

Fire and Emergency Medical Services Operations Analysis, Data Analysis & Strategic Plan Grants Pass, Oregon

August 2014

FIRE/EMS



OPERATIONS

C E N T E R F O R P U B L I C S A F E T Y M A N A G E M E N T

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ICMA

Leaders at the Core of Better Communities

General Information

About ICMA

The International City/County Management Association (ICMA) is a 100-year-old nonprofit professional association of local government administrators and managers, with approximately 9,000 members located in 28 countries.

Since its inception in 1914, ICMA has been dedicated to assisting local governments in providing services to their citizens in an efficient and effective manner. Our work spans all of the activities of local government: parks, libraries, recreation, public works, economic development, code enforcement, brownfields, public safety, and a host of other critical areas.

ICMA advances the knowledge of local government best practices across a wide range of platforms, including publications, research, training, and technical assistance. Our work includes both domestic and international activities in partnership with local, state, and federal governments, as well as private foundations. For example, we are involved in a major library research project funded by the Bill & Melinda Gates Foundation and are providing community policing training in El Salvador, Mexico, and Panama with funding from the United States Agency for International Development. We have personnel in Afghanistan helping to build wastewater treatment plants and have teams working with the United States Southern Command (SOUTHCOM) in Central America on conducting assessments and developing training programs for disaster preparedness.

ICMA Center for Public Safety Management

The ICMA *Center for Public Safety Management* (ICMA/CPSM), one of four centers within ICMA's U.S. Programs Division, provides support to local governments in the areas of police, fire, emergency medical services (EMS), emergency management, and homeland security. In addition to providing technical assistance in these areas, we also represent local governments at the federal level and are involved in numerous projects with the U.S. Department of Justice and the U.S. Department of Homeland Security.

ICMA/CPSM is also involved in police and fire chief selection, assisting local governments in identifying these critical managers through original research, the identification of core competencies of police and fire managers, and assessment center resources.

Our local government technical assistance includes workload and deployment analysis, using operations research techniques and credentialed experts to identify workload and staffing needs and best practices. We have conducted approximately 140 such studies in 90 communities ranging in size from 8,000 population (Boone, Iowa) to 800,000 population (Indianapolis, Indiana).

Thomas Wiczorek is the Director of the Center for Public Safety Management. Leonard Matarese is the Director of Research & Project Development.

Methodology

The ICMA Center for Public Safety Management team follows a standardized approach to conducting analyses of fire, police, and other departments involved in providing services to the public. We have developed this approach by combining the experience sets of dozens of subject matter experts in the areas of police, fire, and EMS. Our collective team has several hundred years of experience leading and managing public safety agencies, and conducting research in these areas for cities in and beyond the United States.

The reports generated by the operations and data analysis team are based upon key performance indicators that have been identified in standards and safety regulations and by special interest groups such as the International Association of Fire Chiefs (IAFC), the International Association of Fire Fighters (IAFF), and the Association of Public-Safety Communication Officials International, and through ICMA's Center for Performance Measurement. These performance measures have been developed following decades of research and are applicable in all communities. For this reason, the data yield similar reporting formats, but each community's data are analyzed on an individual basis by the ICMA specialists and represent the unique information for that community.

The ICMA team begins most projects by extracting calls for service and raw data from a public safety agency's computer-aided dispatch system. The data are sorted and analyzed for comparison with nationally developed performance indicators. These performance indicators (e.g., response times, workload by time, multiple-unit dispatching) are valuable measures of agency performance regardless of departmental size. The findings are shown in tables and graphs organized in a logical format. Despite the size and complexity of the documents, a consistent approach to structuring the findings allows for simple, clean reporting. The categories for the performance indicators and the overall structure of the data and documents follow a standard format, but the data and recommendations are unique to the organization under scrutiny.

The team conducts an operational review in conjunction with the data analysis. The performance indicators serve as the basis for the operational review. The review process follows a standardized approach comparable to that of national accreditation agencies. Before the arrival of an on-site team, agencies are asked to provide the team with key operational documents (policies and procedures, asset lists, etc.). The team visits each city to interview fire agency management and supervisory personnel, rank-and-file officers, and local government staff.

The information collected during the site visits and through data analysis results in a set of observations and recommendations that highlight the strengths, weaknesses, and opportunities of—and threats to—the organizations and operations under review. To generate recommendations, the team reviews operational documents; interviews key stakeholders; observes physical facilities; and reviews relevant literature, statutes and regulations, industry standards, and other information and/or materials specifically included in a project's scope of work.

The standardized approach ensures that the ICMA Center for Public Safety Management measures and observes all of the critical components of an agency, which in turn provides substance to benchmark against localities with similar profiles. Although agencies may vary in size, priorities,

and challenges, there are basic commonalities that enable comparison. The approach also enables the team to identify best practices and innovative approaches.

In general, the standardized approach adopts the principles of the scientific method: We ask questions and request documentation upon project start-up; confirm accuracy of information received; deploy operations and data analysis teams to research each unique environment; perform data modeling; share preliminary findings with the jurisdiction; assess inconsistencies reported by client jurisdictions; follow up on areas of concern; and communicate our results in a formal written report.

CPSM Project Contributors

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Executive Summary

The Center for Public Safety management was engaged by the city of Grants Pass, Oregon, to complete a comprehensive analysis of the city's Fire/Rescue Division, which is under the purview of the Department of Public Safety, and also to facilitate the development of a strategic plan for the Division. This analysis is designed to provide the city with a thorough and unbiased review of all emergency services provided by the Grants Pass Fire/Rescue Division (GPFR). This report provides recommendations for ways to improve those emergency services, identifies major issues the department faces, and discusses in depth the department's operational strengths and weaknesses. The report also provides a benchmark of the city's existing service delivery performance as analyzed in the accompanying comprehensive data analysis, which was performed utilizing information provided by GPFR. Also included in this report is the use of geographic information systems (GIS) data mapping to support the operational discussion and recommendations.

During our study, we analyzed performance data provided by GPFR and we also examined firsthand the department's operations. Fire and EMS departments tend to deploy resources utilizing traditional approaches, which are rarely reviewed. This report seeks to identify ways the department can improve efficiency, effectiveness, and safety for both its members as well as the community it serves. The recommendations provided may be adopted in whole, in part, or rejected.

To begin the review, the project management staff asked the city for certain documents, data, and information. The project management staff used this information/data to familiarize themselves with the fire department's structure, assets, and operations. The provided information was also used in conjunction with the raw performance data collected to determine the existing performance of the fire department, and to compare that performance to national benchmarks. These benchmarks have been developed by organizations such as the National Fire Protection Association (NFPA), Center for Public Safety Excellence, Inc., (CPSE), and the ICMA Center for Performance Measurement. City staff was also provided an electronic shared information folder to upload information for analysis and use by the ICMA project management staff.

The project management staff conducted site visits on May 29 and 30, 2014, for the purpose of observing fire department and agency-connected supportive operations, interviewing key fire department staff, and reviewing preliminary data and operations. Several telephone conference calls were also conducted between CPSM project management staff and the city so that ICMA staff could affirm the project scope, and elicit further discussion regarding this operational analysis. In addition, project staff returned June 17 to 19, 2014, to facilitate a strategic planning process.

GPFR provides a professional service with regard to fire and EMS service delivery. The Division personnel with whom CPSM interacted are truly interested in serving the city to the best of their abilities. One outstanding issue facing GPFR is that the organization has not had a permanent public safety director since late 2013 when the former director retired.

Recommendations

The GPFD provides excellent service to the community, its citizens and businesses. The department is respected in the community and by city leadership.

Forty-seven recommendations for the GPFD are listed below and in the applicable sections within this report. The recommendations are based on best practices derived from the NFPA, the CPSE, ICMA, the U.S. Fire Administration, the International Association of Emergency Managers (IAEM), and the Federal Emergency Management Agency (FEMA).

We have categorized each of these recommendations on the basis of their priority. Three levels of prioritization have been established, **Critical/High Priority**, **Necessary/Medium Priority** and **Desirable/Low Priority**. Those areas that have been determined to be critical or the highest priority, have the most importance and involve areas in which the need for change requires the most immediate effort or will have the highest impacts on service delivery or efficiency. Those areas in the desirable are lower in priority, though they are still viable recommendations; ICMA believes that their overall impacts in the organization have a lesser importance and the timeline for their implementation are not seen as critical as those recommendations in the two higher categories. These recommendations are listed in order that they occur in the report.

- GPFDR needs to make it a priority to complete a fire and community risk assessment. This assessment should be done in conjunction with fire and EMS calls for service demand analysis provided in this report, along with the department's effort to identify, plot and analyze high-hazard risks. (Critical)
- The Division needs to develop and implement an internal risk management plan following the standards of NFPA 1500, Standard for a Fire Department Occupational Safety and Health Program. (Necessary)
- GPFDR needs to formally establish a prefire planning process and ensure that these plans are up to date, with a standard body of information that is readily available to responders. (Critical)
- GPFDR needs to explore staffing options and/or deployment options that would increase staffing levels during the busiest periods. (Critical)
- The Division should initiate actions to reduce both the number of automatic fire alarms and the number of units responding to unconfirmed automatic fire alarms. (Critical)
- In an effort to reduce overall response times, GPFDR should work with the emergency communications center in an effort to reduce the 90th percentile dispatch time to 60 seconds as per NFPA 1221. (Necessary)

- GPFR should study a hybrid system using both geographical-based deployment as well as demand-based employment for the busiest hours of the day. (Desirable)
- Due to what can be seen as a codependency with Rural Metro, GPFR should ensure that the current positive working relationship remains intact. (Necessary)
- Grants Pass should consider the pursuit of Fire Accreditation through the Center for Public Safety Excellence (CPSE) accreditation process. (Desirable)
- It is recommended that the city of Grants Pass and Grants Pass Fire/Rescue continue to monitor legislative efforts and the Patient Protection and Affordable Care Act (PPACA) to ensure that the department's service delivery models are congruent with the changing health care environment, revenue and reimbursement schedules, and continued alignment with community expectations or service. (Desirable)
- While GPFR is to be commended for reducing its EMS call volume by eliminating response to some call types, the deployment of emergency medical dispatching (EMD) at the call creation point within the call cycle will allow even greater precision in determining the most accurate call type and response protocols. (Necessary)
- GPFR should become very familiar with the terms and conditions of the service agreement with American Medical Response (AMR) and ensure the Division is doing its part to ensure compliance. (Desirable)
- Grants Pass should work with dispatch personnel to identify ways to reduce dispatch handling times. ICMA believes it is realistic to achieve a dispatch handling time at the 90th percentile that is less than two minutes. (Critical)
- Maintain the current level of EMS service at the EMT Basic or Intermediate level. (Necessary)
- Consider the expansion of the Student Firefighter program to include 12 total participants and an increase in the duration of the program to four years. (Critical)
- Formalize the apparatus replacement fund and make this plan available to GPFR staff. (Desirable)
- Evaluate the costs/benefits of constructing a new fleet maintenance facility that would be suitable for larger fire apparatus versus contracting for services on the larger units. (Necessary)
- Evaluate the use of smaller, light-chassis rescue trucks that work in tandem with engines when an EMS or public assist response is needed. (Desirable)
- Where fiscally responsible, fully stock reserve fire apparatus to reduce changeover time as well as to provide a deeper fleet for major incidents. (Desirable)

- GPFR should work closely with the dispatch center to improve its call screening efforts and identify those nonemergency and public assist calls that should not receive an emergency response. (Necessary)
- GPFR should work with AMR and the dispatch center to improve the call-screening process in an effort to limit the number of incidents in which both an AMR and GPFR unit are dispatched. (Necessary)
- The department should evaluate on an annual basis during the budget development process the use of overtime and assess the cost/benefit of adding a full time equivalent employee in lieu of overtime expenses to cover vacant time periods created by the various leave benefits such as personal, sick etc. (Necessary)
- Through the collective bargaining process, the department should retain the ability to execute a shift reassignment with minimal notice to better address unforeseen and long-term vacancies such as worker's compensation injury, extended sick leave, or an FMLA qualifying event. (Necessary)
- The department should consider the use of paid part time staff to cover some or all vacant time periods created by the various leave benefits such as personal, sick etc. (Desirable)
- As an alternative staffing model and as funding allows, increase shift staffing to twenty-seven total operational shift personnel (including the battalion chief) to minimize overtime; enable the department to be more nimble with operational staffing; and to enhance a greater likelihood that all positions will be filled on a daily basis. (Desirable)
- Grants Pass should consider the adoption of a fire code provision that requires automatic fire sprinklers in the construction of all new single family and duplex residential structures. (Necessary)
- Grants Pass should formally adopt and report on fire prevention performance measures relating to the completion of fire plans reviews, permitting activities, and inspections. (Desirable)
- The Division should implement a staff development training and education program that supports succession planning. (Necessary)
- GPFR should deploy a teleconferencing system that supports simultaneous viewing and training at all stations. (Desirable)
- Provide Wi-Fi capabilities within the fire stations. (Desirable)
- Support those within the Division who opt to obtain/retain their EMS certification levels at the Intermediate or Paramedic levels. (Necessary)

- Ensure that the training plan includes “high risk-low frequency” activities. (Critical)
- GPFR should plan for the time when the training obligations become such that they will no longer be able to be coordinated by a battalion chief as a collateral duty. (Necessary)
- The City Manager should task a given position at the senior management level, preferably the Deputy City Manager or Public Safety Director as the city’s Emergency Manager Coordinator. If no senior management position has the capacity to assume these duties, consideration should be given (based on available funding) to creating a new position at the senior management level for such duties. (Critical)
- Improve the damage assessment annex in the Grants Pass all-hazard emergency plan by assigning a person skilled in damage assessment and by creating a specific task plan of how this crucial function will be accomplished. The submittal of a damage assessment is a prerequisite to receiving state and federal assistance. (Necessary)
- Develop a training plan that includes quarterly tabletop exercises so that city management becomes more familiar with the emergency management plan, management responsibilities, and the workings of the EOC. (Critical)
- Maintain an effective working relationship with Josephine County Emergency Management and participate in one another’s training and drills. (Critical)
- Purchase the necessary audiovisual equipment to fit-out the EOC for providing situational awareness capability. (Desirable)
- Establish an existing facility that could serve as an EOC and which has full generator capacity, situational awareness technology assets, rest/rehab areas for staff, a policy-making meeting room, high security level, and a direct feed from the communications center. (Necessary)
- Seek a legal opinion and review of ORS 401.309 and ORS 401.165 and ensure the city leadership has a good understanding of both. (Necessary)
- Fully deploy the performance metric portions of the New World™ software to more accurately conduct quality assurance. (Necessary)
- Fully deploy the emergency medical dispatching (EMD) processes into the CAD functionality to make more appropriate dispatching decisions and response mode recommendations. (Critical)
- Deploy emergency fire dispatching (EFD) processes into the CAD functionality to make more appropriate dispatching decisions and response mode recommendations. (Necessary)
- Evaluate the root cause/s of the 90th percentile dispatch time of 2.7 minutes and employ strategies to reduce this to 1.5 minutes. (Critical)

- Continue to exercise the secondary PSAP 911 transfer process at least annually. (Necessary)
- Provide for a monitored and recorded tactical channel for fire-ground operations. (Critical)
- In pursuit of better data, employ methods of distinguishing between a call that is cancelled in its entirety and a call where one or more units are cancelled. (Desirable)

Scope of Project

The scope of this project was to provide an independent review of Grants Pass Fire/Rescue Division (GPFR), such that city officials can understand how well the city's fire and EMS system is working. This project is part of a larger effort to review all city operations. City officials endeavor also to understand if the fire/rescue department can provide services more efficiently, and commissioned this study to measure GPFR against industry best practices, obtain recommendations where appropriate, and receive input on a strategic direction for the future. Finally, CPSM facilitated the development of a community driven strategic planning process to highlight the issues chosen to become a priority for the next three to five years.

Key areas evaluated during this study were:

- Fire division response times (using data from the county's computer-aided dispatch system).
- Fire and EMS unit workloads at each fire station location.
- Population growth and resulting service demand.
- Operational analysis of fire and EMS operations.
- Essential GPFR resources.

Study Process

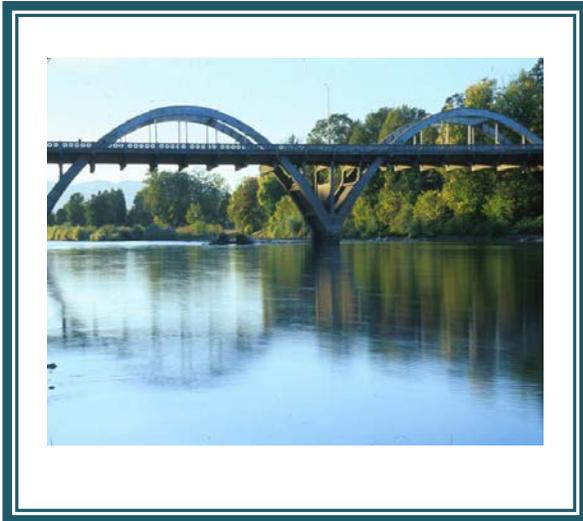
The project used multiple research techniques, including a two-day on-site visit by the operations team, personal interviews with city administration and fire leadership, a group discussion with select rank-and-file members of the department, collection and review of background information, analysis of computer aided dispatch (CAD) and incident data, and analysis of geographic information system (GIS) information. We also visited each of the city's fire stations and we drove throughout the city to understand its unique setting and geography. Throughout the project we maintained contact with the city's designated project manager and city manager, and we followed up with key individuals by e-mail and telephone.

Operational Analysis

Organization and Management

Governance and Administration

Located on the banks of the Rogue River, the “Sun Belt” of southern Oregon, Grants Pass is the county seat and the largest city in Josephine County. Grants Pass is located along Interstate 5 at the



intersection of U.S. Highway 199, approximately, 60 miles north of the California border. Grants Pass is 11.03 square miles in size and is part of the rapidly growing Southern Oregon area, which is a favorite tourist destination for those seeking year-round recreational opportunities in the lush forests and mountains. The 2010 U.S. Census estimates the population of Grants Pass to be 34,533.

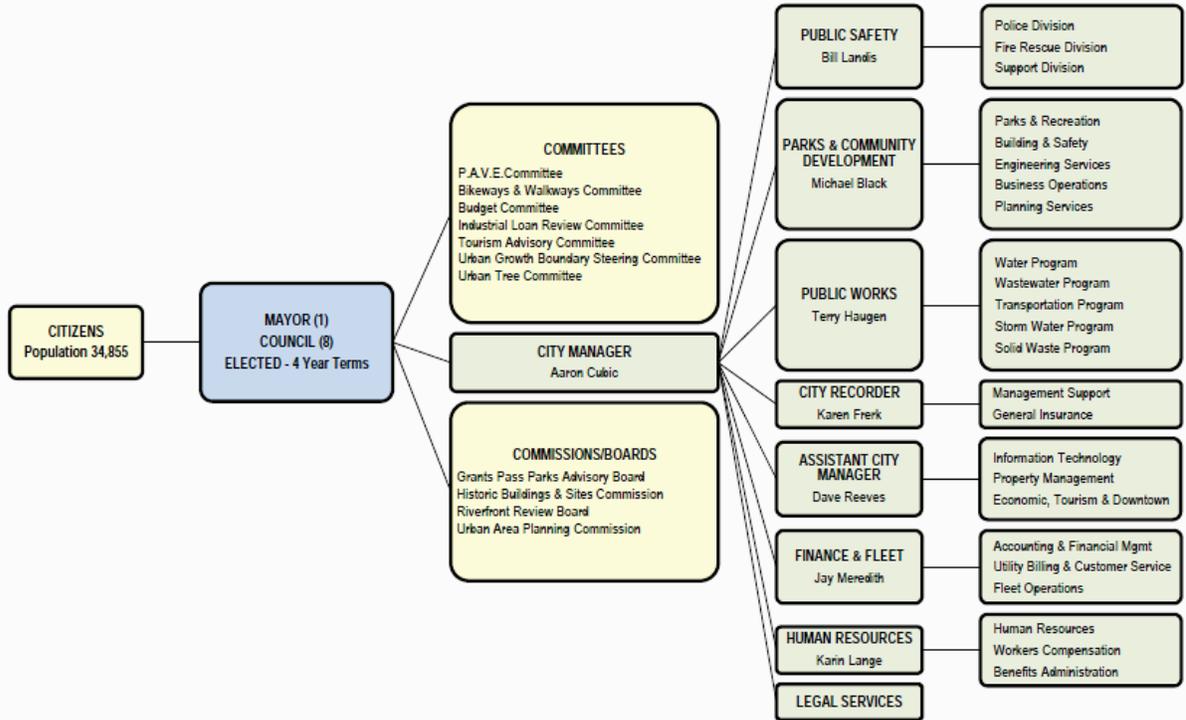
Grants Pass operates under a council/manager form of government. This form of government combines the political leadership of elected officials in the form of a city council with the managerial experience of an appointed city administrator. The city of Grants Pass, incorporated in 1887, is a home rule charter city. This charter is the basic law under

which the city operates. The mayor is the formal representative of the city of Grants Pass and is elected at-large, on a nonpartisan ballot, to a four-year term. The mayor presides over council meetings and does not vote, except in the case of a tie. The mayor can veto any council decision, but a two-thirds vote of the council can override the veto. The city council is composed of eight councilors elected to four-year terms on a non-partisan ballot. One council member is elected from each of the eight wards in the city, with one-half of the council elected every two years.

The city manager is responsible for the business, financial, and property transactions of the city, as well as preparation of the annual budget, appointment and supervision of personnel, enforcement of city ordinances, and the organization and general management of city departments. As chief administrator, the city manager has no vote in the council, but may take part in discussions of matters coming before the legislative body.

Grants Pass is typical of many cities and towns across the United States in that it includes its own public works, community development, parks and recreation, and the internal functions of finance and human resources. Grants Pass operates a public safety department for the management and oversight of its police and fire personnel. Figure 1 illustrates the organizational chart for the city of Grants Pass, Oregon.

Figure 1: City of Grants Pass Organizational Chart



Grants Pass Fire/Rescue Division

The Grants Pass Fire/Rescue Division (GPFR) is part of the Department of Public Safety. The Division operates as a traditional fire department except that its ranking officer is a Deputy Fire Chief who answers to the Chief of Public Safety. The GPFR responds to calls for service from its three fire stations, which are strategically located throughout the city. The Parkway Station serves as the central fire station and is located at the corner of Grants Pass Parkway and East Park Street. The Hillcrest Station is in the northern section of town, located at the corner of Hillcrest Drive and Washington Blvd. The third station is the Redwood Station, located on the west side of the city at Leonard Rd. and Darnielle Ln. All stations operate as public safety centers housing both fire and police personnel. The Parkway facility is a 17,000 square-foot structure and was built in 2009. This facility serves as the Department of Public Safety headquarters and houses the Fire/Rescue Division’s administrative, command, prevention, and support staff along with a host of police operations. The GRFR employs a total of 30 full-time personnel.

This contingent includes:

- One deputy fire chief
- Three battalion chiefs
- One fire marshal
- One fire inspector
- One administrative specialist
- Three fire corporals
- Twenty firefighters.

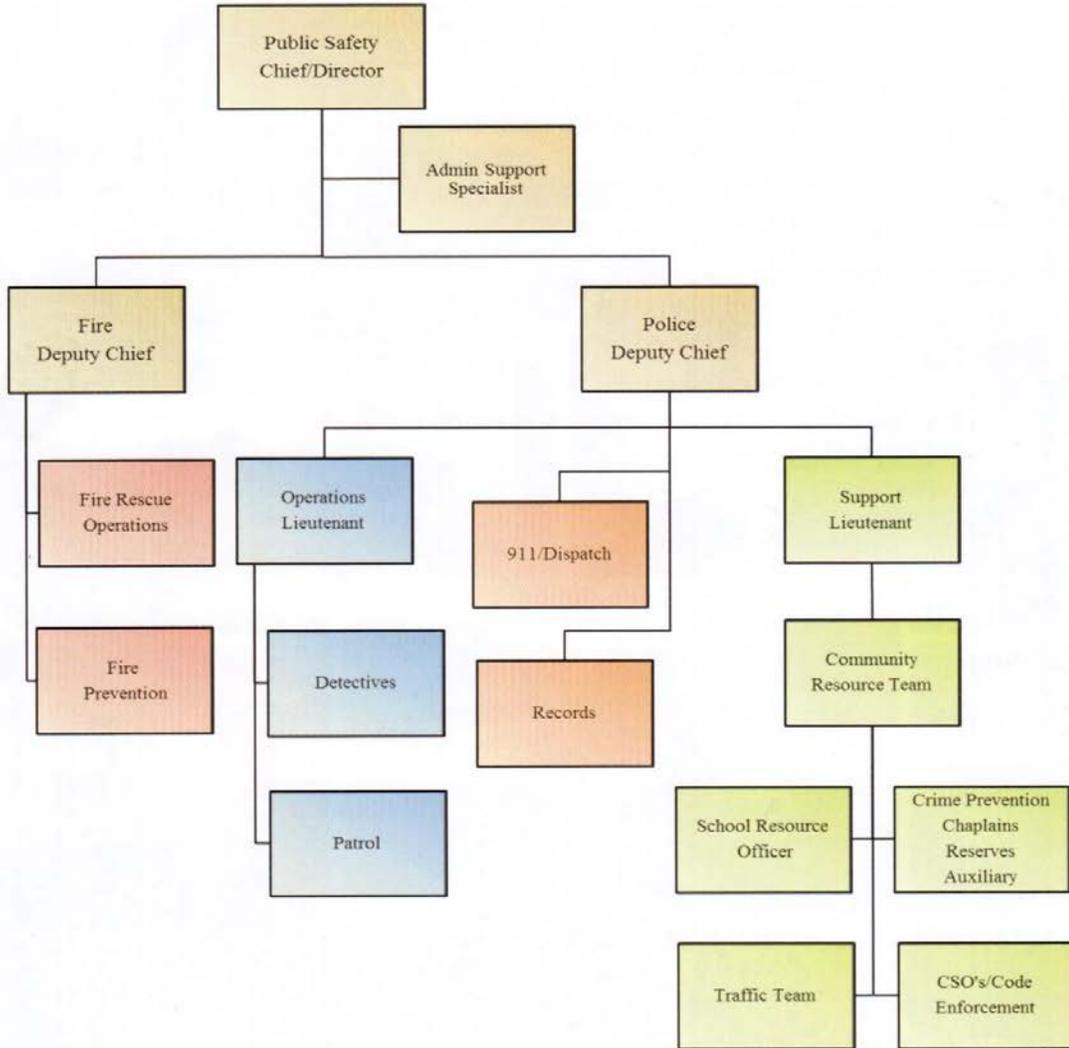
In order to supplement the full time staffing, the Division maintains a complement of nine student firefighters who are assigned to each of the shifts. The Student Firefighter program utilizes students for a three-year timeframe during which students pursue training in firefighting certification, EMT, paramedic certification, and fire science. Student firefighters receive no pay for this service but the city pays all related tuition costs, books, and fees for a three-year timeframe. The GPFR maintains a minimum of seven personnel on-duty at all times. These personnel staff three type-one engines and a command vehicle (battalion chief). All full-time employees are paid salaries and benefits that are specified in the collective bargaining agreement between the city of Grants Pass and Local 3564 of the International Association of Fire Fighters (IAFF).

The Division responds to fire and EMS events along with providing wildland fire response. Grants Pass works closely with the Rural Metro Fire Department (RMFD), which provides subscription fire service to residents of unincorporated Josephine County. GPFR and Rural Metro have entered into a cooperative agreement that provides routine automatic response into each agency's jurisdiction. GPFR has a very engaged fire prevention program that is responsible for fire code enforcement, new construction plans review, and inspections. The Grants Pass fire prevention program is directed by its fire marshal and one fire inspector. The Fire Prevention Bureau coordinates more than 1,200 inspections annually, including nearly 600 in-service fire company inspections. The Bureau works closely with the city's Building Department and is also responsible for public education and fire investigations. Figure 2 Illustrates the Department of Public Safety and GPFR organization chart.

Figure 2: City of Grants Pass Department of Public Safety Organizational Chart



Grants Pass Department of Public Safety
Organizational Chart



Population Growth, Risk, and Demand Analysis

Population Growth and Development

The city of Grants Pass experienced a significant growth in both area and population during the period of 2000 to 2006. The population in 2000 was 23,170 and in 2006 it climbed to 30,000. From the period of 2004 to 2006, the city geography expanded from 5 square miles to 11 square miles via annexations. That period of rapid growth and expansion has subsided and the city is now experiencing relatively flat growth, with a forecast that the flat growth will continue for the foreseeable future. Grants Pass is subject to periodic surges in population primarily Monday through Friday as the area serves as a commercial hub for the region and the daily service population is increased dramatically.

The 2014 population is estimated to be 35,187. The population is 91 percent Caucasian, 1 percent African American, and 9 percent Hispanic. If national trends evidence themselves in Grants Pass, the Hispanic population will continue to grow and may reinforce the need to have bilingual Fire/Rescue staffing. As changes occur, GPFR will need to employ deliberate efforts to have a workforce that mirrors the community. The population makeup includes 24.3 percent under the age of 18 and 18.6 percent over the age of 64. The age group of 35-54 represents 24.5 percent of the population. There are no anticipated shifts in the median age within the community and no increase foreseen in the EMS call volume due to shifting ages.

While it may be a goal of elected officials, rapid annexation is unlikely for the city of Grants Pass. All annexations, including voluntary annexations, require a vote of the residents. This makes any sort of large-scale annexation more cumbersome and unlikely in any significant numbers. From a fire protection perspective, there is limited advantage for current residents on the edges of the city boundaries to seek annexation, as many currently receive fire and rescue services from the city via automatic aid agreements or are under existing service agreements. New developers may seek annexation in an effort to receive water and sewer services.

A possible vote regarding annexation could take place in November 2014, and would involve 358 acres and 719 tax lots. The impact of this on GPFR would be minimal as the majority of the area is covered by existing service agreements and already receives fire and rescue services from the city. The largest probable area of annexation over the next 20 years is southeast of the city. The likely residential growth in the city's revised urban growth boundaries will be in the southwest portion of the city due to favorable topography for development. As this slow growth takes place it will increase the workload at the Redwood station, but at a pace that is very manageable. The Redwood station's location was predicated on the future annexation of both developed and undeveloped properties nearby. In the event that such does not materialize, the city may find that the future call volume for the station does not support the current staffing deployment model. In fact, this station could absorb a 400 percent increase in call volume before additional resources would be required.

Fire Risk Analysis

The cost of providing fire protection to a community continues to escalate; therefore, the need to examine the planning processes involved in providing services is paramount. Each jurisdiction

decides what degree of risk is acceptable in that jurisdiction; the determination is based on criteria that have been developed to define the levels of risk (e.g., of fire) within all areas of the community. To this end, a comprehensive planning approach that includes a fire risk assessment and hazard analysis is essential in determining local needs.

What's involved in a fire risk analysis? A fire department collects and organizes risk evaluation information about individual properties and on the basis of the rated factors can then derive a "fire risk score" for each property. This is done by assessing the needed fire flow, probability, consequences, occupancy risk, and establishing fire management zones. The score is then used to categorize the property as one of low-, moderate-, or high/maximum-risk. To assist in this endeavor, there are retail software products currently available that rate the property based on information inputs.

Plotting the rated properties on a map will provide a better understanding of how fire stations, response run cards, and staffing patterns can be used to provide a higher concentration of resources for worse-case scenarios or, conversely, fewer resources for lower levels of risk.¹ The community fire risk assessment may also include determining and defining the differences in fire risk between a detached single-family dwelling, a multifamily dwelling, an industrial building, and a high-rise building by placing each in separate category. Further, an overall community risk profile can be linked to historical response time data. That analysis can then be used to establish response time baselines and benchmarks.

Community risk and vulnerability assessment are essential elements in a fire department's planning process. GPFR has not completed a comprehensive community risk and vulnerability assessment. According to a National Fire Protection Association (NFPA) paper on assessing community vulnerability, fire department operational performance is a function of three considerations: resource availability/reliability, department capability, and operational effectiveness.² These elements can be further defined as:

Resource availability/reliability: The degree to which the resources are ready and available to respond.

Department capability: The ability of the resources deployed to manage an incident.

Operational effectiveness: The product of availability and capability. It is the outcome achieved by the deployed resources or a measure of the ability to match resources deployed to the risk level to which they are responding.³

¹ *Fire and Emergency Service Self-Assessment Manual*, Eighth Edition, (Center for Public Safety Excellence, 2009), 49.

² Fire Service Deployment, Assessing Community Vulnerability: From <http://www.nfpa.org/assets/files/pdf/urbanfirevulnerability.pdf>.

³ National Fire Service Data Summit Proceedings, U.S. Department of Commerce, NIST Tech Note 1698, May 2011.

Operational Response Approaches

The community risk and vulnerability assessment evaluates the community as a whole, and with regard to property, measures all property and the risk associated with that property and then segregates the property as either a high-, medium-, or low-hazard, which are further broken down into varying degrees of risk. According to the NFPA *Fire Protection Handbook*, these hazards are defined as:

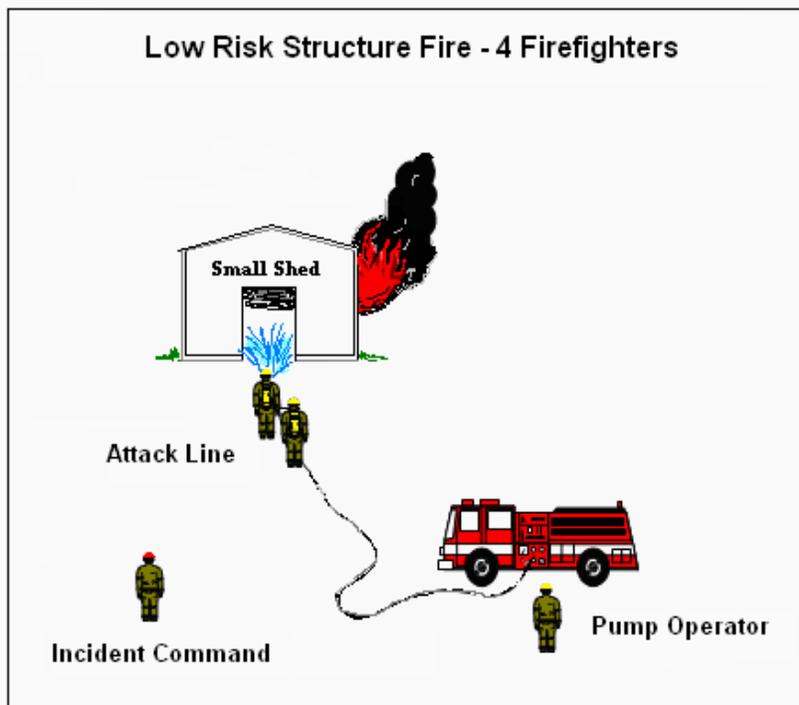
High-hazard occupancies: Schools, hospitals, nursing homes, explosives plants, refineries, high-rise buildings, and other high life-hazard or large fire-potential occupancies.

Medium-hazard occupancies: Apartments, offices, and mercantile and industrial occupancies not normally requiring extensive rescue by firefighting forces.

Low-hazard occupancies: One-, two-, or three-family dwellings and scattered small business and industrial occupancies.⁴

Figures 3 and 4 illustrate the critical tasks and resource deployment required on low-risk incidents and moderate-risk incidents such as structure fires. Understanding the community's risk greatly assists fire department management planning for and justification of staffing and apparatus resources.

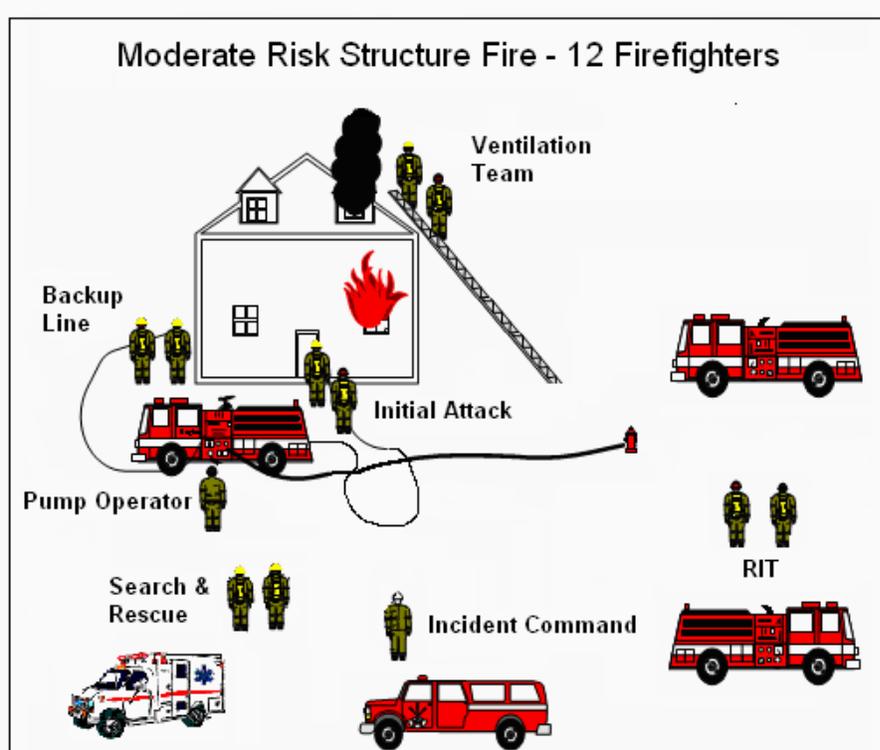
Figure 3: Low-Risk Fire Response



⁴ Cote, Grant, Hall & Solomon, eds., *Fire Protection Handbook* (Quincy, MA: National Fire Protection Association, 2008), 12.

Figure 4 represents critical task elements for a moderate-risk structure fire. Some jurisdictions add additional response resources to meet and in some cases exceed the specifics of national benchmarking, such as National Fire Protection Association (NFPA) 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments, 2010 Edition*.

Figure 4: Moderate Risk Fire Response



In addition to examining risks faced by the community at large, the department needs to examine internal risks in an effort to protect all assets, including personnel, resources, and property. This concept is not new to the fire service and can be an excellent tool for strengthening existing health and safety guidelines. The National Fire Protection Association's *Standard for a Fire Department Occupational Safety and Health Program* (NFPA 1500) requires the development of a separate risk management plan⁵ for fire departments; that is, separate from those incorporated in a local government plan. The risk management plan establishes a standard of safety for the daily operations of the department. This standard of safety establishes the parameters in which the department should conduct all activities during emergency and nonemergency operations. The intent is for all members of the department to operate within this standard or plan of safety and not deviate from this process.

Through the use of automatic aid agreements, GPFR assigns four engine companies on its first alarm assignment for reported structure fires. Due to the staffing levels on most apparatus, fires

⁵ Robert C. Barr and John M. Eversole, eds., *The Fire Chief's Handbook*, 6th edition (Tulsa, OK: PennWell Books), 270.

that spread beyond the room of origin and its content often require that a second alarm assignment be dispatched to the call to assure adequate human resources.

