

# West Chicago Fire Protection District



## Community Risk Assessment

2026

# Contents

|                                                            |    |
|------------------------------------------------------------|----|
| Section 1 – Introduction .....                             | 3  |
| Section 2 – Demographic Profile .....                      | 3  |
| History .....                                              | 3  |
| Population .....                                           | 4  |
| Topography .....                                           | 7  |
| Infrastructure .....                                       | 8  |
| Climate .....                                              | 9  |
| Target Hazards and Occupancy Types .....                   | 9  |
| Section 2 – Resources and Service Areas .....              | 10 |
| Section 3 - Service Demand.....                            | 13 |
| Section 4 – Risk Assessment .....                          | 19 |
| Section 5 – Community Risk Reduction Recommendations ..... | 24 |
| Section 6 – Conclusion.....                                | 26 |

## Section 1 – Introduction

The following report is a compilation of information outlining the assessment of risks, vulnerabilities, and hazards within the jurisdiction of the West Chicago Fire Protection District (WEGOFPD), along with broad findings from the assessment. The assessment included a detailed review of a variety of data sources. The data sources are maintained and produced by entities such as the United States Federal government, City of West Chicago, Ducomm, Central DuPage Hospital, and the internal WEGOFPD database (Imagetrend) with data analytics (Continuum).

The assessment used historical data to identify trends associated with risks, vulnerabilities, and hazards within the community. The typical historical timeframe was 5 years, with a few further extended timeframes included from several of the sources.

The WEGOFPD provides service to manage and mitigate a wide range of hazards (a.k.a. “All Hazards”) within its jurisdiction. As such, the scope of this assessment includes areas related not only to fire and emergency medical services but also natural/manmade hazards. The industry standard for an assessment of this nature incorporates a review and reporting of community demographics, finances, climate, infrastructure, target hazard identification, and resources. The intent is to establish a baseline for comparison of risks, vulnerabilities, and hazards with service demand and resource capabilities. Service demand and resource capabilities are reviewed and reported using general response statistics.

The result of this assessment provides a high-level overview of community risk and WEGOFPD's capability to appropriately manage/mitigate it with several key recommendations for risk reduction. The scope of this report did not incorporate a granular review of deployment criteria, and it is not intended to be a Standards of Cover assessment or deployment assessment. A Standards of Cover Assessment, including the development of benchmarks, would be a logical next step to facilitate a WEGOFPD-focused performance assessment.

The outcome of this assessment is intended to reduce (or, ideally, eliminate) risk for our community members and WEGOFPD personnel. Risk reduction efforts help minimize losses, resulting in cost containment/savings and, most importantly, a safer community for all.

## Section 2 – Demographic Profile

### History

The West Chicago Fire Protection District was formed in 1896 and has served the community for over 125 years. It has evolved from a volunteer fire department to a modern, professional all-hazards agency. The West Chicago Fire Protection District started as a volunteer fire department dating back to May 1896. Fire Marshal Matthew Leonard was the town's first Fire Marshal. The first firehouse was town hall on Main St. that housed the wagons for the Hose Company & Hook and

Ladder Company No.1. Around the same time, the town established a municipal water system, purchased fire equipment, and appointed firefighters creating one of the best protected villages in the area.

In 1953, a new building was built at 128 W. McConnell St., which housed both the police and fire departments. This new building helped accommodate the need for fire protection. It included 4 bays compared to the 1 bay at the original firehouse. New apparatuses were also purchased to better protect the community.

In the late 1960's, the Volunteer Fire Company changed by referendum to a Fire Protection District. This change created a new taxing body, allowing the Fire District to collect taxes directly from the taxpayers, rather than as a component of the City of West Chicago. Ultimately, allowing the fire company to expand and increase the services provided to the village and surrounding rural areas.

By 1968, the newly formed Fire District had plans for 2 new firehouses. One on the South side of the railroad tracks at 509 Church St., and the other on the site of Washington Jr. High at the corner of Fremont St. and McConnell St., adjacent to the then-current city firehouse on McConnell. The school was razed, and the new headquarters was constructed. The firehouse stands today at 200 Fremont St and continues to serve as the headquarters of the Fire District. The firehouse at 509 Church St. was sold to the City of West Chicago for use by Public Works.

A second referendum was passed in the early 1970's, allowing the Fire District to form an ambulance district. This ambulance district provided Emergency Medical Services to residents, a service previously unavailable. This creation led to an immediate increase in service prior to and helped address the needs of the growing community. The Fire District hired 6 full-time members to staff the ambulance 24 hours a day. Quite a change from a true volunteer fire department. The full-time members were sent to the Chicago Fire Academy to become State of Illinois Emergency Medical Technicians. The Fire District was still protected by volunteer firefighters who responded day and night.

Over the next decade, the number of career members increased, allowing both a fire engine and an ambulance to be staffed 24 hours a day while still supplemented by volunteer members. In 1980, a firehouse was constructed on the property of DuPage Airport, increasing coverage for the North side of the district as well as Aircraft Rescue Firefighting (ARFF) protection to the DuPage Airport.

After the referendum passed, the District underwent a period of updating and expansion. In 2010, Fire Station 5 was constructed, in 2011, Station 7 was constructed, and in 2013, Station 8 (DuPage Airport) opened. In 2011, staffing was increased to staff Fire Station 7. In the same timeframe, Fire Station 6 was also updated.

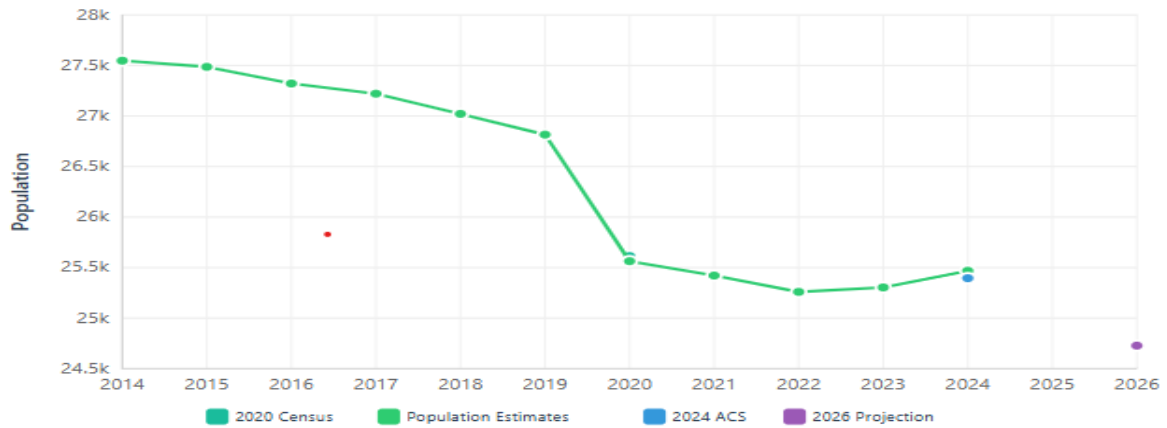
## Population

\*Data sources: (<https://www.census.gov/quickfacts/>),  
([https://data.census.gov/profile/West\\_Chicago\\_city\\_Illinois?g=160XX00US1780060#employment](https://data.census.gov/profile/West_Chicago_city_Illinois?g=160XX00US1780060#employment))

|                                 |                                                                                                                                                                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population:                     | Approximately 30,000 residents (*25,469 residents in the City of West Chicago)                                                                                                                                                                                          |
| Median Age                      | 36 years                                                                                                                                                                                                                                                                |
| People under 5 years of age:    | 5.5%                                                                                                                                                                                                                                                                    |
| People 65 years of age and over | 18%                                                                                                                                                                                                                                                                     |
| Hispanic or Latino ethnicity    | 47.8%                                                                                                                                                                                                                                                                   |
| Education                       | 78.8% of the population has a high school education.                                                                                                                                                                                                                    |
| Median Household Income:        | \$80,734, with 13% of the population below the poverty line                                                                                                                                                                                                             |
| Housing Units                   | 10,620 units – 76% single family detached – 85.5% built over 25 years ago, with 9.5% built over 87 years ago – Median home value: (2026) \$370,000 – 70.9% are owner-occupied. Multifamily apartments – 82 buildings – 96% of all available housing units are occupied. |

**Population Trend Graph (<https://www.illinois-demographics.com/west-chicago-demographics>)**

## West Chicago Population Trends



### Sources:

- United States Census Bureau. [P2 Hispanic or Latino, and Not Hispanic or Latino by Race](#). 2020 Census State Redistricting Data (Public Law 94-171) Summary File. August 2021.
- United States Census Bureau. [Annual Estimates of the Resident Population](#): April 1, 2020 to July 1, 2024. Population Division. May 2025.
- United States Census Bureau. [Annual Estimates of the Resident Population](#): April 1, 2010 to July 1, 2019. Population Division. May 2021.
- United States Census Bureau. [2024 American Community Survey 5-Year Estimates](#). January 2026.
- Cubit Planning. [2026 Population Projections](#). January 2026.

