COMMUNITY RISK ASSESSMENT & STANDARDS OF COVER

2025

BURBANK FIRE DEPARTMENT

AN ISO CLASS 1 RATED DEPARTMENT

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Executive Summary

The fire service is rich in long-standing tradition that is typically personified by the delivery of outstanding customer service. From a historical perspective, the fire service has not proactively defined, validated and communicated the depth and breadth of that service to the community. A Community Risk Assessment & Standards of Cover (CRA & SOC) document is designed to be a present-day tool to bridge that gap.

This CRA & SOC is a comprehensive study that analyzes the risks facing the City of Burbank and the services provided by the Burbank Fire Department (BFD) in relation to risk management. It is the responsibility of BFD to provide the community and policymakers with an educated assessment of the risk levels within the community, and BFD operational capabilities related to risk response, mitigation and expected outcomes. It is BFD's goal to utilize empirical and factual data to transparently document the effectiveness of its performance. This supportive data will serve as adjunct information to policymakers so that more informed decisions can be made regarding fire-based safety services.

The CRA & SOC is one of three documents that are required for international accreditation through the Center for Public Safety Excellence (CPSE) and Commission on Fire Accreditation International (CFAI). This second iteration of a BFD CRA & SOC will mark a fundamental change in the way BFD utilizes the document. The CRA & SOC is not intended to be stand-alone. It will be a living document that will be utilized in conjunction with the five-year BFD Strategic Plan and the BFD Self-Assessment Manual to synergistically provide the foundation for continuous improvement and effective forecasting.

The community has high demands when it comes to the services provided by its governmental agencies and the fire department assumes a tremendous amount of that responsibility. BFD has utilized this CRA & SOC deployment analysis to demonstrate our performance in meeting community expectations and more importantly identifying the gaps where improvement is needed to further earn and validate public trust.

In addition, the creation of the CRA & SOC revealed areas of focus where BFD clearly needed to establish service goals. In the development of those service goals, BFD utilized industry best practice standards, National Fire Protection Association (NFPA) 1710, CPSE and CFAI accreditation model, Insurance Services Office grading schedule, and BFD response time data for the past five fiscal years (FYs).

BFD is confident that the CRA & SOC findings will provide assurance to the community that their fire department is meeting their expectations and further demonstrate the commitment to a culture of continuous improvement.

In 2018, BFD members created a shared purpose and values, and committed to living them by personifying a collective commitment to leadership behavior.

Leadership Principles

- Place the mission and organizational needs ahead of self-interests, as shown by duty performance, being a good teammate, and a commitment to excellence
- Ensure that our values empower how we act, interact, and make decisions
- Promote effective communication – actively listen, respect others' opinions, and encourage dialogue
- Foster a learning environment that encourages a growth mind-set, where we learn from our mistakes, and stretch ourselves beyond comfort zones
- Demonstrate our 4 Key Behaviors:
  - Be a Professional - be proficient and competent in all that we do
  - Own it - own anything that we put our name to
  - Walk the Talk - model what it is supposed to look like
  - Caring - care, not only for the community we serve, but each and every teammate
- Be resilient, persevere, and treat conflict/challenge as opportunity
- Commit to the development of our teammates through coaching and mentoring
- Steward the profession by maintaining high standards and drive for continuous improvement
- Take every opportunity to celebrate our successes
- Champion your legacy and leave it better than you found it

Section One: Introduction

Organizational History

The City of Burbank (Burbank) was incorporated in 1911, with a population of 500. The first record of any volunteer fire chief, Chief O.L. Bashford, was found in an article in the *Burbank Review* dated February 23, 1912 and the first paid Fire Chief was Homer Davis in 1923. Authorization from the City Council for additional paid firemen on May 31, 1927 changed BFD from a partly paid, mostly volunteer, to a paid fire department with a holdover of some volunteers. The authorized strength of BFD in 1927 was 19 men. The last record of a volunteer responding to a fire was in June 1928.

In addition to its rich fire service history, BFD has been an emergency medical services provider for over 40 years. With the introduction of paramedic services on August 19, 1974, BFD continues to provide high quality, state-of-the-art care to its citizens and those that work in and visit Burbank. The Emergency Medical Services (EMS) Program delivered by BFD is recognized as one of the best in California. BFD's Hazardous Materials (HazMat) Program was implemented in 1985 as part of a Tri-City (Burbank, Glendale, Pasadena) cooperative obligation to provide collaborative emergency response for HazMat incidents.

Today, BFD is a full service fire agency and protects over 17.14 square miles. Call volume averages for the last 5 years at about 11,864 a year with 84.60% of incidents being EMS-related. BFD provides a variety of services to the community including fire suppression, EMS, fire prevention, emergency preparedness, residential and commercial inspections, and public education. BFD consists of seven divisions: Fire Prevention Bureau, Fire Suppression, EMS, Emergency Management, Fire Apparatus & Equipment, Training & Safety and Administration, which includes the Office of the Fire Chief. There are a total of 143 BFD employees (124 sworn and 19 non-sworn) and the annual General Fund operating budget is approximately $47 million.

BFD has six fire stations and a training center. Frontline emergency response apparatus includes six engine companies, two truck companies, three Paramedic Rescue Ambulances (RAs), a Hazardous Materials Response Vehicle, a water tender, a brush patrol, and a Battalion Chief Command Vehicle.

Mission Statement

To protect lives, property, and the environment, while enhancing the quality of life and safety through values-driven service.

Vision Statement

To securely position our Department through and beyond the current economic recovery, while responsibly shaping a new future that actively focuses on efficiency, development, and sustainability.

Purpose Statement

Our Family

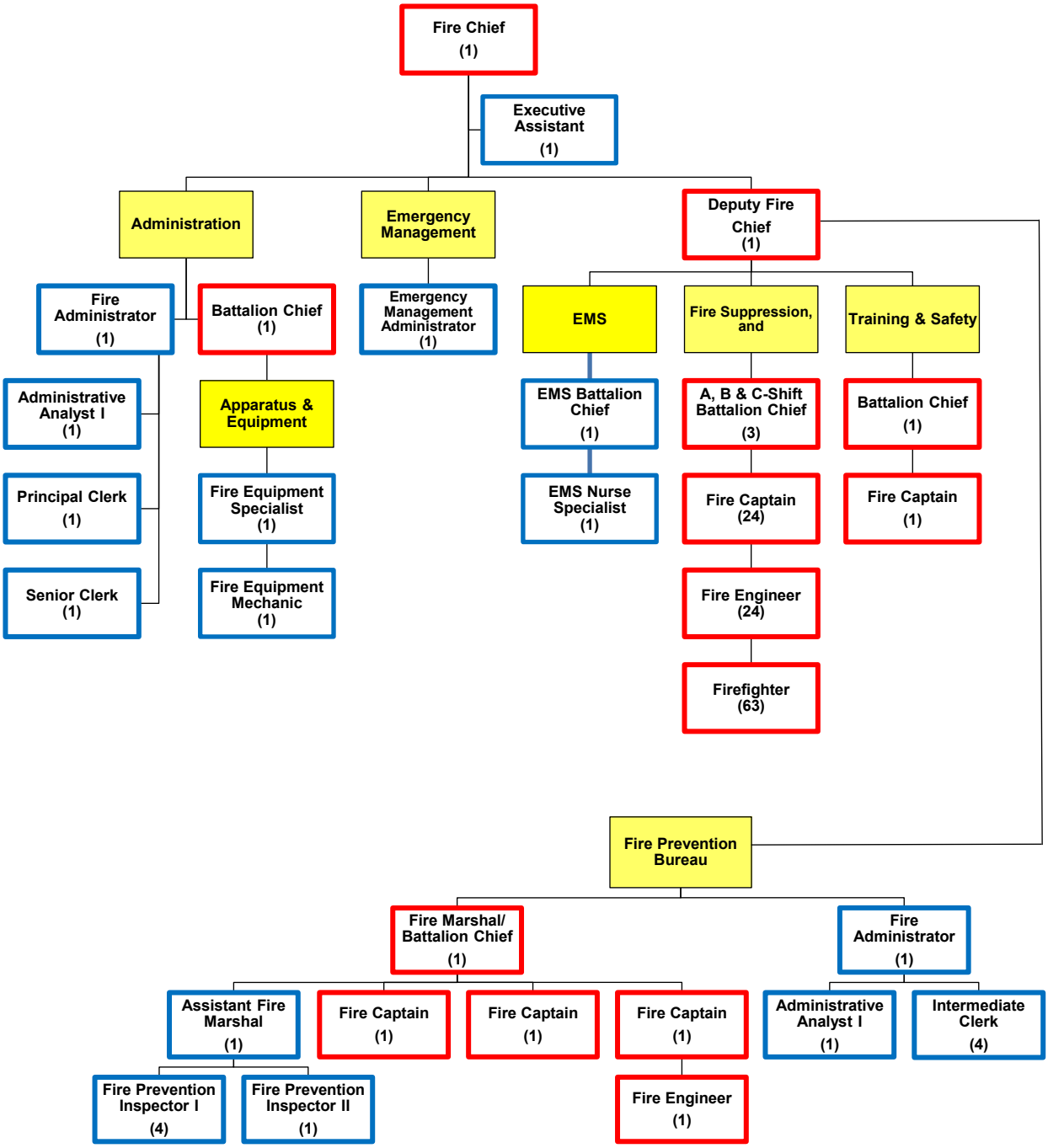
Proudly Serving

Our Community

Shared Values

Integrity	Demonstrating ethical and moral character in all our actions.
Ownership	Taking responsibility and accountability for any and everything that we put our name to.
Compassion	Displaying empathy and care for those we serve, and toward one another.
Innovation	Striving to transcend the status quo through critical and creative thinking.
Excellence	Exemplifying the desire to thrive and always get better!

