

# Fire and EMS Standards of Cover

Wylie Fire-Rescue Department  
Wylie, Texas

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# Center for Public Safety Management

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the International City/County Management Association*

- Strategic and Public Safety Master Planning
- Technical Analysis for Police, Fire, EMS, and 911 Centers
- Public Safety Executive Recruitment
- Fire and EMS Team with Hundreds of Years of Experience
  - Practitioners
  - Middle Managers
  - Senior Administrators
- Conducted over 500 Studies in 46 States and Canada

# CPSM Methodology

- Data Analysis
- Stakeholder Interviews (On-Site and Zoom)
- Document Review
- Operational/Administrative Observations
- Deployment Analysis

# Standards of Cover -Key Concepts-



**Develop an Integrated Response Management Plan**



**Builds a Nexus Between Community Risk and the Department's Response Force**



**Goal is to Ensure a Safe and Effective Response Force**

Fire Suppression

Emergency Medical Services (EMS)

Specialty Response Incidents

# Standards of Cover

## -Key Components-

### Comprehensive Community Risk Analysis

- Community Demographics
- Community Growth/Future Development
- Hazard Identification
- Building Risks/Hazards

### Utilizes National Benchmarking

- ISO
- NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments
- Center for Public Safety Excellence, Quality Improvement for the Fire and Emergency Services, 10<sup>th</sup> Edition

# Standards of Cover

## -Key Components-

### Risk Categorization/Assessment

- Assists with Deployment Analysis
- Quantifies Risk Facing Department
- Once Defined, FD can Analyze Current Deployment Model
- Staffing, Equipment, Training, and Location(s)

### Baseline Assessment and GIS Analysis

- Numerous Data Sets Collected-Baseline Assessment
  - Census Data, FD Performance Metrics, ISO Report
  - Annual Budgets, Staffing/Deployment
  - Station Locations
  - Fire and EMS Demand

