

CITYGATE ASSOCIATES, LLC

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MANAGEMENT CONSULTANTS ■



STANDARDS OF RESPONSE COVER AND HEADQUARTERS STAFFING ADEQUACY STUDY

CARPINTERIA-SUMMERLAND FIRE PROTECTION DISTRICT, CA

***VOLUME 2 OF 4 –
TECHNICAL REPORT***

July 27, 2016



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FIRE & EMERGENCY SERVICES

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VOLUME 3 of 4 – Community Risk Assessment (separately bound)

VOLUME 4 of 4 – Map Atlas (separately bound)

SECTION 1—INTRODUCTION AND BACKGROUND

Citygate Associates, LLC’s detailed work product for a Standards of Response Cover (Deployment) and Headquarters Staffing Adequacy study for the Carpinteria-Summerland Fire Protection District (District) is presented in this volume. Citygate’s scope of work and corresponding Work Plan was developed consistent with Citygate’s Project Team members’ experience in fire administration. Citygate utilizes various National Fire Protection Association (NFPA) publications as best practice guidelines, along with the self-assessment criteria of the Commission on Fire Accreditation International (CFAI).

1.1 REPORT ORGANIZATION

This report volume is structured into the following sections. Volumes 1 (Executive Summary), 3 (Community Risk Assessment), and 4 (Map Atlas) are separately bound.

- Section 1 Introduction and Background: An introduction to the study and background facts about the District.
- Section 2 Standards of Response Coverage Introduction: An introduction to the Standards of Coverage (SOC) process and methodology used by Citygate in this review.
- Section 3 Deployment Goals/Measures and Risk Assessment: An in-depth examination of the District’s deployment ability to meet the community’s risks, expectations, and emergency needs.
- Section 4 Staffing and Geo-Mapping Analysis: A review of: (1) the critical tasks that must be performed to achieve the District’s desired outcome; and (2) the District’s existing fire station locations and future locations.
- Section 5 Response Statistical Analysis: A statistical data analysis of the District’s incident responses and an overall deployment evaluation.
- Section 6 SOC Evaluation and Deployment Recommendation: A summary of deployment priorities and an overall deployment recommendation.
- Section 7 Headquarters and Support Services Staffing Adequacy Review: An analysis of the headquarters functions.
- Section 8 Consolidated Services Options: An overview of the consolidated fire services options the District can consider.
- Section 9 Next Steps: A summary of short-term and ongoing steps.

1.1.1 Goals of Report

As each of the sections mentioned above imparts information, this report will cite findings and make recommendations, if appropriate, that relate to each finding. All of the findings and recommendations throughout Sections 3 through 7 of this report are numbered sequentially. To provide a comprehensive summary, a complete list of all these same findings and recommendations, in order, is found in the Executive Summary (Volume 1). Section 9 of this report brings attention to the highest priority needs and recommended next steps.

This document provides technical information about how fire services are provided, legally regulated, and how the District currently operates. This information is presented in the form of recommendations and policy choices for the District leadership to discuss.

1.2 PROJECT SCOPE OF WORK

1.2.1 Standards of Response Coverage Review

The scope of the Standards of Response Coverage review included the following elements:

- ◆ Modeling the response time ability of the current fire station locations. Although this is not a study of fire departments adjacent to the District, the study does consider the impacts of the District’s automatic and mutual aid agreements common throughout the County.
- ◆ Establishing performance goals for the District consistent with best practices and national guidelines from the National Fire Protection Association (NFPA) and the Commission on Fire Accreditation International (CFAI).
- ◆ Using an incident response time analysis program called StatsFD™ to review the statistics of prior historical performance.
- ◆ Using a geographic mapping response time measurement tool called FireView™ to measure fire unit driving coverages from the District’s fire stations.

SOC Study Questions

Our study addresses the following questions:

1. Is the type and quantity of apparatus and personnel adequate for the District’s deployment to emergencies?
2. What is the recommended deployment to maintain adequate emergency response times as growth continues to occur?

1.3 DISTRICT OVERVIEW

The Carpinteria-Summerland Fire Protection District is located on the eastern coastal corner of Santa Barbara County, covering approximately 40 square miles. The Carpinteria-Summerland Fire Protection District—comprised of the City of Carpinteria, the community of Summerland, and unincorporated lands within Santa Barbara County—is located between the coastal Santa Ynez Mountain Range and the Pacific Ocean 10 miles south of Santa Barbara, and approximately 90 miles northwest of Los Angeles. Highway 101, a major north-south state transportation artery runs through the Fire District along the Coastal Plain. This includes the environs of an urban coastal city, an unincorporated beach community, vibrant light industrial and agriculture businesses, and an expanding Wildland Urban Interface. The City of Carpinteria encompasses 7.3 square miles, of which 2.6 square miles is land and 4.7 square miles are tidelands. Approximately 42% of land use within the City is residential, with 23% commercial/industrial, and the remainder dedicated to public facilities, parks/open space, agriculture, and transportation corridors.

Geographically, the Santa Ynez Mountain Range dominates the area. The mountain range is arranged in an east-west traverse that is parallel to the coast. Beyond the coastal plain, the landscape rises on more than a gradual gradient into the Santa Ynez range foothills. Many homes within the Fire District, especially in foothills of the Wildland Urban Interface, are valued in the multi-million-dollar range. This area, as well as the populated coastal areas just to the north of the District, have a history of having been impacted by major wildfire incidents. The greater part of the Fire District’s jurisdiction is at a risk from wildland fires, with the area generally described as the Wildland Urban Interface, where structures and other human development meet or intermingle with undeveloped wildland and vegetative fuels.

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SECTION 2—STANDARDS OF RESPONSE COVERAGE INTRODUCTION

2.1 STANDARDS OF COVERAGE STUDY PROCESSES

The core methodology used by Citygate in the scope of its deployment analysis work is the “Standards of Cover” (SOC) 5th edition, which is a systems-based approach to fire department deployment, as published by the Commission on Fire Accreditation International (CFAI). This approach uses local risk and demographics to determine the level of protection best fitting the District’s needs.

The Standards of Response Coverage method evaluates deployment as part of the self-assessment process of a fire agency. Citygate has adopted this methodology as a comprehensive tool to evaluate fire station locations. Depending on the needs of the study, the depth of the components may vary.

In the United States, there are no federal or state government requirements for a minimum level of fire services. It is a local choice issue for each community to consider and fund as it deems necessary. The Accreditation SOC systems approach to deployment, rather than a one-size-fits-all prescriptive formula, allows for local determination. In this comprehensive approach, each agency can match local needs (risks and expectations) with the costs of various levels of service. In an informed public policy debate, a governing board “purchases” the fire and emergency medical service levels the community needs and can afford.

While working with multiple components to conduct a deployment analysis is admittedly more work, it yields a much better result than using only a singular component. For instance, if only travel time is considered, and frequency of multiple calls is not considered, the analysis could miss over-worked companies. If a risk assessment for deployment is not considered, and deployment is based only on travel time, a community could under-deploy to incidents.

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The Standards of Response Coverage process consists of the following eight parts:

Table 1—Standards of Response Coverage Process Elements

Element	Meaning
1. Existing Deployment Policies	Reviewing the deployment goals the agency has in place today.
2. Community Outcome Expectations	Reviewing the expectations of the community for response to emergencies.
3. Community Risk Assessment	Reviewing the assets at risk in the community. (In this Citygate study, see Section 3.2 Community Risk Assessment.)
4. Critical Task Study	Reviewing the tasks that must be performed and the personnel required to deliver the stated outcome expectation for the Effective Response Force.
5. Distribution Study	Reviewing the spacing of first-due resources (typically engines) to control routine emergencies.
6. Concentration Study	Reviewing the spacing of fire stations so that building fires can receive sufficient resources in a timely manner (First Alarm assignment or the Effective Response Force).
7. Reliability and Historical Response Effectiveness Studies	Using prior response statistics to determine the percent of compliance the existing system delivers.
8. Overall Evaluation	Proposing Standard of Cover statements by risk type as necessary.

Fire department deployment, simply stated, is about the speed and weight of the attack. Speed calls for first-due, all-risk intervention units (engines, trucks, chiefs for incident command) strategically located across a department responding in an effective travel time. These units are tasked with controlling moderate emergencies, thus preventing the incident from escalating to second alarm or greater size, which unnecessarily depletes department resources as multiple requests for service occur. Weight is about multiple-unit response for serious emergencies such as a room-and-contents structure fire, a multiple-patient incident, a vehicle accident with extrication required, or a heavy rescue incident. In these situations, enough firefighters must be assembled within a reasonable time frame to safely control the emergency, thereby keeping it from escalating to greater alarms.

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This deployment design paradigm is displayed in the following table:

Table 2—Fire Department Deployment Simplified

	Meaning	Purpose
<i>Speed of Attack</i>	Travel time of first-due, all-risk intervention units strategically located across a department.	Controlling moderate emergencies without the incident escalating to second alarm or greater size.
<i>Weight of Attack</i>	Number of firefighters in a multiple-unit response for serious emergencies.	Assembling enough firefighters within a reasonable time frame to safely control the emergency.

Thus, small fires and medical emergencies require a single- or two-unit response with a quick response time. Larger incidents require more crews. In either case, if the crews arrive too late, or the total personnel sent to the emergency are too few for the emergency type, they are drawn into a losing and more dangerous battle. The science of fire crew deployment is to spread crews out across a community for quick response to keep emergencies small with positive outcomes, without spreading the crews so far apart that they cannot amass together quickly enough to be effective in major emergencies.

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SECTION 3—DEPLOYMENT GOALS/MEASURES AND RISK ASSESSMENT

3.1 WHY DOES THE DISTRICT'S FIRE DEPARTMENT EXIST AND HOW DOES IT DELIVER THE EXISTING FIRE CREW DEPLOYMENT SERVICES?

3.1.1 Existing Response Time Policies or Goals—Why Does the Fire Department Exist?

SOC ELEMENT 1 OF 8*
**EXISTING DEPLOYMENT
POLICIES**

**Note: This is an overview of Element 1.
The detail is provided on page 18.*

The District Board of Directors, over the decades, has not adopted best practice-based formal response time policies by type of risks. However, the District has a long history of striving to provide fire services that can be documented in Fire Department annual reports, the number of fire companies, and minimum daily staffing. Thus, although no complete policy has been adopted by the Board of

Directors, the District has been budgeting for and providing a level of services that can be documented.

In adopting a response time goal, using an average time measure does not meet current best practices. In addition, response time measures should specifically denote a beginning and end point response time and staffing quantity, by risk type, consistent with the recommendations of the National Fire Protection Agency (NFPA) or Commission on Fire Accreditation International (CFAI) best practices. A complete response time goal includes dispatch-processing time, crew turnout time, and finally, travel time, along with the type of emergency outcome or staffing needed to accomplish an outcome goal.

The District also has not identified response goals for technical rescue and hazardous material responses; in addition to firefighting and EMS, these incident types response time goals also are required to meet the Standards of Response Coverage model for the CFAI. In this Standards of Response Coverage study, Citygate will recommend revised response time goals to include all risks including fire, EMS, hazardous materials, and technical rescue responses. The goals will be consistent with the CFAI systems approach to response.

3.1.2 Existing Outcome Expectations

SOC ELEMENT 2 OF 8
**COMMUNITY OUTCOME
EXPECTATIONS**

The Standards of Response Cover process begins by reviewing existing emergency services outcome expectations. This can be restated as follows: for what purpose does the response system exist? Has the

governing body adopted any response performance measures? If so, the time measures used need to be understood and good data must be collected.

Current best practice nationally is to measure percent completion of a goal (e.g., 90% of responses) instead of an average measure. Mathematically this is called a “fractile” measure.¹ This is because an average only identifies the central or middle point of response time performance for all calls for service in the data set. Using an average makes it impossible to know how many incidents had response times that were way over the average, or just over. For example, if a department had an average response time of 5 minutes for 5,000 calls for service, it cannot be determined how many calls past the average point of 5 minutes were answered in the 6th minute, or way out at 10 minutes. This is a significant issue if hundreds or thousands of calls are answered far beyond the average point. Fractile measures will identify, per minute, the number of incidents that are reached up to 100%.

More importantly, within the Standards of Response Coverage process, positive outcomes are the goal and, from that, crew size and response time can be calculated to allow efficient fire station spacing (distribution and concentrations). Emergency medical incidents involve situations with the most severe time constraints. The brain can only live 8-10 minutes without oxygen. Heart attacks are commonly known to deprive the brain of oxygen; however, heart attacks make up a small percentage oxygen depriving events. Drowning, choking, trauma constrictions, or other similar events have the same effect. In a building fire, a small incipient fire can grow to involve the entire room in an 8- to 10-minute timeframe. If fire service response is to achieve positive outcomes in severe emergency medical situations and incipient fire situations, *all* responding crews must arrive, assess the situation, and deploy effective measures before brain death occurs or the fire leaves the room of origin.

Thus, from the time of 9-1-1 receiving the call, an effective deployment system is *beginning* to manage the problem within a 7- to 8-minute total response time. This is right at the point that brain death is becoming irreversible, or that an incipient fire has grown beyond the room of origin and become very serious. Thus, the District needs a first-due response goal that is within a range to give the situation hope for a positive outcome. It is important to note the fire or medical emergency continues to deteriorate from the time of inception, not from the time the fire engine actually starts to drive the response route. Ideally, the emergency is noticed immediately and the 9-1-1 system is activated promptly. This step of awareness—calling 9-1-1 and giving the dispatcher accurate information—takes, in the best of circumstances, 90-seconds. Crew notification and travel time then take additional minutes. Once arrived, the crew must walk to the patient or emergency, assess the situation, and deploy its skills and tools. Even in easy-to-access

¹ A *fractile* is that point below which a stated fraction of the values lie. The fraction is often given in percent; the term percentile may then be used.

situations, this step can take two or more minutes. This time frame may be increased considerably due to long driveways, apartment buildings with limited access, multi-storied apartments or office complexes, or shopping center buildings such as those found in parts of the District.

Unfortunately, there are situations in which an emergency has become too severe, even before 9-1-1 notification and/or fire department response, for the responding crew to reverse; however, when an appropriate response time policy is combined with a well-designed system, then only issues like bad weather, poor traffic conditions, or multiple emergencies will slow the response system down. Consequently, a properly designed system will give citizens the hope of a positive outcome for their tax dollar expenditure.

For this report, “total” response time is the sum of the alarm procession, dispatch, crew turnout, and road travel time steps. This is consistent with the recommendations of the CFAI.

Finding #1: The District Board of Directors has not adopted a complete and best-practices-based deployment measure or set of specialty response measures for all-risk emergency responses that includes the beginning time measure from the point of the (contracted) Montecito Fire Protection District Communications Center receiving the 9-1-1 phone call, nor a goal statement tied to risks and outcome expectations. The deployment measure should have a second measurement statement to define multiple-unit response coverage for serious emergencies. Making these deployment goal changes will meet the best practice recommendations of the Commission on Fire Accreditation International.

Community Listening Sessions

One element of the District’s Request for Proposals, and subsequent element of Citygate’s Project Work Plan (Task 1.3), included conducting an online community survey to receive comments and input from District residents and businesses relative to current and future Fire District service delivery and response performance goals. However, based on our previous experiences with online community survey participation, we suggested that the District could achieve essentially the same objective at a lower cost through community listening sessions also included in Task 1.3 of the Project Work Plan.

The initial community listening session was publicly advertised and conducted at the District’s January 29, 2016 Board of Director’s meeting in Carpinteria, and drew approximately 15 persons

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including District residents and Fire District staff. Key comment themes from Board members and the audience included:

- ◆ What is the best service model for the Carpinteria-Summerland Fire District?
- ◆ Should the District provide EMS ambulance transportation services?
- ◆ The study needs to address consolidation with Santa Barbara County Fire; desire to hear more about the potential for shared services and/or consolidation.
- ◆ The study should examine the District’s long-term fiscal viability.
- ◆ What are the opportunities, if any, to improve the District’s Insurance Services Office (ISO) rating?
- ◆ All District residents and businesses should receive equivalent services; all residents should be protected all of the time.
- ◆ The community spoke loudly about the proposed bond measure through the ballot results; community expectations are in the record.
- ◆ Summerland needs a new fire station.
- ◆ Frustration exists with yet another study being performed and the need to start the process for a new fire station all over again.
- ◆ The District will get community involvement if the fire station project and process has more clarity.
- ◆ This Standards of Coverage process has already been conducted at least once or twice previously.
- ◆ This study is a positive move.
- ◆ No desire/need to spend more money for fire protection.

Two more community listening session were publicly advertised and conducted in Carpinteria at Fire Station 1 and in Summerland on March 9, 2016. Combined, the sessions drew approximately 25 persons including District residents, Fire District Directors, and staff. Key comment themes from these sessions included:

- ◆ EMS arrival is expected within 5 minutes.
- ◆ Life is the priority over property; “if you cannot respond to me for an EMS emergency in less than five minutes, I do not want to be saved to live in a vegetative state.”

- ◆ Some level of risk is unavoidable.
- ◆ District residents do not want to be “taxed to death.”
- ◆ There is a need to strike a balance between the desired level of service and affordability.
- ◆ Are there any guidelines for EMS service delivery similar to ISO for fires?
- ◆ The Board of Directors has only received one complaint relating to response time in the past three years; does this not reflect residents’ expectations?
- ◆ The community does not understand the nuances of the emergency response system; perfection is expected every time.
- ◆ Most residents have a narrow understanding of the services provided by the fire department.

Citygate kept these themes in mind as we conducted the following technical assessment of risks to be protected in the entire Fire District.

3.2 COMMUNITY RISK ASSESSMENT

The third element of the SOC process is a community risk assessment or analysis.

Risk assessment is a major component of developing a Standards of Cover (SOC) document. A risk assessment identifies the type of incidents a fire department will respond to and what resources and staffing it will need to mitigate the situation.

**SOC ELEMENT 3 OF 8
COMMUNITY RISK
ASSESSMENT**

To better understand risk, it is necessary to define the types and levels of risk a community can encounter. For risk assessment in an SOC study, it is typical to consider low, moderate, high/special, and maximum risk occupancies. Risk also can be classified by probability and consequences. Probability is defined as the likelihood of a fire occurring in an occupancy type. Consequences are defined as the effects of the fire on the property and community.

As part of this project, the District requested an in-depth risk assessment. Citygate’s comprehensive risk review is contained in Volume 3 of this study and will not be repeated here. Rather, below we provide a summary of the risk assessment conclusions along with a list of findings and recommendations.

3.2.1 Risk Assessment Summary

Citygate’s evaluation of the various risks likely to adversely impact the Carpinteria-Summerland Fire Protection District yields the following conclusions:

1. The District has a diverse suburban population density within its core populated areas, and rural population densities in the outlying areas.
2. The District’s population is projected to grow by a very modest 3.77% over the next 20 years.
3. The District has a mix of residential, commercial, office, and light industrial buildings typical of other smaller California coastal communities.
4. The District has varying levels of risk relative to 10 hazards specifically related to fire district services as follows:
 - a. Building Fire
 - b. Earthquake/Seismic Activity
 - c. Flood / Coastal Surge
 - d. Hazardous Materials
 - e. Landslide / Coastal Erosion
 - f. Medical Emergency
 - g. Technical Rescue
 - h. Transportation
 - i. Tsunami
 - j. Wildland Fire.