Aggregate Call Totals and Dispatches

In this report, each citizen-initiated emergency service request is deemed a call. During the year studied, GPFR responded to 4,168 calls. Of these, 38 were structure fire calls and 80 were outside fire calls. Each dispatched unit is a separate "run." As multiple units are dispatched to a call, there are more runs than calls. The department's total runs and workload are also discussed in this report.

Table 1: Call Types

Call Type	Number of Calls	Calls per Day	Call Percentage
Cardiac and stroke	450	1.2	10.8
Seizure and unconsciousness	316	0.9	7.6
Breathing difficulty	314	0.9	7.5
Overdose and psychiatric	46	0.1	1.1
MVA	212	0.6	5.1
Fall and injury	124	0.3	3.0
Illness and other	323	0.9	7.7
EMS Total	1,785	4.9	42.8
Structure fire	38	0.1	0.9
Outside fire	80	0.2	1.9
Hazard	126	0.3	3.0
False alarm	282	0.8	6.8
Good intent	180	0.5	4.3
Public service	502	1.4	12.0
Fire Total	1,208	3.3	29.0
Mutual aid	600	1.6	14.4
Canceled	575	1.6	13.8
Total	4,168	11.4	100.0

Observations:

- The department received 11.4 calls, including 1.6 canceled calls and 1.6 mutual aid calls, per day.
- EMS calls for the year totaled 1,785 (43 percent of all calls), averaging 4.9 per day.
- Fire calls for the year totaled 1,208 (29 percent of all calls), averaging 3.3 per day.
- Structure and outside fires combined for a total of 118 calls during the year, averaging one call every 3.1 days.

Figure 5: Percentage Fire Calls by Type

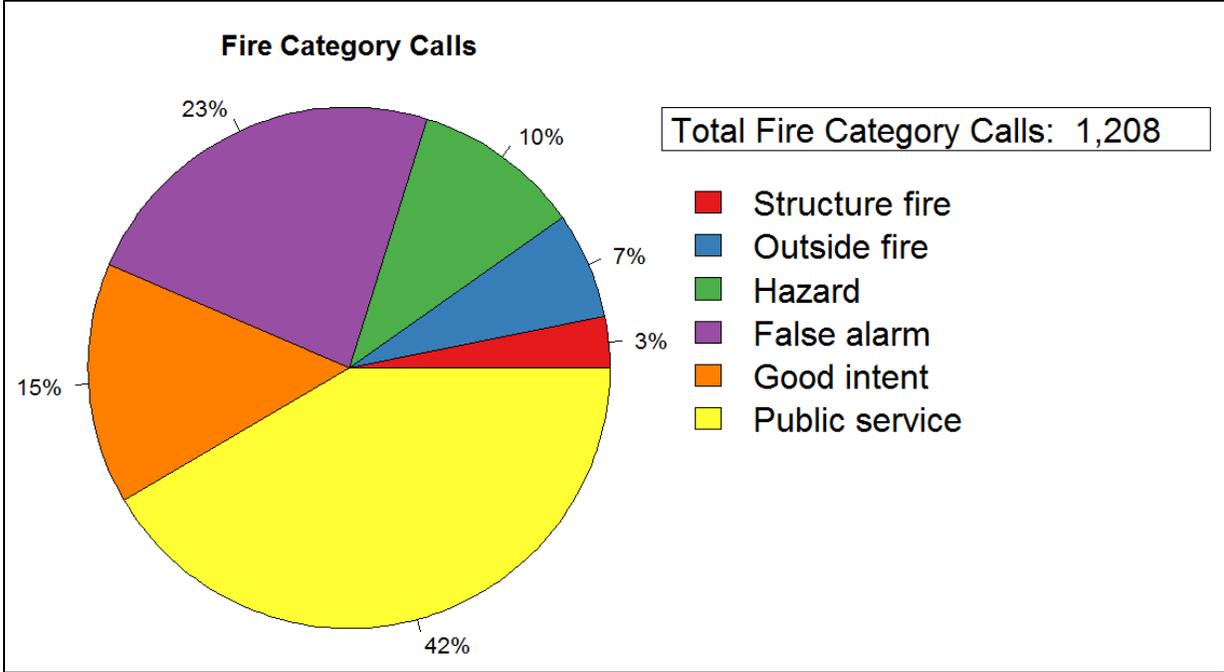
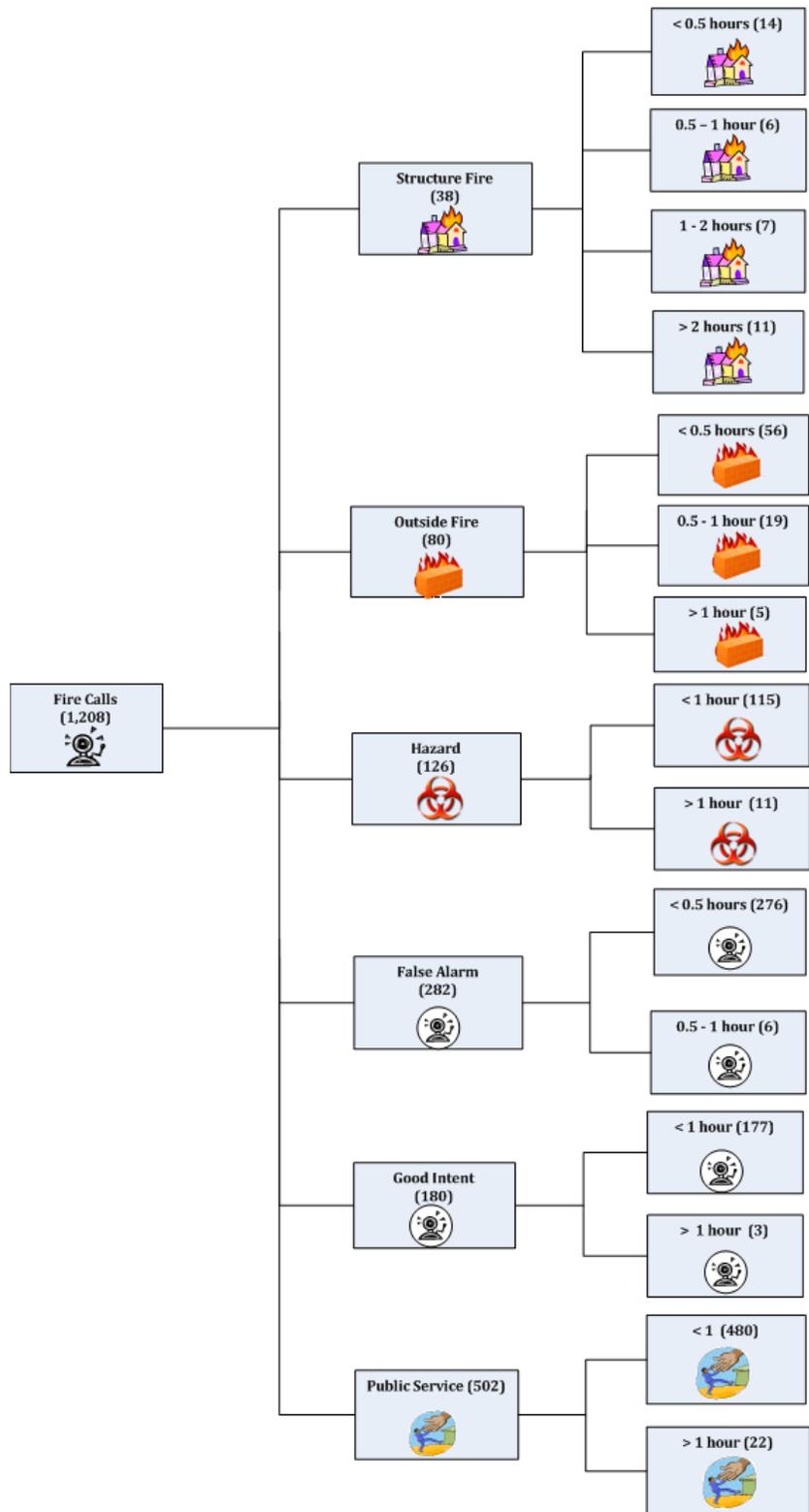


Figure 6: Fire Calls by Type and Duration



Note: Duration of a call is defined as the longest deployed time of all GPFR units responding to the same call.

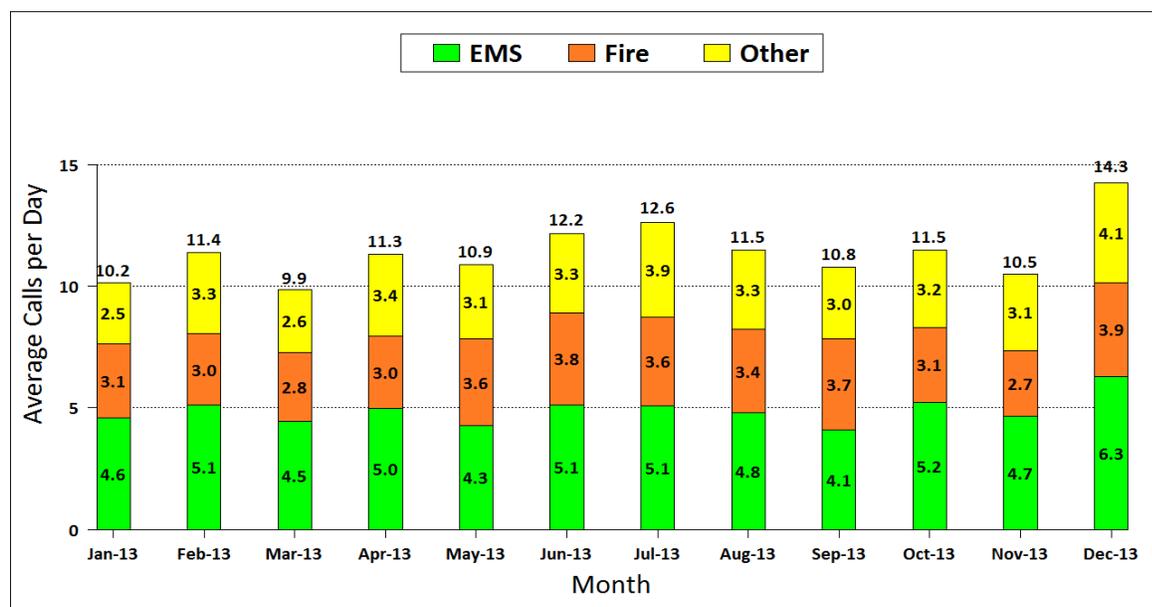
Observations:

- A total of 993 fire category calls (82 percent) lasted less than half an hour, 150 fire category calls (12 percent) lasted between half an hour and one hour, 45 fire category calls (4 percent) lasted between one and two hours, and 20 fire category calls (2 percent) lasted more than two hours.
- A total of 20 structure fire calls (53 percent) lasted less than one hour, 7 structure fire calls (18 percent) lasted between one and two hours, and 11 structure fire calls (29 percent) lasted more than two hours.
- A total of 75 outside fire calls (94 percent) lasted less than one hour, four outside fire calls (5 percent) lasted between one and two hours, and one outside fire call lasted more than two hours.
- A total of 276 false alarm calls (98 percent) lasted less than half an hour, and 6 false alarm calls (2 percent) lasted between half an hour and one hour.
- Public service is the largest fire category call type. A total of 430 public service calls (86 percent) lasted less than half an hour, 50 public service calls (10 percent) lasted between half an hour and one hour, and 22 public service calls (4 percent) lasted more than one hour.

Call Distribution by Month

A review of calls by month showed no significant disparity on a daily call volume on a month-by-month basis. It should be noted the peak in December was attributed to a period of severe weather.

Figure 7: Call Distribution by Month



Observations:

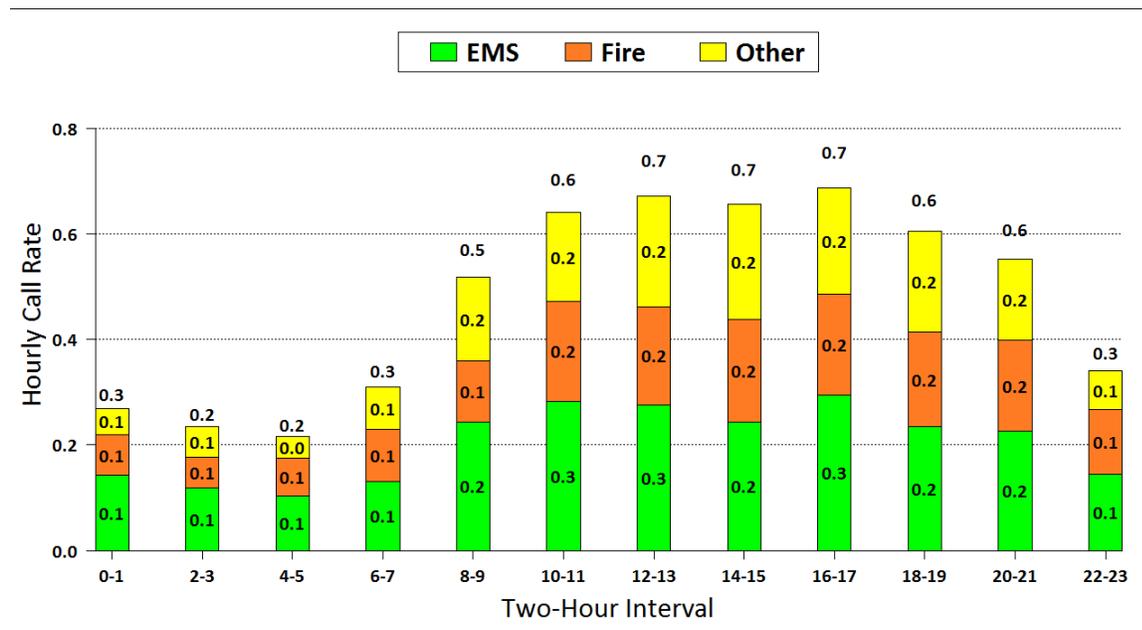
- Average calls per day ranged from a low of 9.9 calls per day in March 2013 to a high of 14.3 calls per day in December 2013. The highest monthly average was 44 percent greater than the lowest monthly average.
- Average EMS calls per day ranged from a low of 4.1 calls per day in September 2013 to a high of 6.3 calls per day in December 2013.
- Average fire calls per day ranged from a low of 2.7 calls per day in November 2013 to a high of 3.9 calls per day in December 2013.
- Average mutual aid and canceled calls per day ranged from a low of 2.5 calls per day in January 2013 to a high of 4.1 calls per day in December 2013.

Call Distribution by Hour of the Day

The heaviest calls by hour of the day are consistent with national norms and show the busiest hours are from 8:00 a.m. through 9:00 p.m. In fact, the call volume for these hours is 100 percent greater than the volume from 10:00 p.m. through 7:00 a.m. Opportunities exist to modify staffing plans, through the use of part-time staff, that would support greater staffing levels during the 8:00 a.m. through 9:00 p.m. window.

It should also be noted that the student firefighters are most likely unavailable due to classes during parts of each week and of each year. Stated another way, the greatest likelihood of having full staffing on duty is during the timeframes when the call volume is the lowest.

FIGURE 8: Calls by Hour of Day



Observations:

- Hourly call rates averaged between 0.22 calls and 0.69 calls per hour.
- Call rates were highest during the day between 8:00 a.m. and 10:00 p.m., averaging between 0.52 and 0.69 calls per hour. The rate peaked between 4:00 p.m. and 6:00 p.m., when it averaged 0.69 calls per hour.
- Call rates were lowest between midnight and 8:00 a.m., averaging between 0.22 and 0.31 calls per hour.

Deployment Models

GPFR uses a predominantly geographical deployment model that deploys resources across the geographical portions of the city without regard to the given call volume in each geographical portion. This means the staffing model is the same for both the busiest units and the slowest units. GPFR should consider the use of a demand deployment model that deploys resources based upon call volume rather than geography. For example, if the Redwood station were not staffed, it would allow greater staffing levels at those stations with the greatest call volumes. Also, GPFR should consider a staffing pattern that, in addition to the 24/48 schedule, would deploy resources during the busiest hours of 8:00 a.m. through 9:00 p.m.

The percent of calls that are handled with units from the first due station are a measure of the availability of that unit for an emergency call. The percent of calls with at least one responding unit from the first due station ranged from 86.3 percent to 94.8 percent. Stated another way, the units were available for an emergency from 86.9 percent to 94.8 percent of the time. Further details are shown in Table 2.

TABLE 2: First Due Station Call Analysis

First Due Station	Number of Calls	Percent of Calls	Calls per Day	Percent of Calls with Units from First Due Station
Parkway	1,765	42.3	4.8	94.8
Hillcrest	1,144	27.4	3.1	93.4
Redwood	709	17.0	1.9	86.3
Rural Metro 1	362	8.7	1.0	NA
Rural Metro 2	110	2.6	0.3	NA
Rural Metro 4	29	0.7	0.1	NA
Other	49	1.2	0.1	NA

Note: Mutual aid and canceled calls are included.

Hazard Analysis

The city of Grants Pass has identified potential hazards that can affect the community as a whole. Through a vulnerability analysis for the community it has identified those events that would have the highest potential for occurrence and the greatest devastation. These include:

- Earthquake.
- Transportation accident (air, rail, shipping).
- Flooding.
- Severe weather.
- Wildland fires and the urban interface.
- Terrorism/ workplace & school violence.
- Energy shortage/ disruption.
- Hazardous materials incident.
- Water emergency/ drought.

While GPFR has completed a preliminary risk assessment list, it does not have a written internal risk management plan in place. In order for the list to be an effective tool it needs to be put into the following operative framework, which will provide the broad outline of the internal risk management plan.

- **Risk identification:** Actual or potential hazards.
- **Risk Evaluation:** The potential of occurrence of a given hazard and the severity of its consequences.
- **Prioritizing risk:** The degree of a hazard based upon the frequency and severity of occurrence.
- **Risk control:** Solutions for eliminations or reduction of real or potential hazards by implementing an effective control measure.
- **Risk monitoring:** Evaluation of effectiveness of risk control measures.⁶

The city's planning efforts should also focus on the support and organizational systems that would be necessary to respond and sustain ongoing relief efforts during times of disaster. Included in these efforts are:

- Continuity of operations planning (COOP).
- Public awareness and public information.
- Succession planning (continuity of government).
- Automatic and mutual aid on a regional basis.

⁶ NFPA 1500 (2007). *Standard for a Fire Department Occupational Safety and Health Program, Annex D.*

- Utilization of volunteers and management of donations.
- Automatic and mutual aid on a regional basis.

Linking a fire department's operational functionality to the community risk and its vulnerability assessment is intended to assist fire personnel in refining their preparedness efforts.

Fire Preplanning

In addition to examining communitywide risk and vulnerability, GPFR should examine specific risks and vulnerabilities on the basis of the community's critical occupancies. Risk assessment and vulnerability analysis are not new to the fire service: the NFPA 1620 Standard, Recommended Practice for Pre-Incident Planning, identifies the need to utilize both written narrative and diagrams to depict the physical features of a building, its contents, and any built-in fire protection systems. The occupancies that are typically specified for pre-incident plans, or "preplans," are as follows:

- Large assembly.
- Educational.
- Health care.
- Detention and correction.
- High-rise residential.
- Residential board and care (assisted living).
- Mercantile.
- Business.
- Industrial.
- Warehouse and storage.

Our evaluation has found GPFR to be deficient in its preplanning efforts. The department did not have a schedule for reviewing or updating existing preplans, and the plans were outdated. The plans also were not integrated into the onboard fire engine computer systems (MDTs). At the fire company level, fire company officers conduct ad hoc preplan walk-through inspections as part of their periodic commercial fire inspection activities, but the results are not archived into any standardized format and there is not a defined list of what facilities require a preplan.

Accreditation

Accreditation is a comprehensive self-assessment and evaluation model that enables organizations to examine past, current, and future service levels. It is used to evaluate internal performance and compares this performance to industry best practices. The intent of the process is to improve service delivery.

The Center for Public Safety Excellence (CPSE) provides an exhaustive evaluation process for a fee to member agencies and which ultimately leads to accreditation. CPSE is governed by the Commission on Fire Accreditation International (CFAI), an 11-member commission representing a cross-section of the fire service industry, including fire departments, city and county management, code councils, the U.S. Department of Defense, and the International Association of Firefighters. The CPSE Accreditation Program is built around the following key measurements:

- Determine community risk and safety needs.
- Evaluate the performance of the department.
- Establish a method for achieving continuous organizational improvement.

Local government executives face increasing pressure to "do more with less" and justify expenditures by demonstrating a direct link to improved or measured service outcomes. Particularly for emergency services, local officials need criteria to assess professional performance and efficiency.

CPSE accreditation has national recognition and is widely used throughout the fire service. The key to its success is that it allows communities to set their own standards that are reflective of their needs and a service delivery model that is specific to the community. In addition, it is a program that is based on ongoing improvement and continuous monitoring. ICMA feels that the CPSE accreditation model is very well suited for the Grants Pass and should be considered in the near future.

Recommendations:

- GPFR needs to make it a priority to complete a fire and community risk assessment. This assessment should be done in conjunction with the fire and EMS calls for service demand analysis provided in this report, along with the department's effort to identify, plot, and analyze high-hazard risks.
- The Division needs to develop and implement an internal risk management plan following the standards of NFPA 1500, *Standard for a Fire Department Occupational Safety and Health Program*.
- GPFR needs to formally establish a prefire planning process and ensure that these plans are up to date, with a standard body of information that is readily available to responders.
- GPFR needs to explore staffing options and/or deployment options that would increase staffing levels during the busiest periods.
- The Division should initiate actions to reduce both the number of automatic fire alarms and the number of units responding to unconfirmed automatic fire alarms.

- In an effort to reduce over response times, GPFR should work with the emergency communications center in an effort to reduce the 90th percentile dispatch time to 60 seconds as per NFPA 1221.
- GPFR should study a hybrid system using both geographical-based deployment as well as demand-based employment for the busiest hours of the day.
- Due to what can be seen as a codependency with Rural Metro, GPFR should ensure that the current positive working relationship remains intact.
- Grants Pass should consider the pursuit of Fire Accreditation through the Center for Public Safety Excellence (CPSE) accreditation process.

EMS Analysis

GPFR responded to 1,785 emergency medical service (EMS) calls in 2013, with 77 percent of the EMS calls ending with a transport. GPFR responds as a “first responder” for EMS calls and arrives first or at the same time as American Medical Response (AMR) 61 percent of the time. GPFR’s average response time for EMS calls was 6.9 minutes and the 90th percentile response time was 9.9 minutes. This means that GPFR units had a response time of less than 9.9 minutes for 90 percent of the calls.

The AMR average response time for EMS calls was 7.6 minutes and the 90th percentile response time was 11.4 minutes. This means that AMR had a response time of less than 11.4 minutes for 90 percent of the calls. GPFR reports that the newest service agreement between AMR and Josephine County requires that 90 percent of the calls have a response time of eight minutes or less. ICMA was unable to obtain a copy of this agreement to review.

GPFR staff is a mix of basic emergency medical technicians (EMT), EMT Intermediate level, and EMT Paramedic, all with different skill sets they are permitted to perform. There is no standardized approach to crew deployment that requires any given unit to have an Intermediate- or Paramedic-level crewmember.

Emergency medical dispatching (EMD) is conducted at the emergency communications center (ECC) using a card-based system. This helps to sort calls, provides a systematic approach to call intake, and provides systematic pre-arrival instructions to the patient or caller. The ECC should upgrade its EMD processes to become an integral part of the computer-aided dispatching (CAD) system to allow more complete and timely EMD services.

While there is considerable concern by department members on the number of reported incidents where an AMR unit is not available upon call dispatch (referred to as Med Zero), data do exist to show the number of times a significant delay took place, or any consequences from the same. There are no data that prove or disprove that these call types cause overall long response times. When AMR has no units available for the call after a given period of time, AMR exercises its mutual aid

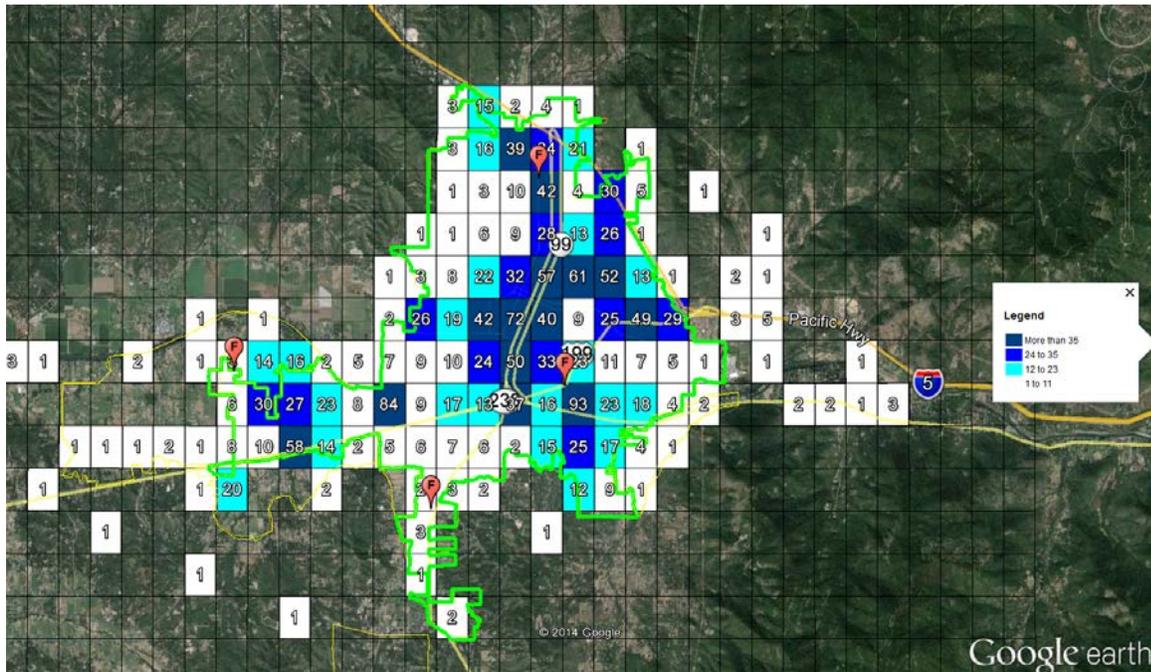
agreement with Rogue River EMS. In 2013, Rogue River conducted 27 transports from Grants Pass as part of this agreement, or approximately one time every two weeks.

Call data indicate that on average, GPFR responded to 11.4 calls per day, and 5.4 involved transporting patients. Cardiac and stroke calls and breathing difficulty calls had the highest transport rates, averaging 93 percent. On average, an AMR ambulance spent 49 minutes from dispatch to clear in a transport run.

In considering the option for GPFR to provide advanced life support transport services in lieu of AMR, the GPFR should accept the reality that this would require a sizeable infusion of funds from the general fund, as user (transport) fees will not cover the costs for the services nor will they cover the additional staff needed for transport services. It should also be noted that there are an insufficient number of staff members at the paramedic level to provide transport services.

The EMS call volume is not equally distributed across the city and the vast majority of the EMS calls are located within the first due district of the Parkway and Hillcrest stations. Figure 9 depicts the 2013 call volume by location of the calls.

Figure 9: Call Distribution by Location



The 2013 call volume by call category is depicted in Figure 10.

Figure 10: EMS Call Category Breakdown

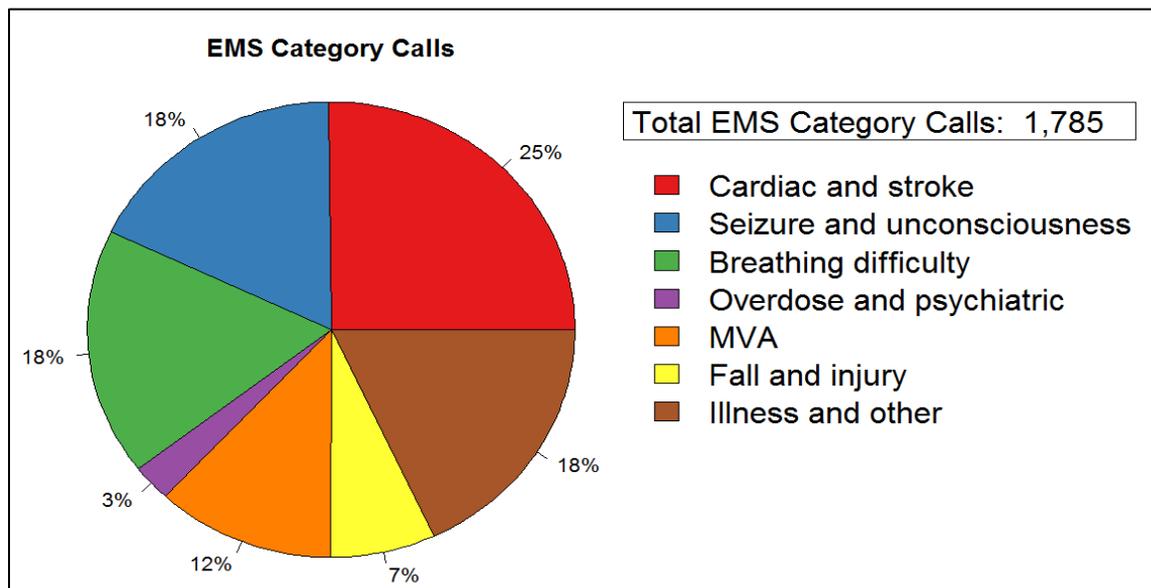


Table 3: Transport Calls by Call Type

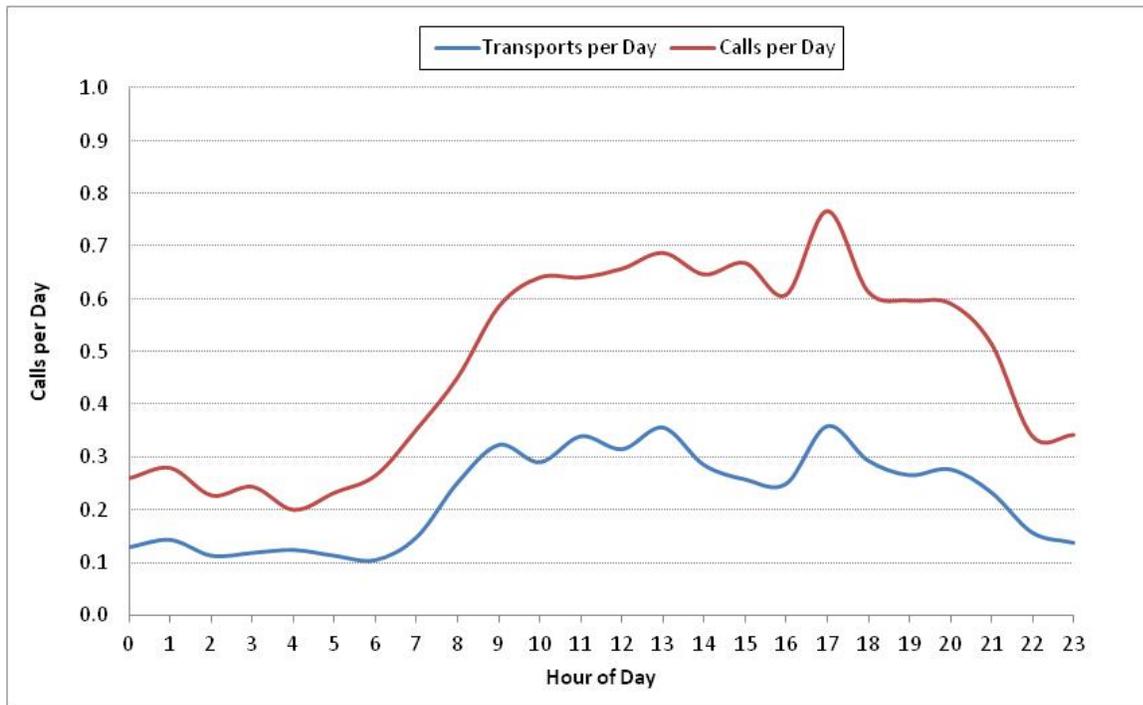
Call Type	Number of Calls			Transport Rate
	Non-Transport	Transport	Total	
Cardiac and stroke	32	418	450	92.9
Seizure and unconsciousness	81	235	316	74.4
Breathing difficulty	23	291	314	92.7
Overdose and psychiatric	5	41	46	89.1
MVA	110	102	212	48.1
Fall and injury	19	105	124	84.7
Illness and other	138	185	323	57.3
EMS Total	408	1,377	1,785	77.1

Note: AMR ambulances provided 99 percent of the transports. On average, AMR ambulances made 5.4 runs per day, and were deployed 4.3 hours for transport calls.

Table 4: Total and Number of Transport Calls per Day, by Hour of Day

Hour	Number of Transports	Number of Calls	Transports per Day	Calls per Day	Transport Rate
0	47	95	0.13	0.26	49.5
1	52	102	0.14	0.28	51.0
2	41	83	0.11	0.23	49.4
3	43	89	0.12	0.24	48.3
4	45	73	0.12	0.20	61.6
5	41	85	0.11	0.23	48.2
6	38	97	0.10	0.27	39.2
7	54	129	0.15	0.35	41.9
8	92	165	0.25	0.45	55.8
9	118	214	0.32	0.59	55.1
10	106	234	0.29	0.64	45.3
11	124	234	0.34	0.64	53.0
12	115	240	0.32	0.66	47.9
13	130	251	0.36	0.69	51.8
14	104	236	0.28	0.65	44.1
15	94	244	0.26	0.67	38.5
16	91	222	0.25	0.61	41.0
17	131	280	0.36	0.77	46.8
18	107	224	0.29	0.61	47.8
19	97	218	0.27	0.60	44.5
20	101	216	0.28	0.59	46.8
21	85	188	0.23	0.52	45.2
22	57	124	0.16	0.34	46.0
23	50	125	0.14	0.34	40.0

Figure 11: Number of Transport Calls, by Hour of Day



Observations:

- Overall, 47 percent of all incidents to which GPFR responded involved transporting patients.
- On average, GPFR responded to 11.4 calls per day, and provided 5.4 transports per day.
- Transports were highest between 8:00 a.m. and 10:00 p.m., averaging between 0.23 and 0.36 transports per hour.
- Transports were lowest between midnight and 8:00 a.m., averaging between 0.10 and 0.14 transports per hour.

Deployed time is measures as the interval from unit dispatch time through unit clear time. The on-scene time is the time from when the unit arrives on scene through the time the unit departs the scene to the hospital. The travel to hospital time is the time from when the unit departs the scene to travel to the hospital through the time it arrives at the hospital. The at-hospital plus travel-back time is the interval from the unit arriving at the hospital through unit clear time.

Table 5: Time Component Analysis for Transport Runs

Agency	Unit	Average Deployed Minutes per Run	Average On Scene Time	Average Travel To Hospital Time	Average at Hospital plus Travel Back Time	Sample Size
AMR	M1	49.0	17.1	8.2	16.9	482
	M2	47.6	15.5	9.7	16.4	550
	M3	50.1	17.6	9.5	16.6	520
	M4	53.1	13.9	9.2	22.3	34
	M8	51.3	14.1	14.8	16.9	12
	M9	52.6	23.2	6.2	18.4	5
	M12	47.0	17.3	8.2	15.8	354
	Total	48.6	16.8	9.0	16.6	1,957
Rogue River - Jackson County	7431	72.2	11.5	6.0	46.9	4
	7433	85.0	11.6	9.0	57.1	23
	Total	83.1	11.5	8.5	55.6	27

Observations:

- AMR transports run averaged 48.6 minutes from dispatch to clear.
- On average, an AMR ambulance spent 16.8 minutes treating patients on scene, and spent 9.0 minutes on the road to take patients to the hospital, and then spent 16.6 minutes at the hospital and traveling back to the station.

Recommendations:

- It is recommended that the city of Grants Pass and Grants Pass Fire/Rescue continue to monitor legislative efforts and the Patient Protection and Affordable Care Act (PPACA) to ensure that the department’s service delivery models are congruent with the changing health care environment, revenue and reimbursement schedules, and alignment with community expectations for service.
- While GPFR is to be commended for reducing its EMS call volume by eliminating response to some call types, the deployment of emergency medical dispatching (EMD) at the call creation point within the call cycle will allow even greater precision in determining the most accurate call type and response protocols.
- GPFR should become very familiar with the terms and conditions of the service agreement with AMR and ensure the Division is doing its part to ensure compliance.

Target Hazards

The process of identifying target hazards and preplanning suppression and rescue efforts are basic preparedness efforts that have been key functions in the fire service for many years. In this process, critical structures are identified on the basis of the risk they pose. Then, tactical considerations are established for fires in these structure. Consideration is given to the activities that take place (manufacturing, processing, etc.), the number and types of occupants (elderly, youth, handicapped, imprisoned, etc.), and other specific aspects relating to the construction of the facility or any hazardous or flammable materials that are regularly found in the building. Target hazards are those occupancies or structures that are unusually dangerous when considering the potential for loss of life or the potential for property damage. Typically, these occupancies include hospitals, nursing homes, high-rise, and other large structures. Also included are arenas and stadiums, industrial and manufacturing plants, and other buildings or large complexes.

Grant Pass does not have many target hazards within city limits. Certainly the Asante-Three Rivers Medical Center would be a target hazard, along with area nursing or adult care facilities (Royale Gardens Health and Rehabilitation Center, Highland House, Spring Point Alzheimer Care, and the Fairview Transitional Center). The historic downtown area would also be considered a target hazard and specific preplanning efforts would be appropriate. In addition, the Josephine County Jail and Rogue Valley Youth Correctional Facility would be considered target hazards. There are nearly a dozen retirement communities that require frequent response and consideration along with the city's manufacturing establishments (Masterbrand Cabinets, Timber Products, and Rogue Valley Door). The city has a number of large assembly facilities (schools, theaters, churches and the fairgrounds), and some large storage and distribution centers. However, as a small residential community, Grants Pass primarily experiences fire scenarios in single family-detached structures. The presence of Interstate-5 and Highway 199 present the potential for transportation accidents and the dispersal of product that requires specific tactical consideration and preparation. In addition, the Central Oregon and Pacific Railroad would also create operational concerns in the event of derailment or the breach of container cars carrying hazardous or flammable product.

Station Location Response Time Analysis Location

The fire station is a critical link in service delivery and where these facilities are located is the single most important factor in determining overall response times. Grants Pass provides fire and EMS services from its three public safety facilities, which are located as follows:

- Parkway Station: 800 E. Park St.
- Hillcrest Station: 199 N.W. Hillcrest Dr.
- Redwood Station: 3071 Leonard Rd.

The Hillcrest Station is the oldest facility, and was built in 1973. The Redwood and Parkway stations are relatively new, built in 2007 and 2009, respectively. Typically, fire stations have an

anticipated service life of approximately fifty years. The Hillcrest station is nearing the end of its usefulness, but has had a number of improvements and renovations that allows its continued operation. In most cases facilities require replacement because of the size constraints of the buildings, a need to relocate the facility to better serve changing population centers, the absence of needed safety features or service accommodations, and the general age and condition of the facility.

