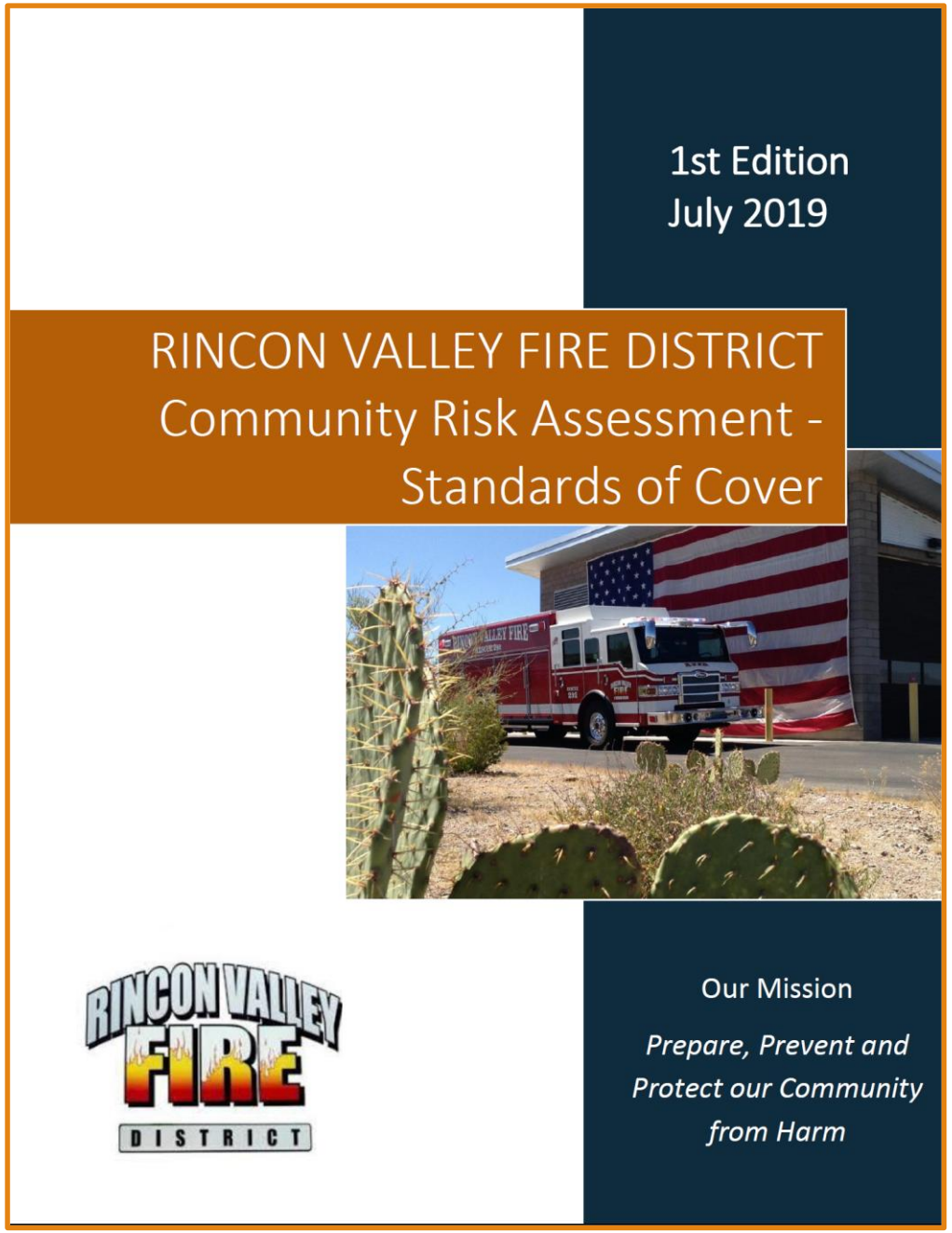
Community Risk Assessment- Standards of Cover Presentation

RVFD Governing Fire Board Meeting

July 18, 2019



What is a CRA-SOC and why is it relevant to RVFD

Community Risk Assessment = The evaluation of fire and non-fire hazards and risk, taking into account all pertinent facts that increase or decrease risk in order to define a standards of cover.