3.2.2 Overall Risk Summary by Hazard and Risk Zone

Table 3 summarizes the District’s overall risk by hazard and risk zone. The table below is fully explained in Volume 3.

Table 3—Overall Risk Summary by Hazard and Risk Zone

Hazard	Risk Assessment Zone					
	1-1	1-2	1-3	1-4	2-1	2-2
Building Fire	Low	Low	Low	Low	Low	Low
Earthquake / Seismic Activity	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Flood / Coastal Surge	Moderate	Moderate	Moderate	Low	Low	Moderate
Hazardous Materials	Low	Low	Low	Low	Low	Low
Landslide / Coastal Erosion	Low	Low	Low	Low	Low	Low
Medical Emergency	Moderate	Moderate	Moderate	Low	Low	Low
Technical Rescue	Low	Low	Low	Low	Low	Low
Transportation	Low	Low	Low	Low	Low	Low
Tsunami	Low	Moderate	Low	Low	Low	Low
Wildland Fire	Low	Low	Low	High	High	Moderate

3.2.3 Risk Assessment Findings and Recommendations

Based on the detailed risk assessment performed in Volume 3, Citygate offers the following findings and recommendations:

- Finding #2:** Santa Barbara County and the Carpinteria-Summerland Fire Protection District have adopted current California codes with local amendments to minimize the occurrence of building fires and provide for the safety of building occupants.
- Finding #3:** The District has a good response capability, training program, and pre-incident planning to reduce the severity of building fires.
- Finding #4:** The engine company inspection program has enhanced the District’s Community Risk Reduction efforts.

Finding #5: Neither of the District’s fire station facilities conform to the seismic safety requirements of essential services buildings as contained in Chapter 2, Sections 16000-16022 of the California Health and Safety Code.

Finding #6: The District has the appropriate training and response capability to reduce the impact severity of a hazardous material release or spill.

Finding #7: The District has adopted an effective Community Wildfire Protection Plan to reduce its wildland fire risk vulnerability by modifying and/or selectively eliminating dead and decadent vegetation thus reducing vegetative fuel loading and related flammability in heavily vegetated areas of the District.

Finding #8: The District has taken some steps to educate residents about, and to enforce state WUI vegetation clearance requirements around buildings; however, there does not appear to be any accountability to ensure that these inspections are completed in a timely manner, and to enforce and correct non-compliance.

Finding #9: The District has developed wildland pre-attack plans for the WUI areas of the District to include populations and buildings at risk, travel routes, and response requirements and assignments.

Recommendation #1: The District should continue updating its pre-fire plans for commercial, high-risk, critical facility, and other target hazard occupancies at least once every five years.

Recommendation #2: The District should consider re-implementing its engine company inspection program, or alternatively hiring additional fire prevention staff, to conduct fire and life safety inspections of all commercial, high-risk, critical facility, and other target hazard occupancies on at least a three-year cycle.

Recommendation #3: Absent complete facility replacement(s), the District should consider upgrading its fire station facilities to conform to the seismic safety requirements of essential services buildings as contained in Chapter 2, Sections 16000-16022 of the California Health and Safety Code.

Recommendation #4: The District should consider collaborating with the City of Carpinteria and the Santa Barbara County Sheriff's Office to develop a local evacuation/shelter-in-place plan specific to District residents and businesses.

Recommendation #5: The District should conduct a tabletop or functional hazardous material release/spill exercise with the Santa Barbara regional Hazardous Materials Response Team at least bi-annually.

Recommendation #6: Maintain existing vegetation reduction/modification projects to ensure sustained long-term effectiveness.

Recommendation #7: Aggressively seek additional landowner agreements for vegetation removal/modification projects, especially in those areas of the District adjacent to the native chaparral fuel beds.

Recommendation #8: Aggressively seek additional neighborhood vegetation removal/reduction projects that will effectively reduce wildland fire intensity/spread potential.

Recommendation #9: Aggressively seek additional funding sources to support District CWPP priorities, goals, and objectives.

3.3 EXISTING DISTRICT DEPLOYMENT

3.3.1 Existing Deployment Situation—What the District Has in Place Currently

SOC ELEMENT 1 OF 8*
**EXISTING DEPLOYMENT
POLICIES**
**Note: Continued from page 9.*

As the Board of Directors has not adopted a best-practices-based response time policy, this study will benchmark the District for urban populated areas against the response time recommendations of NFPA 1710 for career fire service deployment. These are:

- ◆ Four minutes travel time for the first-due unit to all types of emergencies
- ◆ Eight minutes travel time for multiple units needed at serious emergencies (First Alarm).

The District’s current daily staffing plan is:

Table 4—Daily Minimum Staffing per Unit – 2016

Unit	Minimum Staffing Personnel per Unit	Staff	Total Minimum Personnel
2 Engines	3	Firefighters per day	6
1 Rescue Squad	2	Firefighters per day	2
1 Battalion Chief (BC)	1	Command per day	1
Total firefighters and BC			9

This daily staffing is only adequate for an immediate response to control low severity fires in most of the built-up, urban areas of the District, or handle a 1- to 3-patient EMS event. However, for a serious building fire, the assumption is that mutual aid will be available in a timely manner to provide the balance of the staffing needed.

Services Provided

The District is an “all-risk” fire department providing the people it protects with services that include structure and wildland fires, technical rescue, and first-responder hazardous materials response, as well as other services.

Given these risks, the District uses a tiered approach of dispatching different types of apparatus to each incident category. The District contracts for dispatching with the Montecito Fire

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Protection District (FPD) which selects the closest and most appropriate resource types and handles this function. As an example, here are the resources dispatched to common risk types:

Table 5—Resources Sent to Common Risk Types

Risk Type	Minimum Type of Resources Sent	Total Firefighters Sent
1-Patient EMS	1 Engine or Squad with regional contract ambulance	2-3 FF
Auto Fire	1 Engine	3 FF
Building Fire	2 Engines, 1 Squad, 1 Battalion Chief	9 FF + mutual aid
Wildland Fire	1 Wildland Engine, 1 Structure Engine, 1 Squad, 1 Battalion Chief	9 FF + mutual aid
Technical Rescue	1 Engine, 1 Squad, 1 Battalion Chief	6 FF

3.3.2 Emergency Unit Staffing

The two engine companies are staffed on a daily basis with a minimum staffing of three firefighters. One rescue squad is staffed with two firefighters. The daily minimum staffing count for these units is nine firefighters, including one Battalion Chief.

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SECTION 4—STAFFING AND GEO-MAPPING ANALYSIS

4.1 CRITICAL TASK TIME MEASURES—WHAT MUST BE DONE OVER WHAT TIME FRAME TO ACHIEVE THE STATED OUTCOME EXPECTATION?

SOC ELEMENT 4 OF 8
CRITICAL TASK TIME
STUDY

Standards of Response Coverage (SOC) studies use task time information to determine the firefighters needed within a timeframe to accomplish the desired fire control objective on moderate residential fires and modest emergency medical rescues.

4.1.1 Firefighting Critical Tasks

The District’s Effective Response Force (ERF) to structure fires in built-up, suburban areas includes three engines (one of which is via mutual aid), one rescue squad, and one Battalion Chief, for a minimum ERF total of 12 personnel—if *mutual aid is immediately available*.

NFPA 1710 recommends an ERF of 15 personnel. The following table shows what a recommended force of 18 can accomplish (9 from District and 9 from mutual aid). The larger the force (weight of attack), the faster the tasks are completed.

Scenario: *The following is a simulated one-story residential structure fire with no rescue situation. Responding companies received dispatch information as typical for a witnessed fire. Upon arrival they were told approximately 1,000 square feet of the home was involved in fire.*

**Table 6—First Alarm Structure Fire – 9 District Personnel Plus 9 Mutual Aid Personnel
Totaling 18 Personnel**

Company Level Tasks
1st-Due District Engine and Rescue Squad¹
1. Lay in a hydrant supply line.
2. Stretch the 150-foot, 1¾-inch hose line to the point of access for search and rescue.
3. Operate the pump to supply water and attach hydrant supply line.
4. Assume command of initial operations.
5. Establish the Initial Rapid Intervention Crew.
2nd-Due District Engine
1. If necessary, lay in a hydrant supply line.
2. Stretch a 2nd 200-foot hose line as a back-up line and for fire attack.
3. Establish treatment (EMS) sector if needed.
3rd-Due Engine – Mutual Aid
1. If necessary, lay in a hydrant supply line.
2. Pump 1st Engine’s supply line if needed.
3. Stretch 3rd 1¾-inch hose line if needed.
4th-Due Engine – Mutual Aid
1. Establish a dedicated Rapid Intervention Crew.
1st-Due Ladder Truck – Mutual Aid from Santa Barbara City
1. Perform positive pressure and/or vertical ventilation.
2. Secure utilities.
3. Raise ladders, open concealed spaces, and force entry as needed.
4. Provide salvage and overhaul.
1st-Due Incident Commander
1. Establish exterior command.

¹ District personnel are shown in red font

The duties in Table 6, grouped together, form an *Effective Response Force or First Alarm assignment*. These tasks must be performed simultaneously and effectively to achieve the desired outcome; arriving on-scene does not stop the emergency from escalating. While firefighters accomplish the above tasks, the incident progression clock keeps running. However, given the District’s daily staffing of only nine, very few tasks can be performed before mutual aid arrives.

However, waiting for mutual aid can be a devastating disadvantage, and may allow a fire to grow beyond an arriving force can catch up to it and stop it. Fire spread in a structure can double in size during its *free-burn* period before firefighting is started. Many studies have shown that a small fire can spread to engulf an entire room in less than 4 to 5 minutes after free burning has started. Once the room is completely superheated and involved in fire (known as flashover), the fire will spread quickly throughout the structure and into the attic and walls. For this reason, it is imperative that fire attack and search commence before the flashover point occurs if the outcome goal is to keep the fire damage in or near the room of origin. In addition, flashover presents a serious danger to both firefighters and any occupants of the building.

4.1.2 Emergency Medical Services Critical Tasks

The District responds to nearly 1,200 EMS incidents per year. These incidents include car accidents, water emergencies, strokes, heart attacks, difficulty breathing, and many other medical emergencies. The wide variety and circumstances of EMS calls makes it difficult and impractical to chart the critical tasks for each call type.

The American Heart Association (AHA) recommends a minimum of two emergency medical technicians and two certified paramedics to adequately operate an emergency cardiac scene. A 2010 EMS study conducted by the National Institute of Standards and Technology (NIST) clearly demonstrates a crew of four first responders on-scene, including two paramedics, is the most expedient and efficient means of delivering advanced emergency medical care.

The District routinely responds to EMS calls that require treatment for more than one patient. These calls include vehicle accidents, water rescues, chemical exposures, construction or industrial accidents, and any other event that occurs with several people in close proximity. Patient conditions can range from minor cuts and bruises to life-threatening injuries.

Dispatchers are responsible for screening calls to establish the correct initial response. The first fire department officer on-scene amends the response once conditions have been assessed. Standard operating procedures are used to request adequate personnel and resources.

For comparison purposes, the following critical task table reviews the tasks needed on a typical cardiac arrest.

Table 7—Cardiac Arrest – 3-5 Firefighters Plus an Ambulance

Task	Personnel Required	Type of Treatment Administered
Compressions	1-2	Compression of chest to circulate blood
Ventilate/oxygenate	1-2	Mouth-to-mouth, bag-valve-mask, apply O ₂
Airway control	1-2	Manual techniques/intubation/cricothyroidomy
Defibrillate	1-2	Electrical defibrillation of dysrhythmia
Establish I.V.	1-2	Peripheral or central intravenous access
Control hemorrhage	1-2	Direct pressure, pressure bandage, tourniquet
Splint fractures	2-3	Manual, board splint, HARE traction, spine
Interpret ECG	2	Identify type and treat dysrhythmia
Administer drugs	2	Administer appropriate pharmacological agents
Spinal immobilization	4-6	Prevent or limit paralysis to extremities
Extricate patient	3-4	Remove patient from vehicle, entrapment
Patient charting	1-2	Record vitals, treatments administered, etc.
Hosp. communication	1-2	Receive treatment orders from physician
Treat en-route	2-4	Continue to treat/monitor/transport patient
Total	5-7	Personnel required per patient

4.1.3 Critical Task Analysis and Effective Response Force Size

What does a deployment study derive from a company task analysis? The total task needs (as displayed in Table 6 and Table 7) to stop the escalation of an emergency must be compared to outcomes. We know from nationally-published fire service “time vs. temperature” tables that after about 4 to 5 minutes of free burning, a room fire will grow to the point of flashover. At this point, the entire room is engulfed, the structure becomes threatened, and human survival near or in the fire room becomes impossible. Additionally, we know that brain death begins to occur within 4 to 6 minutes of the heart having stopped. Thus, the Effective Response Force must arrive in time to stop these catastrophic events from becoming worse.

The on-scene tasks discussed show that the residents of the District are able to expect positive outcomes, and have a good chance of survival, in a *moderate severity* medical emergency. This is because the District’s first responding units are typically available in 6:33-8:35 minutes/seconds or less first unit *travel* time (as identified in Section 5).

Mitigating an emergency event is a team effort once the units have arrived. This refers back to the “weight” of response analogy; if too few personnel arrive too slowly, then the emergency

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will worsen instead of improve. The outcome times, of course, will be longer, with less desirable results, if the arriving force is later or smaller.

The quantity of staffing and the arrival time frame can be critical in a serious fire. Fires in older and/or multi-story buildings could well require the initial firefighters needing to rescue trapped or immobile occupants. If a lightly-staffed force arrives, it cannot simultaneously conduct rescue and firefighting operations.

Fires and complex medical incidents require that the other units arrive in time to complete an effective intervention. Time is one factor that comes from *proper station placement*. Good performance also comes from *adequate staffing* and training. In the critical tasks identified previously, the District’s firefighters can only perform well in terms of time *when mutual aid is close by*. Given the thinly spaced out fire stations in the District and its neighbors, then when one unit must cover another unit’s area, or multiple units are needed, these units can be too far away and the emergency will worsen.

Previous critical task studies conducted by Citygate, the Standard of Response Cover documents reviewed from accredited fire departments, and NFPA 1710 recommendations all arrive at the need for 15+ firefighters arriving within 11 minutes (from the time of call) at a room and contents structure fire to be able to *simultaneously and effectively* perform the tasks of rescue, fire attack, and ventilation. Given that the District sends *at least 9* of its own personnel plus mutual aid to an incident involving a working First Alarm building fire, it is clear that the District understands that firefighting crews arriving closely together are needed to deliver a positive outcome that protects lives and property by stopping the escalation of the emergency as found by the arriving force.

A question one might ask is, “If fewer firefighters arrive, *what* from the list of tasks mentioned would not be completed?” Most likely, the search team would be delayed, as would ventilation. The attack lines would only consist of two firefighters, which does not allow for rapid movement above the first-floor deployment. Rescue is conducted with only two-person teams; thus, when rescue is essential, other tasks are not completed in a simultaneous, timely manner. It must always be remembered: effective deployment is about the **speed** (*travel time*) and the **weight** (*firefighters*) of the attack.

Nine initial District firefighters plus nine mutual aid firefighters could handle a moderate-risk house fire; however, even a blended Effective Response Force of 18 will be seriously slowed if the fire is above the first floor, in a low-rise apartment building, or commercial/industrial building. This is where the capability to add alarms to the standard response becomes important.

Given the fact that the District’s First Alarm (Effective Response Force) strives to deliver 9 of its personnel plus 9 via mutual aid to a moderate risk building fire, it reflects the District’s

unpublished goal to confine serious building fires near the room(s) of origin, and to prevent the spread of fire to adjoining buildings. This is a typical desired outcome in built-out areas and requires more firefighters more quickly than the typical rural outcome of keeping the fire contained to the building, not room, of origin.

Given that there is not a current District response time policy, the District’s current physical response to building fires is, in effect, the District’s de-facto deployment measure to built-up urban/suburban areas. Thus, this becomes the baseline policy for the deployment of firefighters.

4.2 DISTRIBUTION AND CONCENTRATION STUDIES—HOW THE LOCATION OF FIRST-DUE AND FIRST ALARM RESOURCES AFFECTS THE OUTCOME

SOC ELEMENT 5 OF 8
DISTRIBUTION STUDY

The District is served today by two fire stations. It is appropriate to understand what the existing stations do and do not cover, if there are any coverage gaps needing one or more stations, and what, if anything, to do about them.

SOC ELEMENT 6 OF 8
CONCENTRATION STUDY

In brief, there are two geographic perspectives to fire station deployment:

- ◆ **Distribution** – the spacing of first-due fire units to stop routine emergencies.
- ◆ **Concentration** – the clustering of fire stations close enough together so that building fires can receive sufficient resources from multiple fire stations quickly. As indicated, this is known as the **Effective Response Force**, or, more commonly, the “First Alarm assignment”—the collection of a sufficient number of firefighters on scene, delivered within the concentration time goal to stop the escalation of the problem.

To analyze first-due fire unit travel time coverage, Citygate used a geographic mapping tool called *FireView*TM that can measure theoretical travel time over the street network. For this time calculation, Citygate staff uses the base map and street travel speeds calibrated to actual fire company travel times from previous responses to simulate real-world coverage. Using these tools, Citygate ran several deployment tests and measured their impact on various parts of the District. The travel time measure used was 4 minutes over the road network, which is consistent with the “benchmark” recommendation in NFPA 1710 and desirable outcomes in critical emergencies. When up to a total of 3 minutes is added for dispatch processing and crew turnout times, then the maps effectively show the area covered within 7 minutes total response time of the Montecito FPD Communications Center receiving the request for the first-due unit, and 11 minutes (8 minutes travel) for a First Alarm assignment.

The following maps can be viewed in Volume 4.

Map #1 – General Geography and Station Locations

This view shows the existing District fire station locations with the District boundaries. This is a reference map for the other map displays that follow.

Map #2a – Risk Assessment: High-Risk Occupancies

Risk assessment is an effort by the District to classify properties by potential impact on service demand levels. The higher risk business site locations are shown, which require more firefighters in fewer minutes should a serious fire emerge due to the presence of hazardous materials or at-risk populations, such as those found in health care settings.

Most of these buildings are along the major road corridors where zoning has placed the region’s commercial buildings. The important finding from this geographic-based assessment is that while some of these risks are spread throughout the District, most are located in the highest population density areas of Carpinteria and Summerland. As such, the District needs a strong, multiple-unit response capacity for serious emergencies in the urbanized areas of the District.

Map #2b – Risk Assessment: Critical Facilities

As another perspective of risk, the locations of critical facilities essential to the safe operation of the District’s businesses and governmental institutions are displayed here. Most of these risks are contained in Carpinteria.

Map #2c – Risk Assessment: High Fire Flow Buildings

The Insurance Service Office (ISO) surveys buildings for fire risk underwriters upon which to base premiums. One measure of a buildings risk is the calculated amount of firefighting water needed should a major fire take hold of a building. This “Needed Fire Flow” (NFF) calculation is based on many factors, such as type of construction and spacing from other buildings. This map displays the locations of buildings in the District with larger required fire flows in excess of 1,500 gallons per minute and, while most of these are clustered in the commercial areas of the District, a few are found in rural areas.