From its three facilities GPFR operates four first-line emergency response vehicles—three Type-1 fire engines and one command vehicle (battalion chief). In addition, the department maintains an array of specialized apparatus, including a wildland unit, an aerial ladder, reserve engines, and multiple utility and staff vehicles. The aerial ladder is not staffed on a daily basis but is utilized in those situations that require this specialized equipment.

Assessment of Fire Station Locations

GPFR serves an estimated population of 34,500 people and a total service area estimated to be just over 11 square miles in size. This equates to an average service area for each fire station of approximately 3.7 square miles. In its FY 2011 ICMA Data Report, ICMA tabulated survey information from seventy-six municipalities with populations ranging from 25,000 to 100,000 people. In this grouping the average fire station service area was 11 square miles.⁷ The median service area for this grouping of communities was 6.67 square miles per fire station.⁸ In addition, the NFPA and ISO have established different indices in determining fire station distribution. The ISO Fire Suppression Rating Schedule, Section 560, indicates that first-due engine companies should serve areas that are within a 1.5-mile travel distance.⁹ The placement of fire stations that achieves this type of separation creates service areas that are approximately 4.5 square miles in size, depending on the road network and other geographical barriers (rivers, lakes, railroads, limited access highways, etc.). The National Fire Protection Association (NFPA) references the placement of fire stations in an indirect way. It recommends that fire stations be placed in a distribution that achieves the desired minimum response times. NFPA Standard 1710, Section 5.2.4.1.1, suggests an engine placement that achieves a 240-second (four-minute) travel time.¹⁰ Using an empirical model called the “piece-wise linear travel time function” the Rand Institute has estimated that the average emergency response speed for fire apparatus is 35 mph. At this speed the distance a fire engine can travel in four minutes is approximately 1.97 miles.¹¹ A polygon based on a 1.97 mile travel distance results in a service area that on average is 7.3 square miles.¹² Subsequently, the average 3.7-square-mile service area in Grants Pass appears smaller than the

⁷ *Comparative Performance Measurement, FY 2011 Data Report - Fire and EMS, ICMA Center for Performance Measurement, August 2012.*

⁸ Ibid.

⁹ Insurance Services Office. (2003) *Fire Protection Rating Schedule (edition 02-02)*. Jersey City, NJ: Insurance Services Office (ISO).

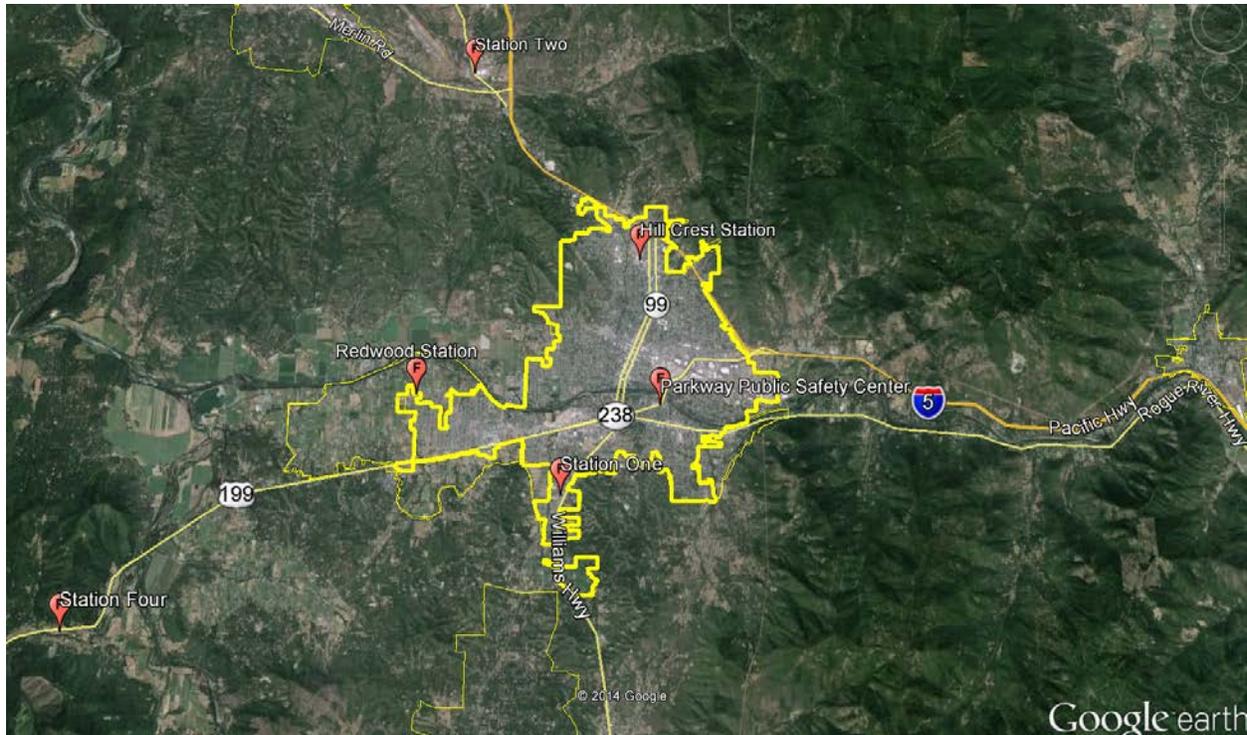
¹⁰ National Fire Protection Association. (2010). *NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*. Boston, MA: National Fire Protection Association.

¹¹ University of Tennessee Municipal Technical Advisory Service, *Clinton Fire Location Station Study*, Knoxville, TN, November 2012. p. 8.

¹² Ibid., p. 9.

noted references; however, the current configuration does not appear inappropriate for the service responsibilities and geography in Grants Pass.

Figure 12: Grants Pass and Rural Metro Fire Station Locations



Response Time Analysis

Response times are typically the primary measurement in evaluating fire and EMS services. However, most deployment models have been built around a four-minute initial travel time for EMS and an eight-minute full-force travel time for fires. Though these times have validity, the actual impact of a speedy response time is limited to very few incidents. For example, in a full cardiac arrest, analysis shows that successful outcomes are rarely achieved if basic life support (CPR) is not initiated within four minutes of the onset. However, cardiac arrests occur very infrequently; on average they are 1 percent to 1.5 percent of all EMS incidents.¹³ There are also other EMS incidents that are truly life-threatening and the time of response can clearly impact the outcome. These involve full drownings, electrocutions, and severe trauma (often caused by gunshot wounds, stabbings, and severe motor vehicle accidents, etc.). Again, the frequencies of these types of calls are limited.

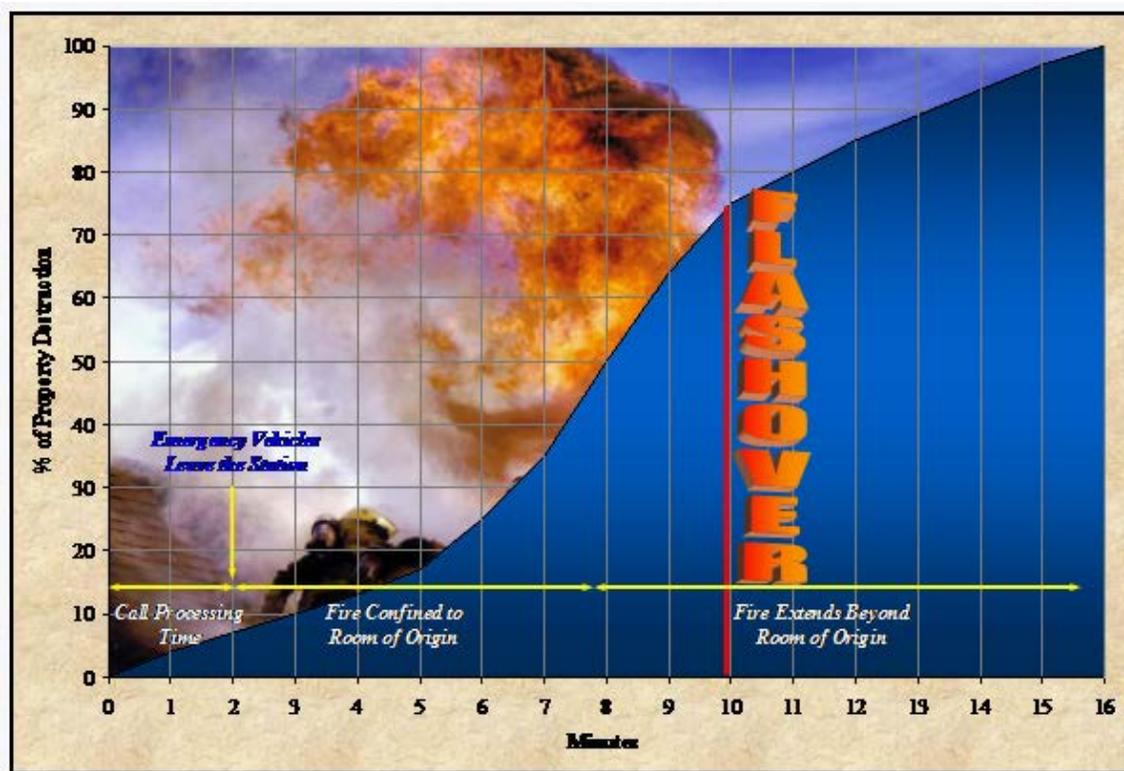
Regarding response times for fire incidents, the criterion is based on the concept of “flashover.” This is the state at which super-heated gasses from a fire are released rapidly, causing the fire to

¹³ Myers, Slovis, Eckstein, Goodloe et al. (2007). “Evidence-based Performance Measures for Emergency Medical Services System: A Model for Expanded EMS Benchmarking.” *Pre-hospital Emergency Care*.

burn freely and become so volatile that the fire reaches an explosive state. In this situation, usually after an extended period of time (eight to twelve minutes), and a combination of the right conditions (fuel and oxygen), the fire expands rapidly and is much more difficult to contain. When the fire does reach this extremely hazardous state, larger and more destructive fire occurs. Figure 13 illustrates the flashover phenomenon and its potential impact on firefighters and fire extinguishment as the fire propagation curve.

Another important factor in the whole response time question is what we term as “detection time.” This is the time it takes to detect a fire or medical situation and notify 9-1-1 to initiate the response. In many instances, particularly at night or when automatic detection systems (fire sprinklers and smoke detectors) are unavailable or inoperable, the detection process can be extended.

Figure 13: Fire Propagation Curve



Measuring Response Times

There have been no documented studies that have made a direct correlation between response times and outcomes in fire and EMS events. No one has been able to show that a four-minute response time is measurably more effective than a six-minute response time. The logic has been “faster is better” but this has not been substantiated by any detailed analysis. Furthermore, the ability to measure the difference in outcomes (patient saves, reduced fire damage, or some other quantifiable measure) between a six-minute, eight-minute, or ten-minute response is not a performance measure often utilized in the fire service. So, in looking at response times it is prudent to design a deployment strategy around the actual circumstances that exist in the community and

the fire problem that is perceived to exist. This requires a “fire risk assessment” that quantifies the hazards in the community, their locations, the levels of “built-in” protection, historical patterns, and the desired level of protection as expressed by the community and its elected officials. It would be imprudent, and very costly, to build a deployment strategy that is based solely upon response times.

For the purpose of this analysis **Response Time** is a product of three components; **Dispatch Time**, **Turnout Time**, and **Travel Time**.

- *Dispatch time* is the time interval that begins when the alarm is received at the communication center and ends when the response information begins to be transmitted via voice or electronic means to the emergency response facility or emergency response units in the field.
- *Turnout time* is the time interval that begins when the notification process to emergency response facilities and emergency response units begins by an audible alarm or visual announcement or both and ends at the beginning point of travel time. The fire department has the greatest control over these segments of the total response time.
- *Travel time* is the time interval that initiates when the unit is en route to the call and ends when the unit arrives at the scene.
- *Response time*, also known as total response time, is the time interval that begins when the call is received by the primary dispatch center and ends when the dispatched unit arrives on the scene to initiate action.

For this study, and unless otherwise indicated, response times and travel times measure the first arriving unit only. The primary focus of this section is the dispatch and response time of the first arriving units for calls responded with lights and sirens.

According to NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments, 2010 Edition*, the alarm processing time or dispatch time should be less than or equal to 60 seconds 90 percent of the time. This standard also states that the turnout time should be less than or equal to 80 seconds (1.33 minutes) for fire and special operations 90 percent of the time, and travel time shall be less than or equal to 240 seconds for the first arriving engine company 90 percent of the time. The standard further states the initial first alarm assignment (a total of fourteen personnel for a single family residential structure) should be assembled on scene in 480 seconds 90 percent of the time (not including dispatch and turnout time). NFPA 1710 response time criterion is a benchmark for service delivery and not an ICMA recommendation.

Division Response Times

The following averages were determined from the data provided to ICMA; these averages are for a total of 2,276 calls (80 percent of all calls), and are depicted in Table 7. These are the number of calls to which the first arriving unit responded in an emergency mode and for which we have complete dispatch and arrival times. For GPFR first arriving units, the average dispatch time was 1.5 minutes, average turnout time was 1.3 minutes, and the average travel time was 4.4 minutes.

The average response time for EMS calls was 6.9 minutes, and the average response time for fire category calls was 7.6 minutes. The average response time for structure fire calls was 6.3 minutes. The average response time for outside fire calls was 6.8 minutes. The 90th percentile dispatch time for all calls was 2.7 minutes and the 90th percentile response time was 10.5 minutes.

The 90th percentile measurement, often referred to as a “fractile response,” is a more conservative and stricter measure of total response time. Most fire agencies are unable to meet this standard. Simply explained, for 90 percent of calls, the first unit arrives within a specified time, and if measured, the second and third unit. Table 8 depicts the 90th percentile response times in Grants Pass for fire and EMS responses. It is important to note, however, that the 90th percentile dispatch time for fire and EMS is 2.7 minutes. This is an area that requires further evaluation, as ICMA believes this time can be reduced to less than two minutes.

Recommendation:

- Grants Pass should work with dispatch personnel to identify ways to reduce dispatch handling times. ICMA believes it is realistic to achieve a dispatch handling time at the 90th percentile that is less than two minutes.

It is important to note those categories of calls that have the highest 90th percentile dispatch handling times”

- Fall and injury, 3.4 minutes.
- Illness and Other, 3.0 minutes.
- Hazard, 3.8 minutes.
- Good Intent, 3.4 minutes.

The indication is that these are calls that typically are nonemergency and though they are responded to as emergency events, it appears that dispatching staff have unintentionally slowed the pace of handling these calls. There were 537 such calls in these categories, nearly 24 percent of the total.

Table 7: Average Dispatch, Turnout, Travel, and Response Times of First Arriving Unit, by Call Type

Call Type	Dispatch Time	Turnout Time	Travel Time	Response Time	Sample Size
Cardiac and stroke	1.3	1.2	4.0	6.6	393
Seizure and unconsciousness	1.2	1.2	3.9	6.3	271
Breathing difficulty	1.4	1.3	4.1	6.8	275
Overdose and psychiatric	1.5	2.4	6.0	10.0	34
MVA	1.5	1.2	3.6	6.3	81
Fall and injury	1.9	1.4	4.7	8.0	100
Illness and other	1.6	1.3	4.5	7.4	253
EMS Total	1.4	1.3	4.2	6.9	1,407
Structure fire	1.3	1.8	3.3	6.3	32
Outside fire	1.3	1.4	4.1	6.8	65
Hazard	1.9	1.4	5.0	8.3	74
False alarm	1.3	1.5	3.8	6.6	219
Good intent	1.9	1.2	4.9	8.1	110
Public service	1.6	1.3	5.3	8.1	369
Fire Total	1.6	1.4	4.7	7.6	869
Total	1.5	1.3	4.4	7.2	2,276

Observations:

- The average dispatch time was 1.5 minutes.
- The average turnout time was 1.3 minutes.
- The average travel time was 4.4 minutes.
- The average response time for EMS calls was 6.9 minutes.
- The average response time for fire category calls was 7.6 minutes.
- The average response time for structure fire calls was 6.3 minutes. The average response time for outside fire calls was 6.8 minutes.

TABLE 8: 90th Percentile Dispatch, Turnout, Travel, and Response Times of First Arriving Unit, by Call Type

Call Type	Dispatch Time	Turnout Time	Travel Time	Response Time	Sample Size
Cardiac and stroke	2.1	2.0	6.2	8.9	393
Seizure and unconsciousness	2.1	1.9	6.2	9.6	271
Breathing difficulty	2.4	2.0	6.3	9.2	275
Overdose and psychiatric	2.7	9.7	11.3	14.9	34
MVA	2.5	1.7	6.0	8.8	81
Fall and injury	3.4	1.9	7.6	12.0	100
Illness and other	3.0	1.9	7.0	10.8	253
EMS Total	2.5	1.9	6.6	9.9	1,407
Structure fire	2.0	3.0	4.9	8.0	32
Outside fire	2.7	2.2	6.1	9.0	65
Hazard	3.8	2.1	9.1	12.7	74
False alarm	2.3	2.3	6.3	9.6	219
Good intent	3.4	1.8	9.1	12.8	110
Public service	2.8	1.9	8.6	11.9	369
Fire Total	2.9	2.1	7.6	11.3	869
Total	2.7	2.0	7.1	10.5	2,276

Note: A 90th percentile value of 10.5 indicates that the total response time was less than 10.5 minutes for 90 percent of all calls. Unlike averages, the 90th percentile response time is not equal to the sum of the 90th percentile of dispatch time, turnout time, and travel time.

Observations:

- The 90th percentile dispatch time was 2.7 minutes.
- The 90th percentile turnout time was 2.0 minutes.
- The 90th percentile travel time was 7.1 minutes.
- The 90th percentile response time for EMS calls was 9.9 minutes.
- The 90th percentile response time for fire category calls was 11.3 minutes.
- The 90th percentile response time for structure fire calls was 8.0 minutes.
- The 90th percentile response time for outside fire calls was 9.0 minutes.

Understanding response times from a spatial perspective is an essential planning element. To illustrate the importance of this, the following maps show the type of coverage provided by GPFR. Figure 14 uses GIS mapping to illustrate travel time probabilities, showing 240-second (red), 360-second (green), and 480-second (blue) travel time comparisons. Figure 15 adds the Rural Metro fire stations and provides their respective travel time bleeds into Grants Pass. These comparisons are made by road network from the existing GPFR and RM stations.

Figure 14: 240-Second (Red: four min.), 360-Second (Green: six min.), and 480-Second (Blue: eight min.) Travel Time Probability from GPFR Facilities

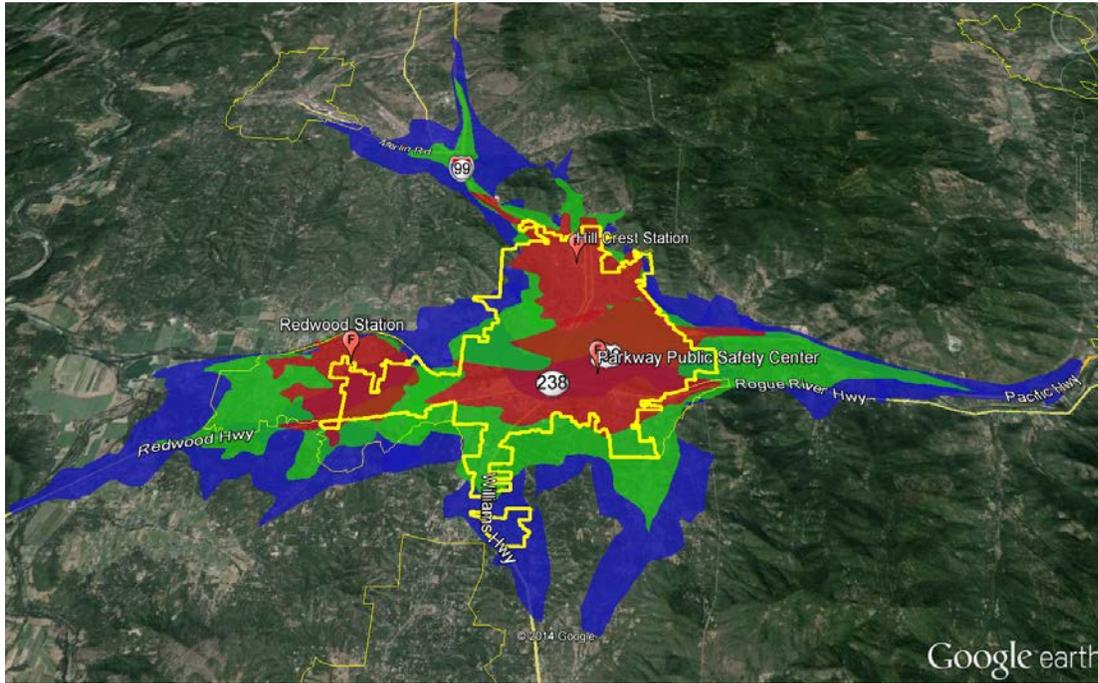
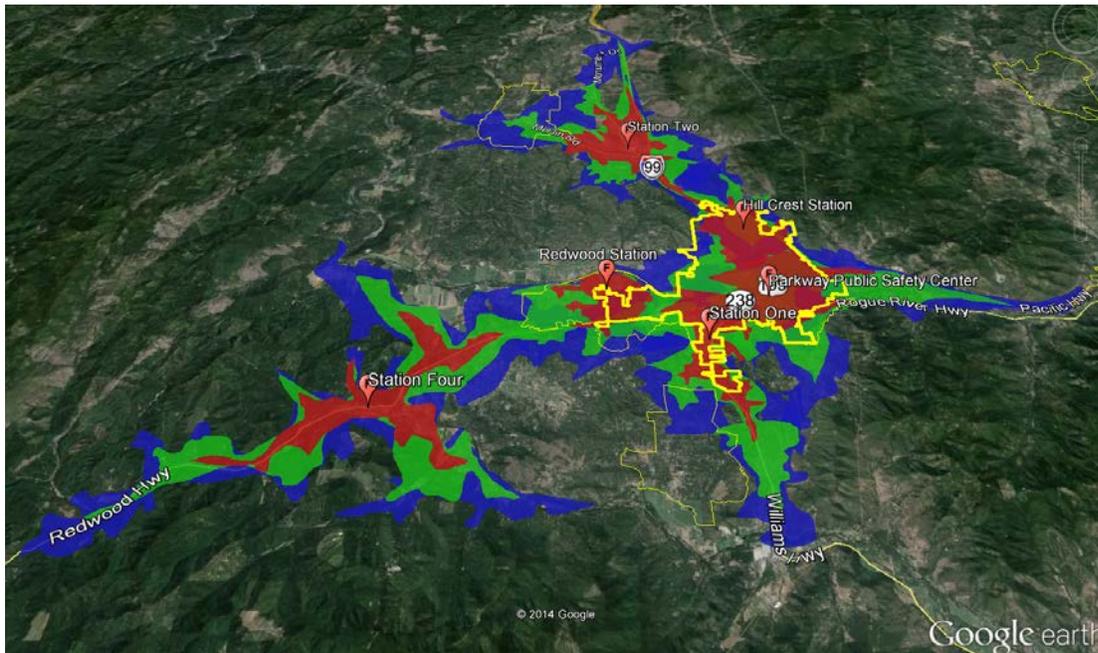


Figure 15: 240-Second (Red: four min.), 360-Second (Green: six min.), and 480-Second (Blue: eight min.) Travel Time Probability from GPFR and RM Facilities



Workload Analysis

The Grants Pass Fire/Rescue Division is a very proficient and well-managed operation. GPFR provides a full array of service response to both the city of Grants Pass along with mutual/automatic aid response into Josephine and Jackson counties. In 2013 GPFR responded to a total of 4,168 calls for service. In this report each citizen-initiated emergency service request is classified as a call. Of the calls for service, 38 were structure fire calls and 80 were outside fire calls. The Division responded to 1,785 EMS calls, approximately 43 percent of all responses. More than 14 percent of its calls were for outside mutual aid or automatic response jurisdictions. Table 9 represents the distribution of call types responded to by GPFR units.

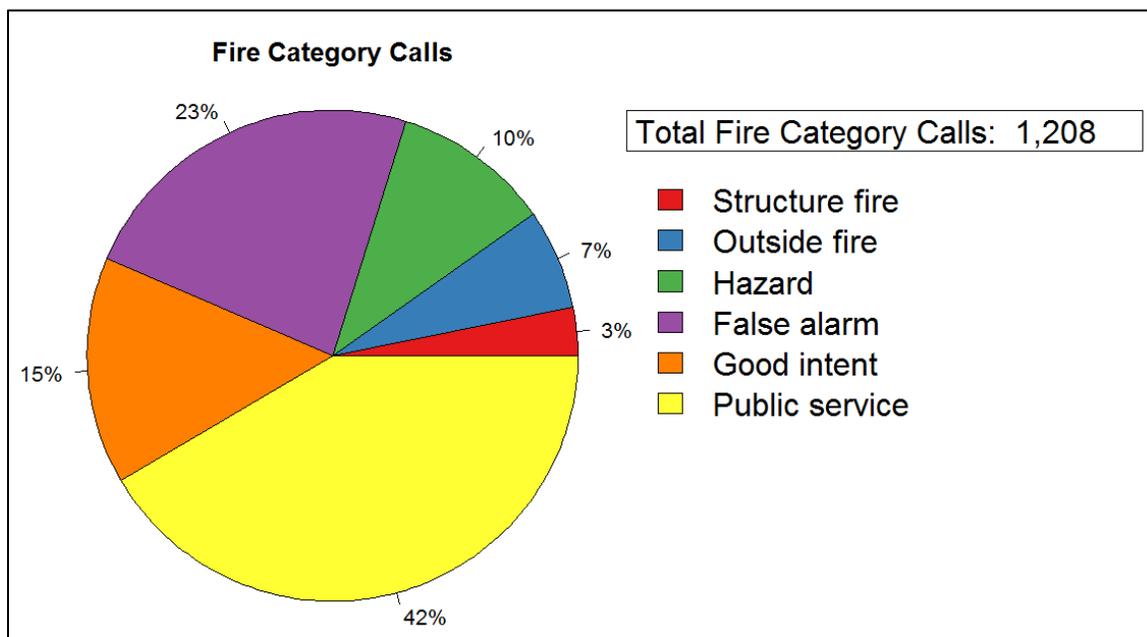
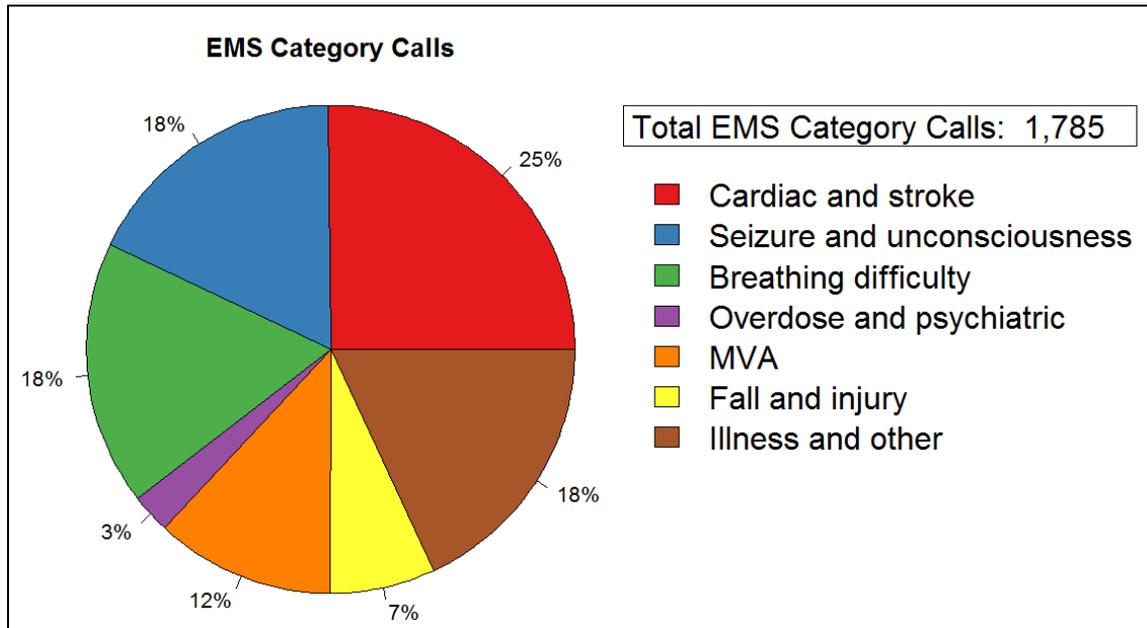
Table 9: Call Types

Call Type	Number of Calls	Calls per Day	Call Percentage
Cardiac and stroke	450	1.2	10.8
Seizure and unconsciousness	316	0.9	7.6
Breathing difficulty	314	0.9	7.5
Overdose and psychiatric	46	0.1	1.1
MVA	212	0.6	5.1
Fall and injury	124	0.3	3.0
Illness and other	323	0.9	7.7
EMS Total	1,785	4.9	42.8
Structure fire	38	0.1	0.9
Outside fire	80	0.2	1.9
Hazard	126	0.3	3.0
False alarm	282	0.8	6.8
Good intent	180	0.5	4.3
Public service	502	1.4	12.0
Fire Total	1,208	3.3	29.0
Mutual aid	600	1.6	14.4
Canceled	575	1.6	13.8
Total	4,168	11.4	100.0

Observations:

- The department received an average of 11.4 calls, including 1.6 canceled calls and 1.6 mutual aid calls, per day.
- EMS calls for the year totaled 1,785 (43 percent of all calls), averaging 4.9 per day.
- Fire calls for the year totaled 1,208 (29 percent of all calls), averaging 3.3 per day.
- Structure and outside fires combined for a total of 118 calls during the year, averaging one call every 3.1 days.

Figure 16: EMS and Fire Calls by Type



Observations:

- A total of 38 structure fire calls accounted for 3 percent of the fire category total.
- A total of 80 outside fire calls accounted for 7 percent of the fire category total.
- Public service calls were the largest fire call category and 42 percent of the fire category total.
- False alarm calls were 23 percent of the fire category total.

- Cardiac and stroke calls were the largest EMS call category and accounted for 25 percent of the EMS category total.
- Motor vehicle accidents were 12 percent of the EMS category total.

The emergency call volume observed in Grants Pass is not excessive; however, one unit (Engine-7308-Parkway) has been experiencing call volumes that can be considered moderate, currently more than 2,400 responses each year or approximately 6.6 calls per day. In our experience, when annual call loads exceed 3,000 responses (eight to nine per day), activity should be monitored to ensure that the frequency of simultaneous alarms are not exceeding ten percent of a unit’s overall call activity. GPFR’s other engines are experiencing significantly lighter workloads, with Engine-7307 (Hillcrest) at 1,500 runs annually (4.1 per day) and Engine-7309 (Redwood) responding to 1,100 total alarms, or 3.0 per day. The call duration for both fire and EMS responses has averaged about 20 minutes per call. This is very typical of fire and EMS workloads in communities that operate in a two-tier system with a private ambulance provider and a relatively light fire load. Call durations in the 20–minute range minimize the actual service time units spend in a “deployed” status. From this perspective the busiest GPFR engine (Parkway) is deployed for approximately two hours in each 24-hour duty cycle. Table 10 indicates unit workloads for the study period.

Table 10: Call Workload by Unit

Station	Unit Type	Unit ID	Average Deployed Minutes per Run	Annual Number of Runs	Annual Hours	Runs per Day	Deployed Hours per Day
Parkway	Type 1 Engine (Frontline)	7308	19.7	2,240	733.8	6.1	2.0
	Type 1 Engine (Reserve)	7319	19.3	144	46.3	NA	NA
	Bike Medic (Special Event)	7339	10.4	7	1.2	NA	NA
	Daily Duty Officer	7353	23.1	702	269.9	1.9	0.7
	Brush truck (Cross Staffed)	7368	76.0	39	49.4	NA	NA
Hillcrest	Type 1 Engine (Frontline)	7307	19.7	1,508	495.4	4.1	1.4
	Type 1 Engine (Reserve)	7317	12.6	52	11.0	NA	NA
Redwood	Type 1 Engine (Frontline)	7309	22.1	772	284.7	2.1	0.8
	Ladder truck (Cross Staffed)	7328	10.7	313	55.8	0.9	0.2

Observations:

- Frontline engine 7308 (Parkway) was the unit deployed the most often and had the most deployed hours. It averaged 6.1 runs and 2.0 hours of deployed time per day.
- Frontline engine 7307 (Hillcrest) was the unit deployed the second most often. It averaged 4.1 runs and 1.4 hours of deployed time per day.
- Frontline engine 7309 (Redwood) averaged 2.1 runs and 0.8 hours of deployed time per day.

- Daily duty officer 7353 (Battalion Chief) averaged 1.9 runs and 0.7 hours of deployed time per day.

Figures 17, 18, and 19 are the “Demand Maps” that show the distribution of fire, EMS, and other incidents occurring during the study period. The plotting of these incidents and the distribution they represent do not indicate any anomaly or concentration of alarms that would necessitate additional resources or facility relocations. Call activity is most concentrated in the central and eastern areas of the city adjacent to and along Hwy. 99, north of the Rogue River and south of the I-5 interchange. These areas are well serviced by the Parkway and Hillcrest Stations. Consequently, these stations combined are first arriving on-scene for approximately 82 percent of all responses.

Figure 17: Fire Call Distribution

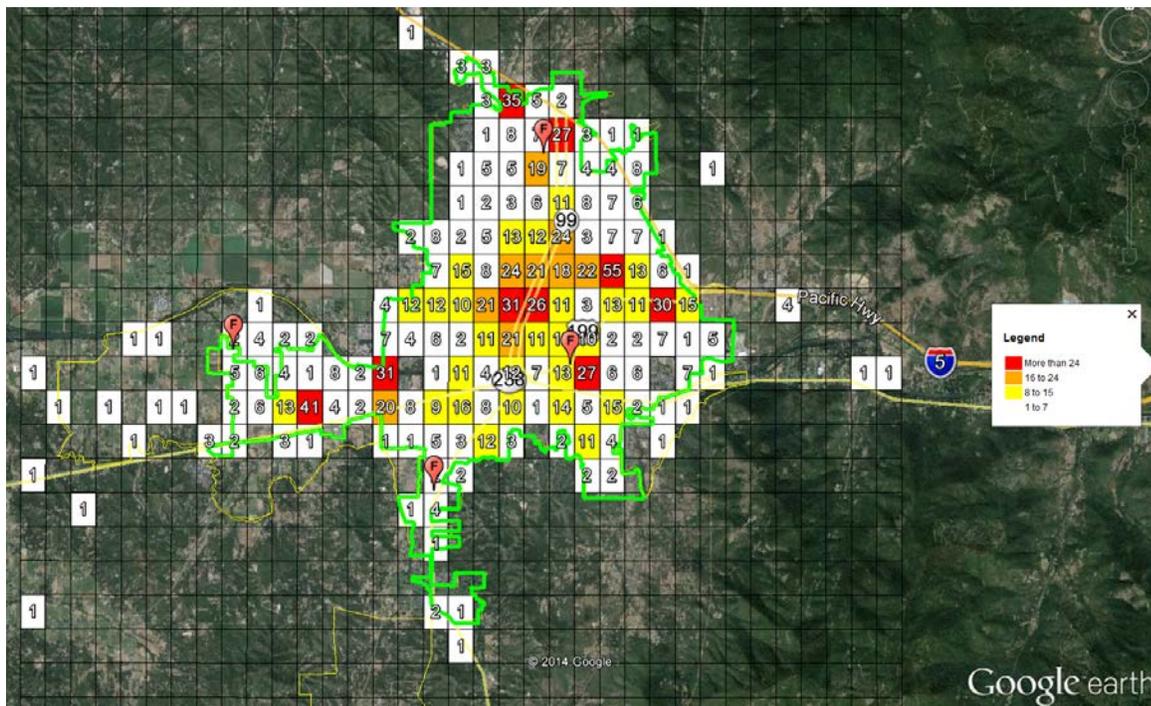


Figure 18: EMS Call Distribution

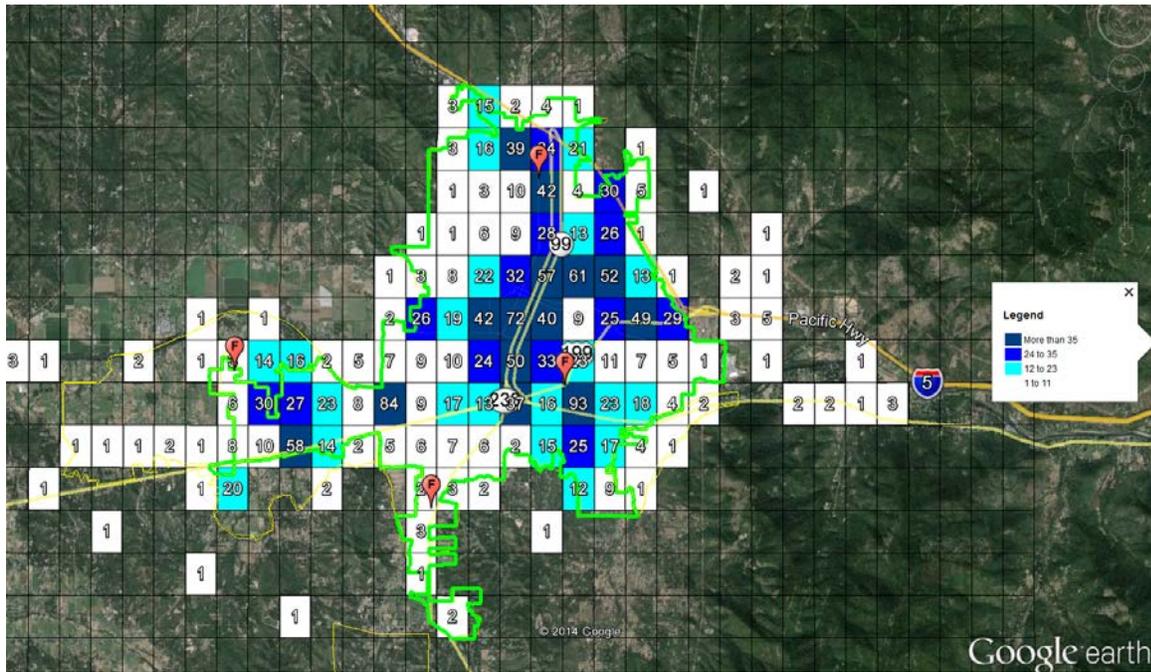
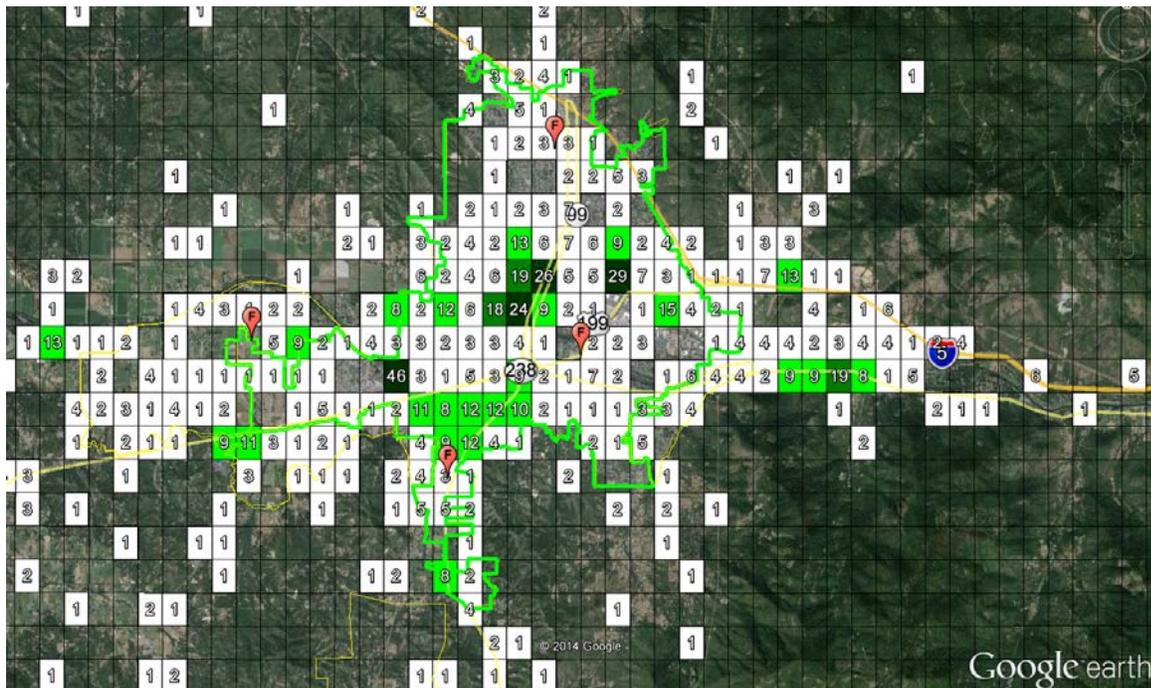


Figure 19: Other Call Type Distribution



Analysis of Fire and EMS Operations

Overview

GPFR has taken a very strategic and cost-effective approach in the delivery of fire and EMS services. The quality of these services are excellent and we believe the efficiencies resulting from this structure are substantial. The leadership of the organization is very progressive, utilizing a holistic approach in the design of a system that is well aligned with the service demand and the level of risk in the community. More importantly, the deployment strategies being utilized are well suited for the community's needs. In addition, the equipment and infrastructure are keeping pace with demand and the focus of training is very appropriate. GPFR is well suited for future growth and has additional capacity available with the current staffing and deployment to carry this organization into the foreseeable future.