Organizational Chart



125 Sworn Personnel

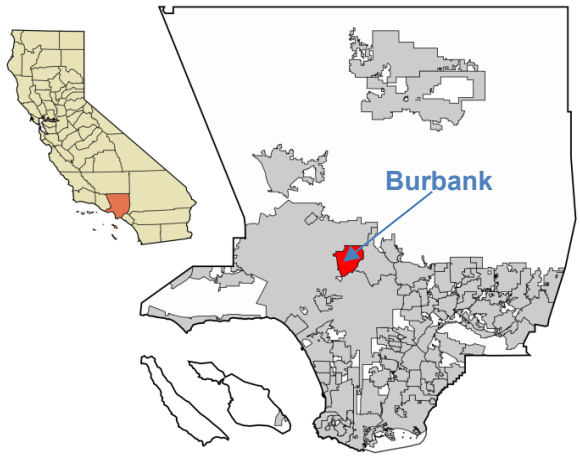
19 Non-Sworn Personnel

Each Division is reflected above in a yellow box.

Description of Community Served

The City of Burbank is a full service Charter City with a Council-Manager government. Burbank began as a small farming town founded in 1887. The city's namesake is Dr. David Burbank, a dentist, who owned a large sheep ranch in the community. In 1911, Burbank was incorporated and today it is a vibrant urban community.

Burbank is bordered by Glendale to the east, Griffith Park (Los Angeles) to the south and Toluca Lake (Los Angeles) to the west. Burbank is also bounded to the north by the Verdugo Mountains, but the urbanized areas of the city occupy a broad island valley that exhibits little topographic relief. In Burbank, elevations range from 500 feet (150 m) to 800 feet (240 m) near the foothills of the Verdugo Mountains. The Verdugo Mountains are part of the Transverse Ranges of Southern California and these mountains form the east boundary of the San Fernando Valley and the southern part of the Crescenta Valley. Burbank's Köppen Climate Classification is "dry-summer subtropical," which is a climate referred to as "Mediterranean." Burbank has an average year-round temperature of 64° F, with 17.35 inches in annual rainfall.



Source: en.wikipedia.org/wiki/Burbank,_California

Quick Facts

City of Burbank Area	17.14 square miles
Resident Population	103,084
Number of Households	42,234
Average Household Income	$1316,940
Median Household Income	$92,939
Some College or Higher Degree	77.13%
Average Single Family Home Value	$1.23 million
Workforce Population	165,000
Population Density	6,014 per square mile

City General Fund Budget FY 2024-25: $258,693,806
Burbank Fire Department Budget FY 2024-25: $53,724,565
Cost per Capita by Population Protected: $521 (resident)/$325 (workforce)
Insurance Services Office Rating: 1
Number of Fire Stations: 6
Minimum Staffing Level per Shift and Ranks: 38
Number of Personnel: 144 (125 sworn and 19 non-sworn)

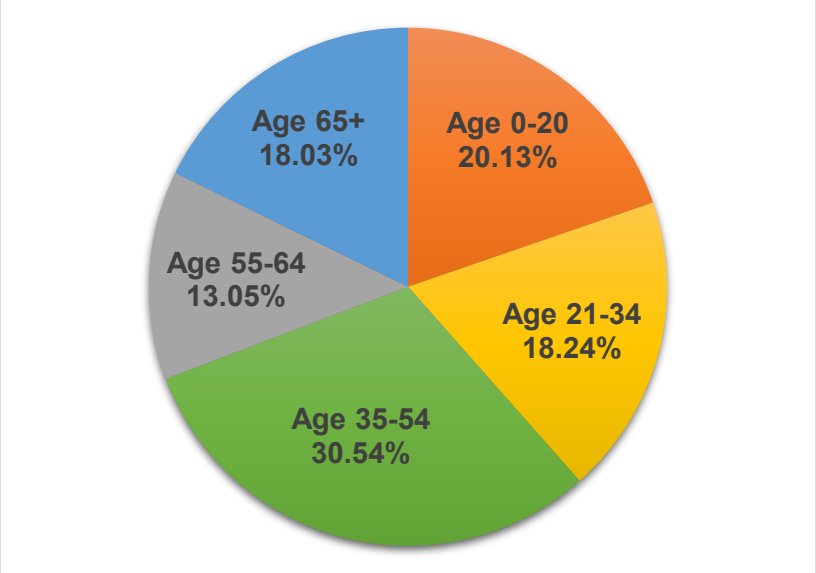
Budget History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Staff Years	144.00	143.00	137.00	136.00	136.00
Salaries & Benefits	$44,097,637	$37,628,445	$32,671,649	$31,191,881	$30,337,228
Materials, Supplies & Services	$7,476,928	$6,659,150	$6,200,333	$6,298,145	$6,234,665
Capital Outlay	$2,150,000	$2,778,740	$574,000	$162,523	-
Total	$53,724,565	$47,066,335	$39,445,982	$37,652,549	$36,571,893

Source: City of Burbank Budget FY24-25, 23-24, 22-23, 21-22 and 20-21

According to the 2025 Claritas Pop-Facts Demographics Report, the total population of Burbank decreased by 4,253 between 2020 and 2025. The population was 103,084 in 2024 and is projected to be 101,707 in 2030. In 2025, males comprised 48.84% of the population and females comprised 51.16%. The median age in Burbank was 42 years. The following chart shows the population by age range:

FY 2024-25 Population by Age Range



Source: 2025 Claritas Pop-Facts Demographics Report

The following table displays the population by single-classification race:

FY 2024-25 Population by Single-Classification Race

Single-Classification Race	% of Population
White Alone	58.42%
Black or African American Alone	3.16%
American Indian and Alaska Native Alone	0.77%
Asian Alone	12.17%
Native Hawaiian and Other Pacific Islander Alone	0.12%
Some Other Race Alone	10.77%
Two or More Races	14.59%

Source: 2025 Claritas Pop-Facts Demographics Report

Burbank's legacy as the "Media Capital of the World" is supported by the location of the world's largest media companies in town including Warner Bros. Discovery, The Walt Disney Company, The Burbank Studios, ABC, Comcast NBC Universal, Nickelodeon, Cartoon Network and Netflix Animation. Burbank is home to numerous media-related companies including television networks, radio stations and music labels. According to the City of Burbank Economic Development Annual Report FY 2023-24, the total number of jobs in Burbank was 165,000. Burbank has three large shopping and recreational areas: Downtown Burbank, Magnolia Park and Empire Center. Each area draws visitors and workers from outside the community and significantly adds to the daytime population.

Burbank's Top Ten Employers

Employer	Number of Jobs
Warner Bros. / Discovery	8,230
The Walt Disney Company	6,284
Hollywood Burbank Airport	3,106
Providence Saint Joseph Medical Center	2,542
Burbank Unified School District	2,300
City of Burbank	1,536
Cast & Crew	655
Nickelodeon	634
Entertainment Partners	579
Walmart	540

Source: City of Burbank (as of July 2025)

The Top 10 industries in Burbank and the number of jobs are listed below.

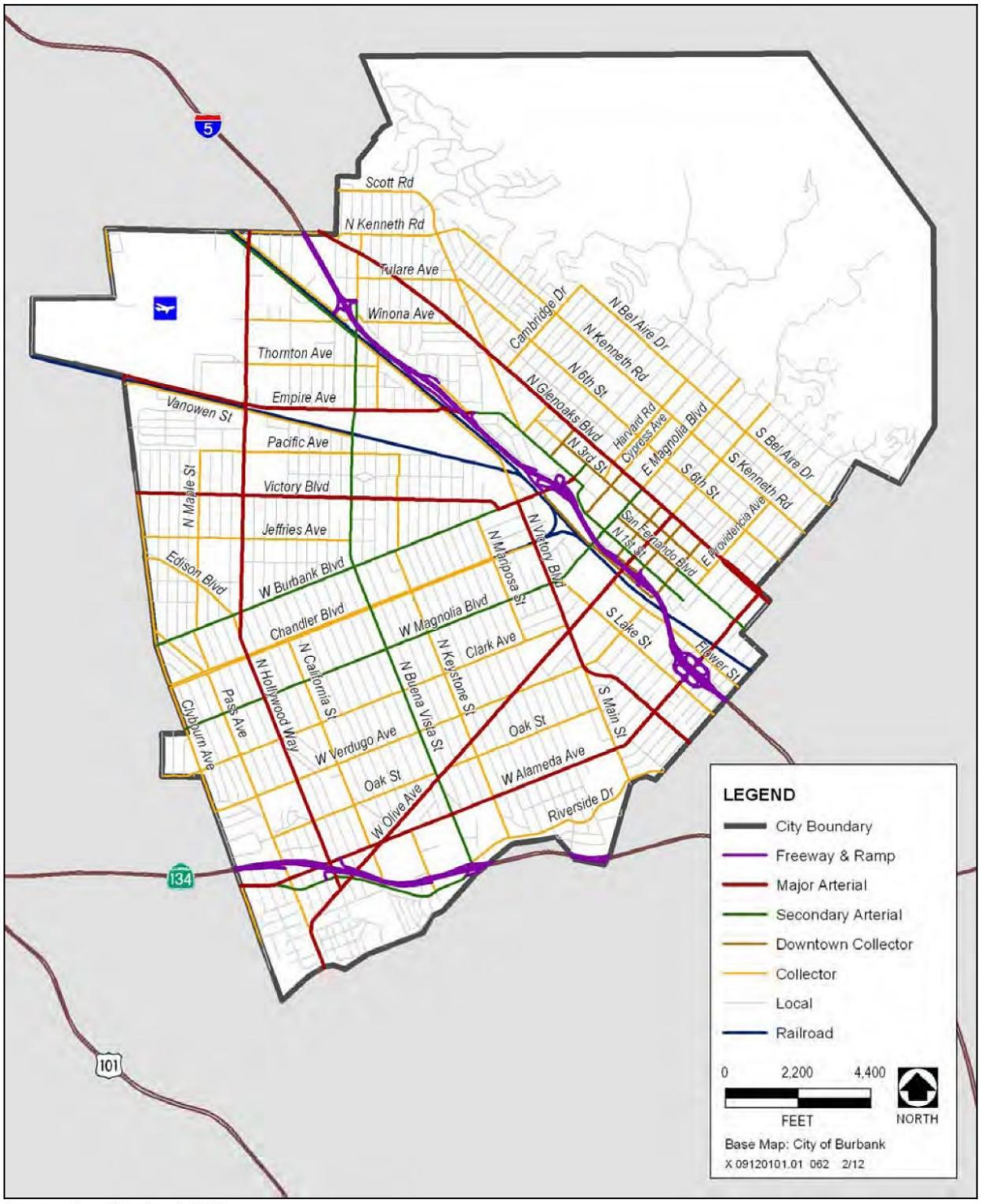
Industry	Number of Jobs
Entertainment	76,492
Health Care Services	15,403
Information Technology	15,391
Professional, Scientific, and Technical Services	13,228
Local Government and Non Profits	10,324
Retail/Wholesale	9,528
Food Service and Drinking Places	6,901
Administrative and Support Services	5,990
Manufacturing	4,349
Construction	3,412