Map #2d – Wildland Fire Risk Zones

Both CAL FIRE, as required by state law, and the District, have classified areas in the District as moderate to very high risk of wildfire for the threat it poses to populated areas. As can be seen, all of the populated areas abut Very High Hazard areas in Summerland, and High Hazard areas in Carpinteria.

Finding #10: Given that all of the populated areas abut high to very high wildfire severity zones, the District needs the “weight” of fire attack, using multiple units in a timely manner, to stop incipient wildfires before they become catastrophic and cannot be controlled in the near term.

Map #2e – Population Density

Displayed on this map are the resident population densities. The Commission on Fire Accreditations and the NFPA typically define an area urban, suburban, or rural with the following population densities:

- ◆ Urban – equal to or greater than 2,000 people per square mile
- ◆ Suburban – 1,000 to 2,000 people per square mile
- ◆ Rural – less than 1,000 people per square mile

As can be seen in this map, the two most populated areas of the District carry urban population densities, and the middle of the coastal plain and eastern Carpinteria carry almost suburban or fully suburban population densities. These densities do not reflect traffic on the highway, tourists, and business employees.

Finding #11: Most of the coastal areas of the District are close to, or above, suburban population densities. The core of Carpinteria and Summerland are urban. As such, it is appropriate to benchmark the Districts’ response time and outcome goals to that as recommended by National Fire Protection Agency 1710 for career fire departments.

Map #2f – Hazardous Materials Sites

Displayed on this map are the locations of businesses and governmental agencies that use, store or transport significant hazardous materials as regulated by the California Fire Code and the California Environmental Protection Agency (CalEPA). Most of these sites are in Carpinteria. The District does field hazardous materials incident first responders and participates in a regional hazardous materials team response plan.

Map #3a – First-Due Unit Distribution: Current Fire Stations 4-Minute Engine Travel

This map shows, using green street segments, the *distribution* of District stations per a best practice-recommended response goal of 4 minutes *travel* time in suburban/urban areas. Therefore, green indicates the locations an engine could reach within this time, *assuming* it is in-station and encounters no unusual traffic delays. In addition, the computer mapping tool uses actual fire company speed limits per roadway type. Thus, the green projection is realistic for fire trucks with normal traffic present.

The purpose of computer response mapping is to determine and balance station locations. This geo-mapping design is then checked in the study against actual dispatch time data, which reflects actual response times. There also should be some overlap between station areas so that a second-due unit can have a chance of an adequate response time when it covers a call in another fire company’s first-due area.

This measure shows how the District’s two fire stations are well located in each of the two major population clusters in the District. However, the coastal and north of Highway 101 areas in between the two stations do not receive 4-minute coverage.

Finding #12: The District’s two fire station locations cannot provide 4-minute travel time coverage to suburban population density areas along the coastal plain and developed areas north of Highway 101.

Map #3b – Relocated Summerland Fire Station 4-Minute Engine Travel

Moving the Summerland Fire station easterly to the prior identified site only adds very small amount of 4-minute coverage to the east, and does not begin to close the 4-minute coverage gap along Highway 101.

Map #3c – Test Third Fire Station Site: 4-Minute Engine Travel

Maps #3c shows the 4-minute coverage from an identified test site at the Highway 101 interchange, on the north side, along Via Real. This map answers two questions. First, a third “middle” fire station can close the 4-minute gap along the center of the District and overlap partially into Summerland and Carpinteria. Second, moving the Summerland fire station this far east and only operating a two-fire-station plan does not begin to cover the most populated section of Summerland in 4 minutes travel time.

Finding #13: Relocating Station 2 east of Summerland does not provide adequate suburban/urban population density response time coverage in Summerland. The District is large enough to need three fire stations along the coastal plain if the service level policy decision is to provide 4-minute travel time coverage to the most populated neighborhoods in the District.

Map #4 – ISO Coverage Areas

This map displays the Insurance Service Office (ISO) requirement that stations cover a 1.5-mile *distance* response area. Depending on the road network in a department, the 1.5-mile measure usually equates to a 3.5- to 4.5-minute travel time. However, a 1.5-mile measure is a reasonable indicator of station spacing and overlap. As can be seen, the conservative ISO coverage is similar to the 4-minute travel time coverage in that only two fire stations cannot cover the entire coastal plain in 1.5 miles driving *distance*.

Map #5a – Concentration (First Alarm)

This map exhibit shows the *concentration* or massing of fire crews for serious fire or rescue calls. Building fires, in particular, require 15+ firefighters (per NFPA 1710) arriving within a reasonable time frame to work together and effectively to stop the escalation of an emergency. Otherwise, if too few firefighters arrive, or arrive too late in the fire's progress, the result is a greater alarm fire, which is more dangerous to the public and the firefighters.

The concentration map exhibits look at the District's ability to send a *minimum* of three engine companies (one via mutual aid), one rescue squad, and one chief officer to serious building fires within 8 minutes travel time (11 minutes from dispatch receipt time). This measure delivers only 12 firefighters (three firefighters per engine, two on the squad, plus command chief) that can arrive on-scene to work *simultaneously* and effectively to stop the spread of a serious building fire.

This map shows in **green** where the District's current fire station system should deliver the initial Effective Response Force. As can be seen, only the Summerland area receives this coverage due to the Montecito FPD engine. In Carpinteria, the Ventura County engine barely crosses into the east city limits in 8 minutes, and the Montecito FPD engine does not reach the city in 8 minutes. Thus, Carpinteria only receives the two District engines and one squad in 8 minutes travel time. The resultant 8 personnel are not sufficient to stop the spread of a serious building or wildland fire.

Finding #14: Given only two fire stations with a minimum of nine firefighters on duty, and the mutual aid engines not being close by, only the Summerland area of the District receives a partial First Alarm compliment of three engines and the rescue squad in 8 minutes travel. Carpinteria does not receive more than two fire engines in 8 minutes, and thus does not have timely, effective multiple-unit coverage to serious fires.

Map #5b – Montecito FPD First Alarm Coverage

Map #5b shows the 8-, 10-, and 12-minute travel time coverage from the closest Montecito FPD station. This illustrates why Carpinteria does not receive three-engine coverage in much less than 12 minutes travel, which is 4 minutes longer than any best practice recommendation for suburban/urban area serious fires.

Map #5c – Ventura County Fire First Alarm Coverage

This map shows the 8-, 10-, and 12-minute travel time coverage from the closest Ventura County station. This illustrates why Carpinteria does not receive three-engine coverage in much less than 10-12 minutes travel, which is 2 minutes at a minimum longer than any best practice recommendation for suburban/urban area serious fires.

Map #5d – Santa Barbara Ladder Truck Coverage

This map shows the 8-, 10-, and 12-minute travel time coverage from the closest City of Santa Barbara station, where the aerial ladder is located. This illustrates that none of the District is within 8 minutes travel of a ladder truck when needed for serious building fires.

Map #6 – Two District Engines Only at 8-Minute Travel

This map shows a different view of concentration by showing the 8-minute coverage of the two District engine companies. The green color shows the areas receiving two engines in 8 minutes travel time, which is the entire District.

Map #7 – One Battalion Chief at 8-Minute Travel

Map #7 displays the coverage for one Battalion Chief at 8 minutes travel time. The small and slightly faster command chief vehicle can cover most of the populated coastal plain areas of the District from its Fire Station 1 location.

Map #8 – One Santa Barbara Ladder Truck at 8-Minute Travel

Map #8 shows the coverage for the ladder truck unit at 8 minutes travel time. As shown on the multiple time measures map, the ladder truck barely gets into west Summerland in 8 minutes travel.

Finding #15: Given the ladder truck coverage from 10 to greater than 12 minutes, the District does not have timely ladder truck coverage, and it must be considered tactically a Second Alarm, longer response time resource.

Map #9 – All Incident Locations

Maps #9 shows, across a three-year period, the exact location for all incident types. It is apparent that there is a need for fire services on almost every street segment of the District. The greatest concentration of incidents is also where the District has located its two fire stations.

Map #10 – Emergency Medical Services and Rescue Incident Locations

This map further breaks out only the emergency medical and rescue call locations. With the majority of the calls for service being emergency medical, virtually all areas of the District need emergency medical services. Of special note is the number of EMS incidents in the coastal plain at the center of the District, where there is not 4-minute travel time coverage from either fire station.

Map #11 – All Fire Type Locations

This map identifies the location of all fires in the District for three years. All fires include any type of fire call, from auto to dumpster to building. There are obviously fewer fires than medical or rescue calls. Even given this, it is evident that both first-due engines in the District experience fires; the fires are more concentrated where the population is higher and the District resources are more concentrated.

Map #12 – Structure Fire Locations

Displayed in this map are the structure fire locations. While the structure fire count is a smaller subset of the total fire count, there are two meaningful findings from this map. First, there are still structure fires along most of the developed areas along the coast. The location of many of the building fires parallels the older and higher risk building types in the Carpinteria in which more significant risk, and the ISO-evaluated buildings, are more common. These areas and buildings are of significant fire and life loss risk to the cities. Second, fires in the more complicated building types must be controlled quickly or the losses will be very large. However,

as the 8-minute multiple-unit travel time maps identify, Carpinteria is does not receive more than two fire engines in 8 minutes, and thus does not have timely, effective multiple-unit coverage to serious fires.

Map #13 – Emergency Medical Services and Rescue Incident Location Densities

Map #13 examines, by mathematical density, where clusters of emergency medical services incident activity occurred. In this set, the darker density color plots the highest concentration of all incidents. This type of map makes the location of frequent workload more meaningful than just mapping the dots of all locations, as done in Map #10.

This perspective is important because the deployment system needs an overlap of units to ensure the delivery of multiple units when needed for serious incidents, or to handle simultaneous calls for service. For the District, this is true in both ends of the District, although more so in Carpinteria, where the incident demand has been the highest.

Finding #16: The District should have a unit distribution plan that provides a third unit to provide simultaneous incident coverage to both ends of the coastal plain in the District.

Map #14 – All Fire Location Densities

This map is similar to Map #13, but shows the hot spots of activity for all types of fires. There are several areas of the District that experience a more frequent occurrence of all types of fires. Given the small count of structure fires, a density plot was not created as the math sample size was too small to support meaningful density plots.

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SECTION 5—RESPONSE STATISTICAL ANALYSIS

5.1 HISTORICAL EFFECTIVENESS AND RELIABILITY OF RESPONSE—WHAT STATISTICS SAY ABOUT EXISTING SYSTEM PERFORMANCE

SOC ELEMENT 7 OF 8
RELIABILITY & HISTORICAL
RESPONSE EFFECTIVENESS
STUDIES

The maps described in Section 4 show the GIS-projected response times given perfect conditions with no competing calls, with and without traffic congestion, and units all in place. Examination of the actual response time data provides a picture of how response times are in the “real” world of simultaneous calls, rush hour traffic conditions, units out of position, and delayed travel time for events such as periods of severe weather.

5.1.1 Data Set Identification

The District provided continuous National Fire Incident System (NFIRS 5) incident records and computer-aided-dispatch (CAD) apparatus response data for the time period 1/1/2013-12/31/2015. NFIRS 5 data was analyzed for all three years and resulted in 5,543 incidents and 6,057 apparatus response records.

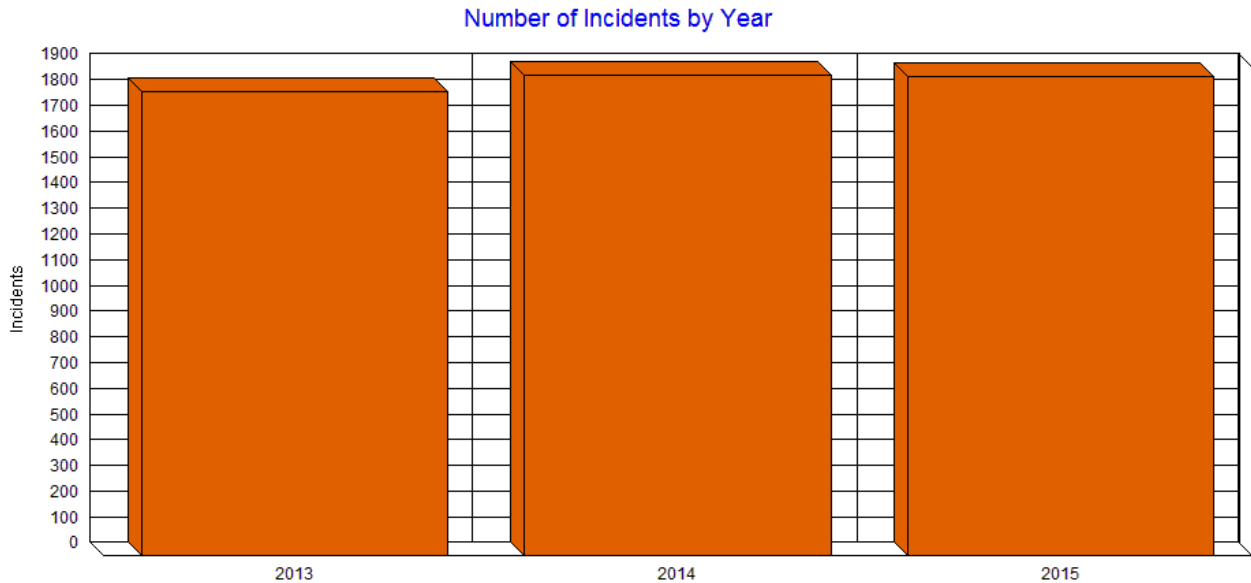
5.2 SERVICE DEMAND

In 2015, the District responded to 1,864 incidents. During this time period, District had a daily demand of more than 5.10 incidents, of which 3.10% were fire incidents, 67.22% were EMS incidents, and 29.68% were “Other” incident types. The quantity of Fire and EMS incidents grew within the 3-year study because incidents without an incident type (blank) were classified as miscellaneous “Other” types of incidents.

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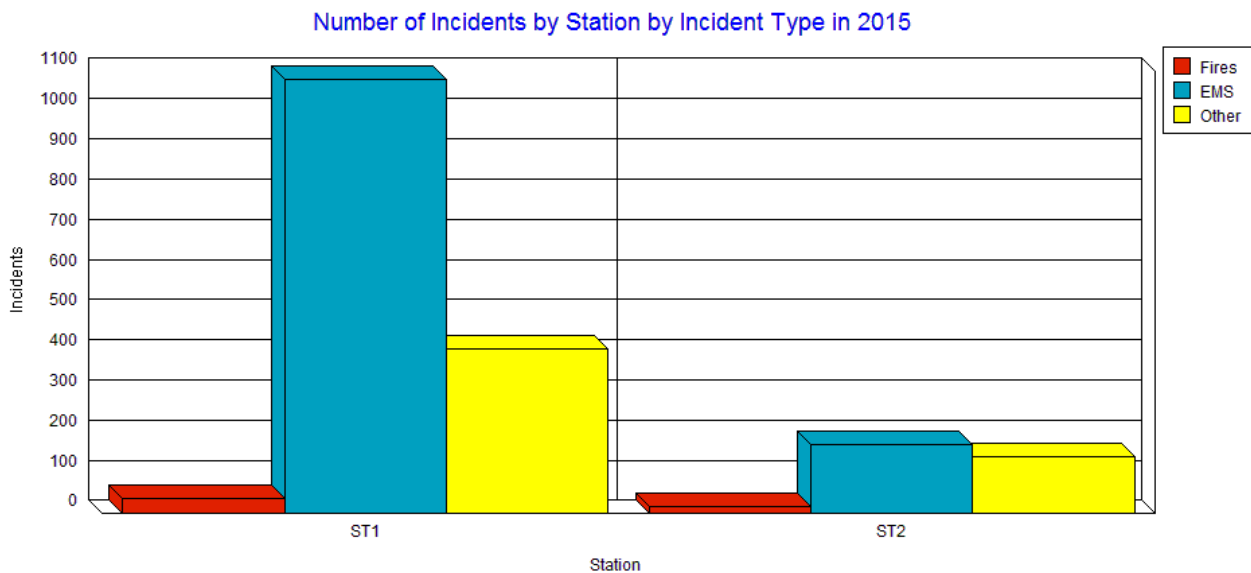
The District experienced an increase in incidents from 2013-2014, but a very slight decline from 2014-2015.