## Standards of Cover

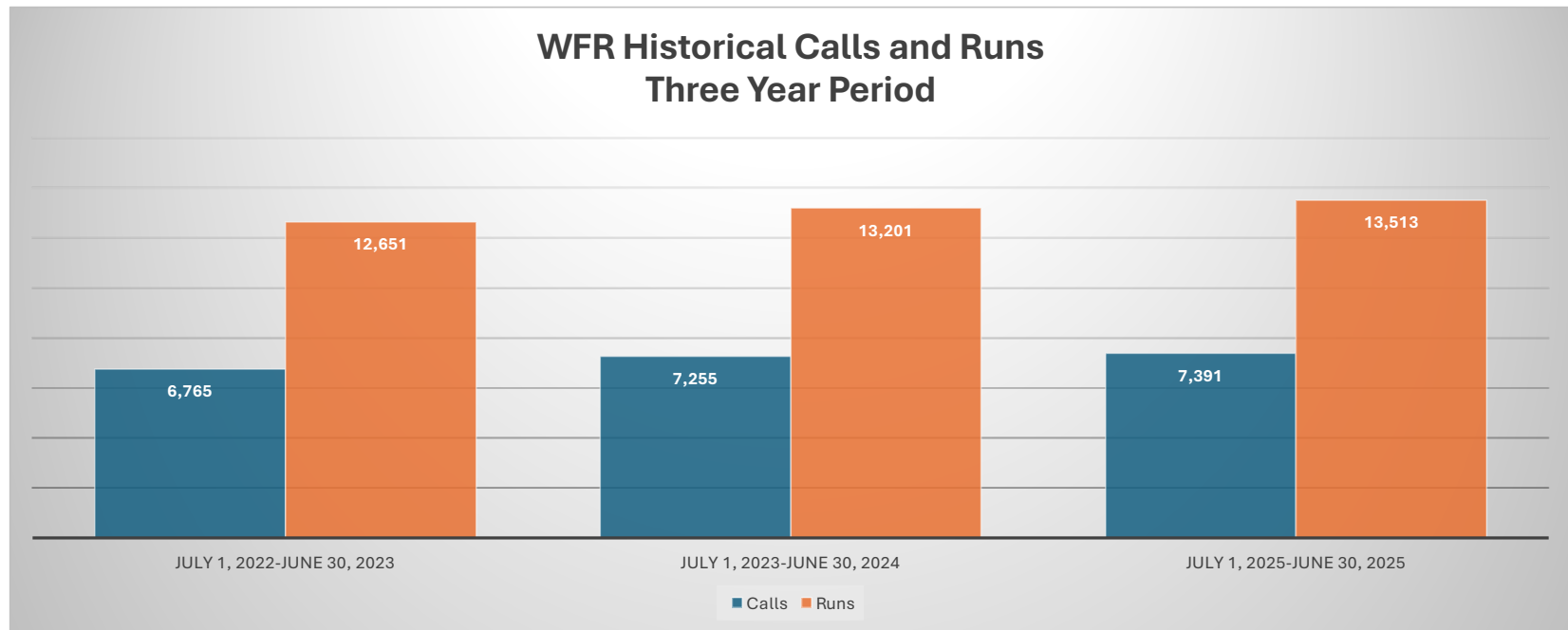
-Key Components-

## Response Time Performance

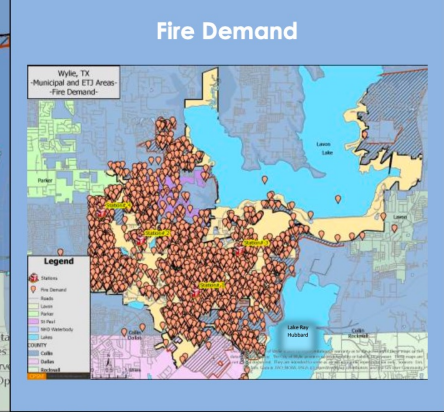
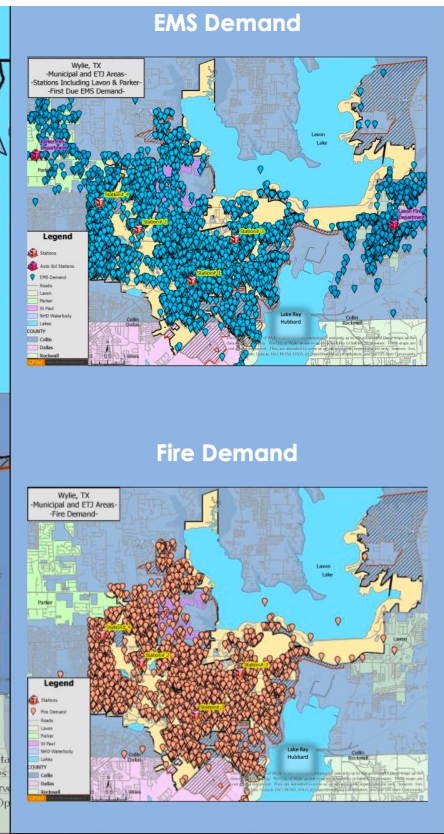
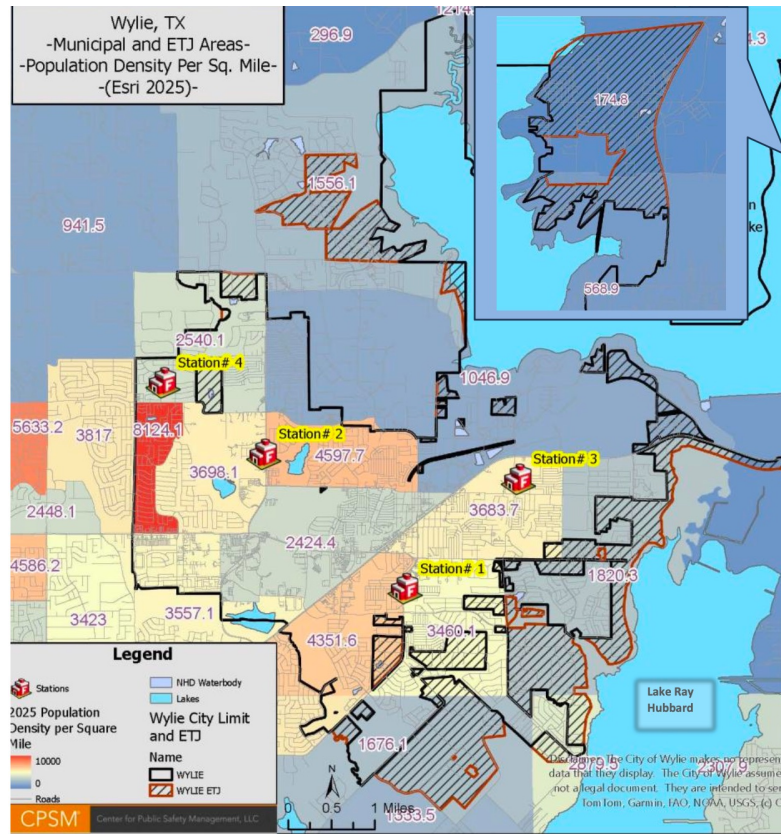
- Response Time
  - Dispatch Time
  - Turnout Time
  - Travel Time
- Average
- 90<sup>th</sup> Percentile