Source: City of Burbank (as of July 2024)

Providence Saint Joseph Medical Center is a large hospital located in Burbank. Its emergency services include a Comprehensive Stroke Center, Heart Attack: ST-segment elevation myocardial infarction (STEMI) Receiving Center and Pediatric Emergency Care. Providence Saint Joseph Medical Center was recognized as one of the Los Angeles Metro Best Regional Hospital in 11 Types of Care by the 2024-25 *U.S. News and World Report*.

Burbank is home to the Hollywood Burbank Airport, which had an increase in passengers from approximately 6.2 million in FY 2023-24 to over 6.5 million in FY 2024-25. Also, Burbank is located at the intersection of the Interstate 5 (Golden State) and Route 134 (Ventura) Freeways. *Burbank2035 General Plan* is the City's policy document that guides physical, environmental and economic development. It discusses Burbank's transportation network, which is shown in the following map.

Roadway Circulation Diagram



Source: City of Burbank 2010

Public Protection Classification

The Public Protection Classification rating by the Insurance Services Office (ISO) is important to a community. Many insurance companies base the fire risk portion of property insurance premiums on the community's ISO rating. ISO uses a 1 to 10 rating scale, with Class 1 being the best level of service (and lowest fire insurance premium cost) and Class 10 representing no service at all. ISO surveyed BFD in July 2022 and then assigned Burbank a Class 1 rating. A rating breakdown of the most recent BFD ISO survey is shown in the table below.

ISO Criteria	Actual	Maximum
Emergency Communications	8.25	10.00
Fire Department	44.11	50.00
Water Supply	34.84	40.00
Divergence	-0.22	N/A
Community Risk Reduction	4.55	5.50
Total Credit	**91.53**	**105.50**

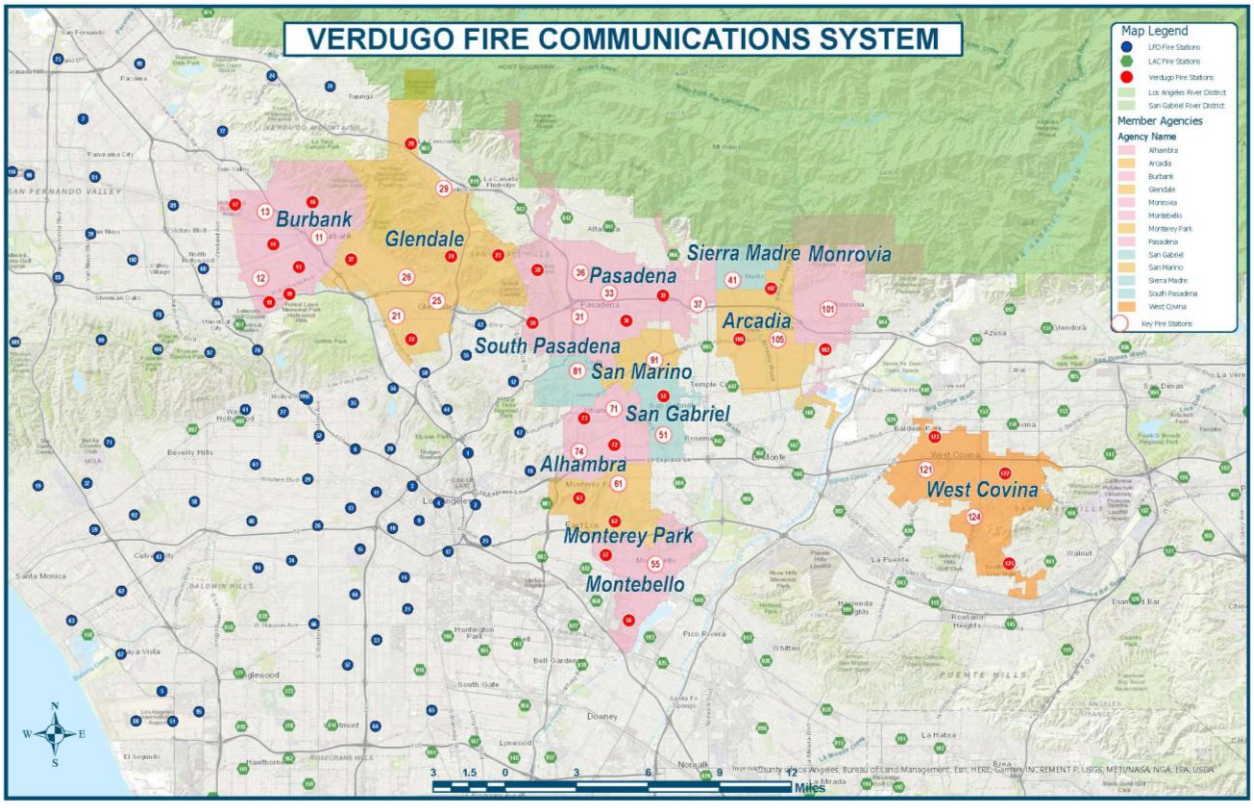
BFD received a total credit of 91.53 points out of a possible 105.50. The fire department section of the Fire Suppression Rating Schedule reviews engine and ladder-service companies, equipment carried, response to fires, training and number of available firefighters. The following table is a detailed breakdown of the July 2022 ISO survey classification assigned to BFD.

Fire Department	Actual	Maximum
Credit for:		
Engine Companies	5.96	6.00
Reserve Pumpers	0.50	0.50
Pumper Capacity	3.00	3.00
Ladder-Service Companies	3.94	4.00
Reserve Ladder and Service Trucks	0.50	0.50
Deployment Analysis	9.09	10.00
Company Personnel	11.25	15.00
Training	7.87	9.00
Operational Considerations	2.00	2.00
Total	**44.11**	**50.00**

Verdugo Fire Communications Center

The Verdugo Fire Communications Center (VFCC) was established on August 1, 1979 by the founding cities of Burbank, Glendale and Pasadena. The purpose of VFCC was to allow the three cities to make optimum use of fire service resources and increase the overall effectiveness of the fire defense system of the joint cities. In its first year of operation, VFCC dispatched over 19,000 incidents. In 1996, the cities of South Pasadena and San Marino joined VFCC. Today, VFCC continues to be jointly owned by the Tri-Cities and provides fire, EMS and rescue dispatch services on a contract basis to the Hollywood Burbank Airport and ten other cities in the region including Alhambra, Arcadia, Monrovia, Montebello, Monterey Park, San Gabriel, San Marino, Sierra Madre, South Pasadena and West Covina. Since its first year of operation, VFCC has dispatched over 2.3 million incidents. VFCC serves a combined population of over 944,000 and covers an area of approximately 150 square miles. The service area includes 48 fire stations and more than 200 pieces of emergency equipment. The following map shows the service area of the VFCC's member and contract cities.

Map of VFCC Cities



The organizational structure of VFCC resides within the City of Glendale; internal policies are the responsibility of the Glendale Fire Chief. The mission and goals of the VFCC are set by the three partner cities of Glendale, Burbank and Pasadena, who cooperatively provide policy direction. Minimum staffing for VFCC is always four dispatchers on duty. VFCC complies with and follows NFPA 1221 Standards.

Automatic Aid and Mutual Aid

BFD maintains various operational relationships with external agencies that support the unified goal of protecting life, property and the environment. BFD has resource sharing and cooperative relationships with the United States Forest Service (USFS), California Governor's Office of Emergency Services (Cal OES) - Fire and Rescue, California Department of Forestry and Fire Protection (CAL FIRE), Los Angeles (LA) County Fire Department and LA City Fire Department.