Standards of Cover = Written policies and procedures that establish the distribution and concentration of fixed and mobile resources of a department/district.

CRA-SOC Value to the Community

- Provides an overview of the risk in the community and the associated planning and preparedness efforts of RVFD to mitigate the risk.
- Ensures emergency services being delivered are reflective of the community's expectations.

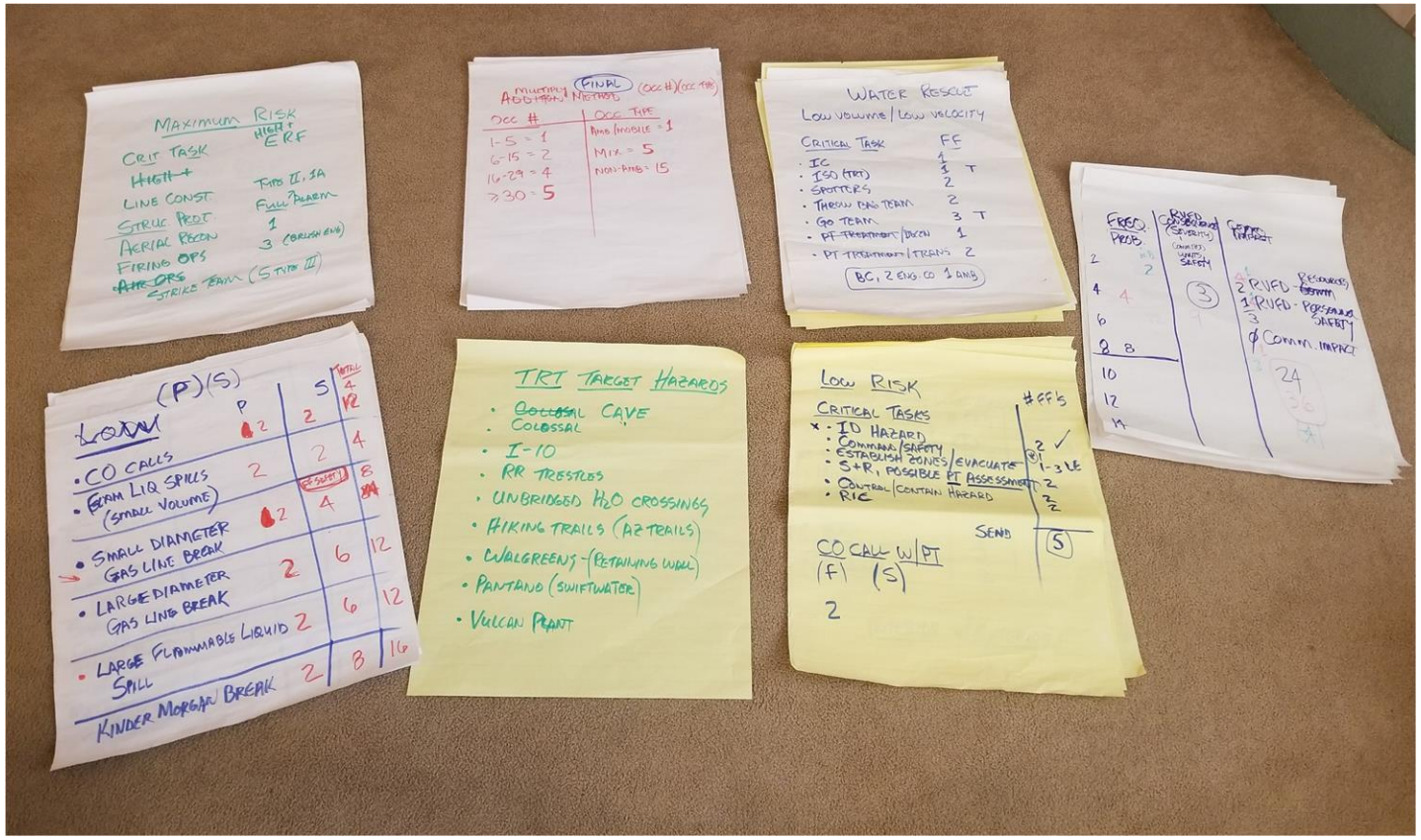
CRA-SOC

Assess the community fire and non-fire risk	Measure current service program performance	Set performance goals	Forecast future workloads	Plan future new unit staffing and station locations	Provide a platform for maintaining and improving current service delivery	Provide elements for the strategic planning process