[Check out our FAQs](#) for more details.

According to the City of West Chicago Economic Development Plan 2021-2025 and the 2024 Comprehensive Annual Financial Report (CAFR), businesses in the community employ 16,000 workers. The top ten employers are contained in the following CAFR graphic:

| Employer                                   | 2024      |      |                                     |           |
|--------------------------------------------|-----------|------|-------------------------------------|-----------|
|                                            | Employees | Rank | Percentage of Total City Employment | Employees |
| The Jel Sert Co                            | 900       | 1    | 5.68%                               | 1,000     |
| West Chicago Elementary School District 33 | 760       | 2    | 4.80%                               | 585       |
| Ball Horticultural Company                 | 507       | 3    | 3.20%                               | 425       |
| Epsilon Data Management, LLC               | 450       | 4    | 2.84%                               |           |
| Amazon.com Services LLC                    | 341       | 5    | 2.15%                               |           |
| OSI Industries                             | 335       | 6    | 2.11%                               | 230       |
| FXI Inc.                                   | 320       | 7    | 2.02%                               |           |
| Mapei Corporation                          | 292       | 8    | 1.84%                               |           |
| Avient Colorants USA LLC                   | 280       | 9    | 1.77%                               |           |
| AJR Filtration                             | 278       | 10   | 1.75%                               |           |

The principal property taxpayers are in the following CAFR graphic:

| Taxpayer                     | 2024                   |      |                                                 | 2015                   |      |                                                 |
|------------------------------|------------------------|------|-------------------------------------------------|------------------------|------|-------------------------------------------------|
|                              | Taxable Assessed Value | Rank | Percentage of Total City Taxable Assessed Value | Taxable Assessed Value | Rank | Percentage of Total City Taxable Assessed Value |
| Discovery Drive Investors    | \$ 16,383,82           | 1    | 1.54%                                           |                        |      |                                                 |
| Discovery Dr Investors II    | 15,239,87              | 2    | 1.43%                                           |                        |      |                                                 |
| Gsi Family Investments Az    | 11,496,21              | 3    | 1.08%                                           |                        |      |                                                 |
| Stag Industrial Holdings LLC | 9,555,281              | 4    | 0.90%                                           |                        |      |                                                 |
| Alpha Z Chi Ind 5 LLC        | 7,727,027              | 5    | 0.73%                                           |                        |      |                                                 |
| Ds Containers Inc            | 7,320,249              | 6    | 0.69%                                           |                        |      |                                                 |
| 280 Westgate Drive Ltd       | 7,161,051              | 7    | 0.67%                                           |                        |      |                                                 |
| Ciof I II 1B02 LLC           | 6,460,830              | 8    | 0.61%                                           |                        |      |                                                 |
| Cicf II II 1B05 LLC          | 6,324,000              | 9    | 0.59%                                           |                        |      |                                                 |
| Ds Containers Inc            | 6,184,948              | 10   | 0.58%                                           |                        |      |                                                 |
| DuPage Airport Authority     |                        |      |                                                 | \$ 11,966,970          | 1    | 2.11%                                           |
| Blackhawk Center, LLC        |                        |      |                                                 | 8,186,810              | 2    | 1.44%                                           |
| Cobalt Industrial REIT II    |                        |      |                                                 | 7,665,890              | 3    | 1.35%                                           |
| Centerpoint Properties       |                        |      |                                                 | 4,013,940              | 4    | 0.71%                                           |
| Mapei Corp                   |                        |      |                                                 | 3,955,480              | 5    | 0.70%                                           |
| LaGrou Properties            |                        |      |                                                 | 3,901,490              | 6    | 0.69%                                           |
| Platinum Health Care         |                        |      |                                                 | 2,984,240              | 7    | 0.53%                                           |
| Prologis                     |                        |      |                                                 | 2,854,260              | 8    | 0.50%                                           |
| Menards, Inc.                |                        |      |                                                 | 2,740,460              | 9    | 0.48%                                           |
| St. Andrews Country Club     |                        |      |                                                 | 2,505,340              | 10   | 0.44%                                           |
| Total                        | <u>93,853,302</u>      |      | <u>8.82%</u>                                    | <u>50,774,880</u>      |      | <u>8.95%</u>                                    |

The overall total assessed value of properties in 2024, according to City of West Chicago data, was \$1.06 billion.

## Topography

The Fire District covers approximately 25 square miles of both the incorporated areas of the City of West Chicago, along with unincorporated areas in DuPage and Kane counties. The area's topography is generally flat, with 800 acres of open land (farm fields), forest lands, and prairies, including numerous interface areas with occupied structures.

Within the District service area, there are also 44 small to medium-sized bodies of water with depths up to 12 feet and approximately 4 miles of the western branch of the DuPage River, along with a long stretch of Kress Creek. Of the 44 bodies of water, 17 are adjacent to roadways.

Due to the river and bodies of water, the service area has topography that is prone to flooding, including areas designated by the Federal Emergency Management Agency (FEMA) as A and AE flood zones. The A and AE zones require mandatory flood insurance due to the hazards adjoining the property. According to the FEMA Flood Map (<https://msc.fema.gov/portal/search?AddressQuery=60185>), many of the flood areas are near Kress Creek and the DuPage River, with surrounding open land or marsh. However, a portion (as noted in the image below) bounded by Hawthorne Road (south), Northwest Avenue (north), Powis Road (west), and the Canadian National railroad (east) contains occupied industrial and warehouse buildings.



## Infrastructure

The Fire District provides service amongst an extensive infrastructure system that includes:

|                                          |                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| State Roadways                           | Route 59 (8 miles & 32,000 vehicles per day), Route 38 (4 miles – 25,000 vehicles per day), Route 64 (4.5 miles – 33,000 vehicles per day) – Average Speed limit 45mph                                                                                                                                                                                                                   |
| Arterial Roadways                        | 174 miles of roadway                                                                                                                                                                                                                                                                                                                                                                     |
| Rail Lines                               | <i>Canadian National</i> – 6 miles, <i>Union Pacific</i> – 4.5 miles, <i>Burlington Northern</i> - 2.5 miles. Rail line traffic averages approximately 60 commuter trains and 50 freight trains per day.                                                                                                                                                                                 |
| Airport                                  | DuPage Airport – 4 runways, 24-hour FAA air control tower, flight center, 32 hangars, 7500 ft runway to land up to Boeing 737's, fuel farm (60,000 gallons of Jet A, 20,000 gallons of AvGas, and 10,000 gallons of automobile gas), and an average of 364 daily aircraft operations.                                                                                                    |
| Bicycle Paths                            | Illinois Prairie Path, Great Western Trail, and DuPage River Trail                                                                                                                                                                                                                                                                                                                       |
| Underground Pipeline                     | Multiple transmission lines for Hazardous Liquid and Natural Gas – Each approximately 5 miles in length.                                                                                                                                                                                                                                                                                 |
| Water Distribution & Non-Hydranted Areas | 147 miles of water main, 2 elevated tanks with a total capacity of 750,000 gallons, and 2 above-ground storage tanks with a total capacity of 1,000,000 gallons.<br>Approx 2000 single-family dwellings in areas that are without fire hydrants, with building sizes ranging from 1500 to 9700 square feet. 15 commercial/industrial structures are also located in non-hydranted areas. |

|                       |                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------|
| Waste Water Treatment | West Chicago Treatment Plant – 9,000,000-gallon capacity                                                   |
| Electric              | 5 miles of high voltage transmission lines with 1 substation and extensive service distribution equipment. |

