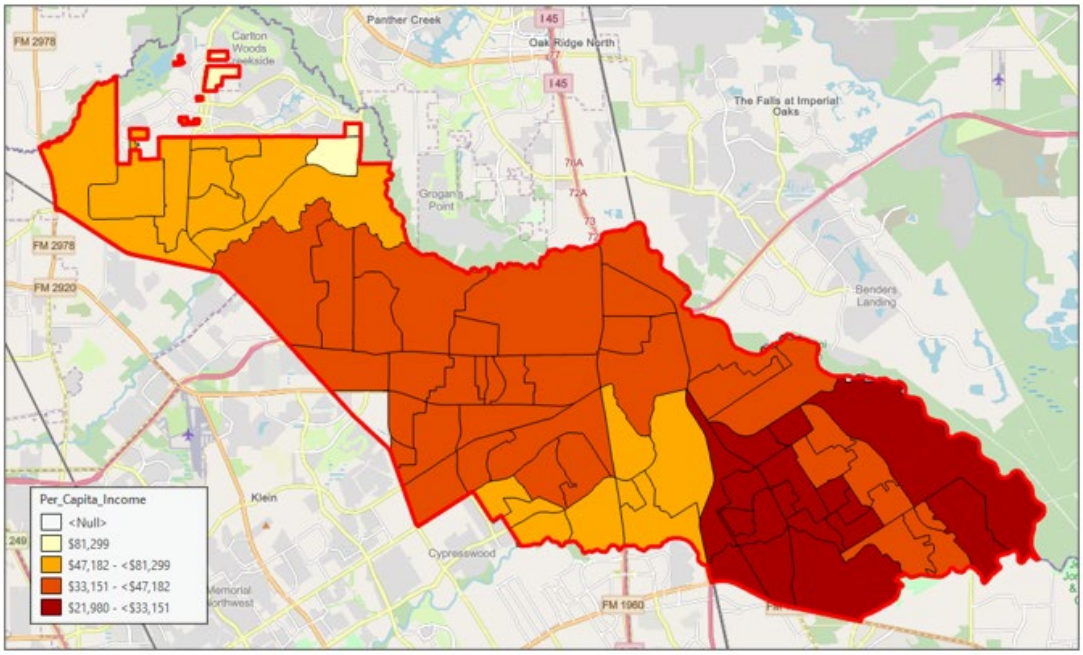
Employment Access

The Employment Access Index (EAI) helps to visualize the distance to areas with high concentrations of jobs. Areas with higher EAI's have better access to employment than areas with lower EAI's.



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Per Capita Income



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Poverty and Affordability

Some of the most vulnerable people in our community are those individuals and families living below the poverty level.

People Below Poverty Level

10%
Spring FD

14%
Texas

13%
United States of America

Families Below Poverty Level

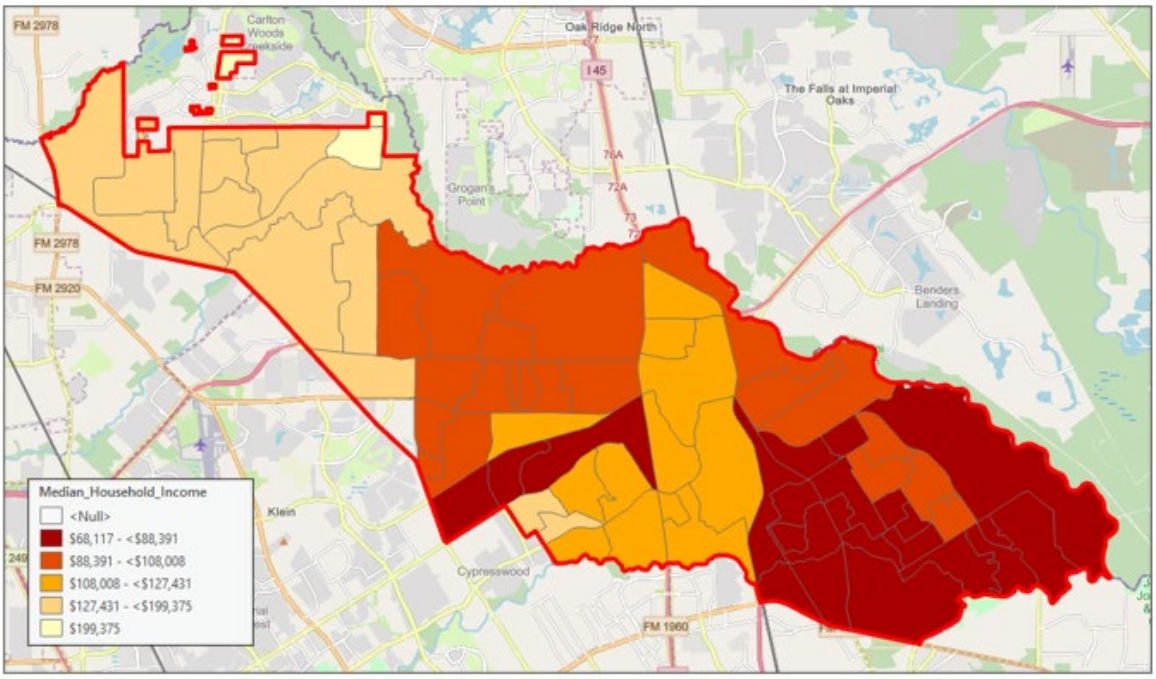
7%
Spring FD

11%
Texas

9%
United States of America

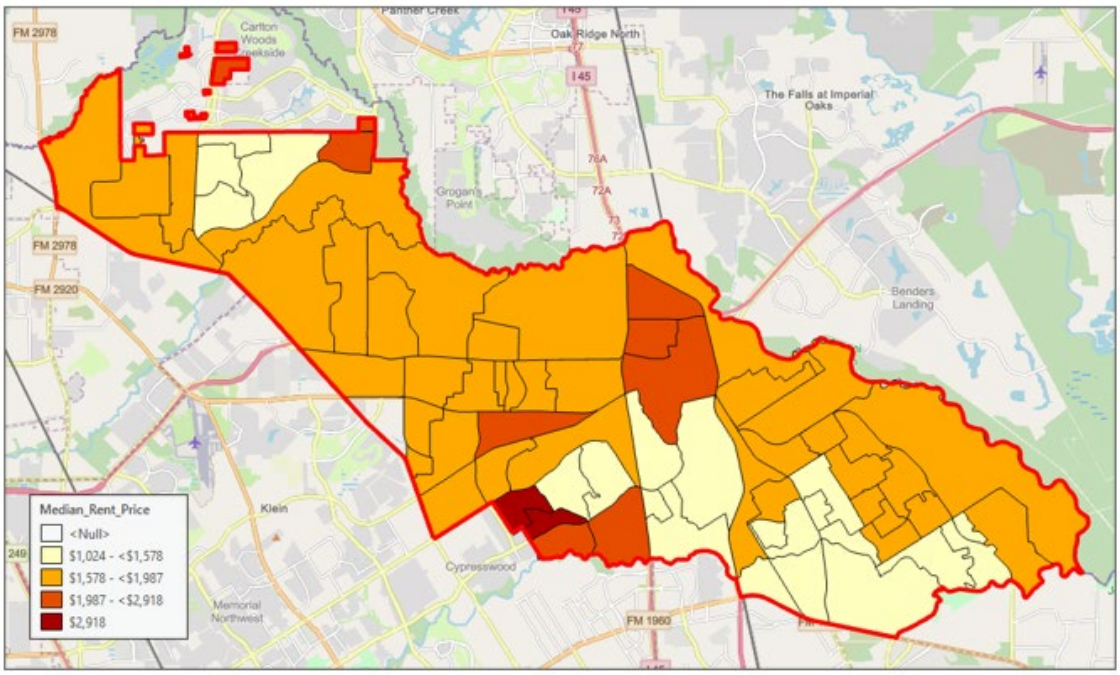
Sources: US Census Bureau ACS 5-year 2018-2022

Median Household Income



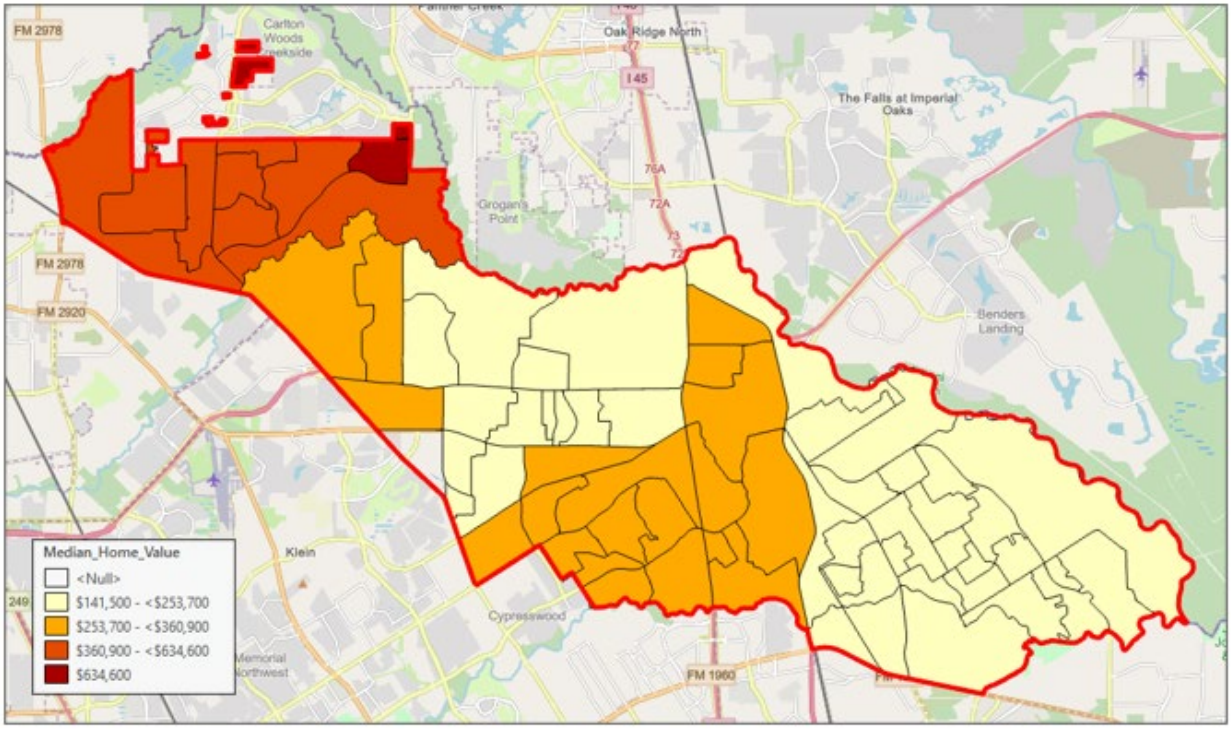
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Median Rent Price



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Median Home Value



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

Dependent Population

Dependents, citizens who are elderly or very young, can be at higher risk during an emergency and/or may be at higher risk of having an emergency.

Population Under 18

27%
Spring FD

25%
Texas

22%
United States of America

Population 65 and Over

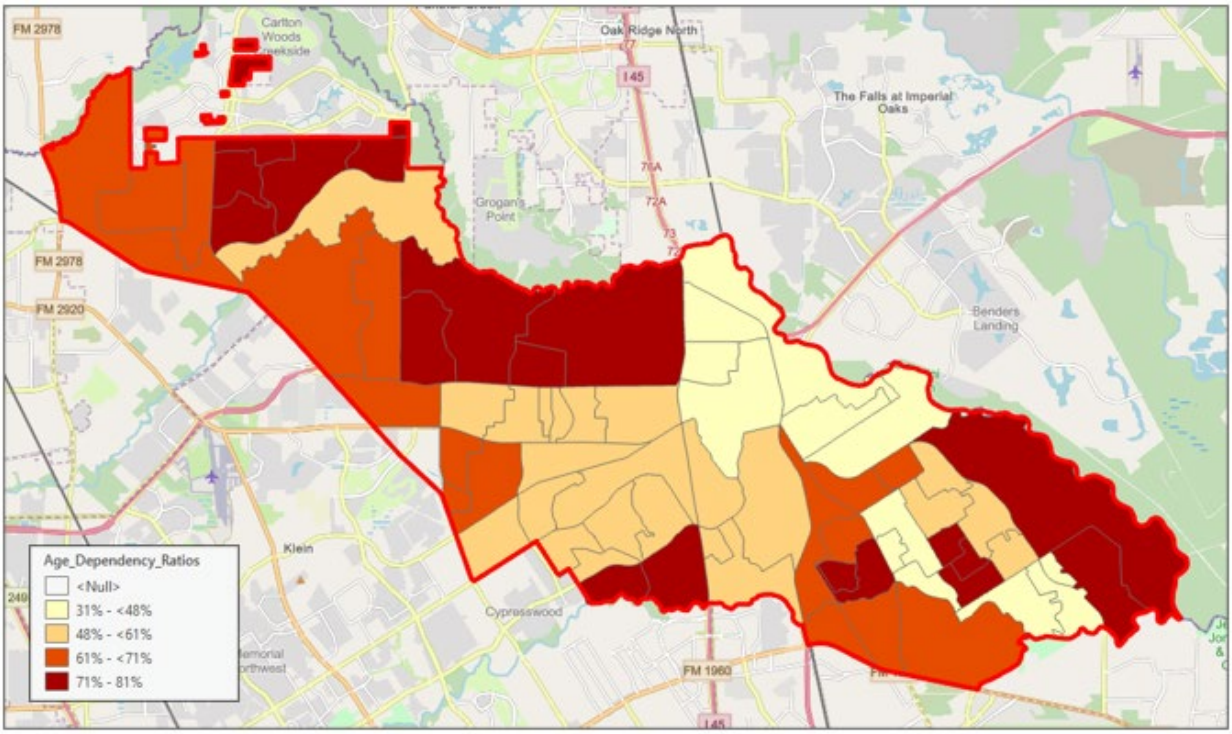
9%
Spring FD

13%
Texas

17%
United States of America

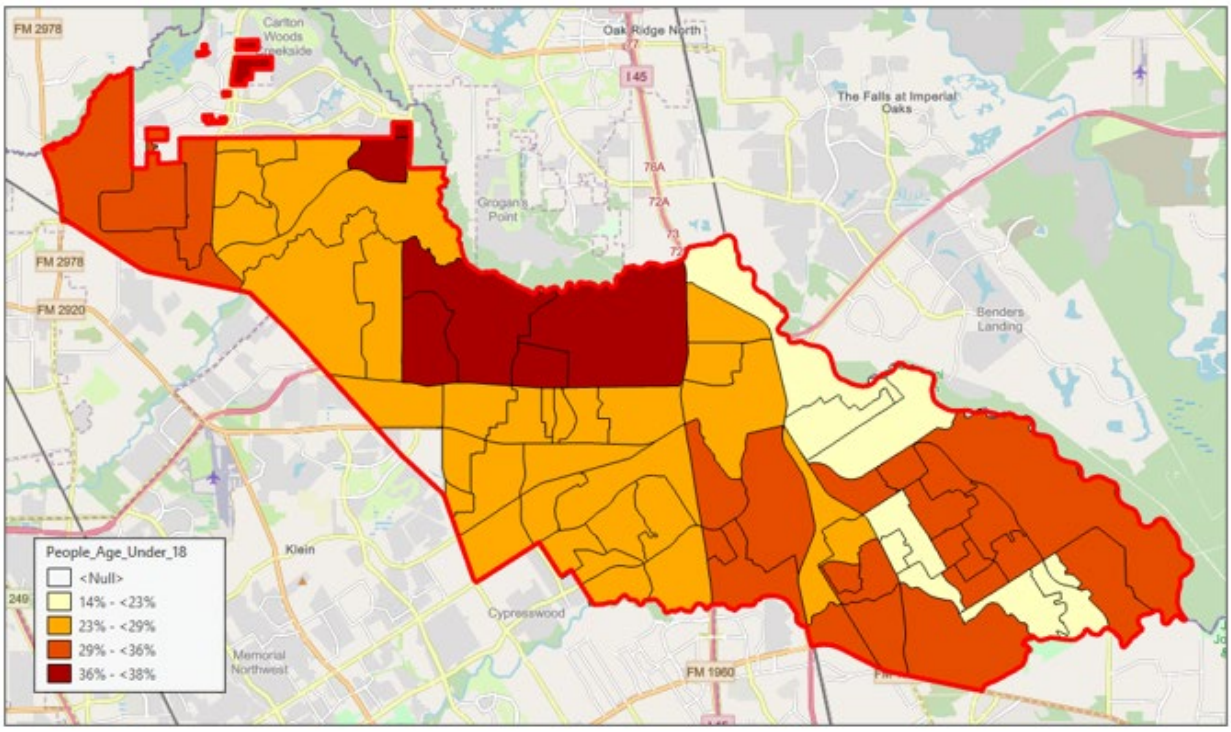
Sources: US Census Bureau ACS 5-year 2018-2022