Figure 1—Number of Incidents by Year



The following graph depicts the number of incidents by incident type by reporting year. The number of EMS incidents is rising year to year. The number of fires is declining slightly from year to year:

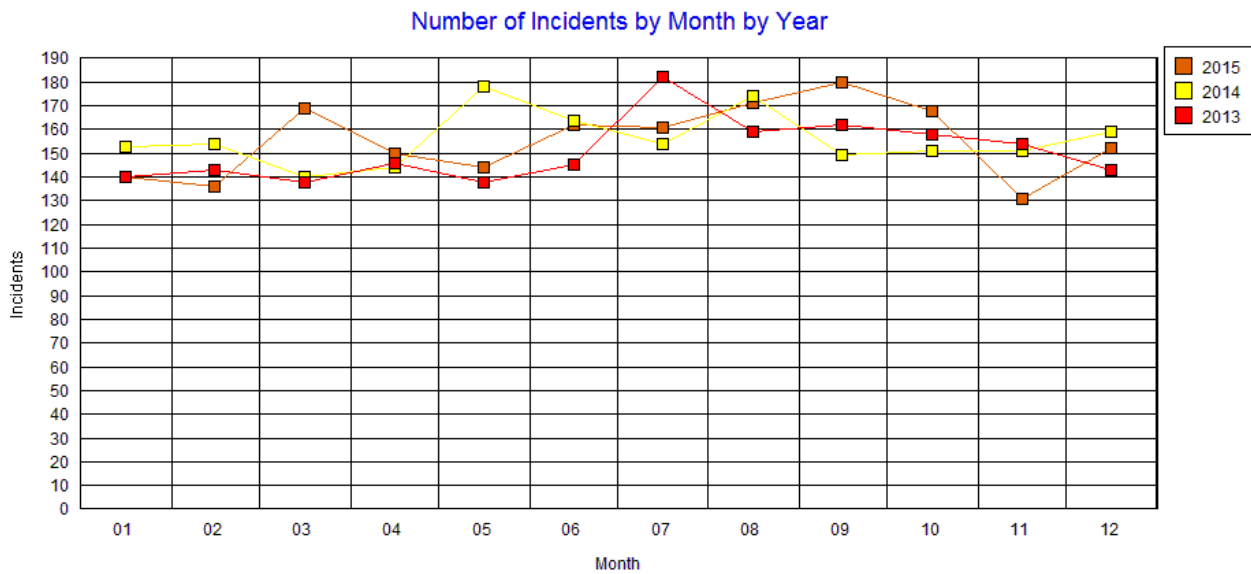
Figure 2—Number of Incidents by Station and Type in 2015



5.2.1 Breakdown of Incident Demand Over Time

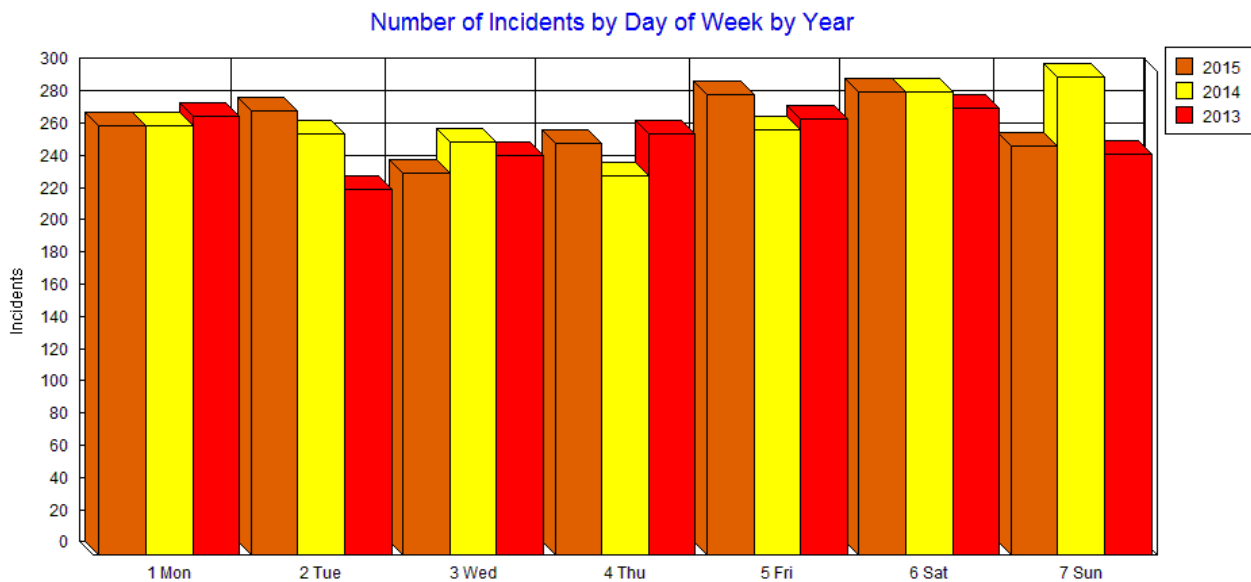
The number of incidents by month modulates between 130, and just above 180, with no dramatic seasonal pattern:

Figure 3—Number of Incidents by Month by Year



When broken down by day of week, incident activity tends to dip slightly mid-week:

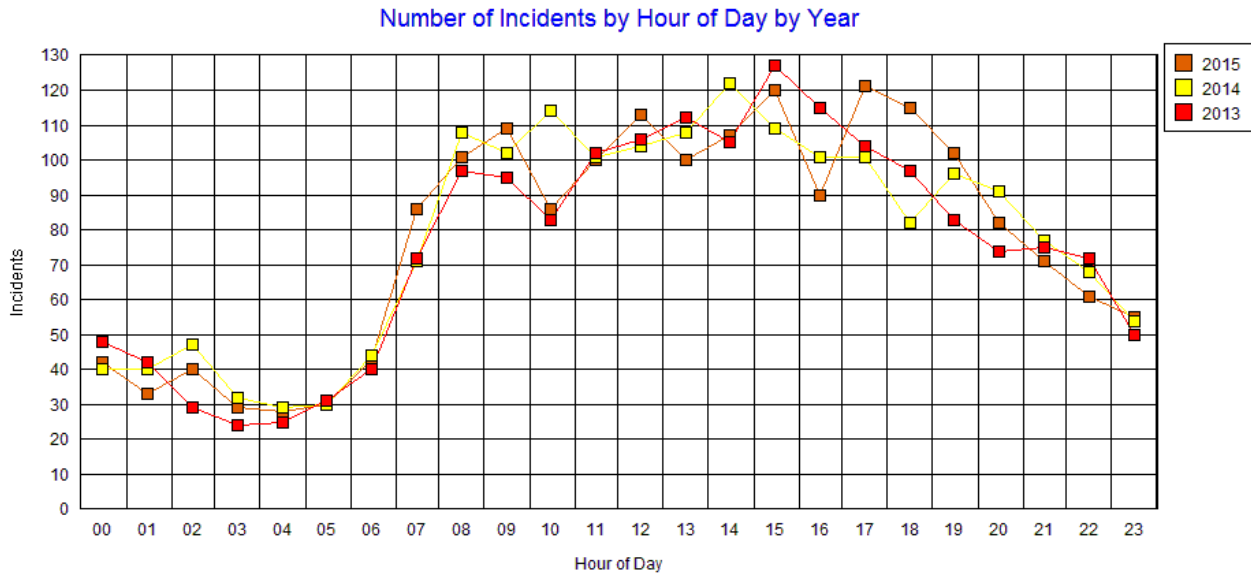
Figure 4—Number of Incidents by Day of Week by Year



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The following is the breakdown of incidents by hour of the day by year. Notice activity rises dramatically at 07:00, and begins to decline slowly at 18:00:

Figure 5—Number of Incidents by Hour of Day by Year



Finding #17: The District’s time-of-day, day-of-week, and month-of-year calls for service demands are very consistent. This means the District needs to operate a fairly consistent 24/7/365 response system.

5.2.2 Breakdown of Incident Demand by Type

The following table shows the activity rankings of incidents by incident quantity in 2015 where there were 5 or more such occurrences. Notice the strong ranking for EMS incidents and incidents that are cancelled before the apparatus reaches the scene. Building fires ranked 22nd place by volume. There were 10 building fires in 2015.

There are 1,867 incident records being analyzed.

Table 8—Incident Demand by Incident Type 2015

NFIRS Code # and Description	Quantity
321 EMS call, excluding vehicle accident with injury	1,041
611 Dispatched & canceled en route	169
322 Vehicle accident with injuries	66
700 False alarm or false call, other	60
300 Rescue, emergency medical call (EMS) call, other	60
324 Motor vehicle accident no injuries	48
400 Hazardous condition, other	29
510 Person in distress, other	28
554 Assist invalid	24
550 Public service assistance, other	20
500 Service call, other	19
444 Power line down	19
323 Motor vehicle/pedestrian accident (MV Ped)	15
600 Good intent call, other	13
531 Smoke or odor removal	13
412 Gas leak (natural gas or LPG)	13
561 Unauthorized burning	12
745 Alarm system sounded, no fire - unintentional	11
733 Smoke detector activation due to malfunction	11
553 Public service	11
311 Medical assist, assist EMS crew	10
111 Building fire	10
735 Alarm system sounded due to malfunction	9
100 Fire, other	9
551 Assist police or other governmental agency	8
520 Water problem, other	8

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NFIRS Code # and Description	Quantity
364 Surf rescue	8
140 Natural vegetation fire, other	8
154 Dumpster or other outside trash receptacle fire	7
740 Unintentional transmission of alarm, other	6
650 Steam, other gas mistaken for smoke, other	5
411 Gasoline or other flammable liquid spill	5
151 Outside rubbish, trash or waste fire	5

5.2.3 Simultaneous Analysis

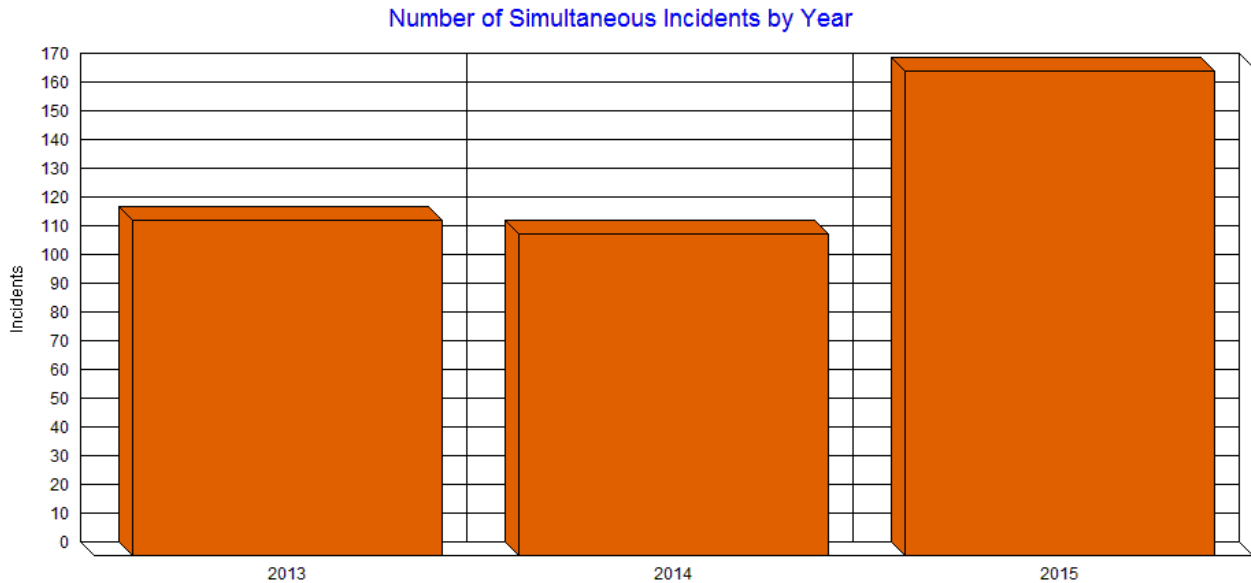
Simultaneous incidents are incidents that begin when other incidents are already underway. In 2015, 21.42% of incidents occurred while one or more other incidents were underway. The following table shows the percentage of simultaneous incidents broken-down by the number of simultaneous incidents.

Table 9—Simultaneous Incident Occurrences – Year 2015

Simultaneous Incidents	Percentage of Occurrences
1 or more simultaneous incidents	21.42%
2 or more simultaneous incidents	00.69%

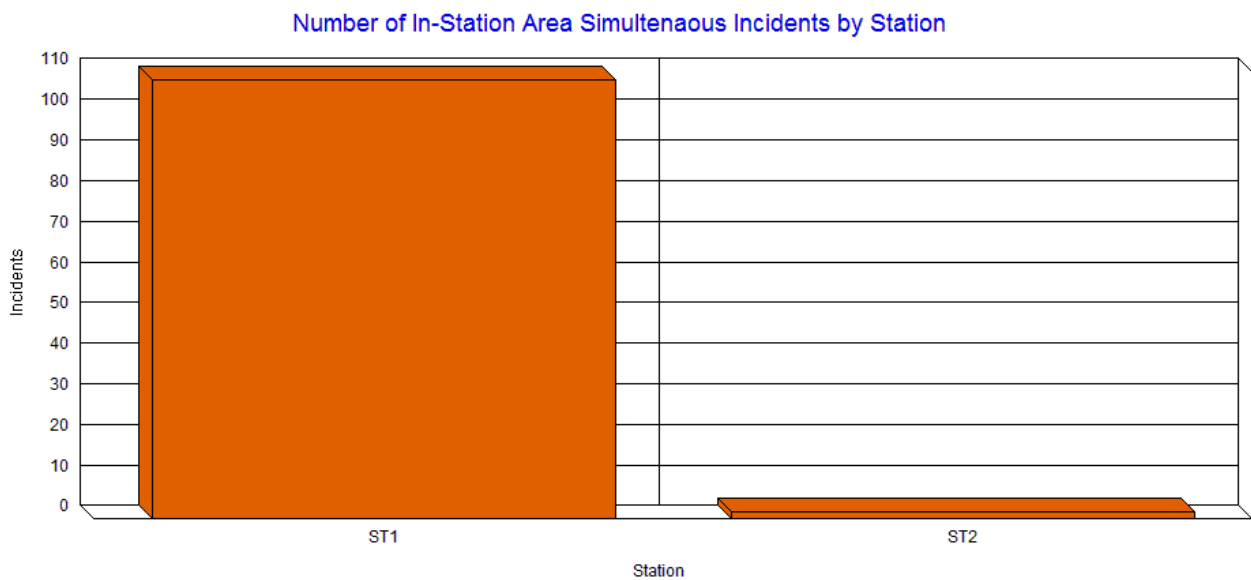
The following graph shows that the number of simultaneous incidents grew in 2015.

Figure 6—Number of Simultaneous Incidents by Year



The following graph illustrates the number of single-station simultaneous incidents by station area by year. Station 1 experiences the greatest number of simultaneous incidents.

Figure 7—Number of In-Station Area Simultaneous Incidents by Station



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5.2.4 Unit-Hour Utilization

The utilization percentage for apparatus is calculated by two primary factors: the number of responses and duration of responses. The following is a 2015 unit-hour utilization (UHU) summary for District engine and squad companies. The busiest companies are listed first.

Table 10—Unit-Hour Utilization – Year 2015

Hour	SQ61	ME61	ME62	E61
0:00	2.50%	0.85%	1.06%	0.31%
1:00	1.70%	0.35%	0.35%	0.08%
2:00	2.46%	0.73%	0.21%	0.20%
3:00	1.49%	0.71%	0.41%	0.15%
4:00	2.15%	1.02%	1.00%	0.00%
5:00	1.20%	1.31%	0.33%	0.05%
6:00	1.97%	1.12%	0.30%	0.03%
7:00	4.23%	1.75%	2.57%	0.44%
8:00	4.03%	1.50%	1.75%	0.07%
9:00	6.61%	2.53%	1.27%	0.32%
10:00	3.70%	2.02%	3.04%	0.25%
11:00	4.42%	3.03%	0.91%	0.17%
12:00	5.76%	2.88%	1.63%	0.61%
13:00	3.78%	2.08%	2.44%	0.34%
14:00	3.86%	2.55%	0.58%	0.39%
15:00	4.24%	3.84%	2.65%	0.30%
16:00	4.14%	2.17%	1.60%	0.58%
17:00	3.88%	2.36%	1.95%	0.18%
18:00	5.20%	3.31%	1.51%	0.22%
19:00	4.23%	2.56%	1.26%	0.38%
20:00	4.76%	2.22%	1.56%	0.26%
21:00	3.45%	2.26%	1.90%	0.32%
22:00	2.92%	0.80%	1.77%	0.02%
23:00	3.10%	1.83%	0.44%	0.00%
Overall	3.57%	1.91%	1.35%	0.24%
Responses	936	482	255	81

What should be the maximum utilization percentage on a firefighting unit? During the 9-hour daytime work period, when crews on a 24-hour shift need to also pay attention to apparatus checkout, station duties, training, public education, and paperwork, plus required physical training and meal breaks, Citygate believes the maximum commitment UHU per hour should not exceed 30%. Beyond that, the most important element to suffer will be training hours.

For a dedicated unit, such as an ambulance or low acuity squad working less than a 24-hour shift, then UHU can rise to 40-50% at a maximum. At that UHU level, peak hour squad crews must then have additional duty days for training only, and not responding to incidents, in order to meet their annual continuing education and training hours requirements.

In the District’s case, the modest incident volume per hour is not yet taxing the units to the point of needing another unit *solely* for peak hour workload. The units have the capacity for more incident load per hour *if there are not simultaneous* incidents.

Finding #18: The hourly incident demand by unit, and the rate of simultaneous incidents, are greatest in Station 1’s area. This is troublesome when there is not a closer unit than Station 2 to handle simultaneous incidents in the eastern District. The use of the squad is helpful, and should be continued on a full-time basis.

5.2.5 Aid Activity with Other Jurisdictions

The following table shows aid activity for the three reporting years. These numbers report data collected in the Mutual Aid section of NFIRS 5 data.

Table 11—2015 Incidents: Quantity – Aid Type

Aid Type	Quantity
1 Mutual Aid Received	11
2 Automatic Aid Received	37
3 Mutual Aid Given	9
4 Automatic Aid Given	85
Total	142

The District is just under twice as likely to give aid as to receive aid. While aid given or received is measurable, it is involved in only 8.4% of Fire Department incidents. Further, as the geographic measures in this study showed, the District is dependent on mutual aid for multiple-

unit coverage. As such, even while the District “gives” a bit more on mutual aid, it needs the cooperative coverage of three other fire departments to cover its serious emergencies.

5.3 RESPONSE TIME ANALYSIS

Once the types of incidents are quantified, incident analysis shifts to the time required to respond to those incidents. Fractile breakdowns track the percentage (and count the number) of incidents meeting defined criteria, such as the first apparatus to reach the scene within progressive time segments.

5.3.1 District-wide Response Time Performance

A resident or visitor of the District measures the speed of fire department response from the time assistance is requested until the assistance arrives. This measurement is called “Call to 1st Apparatus Arrival” (or “Call to Arrival”). Police and sheriff’s departments, under state law, act as a Public Safety Answering Point (PSAP) for 9-1-1 calls. All 9-1-1 calls for fire service in the District are received and dispatched under contract by the Montecito Fire Protection District Communications Center.

Based on national recommendations, Citygate’s response time test goal is for the 90% Call to Arrival to be 7 minutes (or 420 seconds). This is comprised of three component parts:

- Call Processing Time:** 1 minute (receive, determine need, alert crew)
- Turnout Time:** 2 minutes (notify, don required protective gear, get moving)
- Travel Time:** 4 minutes (travel time)

The following is the breakdown of fire dispatch call received to First Apparatus Arrival for the overall District and by station area by year *for fire and emergency medical* incidents:

Table 12—Call to Arrival Response Time (Minutes/Seconds) – 90% Performance

Station	2013	2014	2015
Department-Wide	08:33	08:18	07:29
Station 1	07:37	07:18	06:56
Station 2	10:30	10:30	10:05

While all of the call to arrival times to 90% of the emergent incidents in the table above are just past the Citygate recommended 7 minutes, *for Station 1*, the next set of tables will present the individual segments of total response time—dispatch time, crew turnout time, and travel time—to understand which measure(s) are responsible for the total time being longer than 7 minutes. It

also must be understood that the overall District-wide measure is too good, as the large quantity of incidents in Station 1 mask the very small number of incidents with long response times for Station 2. As such, the District should always report response time performance by station area, not only District-wide.

5.3.2 Dispatch Processing Time

Dispatch time: This measure is the time it takes to answer the 9-1-1 call transferred from the Sheriff to Montecito, determine the emergency, enter information into the computer-aided-dispatch system, and alert the closet crew. NFPA 1710’s advice is for 90% of the calls to be dispatched in 64 seconds. Where language barriers exist, or medical self-help instructions are needed, these calls should be dispatched within 120 seconds. The performance of the Montecito FPD Communications Center is:

Table 13—Dispatch Process Time (Minutes/Seconds) – 90% Performance

Station	2013	2014	2015
District-Wide	00:52	00:45	01:02
Station 1	00:50	00:44	00:59
Station 2	00:59	00:55	01:05

Finding #19: The performance of the Montecito Fire Protection District Communications Center is excellent and better than best practices at the 90% point.

5.3.3 Turnout Time

Turnout time: This measure is the time it takes for all crews to hear the dispatch message, don safety clothing, and begin moving the assigned apparatus.

Table 14—Turnout Time Performance (Minutes/Seconds) – 90% Performance

Station	2013	2014	2015
District-Wide	02:06	02:07	01:54
Station 1	02:05	02:00	01:49
Station 2	02:07	02:34	02:19

While the NFPA and CFAI recommends 60-80 seconds for turnout time, it has long been recognized as a standard rarely met in practical experience. Crews must not just hear the dispatch

message; they must also don the personal protective clothing mandated the Occupational Safety and Health Administration (OSHA) for the type of emergency. Citygate has long recommended that, due to this and the floor plan design of some stations, agencies can reasonably make a 2-minute crew turnout time to 90% of the emergency incidents.