California's 58 counties are grouped into 3 Cal OES administrative regions, which are further divided into 6 mutual aid regions, I through VI. Each mutual aid region is comprised of several operational areas, which may include local jurisdictions. Region I covers five counties in Southern California, including LA County, which is sectioned into Areas A, B, C, E, F and G.

Area C consists of BFD and the other VFCC agencies (excluding Montebello and West Covina). There is a Region I, Area C automatic aid collaboration that was named Unified Response in 2005. Unified Response merged numerous automatic and mutual aid agreements between the agencies into a single automatic aid agreement. This eliminated the time-consuming aspect of mutual aid agreements, where permission to share resources is obtained by VFCC staff before dispatching units.

BFD's automatic and mutual aid agreements allow all agencies to capitalize on dispatching, resources, communications and technology when mitigating large-scale fire, EMS and rescue incidents as well as after major man-made and natural disasters. BFD is also part of the Disaster Management Area C partnership to provide inter-agency cooperation specifically in major disasters. The other nine cities in Disaster Management Area C include Alhambra, Glendale, La Cañada Flintridge, Monterey Park, Pasadena, San Fernando, San Gabriel, San Marino, and South Pasadena.

The following table represents BFD activity to other agencies and other agencies into Burbank, which is Out of Jurisdiction/Out of Verdugo incidents.

FY 2024-25 Out of Jurisdiction/Out of Verdugo Incidents

Agency	BFD to Other Jurisdictions	Other Agencies to City of Burbank
Alhambra	0	4
Arcadia	1	2
CAL FIRE	4	0
Glendale	529	635
LA County	9	3
LA City	60	18
Monterey Park	1	1
Monrovia	1	0
Montebello	7	0
Other*	7	0
Pasadena	8	29
San Gabriel	0	1
San Marino	1	2
South Pasadena	0	3
US Forest Service	25	0
West Covina	3	0
XAA**	0	220
Total	666	805

*Agencies not in VFCC's Computer-Aided Dispatch (CAD) system. It is not a state nor federal fire.
**Usually private ambulance but also may refer to helicopters, private company fire engines, or airport crash-related units.
Source: Microsoft Power BI

Performance Measures

BFD created the following performance measures, which are reported fiscal-year-end to the Burbank City Manager and City Council.

Fire Prevention		**FY24-25**
1.	Number of inspections (general fire and life safety, hazard reduction and brush clearance, and hazardous materials and underground tank inspections) performed by Fire Department personnel.	5,746
2.	Number of service requests for plan check and other non-scheduled inspections fulfilled by the Fire Prevention Bureau.	1,397
3.	Number of public education activities and community outreach events.	37
4.	Number of engagements (likes, comments, and shares) on Fire Department social media posts.	2,063,305
5.	Number of filming permits.	919

Fire Suppression		
1.	90th percentile total response time for first unit on scene for fire incidents.	08:02
2.	90th percentile turnout time for first unit on scene for fire incidents.	02:24
3.	Percent of single family homes, multi-family dwellings, or multi-unit commercial structures where fire is contained to the room of origin or unit of origin.	95%

Emergency Medical Services		**FY24-25**
1.	90th percentile total response time for first unit on scene for emergency medical incidents.	6:50
2.	Percent of time patients who survive and are discharged from the hospital. This includes an out-of-hospital cardiac arrest where resuscitation is attempted by a 911 responder (CPR and defibrillation). This also includes patients who received an automated external defibrillator shock by a bystander prior to the arrival of 911 resources. Compared to Los Angeles County 30.4%.	58.8%
3.	Number of Emergency Medical Services continuing education hours completed by Department personnel.	2,437

Emergency Management		
1.	Number of EOC training sessions facilitated by the Emergency Management Administrator.	11

Wildland Fire Services		
1.	Number of strike teams assignments and single resource/overhead assignments (Federal Incident Management Teams) undertaken by Fire Department personnel.	45

Section Two: Current Levels of Service with Delivery Programs

Fire Suppression

The Fire Suppression Program provides full service fire suppression and emergency response to mitigate the impact of fires on life, the environment and property. Call volume averages for the last 5 years at about 11,864 a year with 10.70% being fire-related. The daily minimum staffing level is 38. Four of the six fire stations are staffed with a four-person Type 1 fire engine and the remaining three fire stations are staffed with a three-person Type 1 fire engine. A typical structure fire response consists of three engine companies, two truck companies, one RA, one Battalion Chief and one Emergency Incident Technician (EIT). The EIT assignment is filled by a qualified Fire Captain and works closely with the Operations Battalion Chief, providing critical support functions during incident response, including emergency driving for Battalion 1, locating and establishing a command post, managing radio communications, and monitoring resources and situation status. In addition to its primary response area, BFD is a signatory to state, regional and local automatic and mutual aid agreements. BFD uses the Incident Command System (ICS) for all major emergencies.

All equipment carried on apparatus are designed to accomplish the tactical operations on the fire/rescue emergency ground. Engine and truck companies carry inventories that meet NFPA 1901 guidelines. Apparatus inventories range from communication, hose, water, ladders, medical, physical rescue, ventilation, hazardous materials, salvage and overhaul equipment. Additional equipment and resources can be requested via automatic and mutual aid for larger scale incidents and are interoperable. A strategic training calendar is maintained to promote familiarity and competency with the equipment. Also, equipment on all frontline and reserve apparatus are inspected and inventoried quarterly. BFD uses a National Fire Incident Reporting System (NFIRS) tracking system to record all emergency responses and response statistics provided by VFCC's Computer-Aided Dispatch (CAD) system.

Emergency Medical Services

BFD provides Emergency Medical Services through staffing of Basic Life Support (BLS) and Advanced Life Support (ALS) units. Service includes the treatment and transport of patients to emergency facilities via BFD Paramedic RA's. EMS incidents account for 84.60% of BFD's call volume. BFD operates three full-time ALS RA's, staffed with two Firefighter/Paramedics each. In FY2024-25, BFD began a pilot program with one peak hour RA. The RA's are strategically located at Station 11, 13, 14, and 15 creating a geographic balance of response times. A typical EMS response includes one engine company or one truck company paired with one ALS RA. Each engine and truck carries Assessment Paramedic EMS equipment/inventory allowing for ALS interventions by Assessment Paramedics on scene before arrival of the ALS RA. In total, there are 11 frontline apparatus capable of responding to EMS incidents. RA's will also respond to neighboring jurisdictions through Unified Response and mutual aid agreements with LA

City Fire Department. BFD does not have any private ambulance agreements. Instead, BFD depends on automatic and mutual aid when a need arises for additional units during peak activity times or larger medical incidents.

ALS care is delivered using Treatment Protocols based on Provider Impressions in the field. For those patients not meeting the Treatment Protocol criteria, ALS services proceed with online medical control, which involves voice communication between BFD Paramedics at the scene and a Mobile Intensive Care Nurse at Providence Saint Joseph Medical Center. BFD also has online medical control capabilities with Glendale Adventist Medical Center, Los Angeles General Medical Center (a Level I Trauma Center) and Providence Holy Cross Medical Center (a Level II Trauma Center). All Firefighters are Emergency Medical Technicians (EMT's) and certified through the State EMS Authority. Firefighter/Paramedics are licensed through the State EMS Authority and accredited through the Local EMS Agency. BFD adheres to ALS and BLS equipment, supplies and vehicle specifications as dictated by the Local EMS Agency/LA County Department of Health Services. There is no specific medical service agreement requirement for BFD's EMS system. The City of Burbank was delivering EMS prior to 1980, whereas newly formed systems are licensed. The California Health and Safety Code 1797.201 allows the City to deliver EMS care within its exclusive operating area.

The EMS Program is managed by one Battalion Chief, three engine-based Fire Captains, and staffed with a part-time Nurse Educator under contract. All positions are responsible for EMS program delivery, Health Insurance Portability and Accountability Act compliance, quality improvement, EMT/Paramedic training and continuing medical education. A physician Medical Director under contract is responsible for pharmaceutical/narcotics program and control oversight. Response statistics are provided by VFCC's CAD system and BFD utilizes electronic patient care reporting for its records management of every patient receiving EMS treatment.

Technical Rescue

BFD provides first response for low and moderate risk technical rescue emergencies and maintains the personnel, apparatus and equipment to respond to these incidents. BFD is equipped and trained to provide rescue services involving vehicle extrication, rope rescue, shore-based swift water rescue, line of sight confined space and minor building collapse. The demand for these services has been historically low, except for vehicle extrication. Technical rescue incidents account for 0.67% of BFD's call volume.

Extrication devices carried on engines include basic hand tool complements and 200-foot rope bags with rappelling/lifting accessories. Trucks carry heavy rescue/vehicle extrication equipment, 200 and 400-foot rope bags with rappelling/lifting accessories, stokes baskets and high pressure air bags. BFD has very limited capabilities to provide high and maximum risk rescue services to major incidents involving high angle, confined space, heavy wall building collapse and trench rescue. BFD utilizes automatic and mutual aid to effectively provide specialized technical rescue resources for high and maximum

risk incidents. VFCC automatically dispatches Area C Urban Search and Rescue (US&R) teams for high and maximum risk incidents since BFD is classified as "US&R Type 3 Light." BFD personnel receive Firefighter 1 and 2 training, as part of minimum training and operational standards. BFD has integrated Rope Rescue Operational, Structural Collapse Specialist 1 and Confined Space Rescue as part of its baseline standards. BFD personnel also receive training in vehicle extrication, shore-based swift water rescue and minor building collapse. BFD's Training Center has been approved by the State Fire Training Office as a Rescue Systems 1 training facility. BFD has developed a cadre of State-approved instructors to teach each discipline mentioned above at BFD's Training Center.