Organization and Resources

From a general perspective, GPFR appears to have taken a very traditional approach in providing services to the community. However, upon closer evaluation, ICMA has observed a number of very unique and innovative concepts that are being utilized. GPFR has an excellent working relationship with its private ambulance provider, AMR. AMR has recently entered into a five-year service agreement, with a provision for two automatic five-year renewals, with Josephine County. This ensures stability and consistency in the delivery of EMS services. GPFR and AMR utilize a two-tier service delivery model in which GPFR provides initial response at a basic life support (BLS)-level and AMR provides advanced life support (ALS) and patient transport. This ensures the best level of coverage and maximizes the number of resources available at any given time. Both agencies utilize the same EMS protocols and have common medical oversight. The two-tier structure improves the availability of first response units and limits the call duration of on-scene time for GPFR. GPFR actually varies its level of BLS first response, depending on the training level of the personnel assigned that day. GPFR provides EMS first response, either at the Basic, Intermediate, or Paramedic level. Grants Pass requires all its response personnel to be trained at the EMT-Basic level. However, a number of employees have reached training levels of either EMT-Intermediate or Paramedic. The IAFF Collective Bargaining Agreement provides a monthly incentive bonus for employees who achieve the higher levels of certification.

Many agencies have elevated their EMS first response to the paramedic level and GPFR has considered upgrading its service to this level. ICMA believes that given the strong working relationship that exists with AMR and the types of response times and reliability being achieved, that raising the level of fire department EMS care to the Paramedic level is not warranted. We believe a service upgrade at this time would have minimal impacts on patient outcomes but would result in additional costs (equipment upgrades, additional employee training, and increased incentive pay).

Recommendation:

- Maintain the current level of EMS service at the EMT Basic or Intermediate level.

Staffing levels in the fire service are perhaps the most contentious and certainly the most costly aspect involved in the delivery of emergency services. NFPA-1710, *Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, Section 5.2.2.1.1, recommends four-person staffing on fire companies. This service standard has been ingrained as the mantra of most fire unions and to a large extent, many fire service administrators as the only viable standard for apparatus staffing.

Staffing levels vary across the nation, typically ranging from two to five personnel on engine companies. Most urbanized areas utilize the higher staffing levels while the more rural areas, including combination fire departments, typically utilize two to three personnel on their apparatus. On average however, most career fire departments with service populations between 25,000 and 50,000 staff fire apparatus with three personnel.¹⁴

There is no Oregon or federal requirement that specifies staffing levels on fire apparatus, with the exception of the FAA regulation regarding commercial airport firefighting. The closest thing that approaches a requirement for staffing levels is the OSHA 29 CFR 1910.134 standard, often referred to as the “**Two-in-Two Out**” guideline. This standard, which is a safety mandate that has application to municipal firefighting, requires the use of four personnel (two inside the structure and two outside the structure) **when conducting interior firefighting activities in a hazardous work environment** (that is, an environment that is immediately dangerous to life or health, or IDLH). The OSHA requirement has two key provisions that allow considerable flexibility regarding staffing:

- One provision specifies that the four personnel who engage in interior firefighting are required at the incident (assembled) and are not a staffing requirement for the individual responding unit.
- The second provision is that an exception is provided when crews are performing rescue operations where there is the potential for serious injury or death of the occupants. In this case the standard allows the entry of two personnel to conduct the rescue activity.

The staffing of fire apparatus is a local government decision, though we often encounter communities that have chosen to negotiate these provisions and include language that specifies staffing levels in their collective bargaining agreements. It is also important to note that this standard is specifically referenced for “**interior firefighting**.” Firefighting activities that are performed from the exterior of the building, including wildland firefighting, are not regulated by this portion of the OSHA standard.

GPFR has taken an alternative approach with regard to its staffing levels. It utilizes a minimum staffing of two personnel on its three first line fire apparatus and supplements this level to three personnel with the use of student firefighters. In cooperation with Rogue Community College, the

¹⁴ NFPA-Needs Assessment of the U.S. Fire Service (3rd), June 2011-Quincy, MA

Division has established a training and mentoring program that utilizes nine student firefighters (three on each shift) to provide staffing for its apparatus. The student firefighters are enrolled in a range of fire and EMS coursework through the community college during the three-year period of the program. Student firefighters must maintain certain performance requirements (both job related and academic) during the program. The city funds all tuition costs, books, and fees for the student while active in the program. In addition, GPFR provides training, protective clothing, firefighting tools, and other personal equipment. In return the student is assigned to a station and shift and must work ten 24-hour-shifts each month. The student receives no pay for these services beyond tuition and other related school expenses. The student is released for any classes, clinical time, or testing during an assigned work day. Students in this program must be enrolled in coursework involving basic and advanced firefighter training, EMT or advanced EMS training, or coursework that may lead to an associate's degree in either Fire Science or EMS. It is estimated that the annual cost per student is approximately \$10,000. The cost for one entry-level firefighter, including wages and benefits, is estimated to be \$80,000 to \$85,000 annually.

The Student Firefighter Program has been very effective and is well received in the community and among GPFR line personnel. The program is held in very high regard regionally and the ability to recruit new students into the program has not been problematic. There are frequent occasions, however, when student firefighters are unavailable and staffing levels are reduced to two-person companies. GPFR personnel have expressed an interest in expanding this program to include more students and increasing the duration of the program from three to four years.

Recommendation:

- Consider the expansion of the Student Firefighter Program to include 12 total participants, and an increase in the duration of the program to four years

Apparatus and Fleet Maintenance

The fleet of first response apparatus is fairly new and in good working order. Since 2008 the city of Grants Pass has purchased three Type-1 engines as well as an aerial apparatus. The first-line engines currently have six years of service age and the aerial apparatus has only three years of service. Table 11 provides an overview of the apparatus inventory for the Grants Pass Department of Public Safety.

Table 11: Engine, Brush, and Ladder Inventory

Unit	Type	Make	Year	Age
7307	Type 1/Pumper	Pierce	2008	5 Years
7308	Type 1/Pumper	Pierce	2008	5 Years
7309	Type 1/Pumper	Pierce	2008	5 Years
7328	Aerial Platform	Pierce	2011	3 Years
7368	Type 6/Brush	Ford F350 w/slip unit	2000	14 Years
7317	Reserve Engine	Pierce	1997	17 Years
7319	Reserve Engine	Pierce	2000	14 Years

GPFR has been using an apparatus replacement schedule that anticipates the useful working life to be 15 years for engines in front-line service and five years in a reserve status. It is anticipated the aerial apparatus will have a slightly higher life expectancy, that is, 20 years as a frontline unit and five years in reserve. This number is a rough guide and can vary based on alarm activity, accidents, and proper maintenance. This guideline is consistent with many organizations we have observed and generally is a reasonable standard for Grants Pass. The Redwood Station has the lowest level of activity in the system, so the wear and tear on the apparatus at this station is far less than the busier stations in the system; placement of the oldest apparatus at this location appears prudent if a disparity arises within the fleet age. If wear and mileage is considerably inconsistent within the fleet, consideration should be given to rotating engines in and out of busier stations.

An ongoing problem faced throughout the American fire service is the age, appropriateness, and operability of its apparatus. The increase in response activity resulting from GPFR's response to all EMS incidents will certainly accelerate apparatus replacement and may even necessitate a reevaluation of the types of response units that are best suited for the predominant EMS workload. Currently, GPFR responds only fire engines to EMS alarms. Future consideration should be given to the use of smaller, light-chassis rescue trucks that work in tandem with engines when an EMS or public assist response is needed.

The current fleet of first-line engines and aerial apparatus has a replacement value of more than \$2.35 million in 2014 dollars (\$450,000 per engine and \$1 million per aerial). A straight-line calculation utilizing a 15-year replacement schedule indicates a need to earmark \$157,000 annually for apparatus replacement. This number excludes reserve apparatus and any specialty units. Grants Pass does not have a formalized apparatus replacement program for fire apparatus. However, a depreciation fund has been established to fund future apparatus replacement as has as a tentative replacement schedule. The depreciation fund is financed through both the general fund and the levy. Careful review should be completed GPFR and financial officers to ensure that sufficient replacement funds will be available on or before the proposed end of life for major apparatus. It should also be noted that the purchase of three Type-1 engines in 2008 could lead to a replacement plan for all three at the same time if the main criteria for replacement is based on age.

The first-line fleet was found to be in very good condition and in good working order. We found the onboard inventory is consistent with national standards and meets the risks of the community. The crews interviewed reported that their fleet and equipment was in very good condition. The reserve fleet can best be described as fully functional, but like most departments, reserve units are not fully equipped. The reserve units also do not allow for the entire equipment inventory from the frontline units to be transferred due to compartment space limitations. Because reserve units are not fully stocked, there are infrequent periods of downtime when transferring equipment to and from a reserve unit.

Fleet management services are provided by the city's Fleet Division. It provides fuel through private providers, preventive maintenance, and all repairs to fire apparatus and staff vehicles, including repairs to fire department equipment and the installation of radios and other peripherals. The Fleet Division operates a single facility that is insufficient in size for the larger fire apparatus. The Fleet Division has two full-time employees, including the mechanic-supervisor. GPFR is charged \$78 per hour for labor costs and a 50 percent markup on parts and materials. In FY14 the fire department budgeted \$149,434 for fuel, parts, and repairs (including labor).

The Fleet Division provides emergency mechanical field response on a 24/7 basis and coordinates towing services if needed. GPFR staff are very pleased with the quality of service and reliability of the Fleet Division. GPFR and the fleet supervisor work jointly in new fire apparatus acquisitions, specification writing, and the oversight of vehicle assembly. ICMA believes that the services provided by the Fleet Division are of high quality, timely, and reasonably priced.

GPFR coordinates the required annual third-party inspections of the pumps and aerial devices. Preventive maintenance for fire apparatus is scheduled based upon a combination of service hours, road miles, and days since the last service. Fluid samples are analyzed as a part of each PM.

Recommendations:

- Formalize the apparatus replacement fund and make this plan available to GPFR staff.
- Evaluate the costs/benefits of constructing a new fleet maintenance facility that would be suitable for larger fire apparatus versus contracting for services on the larger units.
- Evaluate the use of smaller, light-chassis rescue trucks that work in tandem with engines when an EMS or public assist response is needed.
- Where fiscally responsible, fully stock reserve fire apparatus to reduce changeover time as well as to provide a deeper fleet for major incidents.

Emergency Response—Fire and EMS:

Nationwide, fire departments are responding to more EMS calls and fewer fire calls, particularly fire calls that result in active firefighting operations by responders. Improved building construction, code enforcement, automatic sprinkler systems, early detection systems, and aggressive public education programs have contributed to a decrease in serious fires and, more importantly, fire deaths among civilians. Grants Pass is certainly following this trend and we observed a very active fire prevention program and a strong code enforcement effort.

During our period of evaluation GPFR responded to a total of 38 incidents that were classified as structure fires. In looking further at these incidents it was determined that for 19 of these events there was no fire damage reported to either the structure or its contents. When we looked at the time spent on fire incidents, we found that on approximately 53 percent of all structure fire calls the duration of the call was 60 minutes or less. This is also indicative of a very low fire problem as the more significant events take a longer time to manage. The total fire loss in Grants Pass (structure and contents) for all structural fires in 2013 was estimated to be \$467,915. For the 19 calls in which damage was reported this equates to approximately \$25,000 in damage per fire. In 2013 the fire with the largest amount of damage had a combined fire loss of \$110,000. When looking at fire loss comparisons nationwide for structure fires, NFPA estimates that in 2012 the average fire loss for a structure fire nationally was \$20,345.¹⁵ Though the fire loss in 2013 was not exceptionally high, at any time a single fire can occur that results in millions of dollars in fire loss. As an example, in 2012, a fire occurred at Mountain Alloys in which a 20,000 square foot-building was destroyed and which resulted in a total fire loss of more than \$1 million. Table 12 provides an analysis of the GPFR fire loss in 2013.

Table 12: Property and Content Loss Analysis for Structure and Outside Fire Calls

Call Type	Property Loss		Content Loss	
	Loss Value	Number of Calls	Loss Value	Number of Calls
Structure fire	\$421,325	19	\$46,590	15
Outside fire	\$39,210	22	\$12,510	10
Total	\$460,535	41	\$59,100	25

Note: This analysis only includes calls with property loss or content loss greater than 0.

Observations:

- Out of 38 structure fire calls, 19 calls (50 percent) had recorded property loss, with total recorded loss value of \$421,325. The structure fire call with the largest property loss of \$110,000 occurred at 1336 Annabelle Ln. on February 26, 2013. The structure fire call with the second largest property loss of \$100,000 occurred at 115 SW H St. on January 5, 2013.

¹⁵ Michael J. Karter Jr., *Fire Loss in the United States during 2012*, NFPA September 2013, p-13

- Out of 80 outside fire calls, 22 (28 percent) had recorded property loss, with total loss value of \$39,210 and 10 had recorded content loss, with total loss value of \$12,510.

Another interesting trend CPSM continues to evaluate is the frequency of true emergency calls vs. nonemergency or public assist calls. Our findings nationally (from ICMA fire data reports) are indicating that in some jurisdictions more than 50 percent of all responses (fire, EMS, and other) are nonemergency in nature. This factor is critical when calculating response time data, determining staffing levels, and identifying appropriate deployment strategies. GPFR has done a good job in adjusting its response assignments so that only the needed resources are sent to those incidents that are characteristically nonemergency events (automatic fire alarm soundings, public assists, smoke investigations, hazardous conditions, etc.). Our analysis found that on 76.8 percent of all responses, GPFR responds a single unit. This is a very positive attribute and a further indication of the strategic approach GPFR has adopted in maximizing its resources and emphasizing employee safety. In looking at response patterns to false alarms, however, CPSM feels that GPFR can improve its screening process and reduce the number of units assigned to these call types. On only 19 of the 282 false alarms reported in 2013 did GPFR dispatch a single unit. Table 13 summarizes the number of units dispatched to all calls.

Table 13: Number of Grants Pass Fire/Rescue Units Dispatched to Calls

Call Type	Number of Units					Total
	One	Two	Three	Four	Five or More	
Cardiac and stroke	410	38	2	0	0	450
Seizure and unconsciousness	282	33	1	0	0	316
Breathing difficulty	288	24	1	1	0	314
Overdose and psychiatric	42	3	1	0	0	46
MVA	126	63	19	3	1	212
Fall and injury	108	15	1	0	0	124
Illness and other	285	29	5	3	1	323
EMS Total	1,541	205	30	7	2	1,785
Structure fire	2	1	4	21	10	38
Outside fire	31	10	24	12	3	80
Hazard	80	21	22	3	0	126
False alarm	19	35	161	62	5	282
Good intent	117	29	25	8	1	180
Public service	442	41	12	6	1	502
Fire Total	691	137	248	112	20	1,208
Mutual aid	467	108	17	8	0	600
Canceled	500	54	19	2	0	575
Grand Total	3,199	504	314	129	22	4,168
Percentage	76.8	12.1	7.5	3.1	0.5	100

Note: Not included are units responding from mutual aid, contract, or automatic response agencies (AMR, RMTD, and other.)

Observations:

- On average, 1.9 GPFR units were dispatched per fire category call.
- For fire category calls, one GPFR unit was dispatched 57 percent of the time, two GPFR units were dispatched 11 percent of the time, three GPFR units were dispatched 21 percent of the time, four GPFR units were dispatched 9 percent of the time, and five or more GPFR units were dispatched 2 percent of the time.
- For structure fire calls, one or two GPFR units were dispatched 8 percent of the time, three GPFR units were dispatched 11 percent of the time, four GPFR units were dispatched 55 percent of the time, and five or more GPFR units were dispatched 26 percent of the time.
- For outside fire calls, one GPFR unit was dispatched 39 percent of the time, two GPFR units were dispatched 13 percent of the time, three GPFR units were dispatched 30 percent of the time, and four or more GPFR units were dispatched 19 percent of the time.
- On average, 1.2 GPFR units were dispatched per EMS category call.

- For EMS calls, one GPFR unit was dispatched 86 percent of the time, two GPFR units were dispatched 11 percent of the time, and three or more GPFR units were dispatched 2 percent of the time.

In looking at the mode of response (emergency or nonemergency), our evaluation indicates that on approximately 31 percent of all responses, (more than 1,300 incidents) GPFR units responded in a nonemergency mode (following traffic patterns and not utilizing lights and sirens). Again, this is a very commendable effort; however, ICMA feels that the number of nonemergency responses by GPFR units can be increased. To determine which calls merit a nonemergency response will require greater collaboration with the dispatch center and an expanded use of the call-screening process. The ability to accurately screen calls, determine their severity, and then assign the most appropriate unit (s), can pay substantial dividends in the following ways:

- Increased unit availability
- Reduced wear and tear on the vehicles
- Reduced fuel and operating costs
- Reduced vehicle maintenance
- Reduced potential for vehicle accidents.

Recommendation:

- GPFR should work closely with the dispatch center to improve its call-screening efforts and identify those nonemergency and public assist calls that should not receive an emergency response.

As mentioned earlier, GPFR works closely with its key service partners, particularly Rural Metro Fire, in automatically responding to fire incidents. On every fire call in which multiple engines are dispatched, both RMFD and GPFR units respond jointly. This is a **Best Practice** that is commendable and should be maintained. In consideration of the potential for two-person staffing on responding apparatus, RMFD and GPFR utilize a fire-ground tactic that is built upon the exterior fire attack. In this concept, firefighting is done primarily from the exterior of the building. Typically, fire departments utilize a more aggressive firefighting tactic, the interior fire attack, which advances fire companies into the inside of the structure in attempting to extinguish the fire. Again, GPFR is demonstrating a **Best Practice** in recognizing its staffing limitations and adopting a tactical strategy that is best aligned with its capacities. It has built its training regimens around this concept and ingrains in its command personnel the limitation and application of this approach. Clearly the approach has been effective, when considering the level of fire risk in the community and the Division's track record with regard to fire loss and employee injuries.

The distribution of alarm activities in Grants Pass indicates that nearly 43 percent of all calls are classified as EMS. This distribution is considerably lower than the percentage of EMS calls to fire calls that we typically observe in communities we have studied. Usually we see a split in which EMS calls constitute upward of 75 percent of the total alarm activity. We suspect that Grants Pass has a

similar distribution of EMS to fire calls but because of the coding practices in Grants Pass the recorded ratio of EMS calls is much lower. We attribute this to the classification of those public service and good intent calls along with the higher number of mutual aid and cancelled calls, which in many jurisdictions are typically categorized as EMS responses.

The data indicate that GPFR and AMR respond jointly on more than 95 percent of all EMS responses. In discussions with the dispatch center, we found EMS calls are prioritized into three basic categories;

- Priority-1, in which all units respond in an emergency mode (lights and sirens).
- Priority-3, in which only AMR responds with lights and sirens and the GPFR unit responds in nonemergency mode.
- Priority-0, in which both AMR and GPFR units respond in nonemergency mode.

As indicated earlier, our data indicate that on 31 percent of all responses, GPFR is responding in nonemergency mode. The practice of call prioritization and downgrading the response is a **Best Practice** that should be maintained and possibly expanded. ICMA believes that the current practice in which both GPFR and AMR units are dispatched to nearly all EMS calls is excessive. Improved call screening at the dispatch center and changes in the number of units assigned to those public assist and nonemergency calls is recommended.

Recommendation:

- GPFR should work with AMR and the dispatch center to improve the call-screening process in an effort to limit the number of incidents in which both an AMR and GPFR unit are dispatched.

Staffing and Overtime

An analysis was completed regarding the department staffing. The current deployment strategy accounts for 7 personnel on duty each day to adequately staff the allocated resources. This analysis included a relief staffing multiplier of 3.49 derived from the average actual hours worked by employees and the total available hours that need to be staffed.¹⁶ In other words, it requires 3.49 employees to cover one position 24 hours a day 7 days a week. This is a continuous staffing approach and should account for the average leave history (i.e. vacation, sick, holiday, and misc.) and limit overtime dependency. However, this formula itself presumes that all positions are equal to one another and that staff and positions are interchangeable, which is not the case in GPFR.

The need to fill various positions such as fire corporal, driver, or battalion chief changes on a daily basis. This becomes more challenging in small organizations such as GPFR where shift member depth is not comparable to a large organization. When looking at an individual shift basis rather

¹⁶ Ammons, D. (2009). *Tools for decision making*, 2nd (ed.). Washington, DC: CQ Press.

than comingling all shifts into one aggregate, the staffing multiplier would be 1.16 per minimum staffed riding position.

The current GPCR staffing level of twenty-four total operational shift personnel (including the battalion chief) is vulnerable to unforeseen changes in the daily operational staffing. An alternative operational staffing model (should funding allow) that links minimizing overtime; enabling the department to be more nimble with operational staffing; and to enhance a greater likelihood that all positions will be filled on a daily basis is to increase shift staffing to twenty-seven total operational shift personnel (including the battalion chief). Table 1 illustrates this alternative staffing model. ICMA understands it remains a policy decision whether to provide continuous staffing under the current deployment model or to increase staffing levels to an alternative level as discussed herein.

Table 14: GPCR Alternative Staffing Matrix

Unit Type	Number of Staffed Units	Full Time Staffing Per Unit	Minimum Number of Personnel On Duty Per Shift	Total Personnel Assigned to Each Shift	Minimum Total Required Personnel Per Shift (1.16 Staffing Factor)	Alternative Total Shift Personnel 6.96+1.16=8.12 Provides .88 staffing buffer for unplanned vacancies
Engine	3	2	6	7	7 (6.96)	8
Reserve Engine	0	0	0		0	
Tower Ladder	0 ¹⁷	0	0		0	
Brush	0 ¹⁸	0	0		0	
Battalion Chief	1	1	1		1 (1.16)	1

The use of overtime is very prudent and conservative within the department. When compared to total personnel costs, the FY 13 budgeted overtime amount accounted for 5.39% while the actual costs accounted for 4.1%. When compared to total personnel costs, the FY 14 budgeted overtime amount accounted for 5.9% while the actual costs accounted for 4.2%. The department pays a limited amount of Fair Labor Standards Act (FLSA) overtime (\$30,000 to \$40,000 including benefits) by using an FLSA pay cycle of 27 days for determining eligibility. The department has deployed strategies to limit overtime costs by clearly defining what is eligible for callback pay and limits on the vacation slots through the negotiations process with the labor organization. The department tracks the use of overtime using sub-categories that allow for better management of the overtime and the ability to analyze overtime trends. Table 15 breaks down overtime usage for fiscal years 2013 and 2014.

¹⁷ Tower ladder cross staffed by an engine crew

¹⁸ Brush unit cross staffed by an engine crew

Table 15: GPFR Overtime Distribution

Overtime Type		FY 13	FY14
OT - Overtime		\$54,963	\$49,961
OT – Holdover		\$1,982	\$1,345
OT – Callback		\$16,844	\$22,970
OT – Court		----	\$1,750
OT – DARE		\$3,499	\$3,711
OT – Cover Vacation		\$30,720	\$27,360
OT – Cover Sick		\$17,184	\$39,753
OT – Cover Training		\$13,584	\$4,103
OT Cover Training Safe		\$2,197	\$1,257
OT – Mandatory Meeting		\$14,722	\$14,526
OT – Mandatory Training		\$19,358	\$11,296
	Total Actual	\$175,055	\$178,032
	Budget	\$225,350	\$248,893
	Amount Under Budget	\$50,295	\$70,861

The department has an accrued leave liability for vacation time of approximately \$112,000 or 2.68% of payroll. Limits on the amount of vacation leave that can be carried over from year to year are in place within the collective bargaining agreement. The current aggregate annual accrual does not exceed the capacity to use such leave. In the event that half the work force had between 37 and 60 months seniority and the other half had between 61 and 120 months, it would still only account for the need to grant 214.5 shifts vacation.

Recommendations:

- The department should evaluate on an annual basis during the budget development process the use of overtime and assess the cost/benefit of adding a full time equivalent employee in lieu of overtime expenses to cover vacant time periods created by the various leave benefits such as personal, sick etc.
- Through the collective bargaining process, the department should retain the ability to execute a shift reassignment with minimal notice to better address unforeseen and long-term vacancies such as worker’s compensation injury, extended sick leave, or an FMLA qualifying event.
- The department should consider the use of paid part time staff to cover some or all vacant time periods created by the various leave benefits such as personal, sick etc.
- As an alternative staffing model and as funding allows, increase shift staffing to twenty-seven total operational shift personnel (including the battalion chief) to minimize overtime; enable the department to be more nimble with operational staffing; and to enhance a greater likelihood that all positions will be filled on a daily basis.

Essential Resources

Fire Prevention and Wildland Urban Interface

Fire prevention efforts in GPFR are given a high priority in the overall philosophy of the organization and as a key objective in service delivery to the community. This effort is commendable and ICMA believes is a necessary component in the continued success of this organization. Fire suppression and response, although necessary in minimizing property damage, have little impact on preventing fires. Rather, public fire education, fire prevention, and built-in fire protection and notification systems are essential elements in protecting citizens from death and injury due to fire. The concept of fire prevention is also a critical effort as it relates to the wildfire arena and its associated prevention efforts. GPFR enforces the 2010 edition of the Oregon Fire Code as adopted through the Grants Pass Municipal Code, Section 9.12. Efforts are underway to implement the 2012 edition of this code.

Automatic fire sprinklers have proven to be very effective in reducing fire loss and minimizing fire deaths in single family residential structures. Many communities have been reluctant to impose this code provision as a result of the lobbying efforts of the building construction and real estate industry. These industries typically indicate that the increased costs associated with automatic fire sprinklers will limit the new construction market and stymie the housing recovery. According to the National Fire Protection Agency, the average cost nationally for installing automatic fire sprinklers in new single family residential structures was estimated to be \$1.61 per square foot.¹⁹ For a 2500 square-foot home, this estimated cost would be approximately \$4,000. This can be less than the cost of granite counter tops or a carpeting upgrade. Given the limited resources available for fire suppression efforts and the potential for new growth in the Grants Pass area, ICMA believes that the city should include in its 2012 fire code adoption the additional requirement for automatic fire sprinklers in all new single family residential structures.

Recommendation:

- Grants Pass should consider the adoption of a fire code provision that requires automatic fire sprinklers in the construction of all new single family and duplex residential structures

The fire prevention program in Grants Pass is managed through its Fire Prevention Bureau, which is headed by the fire marshal with assistance from one fire inspector. The Bureau was recently staffed with an additional Fire Safety Specialist, but this position has been reallocated due to budget constraints. The Fire Safety Specialist position was primarily charged with fire safety public education and fire prevention outreach efforts, including wildfire prevention. As mentioned previously, the Bureau coordinates inspection activities which result in more than 1,200 interactions annually with the public through its plans review, inspection, and code enforcement efforts. Line personnel have significant involvement in this effort through their prefire planning and in-service company inspections. Each engine company is expected to conduct ten company inspections each month. This is considered a **Best Practice** by ICMA in that it provides an excellent

¹⁹ NFPA, "Cost of Installing Residential Fire Sprinklers Averages \$1.61 per Square Foot" Quincy, MA: September 11, 2008.

exchange between business owners and larger residential and institutional occupancies regarding fire safety and fire code compliance. Engine companies complete more than 600 in-service inspections annually.

Plans review for automatic fire suppression systems and alarm systems, as well as the review of site plans involving fire lanes and ingress and egress for fire apparatus, are handled through GPFR's Fire Prevention Bureau. Annual or biennial inspections and maintenance inspections are typically done by the fire prevention staff and engine companies depending on the size of the structure and the complexity of the fire suppression system. The fire marshal and fire inspector work closely with the Building Department in the review of new construction, ongoing annual maintenance inspections, nuisance abatement, occupancy loads, and other life safety enforcement issues. The Bureau has an established performance guidelines regarding the timelines for completing its fire plans review and inspections; however, periodic reporting on the compliance levels regarding these measures is not done.

Recommendation:

- Grants Pass should formally adopt and report on fire prevention performance measures relating to the completion of fire plans reviews, permitting activities, and inspections.

Arson investigation is managed by the Fire Prevention Bureau. Fire loss calculations, along with determining the cause and origin of the fire, is the responsibility of the engine company officer. Bureau members provide assistance when needed. If arson is suspected, the investigation will be initiated by the fire prevention staff with assistance from the Grants Pass Police personnel. In more extensive cases involving large fire loss or deaths, the Deputy State Fire Marshall along with the Oregon State Police Arson Unit may be called in to assist in the investigation.

The GPFR public education program is achieved primarily through an outreach by fire companies that focuses on school-age children. This area of public education has been impacted the most with the elimination of the Fire Prevention Specialist position. Division personnel present safety programs, primarily upon request. They participate in area and business safety programs along with providing fire station visits and tours in which safety messages are given. The Division has an active smoke detector give-away program and often provides detector battery exchanges when requested.

GRFR has adopted the International Wildland Urban Interface Code. The Division has an active weed abatement program and restricts outdoor burning. GPFR personnel are staffed and equipped to manage wildland incidents and they work closely with the Oregon Department of Forestry in the management of larger incidents. The Division operates and maintains a single, Type-6 wildland/brush engine. GPFR personnel are typically involved with structural protection during wildland fire events. The Division has promoted an active FireWise program since July of 2012 and has been extremely effective in securing grant funding to hire a FireWise Coordinator to oversee preparedness and wildfire prevention programs. Oregon and the Northwest are regularly susceptible to major wildfire events. Recent wildfire complexes, particularly in the southwestern and south central Oregon drive home the importance of wildfire prevention. The **790 Fire**, the

Somers Fire and the **Deception Complex** are stark indications of the regions susceptibility to these events. It is very unlikely that Grants Pass can continue to rely solely on grant funding to support its Firewise efforts. With continued population growth into the interface areas and the reality of climate change, expanded wildfire prevention and mitigation efforts will be needed. ICMA believes that Grants Pass should pursue alternative funding streams to support its current FireWise efforts and the possible expansion of prevention strategies in the wildland arena.

Education and Training Programs

Education and training programs create the character of a fire service organization. Agencies that place a real emphasis on their training have a tendency to be more proficient in carrying out day-to-day duties. The prioritization of training also fosters an image of professionalism and instills pride in the organization. GPFR has an excellent training program and there exists a dedicated effort focused on a wide array of training activities.

GPFR is responsible for administering the training program for its members and maintaining compliance with state training requirements. Training is conducted primarily while personnel are on duty, with topics identified in the monthly training calendar. The International Fire Service Training Association (IFSTA) manual for firefighting is used by the Division as the basis for training and complies with the National Fire Protection Association standards for firefighters, NFPA Standard #1001. Full-time, entry-level positions are filled by staff that have completed the Oregon minimum standards training and have reached NFPA Standard Levels #1001 and #1002, with training often conducted by Rogue Community College.

The Division's training is designed to meet the requirements set forth by the Oregon Health and Trauma System for emergency medical services licensure, the Oregon Department of Public Safety Standards and Training (DPSST) for fire training and certification, and Oregon Occupational Safety and Health Administration (OR-OSHA). Specialized training or assignments, which are not addressed by one of the above governing bodies are addressed either by department policy or industry recognized standards.

Department-licensed EMTs, AEMTs, EMTs-Intermediate, and Paramedics meet the following requirements for continuing education every 2 years:

- Emergency Medical Technician–24 hours.
- Advanced Emergency Medical Technician–36 hours.
- Intermediate Emergency Medical Technician–36 hours.
- Paramedic–48 hours.

DPSST annual fire certification maintenance requires:

- Operation Track Training–60 hours.
- Instructor Track–4 hours.

- Prevention/Public Education Track–12 hours.

OR-OSHA annual training requirements are based on program completion rather than the number of training hours. GPFR schedules training in accordance with city and department health and safety policy guidelines.

A shift battalion chief coordinates and monitors the training program. A training committee representing a cross-section of the department establishes the training curriculum as well as the training calendar. The quarterly calendar contains tracks for general fire rescue development, engineers, company officer development, mandated training and safety, and emergency medical services.

The responsibility to carry out and/or ensure the training is completed at the shift level rests with the shift corporals. An annual physical abilities assessment that mirrors the entry-level assessment is conducted for all line staff annually. The GPFR does not have access to any closed-circuit TV for simultaneous viewings at all stations nor does it use any online video conferencing for instruction or informational purposes. Fire stations do not have Wi-Fi capabilities. Multicompany or all-hands drills generally last up to two to three hours and are conducted on a regular basis (at least quarterly). Technical rescue emphasis has been on confined space rescue and efforts are underway to bring all staff to a land-based swift water rescue operations level.

The Division uses a task book concept that is in concert with the OR- DPSST Fire Officer 1 requirements for staff to be considered for an acting officer certification. The task book is supported by a mentoring program with oversight at the battalion chief level. The program does not have any minimum experience level to enter it, other than being off probation.

It appears that the vast majority of the training is committed to operational elements, with a very limited body of hours committed to staff development. Of the 71 training topics on the 2014 training schedule, only two (interpersonal dynamics and ethics) were more closely aligned with the duties of a company level officer or higher.

Recommendations:

- The Division should implement a staff development training and education program that supports succession planning.
- GPFR should deploy a teleconferencing that supports simultaneous viewing and training at all stations.
- Provide Wi-Fi capabilities within the fire stations.
- Support those within the Division who opt to obtain/retain their EMS certification levels at the Intermediate or Paramedic levels.
- Ensure that the training plan includes “high risk-low frequency” activities.

- GPFR should plan for the time when the training obligations become such that they will no longer be able to be coordinated by a battalion chief as a collateral duty.

Emergency Management

The mayor of Grants Pass, as the chief elected official, is the legally responsible emergency manager for the city. Per ORS 401.309, the mayor has the authority to declare that a state of emergency exists within the city. If needed, the mayor may request, from the governor of Oregon, a state disaster declaration and disaster assistance. The governor can then declare a state disaster, and in turn request a federal emergency or disaster declaration from the President of the United States.

From ORS 401.309:

(1) The governing body of a city or county in this state may declare, by ordinance or resolution, that a state of emergency exists within the city or county. The ordinance or resolution must limit the duration of the state of emergency to the period of time during which the conditions giving rise to the declaration exist or are likely to remain in existence.

(2) A city or county in this state may, by ordinance or resolution, establish procedures to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency. The ordinance or resolution shall describe the conditions required for the declaration of a state of emergency within the jurisdiction.

(3) An ordinance or resolution adopted under subsection (2) of this section may designate the emergency management agency, if any, or any other agency or official of the city or county as the agency or official charged with carrying out emergency duties or functions under the ordinance.

(4) A city or county may authorize an agency or official to order mandatory evacuations of residents and other individuals after a state of emergency is declared under this section. An evacuation under an ordinance or resolution authorized under subsection (2) of this section shall be ordered only when necessary for public safety or when necessary for the efficient conduct of activities that minimize or mitigate the effects of the emergency.

However, ORS 401.165 asserts that requests for an emergency declaration must be submitted through the governing body of the county in which the majority of the city's property is located.

From ORS 401.165:

(1) The Governor may declare a state of emergency by proclamation at the request of a county governing body or after determining that an emergency has occurred or is imminent.

(2) All requests by a county governing body that the Governor declare an emergency shall be sent to the Office of Emergency Management. Cities must submit requests through the governing body of the county in which the majority of the city's property is located.

The city of Grants Pass does not have a full-time emergency management coordinator (EMC) responsible for the management of an emergency management division. It is recommended that the

emergency management coordinator be in charge of emergency operations, updating the EM planning, managing grants from the state and the Department of Homeland Security, NIMS training requirements, monitoring statewide events and Grants Pass special events, and coordinating the resource needs of the Grants Pass regional task forces. The range and number of responsibilities held by an emergency management coordinator is extensive. Redundancy will need to be built in to back-up this critical position.

Josephine County has established an emergency management function within county government, albeit with limited staffing. GPDPS staff has expressed concerns that the commitment level of Josephine County Emergency Management is not consistent with the needs of Grants Pass. Concerns exist regarding the service levels that the county provides to its rural areas are not consistent with the expected service levels of city residents.

Disaster response generally requires numerous agencies to work together and share resources. These agencies typically have overlapping lines of authority and responsibility and, during a response, work in dynamic and uncertain situations under extremely stressful conditions. At the same time, there is often an immediate need for critical and frequently insufficient resources. Too often these conditions cause miscommunication and conflict. Lines of authority must be clear during a disaster.