# Fire and Life Safety Risk

*Incident Demand, Demographics, Building Composition, Service Delivery Capacity*



# Demand Analysis



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# Service Demand

- July 2024 to June 2025- 7,391 calls
  - 20 calls and 37 runs per day
  - 66% were EMS (4,851)
  - 27% were Fire related (2009)
    - 2% were structure fire responses (35)
  - 3% were canceled prior to arrival (209)
  - 4% were mutual aid to other localities (322)

# Key Findings & Evaluation -Department Overview-

Full Career, all hazards emergency response

Oversees Public Safety Communications (911)

Operate from 4 stations

- Total WFR EMS service area- 51.9 square miles
- Total WFR Fire service area- 37.57 square miles

Deploys 4 frontline Quint apparatus, 3 ALS transport units, 1 ALS Squad, several technical rescue, adjunct units

Daily staffing minimum is 25 operational personnel

# Key Findings & Evaluation -Effective Response Force-

Critical Tasks	Personnel
Incident Command	1
Continuous Water Supply	1
Fire Attack- 2 Handlines	4
Hydrant Hook Up-Force Entry-Utilities	2
Primary Search	2
Ground Ladders and Vent	2
Aerial Operator	1
IRIC	4
Total Personnel	16 or 17

Apparatus	Personnel
WFR Battalion Chief	1
WFR Quint	4
WFR Quint	4
WFR Quint	4
WFR Medic	2
WFR Total	15

Working Fire Dispatch will add 3 engine companies (Quints), 1 squad, 3 command staff, 1 safety officer.  
Additional 16 responders

# Key Findings & Evaluation -Response Times-

## Response Time Performance (90<sup>th</sup> Percentile)

Response Time Component	NFPA Standard	WFR Performance
Dispatch Time	≤ 64 seconds ≤ 106 seconds 95%	1.1 minutes (66 sec)
Turnout Time	≤ 80 seconds for fire ≤ 60 seconds for EMS	96 seconds for fire 72 seconds for EMS
Travel Time (Fire)	≤ 240 seconds fire suppression incident	366 seconds for fire
Travel Time (EMS)	≤ 240 seconds first arriving engine with AED or higher	348 seconds for engine with AED or higher

# Recommendations -Response Times & ERF-

Adopt	Adopt a 240 second travel time benchmark for central core areas of each district (+/- 2 miles travel distance)
Adopt	Adopt a 360 second travel time for fire and EMS in the more distant areas of each district
Adopt	Adopt a benchmark for turnout time of less than or equal to 80 seconds for fire and special operations and less than or equal to 60 seconds for EMS responses
Adopt	Adopt a benchmark for ERF within 480 seconds in the central core areas of each district <ul style="list-style-type: none"><li>• Assembling the first alarm on scene 90 percent of the time for low and medium hazards</li></ul>

# Key Findings & Evaluation -ISO Resource Distribution-

- Engine Company 1.5-mile coverage benchmark
  - Core areas of the city are covered (most fire demand)
  - Outlying areas with fire demand not covered
    - South of Stations 1 and 3
    - Northeast of Stations 2 and 4
    - Southwest of Station 2
  
- Aerial Apparatus Requirements 2.5-mile Coverage Benchmark
  - Core areas of the city are covered (most fire demand)
  - Outlying areas with fire demand not covered
    - South of Station 1
    - Northeast of Station 2 and 4