Finding #20: The District’s turnout times are better than or close to Citygate’s recommendations, and continued emphasis must be placed on the crews attaining excellent turnout times.

5.3.4 Travel Time

Travel time: The District-wide travel time measures to all emergency incidents are shown hereafter. Travel time is defined as the time element between when the communications center is notified, either verbally or electronically, that the unit is en-route to the call, and when it arrives at the address or location street front (not the patient’s side).

Table 15—Travel Time Performance (Minutes/Seconds) – 90% Performance

Station	2013	2014	2015
District-Wide	06:36	06:17	06:50
Station 1	05:42	05:25	06:33
Station 2	08:33	08:28	08:35

NFPA Standard 1710 recommends a 4-minute travel time goal in urban and suburban areas. As seen in Table 15, all travel times are higher than this goal. There are several reasons for slower travel time, not all of which can be cost-effectively improved. Traffic congestion variation, non-grid road network areas, open spaces, and limited cross access boulevards all affect travel time.

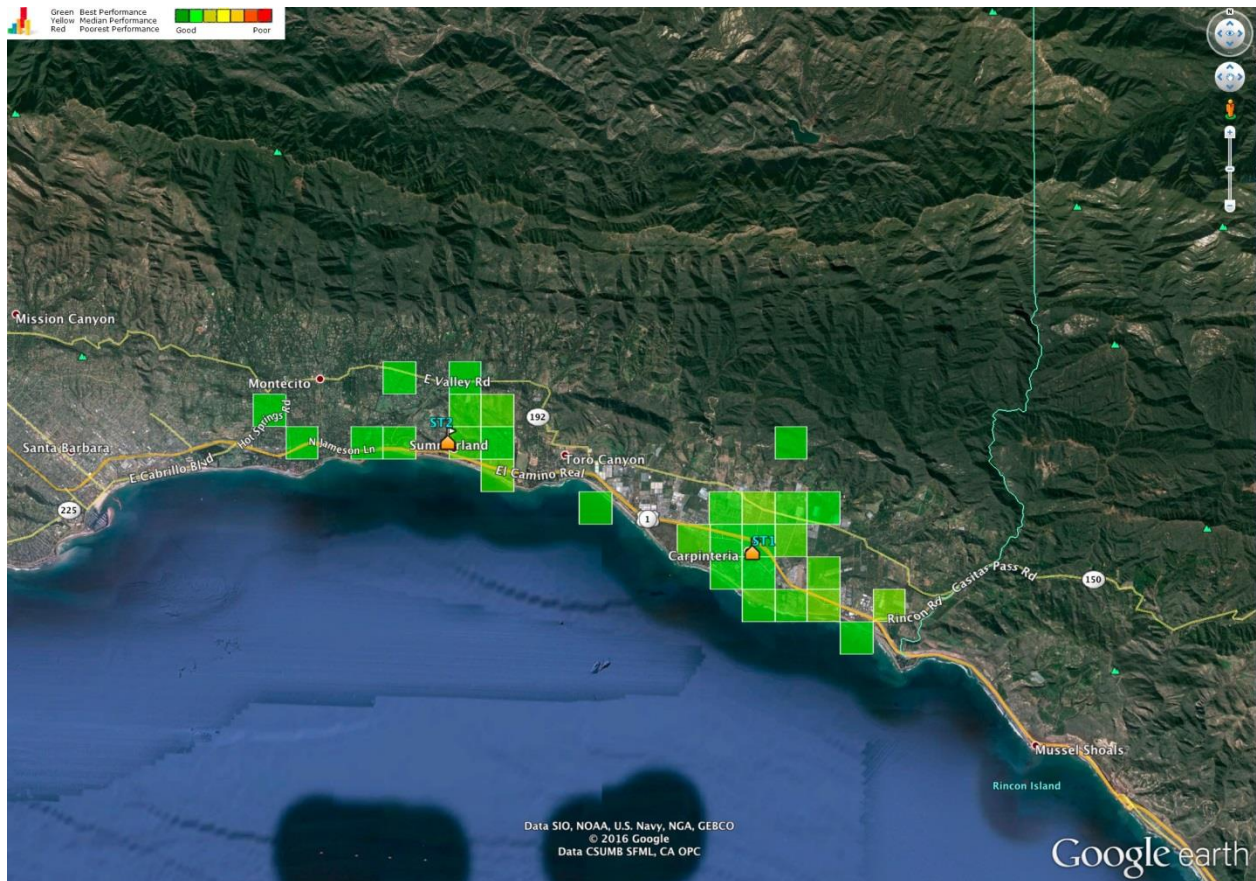
Finding #21: The District’s fire station areas are too large, on a very constrained road network, to deliver travel times less than 6 minutes. Some of this is made worse when both Station 1 units are committed to an incident and Station 2 must cover from farther away. The only way to improve response times is to increase unit availability by properly locating a third unit to support the eastern District and limit the amount of occurrences Station 2 must respond all the way into Carpinteria.

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5.3.5 Travel Time Results on Geography

The following map shows, by small grid area, where the Department in 2015 delivered travel times of 6 minutes or less for the first-due unit.

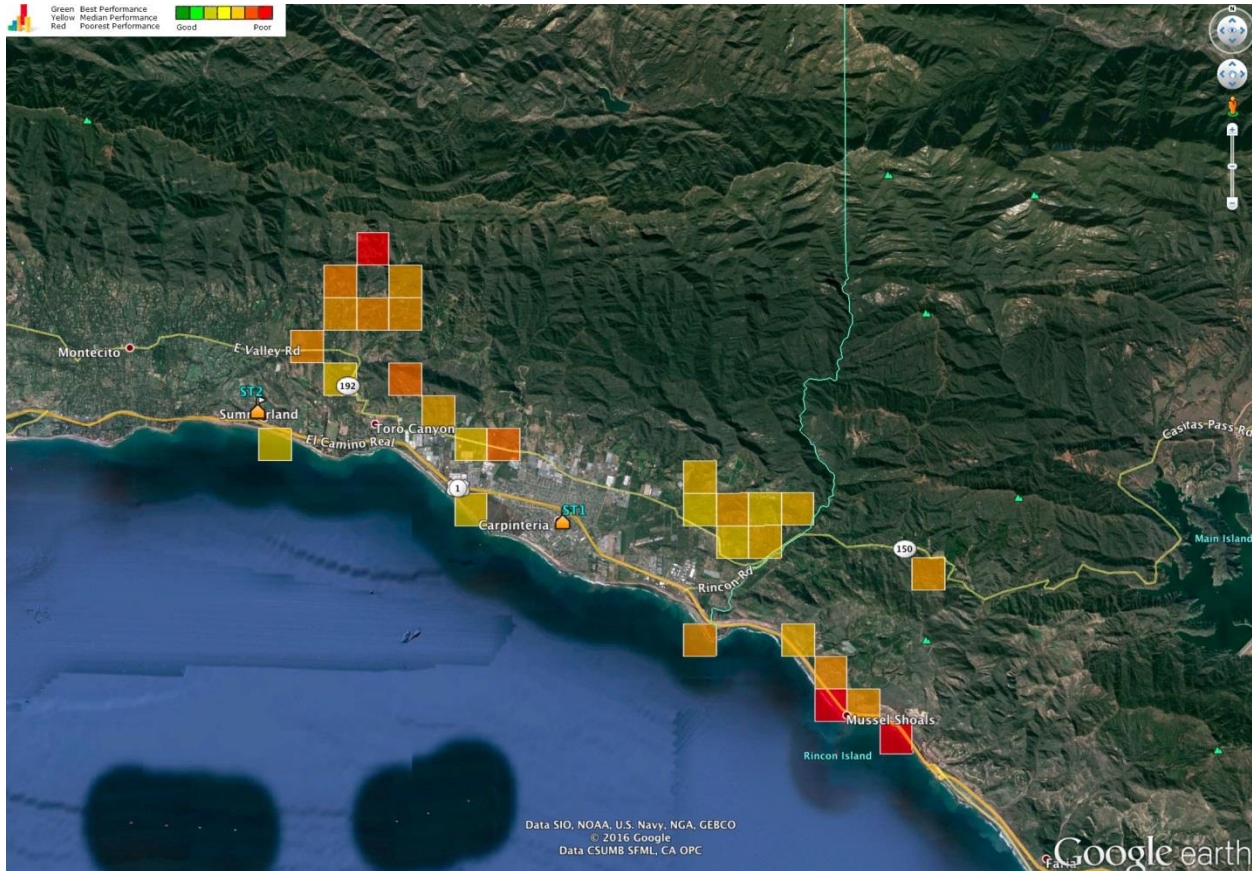
Figure 8—6 Minutes or Less Travel Time for First-Due Units – Year 2015



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The following map shows where travel time was at or greater than 10 minutes.

Figure 9—10 Minutes or More Travel Time for First-Due Units – Year 2015



As can be seen, the District does deliver travel time in less than 6 minutes *in the coastal plain* when the closest fire station is available to respond.

5.3.6 First Alarm (Effective Response Force) Performance to Building Fires

First Alarm or Effective Response Force Performance to Building Fires: The District responds to building fires with two engines, one rescue squad and one Battalion Chief, plus mutual aid.

This response force is needed to provide enough units when fires are very serious at the time of the 9-1-1 call. However, in a given year, there are few building fires in each station area where the entire force including mutual aid units are needed at the incident location. Therefore, the following multiple-unit response time sample size is very small.

The best representation for the First Alarm or Effective Response Force units is **travel** time across the District’s street network. The NFPA 1710 recommendation is for all units to arrive

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within 8 minutes travel time. The numbers in parentheses next to the arrival time of the last due unit is the number of occurrences for that year per station area. The reader is cautioned that some of these sample sizes are very small and can readily change year-to-year depending on the exact locations of serious fires and the various units’ availability.

A “no occurrence” (designated by a blank cell) simply means that there were no building fires in the station areas listed where **all** of the units were needed at the emergency:

**Table 16—Travel Time for Effective Response Force Incidents by Year (Minutes/Seconds)
– 90% Performance**

Arrival	2013	2014	2015
1st	06:41	06:07	06:50
2nd	18:10 (9)	14:03 (10)	06:51 (209)
3rd	18:28 (4)	28:44 (4)	07:58 (12)
4th	12:34 (1)	15:19 (1)	12:21 (3)

The increased use of the squad is providing a timely second-due unit in 2015 that did not exist as much in the prior two years.

Finding #22: The District’s *travel* time response time for the fourth unit to serious fires, known as the Effective Response Force (ERF or First Alarm) shows that, absent another full firefighting unit located inside the District, the multiple-unit travel times cannot be lowered to suburban or urban best practice recommendations due to the distance outside the District that the mutual aid stations are located.

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SECTION 6—SOC EVALUATION AND RECOMMENDATION

6.1 OVERALL EVALUATION

SOC ELEMENT 8 OF 8
OVERALL EVALUATION

The Fire District serves a diverse, spaced out population pattern that, in some locations, is geographically challenged with open spaces, and limited cross access boulevards which limits quick response times. Population drives service demand, and development brings population. The District has historically funded the best fire services it can afford and, even post-recession, continues to do so. The incident volumes in the District are modest, and reflective of the strong socioeconomics of the area.

For the foreseeable future, the District will need both a first-due firefighting unit and Effective Response Force (First Alarm) coverage in all parts of the populated areas of the District, consistent with best practices, if the risk of fire is to be limited to only part of the inside of an affected building, or wildland fires are to be stopped when small. While residential fire sprinklers are now included in the state fire codes, it will be decades before the existing housing stock will be upgraded or replaced, even as these codes are applied to all new construction.

While the volume and response times to EMS incidents consume much of the District’s attention, all communities need a “stand-by and readily available” firefighting force for when fires break out. If the District wants to continue in providing the three elements below, and be *less dependent* on mutual aid, the District can slightly increase its deployment plan by fielding a third fire engine at the center of the District:

- ◆ Provide equitable response times to all similar risk neighborhoods
- ◆ Provide for depth of response when multiple incidents occur
- ◆ Provide for a concentration of response forces for high-risk properties.

For its current risks and likely desired outcomes, the District does not have a sufficient quantity of fire engines (pumpers) spaced across the District’s most populated areas.

While the District does not operate an aerial ladder truck, this is the one resource for which Citygate believes the District can continue to depend on mutual aid given the low number of very serious structure fires. In most building fires, and in all wildland fires, what makes a difference in controlling fires in a small fire department is the ability to get water on the fire quickly. This is, in effect, the speed of the attack, with enough personnel and pumping engines to stop the spread of the fire before the mutual aid units can even arrive.

The District has started to expand the rescue squad staffing and availability, and it *is* helping with simultaneous incidents in the eastern District. However, while the two-firefighter squad assists on firefighting staffing, it cannot itself apply large water streams on a building fire. If Engine 1 is committed to a prior incident, the squad cannot handle a building fire effectively until Engine 2 or mutual aid arrives.

Given that the District can now afford to staff the squad 24/7/365 with two firefighters, when it can afford to staff that crew with three personnel, then the District would be better served with a third staffed fire engine, ideally located in the center of the District’s coastal plain to provide a quicker second unit to either population center. As each end of the District can get a mutual aid unit in a slightly longer time frame, three District engines plus a mutual aid engine means 12 firefighters in less than 12 minutes driving time on four pumping units. This would be a significant increase in District fire control capacity.

The first deployment step for the District Board in the near-term is to adopt updated and complete performance measures from which to set forth service expectations and, on an annual budget basis, monitor and fund fire crew performance.

6.1.1 Deployment Recommendation

Based on the technical analysis and findings contained in this Standards of Response Coverage study, Citygate offers the following overall deployment recommendations:

Recommendation #10: Adopt Deployment Measures Policies: The District elected officials should adopt updated, complete performance measures to direct fire crew planning and to monitor the operation of the Department. The measures of time should be designed to save patients where medically possible and to keep small but serious fires from becoming greater alarm fires. With this in mind, Citygate recommends the following measures:

10.1 Distribution of Fire Stations: To treat medical patients and control small fires, the first-due unit should arrive within 7 minutes, 90% of the time from the receipt of the call in the Montecito FPD Communications Center. This equates to a 1-minute dispatch time, a 2-minute company turnout time, and a 4-minute drive time in the most populated areas.

10.2 Multiple-Unit Effective Response Force for Serious Emergencies: To confine fires near the room of origin, to stop wildland fires to under three acres when noticed promptly, and to treat up to five medical patients at once, a multiple-unit response of a *minimum* of three District engines *plus* one from mutual aid and one Battalion Chief totaling 13 personnel should arrive within 11:00 minutes from the time of 9-1-1 call receipt in fire dispatch, 90% of the time. This equates to a 1-minute dispatch time, 2-minute company turnout time, and 8-minute drive time spacing for multiple units in the most populated areas.

10.3 Hazardous Materials Response: Provide hazardous materials response designed to protect the community from the hazards associated with uncontrolled release of hazardous and toxic materials. The fundamental mission of the District response is to minimize or halt the release of a hazardous substance so it has minimal impact on the community. It can achieve this with a travel time for the first company capable of investigating a HazMat release at the operations level within 6 minutes travel time or less than 90% of the time. After size-up and scene evaluation is completed, a determination will be made whether to request additional resources from the District's multiple-agency hazardous materials response partnership.

10.4 Technical Rescue: Respond to technical rescue emergencies as efficiently and effectively as possible with enough trained personnel to facilitate a successful rescue. Achieve a travel time for the first company in for size-up of the rescue within 6 minutes travel time or less 90% of the time. Assemble additional resources for technical rescue capable of initiating a rescue within a total response time of 11 minutes, 90% of the time. Safely complete rescue/extrication to ensure delivery of patient to a definitive care facility.

10.5 Emergency Medical Services: The District should continue to provide first responder medical services to all neighborhoods.

Recommendation #11: The District needs to maintain acceptable fire crew turnout times for all crews at all stations.

Recommendation #12: The District should totally replace Fire Station 2 at a location near the current location in the middle of the Summerland area.

Recommendation #13: As revenues allow, the District should add a third fire station with a three-person fire engine at a location near the I-101 and Via Real.

Recommendation #14: If the parcel and financing for the third fire station can be identified, Citygate would offer this advice on the programming and priority of facility improvements:

14.1 Rebuild Station 2 as soon as possible. Its size should be reduced to that of a single company fire station, allowing for one reserve apparatus. The training/community room and other expansive spaces can be eliminated.

14.2 Acquire a parcel for a third fire station in the middle of the District. If land space and economics allow, this station should have a training room, reserve apparatus space, and modest outdoor space for training. If revenues further support, the District's headquarters spaces could be added to this facility, in place of leasing space office space in business parks, where the staff is separated from fire crews and there is limited fire engine parking for meetings.

14.3 As revenues allow, upgrade and repair Fire Station 1 to current seismic requirements, fire crew needs, and California Essential Facility Act requirements.

SECTION 7—HEADQUARTERS SUPPORT FUNCTIONS STAFFING AND FACILITIES ADEQUACY REVIEW

7.1 INTRODUCTION

The District engaged Citygate Associates to conduct a high-level review of the headquarters and support staff functions of the Department, along with a facilities review as a supplement to our Standards of Cover review. It is considered a good practice to corroborate that the headquarters and support functions are in alignment with the response operations. This ensures that not only are responses timely, but that the personnel are well trained, properly supported, and that enough prevention activities have been performed to reduce calls for service.

The methodology that Citygate used consisted of two steps: a review of the Department’s supporting documents for each of the headquarters and support sections, and interviews with the lead personnel in each section. Upon completion of these research activities, Citygate developed tentative findings and recommendations. These findings and recommendations were then fact-checked by the management team to ensure that Citygate understood the facts correctly. Once these steps were completed, the Final Report was developed to give context to the findings and recommendations.

7.2 MANAGEMENT ORGANIZATION

National Fire Protection Agency (NFPA) 1201² states in part, “the [department] shall have a leader and organizational structure that facilitates efficient and effective management of its resources to carry out its mandate as required [in its mission statement].”

A fire department needs a management organization that is properly sized, adequately trained, and appropriately supported. There are increasing regulations to comply with in operating fire services, and the proper hiring, training, and supervision of response employees requires an equally serious commitment to leadership and general management functions.

The District’s management organization consists of 1 Fire Chief, 3 Battalion Chiefs, 1 Fire Marshal, 1.5 Fire Prevention Officers, 1 Executive Assistant, and 1 Administrative Assistant as shown in Figure 10, totaling 8.5 total administration personnel. Other functions such as payroll, fleet maintenance, dispatching, and legal services are contracted out.