Age Dependency Ratios



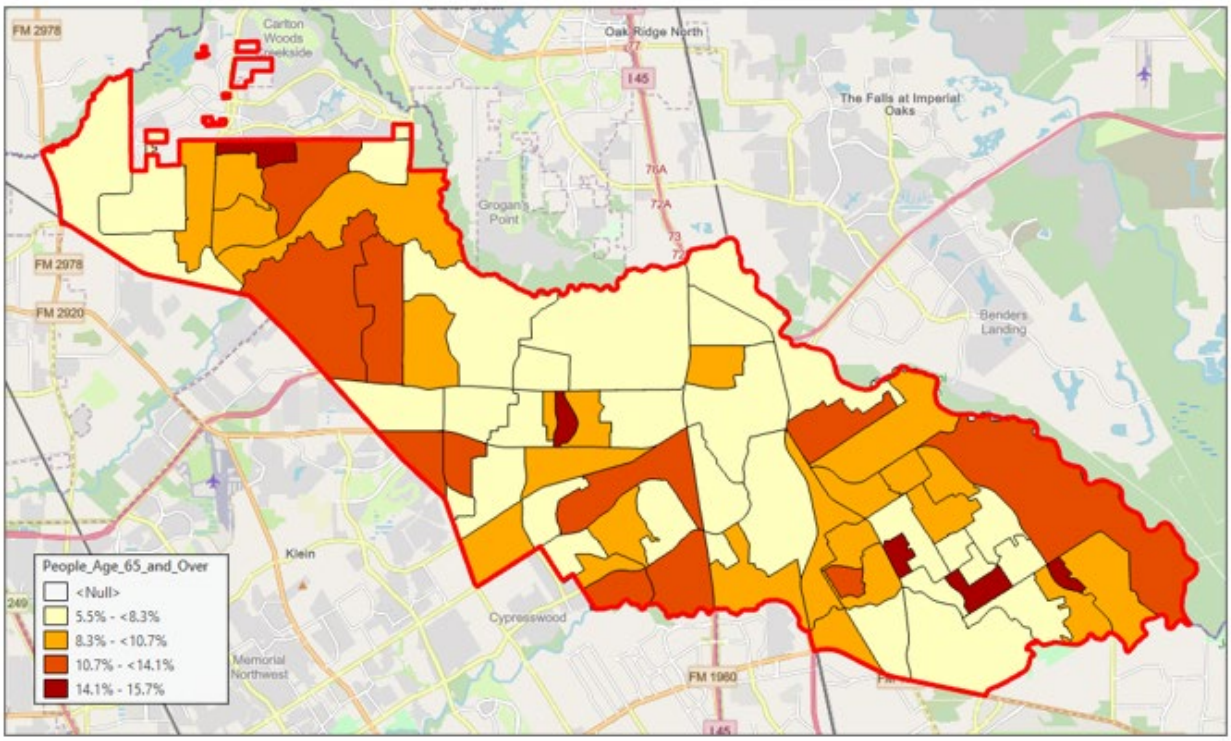
Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

People Under Age 18



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

People Aged 65 and Over

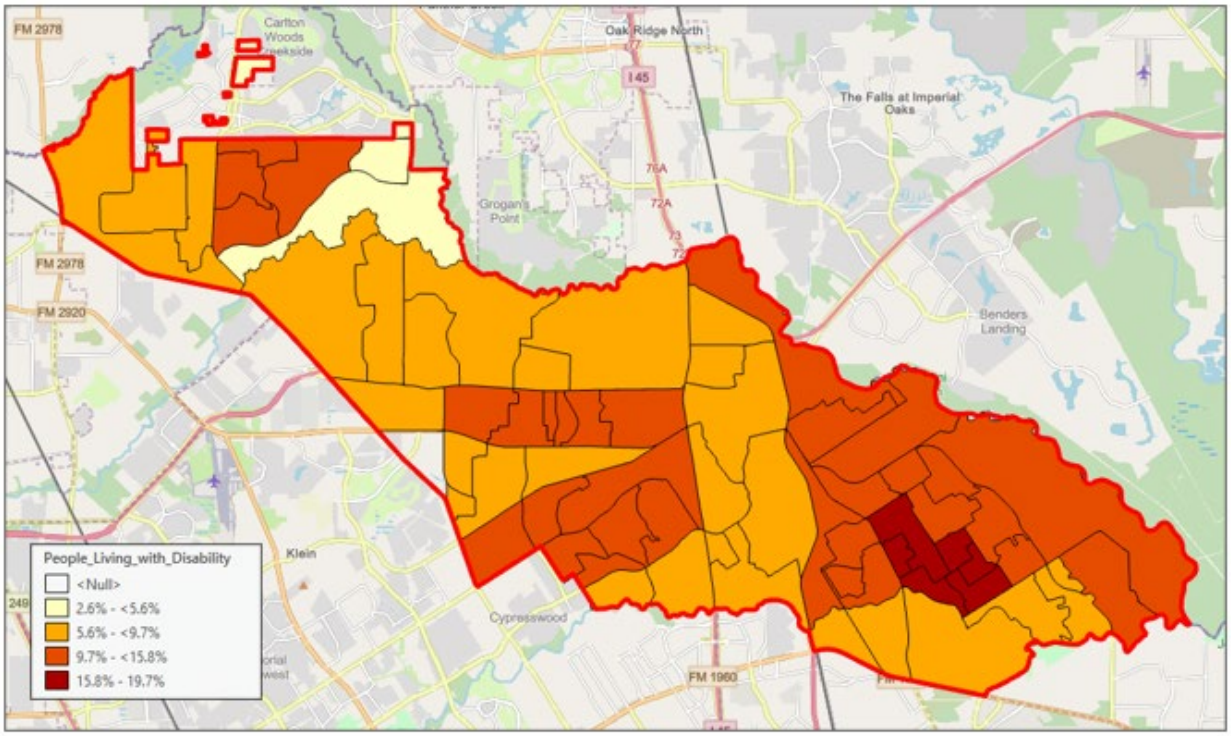


Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022

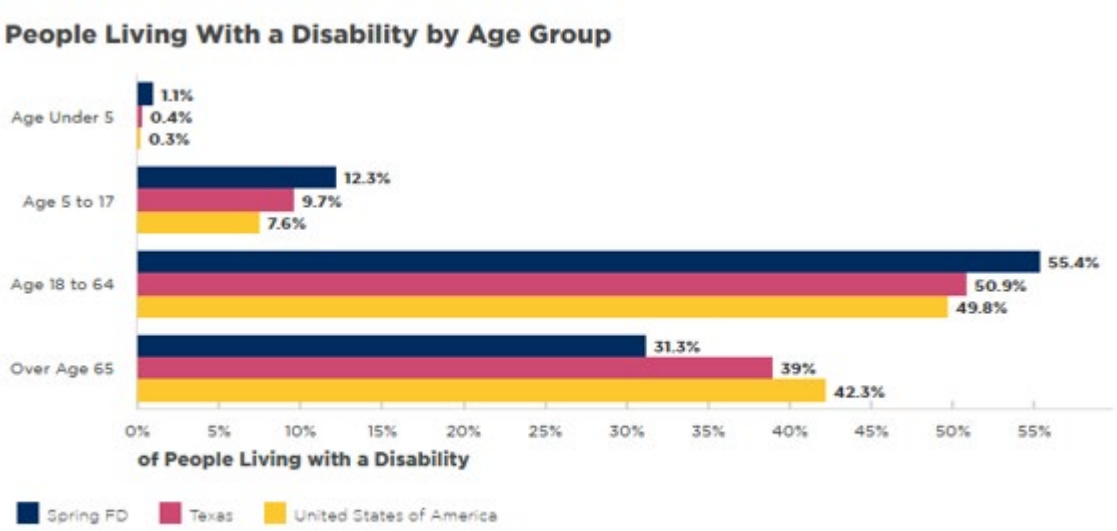
Disabilities

People in our community can suffer a disability suddenly, temporarily, or permanently. Disability categories include mobility, visual, hearing, speech, cognitive, etc. Individuals can also endure multiple disabilities at once. People with disabilities may have difficulty identifying or responding to an emergency situation, making them particularly vulnerable.

People Living with Disability



Sources: CRAIG1300 and US Census Bureau ACS 5-year 2018-2022



Sources: US Census Bureau ACS 5-year 2018-2022

Appendix C – Critical Infrastructure by GPZ

GPZ_70

Area	3.8 Square Miles	
Population (2020)	1709	
Hydrants	294	
Census Class	Rural	
Fire Station		
	Station 70	
Electrical		
	Springwood Substation	
	Transmission Lines	
Railroad		
	Union Pacific - Navasota Subdivision	
Water		
	Dove Meadows Water Plant #1	1519 1/2 Crossington Way, Spring, TX 77389
	HCID 18 Water Plant	
	Dove Meadows Wastewater Treatment	
Transportation		
Highways		
	Interstate 45	
	Grand Parkway	
Main Roads		
	Springwoods Village Parkway	
	Holzwarth Road	
	Spring Stuebner Road	
Parks / Trails		
	Lake at Springwoods Village Nature Preserve	
	Spring Creek Greenway Hike & Bike Trail	
Medical		
	CHI - St Lukes Health Hospital	2255 East Mossy Oaks Road, Spring, TX 77389
	Memorial Hermann GoHealth	2168 Spring Sturbner Road,Suite #270, Spring, TX 77389
	Kelsey Seybold	2340 Grand Parkway, Spring, TX 77389
Major Employers		

	ExxonMobil	22777 Springwoods Village Parkway, Spring, TX 77389
	Hewlett Packard	10300 Energy Drive, Spring, TX 77389
	Hewlett Packard Enterprise	1701 East Mossy Oaks Road, Spring, TX 77389
	Southwestern Energy Company	10000 Energy Drive, Spring, TX 77389
Hotels		
	Residence Inn Houston City Place	22814 Holzwarth Road, Spring, TX 77389
	Courtyard Houston City Place	22742 Holzwarth Road, Spring, TX 77389
	Marriott at Springwoods Village	1200 Lake Plaza Drive, Spring, TX 77389
Apartments		
	The Mark at CityPlace	1600 Springwoods Plaza Dr, Spring, TX 77389
	Belvedere at Springwoods Village	2323 E Mossy Oaks Road, Spring, TX 77389
	Berkshire Exchange Apartments	21603 Spring Plaza Dr, Spring, TX 77388
	The Canopy at Springwoods Village	1800 Spring Stuebner Rd, Spring, TX 77389
	ELEVATE Spring Crossing	21525 Spring Plaza Dr, Spring, TX 77388
	Arielle Spring Plaza Apartments	21145 Spring Plaza Dr, Spring, TX 77388
Places of Worship		
	Saint Edward Catholic Church	2601 Spring Stuebner Road, Spring, TX 77389
Schools		
	Saint Edward Catholic School	2601 Spring Stuebner Road, Spring, TX 77389
Childcare		
	Explorers Club	22903 Springwoods Village Parkway, Spring, TX 77389

GPZ_71

Area	6.5 Square Miles
Population (2020)	9144
Hydrants	574
Census Class	Urban

Fire Station

Station 71

Pipelines

DCP Midstream - Southern Hills Pipeline

Railroad

Union Pacific - Navasota Subdivision

Union Pacific - Lloyd Yard

Union Pacific - Palestine Subdivision

Water

Bayer Water Plant #1

HC MUD 249 Water Plant

HC WCID 110 Water Plant

HC WCID 99 Water Plant

Spring West MUD Water Plant

Timberlane UD Water Plant

HC WCID 99 Water Treatment Plant

HC MUD 249 Water Treatment Plant

Hardy Water Treatment Plant

Transportation

Highways

Intersate 45

Hardy Tollway

Main Roads

FM 2920

Spring Cypress Road

Holzwarth Road

Louetta Road

Cypresswood Drive

Lexington Boulevard

Aldine Westfield Road

Parks / Trails

Bayer Park

Hermann Little Park

Hotels

Best Western Plus Spring Inn & Suites	353 East Louetta Road, Spring, TX 77373
Comfort Suites Old Town Spring	323 East Louetta Road, Spring, TX 77373
Americas Best Value Inn & Suites Spring Houston N	1515 Louetta Road, Spring, TX 77388
Express Inn Spring	20525 Interstate 45 N, Spring, TX 77388

	Palace Inn Spring	21111 I-45, Spring, TX 77388
	Red Roof Inn Houston - Spring North	20543 I-45, Spring, TX 77388
	La Quinta Inn & Suites	21119 North Fwy, Spring, TX 77388
Apartments		
	Botanic Luxury Living Apartments	20525 Holzwarth Rd, Spring, TX 77388
	Spring Creek Village Apartments	20305 Holzwarth Rd, Spring, TX 77388
	Waterstone Apartments	2111 Old Holzwarth Rd, Spring, TX 77388
	Louetta Village Apartments	1601 Louetta Rd, Spring, TX 77388
	The Haven at Louetta Apartments	20330 Whitewood Dr, Spring, TX 77373
	Cypresswood Apartments	708 E Cypresswood Dr, Spring, TX 77373
	Spring Park	555 Spring Park Center Blvd, Spring, TX 77373
Places of Worship		
	Living Water Church of Spring	26910 Aldine Westfield Road, Spring, TX 77373
	New Beginnings Church	26029 Aldine Westfield Rd, Spring, TX 77373
	The Haven Community Church	315 Gentry St, Spring, TX 77373
	Immanuel Church of Spring	26501 Border St, Spring, TX 77373
	Spring Woodlands Church	706 Spring Cypress Rd, Spring, TX 77373
	Advent Presbyterian Church	903 Spring Cypress Rd, Spring, TX 77373
	Spring Baptist Church	1027 Spring Cypress Rd, Spring, TX 77373
	Spring Church of Christ	1327 Spring Cypress Rd, Spring, TX 77373
	Family Life Christian Center	1609 Spring Cypress Rd, Spring, TX 77388
	Spring First Church	1851 Spring Cypress Rd, Spring, TX 77388
	Holy Comforter Episcopal Church	2322 Spring Cypress Rd, Spring, TX 77388
	Resurrection Lutheran Church	1612 Meadow Edge Ln, Spring, TX 77388
	Gospel Truth Pentecostal Church of Spring	24127 W Hardy Rd, Spring, TX 77373
	Lemm Road Church of Christ	1024 Lemm Rd 1, Spring, TX 77373
	Iglesia Evangelica Peniel	1322 Lemm Rd 2, Spring, TX 77373
Schools		
	Carl Wunsche Senior High School	900 Wunsche Loop, Spring, TX 77373
	Evolution Academy Houston	2414 Spring Cypress Road, Spring, TX 77373
	Ginger McNabb Elementary School	743 East Cypresswood Drive, Spring, TX 77373
	Salyers Elementary School	25705 Hardy Street, Spring, TX 77373
	School of Science and Technology Spring	2105 Louetta Road, Spring, TX 77388

	Spring Baptist Academy	633 East Louetta Road, Spring, TX 77373
	Spring High School	19428 Interstate 45 N, Spring, TX 77373
Childcare		
	ACHIEVEMENTS UNLIMITED, INC	20817 SUNSHINE LN, SPRING, TX 77388
	BEGINNINGS AND BEYOND	26501 BORDER ST, SPRING, TX 77373
	DE COLORES SPANISH IMMERSION PRESCHOOL	523 E LOUETTA RD, STE A, SPRING, TX 77373
	KIDS R KIDS	2122 OLD HOLZWARTH RD, SPRING, TX 77388
	KINDERCARE OF SPRING	625 BRANDT RD, SPRING, TX 77373
	KOALA KARE AT MCNABB ELEMENTARY	743 E CYPRESSWOOD DR, SPRING, TX 77373
	KOALA KARE AT SALYERS ELEMENTARY	25705 W HARDY RD, SPRING, TX 77373
	LEARNING JUNGLE SPRING	2050 LOUETTA RD, SPRING, TX 77388
	MOLO GOOD KIDS	1815 SPRING CYPRESS RD, SPRING, TX 77388
	RESURRECTION LUTHERAN EARLY LEARNING CTR	1612 MEADOW EDGE LN, SPRING, TX 77388
Senior Living		
	Spring Creek Village	20305 Holzwarth Rd, Spring, TX 77388
	HomeSteady	1103 Spring Meadow Lane, Spring, TX 77373
	Homebridge Care	1324 Lemm #2 Road, Spring, TX 77373

GPZ_72

Area	9.4 Square Miles
Population (2020)	12872
Hydrants	808
Census Class	Urban
Fire Station	
	Station 72
Electrical	
	Kuykendahl Substation
	Transmission Lines
Pipelines	
	Gulf South - Spring Pipeline Yard
	3 Gas Pipelines

Major Employers

Amazon DHX4	22300 Northcrest Dr, Spring, TX 77389

Railroad

Union Pacific - Navasota Subdivision

Water

Encanto Real UD - Lift Station	<Null>
Encanto Real UD - Water Plant	<Null>
Northampton MUD - Lift Station 1	<Null>
Northampton MUD - Water Plant 2	24400 Northcrest Drive, Spring, TX 77389
Northampton MUD - Water Plant 3	24780 Gosling Road, Spring, TX 77389
Northampton MUD - Water Plant 1	6012 Root Road, Spring, TX 77389
Oakmont PUD Water Plant	25140 Haverford Road, Spring, TX 77389
Northampton Waste Treatment Plant	24235 Gosling Road, Spring, TX 77389
Northampton Waste Treatment Plant	24235 Gosling Road, Spring, TX 77389
Encanto Real	
HC MUD 1 - Waste Treatment Plant 2	7400 Profit Pine Place, Spring, TX 77389
Bridgestone MUD Waste Treatment Plant	

Transportation

Highways

Grand Parkway

Main Roads

FM 2920

Spring Stuebner Road

Gosling Road

West Rayford Road

Parks / Trails

Willow Creek Golf Club	24525 Northcrest Dr, Spring, TX 77389
Spring Valley Golf Club	25110 GOSLING RD, Spring, TX 77389
Inway Park & Trails	

Apartments

Olympus Auburn Lakes	6000 W Rayford Rd, Spring, TX 77389
Landmark at Auburn Lakes Apartments	5755 W Rayford Rd, Spring, TX 77389