Hazardous Materials

BFD operates a Cal OES Type 1 Hazardous Materials Response Team to mitigate incidents in Burbank and provide hazardous materials resources to other agencies through state, regional and local automatic and mutual aid agreements. While hazardous materials incidents are low frequency, they have the potential to have the largest impact on the community. BFD maintains a Hazardous Materials Response Vehicle, which is located at Station 12 and staffed with four Specialist level personnel daily. The unit is cross-staffed by the four members assigned to Truck 12. BFD's Hazardous Materials Program conforms with Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) Standards and is inspected by Cal OES to verify compliance. All BFD personnel are trained to the First Responder Operational level as part of minimum training and operational standards. Hazardous Materials Team members are trained to the Specialist level, maintaining Cal OES Type 1 staffing requirements. BFD has 62 Specialists within its ranks.

Wildland Fire Services

Like any urban environment, Burbank is subject to fire hazards. In particular, Burbank's location adjacent to the Verdugo Mountains and the Hollywood Hills makes the city susceptible to loss from fire in the wildland/urban interface, where urban uses begin to mix with undeveloped land in its natural state. Steep slopes, rugged terrain and limited access provide additional difficulties when firefighting in these areas. New Fire Hazard Severity Zone maps issued by CalFire in 2025 designate moderate, high, and very high fire hazard severity zones in the City of Burbank. BFD conducts defensible space inspections in two Very High Fire Hazard Severity Zones located along the foothills of the Verdugo Mountains in northeast Burbank and the southwestern portion of the city adjacent to Warner Bros. Studios.

Each of BFD's six engine companies is equipped with a full complement of hose, nozzles and hand tools capable of making initial attack, protecting structures and providing perimeter control on wildland fires. Station 14 houses Water Tender 14, a 2,500-gallon Type 1 water tender to provide mobile water support to resources located in remote areas of the city where hydrants are scarce. Station 11 houses Patrol 11, a Type 6 four-wheel

drive fire engine capable of assisting in perimeter control on the Stough Canyon Motorway and the Verdugo Mountain Way. In addition to the resources within the City of Burbank, BFD has established automatic and mutual aid agreements with neighboring agencies including all cities within Cal OES Region I, Area C fire departments, LA City Fire Department, LA County Fire Department and the USFS Angeles National Forest. These agreements provide BFD with a pool of resources including fire engines, Type 2 helicopters, hand crews, line supervision and a bulldozer to assist in controlling and containing wildland fires threatening lives, buildings and infrastructure in and around the city. Wildland fire incidents account for 0.25% of BFD's call volume.

Community Risk Reduction

Fire Prevention Bureau and Hazardous Materials Disclosure Program

BFD's Fire Prevention Bureau (FPB) and Hazardous Materials Disclosure Program are responsible for community risk reduction efforts through permitting, code enforcement, inspections and public education. FPB safeguards the community by checking plans for fire and life safety requirements, issuing operational and fire protection permits, conducting commercial and residential inspections, coordinating the NFIRS and administering the Fire Hazard Reduction Program. FPB's activities are guided by the Burbank Municipal Code, California Fire Code, California Building Code, Code of Federal Regulations (CFR), and NFPA Standards. FPB staff annually inspects high and maximum risk occupancies. Additionally, FPB personnel perform annual inspections for the Fire Hazard Reduction Program under the guidance of the Fire Captain/Arson Investigator assigned to FPB. The Arson Investigator responds to all fires to investigate the origin, cause and circumstances of each fire in Burbank involving loss of life, injury to persons and/or the destruction/damage to property. The Arson Investigator also is on a task force to assist other fire agencies needing additional support.

FPB has two Fire Captains that are mainly responsible for filming activities in Burbank. The first Fire Captain is assigned to Warner Bros. Studio Facilities, which include 29 sound stages and 11 exterior sets. BFD has a Cooperative Fire Service Agreement with Warner Bros. for this position. The second Fire Captain primarily works with production companies at non-Warner Bros. Studio Facilities and assigns Fire Safety Officers.

FPB's Hazardous Materials Disclosure Program manages all hazardous materials inventories within the City as a Participating Agency to the LA County Certified Unified

Program Agency. FPB educates business owners, inspects, and enforces codes and regulations by administering the City's Hazardous Materials Business Plan, Aboveground Petroleum Storage, California Accidental Release Prevention and Underground Storage Tank Programs. FPB uses the California Environmental Reporting System (CERS) to support hazardous materials businesses with electronic reporting, collecting and managing hazardous materials data. The Assistant Fire Marshal conducts follow-up inspections on hazardous materials releases within Burbank.

Emergency Management

BFD's Emergency Management Division serves as the City of Burbank's Office of Emergency Management. BFD employs a full-time Emergency Management Administrator (EMA) to facilitate the mitigation, preparedness, response and recovery efforts for the public and the City. BFD has developed a comprehensive, Federal Emergency Management Administration approved, local Hazard Mitigation Plan that outlines the City's hazards and mitigation strategies. Additionally, BFD carries out an emergency preparedness public education campaign. By focusing on mitigation and preparedness, BFD can strongly reduce the impact on the community following a significant incident and also reduce the time needed for recovery efforts. BFD oversees and conducts plan development and training of City personnel to enhance the City's ability to effectively engage in incident response. During major incidents, the EMA works closely with City officials and all response agencies, including City Departments, neighboring jurisdictions, County and State emergency management agencies, local partners and volunteer organizations.

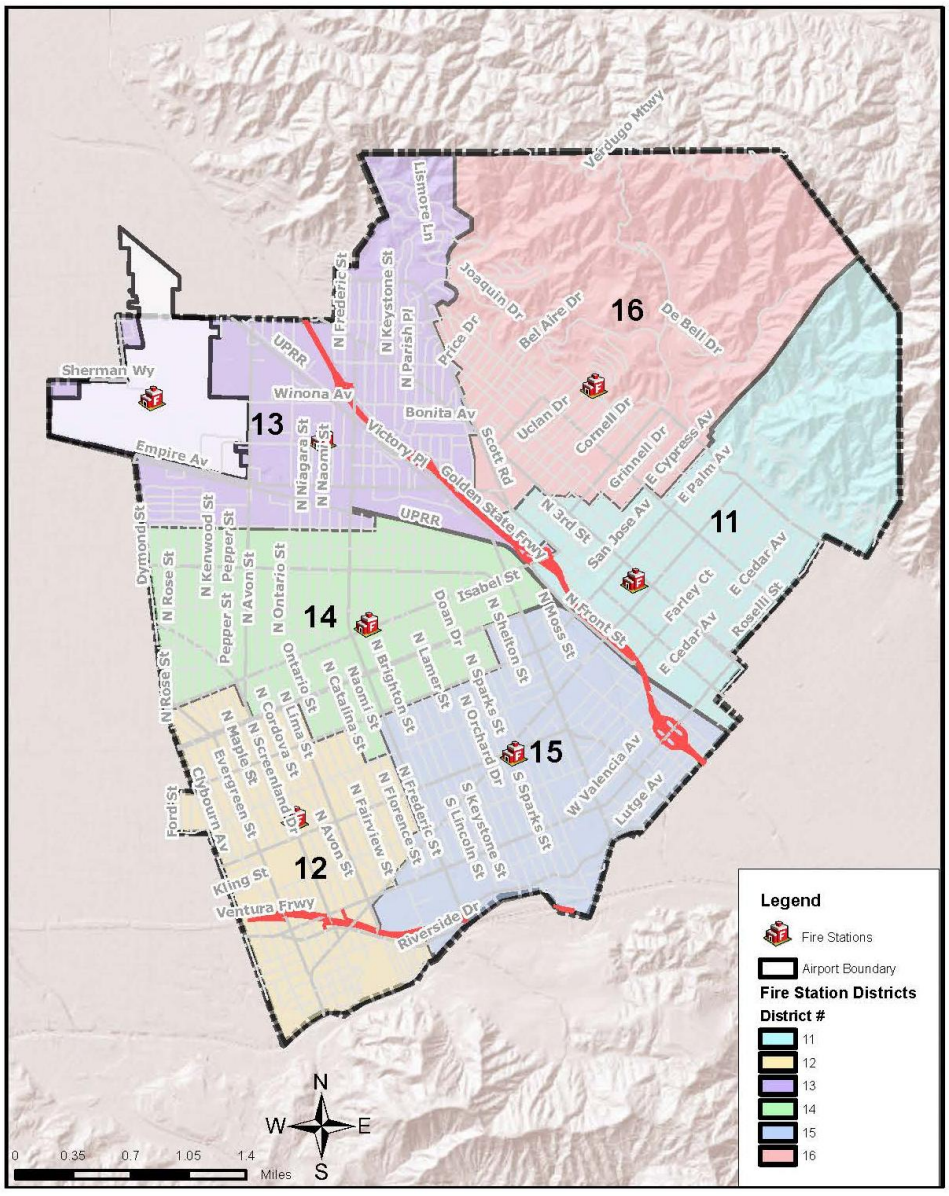
The Emergency Management Division maintains an active volunteer program known as Burbank Fire Corps, which is designed to provide trained and credentialed volunteers for public education, community outreach and non-hazardous operational support roles. The EMA, in collaboration with Burbank Fire Corps members, also instructs Community Emergency Response Team (CERT) classes.