The city of Grants Pass does not have an emergency operations center (EOC) from which to operate during a disaster. In the event of a widespread emergency, the needs of Grants Pass may quickly exceed the capacity of Josephine County to provide resources or manage the event. Consideration should be given to establishing a city EOC from within existing facility resources and ensuring that the city is able to manage any emergency. Deliberate steps should be taken to avoid perceptions that the city is trying to circumvent the processes in place that involve Josephine County, but rather to provide needed depth. The EMC, the public safety director, the deputy fire chief, and others with emergency management responsibilities must make sure that other city department heads (finance, public works, etc.) and their key staff are fully trained in EOC operations and engaged in disaster preparedness and response.

Regular tabletop exercises should be scheduled to familiarize management with the plan, management responsibilities, and the workings of the EOC. In Grants Pass, such exercises should be conducted at least quarterly, with a particular need prior to the wildfire season or potential flooding.

The city of Grants Pass has a comprehensive all-hazard emergency management plan that includes departmental and generic function annexes. Sections are updated annually on a five-year cycle, so the plan in total is updated every five years. The plan details responses to different hazards as well as the requirements of generic functions such as damage assessment, warning, evacuation, sheltering, search and rescue, and so forth. The plan describes all the generic functions and delineates the departmental and/or individual responsibility for each functional annex. Damage assessment is especially crucial because a full assessment is required to request state and possibly federal aid.

Recommendations:

- The City Manager should task a given position at the senior management level, preferably the Deputy City Manager or Public Safety Director as the city's Emergency Manager Coordinator. If no senior management position has the capacity to assume these duties, consideration should be given (based on available funding) to creating a new position at the senior management level for such duties.
- Improve the damage assessment annex in the Grants Pass all-hazard emergency plan by assigning a person skilled in damage assessment and by creating a specific task plan of how this crucial function will be accomplished. The submittal of a damage assessment is a prerequisite to receiving state and federal assistance.
- Develop a training plan that includes quarterly tabletop exercises so that city management becomes more familiar with the emergency management plan, management responsibilities, and the workings of the EOC.
- Maintain an effective working relationship with Josephine County Emergency Management and participate in one another's training and drills.
- Purchase the necessary audiovisual equipment to fit-out the EOC for providing situational awareness capability.
- Establish an existing facility that could serve as an EOC and which has full generator capacity, situational awareness technology assets, rest/rehab areas for staff, a policy-making meeting room, high security level, and a direct feed from the communications center.
- Seek a legal opinion and review of ORS 401.309 and ORS 401.165 and ensure the city leadership has a good understanding of both.

Emergency Communications Center (ECC)

The GPDPS Emergency Communications Center is the primary Public Safety Answering Point (PSAP) for Josephine County. 911 emergency calls that are outside of the dispatching jurisdiction of GPFR are transferred to the appropriate agency, namely the Josephine County Sheriff during specific limited hours or the Oregon State Police. The ECC provides call receipt and dispatching services for Illinois Valley Rural Fire Protection District, Rural Metro Fire Department, Williams Rural Fire Protection District, Wolff Creek Rural Fire Protection District, and American Medical Response (AMR) EMS. The ECC provides after-hours service to the Oregon Department of Forestry and the Rogue River-Siskiyou National Forest. When a call is transferred to another entity, none of the data that have been collected and entered by the call taker transfers to the receiving entity, except what is shared by voice communications.

The ECC transitioned to New World™ computer-aided dispatch (CAD) software in 2012. Due to a number of unforeseen obstacles such as staffing changes, the project has not been completed in its entirety. For example, some of the performance metrics of which the system is capable of are not being deployed. Quality assurance reviews of the dispatching processes are very infrequent. All

critical ECC equipment is on an uninterrupted power supply (UPS) as well as on a full capacity emergency generator. The Hillcrest Fire Station serves as the backup 911 and ECC for the city and the operational capabilities of such a transfer are tested periodically.

The ECC uses a nationally recognized emergency medical dispatching (EMD) system to provide callers with critical pre-arrival instructions for medical emergencies as well as establishing some dispatching parameters for response recommendations. The system used is a card-based system and the transition has not been completed to conduct EMD through the New World CAD software. Initial dispatching is provided to responders via text pagers; however, there is a limit of 80 characters in this system. Additional information from 911 callers that is received after the initial dispatch is provided to responders via mobile data terminals (MDT) onboard the fire apparatus. Emergency fire dispatching (EFD) options are not used.

The ECC meets national standards for call intake times by answering 95 percent of 911 calls within 10 seconds, with the average being 98 percent of the time. Association of Public Safety Communications Officials (APCO) standards require that the 90 percent of 911 calls be answered within 10 seconds for the busiest hour in each day, and this performance measure is not captured. The 90th percentile dispatch time is 2.7 minutes, which is outside of best practices and needs to be reduced.

All calls for GPFR are dispatched onto a single dispatching channel and the calls are generally handled on the same channel. Calls that escalate in their complexity or the number of responders can be moved to a tactical channel; however, the tactical channel is both unmonitored by ECC staff and it is unrecorded. This requires the incident commander of a complex event to monitor both the tactical channel as well as the dispatch channel and this is inconsistent with best practices. An ECC staff member is activated for all second alarm and greater fire alarms to become a part of the Fire Accountability Group that reports to the emergency scene. Radio interoperability is in place and all responders within the region can communicate with all other responders.

A GPFR battalion chief serves as the ECC Liaison to assist the ECC staff in making sound operational and policy decisions. There are five operational consoles that can be used with the ECC facility; however, a minimum staffing level of two exists. Careful analysis of the ECC staffing deployment should be conducted to ensure that sufficient staff is readily available.

Table 16: Average Dispatch Times of First Arriving Unit, by Call Type

Call Type	Dispatch Time	Sample Size
Cardiac and stroke	1.3	393
Seizure and unconsciousness	1.2	271
Breathing difficulty	1.4	275
Overdose and psychiatric	1.5	34
MVA	1.5	81
Fall and injury	1.9	100
Illness and other	1.6	253
EMS Total	1.4	1,407
Structure fire	1.3	32
Outside fire	1.3	65
Hazard	1.9	74
False alarm	1.3	219
Good intent	1.9	110
Public service	1.6	369
Fire Total	1.6	869
Total	1.5	2,276

Table 17: Average Dispatch Times of First Arriving Unit, by Hour of Day

Hour	Dispatch Time	Sample Size	Hour	Dispatch Time	Sample Size
0	1.4	68	12	1.3	123
1	1.5	71	13	1.5	124
2	1.3	52	14	1.5	117
3	1.4	56	15	1.6	105
4	1.3	52	16	1.4	115
5	1.4	58	17	1.4	126
6	1.5	62	18	1.6	130
7	1.4	76	19	1.6	101
8	1.2	90	20	1.5	123
9	1.5	114	21	1.5	103
10	1.5	121	22	1.9	82
11	1.6	131	23	1.4	76

Recommendations:

- Fully deploy the performance metric portions of the New World™ software to more accurately conduct quality assurance.
- Fully deploy the emergency medical dispatching (EMD) processes into the CAD functionality to make more appropriate dispatching decisions and response mode recommendations.
- Deploy emergency fire dispatching (EFD) processes into the CAD functionality to make more appropriate dispatching decisions and response mode recommendations.
- Evaluate the root cause/s of the 90th percentile dispatch time of 2.7 minutes and employ strategies to reduce this to 1.5 minutes.
- Continue to exercise the secondary PSAP 911 transfer process at least annually.
- Provide for a monitored and recorded tactical channel for fire-ground operations.
- In pursuit of better data, employ methods of distinguishing between a call that is cancelled in its entirety and a call where one or more units are cancelled.

Recommendation Summary Table

Recommendation	Report Page	Priority
GPFR needs to make it a priority to complete a fire and community risk assessment. This assessment should be done in conjunction with fire and EMS calls for service demand analysis provided in this report, along with the department's effort to identify, plot and analyze high-hazard risks.	Page 24	Critical
GPFR needs to formally establish a prefire planning process and ensure that these plans are up to date, with a standard body of information that is readily available to responders.	Page 24	Critical
GPFR needs to explore staffing options and/or deployment options that would increase staffing levels during the busiest periods.	Page 24	Critical
The Division should initiate actions to reduce both the number of automatic fire alarms and the number of units responding to unconfirmed automatic fire alarms.	Page 24	Critical
Grants Pass should work with dispatch personnel to identify ways to reduce dispatch handling times. ICMA believes it is realistic to achieve a dispatch handling time at the 90th percentile that is less than two minutes.	Page 37	Critical
Consider the expansion of the Student Firefighter program to include 12 total participants and an increase in the duration of the program to four years.	Page 48	Critical
Ensure that the training plan includes "high risk-low frequency" activities.	Page 61	Critical
The City Manager should task a given position at the senior management level, preferably the Deputy City Manager or Public Safety Director as the city's Emergency Manager Coordinator. If no senior management position has the capacity to assume these duties, consideration should be given (based on available funding) to creating a new position at the senior management level for such duties.	Page 64	Critical
Develop a training plan that includes quarterly tabletop exercises so that city management becomes more familiar with the emergency management plan, management responsibilities, and the workings of the EOC.	Page 64	Critical
Maintain an effective working relationship with Josephine County Emergency Management and participate in one another's training and drills.	Page 64	Critical
Fully deploy the emergency medical dispatching (EMD) processes into the CAD functionality to make more appropriate dispatching decisions and response mode recommendations.	Page 67	Critical
Evaluate the root cause/s of the 90th percentile dispatch time of 2.7 minutes and employ strategies to reduce this to 1.5 minutes.	Page 67	Critical
Provide for a monitored and recorded tactical channel for fire-ground operations.	Page 67	Critical

The Division needs to develop and implement an internal risk management plan following the standards of NFPA 1500, Standard for a Fire Department Occupational Safety and Health Program.	Page 24	Necessary
In an effort to reduce overall response times, GPFR should work with the emergency communications center in an effort to reduce the 90th percentile dispatch time to 60 seconds as per NFPA 1221.	Page 25	Necessary
Due to what can be seen as a codependency with Rural Metro, GPFR should ensure that the current positive working relationship remains intact.	Page 25	Necessary
While GPFR is to be commended for reducing its EMS call volume by eliminating response to some call types, the deployment of emergency medical dispatching (EMD) at the call creation point within the call cycle will allow even greater precision in determining the most accurate call type and response protocols.	Page 31	Necessary
Maintain the current level of EMS service at the EMT Basic or Intermediate level.	Page 47	Necessary
Evaluate the costs/benefits of constructing a new fleet maintenance facility that would be suitable for larger fire apparatus versus contracting for services on the larger units.	Page 50	Necessary
GPFR should work closely with the dispatch center to improve its call screening efforts and identify those nonemergency and public assist calls that should not receive an emergency response.	Page 54	Necessary
GPFR should work with AMR and the dispatch center to improve the call-screening process in an effort to limit the number of incidents in which both an AMR and GPFR unit are dispatched.	Page 55	Necessary
The department should evaluate on an annual basis during the budget development process the use of overtime and assess the cost/benefit of adding a full time equivalent employee in lieu of overtime expenses to cover vacant time periods created by the various leave benefits such as personal, sick etc.	Page 57	Necessary
Through the collective bargaining process, the department should retain the ability to execute a shift reassignment with minimal notice to better address unforeseen and long-term vacancies such as worker's compensation injury, extended sick leave, or an FMLA qualifying event.	Page 57	Necessary
Grants Pass should consider the adoption of a fire code provision that requires automatic fire sprinklers in the construction of all new single family and duplex residential structures.	Page 58	Necessary
The Division should implement a staff development training and education program that supports succession planning.	Page 61	Necessary
Support those within the Division who opt to obtain/retain their EMS certification levels at the Intermediate or Paramedic levels.	Page 61	Necessary

GPFRR should plan for the time when the training obligations become such that they will no longer be able to be coordinated by a battalion chief as a collateral duty.	Page 62	Necessary
Improve the damage assessment annex in the Grants Pass all-hazard emergency plan by assigning a person skilled in damage assessment and by creating a specific task plan of how this crucial function will be accomplished. The submittal of a damage assessment is a prerequisite to receiving state and federal assistance.	Page 64	Necessary
Establish an existing facility that could serve as an EOC and which has full generator capacity, situational awareness technology assets, rest/rehab areas for staff, a policy-making meeting room, high security level, and a direct feed from the communications center.	Page 64	Necessary
Seek a legal opinion and review of ORS 401.309 and ORS 401.165 and ensure the city leadership has a good understanding of both.	Page 64	Necessary
Fully deploy the performance metric portions of the New World™ software to more accurately conduct quality assurance.	Page 67	Necessary
Deploy emergency fire dispatching (EFD) processes into the CAD functionality to make more appropriate dispatching decisions and response mode recommendations.	Page 67	Necessary
Continue to exercise the secondary PSAP 911 transfer process at least annually.	Page 67	Necessary
GPFRR should study a hybrid system using both geographical-based deployment as well as demand-based employment for the busiest hours of the day.	Page 25	Desirable
Grants Pass should consider the pursuit of Fire Accreditation through the Center for Public Safety Excellence (CPSE) accreditation process.	Page 25	Desirable
It is recommended that the city of Grants Pass and Grants Pass Fire/Rescue continue to monitor legislative efforts and the Patient Protection and Affordable Care Act (PPACA) to ensure that the department's service delivery models are congruent with the changing health care environment, revenue and reimbursement schedules, and continued alignment with community expectations or service.	Page 31	Desirable
GPFRR should become very familiar with the terms and conditions of the service agreement with American Medical Response (AMR) and ensure the Division is doing its part to ensure compliance.	Page 31	Desirable
Formalize the apparatus replacement fund and make this plan available to GPFRR staff.	Page 50	Desirable
Evaluate the use of smaller, light-chassis rescue trucks that work in tandem with engines when an EMS or public assist response is needed.	Page 50	Desirable
Where fiscally responsible, fully stock reserve fire apparatus to reduce changeover time as well as to provide a deeper fleet for major incidents.	Page 50	Desirable

The department should consider the use of paid part time staff to cover some or all vacant time periods created by the various leave benefits such as personal, sick etc.	Page 57	Desirable
As an alternative staffing model and as funding allows, increase shift staffing to twenty-seven total operational shift personnel (including the battalion chief) to minimize overtime; enable the department to be more nimble with operational staffing; and to enhance a greater likelihood that all positions will be filled on a daily basis.	Page 57	Desirable
Grants Pass should formally adopt and report on fire prevention performance measures relating to the completion of fire plans reviews, permitting activities, and inspections.	Page 59	Desirable
GPFR should deploy a teleconferencing system that supports simultaneous viewing and training at all stations.	Page 61	Desirable
Provide Wi-Fi capabilities within the fire stations.	Page 61	Desirable
Purchase the necessary audiovisual equipment to fit-out the EOC for providing situational awareness capability.	Page 64	Desirable
In pursuit of better data, employ methods of distinguishing between a call that is cancelled in its entirety and a call where one or more units are cancelled.	Page 67	Desirable

Appendix: Data Analysis

Introduction

This data analysis was prepared as a key component of the study of the Grants Pass Fire/Rescue Division (GPFR) of the Grants Pass Department of Public Safety. This analysis examines all calls for service between January 1, 2013, and December 31, 2013, as recorded in the dispatch center.

This analysis is divided into five sections: the first section focuses on call types and dispatches; the second section explores time spent and workload of individual units; the third section presents analysis of the busiest hours in a year; the fourth section provides a response time analysis of GPFR units; and the fifth section presents mutual aid workloads, AMR transports, and response time analysis of all responding agencies.

During the period covered by this study, the division operated out of three stations. The division deploys three frontline engines (one in each station) and a duty officer vehicle. It cross-staffs two reserve engines, one brush truck, and one ladder truck when needed. The private ambulance company AMR (AMR Josephine County) is contracted to provide transport services.

During the study period, GPFR responded to 4,168 calls, including 600 mutual aid calls, mostly in unprotected areas. The total combined yearly workload (deployed time) for all units was 1,948 hours. The average estimated dispatch time of the first arriving GPFR unit was 1.5 minutes and the average response time of the first arriving GPFR unit was 7.2 minutes. The 90th percentile dispatch time was 2.7 minutes and the 90th percentile response time was 10.5 minutes.

During the study period, GPFR received a total of 7,826 runs and 5,605 hours of workload via mutual aids. GPFR runs accounted for 42 percent of the total runs of all agencies and GPFR deployed time accounted for 26 percent of the total deployed time of all agencies. GPFR units have solely responded to 20 percent of calls (842 out of 4,168 calls). For 99 percent of EMS calls, there was at least one unit from another agency responding together with the GPFR unit. From a citizen's perspective, the average response time of first arriving unit of any responding agency was 7.0 minutes. GPFR units arrived first on scene 54 percent of the time. AMR provided transport service to 1,937 calls, averaging 5.4 transport calls per day.

Methodology

In this report, we analyze calls and runs. A call is an emergency service request or incident. A run is a dispatch of a unit. Thus, a call might include multiple runs.

We received computer-aided dispatch (CAD) data and GPFR's National Fire Incident Reporting System (NFIRS) data. We removed CAD test calls. We matched CAD and NFIRS data using identical address and approximately similar call received times. We cross-validated CAD and NFIRS data and primarily used CAD data in this report, but utilized the unique NFIRS fields of incident type, action taken, and property and content loss data. A total of 23 incidents to which administrative units (fire investigator, fire inspector, fire chief, and fire marshal) were the sole responders are not included in

the analysis sections of the report. Nevertheless, the workload of administrative units is documented in Attachment I.

We classified the calls in a series of steps. We first used the NFIRS mutual aid field to accurately identify mutual aid calls from the GPFR perspective. Then, we used NFIRS incident type to assign EMS, MVA, fire category, and canceled call types. Lastly, for NFIRS EMS calls, we used the CAD call description to assign detailed EMS categories. The classification between NFIRS incident type and call type is documented in Appendix IV.

In this report, mutual aid and canceled calls are not included in the analysis of call duration and GPFR's response time analysis. Since most canceled calls were actually handled by other agencies, we provided response time analysis for mutual aid and canceled calls in Table D-29.

Aggregate Call Totals and Dispatches

In this report, each citizen initiated emergency service request is a call. During the year studied, GPFR responded to 4,168 calls. Of these, 38 were structure fire calls and 80 were outside fire calls. Each dispatched unit is a separate "run." As multiple units are dispatched to a call, there are more runs than calls. The department's total runs and workload are reported in the second section, starting from Table D-4 through Table D-9.

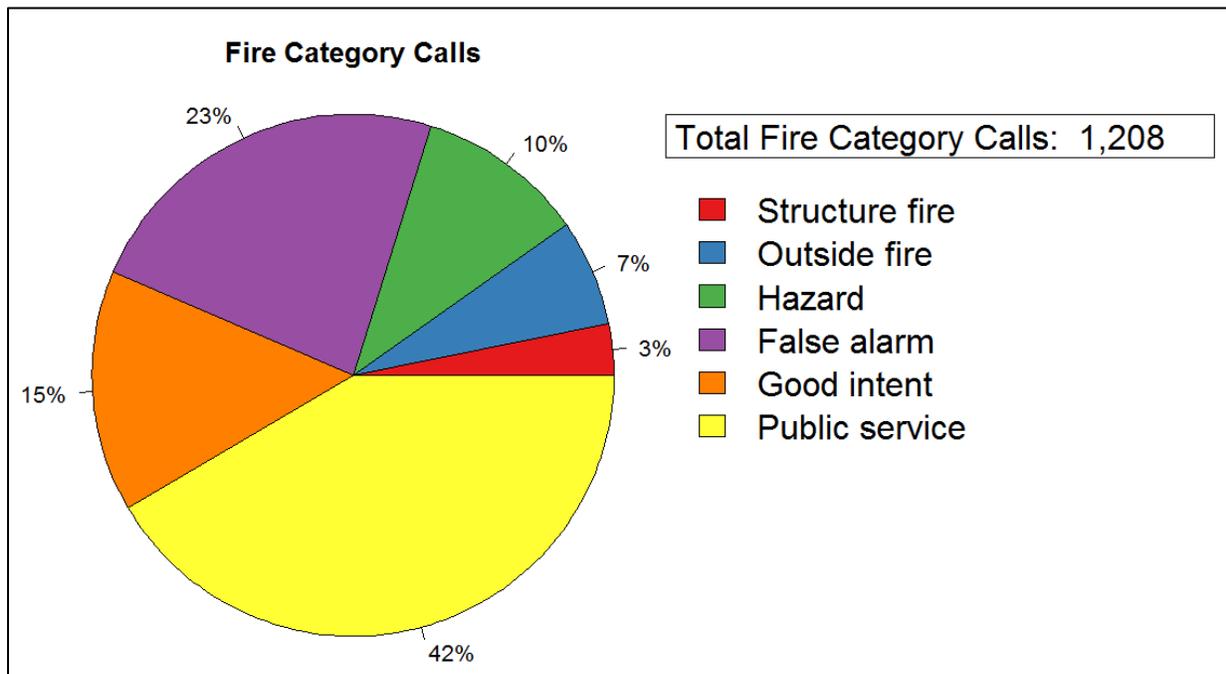
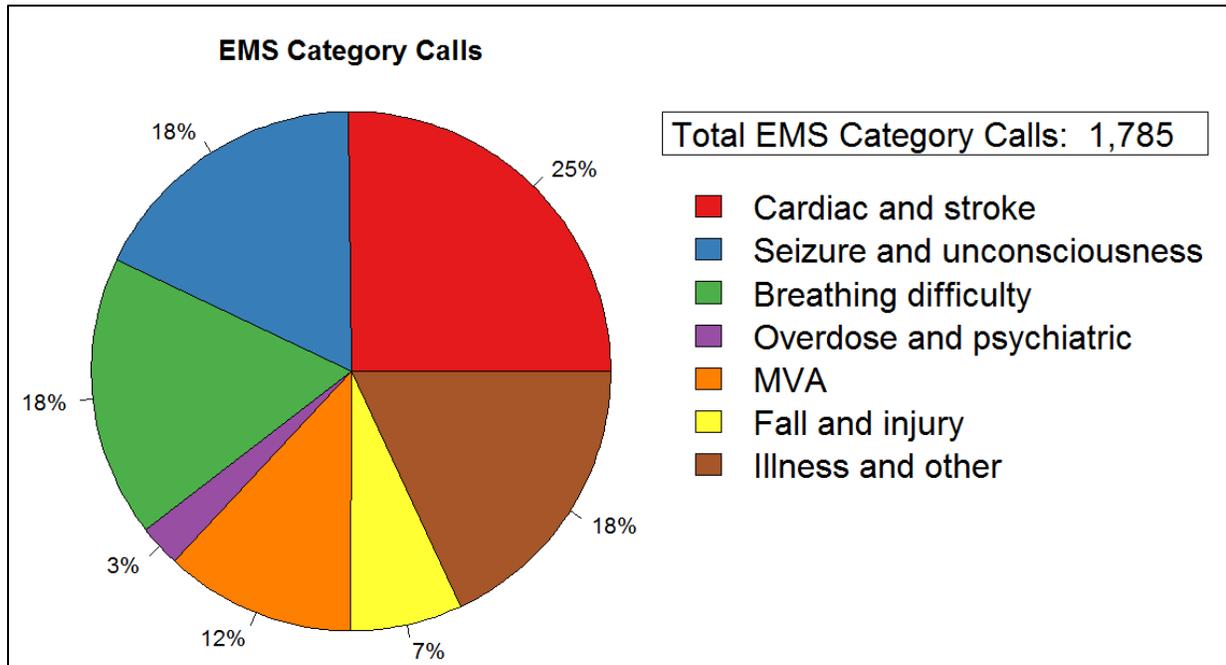
TABLE D-1: Call Types

Call Type	Number of Calls	Calls per Day	Call Percentage
Cardiac and stroke	450	1.2	10.8
Seizure and unconsciousness	316	0.9	7.6
Breathing difficulty	314	0.9	7.5
Overdose and psychiatric	46	0.1	1.1
MVA	212	0.6	5.1
Fall and injury	124	0.3	3.0
Illness and other	323	0.9	7.7
EMS Total	1,785	4.9	42.8
Structure fire	38	0.1	0.9
Outside fire	80	0.2	1.9
Hazard	126	0.3	3.0
False alarm	282	0.8	6.8
Good intent	180	0.5	4.3
Public service	502	1.4	12.0
Fire Total	1,208	3.3	29.0
Mutual aid	600	1.6	14.4
Canceled	575	1.6	13.8
Total	4,168	11.4	100.0

Observations:

- GPFR received an average of 11.4 calls, including 1.6 canceled calls and 1.6 mutual aid calls, per day.
- EMS calls for the year totaled 1,785 (43 percent of all calls), averaging 4.9 per day.
- Fire calls for the year totaled 1,208 (29 percent of all calls), averaging 3.3 per day.
- Structure and outside fires combined for a total of 118 calls during the year, averaging one call every 3.1 days.

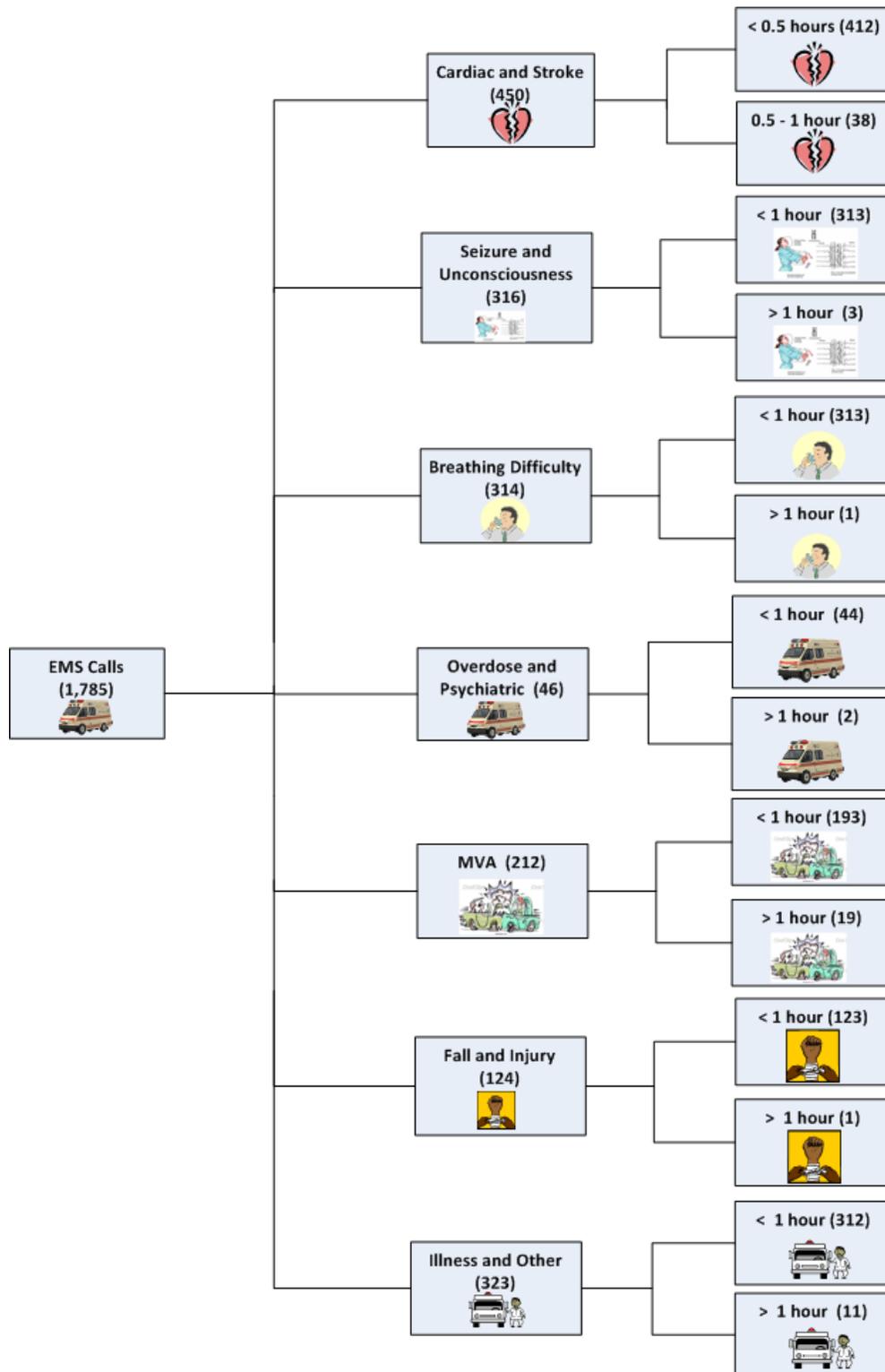
FIGURE D-1: EMS and Fire Calls by Type



Observations:

- A total of 38 structure fire calls accounted for 3 percent of the fire category total.
- A total of 80 outside fire calls accounted for 7 percent of the fire category total.
- Public service calls were the largest fire call category and 42 percent of the fire category total.
- False alarm calls were 23 percent of the fire category total.
- Cardiac and stroke calls were the largest EMS call category and accounted for 25 percent of the EMS category total.
- Motor vehicle accidents were 12 percent of the EMS category total.

FIGURE D-2: EMS Calls by Type and Duration

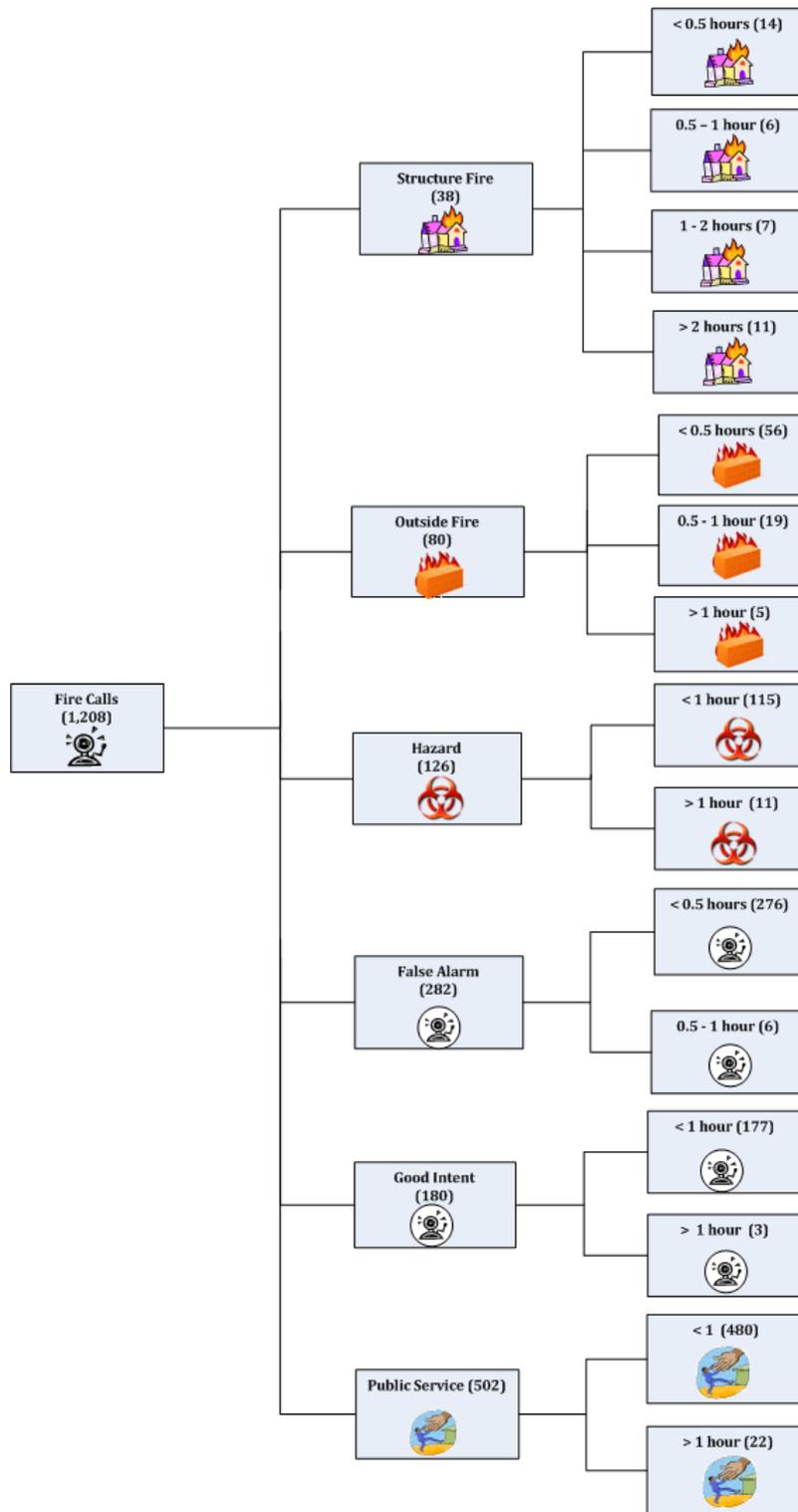


Note: Duration of a call is defined as the longest deployed time of any of the GFR units responding to the same call.

Observations:

- A total of 1,450 EMS category calls (81 percent) lasted less than half an hour, 298 EMS category calls (17 percent) lasted between half an hour and one hour, 32 EMS category calls (2 percent) lasted between one and two hours, and 5 EMS category calls lasted more than two hours.
- All 450 cardiac and stroke calls lasted less than one hour, of which 92 percent lasted less than half an hour.
- A total of 130 motor vehicle accidents (61 percent) lasted less than half an hour, 63 (30 percent) lasted between half an hour and one hour, and 19 motor vehicle accidents (9 percent) lasted more than an hour.

FIGURE D-3: Fire Calls by Type and Duration

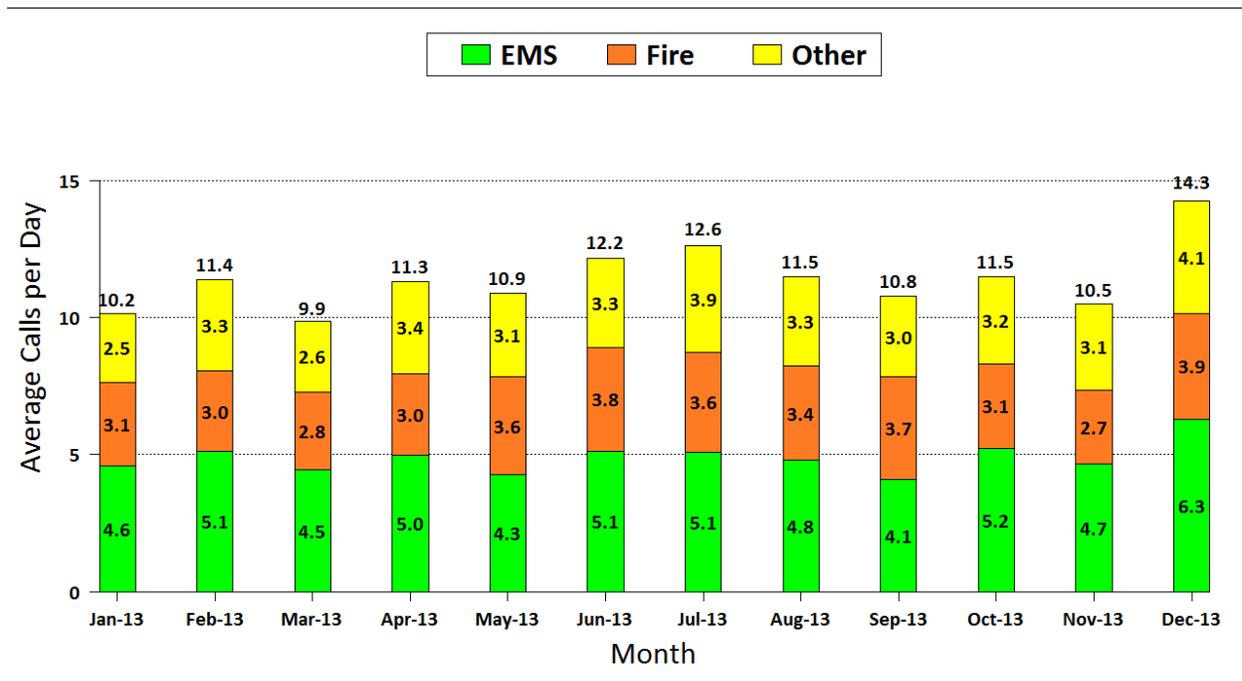


Note: Duration of a call is defined as the longest deployed time of any of the GFR units responding to the same call.

Observations:

- A total of 993 fire category calls (82 percent) lasted less than half an hour, 150 fire category calls (12 percent) lasted between half an hour and one hour, 45 fire category calls (4 percent) lasted between one and two hours, and 20 fire category calls (2 percent) lasted more than two hours.
- A total of 20 structure fires (53 percent) lasted less than one hour, 7 structure fires (18 percent) lasted between one and two hours, and 11 structure fires (29 percent) lasted more than two hours.
- A total of 75 outside fires (94 percent) lasted less than one hour, four outside fires (5 percent) lasted between one and two hours, and one outside fire lasted more than two hours.
- A total of 276 false alarms (98 percent) lasted less than half an hour, and 6 false alarms (2 percent) lasted between half an hour and one hour.
- Public service is the largest fire category call type. A total of 430 public service calls (86 percent) lasted less than half an hour, 50 public service calls (10 percent) lasted between half an hour and one hour, and 22 public service calls (4 percent) lasted more than one hour.

FIGURE D-4: Average Calls per Day, by Month



Observations:

- Average calls per day ranged from a low of 9.9 calls per day in March 2013 to a high of 14.3 calls per day in December 2013. The highest monthly average was 44 percent greater than the lowest monthly average.
- Average EMS calls per day ranged from a low of 4.1 calls per day in September 2013 to a high of 6.3 calls per day in December 2013.
- Average fire calls per day ranged from a low of 2.7 calls per day in November 2013 to a high of 3.9 calls per day in December 2013.
- Average mutual aid and canceled calls per day ranged from a low of 2.5 calls per day in January 2013 to a high of 4.1 calls per day in December 2013.
- The most calls received in a single day were 24. That occurred on March 30, 2013. Those 24 calls included 9 EMS calls, 1 structure fire call, 11 other fire category calls, 2 mutual aid calls, and 1 canceled call. Three days (July 4, 2013, December 6, 2013 and December 27, 2013) each had 23 calls in a day.