² NFPA 1201 – Standard for Providing Emergency Services to the Public (2015 Edition)

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Figure 10—District Management Organization

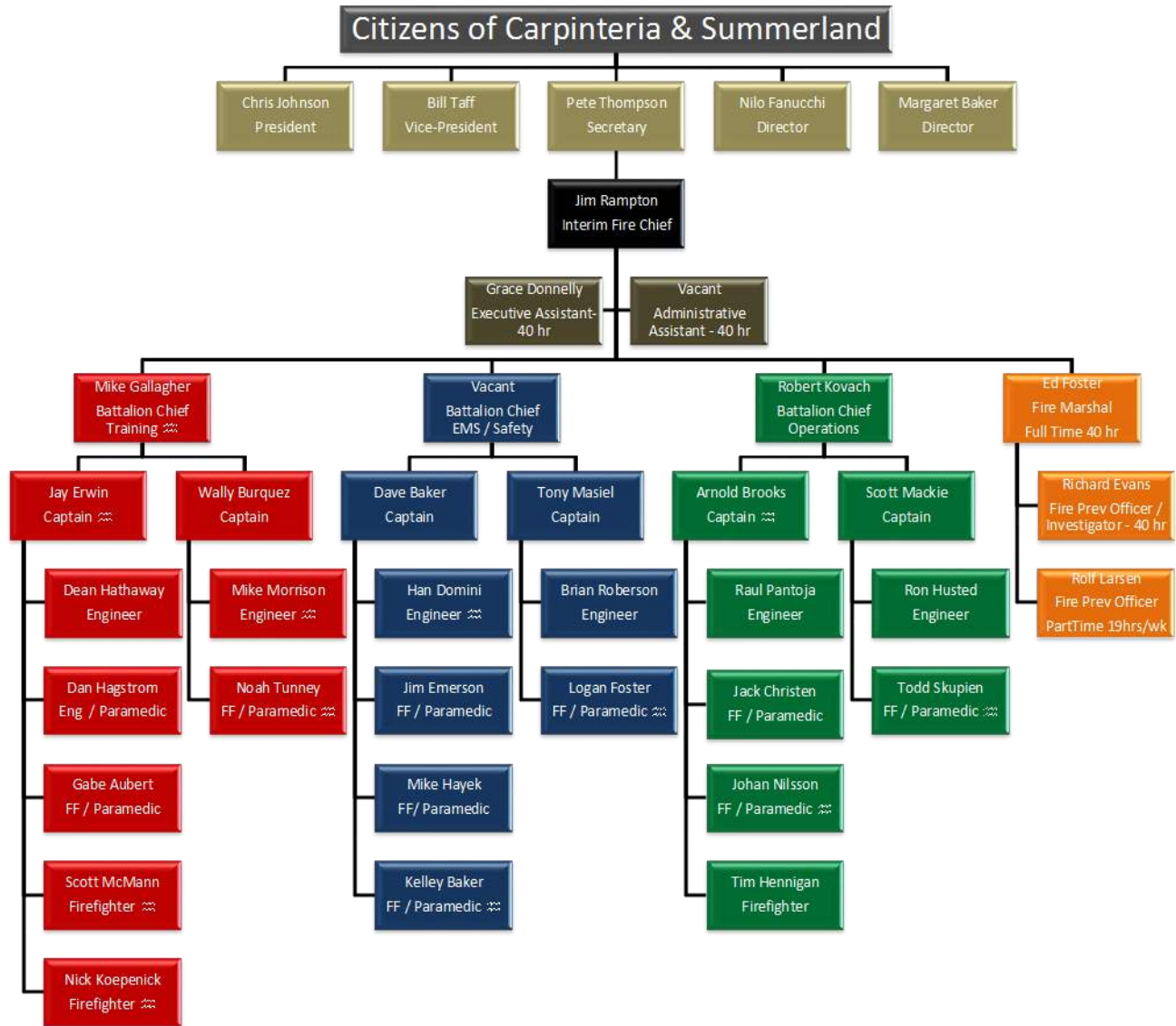


Figure 10 depicts the minimal management structure appropriate to meet the operational and support needs of a two-station fire protection district, including an effective chain of command and manageable span of control.

While the organization is currently able to meet mandated responsibilities, it lacks sufficient capacity and depth to conduct organizational performance benchmarking / ongoing evaluation, long-term strategic planning, risk analysis, and more effective community engagement. Many daily and periodic support service needs are handled by the on-duty personnel as “program specialists” under the overall guidance of one of the three Battalion Chiefs.

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Strengths of the fire management organization include a commitment to team success over individual success, leadership excellence, depth of experience, collaboration with other external partners, community support, and commitment to strengthen the District to meet the challenges of the future.

Weaknesses identified include a lack of capacity to adequately address current, much less anticipated future, workloads relative to internal support services, contract administration, facility replacement, and repairs, to name a few. There is little coordination across the three shifts other than what the Fire Chief provides to each Battalion Chief, as all three Battalion Chiefs are not on duty at the same time. Critical programs, such as training and EMS quality assurance, receive part-time attention at best.

During our listening sessions (described in Section 3 of this report) we received many comments that, over the years and across multiple management teams, some aspects of the District's headquarters services were not at all, or not consistently, performed to published best practices or Cal/OSHA requirements. There are incomplete historical records, and some of these comments could not be validated. Nor was it within the scope of Citygate's study to conduct a forensic, retrospective audit. However, in Citygate's experience, what we heard was entirely plausible as small and even large agencies struggle with providing headquarters services to best practices or even OSHA standards. There are a variety of reasons for this, ranging from a lack of needed staff technical skills to not funding enough positions to perform all the work. Citygate reviewed current records and ascertained, through follow-up questions, how the Department is performing at present, as benchmarked to best practices and Cal/OSHA standards.

While the headquarters team is the smallest possible, it cannot do everything effectively, including developing future chief officers. The District has no clear second-in-command in the Fire Chief's absence, and no back-up for a chief officer whom might need long-term illness or injury leave. Stated this way, the team only functions when everyone is available and able to work long hours to make ends meet.

The headquarters team also lacks the time capacity to enhance internal processes and communications. In addition, the management organization sees a need to improve its political acuity relative to global outside agency policy decisions, internal hierarchical decision-making, and ability to meet and collaborate as a team.

Opportunities identified include: better utilization of technology, particularly relative to maintaining reliable data for performance analysis; strategic planning; exploring innovative ways to address emergency medical care issues; continued collaboration with the County Fire Chiefs Association on regional public safety issues and initiatives; forming stronger internal and external partnerships; leveraging training calendars; and seeking agency accreditation.

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Threats identified include budget pressures, the age and repair needs of the District’s facilities, the Affordable Care Act (ACA), unfunded state mandates, safety equipment costs, and continually changing state fire training standards.

Qualifications for chief officers are consistent with recognized best practices, including a combination of undergraduate college-level education, organizational experience, and professional training and certifications. While outside formal education and training is essential, so too is the on the job training coaching and mentorship in developing management and administration skills *in addition* to those of being an effective emergency incident commander.

The Fire Chief is the executive officer that has final authority for supervision and planning for all of the District’s business functions, from fiscal to human resources, to legal services, multiple-agency partnerships, and the Board of Directors. They must spend considerable time on these activities as there is no city manager or executive officer to handle these items. As such, the Fire Chief does not have enough time to completely handle the internal supervision and coordination of the three line shifts and the headquarters staff. The end result is that something suffers based on the priority of the week due to internal or external issues.

Departments slightly larger than the District typically have a formal second-in-command chief, titled as an Assistant Chief or Deputy Fire Chief. They provide internal continuity across the three shifts and exercise quality oversight on training and internal services. This frees up the Fire Chief for leadership, planning, and outside agency coordination time.

To add an Assistant Fire Chief at this time is not only costly, but does not allow for additional succession training for Fire Captains who desire to develop into chief officers. Another way small and even large fire departments address this need is to add a “staff” Fire Captain on a 40-hour week to assist the Fire Chief with the coordination of internal services and the facilitation of special projects or District issues, such as preparing an annual budget.

Citygate believes the adding a staff Fire Captain would improve headquarters services at the most cost effective point, while providing valuable internal staff issues training to Fire Captains. Typically, such a position is open to interested personnel, and then rotated on two-year cycles. The drawback to the staff captain approach is that there is still no second-in-command to the Fire Chief, except for the on-duty Battalion Chief.

If the Fire Chief were to be absent for a long period of time, a Battalion Chief can move up and act as Fire Chief, but the staff is still one person short. While a Fire Captain can function as a Battalion Chief, they may not have experience or training with administrative duties. If there were one or more experienced staff captains, they could more readily assist with general administrative duties.

Finding #23: The Department’s management organization is under-sized to effectively address current and anticipated future workloads.

Recommendation #15: The headquarters team should be increased with one staff Fire Captain on a 40-hour week schedule to increase administrative capacity and provide depth for succession planning and long-term absence relief.

7.3 FIRE PREVENTION

The Fire Prevention Bureau has a staff of 2.5 personnel as shown in Figure 10. Prior to the recession, the Bureau had another 2.5 personnel, including a secretary, Public Information Officer/Educator, and a vegetation management inspector for wildland fuel reduction.

Fire Prevention currently provides a variety of services typical of a suburban fire department, including development/building plan review and related construction/occupancy inspections; fire protection systems plan review and related construction inspections; state-mandated fire and life safety inspections in non-residential occupancies; and wildland fuel mitigation programs.

With the prior staffing levels, the Fire Prevention Bureau used a 3-year rotation for the fire companies to complete the inspection program for lower risk businesses, while the Bureau staff conducted fire code-mandated and school inspections. With current staffing, the Bureau staff are only completing new construction plan checks and inspections. Some mandated and hazardous materials inspections are completed. There are upwards of 900 commercial properties in the District, but staff does not have, at present, a complete list of ongoing inspection completions. The Bureau staff also handles special use permits for things such as special events, polo grounds, and tent permits

The part-time inspector handles vegetation management, ad hoc complaints, some defensible space grants, and annual weed abatement. There are several hundred parcels noticed for weed abatement, and the staff educates for owner compliance.

Public education programs are completed upon request by the fire crews.

Plan check fees are charged for new construction. The Bureau does not issue, inspect, or charge as the Fire Code allows for annual operating permits in businesses that use hazardous materials or processes. The Bureau does not have the tracking software, office support staff, and billing systems to do so.

The fire inspector does investigate fire cause and conducts limited arson investigations. For serious fires, the District calls in the regional Arson Task Force.

Finding #24: The Fire Prevention Bureau is staffed to meet the minimum needs of a fire district of the District’s size and needs.

Finding #25: The Fire Prevention Bureau does not have adequate record keeping systems to track and schedule work demands, nor the office support staff to grow permit programs.

Recommendation #16: The Fire Chief and Fire Prevention Bureau need to internally triage inspection and program priorities on a multiple-year rotational basis to accomplish mandated inspections and wildland fuel management.

Recommendation #17: Fire Prevention routine inspections and public education can continue to be handled by the fire crews.

Recommendation #18: When the economy is growing as at present, the District would be better off not hiring more permanent staff, but to contract out plan check, and even complex inspections, to private sector companies and charge the appropriate fees to the applicant to cover the costs. Many smaller cities do this, including Carpinteria.

7.4 TRAINING DIVISION

The Training Division is responsible for all departmental education and training, except fire prevention training, which is handled by the Fire Prevention Bureau.

The training program is led by a shift Battalion Chief. The Department has an annual training plan and tracks the subject hours, by employee, annually for mandated classes and certifications.

Table 17 summarizes recommended training standards for firefighters in California.

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Table 17—Recommended Firefighter Training¹

Subject or Skill	Annual Hours	Multi-Year Hours
EMT - Continuing Education ²		24
Cardio-Pulmonary Resuscitation (CPR) ³		4
Automatic External Defibrillator (AED) ³		2
Bloodborne Pathogens	2	
HazMat First Responder Operational	8	
Noise Exposure	1	
Respiratory Protection	1	
Confined Space Rescue - Awareness	7	
General Fire and Rescue Skills ⁴	240	
Sexual Harassment ⁵		2
Totals	259	32

¹ Dowdle, M. & Schoonover, D. (2007) Training Mandates Study for the Fire Service (San Jose Fire Department)

² Required every 2 years

³ Required every 3 years

⁴ To include 4 multi-company drills, 2 night drills, 16 hours officer training, and 12 hours driver/operator training

⁵ Supervisors only

As Table 17 shows, the District should be providing a *minimum* of approximately 259 hours of training annually for every response employee, and 291 hours on alternate years. A review of the District’s 2015 training records indicates that 11 of the District’s 28 response personnel met the recommended minimum training hours. The 90th percentile accomplishment for the 28 employees was 137 hours; however, three of those employees were on medical leave for three or more months that year. These records suggest that the District is clearly attempting to meet recommended best practices for annual training and education; however, it appears to be challenged to achieve that objective for all employees.

Finding #26: While not managed by a full-time training officer, the District’s training program is designed to and attempts to meet current recommended annual training best practices. The program also depends on the line Fire Captains to assist the shift-based Battalion Chief. This training program design is typical in smaller departments, and can meet the needs of the District when given the proper oversight to ensure quality and compliance to safety standards.

7.5 SAFETY/RISK MANAGEMENT

Although there are no mandates requiring that a jurisdiction provide fire protection services, if it chooses to do so, then federal and state regulations specify how to do it safely for the personnel providing the service and the public.

Provision of firefighting and emergency medical services is a risk-intensive enterprise. The goal of a risk management program is to minimize the risks associated with the nature of the business, including limiting the occurrence and severity of any resultant occupational injuries to the extent possible. For firefighters, the goal is to ensure that firefighters arrive home safely at the end of each shift and enjoy a normal quality of life.

Among the necessary elements for a fire department is a safety orientation for new employees, a hazard communications system for employees to communicate hazards to supervisors, the Cal/OSHA process for post-injury reviews, the required annual report of injuries, and a standard for safe work plans.

While NFPA has a number of standards that address safety issues, NFPA 1500 *Standard on Fire Department Occupational Safety and Health Program* and NFPA 1501 *Standard for Fire Department Safety Officer* are the umbrella documents that model the approach that every fire department should take in regards to the safety and health of its firefighters, which, in turn, impacts the safety and health of the public they serve.

NFPA 1500 states, “There must be a fundamental behavioral change in how fire fighters and fire departments address fire service occupational safety. In turn, they must continue to educate their members and, most importantly, the administration and citizens to what the hazards are of the firefighting profession. The utilization and implementation of this standard can go a long way in reducing the staggering statistics involving fire fighter fatalities and injuries, *but only if given the training and resources to do so.*” [Emphasis added]

NFPA 1500's Component Analysis Chart recommends that a fire department's risk management plan contain the following elements:

- ◆ Fire department organizational statement
- ◆ Risk management plan
- ◆ Safety and health policy
- ◆ Roles and responsibilities
- ◆ Occupational safety and health committee
- ◆ Record keeping
- ◆ Incident safety and health officer
- ◆ Laws, codes, and standards
- ◆ Training and education
- ◆ Accident prevention
- ◆ Accident investigation, procedures, and review
- ◆ Record management and data analysis
- ◆ Apparatus and equipment
- ◆ Facility inspections
- ◆ Health maintenance
- ◆ Liaison
- ◆ Occupational safety and health officer
- ◆ Infection control
- ◆ Critical incident stress management
- ◆ Post-incident analysis.

In addition to NFPA 1500, a number of other NFPA standards apply to firefighter safety and health:

- ◆ NFPA 1250 *Recommended Practice in Emergency Service Organizational Risk Management*. This standard outlines a model risk management program to assist in reducing the risk to individuals, the emergency services, and the jurisdiction.

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- ◆ NFPA 1403 *Standard on Live Fire Training Evolutions*. This standard contains minimum requirements for conducting live-fire training.
- ◆ NFPA 1404 *Standard for Fire Service Respiratory Protection Training*. This standard covers the proper use, inspection, maintenance, and program administration of self-contained breathing apparatus (SCBA).
- ◆ NFPA 1451 *Standard for a Fire Service Vehicle Operations Training Program*. This standard establishes the minimum training and record-keeping requirements for fire department emergency vehicle operations training.
- ◆ NFPA 1501 *Standard for Fire Department Safety Officer*. This standard contains minimum requirements for the assignment, duties, and responsibilities of a health and safety officer (HSO) and an incident safety officer (ISO) for a fire department.
- ◆ NFPA 1582 *Standard on Comprehensive Occupational Medical Program for Fire Departments*. This standard contains descriptive requirements for a comprehensive occupational medical program for fire departments.
- ◆ NFPA 1583 *Standard on Health-Related Fitness Programs for Fire Department Members*. This standard establishes the minimum requirements for the development, implementation, and management of a health-related fitness program (HRFP) for members of a fire department involved in emergency operations.
- ◆ NFPA 1584 *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*. This standard establishes the minimum criteria for developing and implementing a rehabilitation process for fire department members at incident scene operations and training exercises.

In addition to applicable NFPA standards, California Code of Regulations Title 8, Section 3203, requires every employer to provide an effective written Injury and Illness Prevention Plan (IIPP). For high-hazard employers such as fire departments, the IIPP should minimally address the following topics:

- ◆ Confined space operations
- ◆ Lock-out/tag-out procedures
- ◆ Chainsaw and other power tool operation
- ◆ Fall protection
- ◆ Driver safety

- ◆ Respiratory protection
- ◆ Hearing conservation
- ◆ Hazardous chemical exposure
- ◆ Blood-borne pathogens and other biological hazards
- ◆ Hazard communication.

The NFPA recommended standards do not have to be adopted in whole or part by an agency. Most departments that Citygate has reviewed at least partially follow the more critical elements of NFPA recommendations. All departments should compare and contrast their local employee and firefighting risks and apply what is necessary locally. However, not all agencies frankly can afford to meet every NFPA recommendation at 100% compliance due to revenue and staffing pressures. Thus, agencies prioritize their efforts first to Cal/OSHA regulations and second to the most essential NFPA recommendations.

The District’s Injury and Illness Prevention Program, under the oversight of one of the shift Battalion Chiefs and last updated in 2014, does **not** address many of the elements listed above, including confined space operations, lock-out/tag-out procedures, chainsaw/power tool operation, fall protection, driver safety, respiratory protection, hearing conservation, and blood-borne pathogens/biological hazards. Although these topics may be addressed elsewhere in existing District policy and/or Standard Operating Guidelines (SOG), they should also have been addressed within the IIPP, at least minimally referencing the applicable District policy or SOG. In addition, Health and Safety Committee meetings have not been conducted at least quarterly as required by the IIPP.

Finding #27: The District’s Injury and Illness Prevention Program, last updated in 2014, does not specifically address many of the elements required by Cal/OSHA for high-hazard employers.

Finding #28: Health and Safety Committee meetings are not conducted at least quarterly as required by the District’s Injury and Illness Prevention Program.

Recommendation #19: The District should consider updating its Injury and Illness Prevention Program to address all of elements required by Cal/OSHA for high-hazard employers.

Recommendation #20: The District should schedule and conduct Health and Safety Committee meetings at least quarterly in conformance with its Injury and Illness Prevention Program.

7.6 EMERGENCY MEDICAL SERVICES PROGRAM

The District operates a paramedic first responder (fire engine-based) program. One shift Battalion Chief oversees emergency medical training, patient care quality assurance, and certification records. Assistance is received from line personnel in handling all of the functions of the District’s EMS plan within State and County EMS Agency regulations.

While the goal is always to deliver the best patient care, in many instances it is not up to the District to determine the method for providing care. Unlike other aspects of firefighting, EMS care is heavily regulated and burdened with mandated oversight requirements. All of these requirements, while medically necessary, add to the District’s overhead cost to provide EMS. The District has no choice but to follow laws and regulations related to training, clinical oversight, data for tracking trends in care and paramedic skills, shelf-life of medical supplies, biomedical equipment certification, controlled drug tracking, etc.