Geographical Planning Zones (Fire Districts)

Burbank is divided into six geographical planning zones, known as fire districts. Each fire district is served by a fire station and defines the first in response area for each station. Each station is located to ensure effective distribution of resources and limit undue risk from extended responses. VFCC has identified 24 "key stations" within its Area C system. The majority of the population in the system lives within a 1.5-mile radius of a key station. During a major incident with maximum drawdown of resources, most or all of the key stations would remain staffed to provide system coverage. BFD's key stations are Station 11, 12 and 13.

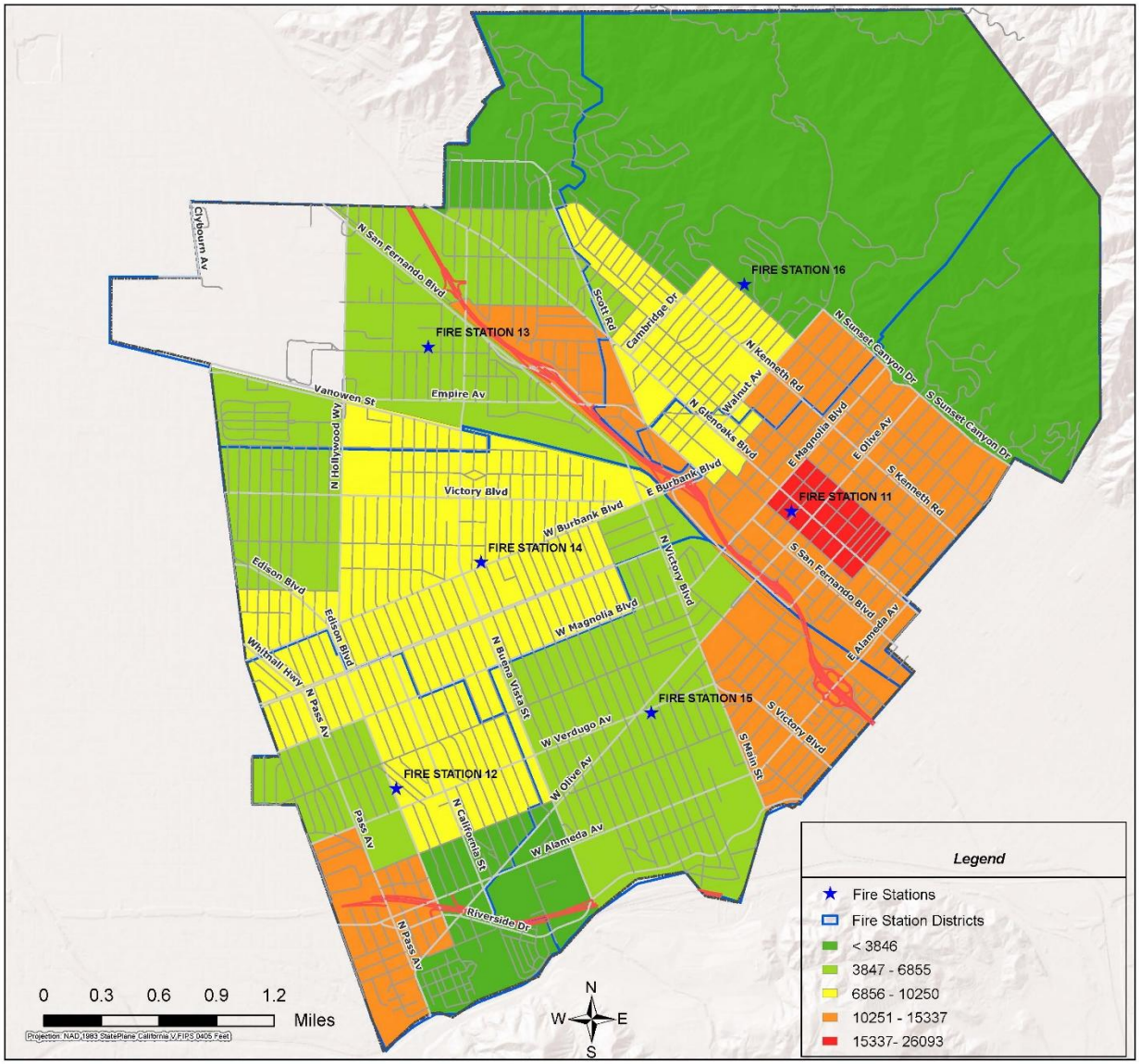
Fire District Square Miles and Map

Fire District	Square Miles
11	2.87
12	2.04
13	3.41
14	2.38
15	2.46
16	3.98



The following map shows the population density in Burbank. Fire District 11 has the highest population density at 8,914 per square mile, while Fire District 16 has the lowest at 2,765 per square mile.

Population Density Map



Population Density Breakdown

Fire District	Population	Population Percentage	Square Miles	Population Density Per Square Mile
11	25,583	23.83%	2.87	8,914
12	17,124	15.95%	2.04	8,394
13	15,881	14.80%	3.41	4,657
14	19,471	18.14%	2.38	8,181
15	18,272	17.02%	2.46	7,428
16	11,006	10.25%	3.98	2,765

Citywide Incident and Response Statistics

Incidents vs. Responses

A single incident usually involves multiple responses from one or more fire departments. For example, when a house fire in Burbank is reported to VFCC, the initial dispatch includes three engines, two trucks, a rescue ambulance and a Battalion Chief – a total of seven responding vehicles or "individual unit responses." Each unit dispatched counts as one response, hence a single incident may involve two or more responses, some of which might be providing automatic or mutual aid from another jurisdiction.

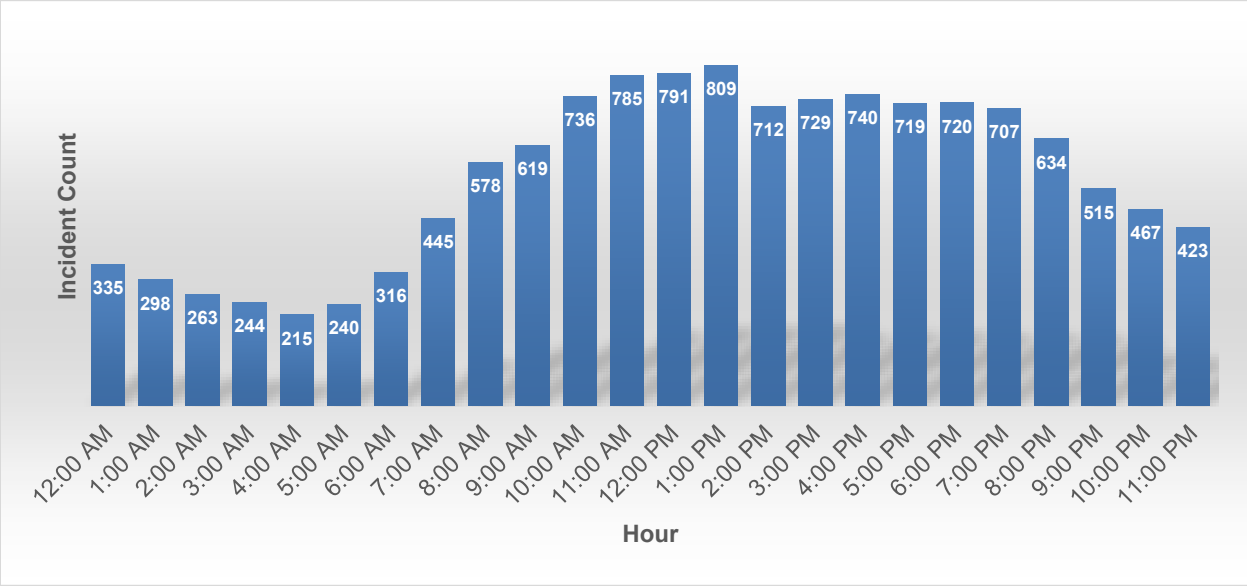
Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	1,274	1,140	1,430	1,274	1,193
EMS	11,203	10,704	10,369	9,490	8,467
Technical Rescue	67	69	90	93	74
Hazardous Materials	30	27	28	38	65
Wildland Fire Services	29	31	19	21	44
Service (e.g., elevator rescue)	433	461	439	349	348
Other (non-emergency)	4	5	6	5	0
Outside the Verdugo System*	105	113	89	83	115
Total	13,145	12,550	12,470	11,353	10,306

*Regional, State and Federal Mutual Aid Responses
Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 5:00 AM and starts to decline at 7:00 PM.

FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

EMS Transports and Non-Transports

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	2,393	3,478	3,284	3,344	3,123
BLS Total	7,419	5,700	5,618	4,923	3,765
ALS Transport	2,173	3,244	3,016	2,971	2,793
BLS Transport	4,002	2,109	1,964	1,836	1,364
ALS Non-Transport	220	234	268	373	330
BLS Non-Transport	3,417	3,591	3,654	3,087	2,401
Other	1,594	1,442	1,654	1,442	1,620

Source: Medic Clipboard, Microsoft Power BI and Tableau

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22. Also, the Other row comprises frequent calls such as motor vehicle accident with no injuries and “dispatched and cancelled enroute.”