FIGURE D-5: Calls by Hour of Day

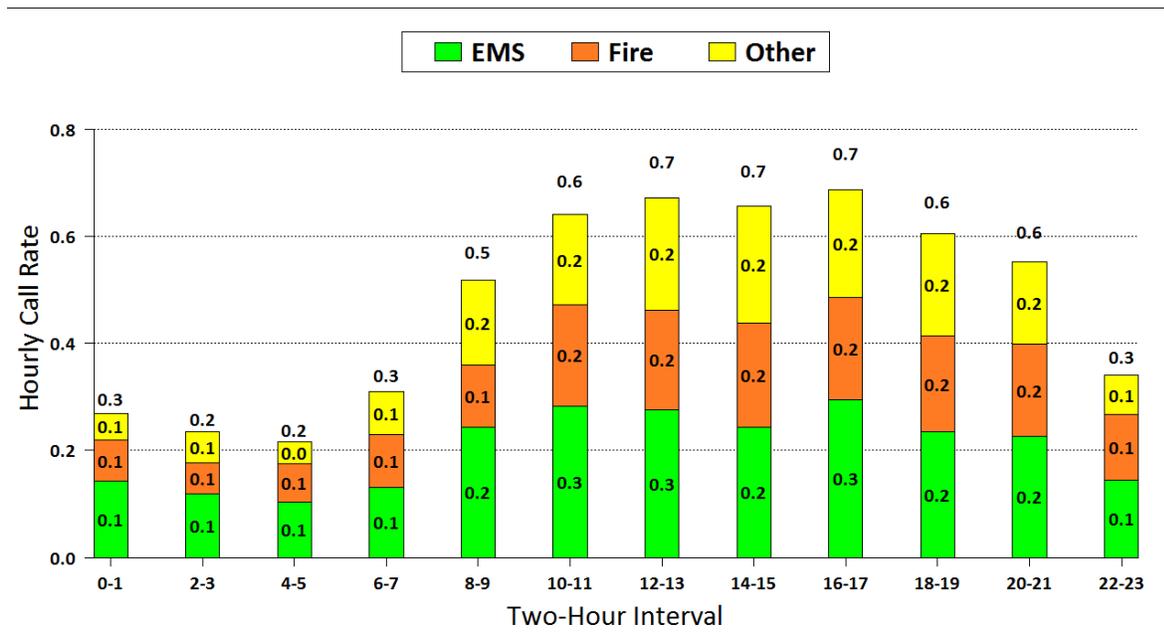


TABLE D-2: Calls by Hour of Day

Two-Hour Interval	Hourly Call Rate			Total
	EMS	Fire	Other	
0-1	0.14	0.08	0.05	0.27
2-3	0.12	0.06	0.06	0.24
4-5	0.10	0.07	0.04	0.22
6-7	0.13	0.10	0.08	0.31
8-9	0.24	0.12	0.16	0.52
10-11	0.28	0.19	0.17	0.64
12-13	0.28	0.19	0.21	0.67
14-15	0.24	0.19	0.22	0.66
16-17	0.29	0.19	0.20	0.69
18-19	0.24	0.18	0.19	0.61
20-21	0.23	0.17	0.15	0.55
22-23	0.15	0.12	0.07	0.34
Calls per Day	4.89	3.31	3.22	11.42

Note: Average calls per day shown are the sum of each column multiplied by two, since each cell represents two hours.

Observations:

- Hourly call rates averaged between 0.22 calls and 0.69 calls per hour.
- Call rates were highest during the day between 8:00 a.m. and 10:00 p.m., averaging between 0.52 and 0.69 calls per hour. The rate peaked between 4:00 p.m. and 6:00 p.m., when it averaged 0.69 calls per hour.
- Call rates were lowest between midnight and 8:00 a.m., averaging between 0.22 and 0.31 calls per hour.

TABLE D-3: First Due Station Call Analysis

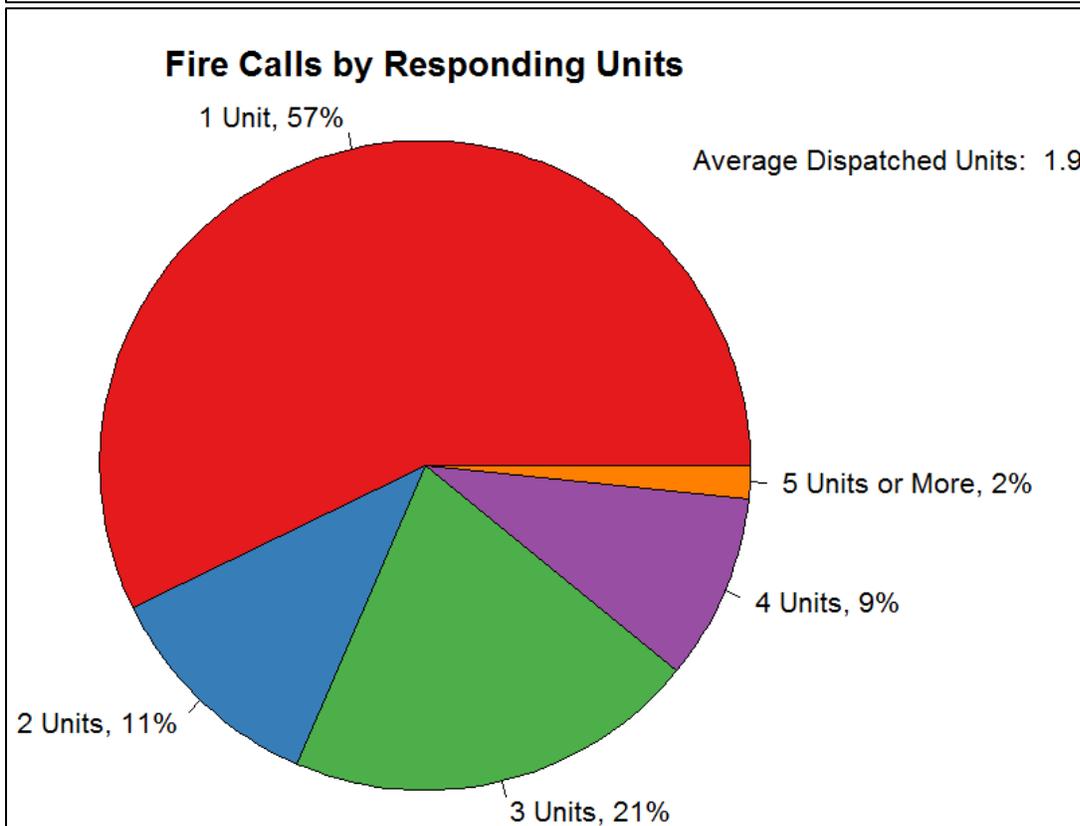
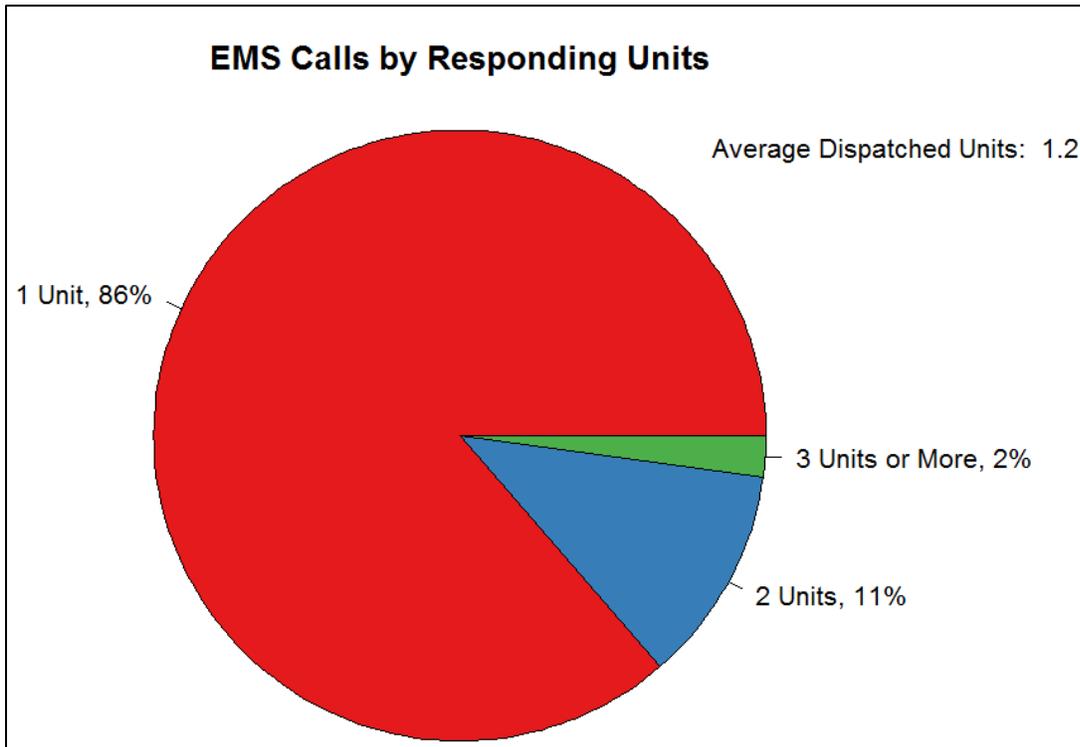
First Due Station	Number of Calls	Percent of Calls	Calls per Day	Percent of Calls with Units from First Due Station
Parkway	1,765	42.3	4.8	94.8
Hillcrest	1,144	27.4	3.1	93.4
Redwood	709	17.0	1.9	86.3
Rural Metro 1	362	8.7	1.0	NA
Rural Metro 2	110	2.6	0.3	NA
Rural Metro 4	29	0.7	0.1	NA
Other	49	1.2	0.1	NA

Note: Mutual aid and canceled calls are included.

Observations:

- The most calls for first due went to Parkway station. It accounted for 42 percent of the total and averaged 4.8 calls per day.
- First due calls at Hillcrest station accounted for 27 percent of the total and averaged 3.1 calls per day.
- First due calls at Redwood station accounted for 17 percent of the total and averaged 1.9 calls per day.
- The percentage of calls with at least one responding unit from the same GPFR first due station ranged from 86 percent to 95 percent.

FIGURE D-6: Number of Units Dispatched to Calls



Note: Daily duty officer unit is included.

TABLE D-4: Number of Grants Pass Fire/Rescue Units Dispatched to Calls

Call Type	Number of Units					Total
	One	Two	Three	Four	Five or More	
Cardiac and stroke	410	38	2	0	0	450
Seizure and unconsciousness	282	33	1	0	0	316
Breathing difficulty	288	24	1	1	0	314
Overdose and psychiatric	42	3	1	0	0	46
MVA	126	63	19	3	1	212
Fall and injury	108	15	1	0	0	124
Illness and other	285	29	5	3	1	323
EMS Total	1,541	205	30	7	2	1,785
Structure fire	2	1	4	21	10	38
Outside fire	31	10	24	12	3	80
Hazard	80	21	22	3	0	126
False alarm	19	35	161	62	5	282
Good intent	117	29	25	8	1	180
Public service	442	41	12	6	1	502
Fire Total	691	137	248	112	20	1,208
Mutual aid	467	108	17	8	0	600
Canceled	500	54	19	2	0	575
Grand Total	3,199	504	314	129	22	4,168
Percentage	76.8	12.1	7.5	3.1	0.5	100

Observations:

- On average, 1.9 GPFR units were dispatched per fire category call.
- For fire category calls, one GPFR unit was dispatched 57 percent of the time, two GPFR units were dispatched 11 percent of the time, three GPFR units were dispatched 21 percent of the time, four GPFR units were dispatched 9 percent of the time, and five or more units GPFR units were dispatched 2 percent of the time.
- For structure fire calls, one or two GPFR units were dispatched 8 percent of the time, three GPFR units were dispatched 11 percent of the time, four GPFR units were dispatched 55 percent of the time, and five or more GPFR units were dispatched 26 percent of the time.
- For outside fire calls, one GPFR unit was dispatched 39 percent of the time, two GPFR units were dispatched 13 percent of the time, three GPFR units were dispatched 30 percent of the time, and four or more GPFR units were dispatched 19 percent of the time.
- On average, 1.2 GPFR units were dispatched per EMS category call.
- For EMS calls, one GPFR unit was dispatched 86 percent of the time, two GPFR units were dispatched 11 percent of the time, and three or more GPFR units were dispatched 2 percent of the time.

TABLE D-5: Annual Deployed Time by Call Type

Call Type	Average Deployed Minutes per Run	Annual Hours	Percent of Total Hours	Deployed Hours per Day	Annual Number of Runs	Runs per Day
Cardiac and stroke	17.3	142	7.3	0.4	492	1.3
Seizure and unconsciousness	18.7	110	5.6	0.3	351	1.0
Breathing difficulty	18.3	105	5.4	0.3	343	0.9
Overdose and psychiatric	23.2	20	1.0	0.1	51	0.1
MVA	26.2	143	7.3	0.4	326	0.9
Fall and injury	21.6	51	2.6	0.1	141	0.4
Illness and other	22.6	142	7.3	0.4	376	1.0
EMS Total	20.5	711	36.5	1.9	2,080	5.7
Structure fire	59.8	150	7.7	0.4	151	0.4
Outside fire	26.4	82	4.2	0.2	186	0.5
Hazard	24.4	81	4.2	0.2	200	0.5
False alarm	11.8	166	8.5	0.5	845	2.3
Good intent	15.0	72	3.7	0.2	287	0.8
Public service	20.7	204	10.4	0.6	589	1.6
Fire Total	20.1	755	38.8	2.1	2,258	6.2
Mutual aid	32.4	414	21.3	1.1	766	2.1
Canceled	6.1	68	3.5	0.2	673	1.8
Total	20.2	1,948	100	5.3	5,777	15.8

Note: Each dispatched unit is a separate "run." As multiple units are dispatched to a call, there are more runs than calls. Therefore, the department responded to 11.4 calls per day and had 15.8 runs per day.

Observations:

- Total deployed time for the year, or deployed hours, was 1,948 hours. This is the total deployment time of all the units deployed on all type of calls, including 414 hours spent on mutual aid calls. The deployed hours for all units combined averaged approximately 5.3 hours per day.
- There were 5,777 runs, including 766 runs dispatched for mutual aid calls and 673 canceled runs. The daily average was 15.8 runs for all units combined.
- Fire category calls accounted for 38.8 percent of the total workload.
- There were 337 runs for structure and outside fire calls, with a total workload of 232 hours. This accounted for 11.9 percent of the total workload. The average deployed time for structure fire calls was 59.8 minutes, and the average deployed time for outside fire calls was 26.4 minutes.
- EMS calls accounted for 36.5 percent of the total workload. The average deployed time for EMS calls was 20.5 minutes. On average, the deployed hours for EMS calls were 1.9 hours per day, and the runs per day were 5.7.

Workload by Individual Unit—Calls and Total Time Spent

In this section, the actual time spent by each unit on calls is reported in two types of statistics: workload and runs. A dispatch of a unit is defined as a *run*; thus one call might include multiple runs. The deployed time of a run is from the time a unit is dispatched through the time a unit is cleared.

TABLE D-6: Call Workload by Unit

Station	Unit Type	Unit ID	Average Deployed Minutes per Run	Annual Number of Runs	Annual Hours	Runs per Day	Deployed Hours per Day
3	Type 1 Engine (Frontline)	7308	19.7	2,240	733.8	6.1	2.0
	Type 1 Engine (Reserve)	7319	19.3	144	46.3	NA	NA
	Bike Medic (Special Event)	7339	10.4	7	1.2	NA	NA
	Daily Duty Officer	7353	23.1	702	269.9	1.9	0.7
	Brush truck (Cross Staffed)	7368	76.0	39	49.4	NA	NA
4	Type 1 Engine (Frontline)	7307	19.7	1,508	495.4	4.1	1.4
	Type 1 Engine (Reserve)	7317	12.6	52	11.0	NA	NA
11	Type 1 Engine (Frontline)	7309	22.1	772	284.7	2.1	0.8
	Ladder truck (Cross Staffed)	7328	10.7	313	55.8	0.9	0.2

Observations:

- Frontline engine 7308 was the unit deployed the most often and had the most deployed hours. It averaged 6.1 runs and 2.0 hours of deployed time per day.
- Frontline engine 7307 was the unit deployed the second most often. It averaged 4.1 runs and 1.4 hours of deployed time per day.
- Frontline engine 7309 averaged 2.1 runs and 0.8 hours of deployed time per day.
- Daily duty officer 7353 averaged 1.9 runs and 0.7 hours of deployed time per day.

FIGURE D-7: Deployed Minutes by Hour of Day

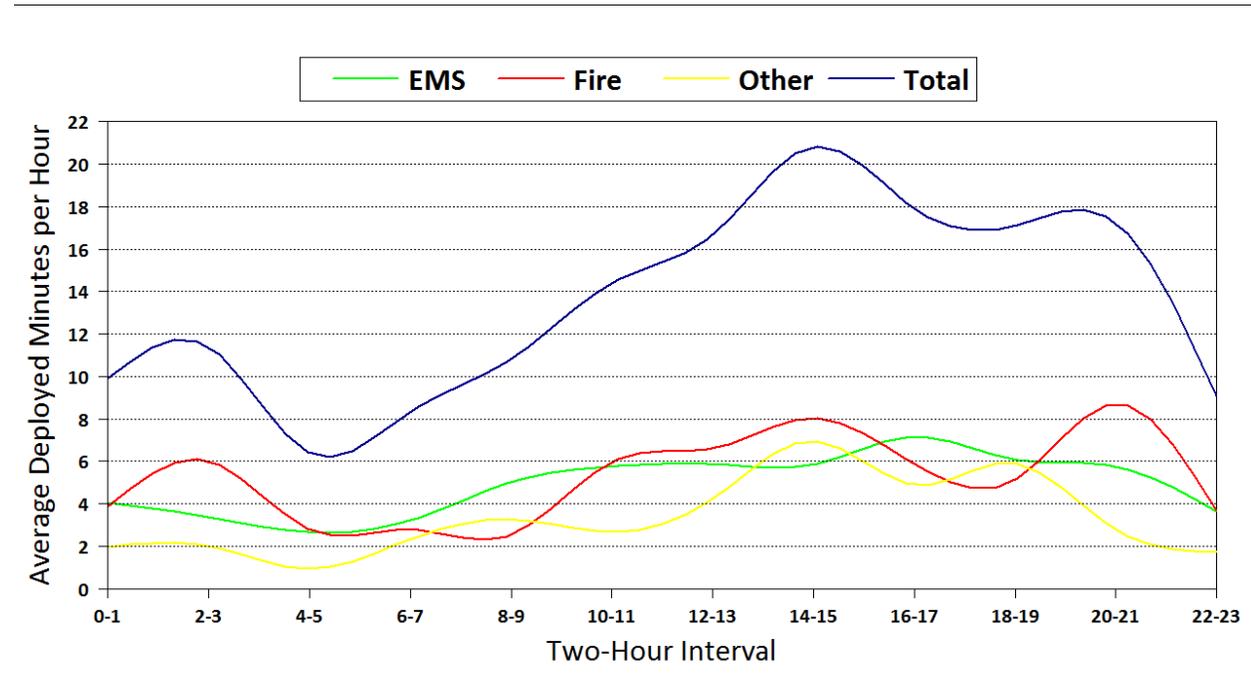


TABLE D-7: Deployed Minutes by Hour of Day

Two-Hour Interval	EMS	Fire	Other	Total
0-1	4.1	3.9	1.9	9.9
2-3	3.4	6.0	2.0	11.4
4-5	2.7	2.8	0.9	6.4
6-7	3.2	2.8	2.3	8.3
8-9	5.0	2.5	3.3	10.8
10-11	5.8	6.0	2.7	14.4
12-13	5.9	6.6	4.2	16.7
14-15	5.9	8.0	7.0	20.8
16-17	7.1	5.9	4.9	17.9
18-19	6.1	5.1	5.9	17.1
20-21	5.8	8.7	2.8	17.2
22-23	3.6	3.7	1.7	9.1
Daily Total	116.8	124.1	79.3	320.1

Note: Daily totals shown equal the sum of each column multiplied by two, since each cell represents two hours.

Observations:

- Hourly deployed minutes were highest during the day between noon and 10:00 p.m., averaging between 16.7 minutes and 20.8 minutes per hour. Average deployed minutes peaked between 2:00 p.m. and 4:00 p.m., averaging 20.8 minutes per hour.
- Hourly deployed minutes were the lowest between 10:00 p.m. and next morning 10:00 a.m., averaging between 6.4 minutes and 11.4 minutes per hour.

TABLE D-8: Total Annual and Daily Average Number of Runs by Call Type and Unit

Station	Unit Type	Unit	EMS	Structure Fire	Outside Fire	Hazard	False Alarm	Good Intent	Public Service	Mutual Aid	Canceled	Total	Runs per Day
3	Type 1 Engine	7308	868	33	60	62	220	110	246	308	333	2,240	6.1
	Type 1 Engine	7319	51	5	4	6	12	5	20	32	9	144	NA
	Bike Medic	7339	7	0	0	0	0	0	0	0	0	7	NA
	Daily Duty Officer	7353	99	37	47	52	258	49	37	92	31	702	1.9
	Brush truck	7368	7	3	3	1	0	1	1	21	2	39	NA
4	Type 1 Engine	7307	620	35	39	54	173	77	183	132	195	1,508	4.1
	Type 1 Engine	7317	27	1	1	2	9	3	3	4	2	52	NA
11	Type 1 Engine	7309	336	25	22	18	21	33	85	157	75	772	2.1
	Ladder truck	7328	65	12	10	5	152	9	14	20	26	313	0.9

Observations:

- Frontline engine 7308 made the most runs, an average of 6.1 runs per day.
- Frontline engine 7307 made the second most runs, an average of 4.1 runs per day.
- Frontline engine 7309 made the third most runs, an average of 2.1 runs per day.
- Daily duty officer 7353 averaged 1.9 runs per day.

TABLE D-9: Daily Average Deployed Minutes by Call Type and Unit

Station	Unit Type	Unit	EMS	Structure Fire	Outside Fire	Hazard	False Alarm	Good Intent	Public Service	Mutual Aid	Canceled	Total	Fire Category Calls Percentage
3	Type 1 Engine	7308	48.7	6.3	4.4	4.3	8.2	4.2	14.4	25.1	5.1	120.6	59.6
	Type 1 Engine	7319	3.0	0.2	0.2	0.4	0.4	0.2	1.0	2.0	0.1	7.6	61.0
	Bike Medic	7339	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
	Daily Duty Officer	7353	6.7	6.6	3.4	3.3	8.3	2.1	2.8	10.8	0.4	44.4	84.9
	Brush truck	7368	0.6	2.8	0.8	0.0	0.0	0.1	0.1	3.6	0.1	8.1	92.2
4	Type 1 Engine	7307	34.6	4.7	3.1	3.6	6.0	3.2	9.9	12.6	3.9	81.4	57.5
	Type 1 Engine	7317	0.9	0.0	0.1	0.0	0.6	0.0	0.1	0.1	0.0	1.8	51.9
11	Type 1 Engine	7309	20.2	2.3	1.4	1.5	0.6	1.8	4.6	12.9	1.5	46.8	56.7
	Ladder truck	7328	1.9	1.9	0.1	0.1	3.2	0.2	0.6	1.0	0.2	9.2	79.2

Observations:

- Frontline engine 7308 was utilized the most. It averaged 121 minutes (two hours, and 1 minute) of deployed time per day.
- Frontline engine 7307 was utilized the second most. It averaged 81 minutes (one hour, and 21 minutes) of deployed time per day.
- Frontline engine 7309 averaged 47 minutes of deployed time per day.
- Daily duty officer 7353 averaged 44 minutes of deployed time per day.

Analysis of Busiest Hours

There is significant variability in the number of calls from hour to hour. One special concern relates to the fire and EMS resources available for hours with the heaviest workload. We tabulated the data for each of the 8,760 hours in the year. Approximately once every 11 days, the Grants Pass Fire/Rescue Division responded to four or more calls in an hour. We report the top ten hours with the most calls received and discuss the two hours with the most calls received.

TABLE D-10: Frequency Distribution of the Number of Calls

Number of Calls in an Hour	Frequency	Percentage
0	5,561	63.5
1	2,440	27.9
2	603	6.9
3	123	1.4
4	22	0.3
5	5	0.1
6	4	0.0
7	1	0.0
9	1	0.0

Observations:

- During 33 hours (0.4 percent of all hours), four or more calls occurred; in other words, the GPFDR responded to four or more calls in an hour roughly once every 11 days.
- The highest number of calls that occurred in an hour was nine calls, and that happened once in a year.

TABLE D-11: Top 10 Hours with the Most Calls Received

Hour	Number of Calls	Number of Runs	Total Deployed Hours
3/30/2013, 7 p.m. to 8 p.m.	9	11	2.7
8/22/2013, 10 a.m. to 11 a.m.	7	8	1.1
12/31/2013, 8 p.m. to 9 p.m.	6	10	4.1
7/4/2013, 11 p.m. to 12 a.m.	6	10	2.7
8/22/2013, 9 a.m. to 10 a.m.	6	9	1.5
12/6/2013, 1 p.m. to 2 p.m.	6	6	0.6
7/31/2013, 12 p.m. to 1 p.m.	5	13	2.9
11/15/2013, 1 p.m. to 2 p.m.	5	6	1.7
8/10/2013, 5 p.m. to 6 p.m.	5	5	1.1
8/19/2013, 5 p.m. to 6 p.m.	5	5	1.9

Note: The combined workload is the total deployed minutes spent responding to calls received in the hour, and which may extend into the next hour or hours.

Observations:

- The hour with the most calls received was 7:00 p.m. to 8:00 p.m. on March 30, 2013. The nine calls involved 11 individual dispatches. These nine calls included one breathing difficulty call, two hazardous condition calls, one false alarm call, two good intent calls, and three public service calls. The combined workload was 2.7 hours. The longest call was a hazardous condition call which lasted 41 minutes. The breathing difficulty was responded to by engine 7307 and AMR ambulance M3, and the patient was transported by M3.
- During the hour from 10:00 a.m. to 11:00 a.m. on August 22, 2013, seven calls involving eight individual dispatches occurred. These seven calls included one outside fire call, one hazardous condition call, one good intent call and four mutual aid calls. The outside fire call was responded to by the GPFR duty officer and primarily handled by 11 units from Illinois Valley fire department.

TABLE D-12: Unit Workload Analysis between 7:00 p.m. and 8:00 p.m. on March 30, 2013

Hour	Station	3		4	11	Number of Busy Units
	Unit	7308	7353	7307	7309	
3/30/2013 7:00–8:00 p.m.	0–5		5.0	5.0		2
	5–10		5.0	5.0		2
	10–15		5.0	5.0		2
	15–20	0.4	1.3	5.0		3
	20–25	3.3	0.8	5.0	4.8	4
	25–30	5.0	4.9	4.9	5.0	4
	30–35	5.0	5.0	5.0	5.0	4
	35–40	5.0	5.0	3.2	5.0	4
	40–45	5.0	4.8		5.0	3
	45–50	5.0	5.0		5.0	3
	50–55	5.0	1.2	1.4	5.0	4
	55–60	5.0	3.1	5.0	2.3	4
		Total	38.7	46.1	44.5	37.1

Note: The numbers in the cells are the deployed minutes within the five-minute block. The cell values greater than 2.5 are coded red. Units 7308, 7307 and 7309 are frontline engines, and 7353 is daily duty officer vehicle.

Observations:

- During this hour, units in the GPFR made 11 runs and responded to nine calls. These nine calls included one breathing difficulty call, two hazardous condition calls, one false alarm call, two good intent calls, and three public service calls. The longest call was a hazardous condition call which lasted 41 minutes. The breathing difficulty was responded to by engine 7307 and AMR ambulance M3, and the patient was transported by M3.
- During the busiest thirty minutes in the hour (7:20 to 7:40 p.m., and 7:50 to 8:00 p.m.), all four frontline units (three engines and one duty officer) were deployed simultaneously.
- All four frontline units were deployed more than 30 minutes in this hour.

TABLE D-13: Unit Workload Analysis between 10:00 a.m. and 11:00 a.m. on August 22, 2013

Hour	Station	3		4	11	Number of Busy Units
	Unit	7308	7353	7307	7309	
8/22/2013 10:00– 11:00 a.m.	0–5	5.0	4.4	5.0	4.2	4
	5–10			5.0		1
	10–15			0.8	0.2	2
	15–20	1.8			4.9	2
	20–25	5.0			1.9	2
	25–30	5.0	2.1		3.3	3
	30–35	5.0	0.5	4.9	5.0	4
	35–40	5.0		4.0		2
	40–45	5.0				1
	45–50	5.0				1
	50–55	5.0				1
	55–60	5.0				1
	Total	46.8	7.0	19.7	19.5	

Note: The numbers in the cells are the deployed minutes within the five-minute block. The cell values greater than 2.5 are coded red. Units 7308, 7307 and 7309 are frontline engines, and 7353 is daily duty officer vehicle.

Observations:

- During this hour, units in the GPFR made eight runs and responded to seven calls. These seven calls included one outside fire call, one hazardous condition call, one good intent call and four mutual aid calls. The outside fire call was responded to by the GPFR duty officer and primarily handled by 11 units from Illinois Valley fire department.
- During the busiest ten minutes in the hour (10:00 to 10:05 a.m., and 10:30 to 10:35 a.m.), all four frontline units (three engines and one duty officer) were deployed simultaneously.
- Engine 7308 was deployed more than 30 minutes in this hour.

Dispatch Time and Response Time of GPFR Units

This section presents dispatch and response time statistics for different call types and units. The main focus is the dispatch and response time of the first arriving GPFR units for calls responded with lights and sirens. However, for structure and outside fire calls, we also analyze the response time of the second arriving units.

Different terms are used to describe the components of response time: **Dispatch processing time** is the difference between the unit dispatch time and call received time of the first arriving unit.

Turnout time is the difference between the unit time en route and the unit dispatch time. **Travel time** is the difference between the unit on-scene arrival time and the time en route. **Response time** is the difference between the on-scene arrival time and call received time.

A total of 2,862 fire and EMS category calls were responded with lights and sirens. In this section, a total of 2,276 calls (80 percent) were used in the analysis. The average dispatch time was 1.5 minutes. The average turnout time was 1.3 minutes, and the average travel time was 4.4 minutes. The average response time for EMS calls was 6.9 minutes, and the average response time for fire category calls was 7.6 minutes. The average response time for structure fire calls was 6.3 minutes. The average response time for outside fire calls was 6.8 minutes. The 90th percentile dispatch time was 2.7 minutes and the 90th percentile response time was 10.5 minutes.

TABLE D-14: Average Dispatch, Turnout, Travel, and Response Times of First Arriving Unit, by Call Type

Call Type	Dispatch Time	Turnout Time	Travel Time	Response Time	Sample Size
Cardiac and stroke	1.3	1.2	4.0	6.6	393
Seizure and unconsciousness	1.2	1.2	3.9	6.3	271
Breathing difficulty	1.4	1.3	4.1	6.8	275
Overdose and psychiatric	1.5	2.4	6.0	10.0	34
MVA	1.5	1.2	3.6	6.3	81
Fall and injury	1.9	1.4	4.7	8.0	100
Illness and other	1.6	1.3	4.5	7.4	253
EMS Total	1.4	1.3	4.2	6.9	1,407
Structure fire	1.3	1.8	3.3	6.3	32
Outside fire	1.3	1.4	4.1	6.8	65
Hazard	1.9	1.4	5.0	8.3	74
False alarm	1.3	1.5	3.8	6.6	219
Good intent	1.9	1.2	4.9	8.1	110
Public service	1.6	1.3	5.3	8.1	369
Fire Total	1.6	1.4	4.7	7.6	869
Total	1.5	1.3	4.4	7.2	2,276

FIGURE D-8: Average Dispatch, Turnout, and Travel Times of First Arriving Unit, by EMS Call Type

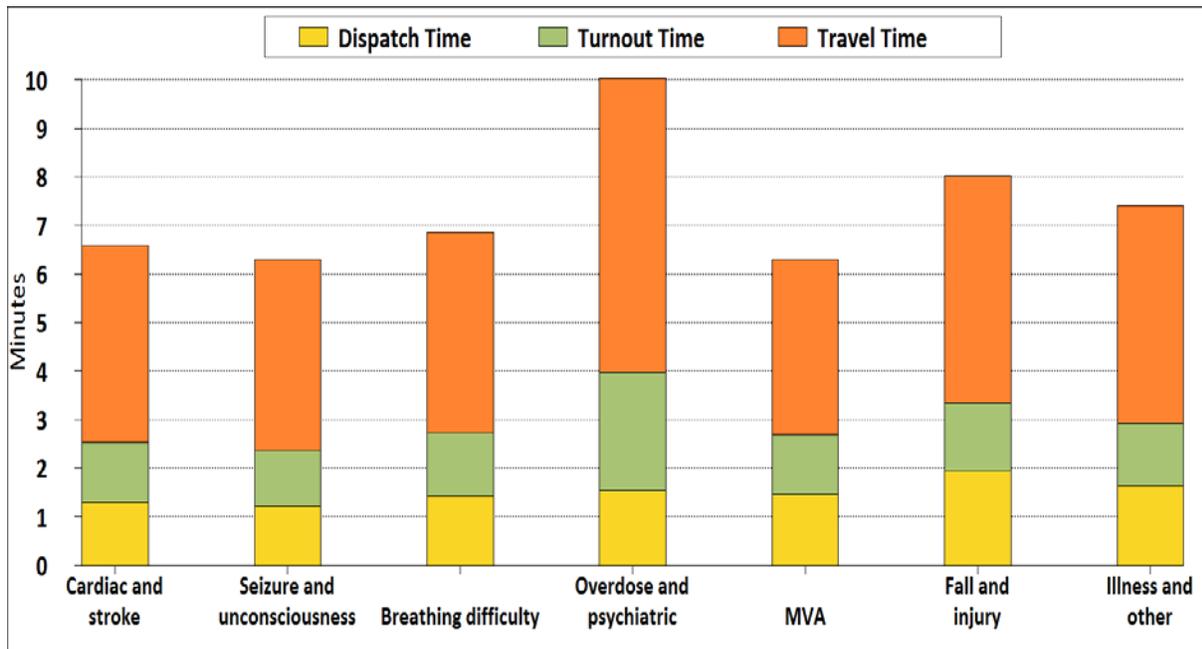
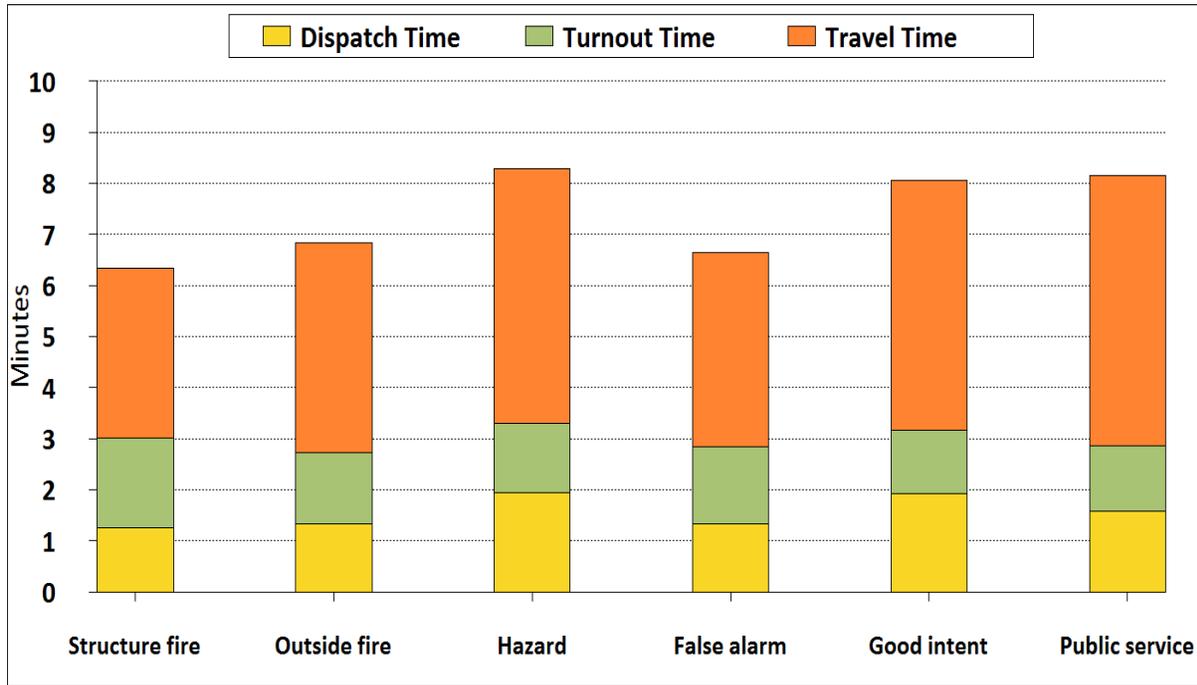


FIGURE D-9: Average Dispatch, Turnout, and Travel Times of First Arriving Unit, by Fire Call Type



Observations:

- The average dispatch time was 1.5 minutes.
- The average turnout time was 1.3 minutes.
- The average travel time was 4.4 minutes.
- The average response time for EMS calls was 6.9 minutes.
- The average response time for fire category calls was 7.6 minutes.
- The average response time for structure fire calls was 6.3 minutes. The average response time for outside fire calls was 6.8 minutes.

TABLE D-15: 90th Percentile Dispatch, Turnout, Travel, and Response Times of First Arriving Unit, by Call Type

Call Type	Dispatch Time	Turnout Time	Travel Time	Response Time	Sample Size
Cardiac and stroke	2.1	2.0	6.2	8.9	393
Seizure and unconsciousness	2.1	1.9	6.2	9.6	271
Breathing difficulty	2.4	2.0	6.3	9.2	275
Overdose and psychiatric	2.7	9.7	11.3	14.9	34
MVA	2.5	1.7	6.0	8.8	81
Fall and injury	3.4	1.9	7.6	12.0	100
Illness and other	3.0	1.9	7.0	10.8	253
EMS Total	2.5	1.9	6.6	9.9	1,407
Structure fire	2.0	3.0	4.9	8.0	32
Outside fire	2.7	2.2	6.1	9.0	65
Hazard	3.8	2.1	9.1	12.7	74
False alarm	2.3	2.3	6.3	9.6	219
Good intent	3.4	1.8	9.1	12.8	110
Public service	2.8	1.9	8.6	11.9	369
Fire Total	2.9	2.1	7.6	11.3	869
Total	2.7	2.0	7.1	10.5	2,276

Note: A 90th percentile value of 10.5 indicates that the total response time was less than 10.5 minutes for 90 percent of all calls. Unlike averages, the 90th percentile response time is not equal to the sum of the 90th percentile of dispatch time, turnout time, and travel time.

Observations:

- The 90th percentile dispatch time was 2.7 minutes.
- The 90th percentile turnout time was 2.0 minutes.
- The 90th percentile travel time was 7.1 minutes.
- The 90th percentile response time for EMS calls was 9.9 minutes.
- The 90th percentile response time for fire category calls was 11.3 minutes.
- The 90th percentile response time for structure fire calls was 8.0 minutes.
- The 90th percentile response time for outside fire calls was 9.0 minutes.