# Recommendation(s) -ISO-

01

Goal is to strengthen areas of deployment analysis and company

02

Conduct regular deployment and coverage analyses

03

Gradually evaluate opportunities to increase daily staffing

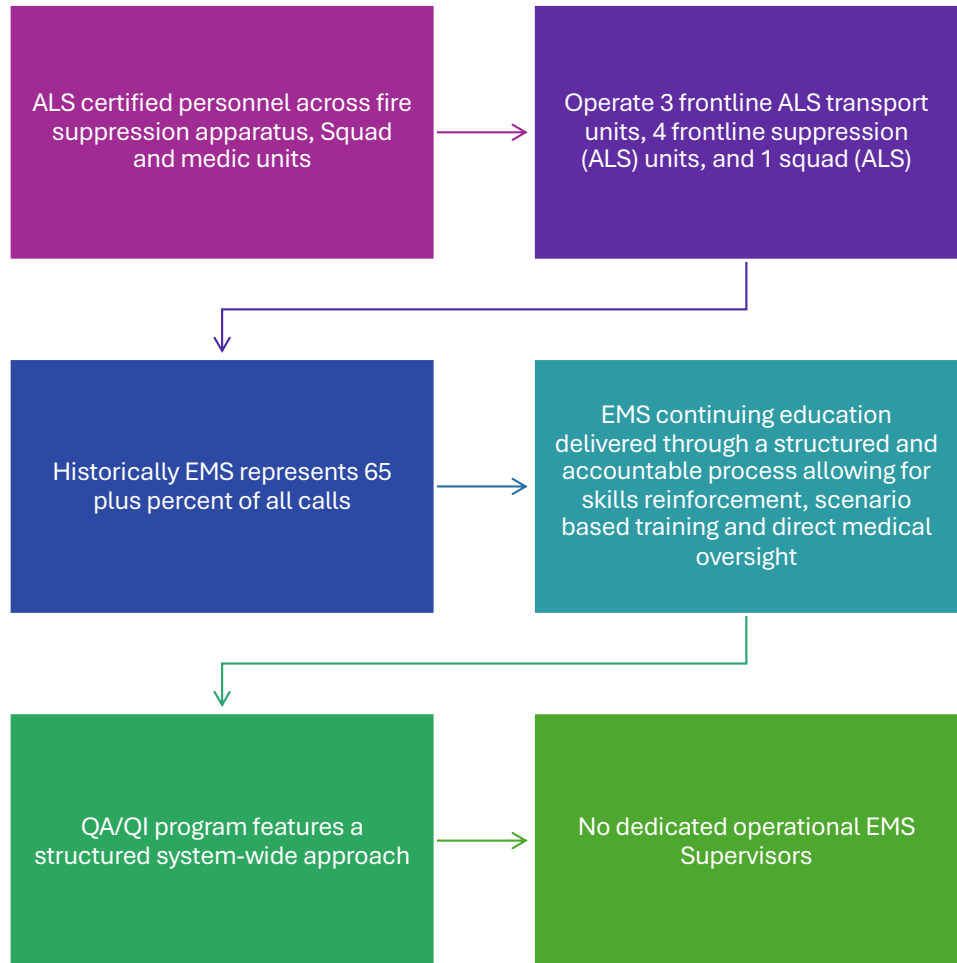
04

Continue to develop and strengthen mutual and automatic aide agreements

05

Establish internal processes to review ISO related performance

# Key Findings and Evaluation -EMS-



# Recommendations

## -EMS-

- Continue to leverage real-time analytics linking QA/QI to continuing education
- Formalizing models such as community paramedicine and pediatric readiness
- Create the EMS Supervisor position for each shift
  - EMS accounts for over 65% of system response

# Key Findings and Evaluation -Emergency Communications-



Receives and dispatches for law enforcement, fire and EMS



Based on workload assessment, the center is busy



Staffing is 4 max when fully staffed (1 Supervisor 3 Telecommunicators)



Staffing may decrease to 2 personnel



Each telecommunicator responsible for a broad range of functions  
Call-taking, radio, data management, admin requests, CAD, delivery of pre-arrival instructions, etc.