CRA-SOC Audience

CRA-SOC Development Effort

- Approximately 700 hours of consultant and staff time
- 20 RVFD members involved in the process



Section 1 – Area Characteristics

- Legal Basis for Existence and Description of Governance Model
- District History
- Organizational Overview
- Major Milestones
- Funding Sources
- Climate
- Geographical/Topographical Description and Features
- Geology
- Water Resources
- **Population and Demographics**
- **Area Economics**
- **Current and Future Development**
- General Description of Occupancies
- Service Type Infrastructure
- Transportation Infrastructure

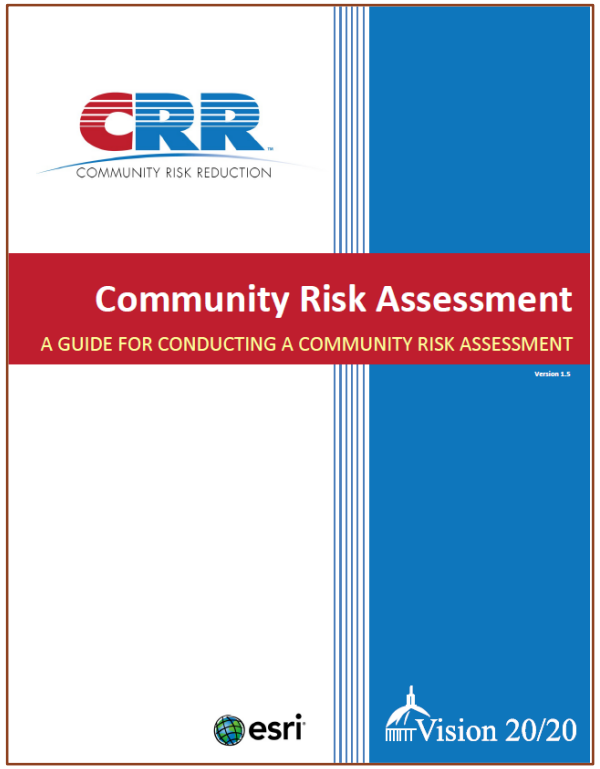
Section 2 – Description of RVFD Programs and Services

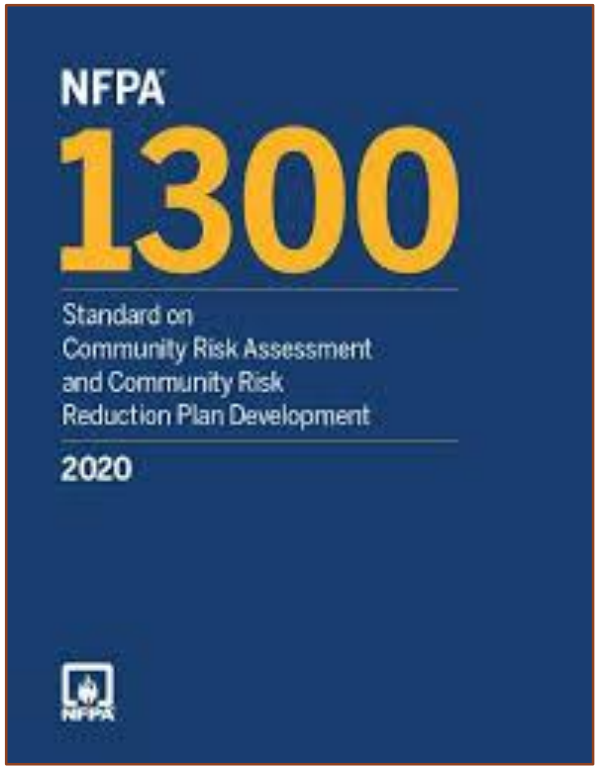
- Community Risk Reduction Services
- Non-Emergency Services Provided by Shift Personnel
- Fire Suppression
- EMS
- Special Operations (Hazmat and Technical Rescue)
- Wildland Fire