FIGURE D-10: Average Dispatch, Turnout, Travel, and Response Time of First Arriving Unit, by Hour of Day

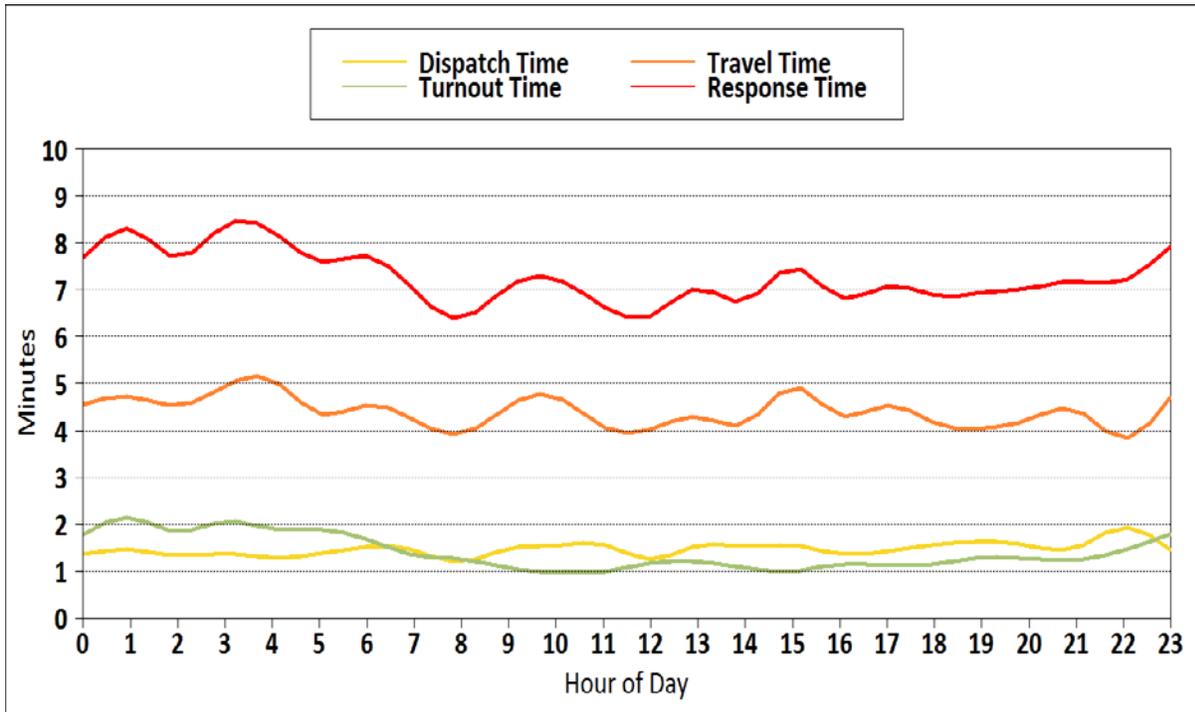


TABLE D-16: Average Dispatch, Turnout, Travel, and Response Times of First Arriving Unit, by Hour of Day

Hour	Dispatch Time	Turnout Time	Travel Time	Response Time	90th Percentile Response Time	Sample Size
0	1.4	1.8	4.5	7.7	10.0	68
1	1.5	2.1	4.7	8.3	11.2	71
2	1.3	1.8	4.5	7.7	9.8	52
3	1.4	2.1	4.9	8.4	11.9	56
4	1.3	1.9	5.1	8.3	11.8	52
5	1.4	1.9	4.4	7.6	10.6	58
6	1.5	1.7	4.5	7.7	10.0	62
7	1.4	1.3	4.2	7.0	9.1	76
8	1.2	1.3	3.9	6.4	9.7	90
9	1.5	1.1	4.5	7.1	10.9	114
10	1.5	1.0	4.7	7.2	11.8	121
11	1.6	1.0	4.1	6.6	9.3	131
12	1.3	1.2	4.0	6.4	9.3	123
13	1.5	1.2	4.3	7.0	10.2	124
14	1.5	1.1	4.2	6.8	9.7	117
15	1.6	1.0	4.9	7.5	11.0	105
16	1.4	1.1	4.3	6.8	11.2	115
17	1.4	1.1	4.5	7.1	12.2	126
18	1.6	1.1	4.2	6.9	9.9	130
19	1.6	1.3	4.0	6.9	10.8	101
20	1.5	1.3	4.2	7.0	11.2	123
21	1.5	1.2	4.4	7.2	10.5	103
22	1.9	1.4	3.8	7.2	10.6	82
23	1.4	1.8	4.7	7.9	11.0	76

Observations:

- Average dispatch time was between 1.2 and 1.9 minute.
- Average turnout time was between 1.0 and 2.1 minutes. Turnout time peaked between 11:00 p.m. and 7:00 a.m., averaging between 1.7 and 2.1 minutes.
- Average travel time was between 3.8 and 5.1 minutes.
- Average response time was between 6.4 and 8.4 minutes. Response time peaked between 11:00 p.m. and 7:00 a.m., averaging between 7.6 and 8.4 minutes.
- 90th percentile response time was between 9.1 and 12.2 minutes.

FIGURE D-11: Number of Total Calls by First Arriving Units

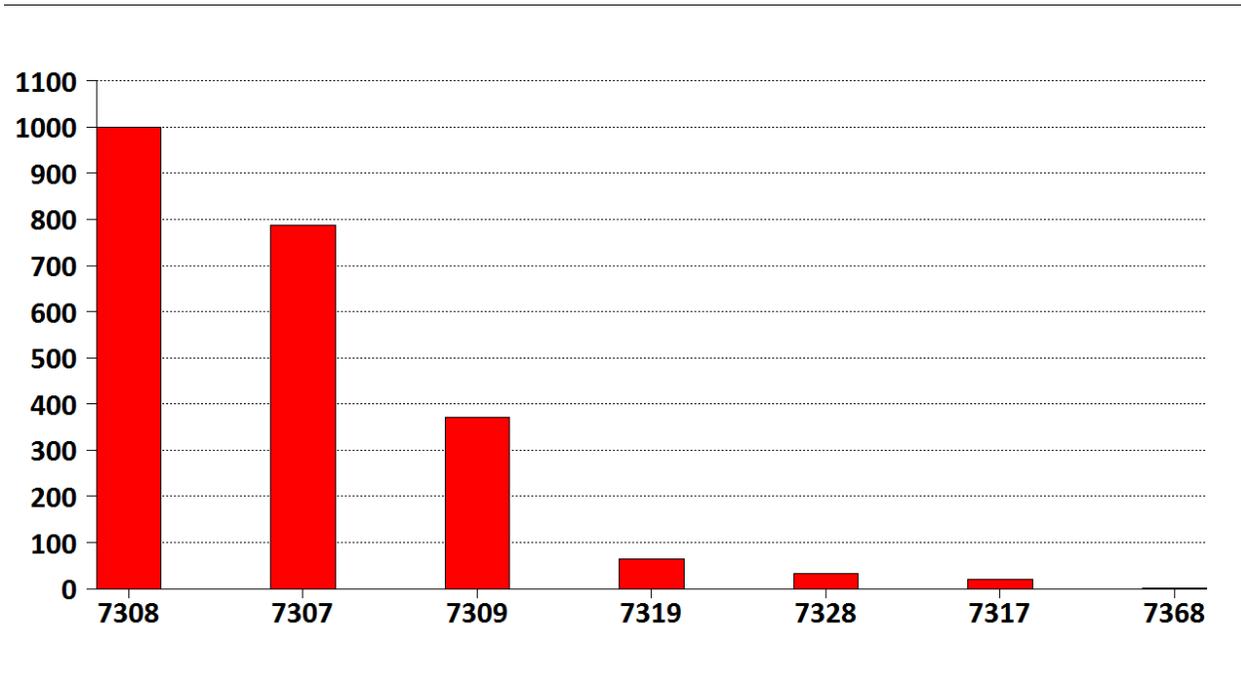


TABLE D-17: Number of Total Calls by First Arriving Units

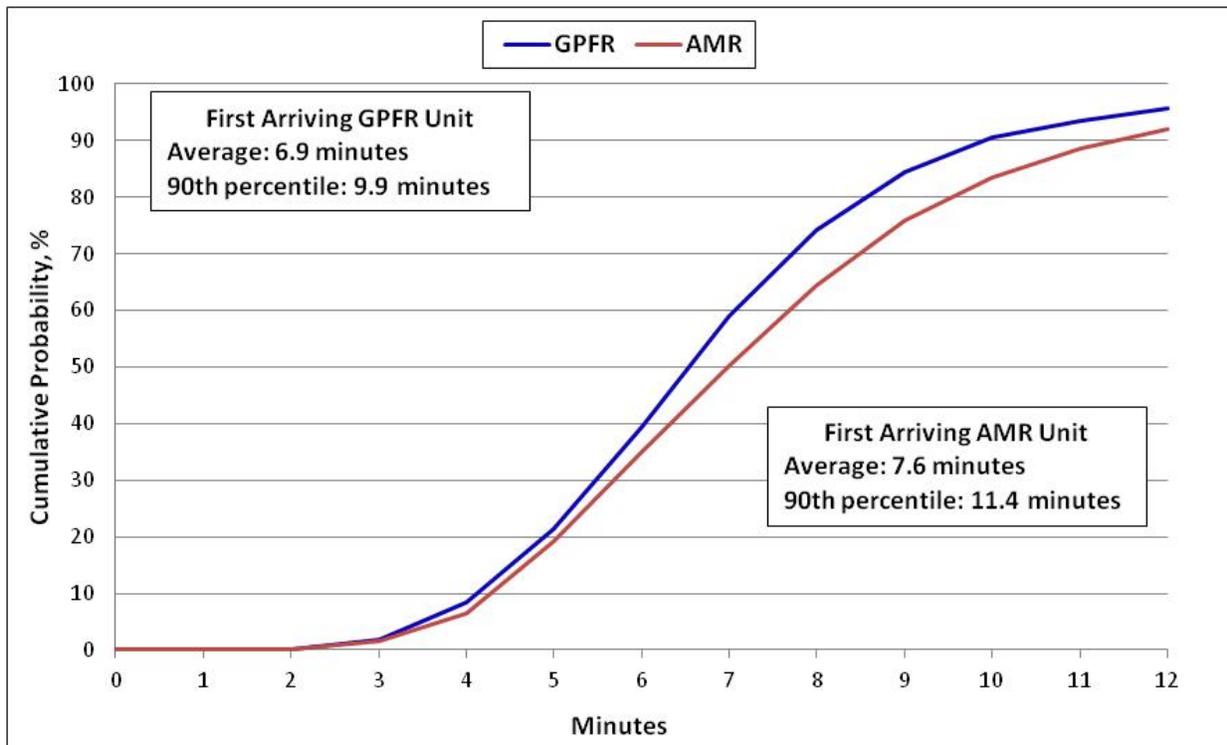
Unit	EMS	Structure and Outside Fire	Other Fire	Total	Percentage	Cumulative Percentage
7308	619	47	333	999	43.9	43.9
7307	463	36	289	788	34.6	78.5
7309	258	8	105	371	16.3	94.8
7319	38	3	23	64	2.8	97.6
7328	14	2	16	32	1.4	99.0
7317	13	1	6	20	0.9	99.9
7368	2	0	0	2	0.1	100.0

Observations:

- Engine 7308 arrived first on scene most often, followed by 7307, and 7309.
- For structure and outside fire calls, 7308 and 7307 in that order arrived first on scene most often.

AMR responded together with GPFR units on 1,704 out of 1,785 EMS calls (95.4 percent). Sixty-one percent of the time, the GPFR unit either arrived earlier than or together with the AMR ambulance. Figures D-12 and D-13 and Table D-18 compare the response performances of the first arriving GPFR unit and AMR ambulance.

FIGURE D-12: Cumulative Distribution Function (CDF) of Response Time of First Arriving GPFR and AMR Units for EMS calls



Reading the CDF Chart: The vertical axis is the probability or percentage of calls. The horizontal axis is response time. For example, with regard to first arriving GPFR unit for EMS calls, the 0.9 probability line intersects the graph at the time mark at about 9.9 minutes. This means that units had a response time of less than 9.9 minutes for 90 percent of these calls.

FIGURE D-13: Frequency Distribution Chart of Response Time of First Arriving GPFR and AMR Units for EMS calls

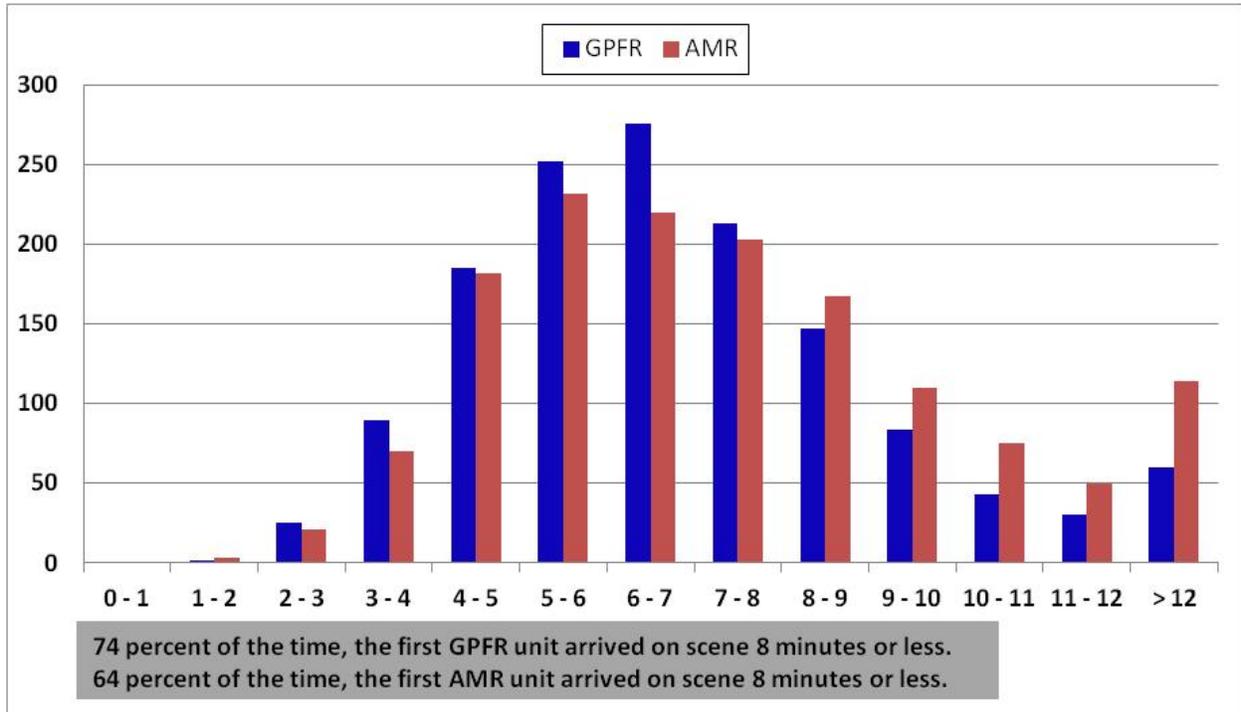


TABLE D-18: Cumulative Distribution Function (CDF) of Response Time of First Arriving GPFR and AMR Units for EMS Calls

Response Time (minute)	GPFR		AMR	
	Frequency	Cumulative Percent	Frequency	Cumulative Percent
0 - 1	0	0.0	0	0.0
1 - 2	2	0.1	3	0.2
2 - 3	25	1.9	21	1.7
3 - 4	90	8.3	70	6.5
4 - 5	185	21.5	182	19.1
5 - 6	252	39.4	232	35.1
6 - 7	276	59.0	220	50.3
7 - 8	213	74.1	203	64.3
8 - 9	147	84.6	167	75.9
9 - 10	84	90.5	110	83.5
10 - 11	43	93.6	75	88.7
11 - 12	30	95.7	50	92.1
12 - 13	23	97.4	24	93.8
13 - 14	15	98.4	26	95.6
14 - 15	12	99.3	9	96.2
>= 15	10	100.0	55	100.0

Observations:

- The average GPFR response time for EMS calls was 6.9 minutes.
- For 74 percent of EMS calls, the response time of the first arriving GPFR unit was less than or equal to 8.0 minutes.
- For 90 percent of EMS calls, the response time of the first arriving GPFR unit was less than 9.9 minutes.
- The average AMR response time for EMS calls was 7.6 minutes.
- For 64 percent of EMS calls, the response time of the first arriving AMR unit was less than or equal to 8.0 minutes.
- For 90 percent of EMS calls, the response time of the first arriving AMR unit was less than 11.4 minutes.

TABLE D-19: Average Response Time for Structure and Outside Fire Calls by First Arriving GPFR Unit

Unit Type	First Arriving Unit	Outside Fire		Structure Fire		Total	
		Response Time	Number of Calls	Response Time	Number of Calls	Response Time	Number of Calls
Ladder truck	7328	0.0	0	8.2	2	8.2	2
Type 1 Engine	7307	6.8	25	6.1	11	6.6	36
	7308	7.0	30	6.5	17	6.8	47
	7309	6.1	7	4.4	1	5.9	8
	7317	5.1	1	0.0	0	5.1	1
	7319	8.3	2	5.2	1	7.3	3
Total		6.8	65	6.3	32	6.7	97

Observations:

- For outside fire calls, the average response time of the first arriving firefighting equipment was 6.8 minutes.
- For outside fire calls, engine 7308 was the first unit on scene most often and had an average response time of 7.0 minutes.
- For structure fire calls, the average response time of the first arriving firefighting equipment was 6.3 minutes.
- For structure fire calls, engine 7308 was the first unit on scene most often and had an average response time of 6.5 minutes.

TABLE D-20: Average Response Time for Structure and Outside Fire Calls by Second Arriving GPFR Unit

Unit Type	First Arriving Unit	Outside Fire		Structure Fire		Total	
		Response Time	Number of Calls	Response Time	Number of Calls	Response Time	Number of Calls
Type 1 Engine	7307	10.3	4	8.3	11	8.9	15
	7308	10.7	9	8.3	5	9.9	14
	7309	0.0	0	9.8	3	9.8	3
	7319	7.5	1	0.0	0	7.5	1
Total		10.4	14	8.6	19	9.3	33

Observations:

- For outside fire calls, the average response time of the second arriving unit was 10.4 minutes.
- For structure fire calls, the average response time of the second arriving unit was 8.6 minutes.

FIGURE D-14: Cumulative Distribution Function (CDF) of Response Time of First Arriving GPFU Unit for Structure and Outside Fire Calls

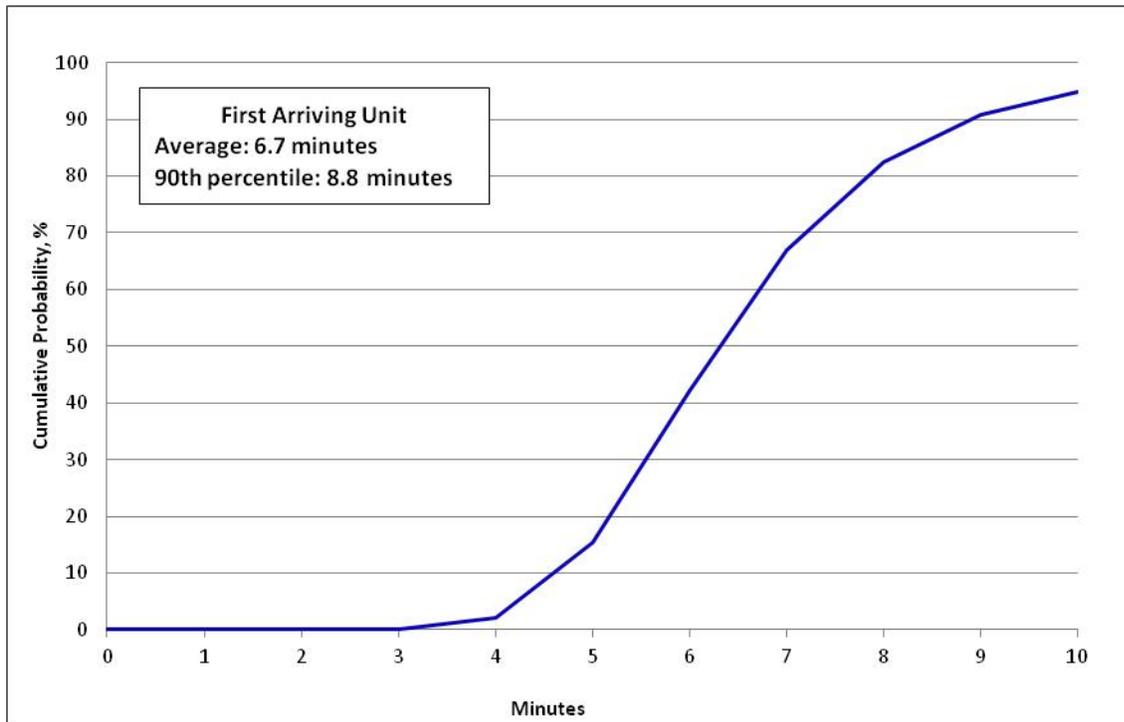


FIGURE D-15: Frequency Distribution Chart of Response Time of First Arriving GPFU Unit for Structure and Outside Fire Calls

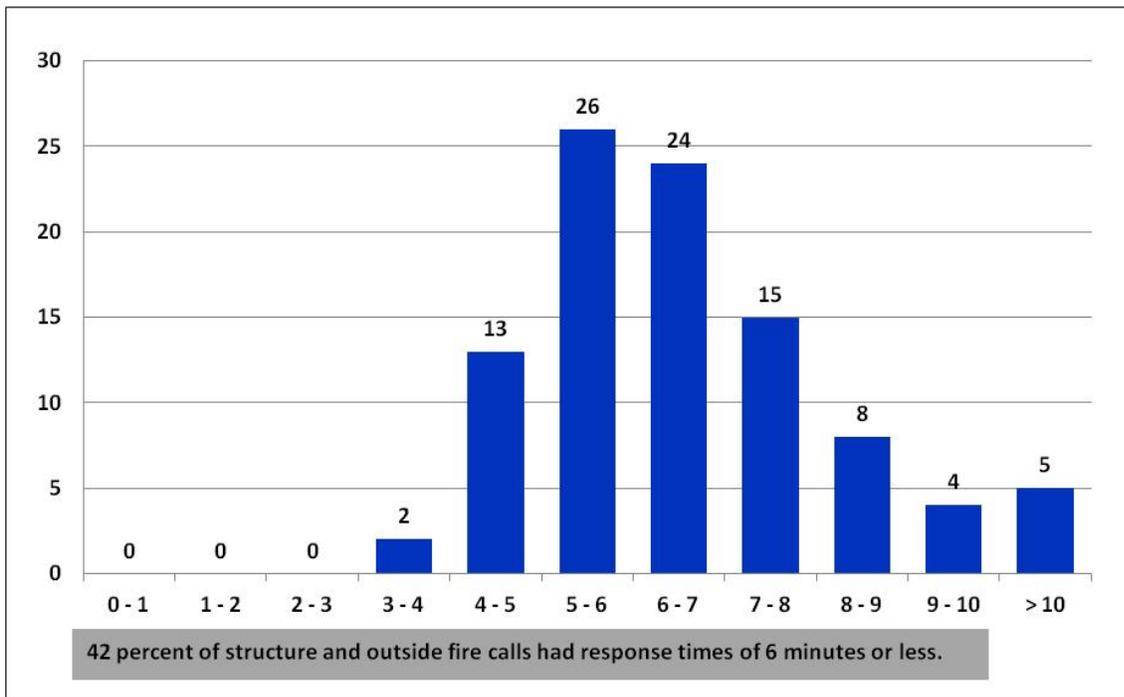


TABLE D-21: Cumulative Distribution Function (CDF) of Response Time of First Arriving GPFR Unit for Structure and Outside Fire Calls

Response Time (minute)	First Unit	
	Frequency	Cumulative Percent
0 - 1	0	0.0
1 - 2	0	0.0
2 - 3	0	0.0
3 - 4	2	2.1
4 - 5	13	15.5
5 - 6	26	42.3
6 - 7	24	67.0
7 - 8	15	82.5
8 - 9	8	90.7
9 - 10	4	94.8
10 - 11	1	95.9
11 - 12	1	96.9
12 - 13	0	96.9
13 - 14	2	99.0
14 - 15	0	99.0
> 15	1	100.0

Observations:

- The average response time of the first arriving unit for structure and outside fire calls was 6.7 minutes.
- 42 percent of the time, the first arriving unit's response time was less than 6.0 minutes.
- 90 percent of the time, the first arriving unit's response time was less than 8.8 minutes.

TABLE D-22: Average and 90th Percentile Response Time by First Due Station

First Due Station	Average Response Time	90th Percentile Response Time	Sample Size
Parkway	7.2	10.8	995
Hillcrest	6.9	10.1	770
Redwood	7.1	9.8	382
Rural Metro 1	8.3	12.6	45

Note: This analysis only includes calls responded with lights and sirens in GPFR jurisdiction.

Observations:

- For emergency calls, the average response time for calls first due at Hillcrest station was the shortest, with an average of 6.9 minutes. The 90th percentile response time was 10.1 minutes.
- For emergency calls, the average response time for calls first due at Redwood station was 7.1 minutes, and the 90th percentile response time was 9.8 minutes.
- For emergency calls, the average response time for calls first due at Parkway station was 7.2 minutes, and the 90th percentile response time was 10.8 minutes.

Mutual Aid Workload, Transport Call and Response Time Analysis

This section examines how many mutual aids GPFR received, and how many calls involved transporting patients. Regarding mutual aid analysis, we focus on the total number of runs, deployed hours by agency and unit, and response time of first arriving unit experienced by Grants Pass citizens. We identified transport calls requiring that at least one responding unit recorded a unit transport time. This section focuses on transport analysis by agency and unit and presents the transport variations by hour of day. We also provide a breakdown of transport time component analysis by agency and unit.

TABLE D-23: Workload Analysis of Other Agencies

Agency	Unit Type	Unit Id	Average Deployed Minutes per Run	Number of Runs	Annual Hours	Runs per Day	Deployed Hours per Day
AMR	Supervisor	J1-J5	12.0	9	2		
	24 hour Ambulance	M1	37.4	741	463		
		M2	34.9	895	520		
		M3	37.1	837	518		
		M4	40.8	66	45		
	12 hour Ambulance	M8	41.8	27	19		
		M9	32.7	9	5		
		M12	34.8	543	315		
AMR Total			36.2	3,127	1,885	8.6	5.2
Rural Metro Fire	Type 1 Engine	7501-7507	14.8	463	114		
	Type 2 Engine	7511-7515	36.9	721	443		
	Tender	7541-7547	63.3	225	237		
	Fire Rescue	7531-7532	43.2	127	91		
	Brush truck	7561-7564	73.9	17	21		
	Chief Officer	7551-7555	38.3	287	183		
	Duty Officer	7581-7591	40.4	69	47		
	Rural Metro Fire Total			35.8	1,909	1,137	5.2
Rogue River - Jackson County	Any	Any	62.0	72	74		
Applegate Fire - Jackson County	Any	Any	167.7	39	106		
District 5 - Jackson County	Any	Any	37.8	4	3		
Medford Fire - Jackson County	Any	Any	36.5	2	1		
Wolf Creek Fire	Any	Any	80.8	18	24		
Williams Fire	Any	Any	371.0	12	74		
Illinois Valley Fire	Any	Any	128.7	163	350		
Other	Any	Any	47.2	2,480	1,950		
Mutual Aid Total			43.0	7,826	5,605	21.4	15.4

Observations:

- GPFR received 7,826 runs, and 5,605 deployed hours of mutual aid in the year.
- On average, GPFR received 21.4 runs and 15.4 deployed hours of mutual aid per day.
- The private ambulance service, AMR, provided the most mutual aid responses. On average, AMR ambulances made 8.6 runs per day, and were deployed 5.2 hours per day.
- Rural Metro Fire Department provided the second most mutual aid responses. On average, Rural Metro Fire Department units made 5.2 runs per day, and were deployed 3.1 hours per day.
- GPFR units' runs accounted for 42 percent of the total runs of all agencies' units.
- GPFR units' deployed time accounted for 26 percent of the total deployed time of all agencies' units.

TABLE D-24: Number of GPFR and Other Agencies' Units by Call Type

Call Type	Average Number of GPFR Units	Average Number of Units from Other Agencies	Number of Units	% of Calls with only GPFR Unit
Cardiac and stroke	1.1	1.2	2.3	0.0
Seizure and unconsciousness	1.1	1.6	2.7	0.3
Breathing difficulty	1.1	1.2	2.3	0.0
Overdose and psychiatric	1.1	3.5	4.6	0.0
MVA	1.5	4.3	5.8	0.9
Fall and injury	1.1	2.3	3.4	0.8
Illness and other	1.2	2.0	3.2	6.8
EMS Total	1.2	1.9	3.1	1.5
Structure fire	4.0	7.5	11.5	5.3
Outside fire	2.3	2.4	4.7	36.3
Hazard	1.6	1.5	3.1	43.7
False alarm	3.0	0.6	3.6	67.4
Good intent	1.6	1.0	2.6	51.7
Public service	1.2	0.9	2.1	70.9
Fire Total	1.9	1.2	3.1	60.0
Mutual aid	1.3	3.0	4.3	11.3
Canceled	1.2	1.9	3.1	4.0
Total	1.4	1.9	3.3	20.2

Observations:

- Only 20 percent of calls (842 out of 4,168 calls) were solely responded to by GPFR units.
- For 99 percent of EMS calls, there was at least one unit from another agency responding together with GPFR unit.
- On average, 3.1 units responded to an EMS call, including an average of nearly two units from other agencies.
- On average, 3.1 units responded to a fire category call, including an average of nearly two units from GPFR.
- Most GPFR canceled calls were handled by units from other agencies.

TABLE D-25: Transport Calls by Call Type

Call Type	Number of Calls			Transport Rate
	Non-Transport	Transport	Total	
Cardiac and stroke	32	418	450	92.9
Seizure and unconsciousness	81	235	316	74.4
Breathing difficulty	23	291	314	92.7
Overdose and psychiatric	5	41	46	89.1
MVA	110	102	212	48.1
Fall and injury	19	105	124	84.7
Illness and other	138	185	323	57.3
EMS Total	408	1,377	1,785	77.1
Fire Total	1,171	37	1,208	3.1
Mutual aid	394	206	600	34.3
Canceled	232	343	575	59.7
Total	2,205	1,963	4,168	47.1
Daily Average	6.0	5.4	11.4	NA

Observations:

- Overall, 77 percent of EMS calls to which GPFR responded involved transporting patients.
- On average, GPFR responded to 11.4 calls per day, and 5.4 involved transporting patients.
- Cardiac and stroke, and breathing difficulty calls had the highest transport rates, averaging 93 percent.

TABLE D-26: Transport Workload by, Agency and Unit

Agency	Unit Id	Average Deployed Minutes per Transport Run	Number of Transport Runs	Total Deployed Hours in Transport
AMR	M1	49.0	482	393
	M2	47.6	550	436
	M3	50.1	520	434
	M4	53.1	34	30
	M8	51.3	12	10
	M9	52.6	5	4
	M12	47.0	354	277
	Total	48.6	1,957	1,586
Rogue River - Jackson County	7431	72.2	4	5
	7433	85.0	23	33
	Total	83.1	27	37

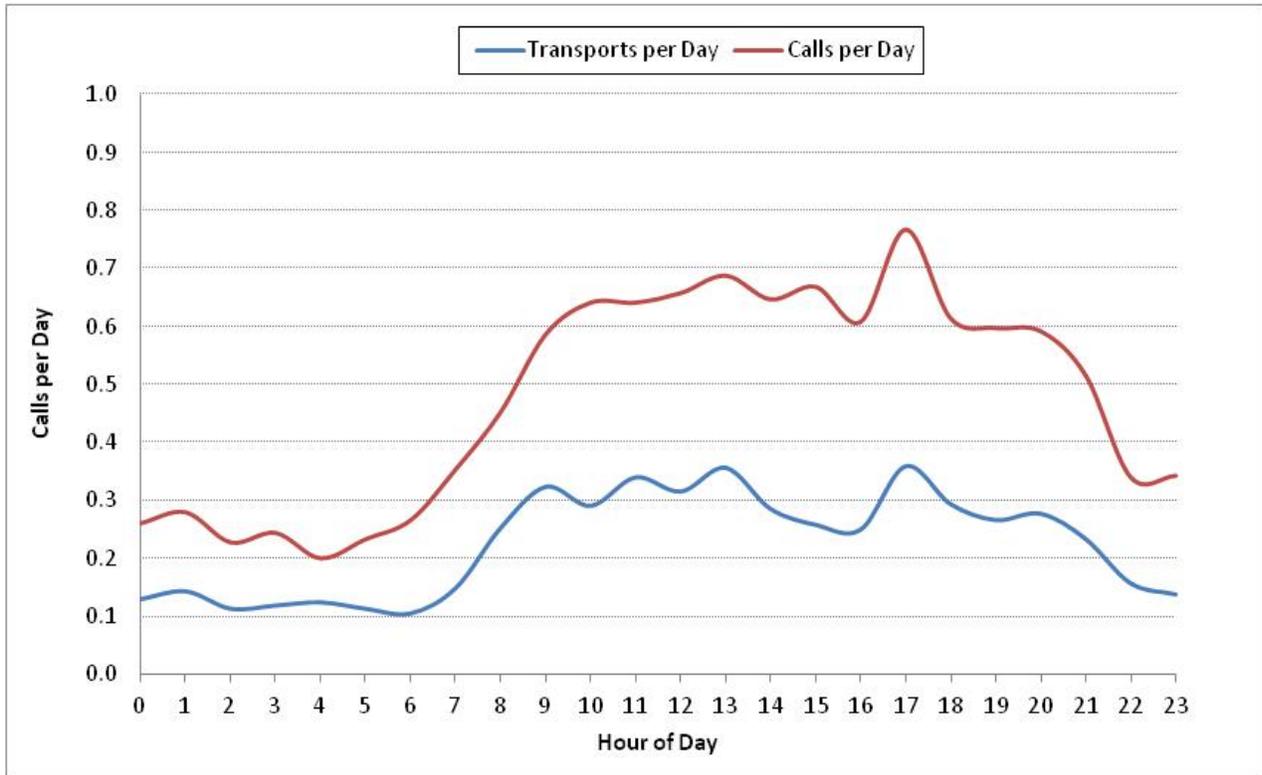
Observations:

- AMR ambulances provided 99 percent of the transports. On average, AMR ambulances made 5.4 runs per day, and were deployed 4.3 hours for transport calls.
- On average, AMR ambulance spent 49 minutes from dispatch to clear in a transport run.

TABLE D-27: Total and Number of Transport Calls per Day, by Hour of Day

Hour	Number of Transports	Number of Calls	Transports per Day	Calls per Day	Transport Rate
0	47	95	0.13	0.26	49.5
1	52	102	0.14	0.28	51.0
2	41	83	0.11	0.23	49.4
3	43	89	0.12	0.24	48.3
4	45	73	0.12	0.20	61.6
5	41	85	0.11	0.23	48.2
6	38	97	0.10	0.27	39.2
7	54	129	0.15	0.35	41.9
8	92	165	0.25	0.45	55.8
9	118	214	0.32	0.59	55.1
10	106	234	0.29	0.64	45.3
11	124	234	0.34	0.64	53.0
12	115	240	0.32	0.66	47.9
13	130	251	0.36	0.69	51.8
14	104	236	0.28	0.65	44.1
15	94	244	0.26	0.67	38.5
16	91	222	0.25	0.61	41.0
17	131	280	0.36	0.77	46.8
18	107	224	0.29	0.61	47.8
19	97	218	0.27	0.60	44.5
20	101	216	0.28	0.59	46.8
21	85	188	0.23	0.52	45.2
22	57	124	0.16	0.34	46.0
23	50	125	0.14	0.34	40.0

FIGURE D-16: Number of Transport Calls, by Hour of Day



Observations:

- Overall, 47 percent of incidents to which GPFR responded involved transporting patients.
- On average, GPFR responded to 11.4 calls per day.
- On average, there were 5.4 transport calls per day.
- Transports were highest between 8:00 a.m. and 10:00 p.m., averaging between 0.23 and 0.36 transports per hour.
- Transports were lowest between midnight and 8:00 a.m., averaging between 0.10 and 0.14 transports per hour.

Deployed time is the interval from unit dispatch time through unit clear time. The on-scene time is the interval from the unit arriving on-scene time through the time the unit departs the scene for the hospital. Travel to hospital time is the interval from the time the unit departs the scene to travel to the hospital through the unit arriving at the hospital time. The at-hospital plus travel back time is the interval from the unit arriving at hospital time through unit clear time.

TABLE D-28: Time Component Analysis for Transport Runs

Agency	Unit	Average Deployed Minutes per Run	Average On Scene Time	Average Travel To Hospital Time	Average at Hospital plus Travel Back Time	Sample Size
AMR	M1	49.0	17.1	8.2	16.9	482
	M2	47.6	15.5	9.7	16.4	550
	M3	50.1	17.6	9.5	16.6	520
	M4	53.1	13.9	9.2	22.3	34
	M8	51.3	14.1	14.8	16.9	12
	M9	52.6	23.2	6.2	18.4	5
	M12	47.0	17.3	8.2	15.8	354
	Total	48.6	16.8	9.0	16.6	1,957
Rogue River - Jackson County	7431	72.2	11.5	6.0	46.9	4
	7433	85.0	11.6	9.0	57.1	23
	Total	83.1	11.5	8.5	55.6	27

Observations:

- AMR transport runs averaged 48.6 minutes from dispatch to clear.
- On average, an AMR ambulance spent 16.8 minutes treating patients on scene, spent 9.0 minutes on the road to take patients to the hospital, and then spent 16.6 minutes combined at the hospital and traveling back to the station.

In Tables D-29 and D-30, the first arriving unit could be from any responding agency. The overall response time is the same or shorter than response time of GPFR units, as reported previously.

TABLE D-29: Average Dispatch, Turnout, Travel, and Response Times of First Arriving Unit of Any Agency, by Call Type

Call Type	Dispatch Time	Turnout Time	Travel Time	Response Time	Sample Size
Cardiac and stroke	1.3	1.1	3.7	6.0	432
Seizure and unconsciousness	1.3	0.9	3.4	5.6	302
Breathing difficulty	1.4	1.1	3.7	6.2	304
Overdose and psychiatric	2.7	0.7	3.8	7.2	36
MVA	1.7	0.7	2.5	4.9	76
Fall and injury	1.6	0.9	4.1	6.6	111
Illness and other	1.7	1.0	4.3	6.9	298
EMS Total	1.5	1.0	3.7	6.2	1,559
Structure fire	1.7	1.2	2.8	5.7	34
Outside fire	1.7	1.1	3.7	6.5	67
Hazard	2.2	1.2	4.7	8.1	81
False alarm	1.4	1.4	3.7	6.6	231
Good intent	2.1	1.1	4.4	7.6	127
Public service	1.7	1.1	4.9	7.8	421
Fire Total	1.7	1.2	4.4	7.3	961
Mutual aid	1.8	1.2	7.2	10.1	471
Canceled	1.6	0.8	3.7	6.0	468
Total	1.6	1.0	4.4	7.0	3,459

Observations:

- The average dispatch time was 1.6 minutes.
- The average turnout time was 1.0 minute.
- The average travel time was 4.4 minutes.
- The average response time for EMS calls was 6.2 minutes, whereas, the average response time of the first arriving GPFR unit was 6.9 minutes.
- The average response time for fire category calls was 7.3 minutes, whereas, the average response time of the first arriving GPFR unit was 7.6 minutes.
- The average response time for structure fire calls was 5.7 minutes. The average response time for outside fire calls was 6.5 minutes.