The concept of providing focus and emphasis on Continuous Quality Improvement (CQI) in patient care delivery became a top priority in EMS in the early 1990s. EMS providers and EMS oversight agencies across the United States developed systems that guaranteed objective feedback about performance both internally (to support CQI efforts) and externally (to demonstrate accountability to partners and oversight agencies).

An effective CQI program must be consistent and systematic, must be based on evidence, and must be free of any perceived or real punitive involvement. It will include a fact-based decision-making process that involves industry-accepted performance measures and comparison of treatment to standard protocols for patient conditions. It will foster learning and knowledge sharing, and will motivate care providers to be the best possible clinicians with each and every patient contact.

Clinical training, oversight, and command staff in the EMS program supports the field personnel. In turn, these technical positions must have office support professionals to *support them*. Functions such as recordkeeping, notifications, filing, internal communications, budgeting, purchase requests, telephone inquiries, scheduling, and a multitude of other assignments must be provided by the EMS oversight team.

Under the Battalion Chief’s supervision, line paramedics handle the majority of the CQI program for the District. This involves reviewing each patient care report for the agency to ensure accuracy as well as coaching their peers on learning points. The EMS Battalion Chief also directs EMS education within the District via the overall training program. Each EMT and paramedic is trained regarding policy and protocol updates/changes, infrequently-used skills, CPR skills, etc. each year.

While the District’s CQI program meets local and state requirements, it is currently challenged to provide an appropriate level of overall program oversight due to the assignment of the responsible Battalion Chief as the District’s Interim Fire Chief. The CQI plan is currently under revision, including review by the District’s Paramedic Coordinator, Physician, and County Emergency Medical Services Agency (EMSA) over the last several months. In addition, the District’s narcotics plan and related Standard Operating Guideline are currently being reviewed, and the District is purchasing secured storage for its controlled medications.

Finding #29: The design of EMS oversight for the District’s EMTs and paramedics is typical and, at present, barely sufficient for the number of personnel and quantity of emergencies. If the staff cannot keep up with the quality assurance program, a common solution is to partner with other small agencies and share the cost of another EMS technical oversight position.

7.7 FIRE APPARATUS AND EQUIPMENT

Fire apparatus need to be properly maintained to ensure response readiness, safe arrival, effective operation, and return to readiness for the next assignment. Considering that a fire apparatus driver is entrusted to drive a vehicle weighing up to 17 tons or more at speeds up to 65 miles per hour, often against prevailing traffic at controlled intersections, officials should ensure that the maintenance, as well as the training program, meets all applicable legal and best-practice standards.

The fire service generally groups fire apparatus into two categories: (1) engine companies, which are primarily responsible for pumping and delivering water and performing basic firefighting functions, including search and rescue; and (2) truck companies, which are primarily responsible for forcible entry, ventilation, search and rescue, aerial operations for water delivery and rescue, utility control, illumination, overhaul, and salvage work. Other types of apparatus include water tenders, which are primarily responsible for carrying large quantities of water; squads or rescue companies, which carry a variety of rescue and emergency medical equipment; medic units or ambulances; command vehicles; and other auxiliary or specialized response apparatus. To be

effective, fire apparatus must be properly designed and well equipped with the proper hose, appliances, tools, ladders, and other equipment necessary to perform the complex work of firefighting, rescue, emergency medical, and public service tasks.

Two basic NFPA standards apply to fire apparatus:

- ◆ NFPA 1901 *Standard for Automotive Fire Apparatus* defines the requirements for new fire apparatus designed to be used under emergency conditions to transport personnel and equipment and to support the suppression of fire and mitigation of other hazardous situations.
- ◆ NFPA 1906 *Standard for Wildland Fire Apparatus* defines the requirements for new fire apparatus designed primarily to support wildland fire suppression operations.

In addition to these standards having application for the development of purchase specifications, there are additional performance standards useful for evaluating in-service apparatus:

- ◆ NFPA 1911 *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*. This standard defines the minimum requirements for establishing an inspection, maintenance, and testing program for in-service fire apparatus. This standard also includes guidelines for fire apparatus refurbishment and retirement; it identifies the systems and items on a fire apparatus that are to be inspected and maintained, the frequency of such inspections and maintenance, and the requirements and procedures for conducting performance tests on components; it also provides sample forms for collecting inspection and test data.
- ◆ There should also be a system of testing, maintenance, and repair, which ensures a high state of readiness of apparatus and critical equipment. In 2000, NFPA issued NFPA 1915 *Standard for Fire Apparatus Preventative Maintenance Program*, which defines the minimum requirements for a fire department preventative maintenance program. Under this standard, the personnel who conduct the preventative maintenance program should meet NFPA 1071 *Standard for Emergency Vehicle Technician Professional Qualifications*. This standard defines the minimum job requirements an emergency vehicle technician should possess. These include the ability to diagnose, maintain, repair, and test the functions of the apparatus.

The Federal Department of Transportation also has motor vehicle safety standards that are applicable to fire apparatus. The District's fire apparatus and vehicle fleet inventory is summarized in Table 18 below.

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Table 18—District Fire Apparatus and Vehicles

Radio Number	Equipment ID	Make	Model	In Service Year	Fire Pump Size	NIMS Type	Station	Equipment Type	Replacement Cost ¹
Engine 61 ²	TBD	Pierce	Arrow XT	June 2016	1500 GPM	1	61	Structure Engine	\$600,000
Engine 61 ³	E-09-06	Pierce	Arrow XT	2009	1500 GPM	1	61	Structure Engine	\$600,000
Engine 62	E-13-09	Pierce	Arrow XT	2013	1500 GPM	1	62	Reserve Engine	\$600,000
Engine 63 ⁴	E-98-04	KME	Renegade	1998	1500 GPM	1	61	Reserve Engine	N/A
OES 282	E-01-07	HME	Westates	2001	1250 GPM	1	62	Reserve / OES Engine	N/A
Engine 361	E-04-02	Pierce	International	2004	500 GPM	3	61	Wildland Engine	\$350,000
Squad 61	U-14-07	Ford	F-250	2014	N/A	N/A	61	Squad	\$54,000
Utility 61	U-07-07	Chevrolet	3500	2007	N/A	N/A	61	Utility	\$48,000
Utility 62	U-02-06	Chevrolet	1500	2002	N/A	N/A	62	Utility	\$41,000
Water Rescue 61	U-06-09	Chevrolet	Colorado	2006	N/A	N/A	61	Water Rescue Tow Vehicle	\$28,000
Boat 61	U-07-04	Yamaha	Waverunner	2007	N/A	N/A	61	Rescue Water Craft	\$18,000
HazMat / MCI 61	U-04-06	Pace American	Shadow 20' trailer	2004	N/A	N/A	61	Special Hazard Response	\$9,500
Chief 600	C-10-01	Ford	Explorer	2012	N/A	N/A	Hdqtrs.	Staff Vehicle	\$48,000
Battalion 611/612/613	C-15-05	Chevrolet	Tahoe	2015	N/A	N/A	61	Command Vehicle	\$58,600
Battalion 611/612/613	C-07-09	Chevrolet	Tahoe	2007	N/A	N/A	61	Reserve Command Vehicle	\$58,600
Prevention 620/621/622	C-08-08	Ford	Explorer	2008	N/A	N/A	Hdqtrs.	Staff Vehicle	\$48,000
Prevention 620/621/622	C-02-09	Chevrolet	Tahoe	2002	N/A	N/A	Hdqtrs.	Staff Vehicle	\$58,600

¹ Replacement cost data provided by District

² To replace current Engine 61

³ To become Reserve Engine 63

⁴ To be sold upon delivery of new Engine 61

Citygate conducted a review of the District’s fire apparatus and support vehicles, and found them to be in good to excellent condition, appropriately maintained, and properly equipped to respond to expected risks. Fire apparatus are built on both custom and commercial chassis, and are well suited to the fire and EMS risks within the District.

Finding #30: District fire apparatus and support vehicles are in good to excellent condition, appropriately maintained, and well suited and properly equipped to respond to expected risks.

The California Vehicle Code requires that all employees who operate motor vehicles with a commercial license, including a Class C Firefighter license, participate in the Employer Pull Notice Program. Under this program, the employer obtains the driving record of new employees 30 days before beginning operation of a commercial vehicle, and every 12 months thereafter for all employees (CVC Section 1808.1 Employer Notification).

7.7.1 Vehicle Maintenance Program

The District’s preventative maintenance program includes daily vehicle inspections as required by the Federal Motor Carrier Safety Administration (49 CFR, Part 396.13) which states, “Before driving a motor vehicle, the driver shall be satisfied that the motor vehicle is in safe operating condition.” District personnel also conduct a more thorough weekly inspection of all apparatus and support vehicles.

California Vehicle Code Section 34505.5a in part states, “Every motor carrier operating any vehicle described in subdivision (a), (b), (e), (f), or (g) of Section 34500, except those vehicles exempted under Section 34501.12, shall, as a part of the systematic inspection, maintenance, and lubrication services required of all motor carriers, require the vehicle or vehicles for which it is responsible pursuant to Section 34501.12 to be inspected at least every **90 days**, or more often if necessary to ensure safe operation.” Vehicles, which are out of service for periods greater than 90 calendar days, do not require an inspection at 90-day intervals if they are inspected before operation on the highway. Fire apparatus fall under this CVC 90-day inspection requirement, and must be inspected by a qualified vehicle safety inspector. In addition, the California Vehicle Code requires all motor carriers, defined as the owners of specified vehicles including most fire apparatus, to participate in the Biennial Inspection of Terminals (BIT) Program, with a requisite site inspection by the California Highway Patrol every 25 months. Prior to 2016, 90-day vehicle safety inspections were not performed by a qualified vehicle safety inspector; however, the District currently contracts with South Coast Pierce Emergency Vehicle Services in Ontario, California for on-site preventive maintenance, minor repairs, and Department of Transportation

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(DOT) safety inspection services. Major repairs are conducted at the contractor’s facility in Ontario.

Finding #31: The District’s current vehicle inspection and maintenance programs and services conform to NFPA, California Vehicle Code, and Department of Transportation standards. This was not always so in the past and should not be allowed to slip again.

NFPA 1911 *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* requires annual testing of fire apparatus pumps. South Coast Pierce Emergency Vehicle Services also performs annual fire pump tests on all District fire apparatus.

Finding #32: The District conducts annual tests of apparatus fire pumps in conformance with NFPA 1911 *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*.

7.7.2 Apparatus/Vehicle Replacement Program

The District’s Fire Protection Master Plan includes a fire apparatus/vehicle replacement schedule as summarized in Table 19.

Table 19—Apparatus/Vehicle Replacement Schedule

Vehicle Type	Number	Service Life (Years)			Replacement Cost	Total Cost
		Front Line	Reserve	Total		
Engine – Type 1	3	15	10	25	\$450,000	\$1,350,000
Engine – Type 3	1	15	10	25	\$315,000	\$315,000
Squad	1	12	0	12	\$185,000	\$185,000
PWC (Water Rescue)	1	12	0	12	\$20,000	\$20,000
PWC Trailer	1	12	0	12	\$1,500	\$1,500
1-ton Pickup Truck	2	8	0	8	\$50,000	\$100,000
½-ton Pickup Truck	2	12	0	12	\$30,000	\$60,000
Command SUV	3	12	0	12	\$60,000	\$180,000
Total	14					\$2,211,500

The District has a restricted Capital Replacement Fund to fund fire apparatus, support vehicles, and related capital equipment. Interest income and reimbursements for District services are the only revenue sources for this restricted fund, which has a current balance of approximately \$465,000. Having a capital vehicle/equipment replacement fund is considered a best practice, as the estimated replacement cost for all of the District’s fire apparatus and support vehicles exceeds \$2.2 million.

Finding #33: The District has a restricted fiscal reserve account to fund replacement of capital fire apparatus and support vehicles.

Fire Equipment Testing

The District currently contracts with Ross’ Ladder Service in Hollister, California for annual on-site ladder testing of its ground ladders in conformance with NFPA 1932 *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders*; however, the District was unable to provide any test records for prior years. The current contractor utilizes a non-destructive testing process, and is certified to perform necessary repairs.

Finding #34: District fire ladders were tested in 2016 in conformance with nationally recognized testing standards; however, no prior test records were available or provided.

Recommendation #21: The District must ensure that all ground ladders are tested annually in conformance with nationally recognized testing standards, and that test records are maintained for each ladder for the duration of its service life.

District personnel test all fire hose annually in conformance with NFPA 1962 *Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances*.

Finding #35: The District tests its fire hose annually in accordance with the annual testing requirements of NFPA 1962 *Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances*.

Self-contained breathing apparatus (SCBA) are currently tested annually by District staff certified as SCBA Technician(s) by the SCBA manufacturer in conformance with NFPA 1981 *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services*; however, the District acknowledged that there have been gaps in prior years where testing was not conducted as required, including hydrostatic testing of SCBA bottles every 5 years in conformance with Department of Transportation (DOT) regulations.³

Finding #36: Although gaps exist for some prior years, District self-contained breathing apparatus (SCBA) are currently tested annually by a qualified District SCBA Technician in conformance with nationally recognized standards.

Recommendation #22: The District must ensure that all self-contained breathing apparatus (SCBA) are tested annually in conformance with nationally recognized testing standards, and that compressed air cylinders are tested as required by the Federal Department of Transportation regulations.

The District also has a breathing air compressor at Station 1 that is currently tested quarterly for air quality in conformance with NFPA 1989 *Standard on Breathing Air Quality for Emergency Services Respiratory Protection* (2013 Edition); however; the District acknowledged that required testing has not been conducted consistently as required in previous years.

³ Code of Federal Regulations (CFR) Part 180.205.

Finding #37: The District’s self-contained breathing apparatus air compressor is currently tested quarterly for air quality in conformance with nationally recognized standards, although testing was not conducted consistently as required in previous years.

Recommendation #23: The District must ensure that its breathing apparatus air compressor is tested quarterly for air quality in conformance with nationally recognized standards.

7.8 DISPATCH SERVICES

The District contracts for dispatch services from the adjacent Montecito Fire Protection District (FPD). The communications center is located at Montecito FPD Station 1 at 595 San Ysidro Road in Montecito. Under the supervision of Communications Coordinator Jackie Jenkins, the communications center employs three full-time dispatchers, and six other Montecito FPD personnel are cross-trained as dispatchers for relief and emergency incident surge capacity.

The Montecito FPD Communications Center processes approximately 2,800-3,000 calls annually, and is a secondary Public Safety Answering Point (PSAP). Fire service calls are transferred from the primary PSAPs within the County, including the Santa Barbara County Sheriff’s Department, California Highway Patrol, and Santa Barbara City. The Montecito FPD Communications Center is staffed 24 hours per day, 365 days per year, with a minimum of one qualified dispatcher, and there are sufficient callback and cross-trained personnel to adequately handle a major emergency incident or multiple concurrent emergency incidents. The Montecito FPD Communications Center conforms to NFPA 1221⁴ for emergency call processing as follows:

- ◆ Ninety-five percent (95%) of all emergency telephone calls shall be answered within 15 seconds, and 99% shall be answered within 40 seconds.
- ◆ Ninety percent (90%) of emergency calls shall be processed and response resources notified within 64 seconds, and 95% shall be completed within 106 seconds, except that 90% of the following call types shall be processed within 90 seconds, and 99% of the calls within 120 seconds:

⁴ NFPA 1221 *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems* (2016 Edition)

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- Calls requiring emergency medical dispatch questioning and pre-arrival medical instructions.
 - Calls requiring language translation.
 - Calls requiring the use of a Teletypewriter / Telecommunication Device for the Deaf (TTY/TDD) device or audio/video relay services.
 - Calls of criminal activity that requires information vital to the safety of emergency responders prior to dispatching units.
 - Hazardous materials incidents.
 - Technical rescue incidents.
 - Calls that require determining the location of the incident due to insufficient information.
 - Calls received by text messaging.
- ◆ For calls transferred from a PSAP to a secondary answering point, the transfer procedure shall not exceed 30 seconds for 95% of all calls processed.

The Montecito FPD Communications Center monitors its compliance with these NFPA standards on a monthly basis, and consistently performs better than the 90% performance standard.

Finding #38: The Montecito Fire Protection District Communications Center consistently performs better than nationally recognized emergency call processing and dispatch performance standards.

7.9 DISTRICT FACILITIES

This section provides an assessment of the facilities that support the District’s mission. Effective fire protection services require adequately located and sized facility(s) to house on-duty response crews, apparatus and support vehicles, administrative and support staff, and training needs. Fire stations should also be located to provide an appropriate speed and weight of response across the entire response area.

Citygate examined the District’s fire station and office facilities for suitability to function, location relative to deployment performance goals, access to primary travel routes, travel route impedances, age, condition, space needs, and any other relevant factors influencing the District’s ability to meet its mission. All of these factors are important components of a fire department

operation and are critical to ensuring that needed resources can respond quickly and effectively, and staff has suitable work and living space.

7.9.1 Fire Station Facilities

Fire Station 1

Fire Station 1 is located at 911 Walnut Avenue in Carpinteria, and includes five buildings on an approximately 36,450-square-foot parcel. The main two-story fire station building is 6,730 square feet and was constructed in 1968. The first floor contains living quarters and office space for the on-duty response crew(s) and Battalion Chief consisting of six dormitory/sleeping rooms, two full bathrooms, and office space. The second floor contains the kitchen, Captain's office, and a large training classroom. An attached single-story apparatus room contains two double-deep drive-through apparatus bays, and workshop and storage space, with an exhaust extraction system. This facility houses two Type-1 structural engines, a Type-3 wildland engine, a rescue squad, two command vehicles, utility flatbed truck, an enclosed hazardous materials decontamination and mass-casualty incident response trailer, and a trailered water rescue craft and associated tow vehicle. The two Type-1 engines, Type-3 engine, and the rescue squad are stored indoors, and the remaining vehicles are stored in the outdoor parking lot due to a lack of secure, indoor parking space.

An adjacent 760-square-foot utility building to the rear of the main station building is used for physical fitness training, self-contained breathing apparatus (SCBA) air compressor fill station, and storage. Another adjacent 441-square-foot storage building is used for maintenance equipment and supply storage. The parcel also contains a 363-square-foot three-story hose-drying tower, and 1,450-square-foot, two-bedroom, one-bath residence that is currently occupied by a tenant. The facility has an aboveground fuel storage tank and dispenser pump for both gasoline and diesel fuel, and also has a 40-Kilowatt propane-powered emergency backup generator.

This fire station is located within the central area of Carpinteria with very good access to surface City streets. Access to U.S. 101 is also good via the Linden Avenue or Casitas Pass Road ramps. This location provides access to most areas of the City of Carpinteria within 4:00 minutes travel, as well as a small section of Highway 192 north of Carpinteria High School and south of Casitas Pass Road.

Overall, this fire station is in moderate condition, showing signs of its age and the wear and tear associated with housing 5-6 response personnel daily. In addition to the lack of secure indoor parking space for all assigned vehicles, fire apparatus parked in the front driveway for any reason also block the public sidewalk due to the short driveway depth.