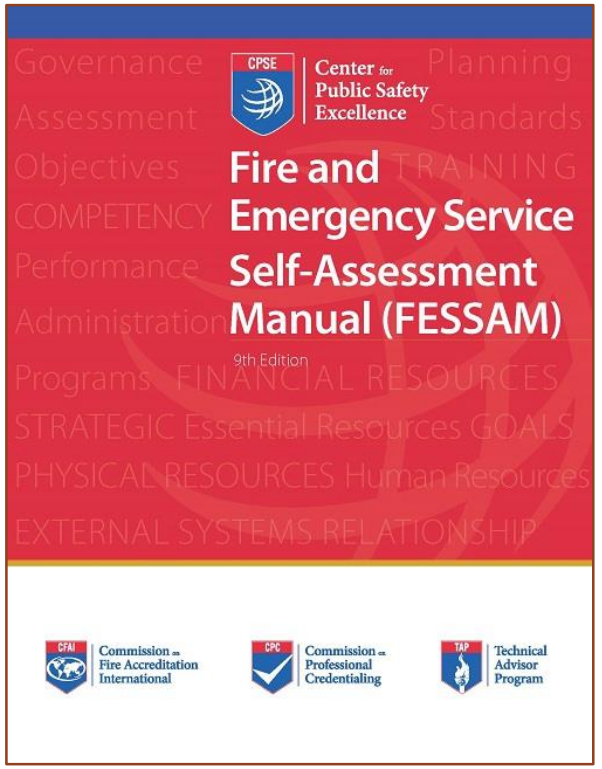
Section 3 – All Hazard Community Risk Assessment

The first step in the risk management process is acknowledge the reality of risk. Denial is a common tactic that substitutes deliberate ignorance for thoughtful planning.