## Climate

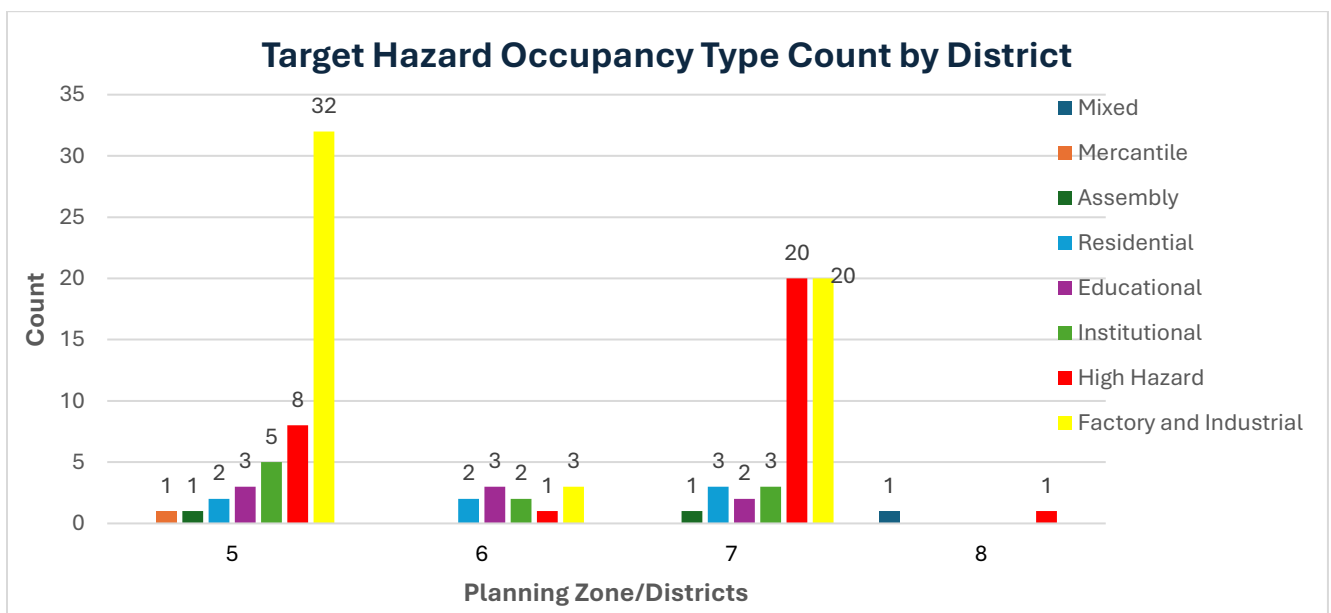
The area served by the West Chicago Fire Protection District experiences four seasons, with the potential for temperature extremes in both winter and summer. Temperatures typically range from 16°F in the winter to 84°F in the summer. Average annual snowfall is 28 inches, and average annual rainfall is 36 inches. The area experiences up to 30 days of severe weather per year.

## Target Hazards and Occupancy Types

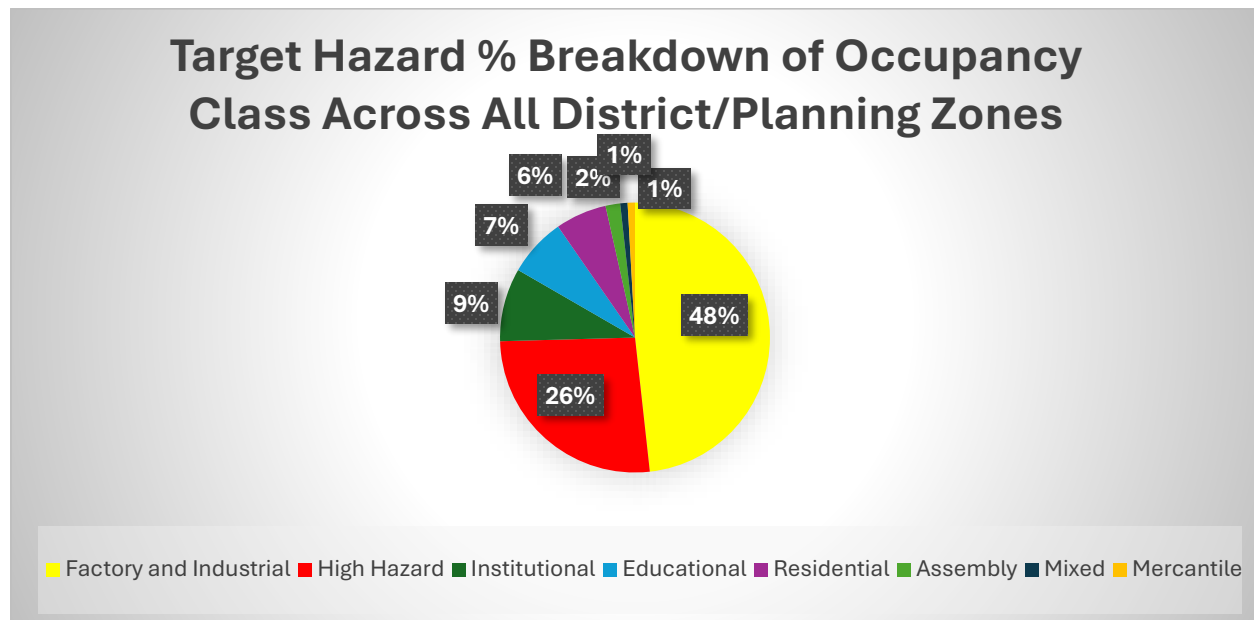
The Fire District protects a wide variety of occupancy types with occupants and building construction/features that present hazards ranging from low to high. Occupancies that present “complex” hazards are termed Target Hazards. Target Hazards were identified by analyzing occupancies based on their impact on the community and the District’s protection capabilities, using vulnerability factors such as life safety, building construction features, the presence of hazardous materials, and potential loss of value to the community.

The assessment further categorizes the occupancies by Occupancy Class and Planning Zone (District). The assessment identified one-hundred fourteen (114) “Target Hazard” occupancies in the jurisdiction. The detailed list of occupancies contains information considered confidential (Illinois FOIA-exempt) because it identifies occupancy vulnerabilities. The following graphs provide a snapshot of Target Hazard breakdowns in the West Chicago Fire Protection District:

*The graph below shows the quantity of Target Hazards categorized by Occupancy Class within each Planning Zone/District.*



The graph below shows the quantity of Target Hazards categorized by Occupancy Class within each Planning Zone/District.



While most properties within the response area are residential, the District protects over 2100 non-residential properties, including 8 schools, 10 institutional occupancies, 44 places of assembly, and 96 large manufacturing/warehouse buildings. Among the 96 manufacturing/warehouse buildings are numerous businesses that use/produce hazardous materials.

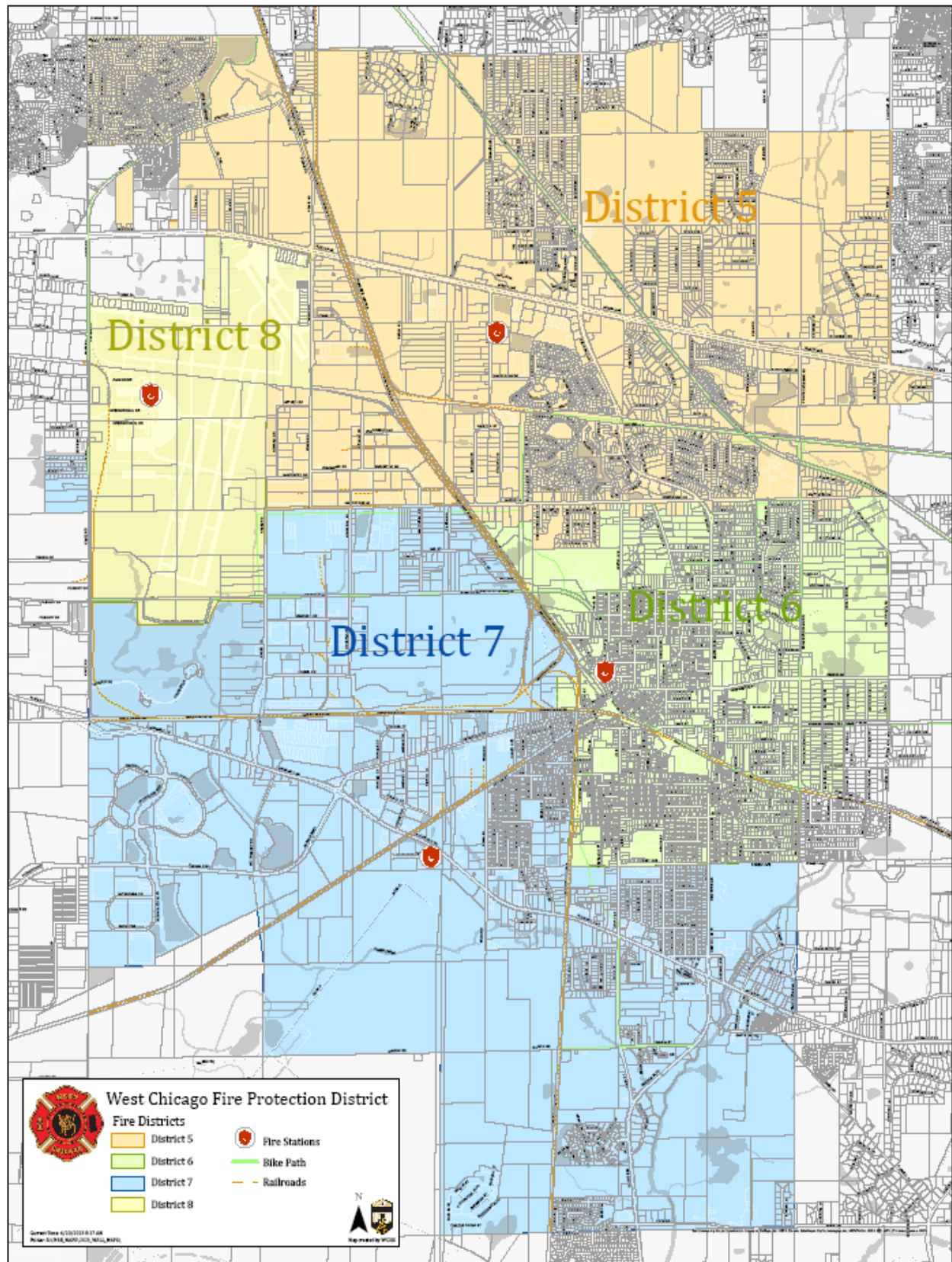
## Section 2 – Resources and Service Areas