Arden Woods	24530 Gosling Rd, Spring, TX 77389
Wyldewood Gosling	23223 Gosling Rd, Spring, TX 77389
The Abbey at Spring Town Center	21801 Northcrest Dr, Spring, TX 77388
Allora Gosling	22103 Gosling Rd, Spring, TX 77389
Cadence Creek at Gosling	21901 Gosling Rd, Spring, TX 77388

Places of Worship

Faith Temple Baptist Church	5318 Spring Stuebner Road, Spring, TX 77389
HISplace Family Church in Spring	5302 Spring Stuebner Road, Spring, TX 77389
Klein United Methodist Church	5920 FM 2920 , Spring, TX 77388
Masjid Ibrahim - Klein Islamic Center	5500 FM 2920, Spring, TX 77388
The Church of Jesus Christ of Latter-Day Saints	24833 Gosling Road, Spring, TX 77389
Unity of The Woodlands	25817 Gosling Road, Spring, TX 77389
WoodsEdge Community Church	25333 Gosling Road, Spring, TX 77389

Schools

CUNAE INTERNATIONAL SCHOOL	5655 Creekside Forest Drive, Spring, TX 77389
FRENCH EL	5802 W RAYFORD RD, Spring, TX 77389
HILDEBRANDT INT	22800 HILDEBRANDT RD, Spring, TX 77389
KLEIN OAK H S	22603 NORTHCREST DR, Spring, TX 77389
NORTHAMPTON EL	6404 ROOT RD, Spring, TX 77389

Childcare

CAMPUS KIDS AT NORTHHAMPTON ELEM. SCHOOL	6404 ROOT RD, KLEIN, TX 77389
CAMPUS KIDS AT FRENCH ELEMENTARY	5802 W RAYFORD RD, SPRING, TX 77389
KIDS N KIDS CREATIONS	23110 KUYKENDAHL RD, STE 200, TOMBALL, TX 77375
KIDSEDGE PRESCHOOL	25333 GOSLING RD, SPRING, TX 77389
KIDSPARK THE WOODLANDS	24345 GOSLING RD, STE 140, SPRING, TX 77389
KLEIN WEEKDAY MINISTRIES	5920 FM 2920 RD, SPRING, TX 77388
LITTLE ANGELS PLAYHOUSE LLC	24525 GOSLING RD, SPRING, TX 77389
MAGIC OAK PRESCHOOL LLC	24527 GOSLING RD BLDG G, SPRING, TX 77389

Senior Living

Cadence Creek at Gosling	21901 Gosling Road, Spring, TX 77389
Tender Living Care	23922 Lenze Road, Spring, TX 77389

GPZ_73

Area	11.9 Square Miles
Population (2020)	23404
Hydrants	869
Census Class	Urban

Fire Station

Station 73

Electrical

Treaschwig Substation

Transmission Lines

Railroad

Union Pacific - Palestine Subdivision

Water

Dove Meadows Water Plant #1	1519 1/2 Crossington Way, Spring, TX 77389
HCID 18 Water Plant	
Dove Meadows Wastewater Treatment	

Transportation

Highways

Hardy Tollway

Main Roads

FM-1960

Treaschwig Road

Aldine Westfield Road

Cypresswood Drive

Parks / Trails

Mercer Arboretum

Mercer Botanic Gardens

Timberlane Hike & Bike Trails

Creek Course

Cypresswood Golf Club

Cypress Creek Parks Project

Bill and Ellen Carter Park

Carmine Stahl Preserve	
Hotels	
Scottish Inns & Suites IAH Airport West	2531 Farm to Market 1960 Rd E, Houston, TX 77073
Americas Best Value Inn Aldine Westfield	3231 FM 1960, Humble, TX 77338
Apartments	
Knightsbridge Apartments	3455 FM 1960, Humble, TX 77338
Places of Worship	
Cross Over Church	3607 FM 1960, Humble, TX 77338
Essential Life Church	23300 Cypresswood Drive, Spring, TX 77373
Father's House Church	22855 Banquo Drive, Spring, TX 77373
Grace Family Church	23007 Cypresswood Drive, Spring, TX 77373
Iglesia Evangelica Oasis De	22800 Birnam Wood Boulevard, Spring, TX 77373
North Woods Baptist Church	5803 Treaschwig Road, Spring, TX 77373
Redeemed Christian Church of God	21127 Aldine Westfield Road, Humble, TX 77338
Springs of Living Water Church	5901 Treaschwig Road, Spring, TX 77373
Templo Poder y Gozo	4401 Theiss Road, Humble, TX 77338
Vida Abundante	21800 Rayford Road, Humble, TX 77338
Schools	
ANDERSON ELEMENTARY	6218 LYNNGATE DR, SPRING, TX 77373
CHET BURCHETT ELEMENTARY	3366 JAMES LEO DR, SPRING, TX 77373
DUEITT MIDDLE SCHOOL	1 EAGLE CROSSING, SPRING, TX 77373
MAGRILL ELEMENTARY	21701 RAYFORD RD, HUMBLE, TX 77338
MILDRED JENKINS ELEMENTARY	4615 REYNALDO DR, SPRING, TX 77373
OGDEN ELEMENTARY	21919 RAYFORD RD, HOUSTON, TX 77338
RICKEY C BAILEY MIDDLE SCHOOL	3377 JAMES C LEO DR, SPRING, TX 77373
TEAGUE MIDDLE SCHOOL	21700 RAYFORD RD, HUMBLE, TX 77338
Childcare	
AIM HIGH PREPARATORY LLC	2349 FM 1960 RD, HOUSTON, TX 770736
ALDINE ISD NORTH TRANSPORTATION NURSERY	21246 ALDINE WESTFIELD RD, HUMBLE, TX 77338
KOALA KARE AT ANDERSON ELEMENTARY	6218 LYNNGATE DR, SPRING, TX 77373
KOALA KARE AT BURCHETT ELEMENTARY	3366 JAMES C LEO DR, SPRING, TX 77373
KOALA KARE AT JENKINS ELEMENTARY	4615 REYNALDO DR, SPRING, TX 77373
LA PETITE ACADEMY	5007 TREASCHWIG RD, SPRING, TX 77373

	LITTLE GENIUS KIDDIE COLLEGE	23300 CYPRESSWOOD DR, SPRING, TX 77373
	LITTLE HARVARD ACADEMY CENTER	5751 TREASCHWIG RD, SPRING, TX 77373
	OUR LITTLE RED SCHOOLHOUSE	5802 TREASCHWIG RD, SPRING, TX 77373
	PRECIOUS ANGELS CHILDCARE	21330 ALDINE WESTFIELD RD, STE 101,HUMBLE, TX 77338
	RAINTREE ACADEMY	4515 TREASCHWIG RD, SPRING, TX 77373
	SPRING BRAINIACS	21626 ALDINE WESTFIELD RD, HUMBLE, TX 77338
	YMCA AFTERSCHOOL AT OGDEN ELEMENTARY	21919 RAYFORD RD, HUMBLE, TX 77338

Senior Living

	Ladybirds Senior Care Home	4810 Aquagate Drive, SPRING, TX 77373
	Knightsbridge Senior Apartments	3455 FM 1960, HUMBLE, TX 77338

GPZ_74

Area	6.9 Square Miles
Population (2020)	21434
Hydrants	777
Census Class	Urban

Fire Station

	Station 74

Pipelines

	DCP Midstream - Southern Hills Pipeline	HydroCarbon Liquids
	Interstate Pip0eline	Gas Pipeline

Railroad

	Union Pacific - Palestine Subdivision

Water

	HC MUD 82 - Water Plant 1	2308 North Spring Road,, Spring, TX 77373
	HC MUD 82 - Water Plant 2	25142 Birnamwood Blvd., Spring, TX 77373
	HC WCID 92 - Plant 3	25301 Laurel Green Street, Spring, TX 77373
	HC WCID 92 - Water Plant 1	3214 Deer Valley Drive, Spring, TX 77373
	Timberlane UD - Lift Station #1	3431 Hirschfield Road, Spring, TX 77373
	Timberlane UD - Water Plant 1	23118 Grand Rapids Drive, Spring, TX 77373
	Timberlane UD - Water Plant 2	23548 Canyon Lake Drive, Spring, TX 77373

	Memorial Hills UD Waste Plant	1603 Briarcreek Drive, Spring, TX 77373
	Timberlane Sewage Treatment Plant	23119 Grand Rapids, Spring, TX 77373
	HC WCID #92 Waste Plant	25511 Holyoke Lane, Spring, TX 77373
	HC MUD 82 Waster Water Plant	25141 Birnhamwood Drive, Spring, TX 77373`
	Inverness Forest ID Waste Water Plant	West Hardy Road, Spring, TX 77373
Transportation		
Highways		
	Hardy Tollway	
Main Roads		
	Aldine Westfield Road	
	Cypresswood Drive	
Parks / Trails		
	Cypress Creek Park at Timberlane	
	Timberlane Park	
	Timberlane Hike & Bike Trails	
	Liberty Park	
	Carmine Stahl Preserve	
	Spring Creek Greenway	
	John Pundt Park	
Medical		
	Budget Family Clinic	25422 Aldine Westfield, Spring, TX 77373
Apartments		
	Serena Woods Apartments	2800 Hirschfield Rd, Spring, TX 77373
	Spring Trace Seniors	24505 Aldine Westfield Rd, Spring, TX 77373
	Trailing Vine Place Apartment Homes	2812 Trailing Vine Rd, Spring, TX 77373
Places of Worship		
	Beautiful Savior Lutheran Church	1804 North Spring Drive, Spring, TX 77373
	Founders Baptist Church	24724 Aldine Westfield Road, Spring, TX 77373
	Get Wrapped Church	23221 Aldine Westfield Road, Spring, TX 77373
	Houston Spring Creek Seventh-Day Adventist Church	2190 Spring Creek Drive, Spring, TX 77373
	New Direction Christian Community	2670 Spring Creek Drive, Spring, TX 77373
	North Central Church	25130 Aldine Westfield Road, Spring, TX 77373
	Saint James Catholic Church	22800 Aldine Westfield Road, Spring, TX 77373

	Saint Michael the Archangel Chapel	24001 Aldine Westfield Road, Spring, TX 77373
	Spring Community Church	22801 Aldine Westfield Road, Spring, TX 77373
Schools		
	FOUNDERS CHRISTIAN SCHOOL	24724 ALDINE WESTFIELD ROAD, SPRING, TX 77373
	GLORIA MARSHALL ELEMENTARY	24505 BIRNAMWOOD DR, SPRING, TX 77373
	JOHN WINSHIP ELEMENTARY	2175 SPRING CREEK DR, SPRING, TX 77373
	LEGACY SCHOOL OF SPORT SCIENCES	2727 SPRING CREEK DR, SPRING, TX 77373
	PEARL M HIRSCH ELEMENTARY	2633 TRAILING VINE RD, SPRING, TX 77373
	SHSU CHARTER SCHOOL AT CYPRESS TRAILS	22801 ALDINE WESTFIELD ROAD, SPRING, TX 77373
	SMITH ELEMENTARY	26000 CYPRESSWOOD DR, SPRING, TX 77373
	TWIN CREEKS MIDDLE	27100 CYPRESSWOOD DR, SPRING, TX 77373
Childcare		
	CYPRESS TRAILS CHILDCARE CENTER	22801 ALDINE WESTFIELD RD, SPRING, TX 77373
	E AND C ACADEMY LLC	2911 WOOD RIVER DR, SPRING, TX 77373
	KOALA KARE AT HIRSCH ELEMENTARY	2633 TRAILING VINE RD, SPRING, TX 77373
	KOALA KARE AT MARSHALL ELEMENTARY	24505 BIRNAMWOOD DR, SPRING, TX 77373
	KOALA KARE AT SMITH	26000 CYPRESSWOOD DR, SPRING, TX 77373
	PARENTS CHOICE INC	23440 ALDINE WESTFIELD RD, SPRING, TX 77373
	TEACH A TOT	2814 TRAILING VINE RD, SPRING, TX 77373
	WINN KIDS ACADEMY	25430 ALDINE WESTFIELD RD, SPRING, TX 77373
	YMCA AT WINSHIP ELEMENTARY	2175 SPRING CREEK DR, SPRING, TX 77373
	Z1 Z2 EARLY LEARNING CENTER	23221 ALDINE WESTFIELD RD, SPRING, TX 77373
Senior Living		
	Spring Trace Seniors	24505 Aldine Westfield Road, Spring, TX 77373
	Loving Care Personal Care Home	23027 Berry Pines Drive, Spring, TX 77373

GPZ_75

Area	7.9 Square Miles
Population (2020)	19395
Hydrants	901
Census Class	Urban

Fire Station

Station 75	

Pipelines

Interstate Gas Pipeline	

Railroad

Union Pacific - Navasota Subdivision	

Water

<Null>	3118 Spring Stuebner Road, Spring, TX 77388
<Null>	<Null>22619 Mossy Oaks Road, Spring, TX 77388
<Null>	<Null>
<Null>	<Null>
Bridgestone MUD - Water Plant 1	21503 Slippery Creek Lane, Spring, TX 77388
Bridgestone MUD - Water Plant 2	4135 FM 2920, Spring, TX 77388
HC MUD 275 - Water Plant 1	4734 Louetta Road, Spring, TX 77388
Meadowhill Regional MUD - Water Plant 1	21707 Meadowhill Drive, Spring, TX 77388
Meadowhill Regional MUD - Water Plant 2	3123 Peachtree Place, Spring, TX 77388
Meadowhill Regional MUD - Water Plant 3	3251 Spring Ranch Lane, Spring, TX 77388
NW HC MUD 36 - Water Plant	3510 Spring Cypress Road, Spring, TX 77388
NW HC MUD 36 - Water Plasnt	20455 Ella Blvd., Spring, TX 77388
Shasla PUD - Lift Station 1	22103 Roseville Lane, Spring, TX 77389
Shasla PUD - Water Plant	22215 Meadowrock Drive, Spring, TX 77389
Spring West MUD - Water Plant 1	21323 Harvest Grove Court, Spring, TX 77388
Bridgestone Waste Water Treatment Plant	21106 Slippery Rock Lane, Spring, TX 77388
Spring West MUD Waste Water Treatment Plant	2320FM 2920, Spring, TX 77388

Electrical

Louetta Substation	
Centerpoint - Rothwood Substation	4820 Spring Stuebner Road, Spring, TX 77388
Transmission Lines	

Transportation

Highways

Grand Parkway	

Main Roads

Spring Cypress Road	

Ella Boulevard

Kuykendahl Road

FM-2920

Gosling Road

Spring Stuebner Road

Aldine Westfield Road

Cypresswood Drive

Parks / Trails

Dove Meadows Park

Country Lake Estates - Big Lake Park

Country Lake Estates - Small Lake Park

Country Lake Estates - Small Playground Park

Klein Park

Bridgestone Park

Rothwood Park

Spring Creek Greenway Hike & Bike Trail

Medical

Ally Medical Emergency Room	2490 FM 2920 #100, Spring, TX 77388
CareNow Urgent Care	2540 FM 2920, Spring, TX 77388
A-Z Primary Care	2940 FM 2920, Spring, TX 77388
Clinica Hispanica	4334 FM 2920, Spring, TX 77388
Memorial Springs ER	5037B FM 2920, Spring, TX 77388
Next Level Urgent Care	5211 FM 2920, Spring, TX 77388
Houston Methodist Emergency Care Center	5303 FM 2920, Spring, TX 77388
Centrum Health	4894 Louetta Rd, Spring, TX 77388

Apartments

Landmark at Spring Cypress Apartments	3223 Spring Cypress Rd, Spring, TX 77388
New Construction	2990 FM-2920, Spring, TX 77388
New Construction	2550 FM-2920, Spring, TX 77388
Territory at 2920	3880 Farm to Market 2920, Spring, TX 77388
Virtuo Spring	4114 Farm to Market 2920, Spring, TX 77388
Vale Apartments	4209 Spring Stuebner Rd, Spring, TX 77389
Savannah Oaks Apartments in Spring	21000 Gosling Rd, Spring, TX 77388

	Bridgestone Crossing Townhomes	21155 Gosling Rd, Spring, TX 77379
Places of Worship		
	Above and Beyond Fellowship	20498 Rhodes Road, Spring, TX 77388
	Believers Fellowship Baptist Church	21603 Rhodes Road, Spring, TX 77388
	Candlestick Baptist Church	2631 Spring Cypress Road, Spring, TX 77388
	Champion Forest Baptist Church - North Klein	4515 Spring Stuebner Road, Spring, TX 77389
	Chsmpion Life Church	3031 FM 2920, Spring, TX 77388
	Genesis Community Church	19315 Ella Boulevard, Spring, TX 77388
	Harvest Community Church	20010 Kuykendahl Road, Spring, TX 77379
	Hilltop Church	4210 Spring Stuebner Road, Spring, TX 77389
	Iglesia Adventista del Septimo Dia Heights	2831 Spring Cypress Road, Spring, TX 77388
	Iglesia Intimidad Con Dios	3131 FM 2920, Spring, TX 77388
	New Life Christian Reformed Church	2050 FM 2920, Spring, TX 77388
	Northside Christian Church	20250 Kuykendahl Road, Spring, TX 77389
	Saint Jonah Orthodox Church	2910 Spring Cypress Road, Spring, TX 77388
	Spring Baptist Church - Klein Campus	21825 Bridgestone Lane, Spring, TX 77388
Schools		
	FRASSATI CATHOLIC HIGH SCHOOL	22151 FRASSATI WAY, Spring, TX 77389
	KLEIN COLLINS H S	20811 ELLA BLVD, Spring, TX 77388
	KREINHOP EL	21010 ELLA BLVD, Spring, TX 77388
	ROTH EL	21623 CASTLEMONT, Spring, TX 77388
	SCHINDEWOLF INT	20903 ELLA BLVD, Spring, TX 77388
	ZWINK EL	22200 FRASSATI WAY, Spring, TX 77389
Childcare		
	CAMPUS KIDS AT FOX ELEMENTARY SCHOOL	4800 PORT AEGEAN DRIVE, Spring, TX 77388
	CAMPUS KIDS AT ZWINK ELEMENTARY	22200 FRASSATI WAY, Spring, TX 77389
	CAMPUS KIDS LLC AT KREINHOP ELEM. SCHOOL	20820 ELLA BLVD, Spring, TX 77388
	GROWTH AND GUIDANCE CHILD DEV. CENTER	3336 SPRING STUEBNER RD, STE C, Spring, TX 77389
	KLEIN KINDER CARE	3110 FM 2920 RD, Spring, TX 77388
	KOALA KARE AT ROTH ELEMENTARY	21623 CASTLEMONT LN, Spring, TX 77388
	KOTI ACADEMY OF SPRING KLEIN	4655 FM 2920 RD, Spring, TX 77388
	NEW LIFE COMMUNITY CHRISTIAN SCHOOL	2050 F M 2920, Spring, TX 77388