Charles Tremper
American author on law and risk management







Methodology Approach

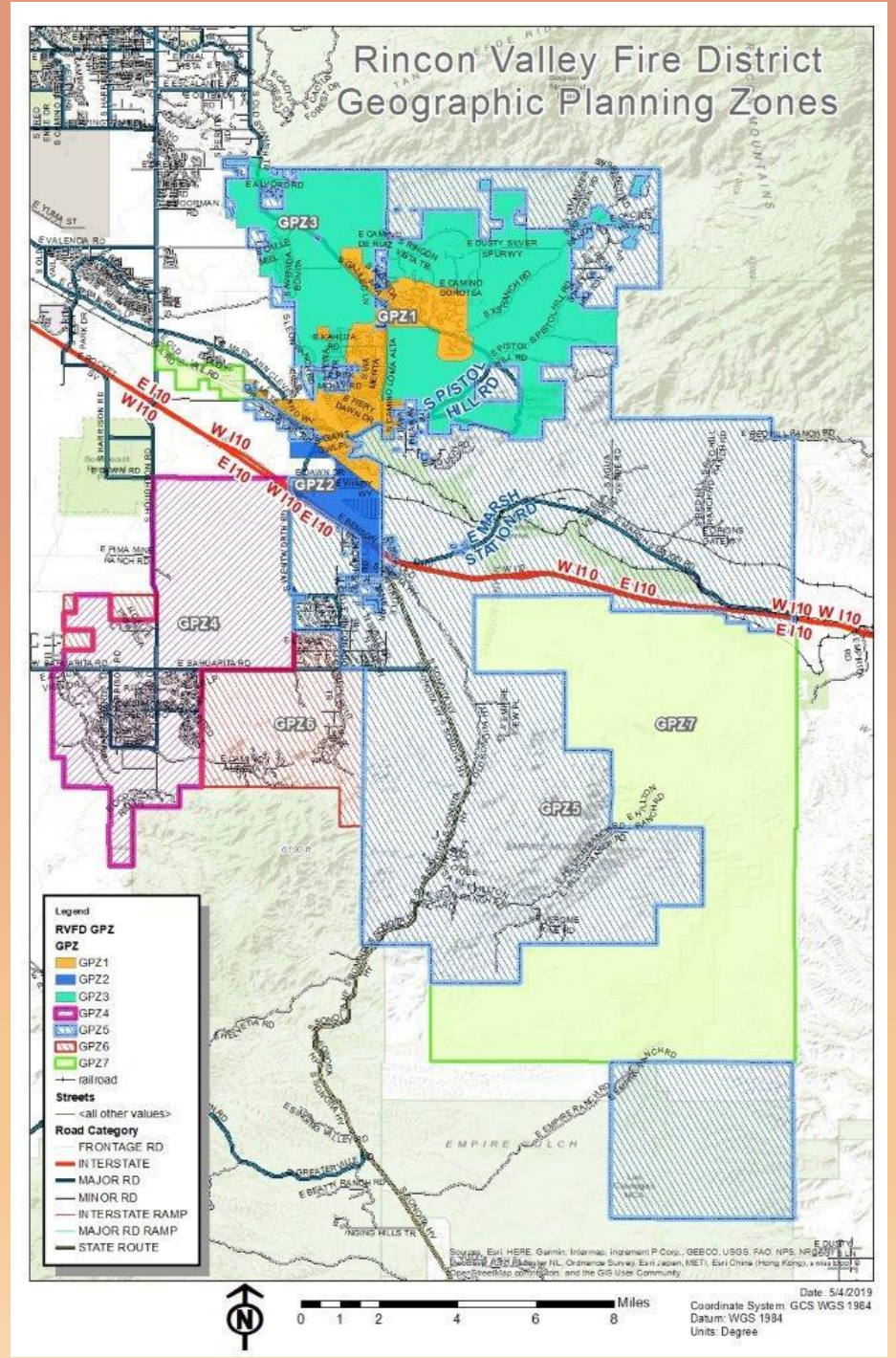
THREE DIFFERENT RESOURCES WERE REFERENCED FOR DEVELOPING THE METHODOLOGY

RVFD Unique Risk Factors

- **Out-of-District Responses**
- Large CON Service Area
- Water Resources
- Earthquakes
- UPRR
- **Interstate 10**
- “Vail Gale”
- Roadway Network
- **Lack of Nearby Additional Fire Agency Resources**
- Upcoming Major Construction Projects

Geographical Planning Zones (GPZ's)

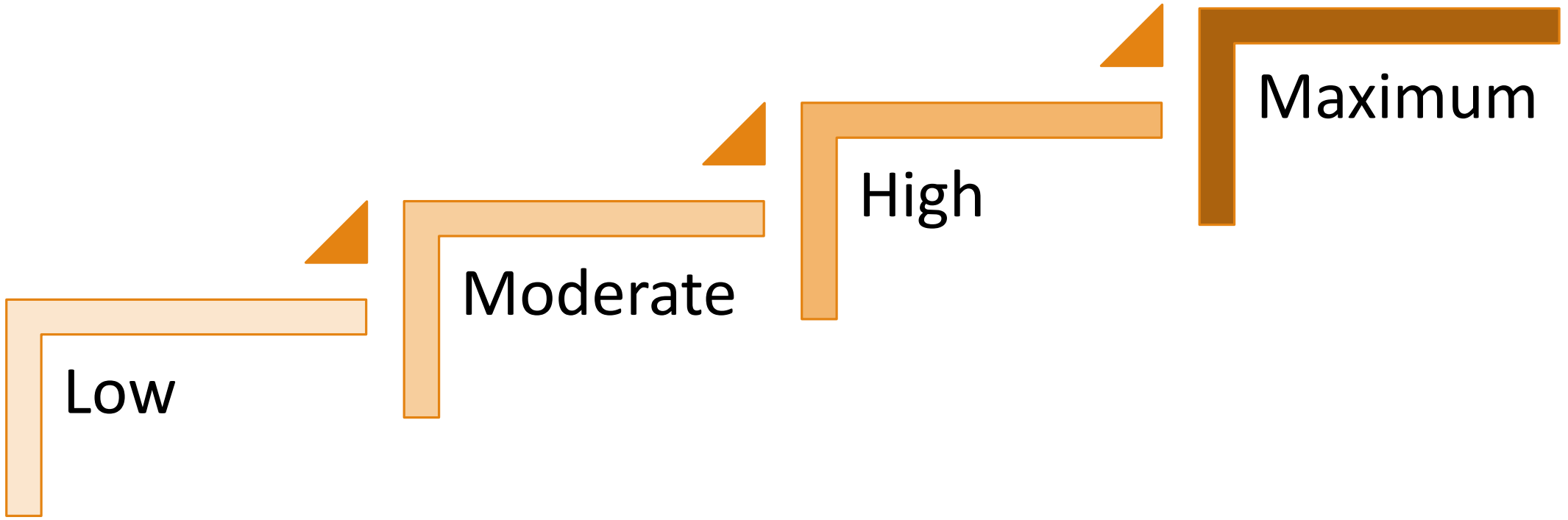
- The establishment of organized geographical response areas by unique occupancy, demographic type or other risk-relevant characteristics.