To provide comprehensive, “All Hazards” protection to the District, our personnel provide the following services:

- Emergency Medical (Advanced Life Support) Services
- Fire Suppression Services
- Aircraft Rescue and Firefighting Services
- Vehicle/Machinery Entrapment Rescue Services
- Hazardous Materials Mitigation Services
- Trench Collapse Rescue Services
- Rope Rescue (High Angle/Low Angle) Services
- Water/Ice Rescue (Surface/Underwater) Services
- Confined Space Rescue Services
- Search with K9 and Drone Services
- Disaster Management/Mitigation Services
- General Incident Response Services (Water leaks, Activated Alarms, Lockouts, Elevator Rescues)
- Fire Investigation Origin and Cause Program
- Inspection Program (Community Risk Reduction)
- Education/Community Engagement Program (Community Risk Reduction)

The Fire District is segmented into four (4) districts or planning zones (PZ). The coverage of the Districts/PZs is outlined on the map shown on page 12.

*This area  
intentionally left  
blank.*



The services provided within the Districts/PZs are delivered from four (4) fire stations and a training facility located at:

Fire Station #5 (District/PZ 5) – 1651 Atlantic – Primary coverage of North Area of District.  
Fire Station #6 (District/PZ 6) – 200 Fremont Street – Primary coverage of Central Area of District.  
Fire Station #7 (District/PZ 7) – 1080 Commerce – Primary coverage of South Area of District.  
Fire Station #8 – (District/PZ 8) 2705 International (DuPage Airport) – Sole coverage of Airport Property.  
Kress Road Training Center – 320 Kress Road

The facilities house a fleet of 3 engines (2 frontline and 1 reserve), 1 tower ladder, 3 ambulances (2 front line and 1 reserve), 1 water tender, 1 brush vehicle, 1 heavy rescue squad, 1 ATV with utility trailer, multiple drones, 1 boat, and various command/support vehicles.

District services are delivered using a combined total of fifty-eight (58) full-time and contractual personnel. The infrastructure to support the delivery of services includes:

Personnel  
Fleet  
Facilities  
Training  
Equipment  
Communications  
Administration (*Span of control*)  
Legal  
Information Technology  
Logistics (Supply and Maintenance)  
Operations Funding/Expenditures  
Capital Funding/Expenditures

The Fire District organizational structure is: Fire Chief, (1) Deputy Fire Chief, (1) Fire Marshal, (1) Administrative Assistant, (1) Fire Inspector, (3) Battalion Chiefs, (9) Lieutenants, (29) Firefighters, (12) Paramedics, and (1) canine.

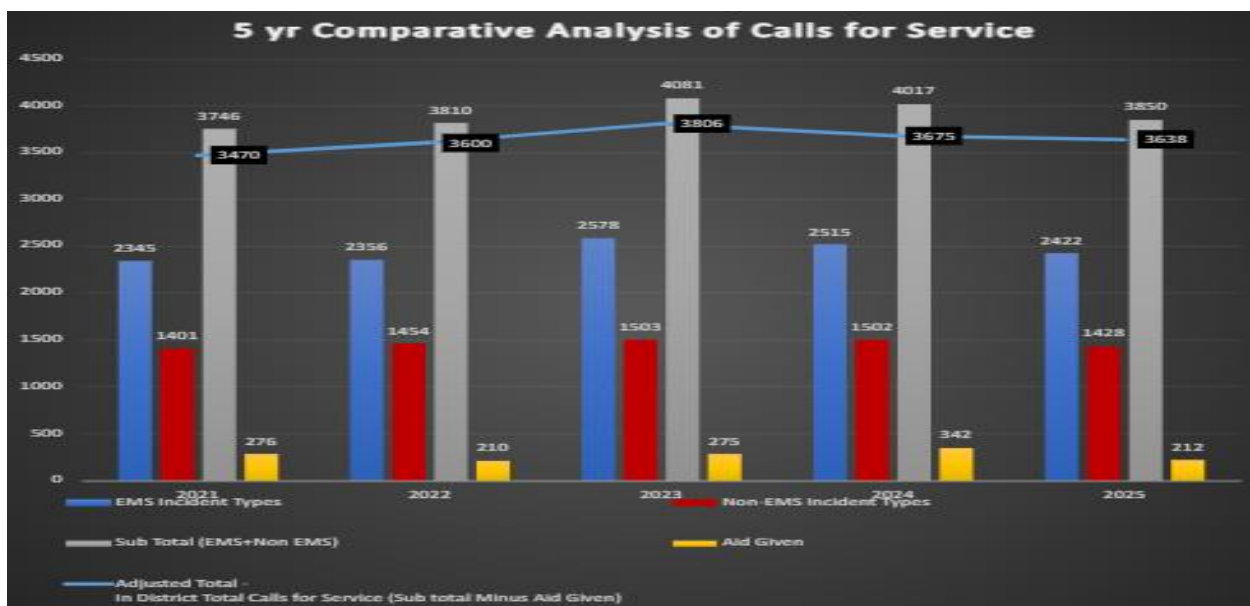
## Section 3 - Service Demand

Based on a 5-year timeline (2021-2025), District personnel respond to an average of approximately 3,900 calls for service annually, with approximately 63% of the calls being emergency medical-related incidents. The following comparative table/graph provides an overview of service demand:

## 5 year - Comparative Analysis of Calls for Service

| Year | EMS Incident Types | Non-EMS Incident Types | Sub Total (EMS+Non EMS) | Aid Given | Adjusted Total - In District Total Calls for Service (Sub total Minus Aid Given) |
|------|--------------------|------------------------|-------------------------|-----------|----------------------------------------------------------------------------------|
| 2021 | 2345               | 1401                   | 3746                    | 276       | 3470                                                                             |
| 2022 | 2356               | 1454                   | 3810                    | 210       | 3600                                                                             |
| 2023 | 2578               | 1503                   | 4081                    | 275       | 3806                                                                             |
| 2024 | 2515               | 1502                   | 4017                    | 342       | 3675                                                                             |
| 2025 | 2422               | 1428                   | 3850                    | 212       | 3638                                                                             |

*\*Note: Non EMS Column includes all other incidents types such as structure fires, rescues, etc.*



The Fire District responds to approximately 18 structure fires within District boundaries per year, based on a 5-year statistical assessment. Further review of the structure fire data identified the most common “determined” causes of structure fires as:

| Top 5 Causes of Structure Fires – 5 yr statistics                              |
|--------------------------------------------------------------------------------|
| 1. Cooking fires – 37 incidents                                                |
| 2. Improper use of Open Flames (i.e. candles) – 13 incidents                   |
| 3. Electrical-related (i.e. improper wiring, downed power lines) – 9 incidents |
| 4. Industrial Machinery malfunction – 5 incidents                              |
| 5. Smoking material-related – 4 incidents                                      |