TABLE D-30: 90th Percentile Dispatch, Turnout, Travel, and Response Times of First Arriving Unit of Any Agency, by Call Type

Call Type	Dispatch Time	Turnout Time	Travel Time	Response Time	Sample Size
Cardiac and stroke	2.2	1.9	5.8	8.3	432
Seizure and unconsciousness	2.3	1.8	5.5	8.1	302
Breathing difficulty	2.2	1.9	5.6	8.4	304
Overdose and psychiatric	4.4	1.3	7.1	12.3	36
MVA	2.9	1.7	4.8	6.9	76
Fall and injury	2.9	1.7	6.6	9.4	111
Illness and other	3.2	1.9	7.2	10.8	298
EMS Total	2.7	1.9	5.9	8.9	1,559
Structure fire	3.4	2.7	4.7	7.3	34
Outside fire	3.6	2.2	6.1	8.9	67
Hazard	4.0	2.1	8.7	12.6	81
False alarm	2.6	2.2	6.3	9.6	231
Good intent	4.2	1.9	8.9	12.6	127
Public service	3.2	1.9	8.1	11.2	421
Fire Total	3.3	2.1	7.5	10.9	961
Mutual aid	3.4	2.2	12.0	15.3	471
Canceled	2.9	1.5	6.2	9.2	468
Total	3.0	1.9	7.6	10.9	3,459

Note: A 90th percentile value of 10.9 indicates that the total response time was less than 10.9 minutes for 90 percent of all calls. Unlike averages, the 90th percentile response time is not equal to the sum of the 90th percentile of dispatch time, turnout time, and travel time.

Observations:

- The 90th percentile dispatch time was 3.0 minutes.
- The 90th percentile turnout time was 1.9 minutes.
- The 90th percentile travel time was 7.6 minutes.
- The 90th percentile response time for EMS calls was 8.9 minutes.
- The 90th percentile response time for fire category calls was 10.9 minutes.
- The 90th percentile response time for structure fire calls was 7.3 minutes.
- The 90th percentile response time for outside fire calls was 8.9 minutes.

TABLE D-31: Number of Total Calls by First Arriving Agency

Agency	EMS	Structure and Outside Fire	Fire Other	Mutual aid	Canceled	Total	EMS Percent	Percent
Grants Pass Fire Rescue	819	70	731	223	14	1,857	52.5	53.7
AMR	606	0	25	120	363	1,114	38.9	32.2
Rural Metro Fire	16	9	42	115	56	238	1.0	6.9
Other Agencies	118	22	62	13	35	250	7.6	7.2
Total	1,559	101	860	471	468	3,459	100.0	100.0

Observations:

- For EMS calls, Grants Pass Fire/Rescue arrived first 53 percent of the time and AMR ambulance arrived first on scene 39 percent of the time.
- Overall, Grants Pass Fire/Rescue arrived first 54 percent of the time.

FIGURE D-17: Cumulative Distribution Function (CDF) of Response Time of First, Second, Third, and Fourth Arriving Units of Any Agency for Structure Fire Calls

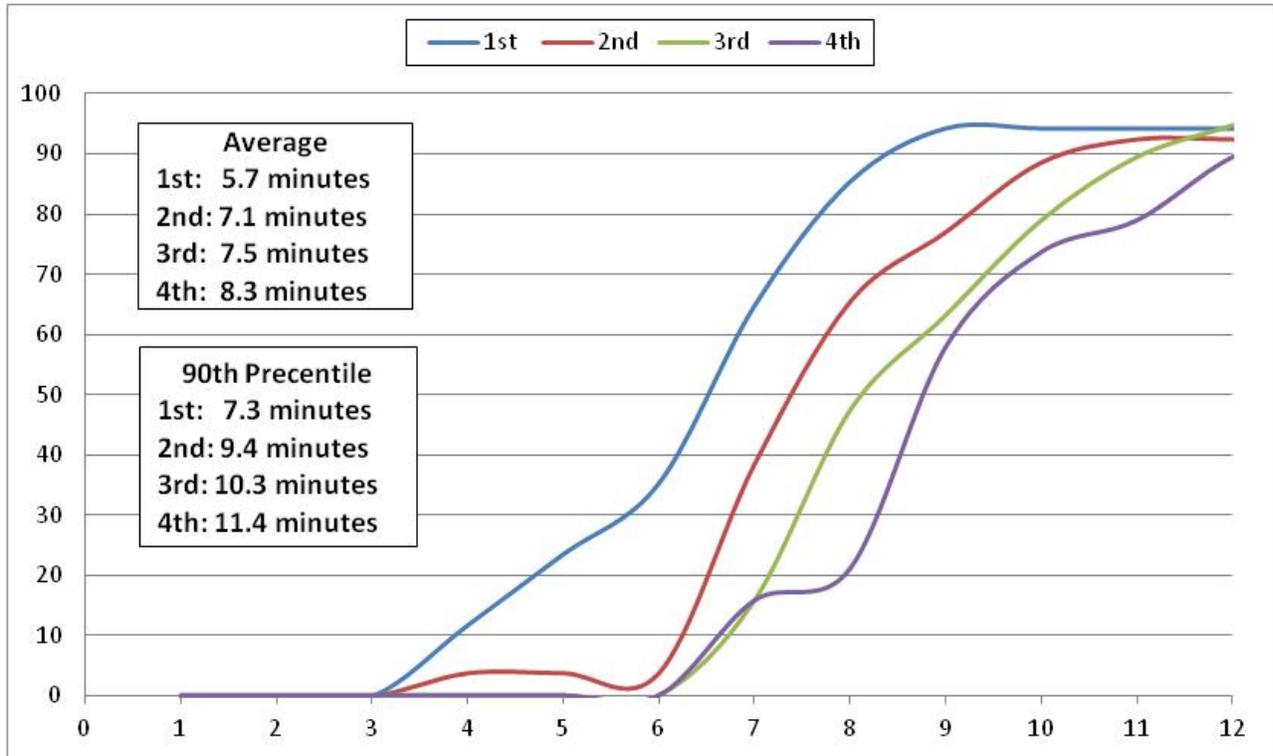


TABLE D-32: Cumulative Distribution Function (CDF) of Response Time of First, Second, Third, and Fourth Arriving Units of Any Agency for Structure Fire Calls

Response Time (minute)	First Unit		Second Unit		Third Unit		Fourth Unit	
	Frequency	Cumulative Percent	Frequency	Cumulative Percent	Frequency	Cumulative Percent	Frequency	Cumulative Percent
0 - 1	0	0.0	0	0.0	0	0.0	0	0.0
1 - 2	0	0.0	0	0.0	0	0.0	0	0.0
2 - 3	4	11.8	1	3.8	0	0.0	0	0.0
3 - 4	4	23.5	0	3.8	0	0.0	0	0.0
4 - 5	4	35.3	0	3.8	0	0.0	0	0.0
5 - 6	10	64.7	9	38.5	3	15.8	3	15.8
6 - 7	7	85.3	7	65.4	6	47.4	1	21.1
7 - 8	3	94.1	3	76.9	3	63.2	7	57.9
8 - 9	0	94.1	3	88.5	3	78.9	3	73.7
9 - 10	0	94.1	1	92.3	2	89.5	1	78.9
10 - 11	0	94.1	0	92.3	1	94.7	2	89.5
11 - 12	0	94.1	0	92.3	1	100.0	1	94.7
12 - 13	1	97.1	1	96.2	0	100.0	1	100.0
13 - 14	0	97.1	0	96.2	0	100.0	0	100.0
14 - 15	0	97.1	0	96.2	0	100.0	0	100.0
> 15	1	100.0	1	100.0	0	100.0	0	100.0

Observations:

- The average response time of the first, second, third, and fourth arriving units for structure fire calls was 5.7, 7.1, 7.5, and 8.3 minutes, respectively.
- The 90th percentile response time of the first, second, third, and fourth arriving units for structure fire calls was 7.3, 9.4, 10.3, and 11.4 minutes, respectively.

Attachment I: Workload of Administrative Units

Unit	Number of Runs	Annual Hours
Fire Investigator	5	9.7
Chief Officer	20	29.5
Fire Inspector	87	42.4
Fire Marshal	85	34.4

Attachment II: Actions Taken Analysis for Structure and Outside Fire Calls

Action Taken	Number of Calls	
	Structure fire	Outside fire
Extinguishment by fire service personnel	21	47
Fire control or extinguishment, other	0	2
Salvage & overhaul	1	1
Ventilate	1	0
Establish safe area	1	0
Incident command	1	2
Provide manpower	0	1
Enforce codes	0	1
Fires, Rescues & Hazardous Conditions	0	1
Remove hazard	0	1
Restore fire alarm system	1	0
Investigate	3	9
Investigate fire out on arrival	2	2
Missing data	7	13
Total	38	80

Attachment III: Property and Content Loss Analysis for Structure and Outside Fire Calls

Call Type	Property Loss		Content Loss	
	Loss Value	Number of Calls	Loss Value	Number of Calls
Structure fire	\$421,325	19	\$46,590	15
Outside fire	\$39,210	22	\$12,510	10
Total	\$460,535	41	\$59,100	25

Note: This analysis only includes calls with property loss or content loss greater than 0.

Observations:

- Out of 38 structure fire calls, 19 calls (50 percent) had recorded property loss, with total recorded loss value of \$421,325. The structure fire call with the largest property loss of \$110,000 occurred at 1336 Annabelle Ln. on February 26, 2013. The structure fire call with the second largest property loss of \$100,000 occurred at 115 SW H St. on January 5, 2013.
- Out of 80 outside fire calls, 22 (28 percent) had recorded property loss, with total loss value of \$39,210 and 10 had recorded content loss, with total loss value of \$12,510.

Attachment IV: Correspondence between NFIRS Incident Type and Call Type

NFIRS Incident Type	Incident Description	Call Type
100	Fire, other	Outside fire
111	Building fire	Structure fire
113	Cooking fire, confined to container	Structure fire
114	Chimney or flue fire, confined to chimney or flue	Structure fire
118	Trash or rubbish fire, contained	Structure fire
130	Mobile property (vehicle) fire, other	Outside fire
131	Passenger vehicle fire	Outside fire
132	Road freight or transport vehicle fire	Outside fire
136	Self-propelled motor home or recreational vehicle	Outside fire
140	Natural vegetation fire, other	Outside fire
142	Brush or brush-and-grass mixture fire	Outside fire
143	Grass fire	Outside fire
150	Outside rubbish fire, other	Outside fire
151	Outside rubbish, trash or waste fire	Outside fire
154	Dumpster or other outside trash receptacle fire	Outside fire
160	Special outside fire, other	Outside fire
161	Outside storage fire	Outside fire
170	Cultivated vegetation, crop fire, other	Outside fire
243	Fireworks explosion (no fire)	Hazard
300	Rescue, EMS incident, other	EMS
311	Medical assist, assist EMS crew	EMS
320	Emergency medical service, other (conversion only)	EMS
321	EMS call, excluding vehicle accident with injury	EMS
322	Motor vehicle accident with injuries	MVA
323	Motor vehicle/pedestrian accident (MV Ped)	MVA
324	Motor vehicle accident with no injuries.	MVA
340	Search for lost person, other	EMS
342	Search for person in water	EMS
350	Extrication, rescue, other	EMS
353	Removal of victim(s) from stalled elevator	EMS
357	Extrication of victim(s) from machinery	EMS
360	Water & ice-related rescue, other	EMS
363	Swift water rescue	EMS
400	Hazardous condition, other	Hazard
410	Combustible/flammable gas/liquid condition, other	Hazard

NFIRS Incident Type	Incident Description	Call Type
411	Gasoline or other flammable liquid spill	Hazard
412	Gas leak (natural gas or LPG)	Hazard
424	Carbon monoxide incident	Hazard
440	Electrical wiring/equipment problem, other	Hazard
441	Heat from short circuit (wiring), defective/worn	Hazard
442	Overheated motor	Hazard
444	Power line down	Hazard
445	Arcing, shorted electrical equipment	Hazard
460	Accident, potential accident, other	Hazard
463	Vehicle accident, general cleanup	Hazard
480	Attempted burning, illegal action, other	Hazard
500	Service Call, other	Public service
510	Person in distress, other	Public service
511	Lock-out	Public service
512	Ring or jewelry removal	Public service
531	Smoke or odor removal	Public service
541	Animal problem	Public service
542	Animal rescue	Public service
550	Public service assistance, other	Public service
551	Assist police or other governmental agency	Public service
552	Police matter	Public service
553	Public service	Public service
554	Assist invalid	Public service
555	Defective elevator, no occupants	Public service
561	Unauthorized burning	Public service
600	Good intent call, other	Good intent
611	Dispatched & canceled en route	Canceled
6111	Dispatched & canceled en route	Canceled
6112	Dispatched & canceled en route	Canceled
6113	Dispatched & canceled en route	Canceled
6114	Dispatched & canceled en route	Canceled
6116	Dispatched & canceled en route	Canceled
6117	Dispatched & canceled en route	Canceled
622	No incident found on arrival at dispatch address	Canceled
622	No incident found on arrival at dispatch address	Canceled
631	Authorized controlled burning	Good intent
651	Smoke scare, odor of smoke	Good intent
652	Steam, vapor, fog or dust thought to be smoke	Good intent
653	Smoke from barbecue, tar kettle	Good intent

NFIRS Incident Type	Incident Description	Call Type
700	False alarm or false call, other	False alarm
710	Malicious, mischievous false call, other	False alarm
711	Municipal alarm system, malicious false alarm	False alarm
715	Local alarm system, malicious false alarm	False alarm
730	System malfunction, other	False alarm
731	Sprinkler activation due to malfunction	False alarm
733	Smoke detector activation due to malfunction	False alarm
735	Alarm system sounded due to malfunction	False alarm
736	CO detector activation due to malfunction	False alarm
740	Unintentional transmission of alarm, other	False alarm
741	Sprinkler activation, no fire - unintentional	False alarm
743	Smoke detector activation, no fire - unintentional	False alarm
744	Detector activation, no fire - unintentional	False alarm
745	Alarm system activation, no fire - unintentional	False alarm
746	Carbon monoxide detector activation, no CO	False alarm
8002	Severe weather or natural disaster, other	Public service
911	Citizen complaint	Public service

Grants Pass Fire/Rescue Strategic Plan

Introduction

The Grants Pass Fire/Rescue Division (GPFR) demonstrates exemplary dedication to continuous improvement, innovation, and professionalism. The development of a strategic plan is concrete evidence of the agency's desire to provide highly professional, accountable, and transparent services to the community.

The Center for Public Safety Management was contracted to facilitate the development of a strategic planning document for the fire department. The process that was utilized mirrors the process developed by the Center for Public Safety Excellence and the Commission on Fire Accreditation International as being community driven and facilitated so that the members of the organization would have the greatest opportunity for buy-in. This provides the greatest opportunity for the strategic plan to become a successful living document that guides the organization.

The process began with an external stakeholder survey that was provided through the city's website. An external stakeholder town hall meeting was scheduled, but there was no community participation at this event; therefore, only the online survey results were utilized to provide guidance to the department and city personnel while developing the strategic plan.

The process was then continued with an internal stakeholder meeting: a group of 16 to 20 department personnel, city administration, and elected officials who participated in the development of the strategic planning utilizing a traditional SWOT (strengths, weakness, opportunities, and threats) analysis. The CPSM project staff guided the participants through the process and challenged the participants to think differently about how the community views their services, what internal cultural and behavior dynamics may create blind spots to efficiencies, and explored how other agencies handle similar challenges as experienced in Grants Pass. Ultimately, the product was generated entirely by the stakeholders as the ICMA staff facilitated the process but did not dictate which items rose to priority status.

This document is intended to capture all of the internal and external stakeholders' participation and input without bias or influence from the CPSM staff. In other words, the product is the direct reflection of the work accomplished by the city, department, and elected officials.

The facilitation team would like to compliment the city and Division on their professionalism and attention to detail. This document represents considerable effort in a compressed time frame and is very comprehensive.

Organizational Background



The Grants Pass Fire/Rescue Division of the Grants Pass Department of Public Safety operates three stations on a 24-hour basis and has total staff of 29. The department provides structural and wildland fire suppression, advanced emergency medical care, technical rescue, along with fire and life safety prevention services.

The GPFR service area covers approximately 11 square miles within the city of Grants Pass, and the Division has an extensive array of cooperative automatic aid and mutual aid agreements with neighboring agencies. Advanced life support transport services are provided by a third party, American Medical Response (AMR), through an agreement with Josephine County.

The service demands of the community are numerous for the department. The GPDPS, as well as the GPFR, take great pride in finding innovative solutions to their demand challenges through interlocal agreements, a student firefighter program, and the pursuit of grants for staffing and equipment to meet their needs. Expenses are reduced by the use of shared facilities, with both police and fire/rescue using the same strategically located stations.

In 2013, GPFR responded to 204 active fire calls, 1,887 medical calls, 454 public service calls, 123 calls for hazardous conditions, 284 false alarms, and 1,171 otherwise unclassified calls. The GPFR assisted other agencies 623 times, and was assisted by other agencies 421 times in 2013.

External Stakeholder Feedback

This section provides the feedback captured from the citizens who participated in the online survey. The external feedback included answers about prioritizing city and department services as well as the opportunity to share open-ended comments in a narrative form.

The data are provided in the following tables for clarity. However, all comments are in their natural form without any editing from the CPSM facilitation team.

Community Priorities for City Services

Table SP-1: Community Service Priorities for the City of Grants Pass

Services	Ranking
Police Department	1
Fire Department	2
Water Resources	3
Garbage/Recycling/Rubbish	4
Utilities and Billing	5
Maintenance of Streets/Sidewalks/ Infrastructure	6
Storm Water Resources	7
Parks and Recreation	8

Community Priorities for Fire Department Services

Table SP-2: Customer Service Priorities of Grants Pass Fire/Rescue

Services	Ranking
Fire Suppression (firefighting)	1
EMS First Response	2
Basic Rescue	3
Disaster/Emergency Preparedness	4
Advanced Rescue (vehicle extrication, confined space rescue, etc.)	5
Hazardous Materials Mitigation	6
Response to Weapons of Mass Destruction	7
Building Fire Inspections	8

Customer Expectations

One of the greatest challenges when agencies attempt to utilize customer feedback is a lack of clarity of the services provided. For this reason, we encourage the department to understand the value and importance of the community's perceptions and beliefs of services and also to clearly identify the opportunity to improve the transparency in operations to bolster the ongoing dialogue.

The following are the expectations of the community's external stakeholders.

Table SP-3: Customer Expectations of Grants Pass Fire/Rescue (in priority order)

1. Fast responses to fires.
2. Rapid responses.
3. Purchase and maintain an effective fire/rescue emergency fleet.
4. Provide residents and businesses with inspections and evaluations for improving safety at a minimum of annually—keep us informed regarding what we can do to help ourselves prevent fires—community education for fire, public health, first aid, CPR, and an active school program.
5. Active participation in the community—more than just responses and fire department related activities.
6. Staff that is well trained and with the highest level of competency in all areas of fire protection and safety—have enough staffing to efficiently and effectively suppress fires safely.
7. Highly effective, professional, and timely provision of service.
8. Rapid response to public safety/fire emergencies based on prioritized criteria.
9. 10 minute response times.
10. Save as much of the structure from the fire as possible.
11. Respond to serious vehicle crashes in and around the city.
12. Continue to work with other providers in the area.
13. Be cost effective and efficient.
14. Help in other emergencies such as auto accidents, drowning, etc.
15. Stop chasing ambulances.
16. Respond to vehicle fires.

Areas of Customer Concern

Table SP-4: Areas of Customer Concern of Grants Pass Fire/Rescue

1.	<p>By far the highest complaint I have is that is the fire department appears to be more concerned about themselves and what’s best for firefighters than they are for the residents. Except for crashes, fires, and other emergencies that happen in public areas, the times that you see the firefighters is when they are raising funds or support for something that is important to them. This includes times like the MDA donation drive or when a levy is on the ballot. When they are at other public events like the show at Home Depot, the firefighters come across as being there because they were told to show up. I’m sure individuals are involved in various community groups but not as the community firefighters. The firefighters and city leaders often seem at odds. Numerous news articles point out these times, often which have to do with money. The firefighters may be greedy and just want as much as they can get, the city leadership may have an “attitude” about firefighters and do things to spite the firefighters, It looks like both are true in some part. There is a way to clear the air and improve the relationship if both sides are willing to take the time and effort to find it. Why do they go to so many medical aids? I know it’s about the person they are helping and that lots of fire departments do but have they looked at how effective or improved the person’s condition is because they were there? Would it be better to spend time walking through businesses or schools? Does anyone in the fire department seek to answer the question of why they do what they do?</p>
2.	<p>The real concern is the dispatch center that really needs some oversight and a CAD change. In any organization you can pinpoint communications as the weakest link. City personnel are doing the best job anyone could do with what they have to work with. The system has been in place for two years and is a great system for PD but it is not working for fire or EMS. Solution would be to separate the PD and Fire/EMS and run on separate systems. I would also keep the same staff on PD or Fire as they are very different disciplines and require different information on CAD notes. Well I hope this helps as we really appreciate the City of Grants Pass and what it is doing for our community.</p>
3.	<p>I believe the department does not have enough staffing to keep up with the current call volume and growth of the city. The city needs to provide higher education to the firefighters such as paramedic and advanced EMT certifications so they can provide the highest level of care possible to the citizens of Grants Pass.</p>
4.	<p>Ability to pay rising employee costs.</p>
5.	<p>Adequate funding adequate staffing levels community support.</p>
6.	<p>No concerns at this time.</p>
7.	<p>Availability. I do not live inside the city limits, so I am afraid I will not receive coverage if a fire threatens my home and property. I worry about how fast everything is drying out already and the increasing threat of fire. My property is wooded, so my concerns are real and immediate. I hope I never need them, but would like to know that someone is out there to help if the worst should occur.</p>
8.	<p>The priority of the department seems to be to respond the medical emergencies. I do not think</p>

	taxes should pay for this. I also believe that the wages and benefits are excessive and way out of line with similarly skilled workers in the community.
9	I am wondering if there is an opportunity to use student firefighters, volunteers, and partnerships with Rural Metro more in order to maintain fire services in a more fiscally efficient manner. I also wonder whether the level of service and responding to all the medical calls is a necessary function given the typical availability of AMR. Finally, I am wondering where the City stands on the potential for a Fire District that could cover both the City and the rural parts of the County around Grants Pass that are not covered by a Fire District (or a consolidation with Jackson County Fire District).

Positive Customer Feedback

The external stakeholders provided the following comments when asked to identify the positive aspects of GPFR.

Table SP-5: Positive Customer Comments about Grants Pass Fire/Rescue

1.	The fire department is doing a great job and would like to keep them happy and well-funded. The City has several great programs that are cost effective and are a great value to the community. I would like to look at a reserve program for the Department to bring in the community as we have several retired firefighters and young people who would love to volunteer their time to a community department. The reserve program has been successful in other departments and I believe the city already has two similar programs as well.
2.	The firefighters in our communities are the most under-appreciated , and I dare say, most under-paid, public servants who, along with our law enforcement officers, should be treated better and given priority funding to “protect and serve” in Jefferson County.

Other Thoughts and Comments

The external stakeholders were asked to share any other comments they had about GPFR or its services. The following written comments were received.

Table SP-6: External Stakeholders’ Comments about Grants Pass Fire/Rescue

1.	I believe the City Council should investigate the possibility of privatization of the Fire Department. The public safety levy should be split into two levies, one for fire and one for police.
2.	Please reduce our taxes!

Internal Stakeholder Group Findings

Following the external stakeholder input, a two-day work session was conducted with representatives of the GPFR and the city of Grants Pass. The purpose of this work session was to review and discuss the agency’s approach to “Community-Centered Strategic Planning.” The work sessions generated a high level of interest and participation.

Discussion at the work sessions focused on the GPFR’s Mission, Values, Core Services, and Supporting Programs, as well as the agency’s perceived Strengths, Weaknesses, Opportunities, and Threats.

In the process of strategic planning, the following are important:

- Review of the agency’s history, culture, and evolution.
- Identification of the current status of the department.
- Determining where and what the agency desires to be in the future.

This process could not have been completed without the participation of the members of the GPFR and their internal stakeholders. Their insights were invaluable in putting together this strategic plan. The assistance and resources graciously made available to ICMA are appreciated. The participants took their work very seriously and accepted the challenge to develop a quality product. Participants included the following:

Table SP-7: Participating Internal Stakeholders

<i>Lang Johnson Deputy Fire Chief</i>	<i>Tim DeLisle Battalion Chief</i>	<i>Lloyd Lawless Battalion Chief</i>
<i>Craig Henslee Battalion Chief</i>	<i>Randy DeLonge Fire Corporal</i>	<i>Tony Strickland Fire Corporal</i>
<i>Jay Meredith Finance Director</i>	<i>Bill Landis Interim Public Safety Director</i>	<i>Trevor Miller Student FF Intern</i>
<i>Brian Pike Fire Marshal</i>	<i>Joe Hyatt Fire Inspector</i>	<i>Rick Riker City Council Member</i>
<i>Mark Gatlin City Council Member</i>	<i>David Allen PAVE Committee Member</i>	<i>Kristen Guenther Emergency Communications Manager</i>
<i>Vince Ownbey Company Officer</i>	<i>Brandon Jones Firefighter/Apparatus Oper.</i>	<i>Jeremy Petronella Company Officer/Labor Rep.</i>
<i>Eli Cunningham Firefighter</i>		

Figure SP-1: Grants Pass Fire/Rescue Internal Stakeholder Group



The Mission Statement

The internal stakeholder group worked hard to ensure that GPFR's mission statement accurately captured the key elements necessary to guide organizational efforts. After considerable effort and dialogue, a "new" mission statement was created. The current and the proposed mission statements for GPFR are presented in Table SP-8.

Table SP-8: Grants Pass Fire/Rescue Mission Statement

Current: The mission of our Fire/Rescue Division is to prevent the loss of life and damage to property from fire, accidents, medical emergencies and natural disasters through a comprehensive program of public education, awareness, enforcement and emergency response.

Proposed: The mission of the Fire/Rescue Division is to keep our community safe by reducing the loss of life and damage to property from fire, accidents, medical emergencies, and natural disasters through the comprehensive program of public education, prevention services, and emergency response.

Values

In concert with the previous section on establishing a mission statement, the internal stakeholder group worked on existing values to ensure that they were adequately capturing the values of the organization. After considerable effort, the group came to consensus on condensing the current values down to four main values that represent the beliefs, behaviors, and action of all the members of the organization.

The values identified by the internal stakeholder group are:

- Honor.
- Leadership
- Service
- Teamwork

The Mission and Values are the foundation of any successful organization. Every effort should be made to keep these current and meaningful so that the individuals who make up the organization are well guided by them in the accomplishment of the organization's goals, objectives, and day-to-day tasks.

Figure SP-2: Internal Stakeholders Conducting a Work Session



Services Provided

The internal stakeholder group went through an iterative process to identify which of the organization’s services were core services and which were supporting programs. This process was valuable to the group to both ensure that the internal and external expectations were aligned and to prioritize services internally to bring greater clarity to elements of efficient use of time and resources.

Table SP-9: Core Services

1. Incident responses.
2. Fire prevention and public education services.
3. Community assistance to health and welfare gaps.

Table SP-10: Support Programs

• Car seat program	• Advanced rescue and technical rescue
• Citizens public safety academy	• Smokey team teaching
• Public relations	• School visits
• Community emergency response team	• Student Firefighter program
• Training	• Police assist through SWAT
• Police assist through Community Service Officers	• Fire investigations
• Purchasing	• Logistics
• Maintenance of mutual and automatic aid	• Plans review
• Participation in professional associations	• Water supply
• Fleet services	• Safety committee
• Dispatching services	

S.W.O.T. Analysis

The Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis is a well-established process to identify both the internal and external elements that are identified as either generally positive or generally negative for the organization. This process began with an examination of the external environment, as it is more important to establish the external factors prior to turning the lens to the internal concerns. In this way, the process continues to reinforce the community-driven perspective.

Figure SP-3: Internal Stakeholders Conducting a Work Session



Strengths

Through a consensus process, the internal stakeholders identified the strengths of GPFR as shown in Table SP-11.

Table SP-11: Strengths of Grants Pass Fire/Rescue

High quality staff	Modern equipment
Modern apparatus	Safe personal protective gear
In-house training program	Some outside training
Good public support	Efficient (# of staff vs. service delivery)
Parkway and Redwood station quality	Professional
EMS skills and patient care	Strong first alarm response plan
Customer service	Recruitment of new members
Readiness levels (training and equipment)	Support programs
Mutual and automatic aid (local/state/region)	Locations of partners (AMR and Rural Metro)
Use of available resources	Lead agency within the region
Representative in Oregon fire service	Good fire prevention staff
Proactive	Innovative
Current structure is lean & effective	

Weaknesses

Table SP-12 lists the areas identified by the internal stakeholders as weaknesses.

Table SP-12: Weaknesses of Grants Pass Fire/Rescue

Lack of captains and lieutenants	Levy process and funding levels
Retention related to levy concerns	Lack of midlevel management (Training/Operations)
Codependent on Rural Metro and AMR	Understaffed in fire prevention
Staffing levels	Lack of residential fire sprinklers
Labor/management relationships	Lack of accreditation and FTE to support
Staff wearing “too many hats”	Internal processes inefficient (training requests, purchasing, SOGs)
No apparatus depth for wildland	Some resistance to having interoperability skills from other agencies
Lack of succession planning	Experience levels with some Rural Metro staff
Testing and maintenance of water supply	

Opportunities

The Internal Stakeholders identified opportunities for GPFR as shown in Table SP-13.

Table SP-13: Opportunities for Grants Pass Fire/Rescue

Community volunteerism	EMS service delivery
Build upon Fire Adaptive Community approaches	Service some unprotected areas of the county (contracts or a district)
Maintain public approval	Seek Assistance to Firefighters grants for fire prevention
Meet mutual aid needs	Broad-based community education
Establish a residential sprinkler ordinance	Establish a fee schedule for fire prevention inspections
Standardize operational approaches for all mutual aid departments	Establish a fire district
Reduce the number of false fire alarms	Reduce the response matrix to fire alarms
Establish a fee schedule for motor vehicle crashes	Build succession plan that starts with student firefighter
Provide/facilitate a car seat program	Become the “lead agency” in the mutual aid
Improve community engagement	Raise the awareness levels of elected officials and other city departments
Establish a Public Information Officer	Maintain high quality internal customer service
Recruit and retain a high-quality, diverse workforce	Stay abreast of community paramedicine opportunities
Evaluate having a transport capable unit	

Threats

Some of the current and potential threats identified by the Internal Stakeholders are listed in Table SP-14.

Table SP-14: Threats to Grants Pass Fire/Rescue

The uncertainty from the levy	Politics
Privatization	Implied threats of privatization
Losing newer employees to other departments	Losing quality student firefighter to other departments
Unfunded state and federal mandates	Funding levels
Public apathy	Lack of full-time law enforcement services in the county areas
Litigation	Vocal minority and public perceptions
Student firefighter program replacing career employees	Mission drift
A changing fire problem	Establishing a fire district that does not ensure all employees are retained
Workloads that come from fire-based EMS transport	Changes within the industry standards
Community expectations	Possibility of the public safety director having only a law enforcement background
Disconnect between the customer expectations and the service levels provided	Disconnect between the city leadership and service levels

Critical Issues and Service Gaps

Upon completion of the SWOT Analysis, the internal stakeholder group then refined their lists to capture the most critical issues and service gaps. These service gaps and critical issues were then utilized as the framework for establishing the goals for the strategic planning period. This iterative process is formed through consensus and much dialogue to establish only those issues that are believed to be of the highest priority to the organization.

Table SP-15: Critical Issues Facing Grants Pass Fire/Rescue

• Unstable funding due to levy
• Staffing levels
• Lack of mid-management levels and support staff
• Lack of rank structure
• EMS service delivery
• Maintaining strong public perception and support
• Low fire prevention staffing
• Labor/management relations
• Lack of succession planning for all levels
• Disconnect with public
• Public apathy
• Water supply maintenance/testing/maps
• Lack of deployment plan, preplans, target hazard plans

Table SP-16: Service Gaps of Grants Pass Fire/Rescue

• EMS service delivery and the lack of available AMR units
• Codependence on Rural Metro and other private entities and the lack of depth
• Lack of midlevel managers to handle operations and training
• Lack of broad-based community education
• Lack of Fire Adaptive Communities depth
• Lack of rank structure
• Lack of wildland apparatus

Goals and Objectives

This phase of the strategic planning process resulted in the establishment of goals and objectives that are reasonable and obtainable over the next five-year planning period. The internal stakeholder group began with selecting, through consensus, the critical issues and service gaps with the highest priority. Then, they established goals and objectives. The goals are the overarching desired outcome in a broad sense. Objectives are the iterative steps to accomplish the goal. Each goal is supported by several objectives and each objective is supported by several critical tasks required to bring each objective to fruition.

The internal stakeholder group identified five key goals that they wanted to make a priority over the next three to five years. The group was encouraged to build broad buy-in for these consensus goals and dedicate the appropriate resources, leadership, and approval to provide the greatest likelihood of bringing these goals to fruition.

CPSM would like to compliment the city of Grants Pass, as it has taken a great first step in setting up the strategic plan and the planning process for success by full participation. During the internal stakeholder process the city manager, finance director, PAVE committee member, two council members, and the interim public safety director participated, in addition to a full range of representatives of GPFR. City and Department of Public Safety support are critical to the success of these initiatives.

The goals presented here are not in any particular priority order.

Goal 1	Evaluate the Organizational Structure
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Objective 1A	Evaluate the span of control
Timeline	October 2015
Essential Tasks	<ul style="list-style-type: none"> • Assess current practices • Identify and assess the types of span of control including emergency, nonemergency, functional, and supervisory • Identify challenges presented by current span of control • Examine industry practices • Conduct work/task analysis

Objective 1B	Identify industry best practices and/or alternatives
Timeline	January 2015
Essential Tasks	<ul style="list-style-type: none"> • Research industry practices and standards • Reach out to professional associations • Examine how private industry or “non-public safety” agencies establish an organizational structure (not intended to mean privatizing) • Conduct risk assessment including liability assessment

Objective 1C	Present finding and/or recommendations
Timeline	June 2015
Essential Tasks	<ul style="list-style-type: none"> • Prepare recommendations, report, and presentation • Present to administration, labor, and city council

Goal 2	Continuous Self-improvement through Ongoing Departmental Evaluation Processes
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Objective 2A	Initiate the application process with Commission for Fire Accreditation International (CFAI)
Timeline	January 2015
Essential Tasks	<ul style="list-style-type: none"> • Visit an accredited agency • Obtain data on the process • Obtain buy-in at the frontline level • Establish a project manager and the team members

Objective 2B	Conduct a cost/benefit analysis
Timeline	January 2015
Essential Tasks	<ul style="list-style-type: none"> • Determine the costs of the process • Estimate the number of staff hours needed • Identify the beneficiaries • Determine who benefits and how they do so

Objective 2C	Complete the self-assessment process
Timeline	January 2016
Essential Tasks	<ul style="list-style-type: none"> • Audit existing policies and procedures • Create deployment standards • Publish the standards of cover document • Identify the ongoing commitments once accredited

Objective 2D	Obtain third-party accreditation through the Commission on Fire Accreditation International (CFAI)
Timeline	January 2017
Essential Tasks	<ul style="list-style-type: none"> • Initiate application process with CFAI

Goal 3	Reduce the Risks to the Community through Increased Public Education, Inspections, and Fire Investigative Programs. (It is proposed to add one full-time equivalent to address all of the objectives.)
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Objective 3A	Provide for community-wide public education programs
Timeline	July 2015
Essential Tasks	<ul style="list-style-type: none"> • Involve engine companies in city events and gatherings by January 2015 • Create a public education steering committee by July 2014 • FTE to begin the development and implementation of programs by July 2015

Objective 3B	Increase business inspections
Timeline	July 2016
Essential Tasks	<ul style="list-style-type: none"> • Investigate the option to charge a fee for inspection services by July 2015 • Send mailings to scheduled inspections to raise compliance levels by July 2015 • Complete business and mercantile inspections annually beginning July 2016

Objective 3C	Provide support for fire investigations
Timeline	September 2016
Essential Tasks	<ul style="list-style-type: none"> • Ensure new FTE obtains Oregon DPSST Basic Fire Investigator Certification by July 2016 • Provide fire investigation training to shift personnel by September 2016

Objective 3D	Establish a Fire Adaptive Community Program
Timeline	May 2017
Essential Tasks	<ul style="list-style-type: none"> • Meet with stakeholders by January 2016 • Identify the needed code changes by April 2016 • Adopt the proposed code changes by September 2016 • Conduct the surveys for wildland urban interface triage mapping by May 2017

Objective 3E	Create fire sprinkler ordinance
Timeline	August 2015
Essential Tasks	<ul style="list-style-type: none"> • Initiate data gathering and exploring communities which have same

	<p>by March 2015</p> <ul style="list-style-type: none">• Conduct a cost/benefit analysis by June 2015• Develop or obtain fact vs myth materials by June 2015• Meet with stakeholders (contractors, home builders, realtors, insurance industry reps, fire sprinkler industry reps., elected officials, and the planning department) by June 2015• Draft ordinance with the collaboration of contractors and planning officials by June 2015• Present to city council for approval by August 2015
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Goal 4	Maintain the Continuity of Services in the Event of Changes in Automatic Aid, Mutual Aid, or Change in Cooperator Agency Status
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Objective 4A	Identify cooperator agencies and define how they influence or impact GPFR services
Timeline	January 2015 through July 2015
Essential Tasks	<ul style="list-style-type: none"> • Identify agencies • Identify related contracts, agreements, and performance expectations • Identify other affected stakeholders • Define or quantify how the agencies, cooperators, or agreements influence or impact GPFR services • Develop systems to benchmark and track cooperator performance

Objective 4B	Conduct a risk analysis to GPFR services in the event of change to cooperator status
Timeline	July 2015 through December 2015
Essential Tasks	<ul style="list-style-type: none"> • Determine funding impacts • Determine impact/s on current deployment plan • Complete a SWOT analysis for each identified cooperator

Objective 4C	Develop contingency plans to maintain continuity of services
Timeline	January 2016 through January 2017
Essential Tasks	<ul style="list-style-type: none"> • Develop strategies to maintain, improve, and secure current levels of cooperator identified service • Conduct cost/benefit analysis for identified strategies • Identify ways to enhance current relationships with cooperators • Prepare a written plan and seek stakeholder support

Goal 5	Secure a Permanent Funding Source to Replace the Current Levy
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Objective 5A	Identify and discuss alternative means of funding with city council
Timeline	December 2015
Essential Tasks	<ul style="list-style-type: none"> • Identify all possible alternatives • Hold a series of workshops with city council • Select the specific funding alternative/s to present for public input

Objective 5B	Create and implement a public outreach program on top-rated funding program
Timeline	September 2016
Essential Tasks	<ul style="list-style-type: none"> • Hire a public relations firm to assist the city • Design and implement a survey/poll • Select funding alternative based upon public input

Objective 5C	Prepare ballot measure for approved method of funding for November 2017 election
Timeline	April 2017
Essential Tasks	<ul style="list-style-type: none"> • Prepare draft ballot language for measure, title, and explanatory materials • City council approves ballot measure for November 2017 election