Unit hour utilization (UHU) measures the amount of time a unit spends on emergency incidents. It is calculated using the number of incidents multiplied by the average incident duration then divided by the available hours per unit. A unit staffed full-time is available 8,760 hours per year. There is no UHU national standard though many industry experts concur that the percentage should be less than 30%. UHU above 30% may contribute to longer response times, fatigue and potentially higher risk of errors. UHU reflects a unit's time specifically on an emergency response. However, it does not account for time spent on the following critical activities: training, equipment maintenance, fire prevention inspections and public education. The table below shows all BFD units are under 30%.

FY 2024-25 Unit Hour Utilization

Unit	Unit Hour Utilization
E11	8.94%
E12	4.74%
E13	5.69%
E14	4.81%
E15	7.04%
E16	3.70%
RA11	19.32%
RA13	16.91%
RA14	4.02%
RA15	18.62%
T11	3.02%
T12	1.73%

Source: Microsoft Power BI

The following tables show incident types based on CAD dispatch codes, which usually represent the initial reported emergency. Often, the actual incident differs from the initial report and the Fire Captain on scene will notify VFCC of the updated CAD dispatch code. Also, the Fire Captain will enter this change in the First Due records management system.

FY 2024-25 Fire Suppression Incident Types

Incident Type	# of Incidents	% of Incidents
Appliance Fire	13	1.02%
Carbon Monoxide Alarm	113	8.87%
Commercial Building	15	1.18%
Electrical Fire	21	1.65%
Electrical Vault Fire	1	0.08%
Emergency Landing at Airport	3	0.24%
Fire Alarm	711	55.81%
Fire Alarm Reset	14	1.10%
Fire Now Out	20	1.57%
House Fire	27	2.12%
Illegal Burning	45	3.53%
Miscellaneous Outside Fire	44	3.45%
Miscellaneous Outside Fire on the Freeway	4	0.31%
Multifamily Dwelling	25	1.96%
Odor of Natural Gas Inside	32	2.51%
Odor of Natural Gas Outside	30	2.35%
Refuse Fire	21	1.65%
Smoke in the Area	77	6.04%
Structure Fire	2	0.16%
Transformer/Street Light Fire	9	0.71%
Vehicle Fire	34	2.67%
Vehicle Fire on the Freeway	13	1.02%
Total	1,274	100.00%

Source: Microsoft Power BI

FY 2024-25 EMS Incident Types

Incident Type	# of Incidents	% of Incidents
Abdominal Pain	320	2.86%
Allergic Reaction	56	0.50%
Altered Level of Consciousness	563	5.03%
Animal/Stings - ALS	12	0.11%
Animal/Stings - BLS	3	0.03%
Assault Victim	129	1.15%
Assist the Invalid	443	3.95%
Back Pain	143	1.28%
Blood Pressure Problem	410	3.66%
Burn Injury	5	0.04%
Catheter / G-Tube Problem	30	0.27%
Cerebrovascular Accident - Neurologic	228	2.04%
Chest Pain - Heart Attack	722	6.44%
Diabetic Problem	95	0.85%
Drowning/Diving Incident	1	0.01%
Electrical Shock Injury	13	0.12%
EMS Call - No Details	30	0.27%
EMS on the Freeway	17	0.15%
Exposure-Heat Or Cold	28	0.25%
Eye Injury	3	0.03%
Fall - ALS	1383	12.34%
Fall - BLS	45	0.40%
Gastrointestinal Bleed	93	0.83%
Gunshot Wound	4	0.04%
Head Pain	46	0.41%
Heart Problem	324	2.89%
Ingestion/Poisoning/Inhalation	18	0.16%

Incident Type	# of Incidents	% of Incidents
Investigate the Welfare	34	0.30%
Medical Alarm	111	0.99%
Miscellaneous Medical	596	5.32%
Nosebleed Non-Traumatic	42	0.37%
Obstetrics/Gynecological	50	0.45%
Overdose	230	2.05%
Pediatrics 0-36 Months	239	2.13%
Person Choking	30	0.27%
Person Dizzy	123	1.10%
Person Down	174	1.55%
Person Feeling Weak	299	2.67%
Person in Seizure	223	1.99%
Person Not Breathing	181	1.62%
Person Sick - ALS	473	4.22%
Person Sick - BLS	146	1.30%
Person Stabbed	5	0.04%
Person Unconscious/ Unresponsive	297	2.65%
Psychiatric	221	1.97%
Shortness of Breath	962	8.59%
Syncope/Fainted Now Conscious	366	3.27%
Traffic Collision	492	4.39%
Traffic Collision on the Freeway	142	1.27%
Traffic Collision with Pedestrian	112	1.00%
Trauma	347	3.10%
Unknown Medical	144	1.29%
Total	11,203	100.00%

Source: Microsoft Power BI

FY 2024-25 Technical Rescue Incident Types

Incident Type	# of Incidents	% of Incidents
Collapse/Extrication/Rescue	1	1.49%
Mountain Rescue	5	7.46%
Person Threatening to Jump	5	7.46%
Rescue	4	5.97%
Rescue on the Freeway	10	14.93%
Traffic Collision - Rescue	36	53.73%
Vehicle into Structure	6	8.96%
Total	67	100.00%

Source: Microsoft Power BI

FY 2024-25 Hazardous Materials Incident Types

Incident Type	# of Incidents	% of Incidents
Biohazard Investigation	2	6.67%
Chemical Outside	4	13.33%
Fuel Spill	14	46.67%
Broken Gas Main	5	16.67%
Hazardous Materials Response	5	16.67%
Total	30	100.00%

Source: Microsoft Power BI

FY 2024-25 Wildland Fire Services Incident Types

Incident Type	# of Incidents	% of Incidents
Brush Fire	3	10.34%
Brush Fire Augmented	2	6.90%
Vegetation Fire	21	72.41%
Vegetation Fire on the Freeway	3	10.34%
Total	29	100.00%

Source: Microsoft Power BI

The table below details the responses by each unit in Burbank or another jurisdiction. It does not signify whether the unit arrived on scene and was actually committed to an incident either in their jurisdiction or elsewhere. This is due to scenarios where a unit will be dispatched and then subsequently canceled when another unit identifies it is available and physically closer to the incident.

FY 2024-25 Responses by Unit

Unit	Responses
Battalion Chief 1	304
Deputy Fire Chief	5
Emergency Medical Services 11	1
Engine 11	3,727
Engine 12	1,888
Engine 13	2,262
Engine 14	1,805
Engine 15	2,887
Engine 16	1,357
Gator 16	1
Hazardous Materials 12	15
Investigator 1	35
Investigator 11	1
Investigator 12	1
Patrol 11	9
Prevention 1	2
Prevention 16	2
Prevention 17	1
Rescue Ambulance 11	3,666
Rescue Ambulance 13	3,158
Rescue Ambulance 14	768
Rescue Ambulance 15	3,665
Truck 11	1,197
Truck 12	670
Training Officer 1	17
Training Officer 11	4
Water Tender 14	4
Total	27,459

Source: Microsoft Power BI

Fire District Profiles and Statistics

Fire District 11

Station 11 is at 311 East Orange Grove Avenue. BFD's Headquarters and mechanic shop are also located in the same building. Station 11's first in response district is 2.87 square miles, which includes Downtown Burbank, a major shopping and entertainment center. Some of the district's maximum risk occupancies include Burbank Town Center (a mall), three movie theaters, five high-rise buildings and Ikea, a large home furnishings store. Fire District 11 has the city's highest population density and call volume.

FY24-25 Station 11 Responses by Unit

Unit	Staffing Level	Responses
Battalion 1	1	304
Engine 11	4	3,727
Truck 11	4	1,197
Rescue Ambulance 11	2	3,666
Patrol 11	Staffed as Needed	9
Total	11	8,903

Source: Microsoft Power BI

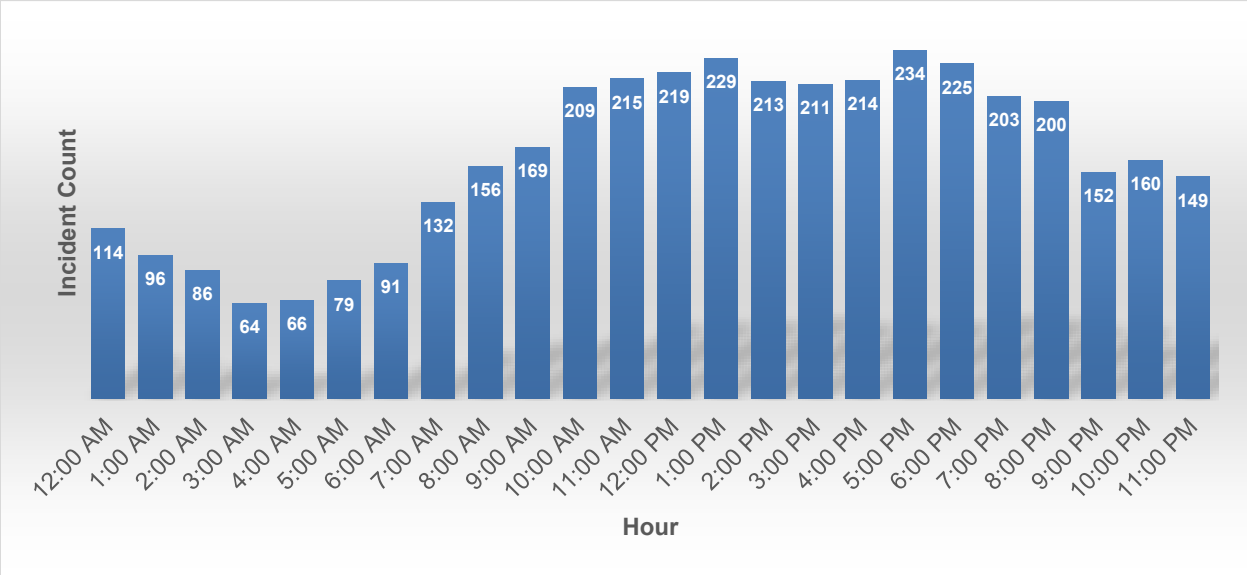
Fire District 11 Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	397	357	389	321	327
EMS	3,315	3,175	3,159	3,008	2,565
Technical Rescue	27	28	42	43	38
Hazardous Materials	7	7	10	9	11
Wildland Fire Services	10	8	6	11	19
Service (e.g., elevator rescue)	129	147	175	121	103
Other (non-emergency)	1	-	1	-	-
Total	3,886	3,722	3,782	3,513	3,063

Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 5:00 AM and starts to decline at 8:00 PM.