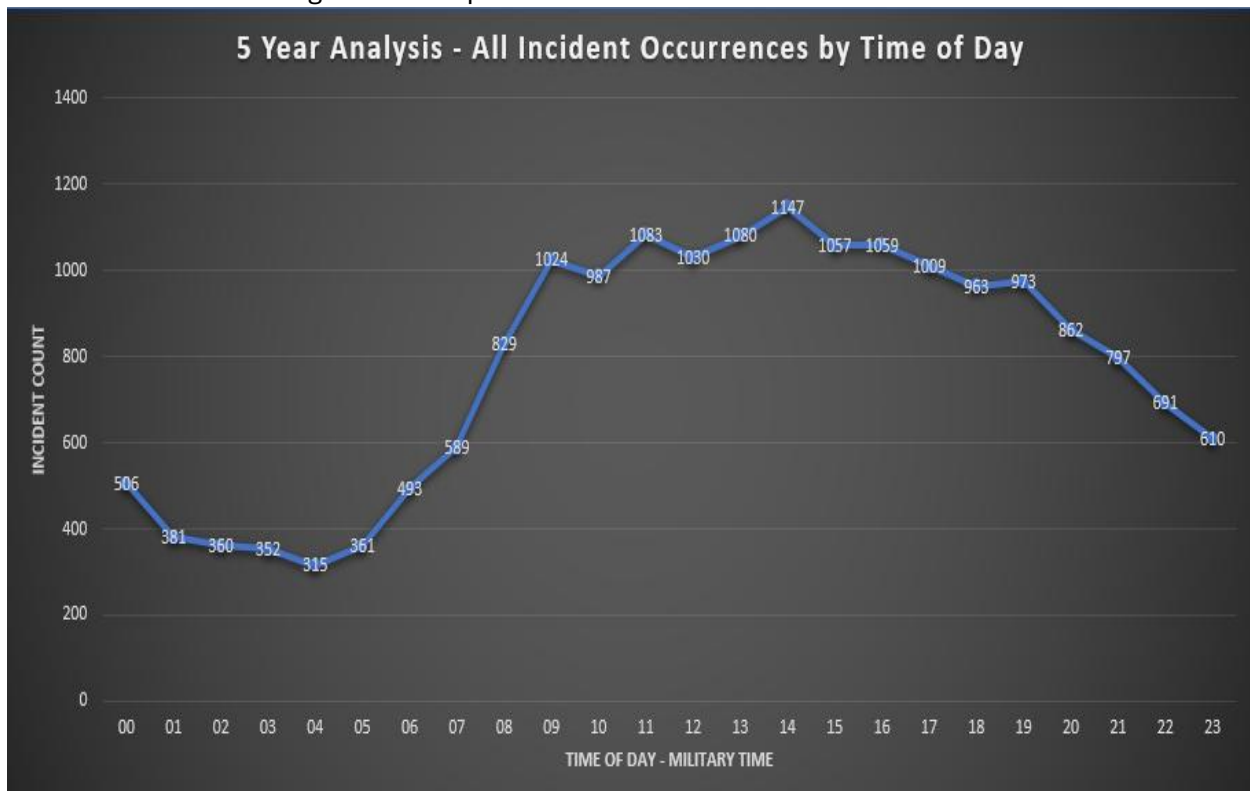
*\*Note: The assessment identified 15 incidents with undetermined causes, 1 incident resulting in a fatality, and 2 intentionally set fires.*

The data review also included an assessment of all incident types over a 5-year timeframe. Of the 19,504 incidents, the following are the Top Ten incidents creating service demand:

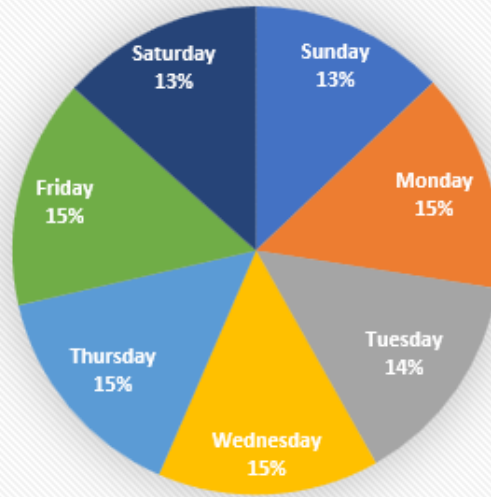
|        |     |
|--------|-----|
| 63.00% | EMS |
|--------|-----|

|        |                                                                                            |
|--------|--------------------------------------------------------------------------------------------|
| 14.45% | False Alarms ( <i>*The District has over 2000 buildings with fire protection systems</i> ) |
| 5.48%  | Dispatched Cancelled Enroute                                                               |
| 4.29%  | Motor Vehicle Accidents                                                                    |
| 4.23%  | Invalid Assists                                                                            |
| 1.09%  | Station Coverage                                                                           |
| 0.97%  | Gas Leaks                                                                                  |
| 0.94%  | Carbon Monoxide                                                                            |
| 0.81%  | Power Line Down                                                                            |
| 0.76%  | Smoke Scare                                                                                |

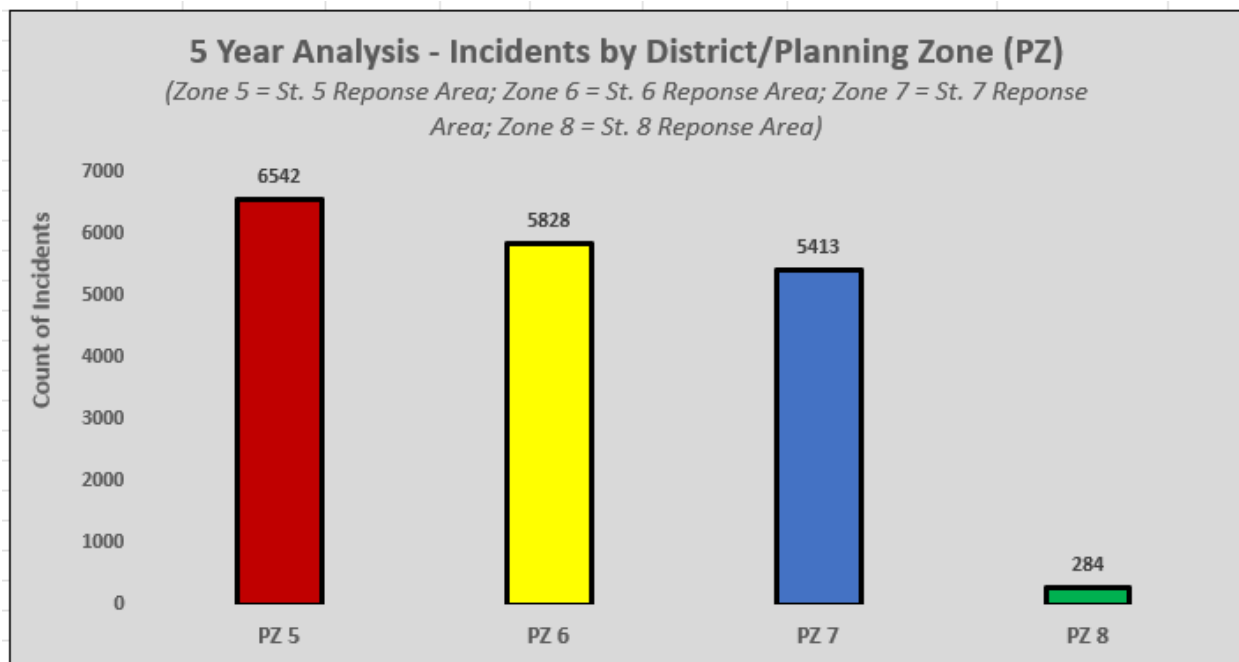
To identify peak demand timeframes, the assessment included a review of time-of-day and day-of-week data. The following two charts provide an overview of service demand based on timeframes:



### 5 Year Analysis - % of Incidents by Day of Week



The assessment also included a review of service demand per District/Planning Zone (PZ). The following graph provides the breakdown by PZ:



A review of the overall response time was included in the assessment. Response time is a risk factor, given that successful management and mitigation of hazards depend on the shortest possible response time. WEGOFPD's average response time (Dispatch time to Arrival time) for all incidents **within** the Fire District's response area (*excluding mutual aid/aid given*) is **5 minutes and 13 seconds**. By comparison, the National Fire Protection Association aspirational standard response time for municipal fire departments is 6 minutes for emergency medical service (EMS)

incidents and 6 minutes, 20 seconds for non-EMS responses for 90% of its calls. The national benchmarks are based upon the cardiac chain of survival and the stages of fire development during a structure fire. As stated in the Introduction, this assessment did not include a focused review of fractile data elements. A Standards of Cover study would incorporate a thorough review of this area.

In addition to response time, the assessment also accounted for the general availability of resources. A review of Calls in Progress provides an overview of the frequency of simultaneous requests for service, resulting in greater resource commitment and increased risk due to extended response times for the next available resource. The “Calls in Progress” column is broken down by the count/percentage of simultaneous calls, starting at “1,” which denotes a single call for service. As noted in the following table, over the 5-year timeframe, WEGOFPD averaged 2.2% of incidents with “3 Calls in Progress” (i.e., 3 simultaneous incidents), which can indicate that most, if not all, available WEGOFPD resources are committed and mutual aid is needed. Note that “Occurrences” in this table is not a measurement of call volume but rather calls occurring over time frames, thus the additional reference to the hours.