Risk assessments were completed for the five emergency service delivery programs

- Fire
- EMS
- Hazmat
- Technical Rescue
- Wildland Fire

Risk categories were developed for each of the 5 service programs



Fire Risk Assessment Factors

- Water supply
- Type of building construction
- Age
- Exposures
- Content
- Occupancy number
- Occupancy type
- Square feet
- Detection system presence/type
- Travel time
- Wildland/urban interface exposure
- Number of stories
- Hazmat content
- Firefighter safety factor
- Community impact

Critical Task Analysis and development of associated Effectiveness Response Force

- Critical Task Analysis - A time-sensitive work function that is essential along with other work functions to ensure a positive outcome for a performance objective.
- Effective Response Force (ERF) - The ERF is the result of the critical tasking analysis conducted as part of a community risk assessment. The ERF is the minimum amount of staffing and equipment that must reach a specific emergency zone location within a maximum prescribed total response time and is capable of initial actions to mitigate the emergency.

Critical Task	Personnel Required
Incident Command/Safety	1
Water Supply/Pump Operation	1
Fire Attack/Search & Rescue	4
Rapid Intervention Crew (OSHA requirement)	2
Ventilation	3
Exposure	3
TOTAL PERSONNEL = 14	
Effective Response Force = 3 engine companies, 2 ambulances, 1 battalion chief	

Critical Task Analysis
example of a “typical” house fire

Large Scale Risk Assessment - Potentially Districtwide Events

Interstate 10 – a source of several significant risks to the public and firefighters