	PRIMROSE SCHOOL OF SPRING - KLEIN	22003 BRIDGESTONE LN, Spring, TX 77388
	SUMMERFIELD ACADEMY PRESCHOOL, LLC	21611 BRIDGESTONE LN, Spring, TX 77388
	THE GODDARD SCHOOL	3429 FM 2920 RD, Spring, TX 77388
Senior Living		
	Mossy Oaks Retreat	23003 Fritz Lane, Spring, TX 77389
	Countryside Senior Living and Memory Care of Spring	21327 Falvel Road, Spring, TX 77388
	3 Senior	21050 Normandy Forest Drive, Spring, TX 77388

GPZ_76

Area	7.8 Square Miles
Population (2020)	14,466
Hydrants	641
Census Class	Urban
Fire Station	
	Station 76
Railroad	
	Union Pacific - Navasota Subdivision
Water	

<Null>	<Null>
Waterstone Estates - Water Plant	<Null>24714 Stuebner Airline Road, Tomball, TX 77375
CSAW 11744 - Water Plant	7831 Augusta Pines Drive, Spring, TX 77389
HC MUD 1 - Water Plant 4	<Null>9711 Stone Briar Creek, Tomball, TX 77375
HC MUD 1	<Null>
HC MUD 1	<Null>
HC MUD 1 - Lift Station 4	<Null>
HC MUD 1 - Water Plant 2	25204 Shalford Drive, Spring, TX 77389
HC MUD 1 - Water Plant 3	25802 Alicia Drive, Tomball, TX 77375
HC MUD 480 - Lift Station 2	11007 Loblolly Wood Drive, Tomball, TX 77375
Water Plant	11824 Violet Bloom Drive, Tomball, TX 77375
NW HC MUD 19	7676 West Rayford Road, Spring, TX 77389
NW HC MUD 19 - Lift Station 3	<Null>

	NW HC MUD 19 - Well 2	7225 Sands Terrace Lane
	NW HC MUD 19 - Well 3	25703 Drybrook Road
	NWHC MUD 19 Waste Water Treatment Plant	West Rayford Road, Spring, TX 77389
	HC MUD 1 Waste Water Treatment Plant 1	24770 Kuykendahl Road, Spring, TX 77389
	HC MUD 480 Sewage Treatment Plant	11324 Bogs Road, Tomball, TX 77375
	NW HC MUD 19 Waste Plant 1	25714 Steeple Canyon
	Aqua Texas Waste Water Treatment Plant	8002 Lazy Lane, Spring, TX 77389

Electrical

Transmission Lines

Transportation

Main Roads

Huffsmith Kuykendahl Road

Kuykendahl Road

West Rayford Road

FM-2978

Parks / Trails

Burroughs Park

Augusta Pines Golf Course

Medical

	QLMD Direct Primary Care	24914 Kuykendahl Rd, Suite C, Tomball, TX 77375
	Davarn Urgent Care	25245 Kuykendahl Rd, Tomball, TX 77375
	Meridian Springs Primary Care	25240 Kuykendahl Rd, Tomball, TX 77375
	Next Level Urgent Care	25750 Kuykendahl Rd, Spring, TX 77389

Apartments

	The Landing at Augusta Woods Senior Living	7727 Augusta Pines Dr, Spring, TX 77389
	Augusta Woods, Adult community	7833 Augusta Pines Dr, Spring, TX 77389
	Haven at Augusta Woods	8011 Augusta Pines Dr, Spring, TX 77389
	The Preserve at Spring Creek Apartments	8627 Hufsmith Rd, Tomball, TX 77375
	Augusta Meadows Apts	24215 Kuykendahl Road, Tomball, TX 77375
	Everlee	23902 Kuykendahl Rd, Tomball, TX 77375

Places of Worship

	Grace Community Bible Church	24422 Kuykendahl Road, Tomball, TX 77375
	Ismaili Jamatkhana - Spring	24525 Community Center Drive, Spring, TX 77389

Schools

HOFIUS INTERMEDIATE SCHOOL	8400 W RAYFORD RD, Spring, TX 77389
METZLER ELEMENTARY SCHOOL	8500 W RAYFORD RD, Spring, TX 77389

Childcare

CAMPUS KIDS AT METZLER ELEM SCHOOL	8500 W RAYFORD RD, Spring, TX 77389
THE GODDARD SCHOOL	8522 PRINCETON PLACE DR, Tomball, TX 77375
XPLOR - W RAYFORD	8615 W RAYFORD RD, Spring, TX 77389

Senior Living

Village Green Memory Care Community	7910 W Rayford Road, Spring, TX 77389
Avanti Senior Living ar Augusta Pines	24520 Community Center Drive, Spring, TX 77389
Augusta Woods	7833 Augusta Pines Drive, Spring, TX 77389
The Landing at Augusta Woods	7727 Augusta Pines Drive, Spring, TX 77389

GPZ_77

Area	3.8 Square Miles
Population (2020)	9485
Hydrants	432
Census Class	Urban

Fire Station

Station 77

Railroad

Union Pacific - Navasota Subdivision

Water

HC WCID 110 - Water Plant 1	19438 Enchanted Oaks Drive, Spring, TX 77388
Klein PUD - Water Plant 1	3330 Cypresswood Drive, Spring, TX 77388
HC WCID 110 Wastewater Plant	627 Cypress Oaks Drive, Spring, TX 77388
HC MUD 104 Wastewater Plant	19519 Lajuana Lane, Spring, TX 77388
Candlelight Wastewater Plant	Candlechase Drive, Spring, TX 77388

Electrical

Transmission Lines

Transportation

Main Roads

	Cypresswood Drive	
	Louetta Road	
	Holzwarth Road	
Parks / Trails		
	Forest Oaks Park (WCID110 Residents)	627 Cypress Oaks Dr, Spring, TX 77388
	Devonshire Recreation Center	19511 Lajuana Ln, Spring, TX 77388
Apartments		
	Harlow Spring Cypress	2539 Spring Cypress Rd, Spring, TX 77388
	Cardiff at Louetta Lakes	3400 Louetta Rd, Spring, TX 77388
Places of Worship		
	Christ Church of Houston Texas	18823 Mirror Lake Drive, Spring, TX 77388
	Iglesia Cristiana North Houston	2020 Bending Bough Lane, Spring, TX 77388
	Iglesia Fe Y Gracia Rodofo Font	19318 Ella Boulevard, Spring, TX 77388
	Kingdom Hall of Jehovah's Witnesses	19413 Haude Road, Spring, TX 77388
	Revival House Church	2560 Old Louetta Loop, Spring, TX 77388
	The Daily Bread Church	19863 Holzwarth Road, Spring, TX 77388
Schools		
	HAUDE ELEMENTARY	3111 LOUETTA, Spring, TX 77388
	LEMM ELEMENTARY	19034 JOANLEIGH DR, Spring, TX 77388
Childcare		
	BLOSSOMS MONTESSORI SCHOOL	3700 LOUETTA RD, Spring, TX 77388
	CAMPUS KIDS AT HAUDE ELEMENTARY SCHOOL	3111 LOUETTA RD, Spring, TX 77388
	CAMPUS KIDS AT LEMM ELEMENTARY SCHOOL	19034 JOANLEIGH DR, Spring, TX 77388
	HOUSE OF TOTS MOLO MONTESSORI SCHOOL	3522 MIRROR CT, Spring, TX 77388
	SCHOOL IN THE PINES	19027 JOANLEIGH DR, Spring, TX 77388
Senior Living		
	The Raven Creek	1923 Silver Leaf Drive, Spring, TX 77388
	Mimi's Cottage	515 Enchanted River Drive, Spring, TX 77388
	Mercy Elderly	19003 Mirror Lake Drive, Spring, TX 77388
	BeeHive Homes of Spring	3207 Cypresswood Drive, Spring, TX 77388
	Just Divine Hands LLC	510 Enchanted Hollow Drive, Spring, TX 77388

GPZ_78

Area	3.4 Square Miles
Population (2020)	5893
Hydrants	268
Census Class	Urban

Fire Station

	Station 78

Railroad

	Union Pacific - Navasota Subdivision
	Union Pacific - Palestine Subdivision

Water

	Northgate Crossing MUD 1 - Well 1	23902 Northgate Crossing Blvd., Spring, TX 77373
	Northgate Crossing MUD 2 - Well 1	625 Booker Road, Spring, TX 77373
	Northgate Crossing Waste Water Treatment Plant	

Hotels

	Holiday Inn Express & Suites Spring	21606 Spring Plaza Dr, Spring, TX 77388
	Hilton Garden Inn North Houston Spring	23535 Northgate Crossing Blvd, Spring, TX 77373
	Hampton Inn & Suites North Houston Spring	23523 Northgate Crossing Blvd, Spring, TX 77373
	Homewood Suites by Hilton North Houston/Spring	23800 Interstate 45 N, Spring, TX 77373

Electrical

	Transmission Lines

Major Emlpoyers

	FedEx

Transportation

Highways

	Interstate 45
	Grand Parkway
	Hardy Toll Road

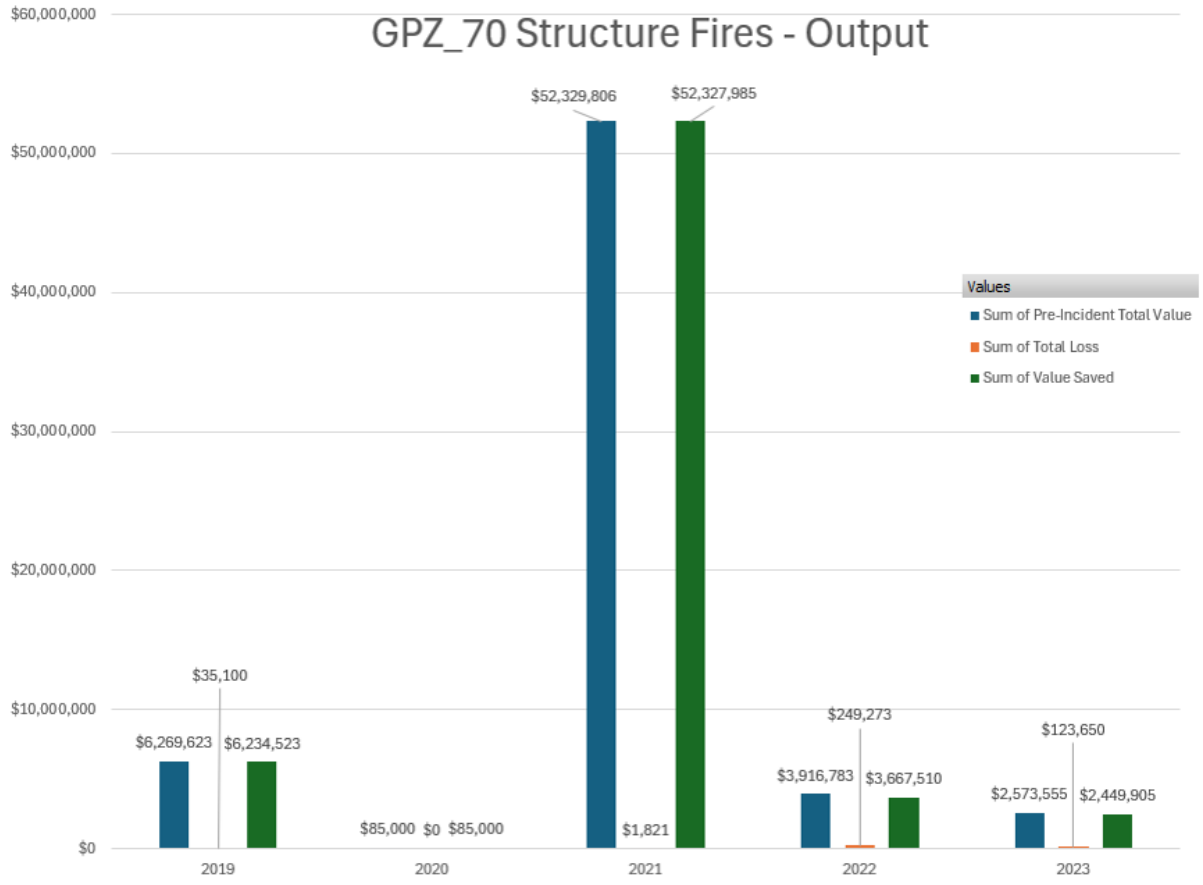
Main Roads

	Springwoods Village Parkway
	Northgate Crossing Boulevard

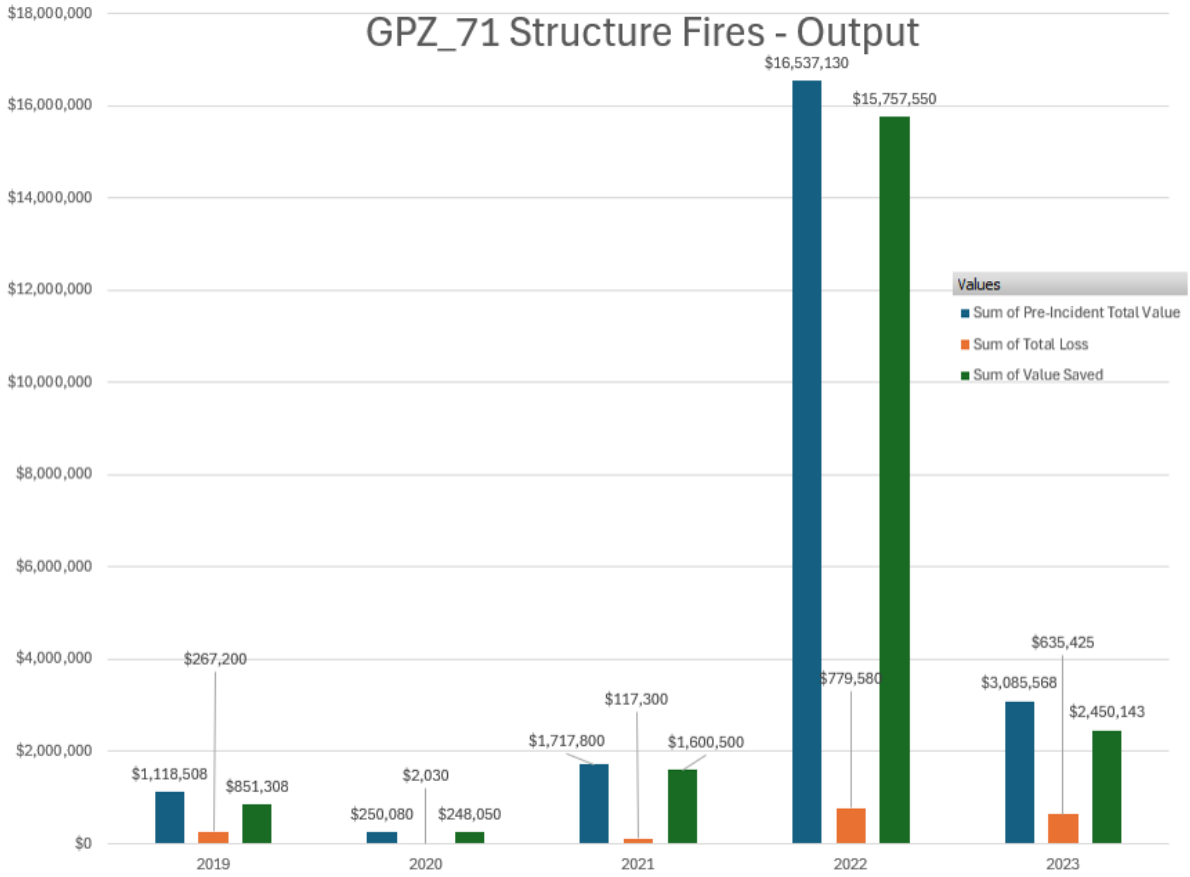
	Riley Fuzzle Road	
	Aldine Westfield Road	
	West Hardy Road	
Parks / Trails		
	Dennis Johnson Park	
	Spring Creek Greenway Hike & Bike Trail	
	Big Stone Lodge	
	Southwell Park	
	Northwood Pines Park	
Apartments		
	The Tribute	26325 Northgate Crossing Blvd, Spring, TX 77373
	The Pierpont	23770 Springwoods Village Pkwy, Spring, TX 77373
	The Abbey at Northpoint	23550 Northgate Crossing Blvd, Spring, TX 77373
Places of Worship		
	Church of the Living God	27127 Border Street, Spring, TX 77373
	Saint Paul Community Church of Spring	426 Booker Road, Spring, TX 77373
	Spring Antioch Baptist Church	27310 Oak Street, Spring, TX 77373
	Truevine Missionary Baptist Church	27307 Oak Street, Spring, TX 77373
Schools		
	NORTHGATE ELEMENTARY SCHOOL	23437 NORTHGATE CROSSING BLVD, Spring, TX 77373
	SPRINGWOODS VILLAGE MIDDLE SCHOOL	1120 Crossgate Blvd, Spring, TX 77373
Childcare		
	KIDS R HERE SPRING	605 RILEY FUZZELL RD, Spring, TX 77373
	OUR LITTLE RED SCHOOLHOUSE - NORTHGATE	23437 NORTHGATE CROSSING BLVD, Spring, TX 77373