# Recommendations

## -Emergency Communications-

- Establish a process to evaluate Public Safety Communications workload metrics
- Consider increasing minimum staffing levels to 3, with a supervisor consistently assigned to the floor
- Consider implementing a targeted surge staffing such as adding 1 FTE 0900-2100 M-F (2FTEs total)

# Performance Objectives

## ➤ SOC Analysis

- Defines clear, data-driven performance expectations for deployment/delivery of services
- Establishes measurable objectives
  - Turnout time, travel time, total response time
  - Aligned with nationally recognized benchmarks (NFPA/ISO)
- Provides an objective basis for department evaluation
  - Connecting deployment to community risk, call demand and service expectations

## ➤ System Performance Evaluation

- Compliance methodology: percentile-based response analysis, temporal/geographic workload, EFR evaluation, and UHU metrics
- Achievement of benchmarks, system consistency, dependability and resilience

# Performance Objectives

Foundational Element of an Effective Standards of Cover

Aligns Fire and EMS Resources with Community Risk & Service Expectations

Measurable Benchmarks

- Response Times
- Reliability
- Staffing
- Effective Response Force

Data Driven Framework for Evaluating System Performance and Accountability

# Call Processing Goals

- Collaborate with Public Safety Communications Center to Ensure Compliance with NFPA 1225, 2022 Edition
  - 911 Calls Answered within 15 Seconds, 90 Percent of the Time
  - 911 Calls Answered within 20 Seconds, 99 Percent of the Time
- Compliance with NFPA 1710, 2022 Edition, Call Processing Time
  - 64 Seconds, 90 Percent of the Time

# Travel Time Goals

- Adopt a 240 Second Travel Time Benchmark for Central Core Areas of each Station District (+/- 2 Miles Travel Distance)
- 360 Second Travel Time at the 90<sup>th</sup> Percentile for calls
  - Low and Medium Hazard Structure Fires
  - More Distant Areas of Each District
  - First Arriving Unit for EMS
  - First Arriving Fire Apparatus for Structure Fires

# Travel Time Goals

- Assembling the ERF within 480 Seconds in the Central Areas of Each Station District
- Within 600 Seconds in the more Outlying Areas
- Assembling the First Alarm Assignment on Scene 90 percent of the time for low and medium hazard incidents

# Medic Unit Hour Utilization

- Maintain a UHU of  $\leq .35$  over a 24-Hour Period for Each Medic Unit
  - Deployed Minutes per Day/Total Minutes Per Day
- Implement Peak Time Medic Unit(s)
  - Exceeds .30 for 90 Days
  - Overlapping District Calls Increase
- Peak Time Medic Unit(s) Conversion to 24-hour/Day

# Staffing

Goal:  
Strengthen  
ERF  
Deployment

Maintain Staffing of 4 on all Quint Units

Focused Review of High/Special Risk Response

- Updating First Alarm Assignments
- Pre-Determined Dispatch Triggers

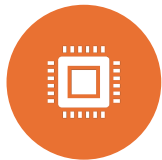
Continued Planning for Station 5

- Quint (4 Personnel)
- Medic (2 Personnel)

# Community Risk Reduction

- Annual Meet NFPA 1730, Standard on Organization and Deployment of Fire Prevention, Inspection, and Code Enforcement, Plan Review, Investigation, and Public Education Operations, 2019 Edition
  - Goal is 90 Percent Completion
    - High Hazard- Annually
    - Moderate hazards- Biennially
    - Low Hazards- Triennially
    - Critical Infrastructure- As Assigned by AHJ
- Expand FMO to Keep Pace with Growth and Demand
  - Inspections, Plan Review, Pub Ed, etc.
- Develop Plan Review and Inspection Turnaround Benchmarks

# ISO- Public Protection Classification



Maintain/Improve staffing, apparatus, training and station distribution



Maintain/Enhance station locations that support 1.5-mile engine and 2.5-mile ladder travel distance coverage



Deliver/Document ISO-creditable training hours annually



Complete required commercial and multi-family inspections



Ensure fire protection capabilities keep pace with community growth

# Emergency Medical Services

Sustain

Sustain System-Wide QA/QI program

Sustain

Sustain CE program addressing minimum regulatory requirements but expand training to remain at the forefront of evolving EMS patient care

Evaluate

Continuously evaluate EMS transport unit hour utilization, hospital turnaround times, and peak demand system stress

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*Thank You*

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