Section 4 – Current Deployment and Performance

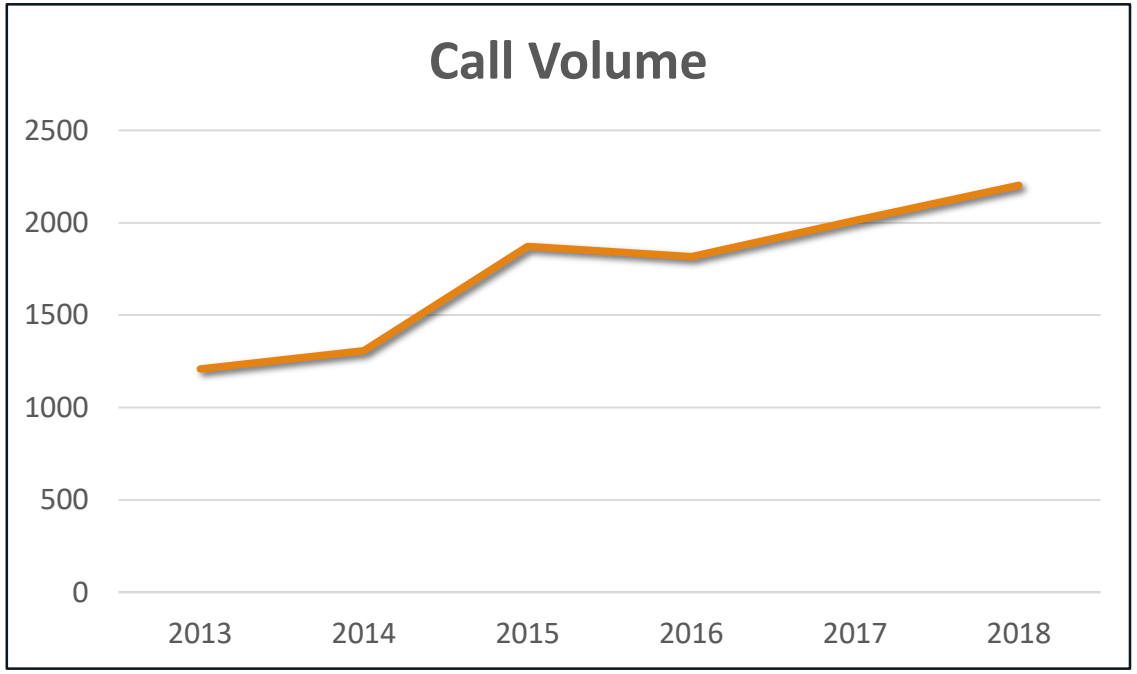
Deployment

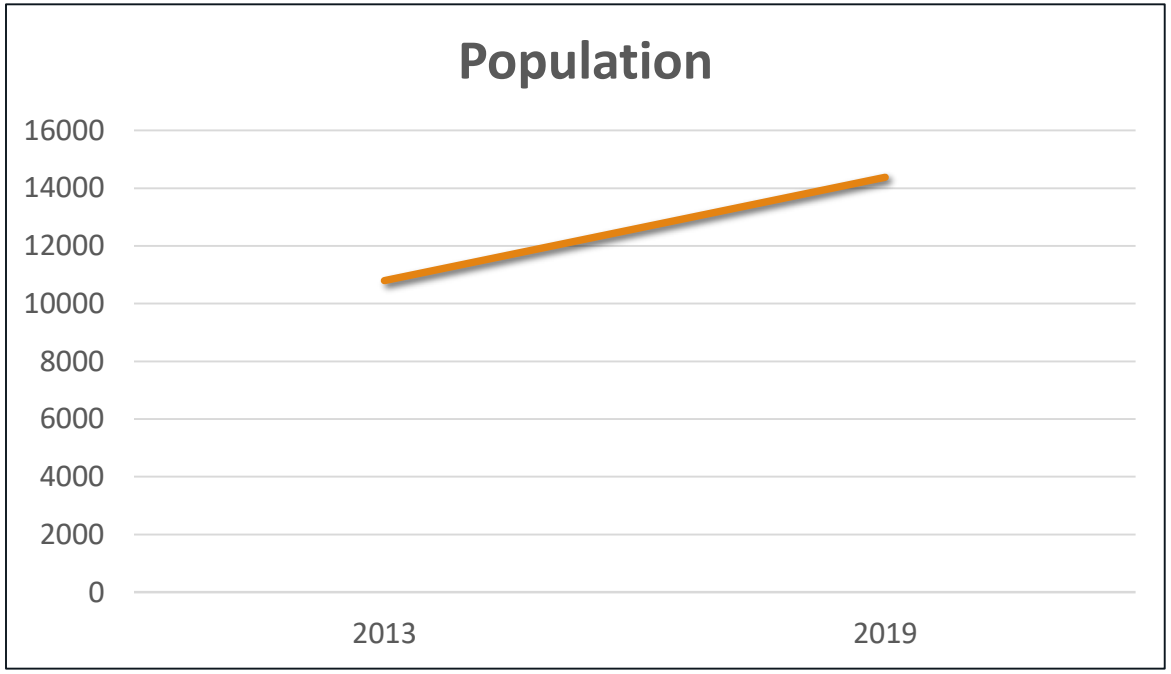
- Mobile Resources
- Fixed Resources

Performance

- Auto/Mutual Aid
- ISO Rating
- Temporal Analysis charts/graphs
- Cascade of Events
- 2018 Total Response Time Performance