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Essential services buildings constructed since 1896 are required to meet the seismic safety requirements of the Essential Services Buildings Seismic Safety Act of 1986⁵ to minimize fire hazards and the forces of earthquakes, gravity, and winds. To date, Fire Station 1 has not been retrofitted to comply with these requirements.

Other maintenance issues associated with this facility include ongoing electrical and plumbing problems related to the age of the building and these key utility infrastructure systems.

Finding #39: As the deployment analysis identified, Fire Station 1 has good access to the eastern areas of the District and, as such, this site should continue to be used as a fire station.

Finding #40: Fire Station 1 does not conform to the seismic safety requirements of the Essential Services Building Seismic Safety Act of 1986 (Health and Safety Code Section 16000-16022).

Finding #41: Fire Station 1 has ongoing electrical and plumbing problems, as well as other general building maintenance issues related to the facility's age and heavy daily use.

Fire Station 2

Fire Station 2, located at 2375 Lillie Avenue in Summerland, is a 2,350-square-foot single-story building consisting of a small office, living area, kitchen, single bathroom, and an open dorm sleeping area for the assigned 3-person crew. The building has an attached two-bay apparatus garage housing two Type-1 engines, and includes a vehicle exhaust extraction system. An assigned utility pickup truck is stored outdoors due to a lack of secure, indoor parking space. The apparatus garage was constructed in 1925, and the living/office area was added in 1965. The facility also has a small wood storage shed for maintenance equipment, as well as an 11-kilowatt propane-powered emergency backup generator. The facility also lacks gender-separate sleeping areas and bathrooms for assigned personnel.

The location of this fire station near the western edge of the District provides good access to surface streets in the northern areas of the District, with 4-minute travel time coverage extending south to approximately Sentar Road and east to approximately Ortega Reservoir. The location also provides good access to U.S. 101 via the Ortega Hill northbound ramp and the Wallace Avenue southbound ramp.

⁵ California Health and Safety Code, Chapter 2, Sections 16000-16022

Like Fire Station 1, this facility was built prior to 1986 and has not been retrofitted to comply with seismic safety requirements for essential services buildings. In addition, the short height and depth of the apparatus garage are a limiting factor, with essentially no room to walk around or climb on top of the currently assigned engines when parked inside the garage. Apparatus parked in front of the garage doors also block the public sidewalk due to insufficient driveway depth.

This fire station facility abuts the California department of Transportation right-of-way for northbound U.S. 101, presenting a significant noise and safety hazard for assigned personnel. In addition, the attic and roof area of the facility is infested with termites, and is in poor overall condition due to its age.

Finding #42: As the deployment analysis identified, Fire Station 2 has good access to the western areas of the District.

Finding #43: Fire Station 2 lacks adequate secured indoor parking space for the assigned vehicles.

Finding #44: Fire Station 2 lacks gender-separate bathroom facilities and sleeping areas.

Finding #45: Fire Station 2 does not conform to the seismic safety requirements of the Essential Services Building Seismic Safety Act of 1986 (Health and Safety Code Section 16000-16022).

Finding #46: Fire apparatus parked in the front driveway of Fire Station 2 block the public sidewalk due to insufficient driveway depth.

Finding #47: Fire Station 2 abuts the CalTrans right-of-way for northbound U.S. 101, presenting a significant noise and safety hazard for assigned District personnel.

Finding #48: Fire Station 2 is in poor condition due to its age and ongoing termite damage. It is no longer suitable or cost-effectively repairable for ongoing use as fire crew living space 24/7/365.

7.9.2 District Headquarters Offices

The District also leases approximately 3,500 square feet of office space at 1140 Eugenia Place in central Carpinteria, which also serves as the City’s Emergency Operations Center (EOC). This office space currently serves as District Headquarters for the Board of Directors, Fire Chief, Fire

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Prevention staff, clerical staff, and Battalion Chiefs. The facility has adequate uncovered parking for staff and visitors, and the District provides a 25-Kilowatt diesel-powered emergency generator onsite for manual connection to the building's electrical system as needed.

This administrative office space provides adequate space for the District's administrative functions with close proximity to Fire Station 1 and good access to U.S. 101 at Linden Avenue.

Finding #49: The District's leased headquarters office space is cramped, and the leased building is not built to California Essential Facility Act Standards. The building also serves as the disaster plan Emergency Operations Center for Carpinteria.

Recommendation #24: Replace and slightly relocate Fire Station 2 in Summerland as tested in the deployment study. The building in all aspects is inadequate and the parcel too small to continue to invest in repairs.

Recommendation #25: Fire Station 2 presents potential employee health and safety issues. If a temporary facility can be identified in Summerland, the fire crew should be moved as soon as possible while funding, design, and construction occur for a permanent replacement.

Recommendation #26: Permanent Fire Station 2 should be sized for a single fire crew with one firefighting unit and one reserve apparatus. The primary fire apparatus should be designed for the topography of the Summerland section of the District. Meeting, training, and other spaces should be located at a third fire station in the central District.

Recommendation #27: Fire Station 1 requires Essential Facility Act and other repairs for its long-term use and these repairs should be the second facility priority of the District.

Recommendation #28: If funds can be identified to staff a third fire engine, the District should consider a location close to the middle of the District as tested in the deployment study.

Recommendation #29: A third fire station in the central District should also contain adequate space for the headquarters personnel, a training/community room, and small outdoor space for hands-on training of the District’s firefighters.

SECTION 8—CONSOLIDATED SERVICES OPTIONS

8.1 OVERVIEW OF CONSOLIDATED SERVICES OPTIONS

Small fire departments, typically those with less than five career-staffed fire stations, have a burden to provide effective headquarters team services at an affordable cost. This is because there is a minimum number of staff needed to perform administrative, management, and incident command duties and such a minimum headquarters team can typically cover more than an only a few fire stations. The fire service over the last 15-20 years also has become very regulated for safety and patient care standards. Citygate advises our clients that the following headquarters positions are needed to manage a small career staffed fire department *at a minimum*:

- ◆ 1 Fire Chief (also the Chief Executive in a Fire District)
- ◆ 1 Fire Marshal
- ◆ 3 Battalion Chiefs for 24/7/365 Incident Command
- ◆ 2 Office Support/Administrative Professionals
- ◆ *Total of 7 full-time positions.*

As this study identified, there are a multitude of required functions that the headquarters team must perform, facilitate, and for which quality assurance oversight must be provided. At a summary level these are:

- ◆ Training
- ◆ EMS clinical care oversight and quality improvement
- ◆ Fleet maintenance
- ◆ Station maintenance
- ◆ Logistics and supplies
- ◆ Safety program
- ◆ Fire prevention programs
- ◆ Contract administration for items such as dispatching.

Smaller fire departments, based on the number of line personnel and the size/workload demands of the above programs, will first assign the programs to the line Battalion Chiefs, and they in turn receive assistance from station crews. When that capacity is exceeded, departments initially add headquarters capacity with part-time contract positions and/or participate in specialty Joint Powers Authorities (JPAs) or contract for service partnerships with another agency. Using these

approaches, a department pays for just enough shared hours to accomplish the program according to local needs. Examples are shared dispatching (which the District already performs), fleet maintenance, training and EMS clinical oversight functions, building / fire protection system plan reviews, etc. The last and most expensive choice to add headquarters capacity is to add full-time agency positions.

The District currently funds seven full-time headquarters positions and contracts for outside services such as dispatching, payroll processing, legal, etc. In addition to the seven positions, the District also fields 1.5 fire inspector positions to handle those technical duties.

In our review of the District’s headquarters programs workload demand at present, we found the headquarters staffing under-sized and recommended the addition of one staff Fire Captain on a 40-hour week schedule to increase administrative capacity and provide depth for succession planning and long-term absence relief.

Fundamentally, communities have the level of fire services they can afford, which is not always the level the community and/or employees desire. Assuming the Board of Directors can fund one more full-time administrative/oversight position, a common question then arises: would the agency have improved services at the same or lower cost if the District’s functions were completely contracted out or merged into another, larger fire department or fire district? There will always be the “local control” and revenue issues to be addressed with a contract or merger of fire districts. Given our experiences with fire services mergers, a high-level assessment of this question can be addressed before any in-depth technical research needs to be performed. Listed below are the typical types of fire services re-organization:

- ◆ **Dissolution of the Fire District and merging into another fire district.** While this sounds easy, it is a little more difficult, as California requires Local Agency Formation Commission (LAFCO) oversight and approval of mergers. Under taxation laws, the dissolving district’s tax rate cannot be “passed” to another entity. The replacement tax rate must be approved by the voters.

Depending on the tax rate differences between the two fire districts, a merger may produce not only added income to meet the needs of the district to be merged, but all of the larger district’s resources are available such as hazardous materials team, technical rescue, full administration bureau support, and the maintenance and replacement of capital equipment and fire stations.

- ◆ **Full contract for service.** The district board stays intact, and via a performance-based contract, forwards all revenues, other than those for county tax collection, insurance, and fiscal audit costs, to the contractor. The district board meets once per year to handle minimum legal and taxation functions. Employees are laid-off and if they meet the standards set by the larger department, they are rehired. If

revenues are insufficient to fund the contracted services, the district board must ask the voters for an assessment increase, or take back the provision of fire services. Given newer California regulations for a full contract for fire service, county LAFCO approval may be required. Some county fire districts will offer contracts for service, and others will be based on the property tax rates and the services needed in the district desiring a contract.

- ◆ **Partial contract for services.** In addition to dispatch, examples of partial contract for services functions are training, EMS oversight, and fleet maintenance. Service standards and costs are set in the contract's terms. While a contract can specify operating procedures, in most occurrences, the smaller agency cannot dictate how functions are performed/provisioned. They must accept the standards and methods of the larger agency.
- ◆ **Joint Powers Authorities (JPAs).** For fire services re-organizations that involve maintaining one or more headquarters and/or line staff, agencies pool revenues to provide cost-effective services. In larger JPAs employees can be moved to JPA employment. Governance control is shared by the JPA board of directors. No single agency in the JPA partnership dictates to another. Currently, under fluid CalPERS post pension reform guidelines, if CalPERS is involved, merging the employment of classic pension plan employees into a new JPA can be *very* difficult.

In Santa Barbara County, due to geography, there are not many contract or merger choices for the Carpinteria-Summerland Fire Protection District. Contracts across county lines are almost, if not impossible, so Ventura County Fire to the south is not an option. Thus, the three south Santa Barbara County options are:

1. **County Fire.** The Santa Barbara County Fire Department can merge or perhaps enter into a services-based contract, which is common for many county fire departments. County Fire can accept employees into its system. It is a full-service, large agency and also—under an agreement with CAL FIRE—responsible for wildfire protection in the County.
2. **Montecito Fire Protection District.** Contracting or merging is possible with the Montecito Fire Protection District, but will require many cost and control issues to be resolved. Other than for dispatch, Montecito FPD is not a contract for services provider. Respectfully, Montecito is a very unique community with a strong relationship with its government service providers. Citygate would not envision the Montecito community easily sharing total fire services revenue and governance in an expanded fire district.

3. **Santa Barbara City.** Santa Barbara City is not a traditional contract for service provider. Under revenue and tax laws, cities do not typically absorb fire districts without forming a fire district across the city also. Doing so would require voter approval in both agencies. A more likely path is a contract for service. However, at present, the City is not a full-service fire department contract provider. They are a Charter City and the City Council would likely not share the governance of fire services.

8.2 CONTRACT FOR SERVICE MACRO ASSESSMENT

In a scenario in which the District would contract for services to a larger department, the starting question is, “If the District can afford even the existing headquarters positions (before adding an Administrative Captain) would a contract/merger produce significant savings, or at the same cost, provide substantially improved services?” Answering this question assumes the same number of fire stations and firefighters as this study did not identify a situation in which the District can close an existing fire crew/station. Thus, a merger assessment focuses on these District headquarters positions, aside from the fire inspectors:

- ◆ 1 Fire Chief (also the Chief Executive in a fire district)
- ◆ 1 Fire Marshal
- ◆ 3 Battalion Chiefs for 24/7/365 Incident Command
- ◆ 1 Administrative Fire Captain
- ◆ 2 Office Support/Administrative Professionals
- ◆ *Total of 8 full-time positions.*

Given the District’s geographic location and internal needs, Citygate submits that any merger or contract would need to keep a local Battalion Chief per day for effective incident command response, plus the 2.5 Fire Prevention positions. Therefore, in a merger, these positions would not be expensed to the Carpinteria service area. Typically, in a merger, layoffs are avoided and the larger agency accepts all personnel at the time of the merger into other needed positions.

- ◆ 1 Fire Chief (also the Chief Executive in a fire district)
- ◆ 2 Office Support/Administrative Professionals
- ◆ *Total of 3 full-time positions.*

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While a larger fire department will provide full-time headquarters positions, with technical competency, to provide all of the required headquarters services, under any type of reorganization, the District’s taxpayers do not receive these services for free. Larger or shared service partnerships will charge the District for *all* types of administrative overhead from supervision to personnel, legal, training, EMS etc. The charges/assessments are typically done on a per-firefighter or per-fire-station/apparatus basis, so that everyone pays their proportional fair share.

Even without a detailed cost analysis, Citygate’s experience suggests that a “back of the envelope” calculation shows that at least 50% of the total compensation costs of \$462,565 for the three unneeded local District positions would come back as overhead/support charges, *and* there would be similar charges for the contract issues for which the District currently pays, such as payroll processing and dispatching.

On top of the limited headquarters savings, another agency could have even slightly higher salary and benefit costs for the line firefighter positions. A small cost-per-firefighter increase could very quickly erode or exceed all of the net headquarters savings. In the studies Citygate has completed, given the higher number of line firefighters to headquarters positions, it is all too common for the headquarters savings to disappear in a merger. Agencies do merge for improved headquarters services, depth of staff, succession planning, etc. These are all very important goals, but the improvements must be funded by the existing agency.

Thus, a net fiscal to policy control question is, “Would a fire district want to change from local to regional control for the possible \$231,283 dollars in savings, if even that much?” Staying independent also requires the District’s leadership to fund and ensure that there is an appropriate level and quality of management services. There can be no assumption that a larger agency performs headquarters services better only because they are larger. Citygate has seen large departments also struggle with funding adequate headquarters and oversight services, as line fire station staffing always consumes the largest amount of available revenues.

8.3 MERGING OF FIRE DISTRICTS

Santa Barbara County Fire Department is a dependent (separate) district under California law, with the County Board of Supervisors also sitting as the Fire District Board of Directors. In a merger assessment and application to LAFCO, the Carpinteria-Summerland Fire Protection District would dissolve and, in that transition, the County Fire tax rate would become effective. This is more than just a “fiscal swap.” In a merger, the County becomes responsible for *all* the operational, capital equipment, and fire station needs (*met or not at the time of merger*) of the absorbed fire district. The Carpinteria-Summerland taxpayers only pay the County Fire tax rate and the County provides the services it deems appropriate. The Carpinteria-Summerland

taxpayers are not, by themselves, liable for a future tax increase requests, as they could be under a contract for service, if local area fire revenues fell short of the County’s (or another agency’s) contract price in a future year.

Thus, district mergers result in a complete shutdown of the smaller fire district and, if the County ever needs more fire protection revenues, they must ask all of the voters district-wide, not just in one area. There may be advantages for Carpinteria-Summerland to consider a district merger with the County. Currently, Carpinteria-Summerland’s tax rate is 14.465% of the base Proposition 13 tax rate of 1%. County Fire’s tax rate is currently 15.66% and, under a multi-year phase-in, is anticipated to be 17% in Fiscal Year 2018/19. If the County were to achieve that tax rate, and if it were applied to Carpinteria-Summerland, the result is an increase of 2.5%. By way of comparison, Montecito Fire Protection District’s tax rate is 16.07%. All three districts have very different assessed valuations to which these rates are applied.

It may be possible that the increased tax rate, combined with Carpinteria-Summerland’s fiscal reserves, could allow the County to more easily provide for Carpinteria-Summerland’s fire station replacement, repair, and additional needs. Such fiscal strength could come from combined fiscal resources and large-agency bond capabilities.

Such a merger analysis is a complicated taxation and services puzzle; completely solving it cannot be completed in this high-level assessment. There are many variables to be negotiated in a merger application to LAFCO and the Board of Supervisors. Citygate, in this study, is not promising a specific outcome, other than to say the tax rates are close enough for a detailed analysis, if for many reasons the Carpinteria-Summerland Fire Protection District Board wants to ask the County for a proposal.

8.4 REORGANIZATION OPTIONS CONCLUSION

In all of the scenarios cited above, California labor laws require “meeting and conferring” with an agency’s recognized employee bargaining group(s) over the impacts of a transfer of employment. Municipal labor lawyers will say, “implementing a merger or contract change of employer cannot be done unilaterally to abrogate a labor agreement.” It is unclear who has the final say if negotiations break down and the dissolving agency wants to impose a settlement.

Given these issues and service provider choices, Citygate would suggest that, if the Carpinteria-Summerland Board of Directors wants to pursue the complete analysis of a merger or full contract for service, the most straightforward way is to ask formally for the County Fire Department to submit a detailed proposal. If the costs seem reasonable, a second step would be the appropriate detail work resulting in an application to LAFCO and the County Board of Supervisors.

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If the Carpinteria-Summerland Board of Directors merely wants to benchmark its costs to a consolidated cost, initially including the Montecito Fire Protection District and Santa Barbara Fire Department along with the County, this analysis would be a complex and costly endeavor for the Board. The County's costs will likely be close to the other options and the County, being the largest of the three departments, already has the greatest cost of services scale to offer another agency.

Absent a strong Carpinteria-Summerland Board of Directors and community preference to exit fire services at hopefully the same or less available revenue as today, the remaining path is to implement the recommendations in this study, maintain quality control oversight, and continue to match services to local revenues and community preferences.

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SECTION 9—NEXT STEPS

9.1 NEXT STEPS

The purpose of this assessment is to compare the District’s current performance against the local risks to be protected, as well as to compare against nationally recognized best practices. This analysis of performance forms the base from which to make recommendations for changes, if any, in fire station locations, equipment types, staffing, and headquarters programs.

As one step, the District Board of Directors should adopt updated and best practices based response time goals for the District and provide accountability for the District personnel to meet those standards. The goals identified in Recommendation #10 meet national best practices. Measurement and planning as the District continues to evolve will be necessary for the District to meet these goals. Citygate recommends that the District’s next steps be to work through the issues identified in this study over the following time lines:

9.1.1 Short-Term Steps

- ◆ Absorb the policy recommendations of this fire services study and adopt updated District performance measures to drive the deployment of firefighting and emergency medical resources.
- ◆ Consider requesting a services merger proposal from the Santa Barbara County Fire Department.
- ◆ Identify funding and timing for a full third crew.
- ◆ Identify funding and timing for three major facility projects in this priority order:
 - Temporary Fire Station 2
 - Permanent Fire Station 2
 - Repairs of Fire Station 1
 - New Fire Station 3

9.1.2 Ongoing Steps

- ◆ Monitor the headquarters staff workload and, as capacity is exceeded, a best practice is to use part-time or contract employees to deliver expanded services due to economic upswing-driven workload increases. If the workload increase is permanent and not part of a temporary upswing, then the addition of permanent staff must be considered.