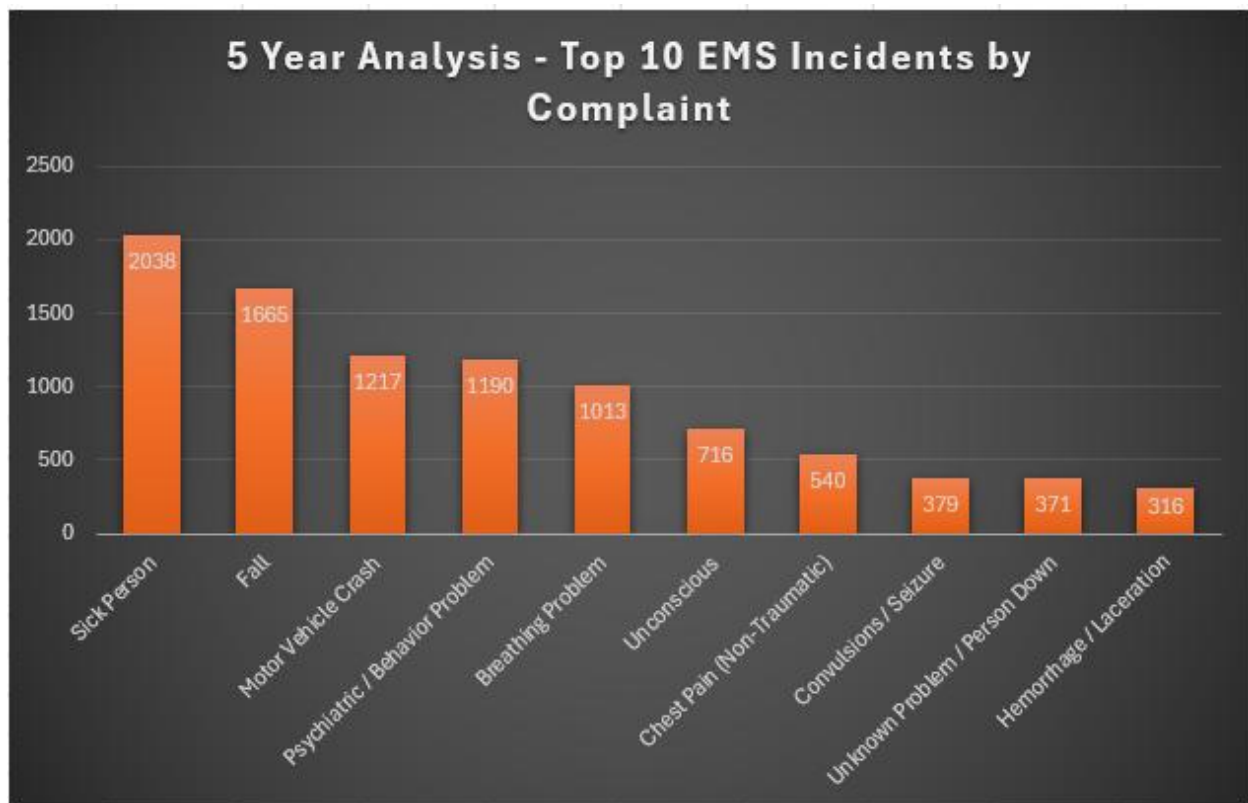
Calls in Progress ≡

Jan 01, 2021 12:00 AM to Dec 31, 2025 11:59 PM

| Calls in Progress   | Occurrences   | % of Occurrences | Hours         | % of Hours     |
|---------------------|---------------|------------------|---------------|----------------|
| 0 Calls In Progress | 14,284        | 36.58%           | 33,824        | 77.18%         |
| 1 Call In Progress  | 18,619        | 47.68%           | 8,547         | 19.50%         |
| 2 Calls In Progress | 5,110         | 13.08%           | 1,284         | 2.93%          |
| 3 Calls In Progress | 887           | 2.27%            | 153           | 0.35%          |
| 4 Calls In Progress | 128           | 0.33%            | 13            | 0.03%          |
| 5 Calls In Progress | 18            | 0.05%            | 1             | 0.00%          |
| 6 Calls In Progress | 4             | 0.01%            | 0             | 0.00%          |
| 7 Calls In Progress | 2             | 0.01%            | 0             | 0.00%          |
| 8 Calls In Progress | 1             | 0.00%            | 0             | 0.00%          |
| <b>Totals</b>       | <b>39,053</b> | <b>100.00%</b>   | <b>43,824</b> | <b>100.00%</b> |

Since emergency medical services (EMS) incidents account for 63% of the services WEGOFPD provides, they also represent a significant portion of the risk WEGOFPD assumes. The assessment included a review of data associated with this specific service delivery area.

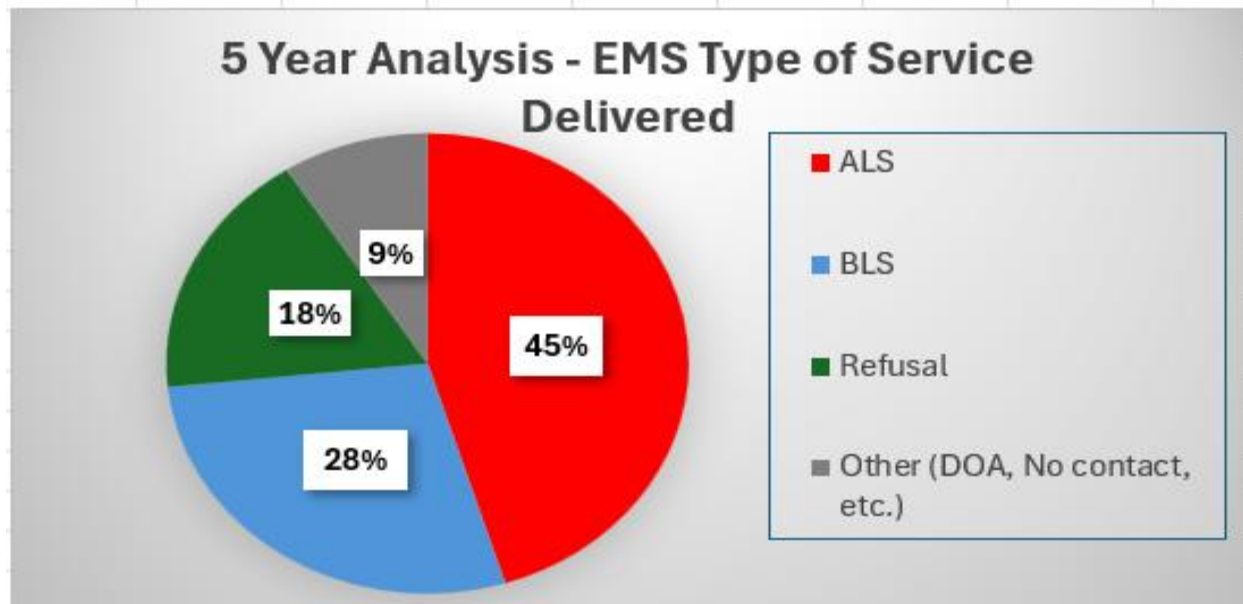
The following graph identifies the “Top Ten EMS complaints” (\*Note: Complaints = EMS Nature of Incident) over the 5-year period:



Additionally, the following table identifies the “Top 10” locations where EMS incidents occurred within the 5-year period (*\*Note: Exact addresses were redacted in recognition of HIPPA/PHI*):

| 5 Year Analysis - Top 10 Locations for EMS Incidents |                                      |                    |
|------------------------------------------------------|--------------------------------------|--------------------|
| Location                                             | Occupancy/Location Type              | Count of Incidents |
| 200 block W NORTH AV, West Chicago, IL, 60185        | Institutional Occupancy              | 113                |
| 300 block SPENCER ST, West Chicago, IL, 60185        | Business Occupancy (Law Enforcement) | 118                |
| 600 block PARKSIDE AV, West Chicago, IL, 60185       | Single Family Occupancy              | 100                |
| 300 block DAYTON AV, West Chicago, IL, 60185         | Single Family Occupancy              | 27                 |
| 900 block Joliet St, West Chicago, IL, 60185         | Institutional Occupancy              | 83                 |
| 200 block E HAZEL ST, West Chicago, IL, 60185        | Educational Occupancy                | 81                 |
| 1900 block Franciscan Way, West Chicago, IL, 60185   | Institutional Occupancy              | 27                 |
| 300 block JOLIET ST, West Chicago, IL, 60185         | Educational Occupancy                | 59                 |
| 500 block MAIN ST, West Chicago, IL, 60185           | Business/Assembly Occupancy          | 54                 |
| 1000 block RIDGEWOOD DR, West Chicago, IL, 60185     | Single Family Occupancy              | 12                 |

EMS service delivery types are generally categorized by Advanced Life Support (ALS), Basic Life Support (BLS), Refusal of Services, and Other. The Advanced Life Support service category has the highest level of complexity in response, treatment, and patient outcomes, thus presenting the greatest risk. The following graph provides an overview of the % demand by EMS service delivery type to identify areas of greater EMS risk related to service delivery:



Of all the EMS “Complaint” categories, cardiac arrest ranks at the highest level from a risk perspective due to its’ low frequency/high risk nature. The goal in a cardiac arrest is to achieve “Return of Spontaneous Circulation” (ROSC) or resuscitation of the patient. The process for attempting to achieve ROSC involves numerous, crucial steps (i.e. Early 9-1-1 notification, CPR/AED use, rapid response, and rapid initiation of highly technical emergency medical interventions) in an attempt to save a life. The following data snapshot provides a broad view of WEGOFPD’s capabilities to achieve ROSC for patients experiencing cardiac arrest based on 81 cardiac arrest incidents during the 5-year period:

| 5 yr Overview |       |
|---------------|-------|
| Total         | 81    |
| ROSC          | 30    |
|               | 37.0% |

**National ROSC Average (CDH - Biospatial Data): 28.9%**

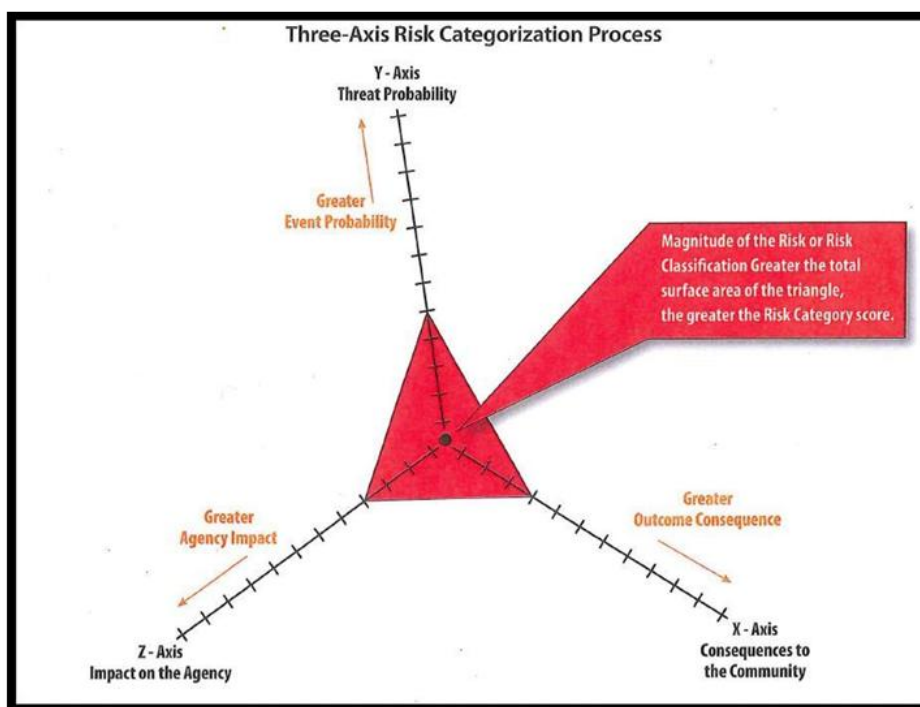
## Section 4 – Risk Assessment

For this assessment, the WEGOFPD used a risk assessment methodology that is built on data-based calculations using the functionality of Microsoft Excel while also attempting to provide a format that is understandable. To complete this process, the WEGOFPD administration used the methods described below and the gathered data contained in this assessment to determine risk classification for each National Fire Incident Reporting System (NFRIS) incident type category.

Incident type and infrastructure type were used to assess risk, although they are measured and examined differently. Risks were categorized by incident type using the Three-Axis Risk Categorization Process shown in the figure below, which was adopted from the Quality Improvement for the Fire and Emergency Services (QIFES) manual published by the Center for Public Safety Excellence (CPSE). The three areas used to determine risk classification are

probability, consequence, and impact. These three areas each receive a numerical score, which is then entered into a formula to produce a risk score. For ease of comparison, these scores are grouped into low-, moderate-, or high-risk classifications.

The Three-Axis Risk model employs a score for each area, which, when entered into an equation based on a modified Heron's Formula, yields a risk score. By entering the risk data into this formula, "an objective mathematical calculation of the triangle surface area creates a risk category score based upon pre-qualified jurisdictional parameters set for risk category ranges" (CPSE, pp. 267). Probability scores are derived from past department responses. Consequence scores are derived from the effect/severity on individuals and community partners. Impact scores are derived from the effect on department resources. The following graphics provide further explanation:



**Figure 9: Three Axis Risk Categorization Model**

| Probability                                  |
|----------------------------------------------|
| 2 = Rarely/Annually/Quarterly                |
| 4 = Monthly                                  |
| 6 = Weekly                                   |
| 8 = Daily                                    |
| Consequence                                  |
| 2 = Individual/Confined to object            |
| 4 = Multiple people/Confined to room, floor  |
| 6 = Multiple people/Confined to building     |
| 8 = City/Community/Beyond building of origin |
| Impact                                       |
| 2 = 1 apparatus                              |
| 4 = 2-3 apparatus                            |
| 6 = 4-5 apparatus                            |
| 8 = 6 or more apparatus                      |

**Table 4: Risk Assessment Category Scores**

| Risk Score | Risk Classification |
|------------|---------------------|
| 0-20       | Low                 |
| 21-30      | Moderate            |
| 30 +       | High                |

**Table 5: Risk Assessment Score and Classification**

The tables below list the scores used for each area of risk and associated classification specific to the WEGOFPD:

| NFIRS CODE | NFIRS TYPE                                 | Probability | Consequence | Impact | Risk Score  | Risk Classification |
|------------|--------------------------------------------|-------------|-------------|--------|-------------|---------------------|
| 111        | Building Fire                              | 4           | 4           | 8      | 33.9411255  | High                |
|            | Confined to object of origin               | 4           | 2           | 8      | 25.92296279 | High                |
|            | Confined to room of origin                 | 4           | 2           | 8      | 25.92296279 | High                |
|            | Confined to floor of origin                | 2           | 4           | 8      | 25.92296279 | High                |
|            | Confined to building of origin             | 2           | 6           | 8      | 36.76955262 | High                |
|            | Beyond building of origin                  | 2           | 8           | 8      | 48          | High                |
| 112        | Fire in structure other than in a building | 2           | 4           | 8      | 25.92296279 | High                |
| 113        | Cooking fire, confined to container        | 4           | 2           | 6      | 19.79898987 | Moderate            |
| 131        | Passenger vehicle fire                     | 2           | 2           | 4      | 8.485281374 | Low                 |

| NFIRS CODE | NFIRS TYPE                                       | Probability | Consequence | Impact | Risk Score  | Risk Classification |
|------------|--------------------------------------------------|-------------|-------------|--------|-------------|---------------------|
| 132        | Road freight or transportation vehicle fire      | 2           | 2           | 6      | 12.32882801 | Low                 |
| 135        | Aircraft fire                                    | 2           | 2           | 6      | 12.32882801 | Low                 |
| 141        | Forest, woods or wildland fire                   | 2           | 2           | 4      | 8.485281374 | Low                 |
| 142        | Brush or brush-and-grass mixture fire            | 2           | 2           | 4      | 8.485281374 | Low                 |
| 151        | Outside rubbish, trash or waste fire             | 2           | 2           | 2      | 4.898979486 | Low                 |
| 154        | Dumpster or other outside trash receptacle       | 2           | 2           | 2      | 4.898979486 | Low                 |
| 162        | Outside equipment fire                           | 2           | 2           | 4      | 8.485281374 | Low                 |
| 311        | Medical assistant, assist EMS crew               | 8           | 2           | 2      | 16.24807681 | Moderate            |
| 321        | EMS call, excluding vehicle accident with injury | 8           | 2           | 2      | 16.24807681 | Moderate            |
| 322        | Motor Vehicle accident with injuries             | 6           | 4           | 4      | 26.53299832 | High                |
| 323        | Motor Vehicle/Pedestrian accident (MV/Ped)       | 2           | 4           | 4      | 13.85640646 | Low                 |
| 324        | Motor Vehicle accident with no injuries          | 6           | 4           | 4      | 26.53299832 | High                |
| 340        | Search for lost person, other                    | 2           | 2           | 2      | 4.898979486 | Low                 |
| 341        | Search for person on land                        | 2           | 2           | 2      | 4.898979486 | Low                 |
| 342        | Search for person in water                       | 2           | 2           | 6      | 12.32882801 | Low                 |
| 343        | Search for person underground                    | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 350        | Extrication, rescue, other                       | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 351        | Extrication of victim(s) from building/structure | 2           | 4           | 8      | 25.92296279 | High                |
| 352        | Extrication of victim(s) from vehicle            | 2           | 4           | 8      | 25.92296279 | High                |