Correlation between population growth and call volume increase: 2013-2018





90th percentile v. average response times

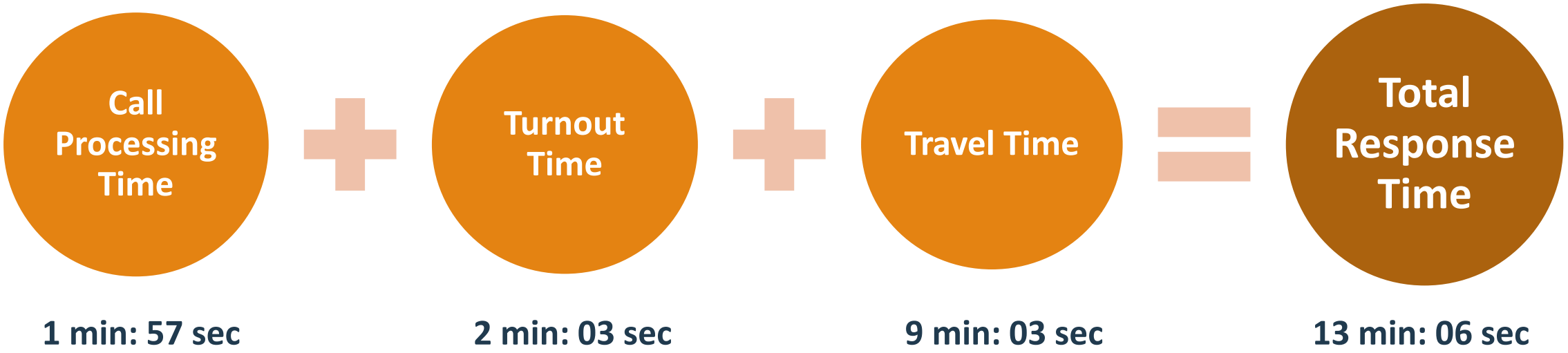
90th percentile expresses that 90% of the response times the performance was better than this number but 10% of the time it was slower.

Average reports what the performance is roughly half the time.

Example of how misleading an "average" response time can be

Total Response Time	Average	90th Percentile
7 min: 30 sec	7 min: 58 sec	9 min: 29 sec
5 min: 27 sec		
9 min: 0 sec		
7 min: 54 sec		
8 min: 20 sec		
6 min: 54 sec		
7 min: 52 sec		
10 min: 30 sec		
8 min: 21 sec		
9 min: 41 sec		
8 min: 0 sec		
8 min: 34 sec		
5 min: 2 sec		

Total Response Time



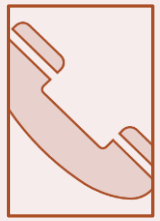
Section 5 – Evaluation of Current Deployment and Performance

- Community Expectations
- Internal Expectations
- Response Time Performance Objectives
- Performance Gap Discussion
- Call Processing
- Turnout time
- Travel time

All Emergency Calls Districtwide 90th percentile	Baseline 2018 n=3364	2020 Objective	Benchmark (2024)
Call Processing	1 min: 57 sec	1 min: 47 sec	1 min: 30 sec
Turnout Time	2 min: 03 sec	1 min: 43 sec	1 min: 30 sec
Travel Time	9 min: 6 sec	9 min: 0 sec	8 min: 0 sec
Total Response Time	13 min: 06 sec	12 min: 30 sec	11 min: 0 sec

Response Time Performance Objectives

Performance Gap Discussion



Call Processing Time

Turnout Time

Travel Time

Section 6 – Plan for Improving and Maintaining Response Capabilities

Evaluate	Evaluate Performance
Establish	Establish Performance Objectives
Develop	Develop Compliance Improvement Strategies
Communicate	Communicate Expectations
Validate	Validate Compliance
Make	Make Adjustments

Section 7 – Key Findings and Recommendations

Out of District calls represent 34% of RVFD's total call volume.

Total response times exceed the community's and internal stakeholder's expectations.

40% of RVFD ambulance transports meet the basic life support classification.

Key Findings con't

RVFD has experienced a 23% call volume growth in the past three years and is expected to experience a similar or greater growth pattern in the next five years. This continued growth will result in increased difficulty maintaining current performance levels and even more difficulty in efforts to improve current performance.

There are significant large-scale risks in RVFD.

The critical task analysis process identified that RVFD does not have adequate on duty staffing or additional resources in reasonable proximity to accomplish all of the critical tasks in the required time frame for accomplishing the District's performance objective of containing structure fires to the area of origin.

Key Findings con’t

RVFD currently tracks only property fire loss versus property value saved.

Code arrest survival rates with on-scene CPR are 45% versus 10% without on-scene CPR.

RVFD lacks the resources needed to process data to the degree it can be of maximum benefit to the District.

Key Findings con't

Engine and ambulance company functions and expectations at structure fires are in need of enhancement and formal documentation in the form of minimum company standards and SOP development.

The community risk assessment discovered many elements of community risk can be minimized through specific risk reduction efforts by the District.

The CRA=SOC can be thought of as a “service contract” RVFD has with the community it serves.