Appendix D – Structure Fire Outputs for Each GPZ

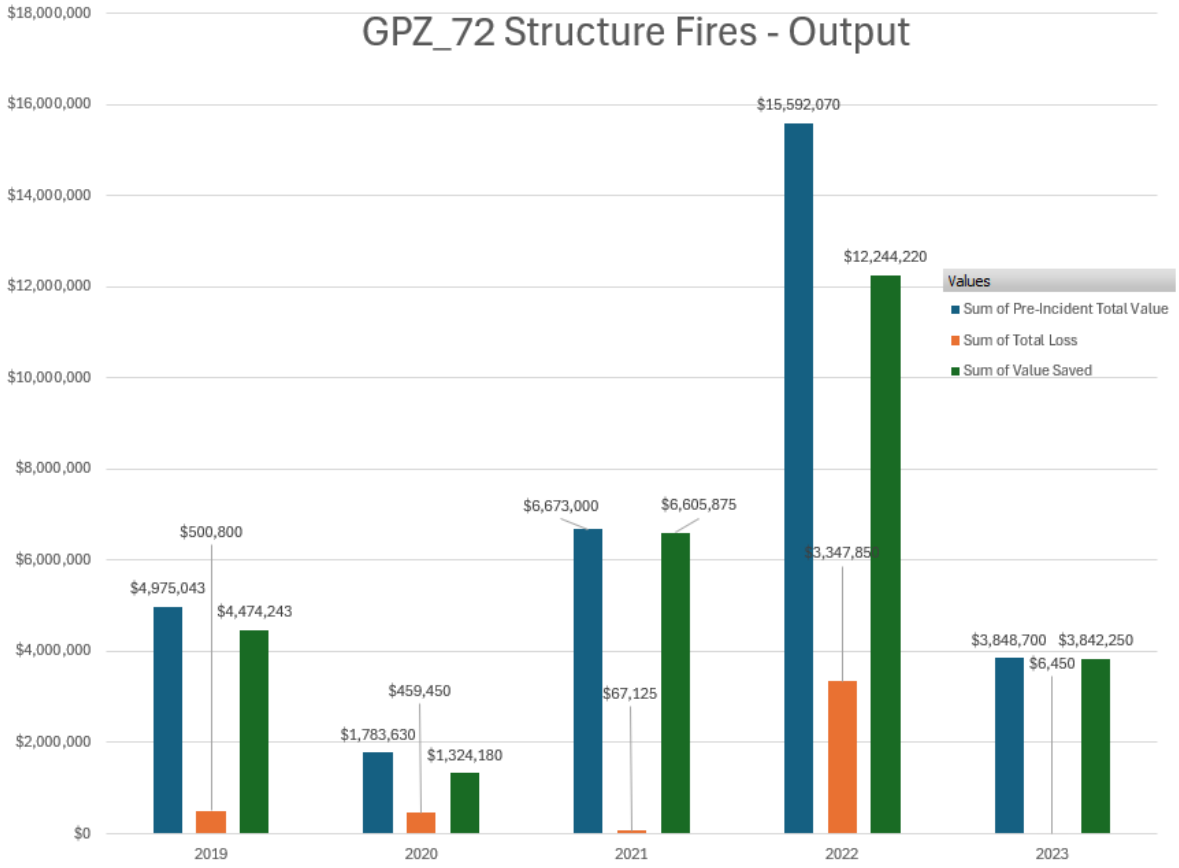
GPZ_70



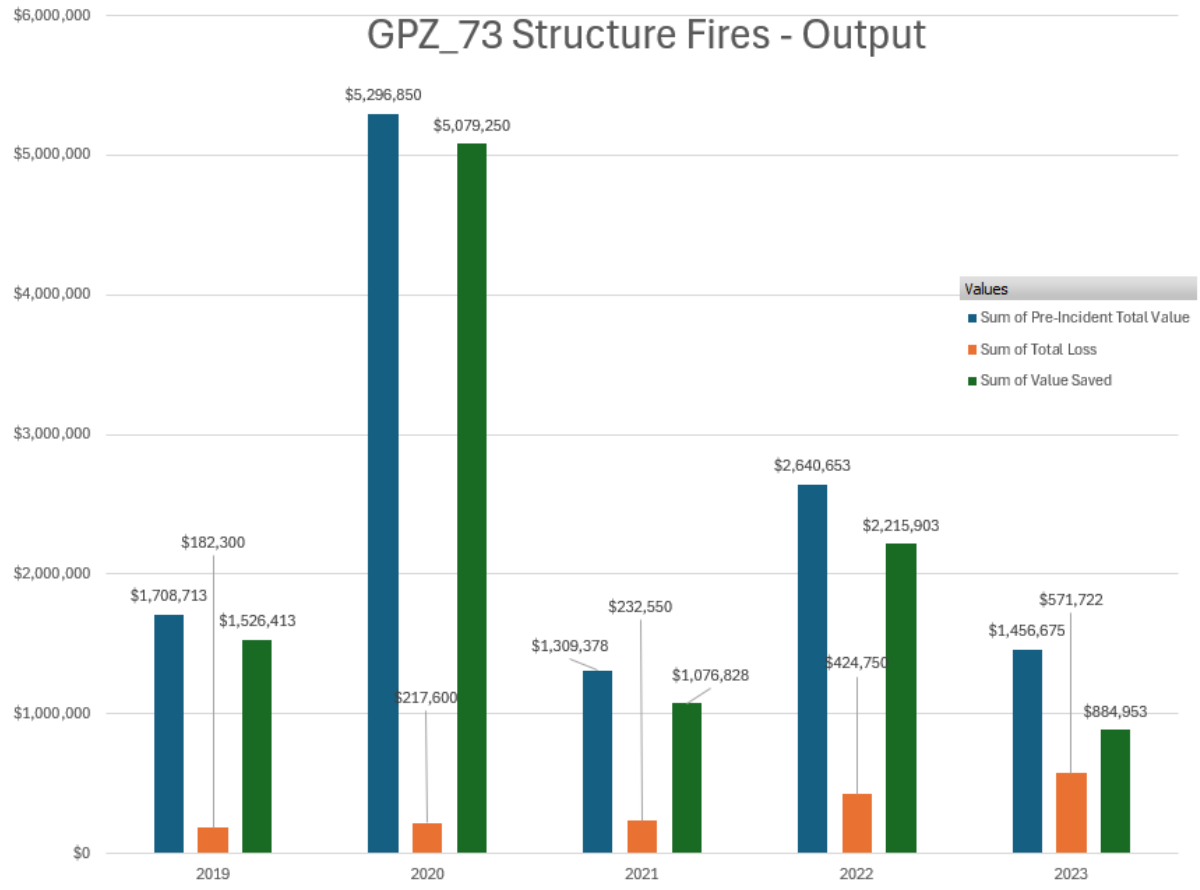
GPZ_71


GPZ_71 Structure Fires - Output
$18,000,000
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
2019
2020
2021
2022
2023
$1,118,508
$267,200
$851,308
$250,080
$2,030
$248,050
$1,717,800
$117,300
$1,600,500
$16,537,130
$779,580
$15,757,550
$3,085,568
$635,425
$2,450,143
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

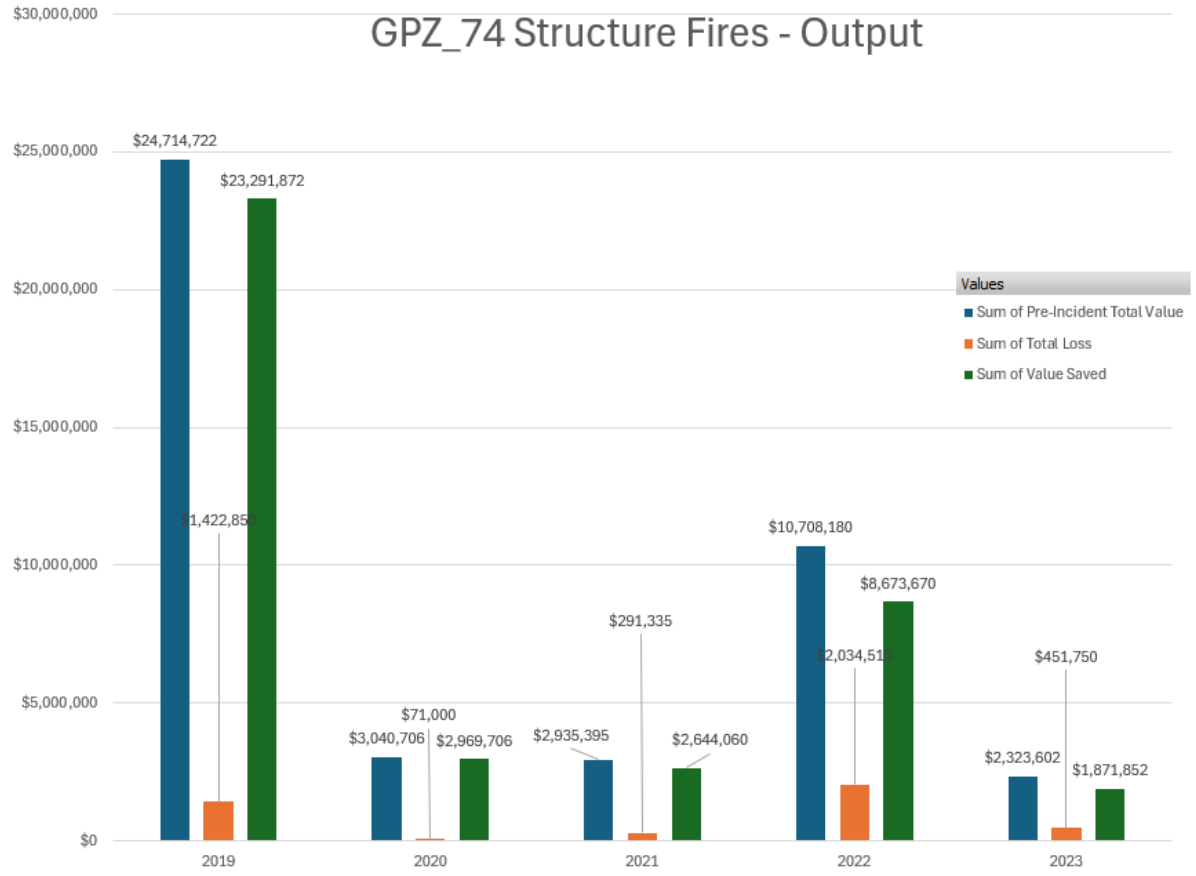
GPZ_72


GPZ_72 Structure Fires - Output
$18,000,000
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
2019
2020
2021
2022
2023
$4,975,043
$500,800
$4,474,243
$1,783,630
$459,450
$1,324,180
$6,673,000
$67,125
$6,605,875
$15,592,070
$3,347,850
$12,244,220
$3,848,700
$6,450
$3,842,250
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

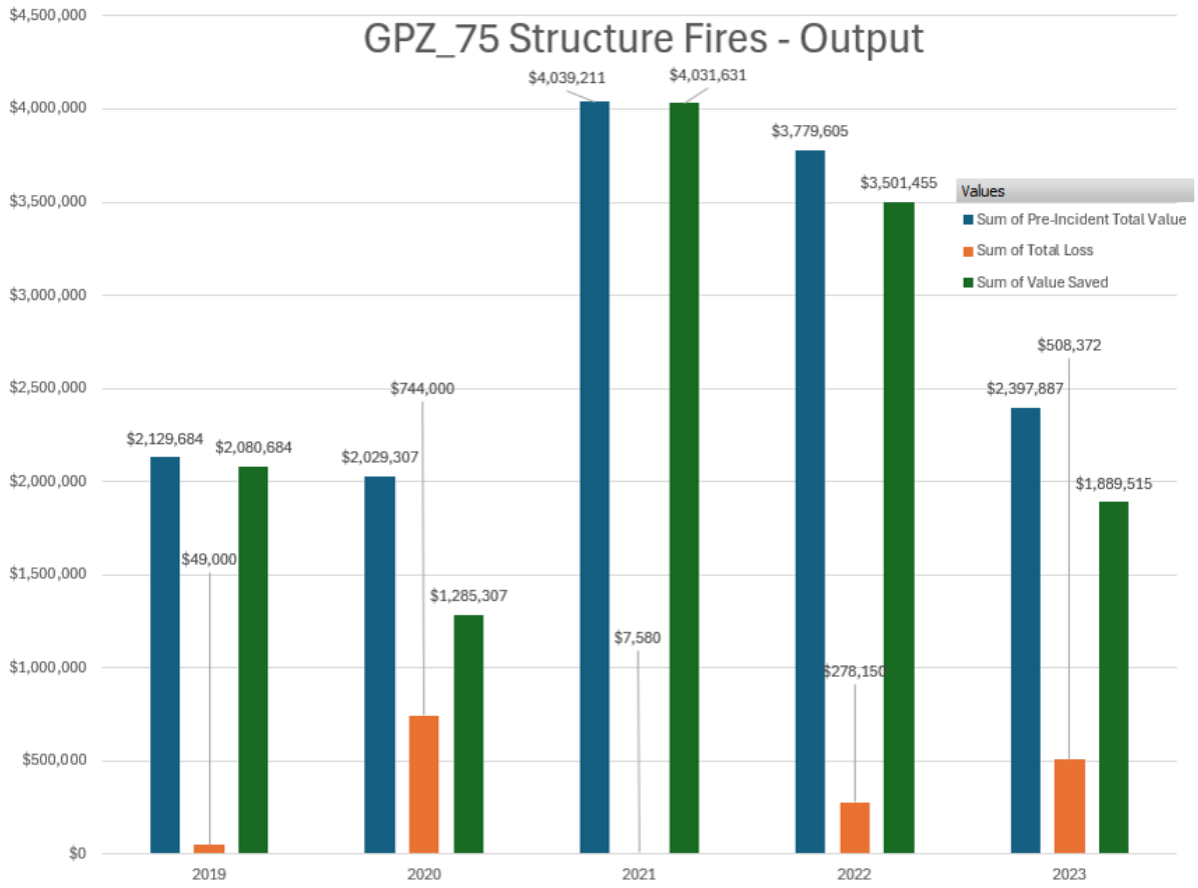
GPZ_73


GPZ_73 Structure Fires - Output
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0
2019
2020
2021
2022
2023
$1,708,713
$182,300
$1,526,413
$5,296,850
$217,600
$5,079,250
$1,309,378
$232,550
$1,076,828
$2,640,653
$424,750
$2,215,903
$1,456,675
$571,722
$884,953
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

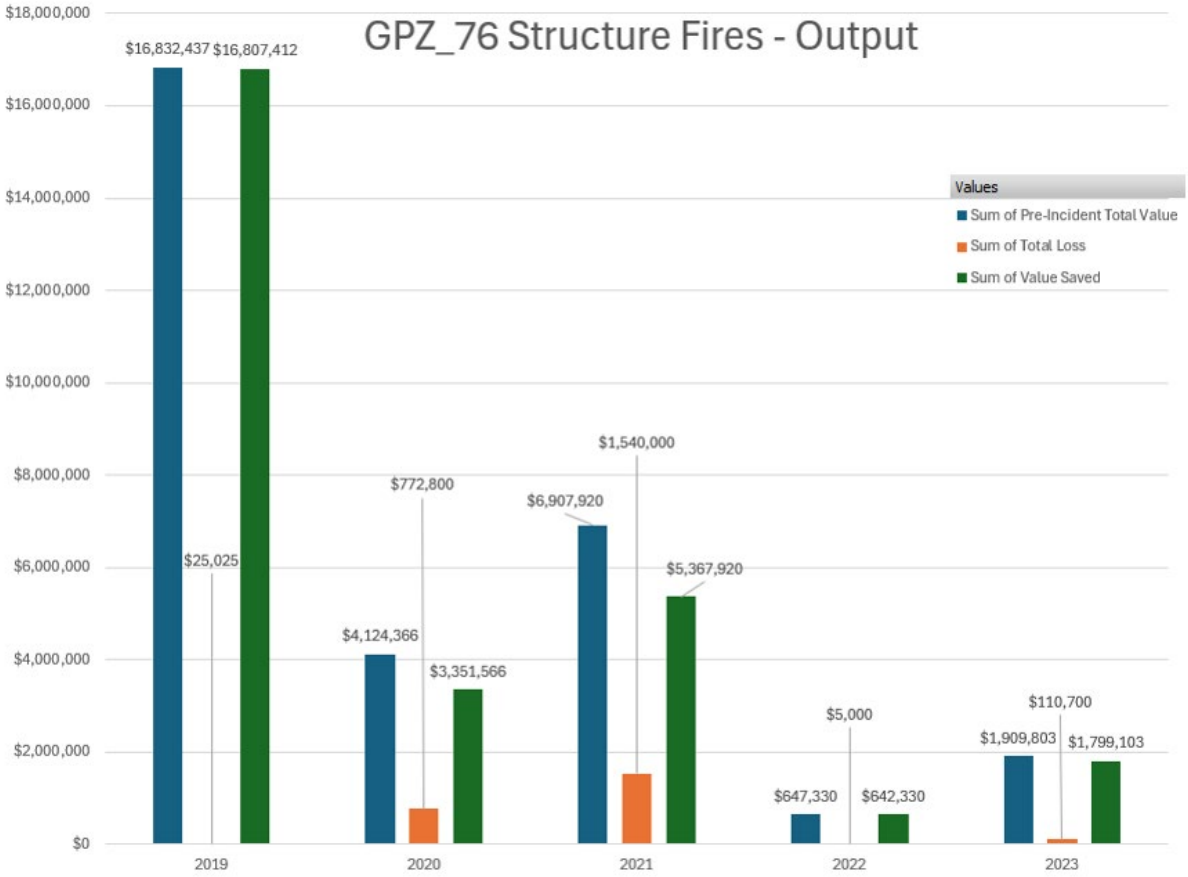
GPZ_74


GPZ_74 Structure Fires - Output
$30,000,000
$25,000,000
$20,000,000
$15,000,000
$10,000,000
$5,000,000
$0
$24,714,722
$23,291,872
$1,422,850
$3,040,706
$71,000
$2,969,706
$2,935,395
$291,335
$2,644,060
$10,708,180
$2,034,510
$8,673,670
$2,323,602
$451,750
$1,871,852
2019
2020
2021
2022
2023
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