| NFIRS CODE | NFIRS TYPE                                 | Probability | Consequence | Impact | Risk Score  | Risk Classification |
|------------|--------------------------------------------|-------------|-------------|--------|-------------|---------------------|
| 353        | Removal of victim(s) from stalled elevator | 4           | 2           | 2      | 8.485281374 | Low                 |
| 354        | Trench/below-grade rescue                  | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 355        | Confined space rescue                      | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 356        | High-angle rescue                          | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 357        | Extrication of victim(s) from machinery    | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 361        | Swimming/recreational water areas rescue   | 2           | 2           | 2      | 4.898979486 | Low                 |
| 362        | Ice Rescue                                 | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 363        | Swift water rescue                         | 2           | 2           | 8      | 16.24807681 | Moderate            |
| 411        | Gasoline or other flammable liquid spill   | 2           | 2           | 2      | 4.898979486 | Low                 |
| 412        | Gas leak (natural gas or LPG)              | 4           | 6           | 4      | 26.53299832 | High                |
| 413        | Oil or other combustible liquid spill      | 2           | 2           | 2      | 4.898979486 | Low                 |
| 422        | Chemical spill or leak                     | 2           | 4           | 4      | 13.85640646 | Low                 |
| 424        | Carbon monoxide incident                   | 4           | 6           | 2      | 19.79898987 | Moderate            |
| 430        | Radioactive Condition, other               | 2           | 8           | 8      | 48          | High                |
| 443        | Breakdown of light ballast                 | 2           | 2           | 2      | 4.898979486 | Low                 |
| 451        | Biological hazard, confirmed or suspected  | 2           | 6           | 8      | 36.76955262 | High                |
| 700        | False alarm or false call, other           | 8           | 6           | 4      | 44.18144407 | High                |
| 710        | Malicious, mischievous false call, other   | 4           | 6           | 4      | 26.53299832 | High                |
| 730        | System malfunction, other                  | 6           | 6           | 4      | 34.98571137 | High                |

| NFIRS CODE | NFIRS TYPE                                        | Probability | Consequence | Impact | Risk Score  | Risk Classification |
|------------|---------------------------------------------------|-------------|-------------|--------|-------------|---------------------|
| 740        | Unintentional transmission of alarm, other        | 6           | 6           | 4      | 34.98571137 | High                |
| 741        | Sprinkler activation, no fire-unintentional       | 4           | 6           | 4      | 26.53299832 | High                |
| 742        | Extinguishing system activation                   | 2           | 4           | 4      | 13.85640646 | Low                 |
| 743        | Smoke detector activation, no fire, unintentional | 8           | 4           | 4      | 33.9411255  | High                |
| 744        | Detector activation, no fire, unintentional       | 8           | 4           | 4      | 33.9411255  | High                |
| 745        | Alarm system activation, no fire unintentional    | 8           | 4           | 4      | 33.9411255  | High                |
| 746        | Carbon monoxide detector activation, no CO        | 4           | 6           | 2      | 19.79898987 | Moderate            |
| 751        | Biological hazard, malicious false report         | 2           | 6           | 8      | 36.76955262 | High                |
| 800        | Severe weather or natural disaster, other         | 2           | 8           | 8      | 48          | High                |

The risk classifications listed above provide insight into the overall risk profile for the WEGOFPD. The identified risk classes can be used to ensure that the WEGOFPD resources, capabilities, and response adequately align with each incident type.

## Section 5 – Community Risk Reduction Recommendations

A review of the compiled data and associated assessment supports the development of recommendations to help manage risk for both the community and the WEGOFPD. The recommendations and associated rationale are listed as follows:

- **RECOMMENDATION – PUBLIC INFO/EDUCATION:** Further enhance public information and education efforts, in a bilingual format, to include an emphasis on identified, higher risk-related topics such as: Fall Prevention, Flood Safety, Safe Cooking Practices, and CPR Chain of Survival. **RATIONALE:** The data assessment identified multiple, “All Hazard” related vulnerabilities (via the “Top 10” tables, Topography info, etc.) that could be directly addressed with increased info/education in an attempt to reduce the associated risks to the community and the WEGOFPD. Bilingual formatting will help expand the reach to the approximate 48% of our community members who are Hispanic.

- **RECOMMENDATION – CPR TRAINING:** Complete the implementation of regularly scheduled year-long community-based, bilingual CPR training. **RATIONALE:** The ROSC data identified an opportunity for continued improvement in this low-frequency/high-risk area, which could be positively impacted by training more community members in CPR. Bilingual formatting will help expand the reach to the approximate 48% of our community members who are Hispanic.
- **RECOMMENDATION – OPERATIONS PERMIT PROGRAM:** Implement the final phase of the annual operations permit program for the tracking of hazardous materials/high-piled storage within our target hazard facilities. **RATIONALE:** The assessment identified 114 target hazard occupancies, of which approximately 65% were classified as Industrial or High Hazard, and 85 of those occupancies contained hazardous materials and/or high-piled storage. Additionally, many of the identified occupancies are included in the “Top 10 Employers” list in the City of West Chicago and are major contributors to property assessed value and tax revenue. An interruption or loss of business at these facilities, resulting from a catastrophic incident, will affect the entire community. An annual monitoring (permit) program will help maintain high levels of code compliance and track hazardous materials/high-piled storage activity, thereby better managing associated risks.
- **RECOMMENDATION – FALSE ALARM REDUCTION CAMPAIGN:** Enhance the current false alarm program to include an annual communication to the business community on false alarm reduction practices. **RATIONALE:** False alarms rank #2 in the “Top Ten Incident Type” list, and WEGOFPD has an aggressive program to ensure fire alarm systems are maintained and quickly repaired as needed. However, adding an annual bilingual communication step will help educate the business community about the importance of reducing false alarms, which helps prevent complacency and increased risk exposure related to responding to these types of incidents. Bilingual formatting will help expand the reach to the approximate 48% of our community members who are Hispanic.
- **RECOMMENDATION – CAPABILITY/RESPONSE EVALUATION:** Perform an internal review of WEGOFPD operations based upon the Risk Assessment findings. Outcomes may include policy revisions, changes to responses, and modifications to capabilities and equipment. **RATIONALE:** The risk classification process categorized incident types as high, moderate, or low risk. The data identified numerous high-risk areas, such as the provision of ALS services and the frequency of high-risk incidents. An internal review could result in operational modifications that reduce or better manage the associated risk.
- **RECOMMENDATION – EMERGENCY MANAGEMENT:** Increase WEGOFPD’s involvement in the City of West Chicago emergency management program to play a more active role in emergency management planning and the development of emergency management resources such as a bilingual mass notification system. **RATIONALE:** The assessment identified extensive data on Target Hazard, Climate, Topography, Infrastructure, and Demographics, revealing a variety of vulnerabilities related to emergency management. Vulnerability examples include a high volume of hazardous materials activity in the community within fixed facilities (Target Hazards), as well as rail, pipelines, and roadways. The high level of hazardous materials activities increases the probability of an incident requiring response and broader emergency management. The demographics and topography reveal a high degree of integration between residential occupancies and target

hazards. Seasonal extremes in the midwestern climate also increase the potential for natural disasters. Delivering emergency management services for these man-made and natural disasters is more challenging because of the need for bilingual communication. Planning, education, and resources are critical to effectively managing/mitigating this risk.

## Section 6 – Conclusion

The WEGOFPD Community Risk Assessment was created to support decision-making and risk management for both the community and the organization. The Assessment not only resulted in the Community Risk Reduction Recommendations, but it also identified a variety of key data points worth highlighting:

- The population in the City of West Chicago had trended downward in 2019 and then plateaued at the lower level since that time.
- The number of housing units has remained constant without a remarkable addition of residential development. Future, large residential developments are not currently anticipated.
- Service demand has generally remained flat over the past 5 years. Requests for service are equally distributed between the Districts/Planning Zones and by day of the week.
- Peak service demand typically occurs between the time frame 0800 hrs. and 2100 hrs.
- Of the over 19,000 incidents responded to by the WEGOFPD in the five-year period, there were 90 structure-related fires within the WEGOFPD response area.
- Of the 2160 non-single-family occupancies protected by the WEGOFPD, 114 are identified as Target Hazards. It is forecasted that there will be a slight increase in Target Hazard occupancies in the coming years due to active industrial development.
- The topography and infrastructure protected by the WEGOFPD offer unique challenges not typically presented to similar communities. Rail volume (50 freight trains per day) and high roadway traffic, including truck traffic, account for large volumes of freight and hazardous materials movement. Additionally, the DuPage Airport activity, with its 364 daily aircraft operations and large volumes of fuel handling, adds to the challenges. WEGOFPD also protects more structures in areas without close access to fire hydrants (a.k.a. non-watered areas) than other similarly sized Fire Districts in our area. Couple the non-watered challenge with the fact that many of the same areas are located within WEGOFPD's extensive wildland interface areas.

In closing, to retain the effectiveness of the Community Risk Assessment process for future decision-making, the Assessment findings should be monitored annually for adjustments and then fully updated after the next 5-year data cycle to account for trends.