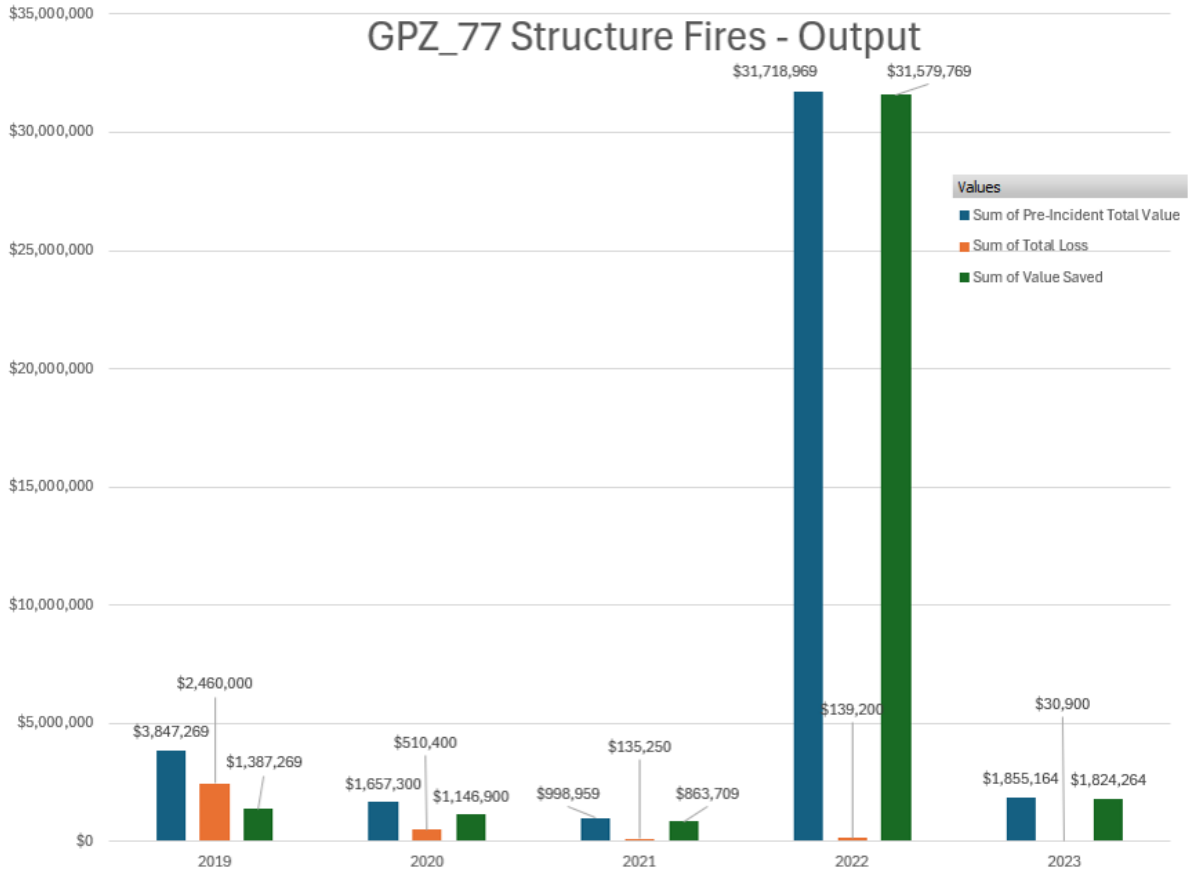
GPZ_75


GPZ_75 Structure Fires - Output
$4,500,000
$4,000,000
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
2019
2020
2021
2022
2023
$2,129,684
$49,000
$2,080,684
$2,029,307
$744,000
$1,285,307
$4,039,211
$7,580
$4,031,631
$3,779,605
$278,150
$3,501,455
$2,397,887
$508,372
$1,889,515
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

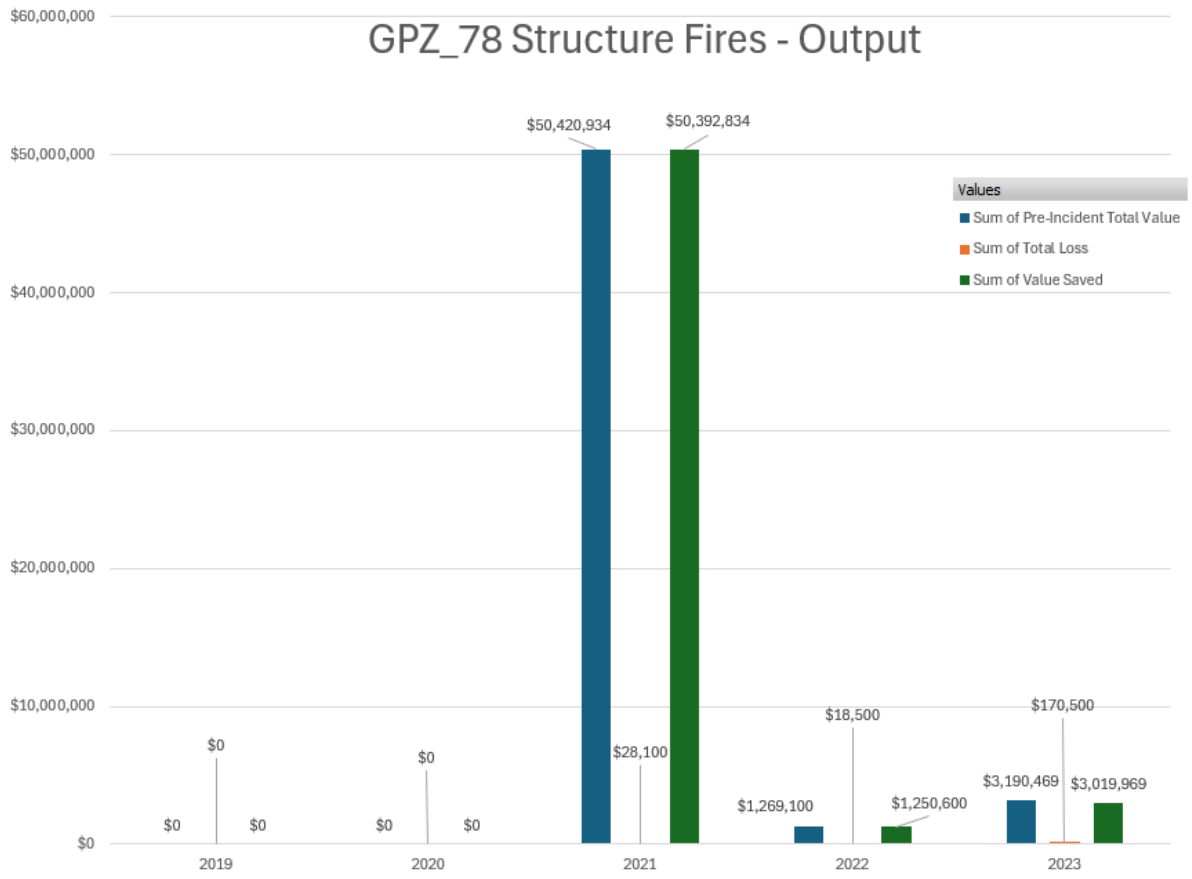
GPZ_76


GPZ_76 Structure Fires - Output
$18,000,000
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
$16,832,437
$16,807,412
$25,025
$4,124,366
$772,800
$3,351,566
$6,907,920
$1,540,000
$5,367,920
$647,330
$5,000
$642,330
$1,909,803
$110,700
$1,799,103
2019
2020
2021
2022
2023
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

GPZ_77


GPZ_77 Structure Fires - Output
$35,000,000
$30,000,000
$25,000,000
$20,000,000
$15,000,000
$10,000,000
$5,000,000
$0
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved
$3,847,269
$2,460,000
$1,387,269
$1,657,300
$510,400
$1,146,900
$998,959
$135,250
$863,709
$31,718,969
$139,200
$31,579,769
$1,855,164
$30,900
$1,824,264
2019
2020
2021
2022
2023

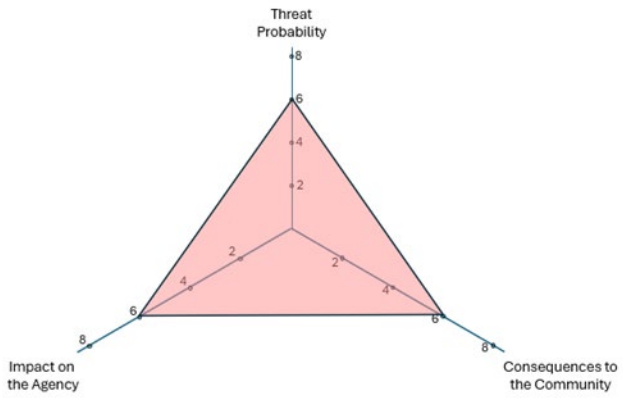
GPZ_78


GPZ_78 Structure Fires - Output
$60,000,000
$50,000,000
$40,000,000
$30,000,000
$20,000,000
$10,000,000
$0
$50,420,934
$50,392,834
$28,100
$18,500
$170,500
$1,269,100
$1,250,600
$3,190,469
$3,019,969
$0
$0
$0
$0
$0
$0
2019
2020
2021
2022
2023
Values
Sum of Pre-Incident Total Value
Sum of Total Loss
Sum of Value Saved

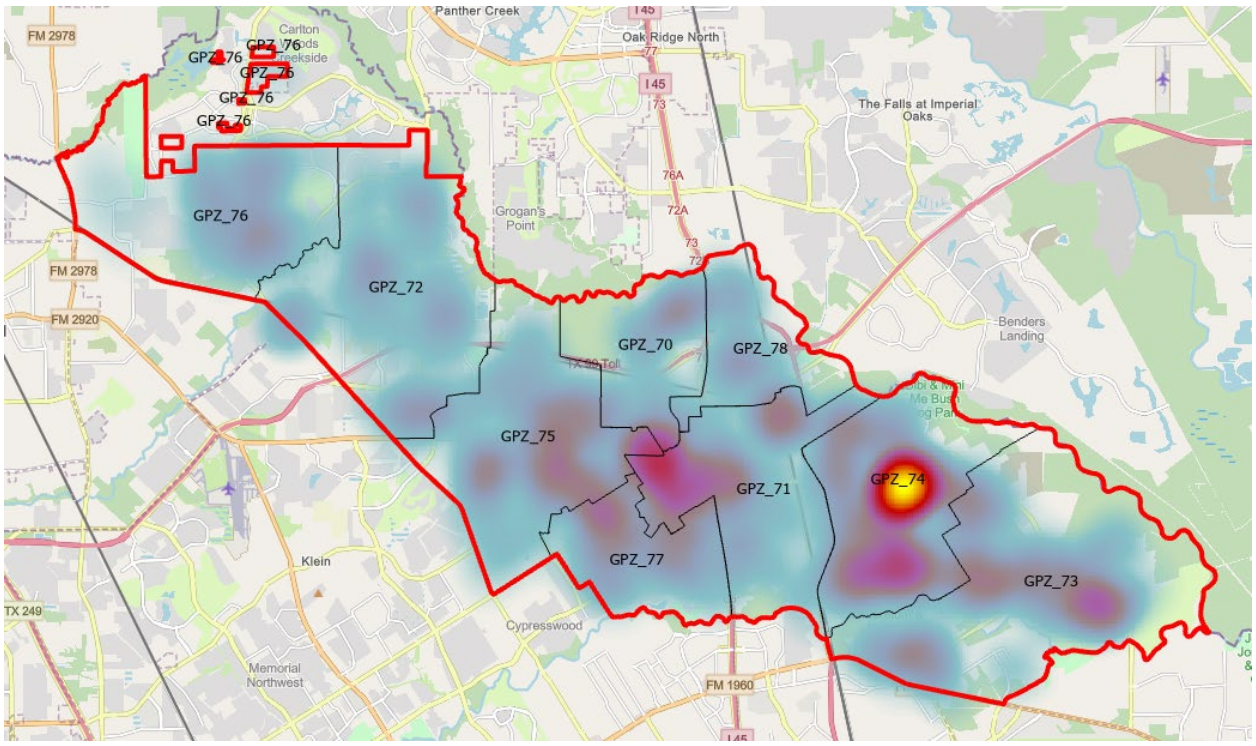
Appendix E – Incident Risk Characterization

Structure Fire Incidents

High Risk



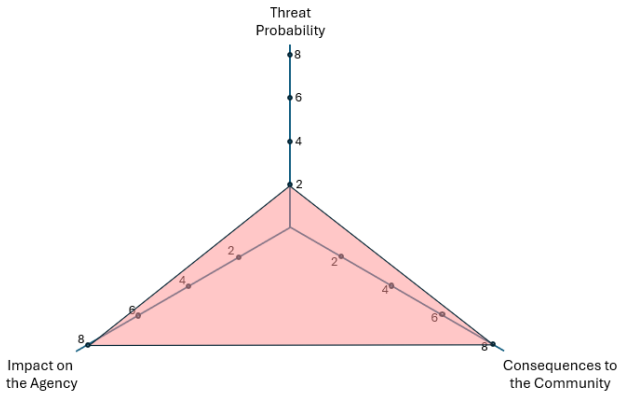
Building Fires represent one of the biggest fire threats to our community. Not only do they have high consequences for the community and high impact on the agency, but they also occur more frequently than many other fire threats so have a high probability of occurrence.

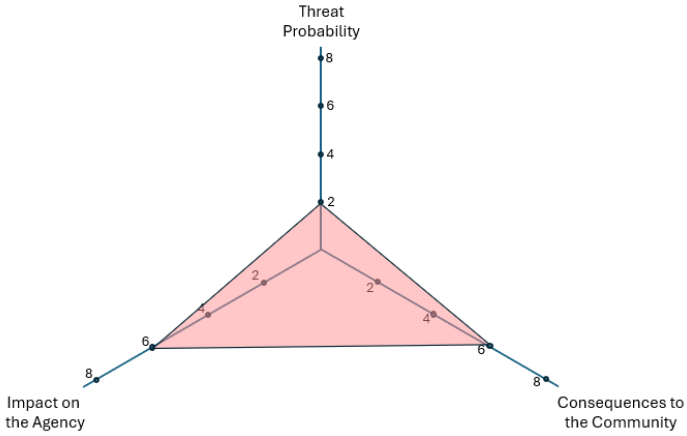


Heat Map of Structure Fires (2019-2023)

Other Fire Incidents

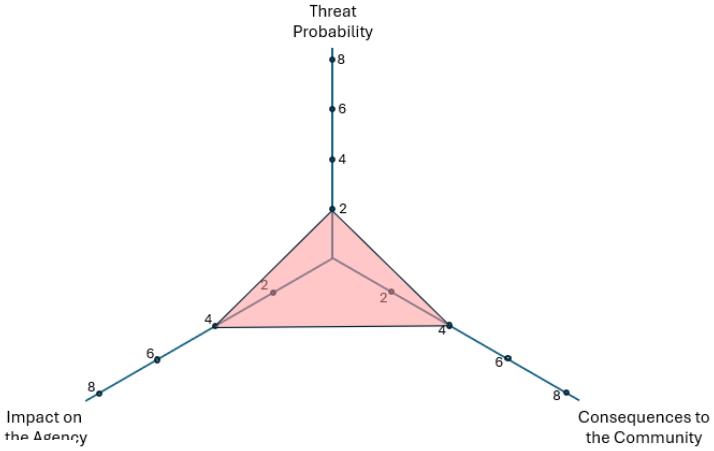
Rail vehicle fires can have maximum consequences to the agency and maximum impact on the community. Even though they have a low probability of occurrence, they are classified as **Max Risk Fire Incidents.**

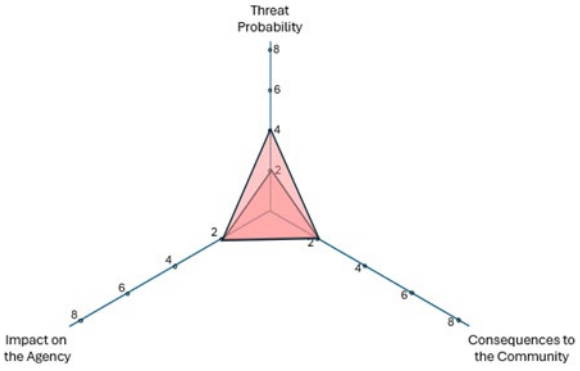




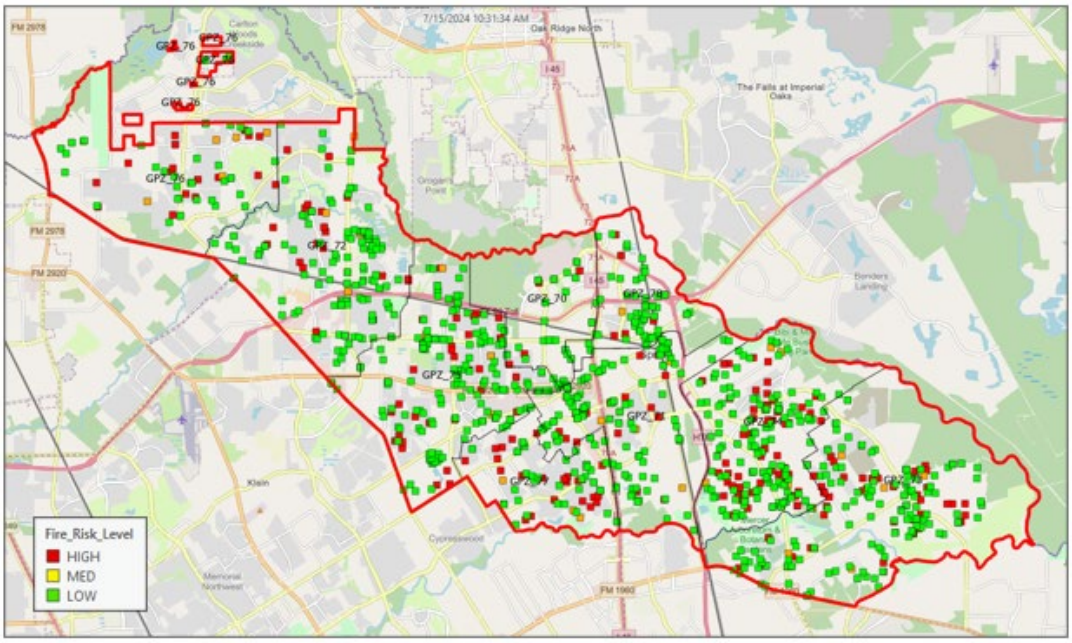
While passenger vehicle fires and aircraft fires have high consequences to the community and impact on the agency, they have low probabilities of occurrence. These are classified as **High Risk Fire Incidents**.

Moderate Risk Fire Incidents are dominantly threats that have moderate consequences to the community, moderate impact on the agency, with low probability. They include threats like mobile home fires, large truck fires, boat fires, wildland forest fires, and outside equipment fires.



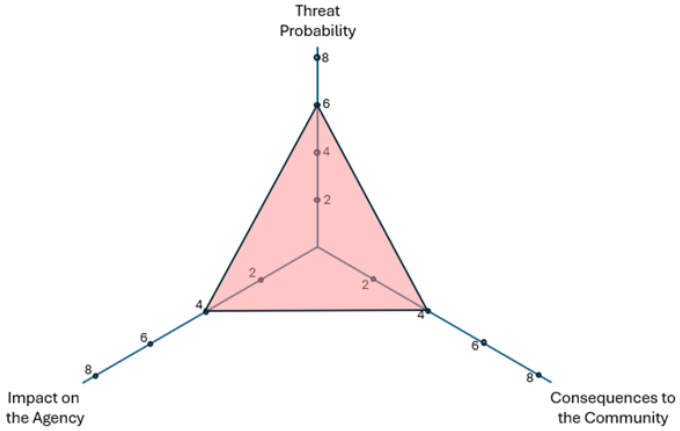


Low Risk Fire Incidents generally have low consequences for the community and low impact on the agency. They also have low to moderate probability of occurrence. Included among these threats are other structure fires, camper and RV fires, grass and brush fires, and trash and dumpster fires.



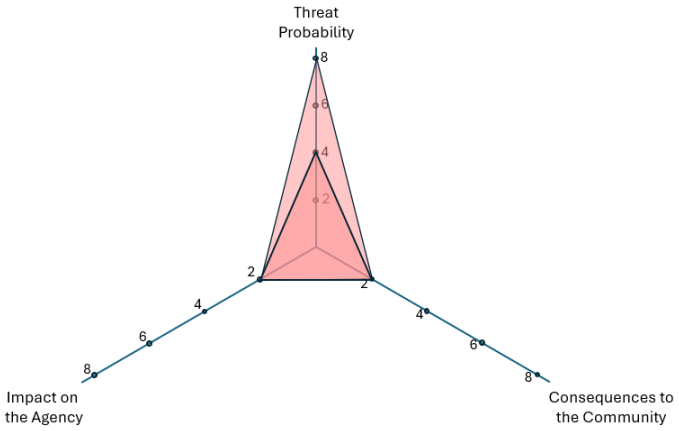
Fire Incidents by Risk Category (2019-2023)

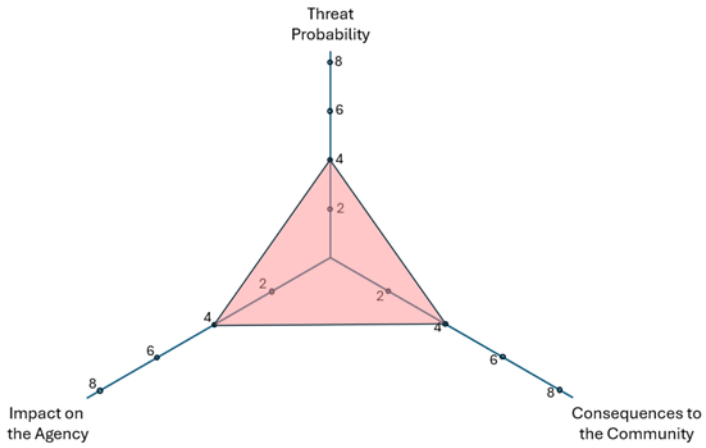
EMS Incidents



High Risk EMS Incidents include vehicle accidents with injuries which have a high probability of occurrence, moderate consequences to the community, and moderate impact on agency resources.

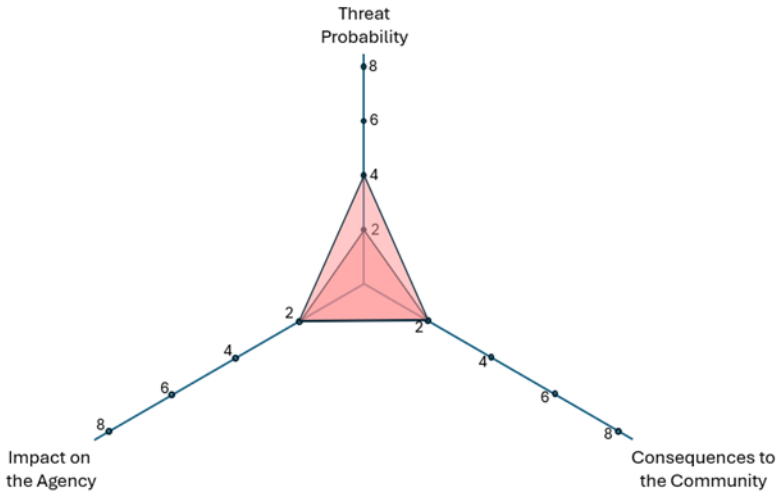
Moderate Risk EMS Incidents include general EMS calls, medical assists, and motor vehicle accidents without injuries. These threats have moderate to maximum probabilities, but low consequences to the community, and low impact on the agency.

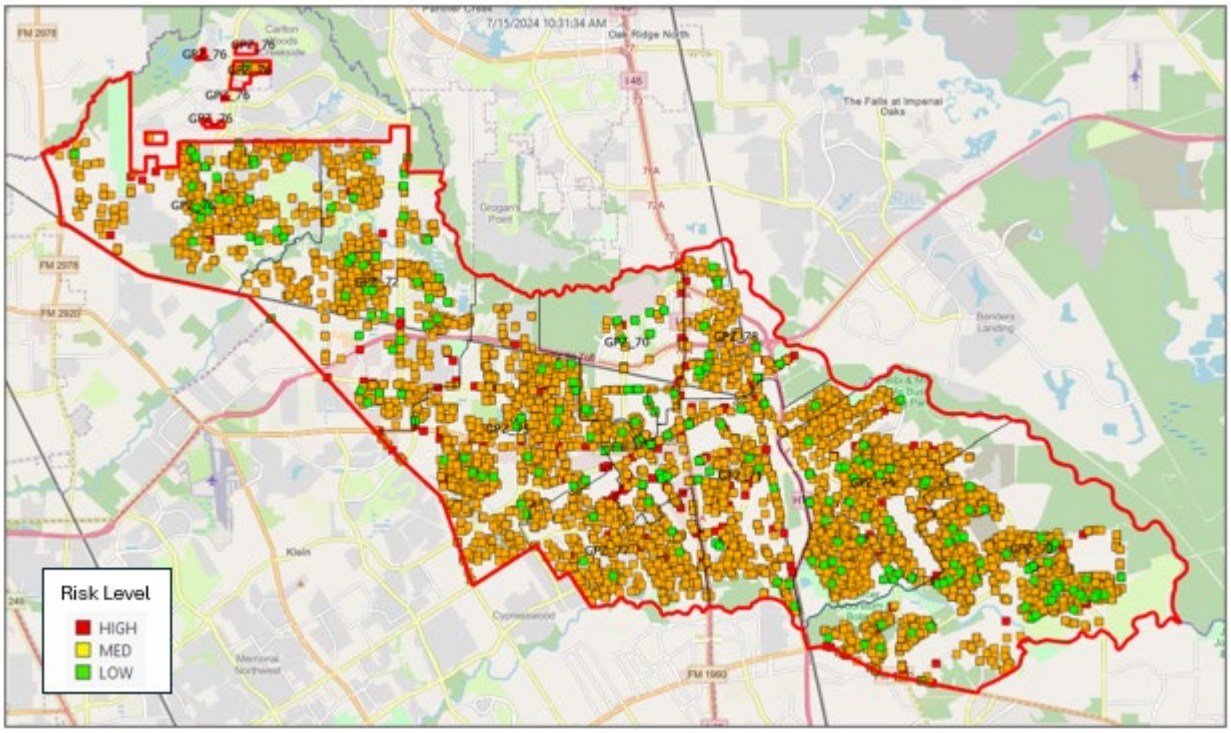




However, while still **Moderate Risk EMS Incidents**, motor vehicle / pedestrian accidents have only moderate probability of occurrence, but higher (moderate) consequences to the community and impact on the agency.

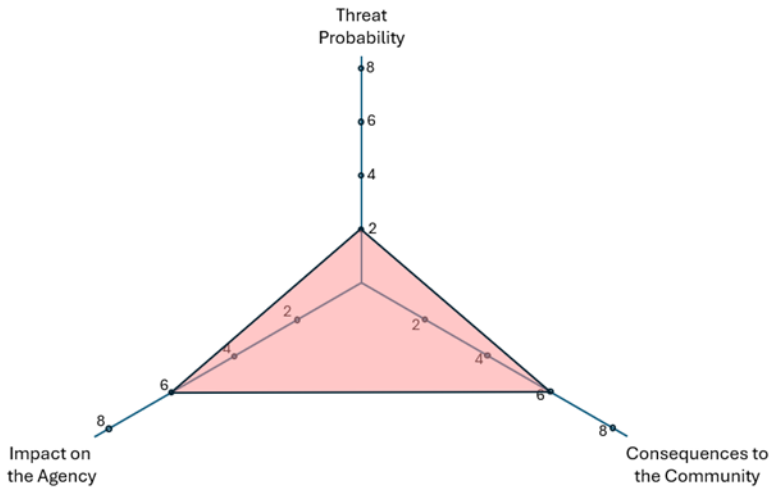
Low Risk EMS Incidents include medical assists of EMS crew, and lock-ins. These threats have low to moderate probabilities, low consequences to the community, and low impact on the agency





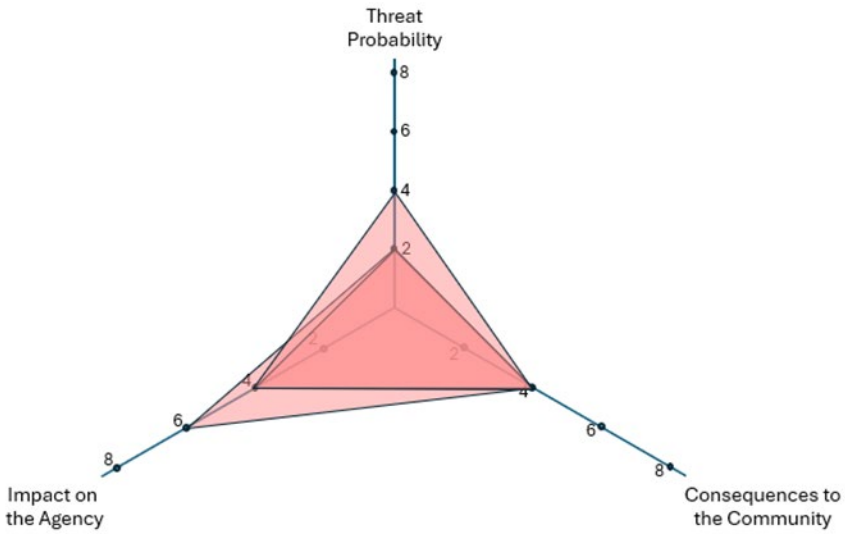
EMS Incidents by Risk Category (2019-2023)

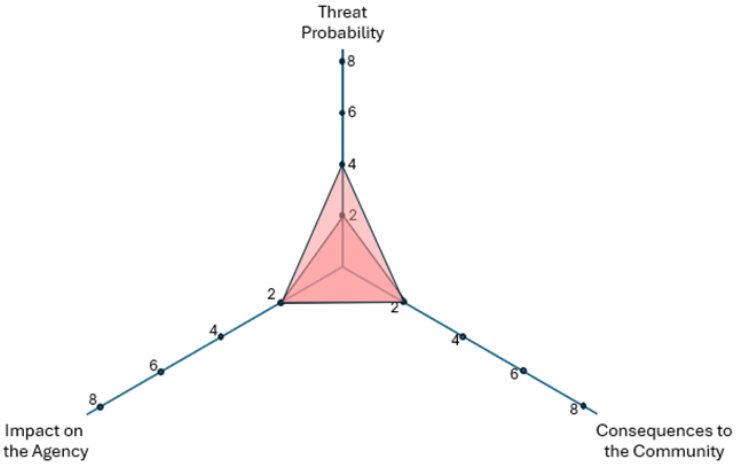
Rescue Incidents



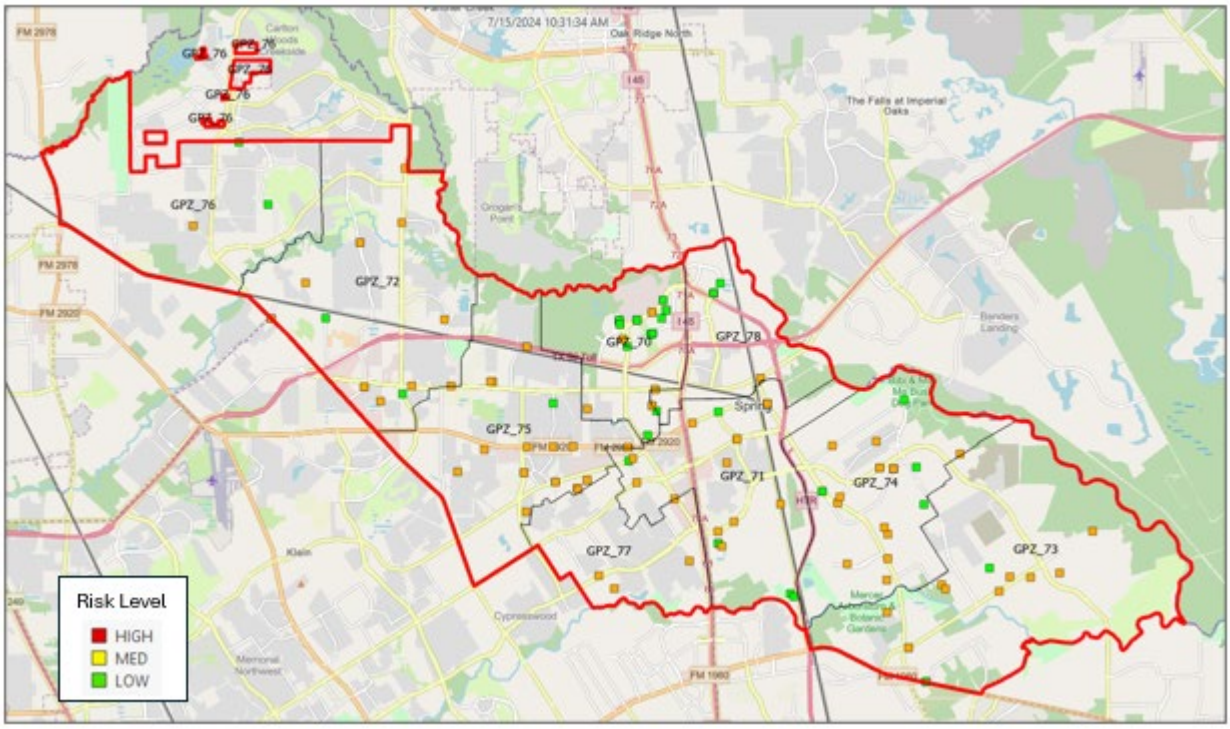
High Risk Rescue Incidents are low probability threats with high consequences to the community and high impacts on the agency. These threats include search and rescue of a person underground.

Moderate Risk Rescue Incidents have a low probability of occurrence, have moderate consequences to the community, and have moderate to high impacts on the agency. These threats include extrication of victims from buildings and vehicles, as well as trench, confined space, high-angle, and swift water rescues.





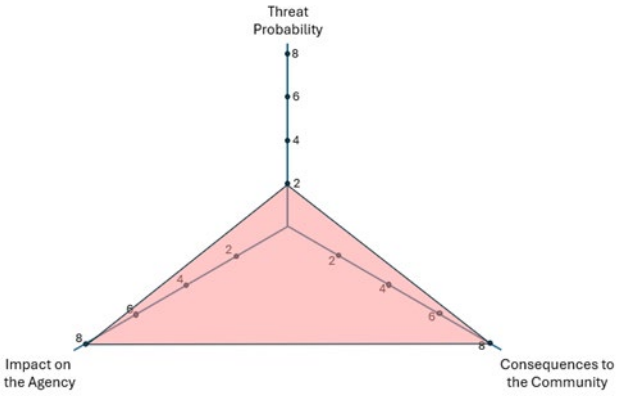
Low Risk Rescue Incidents have low to moderate probability and have low consequences to the community and impact on the agency. These threats include elevator rescues, swimming rescues, and rescue of victims trapped by power lines.

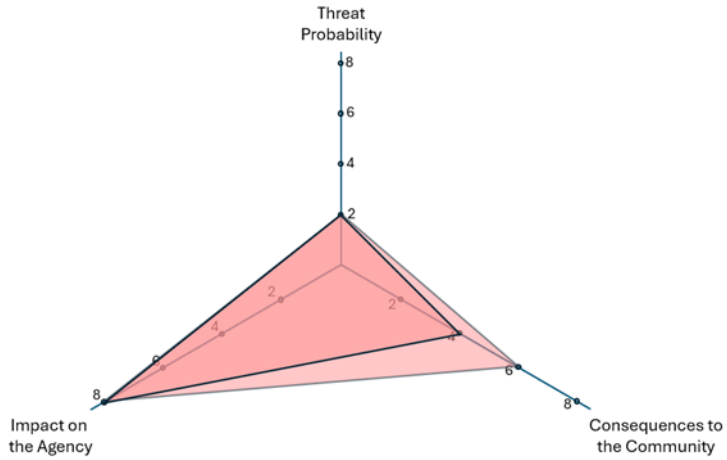


Rescue Incidents by Risk Category (2019-2023)

Explosion and Hazmat Incidents

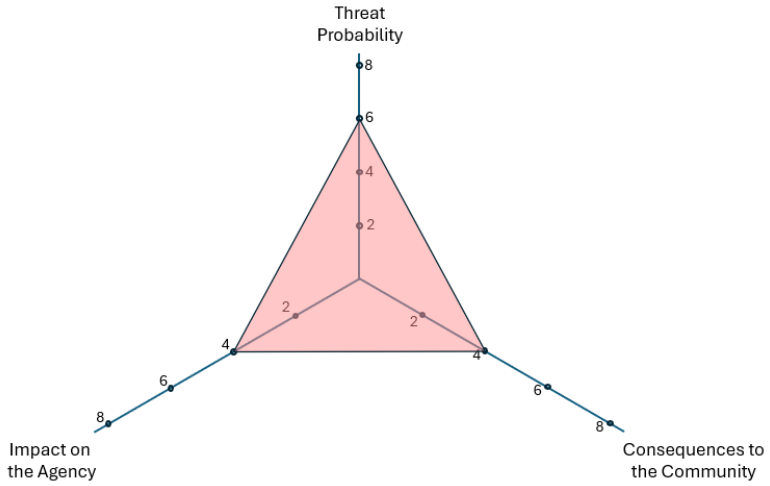
Max Risk Explosion and Hazmat Incidents have a low probability, but maximum impact on the agency and maximum consequences to the community. These include Radiation Leaks, Radioactive Material, and Biological Hazards.

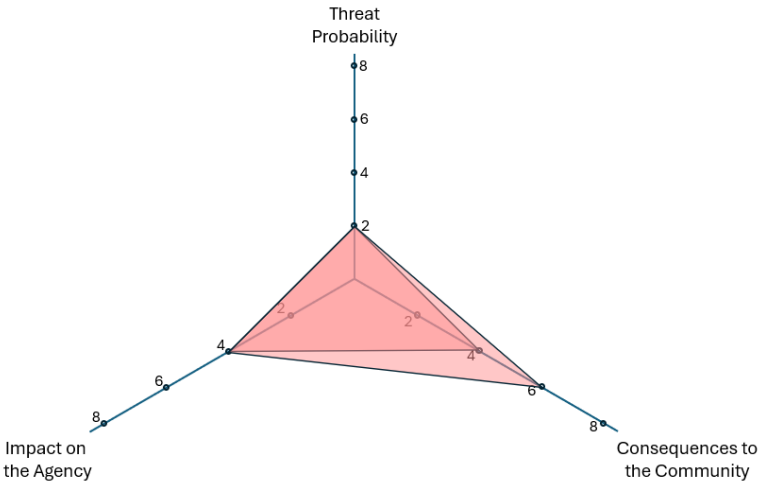




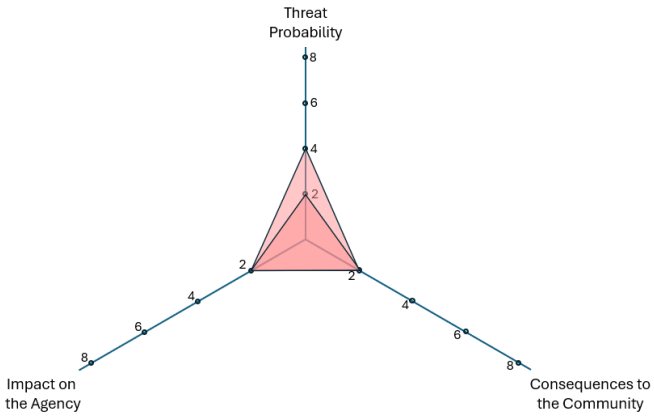
High Risk Explosion and Hazmat Incidents have low probability, moderate to high consequences to the community, but maximum impact on the agency. Included among these threats are overpressure explosions of gas pipelines, explosions of bombs or munitions, explosion of blasting agents, and dust explosions.

Gas Leaks are also **High Risk Explosion and Hazmat Incidents** but have a different risk profile. They have a high probability, moderate consequences to the community, and moderate impact on the agency.

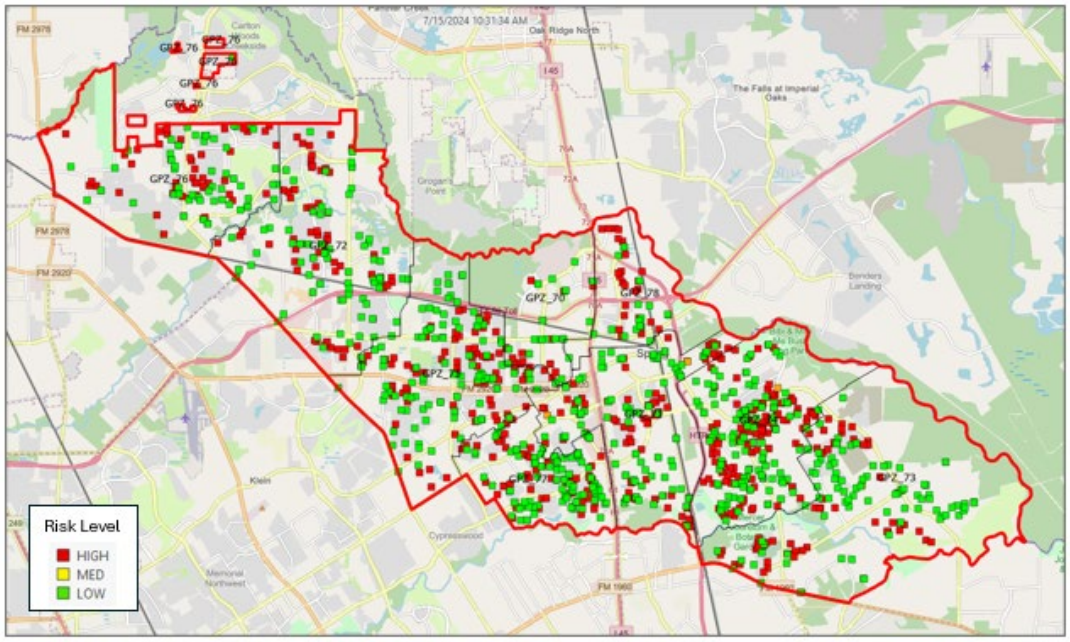




Moderate Risk Explosion and Hazmat Incidents have low probability, moderate to high consequences to the community, and moderate impact on the agency. These threats include overpressure rupture of steam pipes, confined cooking fires, chemical reaction rupture of a pressure or process vessel, and fireworks explosions.



Low Risk Explosion and Hazmat Incidents have low probability, low consequences to the community, and low impact on the agency. These threats include excessive heat events or scorch burns with no fire.



Explosion and Hazmat Incidents by Risk Category (2019-2023)

Appendix F – Historic Risk-Banded Incidents by GPZ

GPZ-70

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	7	3	5	10	11	36
Grand Total	**7**	**3**	**5**	**10**	**11**	**36**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	8	9	7	16	16	56
2 - MOD	0	0	0	1	1	2
Grand Total	**8**	**9**	**7**	**17**	**17**	**58**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	6	5	3	5	1	20
2 - MOD	119	98	124	93	91	525
3 - HIGH	16	16	33	40	32	137
Grand Total	**141**	**119**	**160**	**138**	**124**	**682**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	2	1	2	1	5	11
2 - MOD	1	1	0	0	3	5
Grand Total	**3**	**2**	**2**	**1**	**8**	**16**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	4	5	10	7	12	38
2 - MOD	0	1	1	0	0	2
3 - HIGH	0	2	9	6	6	23
Grand Total	**4**	**8**	**20**	**13**	**18**	**63**

GPZ-71

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	10	8	9	19	14	60
Grand Total	**10**	**8**	**9**	**19**	**14**	**60**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	21	22	39	28	37	147
2 - MOD	3	2	3	2	4	14
Grand Total	**24**	**24**	**42**	**30**	**41**	**161**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	7	6	9	3	5	30
2 - MOD	343	303	260	171	234	1311
3 - HIGH	79	73	76	76	60	364
Grand Total	**429**	**382**	**345**	**250**	**299**	**1705**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	1	2	4	2	3	12
2 - MOD	7	1	0	2	3	13
Grand Total	**8**	**3**	**4**	**4**	**6**	**25**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	12	7	17	21	32	89
2 - MOD	1	2	1	0	0	4
3 - HIGH	15	13	14	15	25	82
4 - MAX	0	0	1	0	0	1
Grand Total	**28**	**22**	**33**	**36**	**57**	**176**

GPZ-72

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	9	12	8	14	11	54
Grand Total	**9**	**12**	**8**	**14**	**11**	**54**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	21	25	19	32	37	134
2 - MOD	2	5	2	3	1	13
Grand Total	**23**	**30**	**21**	**35**	**38**	**147**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	12	8	2	7	6	35
2 - MOD	330	272	238	102	208	1150
3 - HIGH	46	47	58	39	43	233
Grand Total	**388**	**327**	**298**	**148**	**257**	**1418**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	0	2	2	1	1	6
2 - MOD	2	3	1	2	3	11
Grand Total	**2**	**5**	**3**	**3**	**4**	**17**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	19	14	22	10	34	99
2 - MOD	0	1	1	1	0	3
3 - HIGH	15	14	19	30	16	94
Grand Total	**34**	**29**	**42**	**41**	**50**	**196**

GPZ-73

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	12	19	12	17	18	78
Grand Total	**12**	**19**	**12**	**17**	**18**	**78**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	32	29	27	47	29	164
2 - MOD	2	1	0	1	6	10
Grand Total	**34**	**30**	**27**	**48**	**35**	**174**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	20	7	4	5	4	40
2 - MOD	522	438	393	204	257	1814
3 - HIGH	86	94	58	53	46	337
Grand Total	**628**	**539**	**455**	**262**	**307**	**2191**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	1	0	4	3	3	11
2 - MOD	10	6	0	4	1	21
Grand Total	**11**	**6**	**4**	**7**	**4**	**32**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	24	22	15	17	30	108
3 - HIGH	7	19	22	14	20	82
Grand Total	**31**	**41**	**37**	**31**	**50**	**190**

GPZ-74

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	26	17	20	27	16	106
Grand Total	**26**	**17**	**20**	**27**	**16**	**106**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	34	46	52	44	33	209
2 - MOD	4	4	3	2	5	18
Grand Total	**38**	**50**	**55**	**46**	**38**	**227**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	20	4	11	7	7	49
2 - MOD	683	519	498	279	381	2360
3 - HIGH	91	80	98	95	103	467
Grand Total	**794**	**603**	**607**	**381**	**491**	**2876**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	0	0	2	2	4	8
2 - MOD	3	4	3	5	5	20
Grand Total	**3**	**4**	**5**	**7**	**9**	**28**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	28	17	18	26	56	145
2 - MOD	0	0	1	1	2	4
3 - HIGH	20	18	39	32	30	139
4 - MAX	0	1	0	0	0	1
Grand Total	**48**	**36**	**58**	**59**	**88**	**289**

GPZ-75

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	16	14	13	18	15	76
Grand Total	**16**	**14**	**13**	**18**	**15**	**76**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	33	29	46	39	39	186
2 - MOD	1	3	0	1	0	5
Grand Total	**34**	**32**	**46**	**40**	**39**	**191**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	14	2	1	8	8	33
2 - MOD	471	318	288	172	208	1457
3 - HIGH	69	60	71	50	48	298
Grand Total	**554**	**380**	**360**	**230**	**264**	**1788**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	3	1	1	1	2	8
2 - MOD	4	4	4	3	4	19
Grand Total	**7**	**5**	**5**	**4**	**6**	**27**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	28	20	19	21	42	130
2 - MOD	1	1	1	0	1	4
3 - HIGH	15	11	17	16	17	76
Grand Total	**44**	**32**	**37**	**37**	**60**	**210**

GPZ-76

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	9	7	7	9	10	42
Grand Total	**9**	**7**	**7**	**9**	**10**	**42**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	14	13	15	18	21	81
2 - MOD	0	1	1	1	2	5
Grand Total	**14**	**14**	**16**	**19**	**23**	**86**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	6	0	0	1	3	10
2 - MOD	213	167	164	78	153	775
3 - HIGH	27	24	34	29	26	140
Grand Total	**246**	**191**	**198**	**108**	**182**	**925**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	3	1	0	1	0	5
2 - MOD	3	0	1	1	1	6
Grand Total	**6**	**1**	**1**	**2**	**1**	**11**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	15	8	13	12	26	74
2 - MOD	1	0	0	1	0	2
3 - HIGH	3	11	10	15	7	46
Grand Total	**19**	**19**	**23**	**28**	**33**	**122**

GPZ-77

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	7	12	5	9	11	44
Grand Total	**7**	**12**	**5**	**9**	**11**	**44**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	12	12	15	12	7	58
2 - MOD	0	0	2	0	2	4
Grand Total	**12**	**12**	**17**	**12**	**9**	**62**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	4	2	1	4	3	14
2 - MOD	167	157	146	86	117	673
3 - HIGH	28	36	29	36	22	151
Grand Total	**199**	**195**	**176**	**126**	**142**	**838**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	1	0	1	0	0	2
2 - MOD	0	2	3	2	2	9
Grand Total	**1**	**2**	**4**	**2**	**2**	**11**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	8	9	9	13	26	65
3 - HIGH	7	5	12	11	15	50
Grand Total	**15**	**14**	**21**	**24**	**41**	**115**

GPZ-78

Structure Fires	2019	2020	2021	2022	2023	Grand Total
3 - HIGH	2	1	8	2	4	17
Grand Total	**2**	**1**	**8**	**2**	**4**	**17**

Other Fires	2019	2020	2021	2022	2023	Grand Total
1 - LOW	6	8	2	16	12	44
2 - MOD	0	0	0	0	1	1
Grand Total	**6**	**8**	**2**	**16**	**13**	**45**

EMS	2019	2020	2021	2022	2023	Grand Total
1 - LOW	4	0	5	1	1	11
2 - MOD	99	60	65	61	56	341
3 - HIGH	15	17	12	18	9	71
Grand Total	**118**	**77**	**82**	**80**	**66**	**423**

Tech. Rescue	2019	2020	2021	2022	2023	Grand Total
1 - LOW	0	0	0	0	1	1
2 - MOD	1	0	1	0	1	3
Grand Total	**1**	**0**	**1**	**0**	**2**	**4**

Hazmat/Explosions	2019	2020	2021	2022	2023	Grand Total
1 - LOW	4	3	4	2	7	20
3 - HIGH	2	8	5	7	2	24
Grand Total	**6**	**11**	**9**	**9**	**9**	**44**

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