Fire District 11 FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

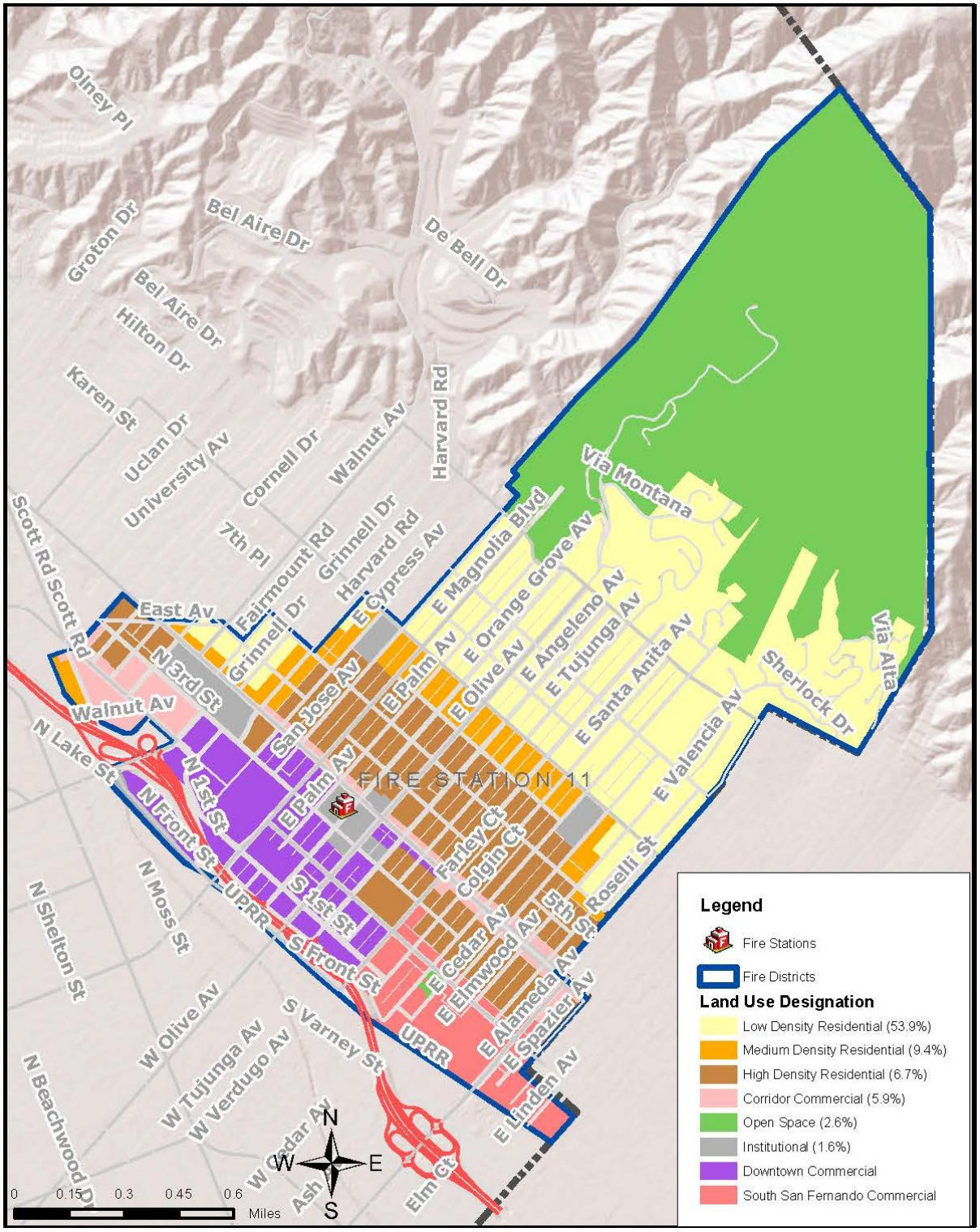
EMS Transports and Non-Transports with Engine 11 or Truck 11 Response

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	623	964	993	1,059	940
BLS Total	2,256	1,867	1,980	1,854	1,324
ALS Transport	568	871	914	955	904
BLS Transport	1,136	610	617	601	656
ALS Non-Transport	55	93	79	104	95
BLS Non-Transport	1,120	1,257	1,363	1,253	897

Source: Medic Clipboard

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22.

Fire District 11 Land Use Map



Fire District 11 Building Occupancy Classification and Risk Category

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	0	99	0	6	**105**
Business	0	710	0	0	**710**
Educational	0	0	17	0	**17**
Health Care	0	0	7	0	**7**
Mercantile	0	0	75	1	**76**
Hazardous	0	0	0	62	**62**
Factory/Industrial	0	57	0	0	**57**
Storage	0	42	0	0	**42**
Residential	0	5,242	7,578	9	**12,829**
High-Rise	0	0	0	5	**5**
Total	**0**	**6,150**	**7,677**	**83**	**13,910**

Source: Firehouse

Fire District 12

Station 12 is at 644 North Hollywood Way and houses the HazMat Division. The crew of Truck 12 cross-staffs HazMat 12 in the event of a HazMat incident. Station 12's first in response district is 2.04 square miles, which includes the maximum risk occupancies of Warner Bros. Studios, Warner Bros. Ranch filming facilities and seven high-rise office buildings. Additionally, the shopping and dining area known as Magnolia Park is in Fire District 12.

FY24-25 Station 12 Responses by Unit

Unit	Staffing Level	Responses
Engine 12	4	1,840
Truck 12	4	670
Hazardous Materials 12 (Cross-Staffed)	4	15
Total	8*	2,573

*Since Hazardous Materials 12 is cross staffed, its staffing level is excluded from this Total.
Source: Microsoft Power BI

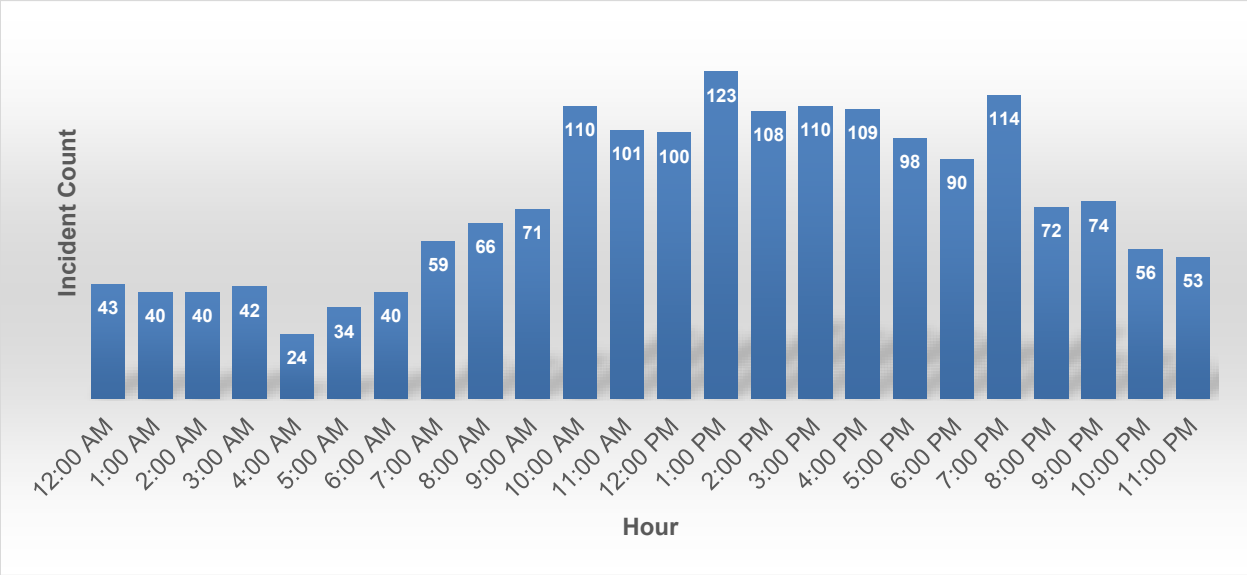
Fire District 12 Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	192	161	201	187	150
EMS	1,499	1,421	1,425	1,220	1,096
Technical Rescue	6	7	10	9	9
Hazardous Materials	2	6	3	4	7
Wildland Fire Services	2	3	1	4	5
Service (e.g., elevator rescue)	76	64	81	49	56
Other (non-emergency)	-	1	-	1	-
Total	1,777	1,663	1,721	1,474	1,323

Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 5:00 AM and starts to decline at 8:00 PM.

Fire District 12 FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

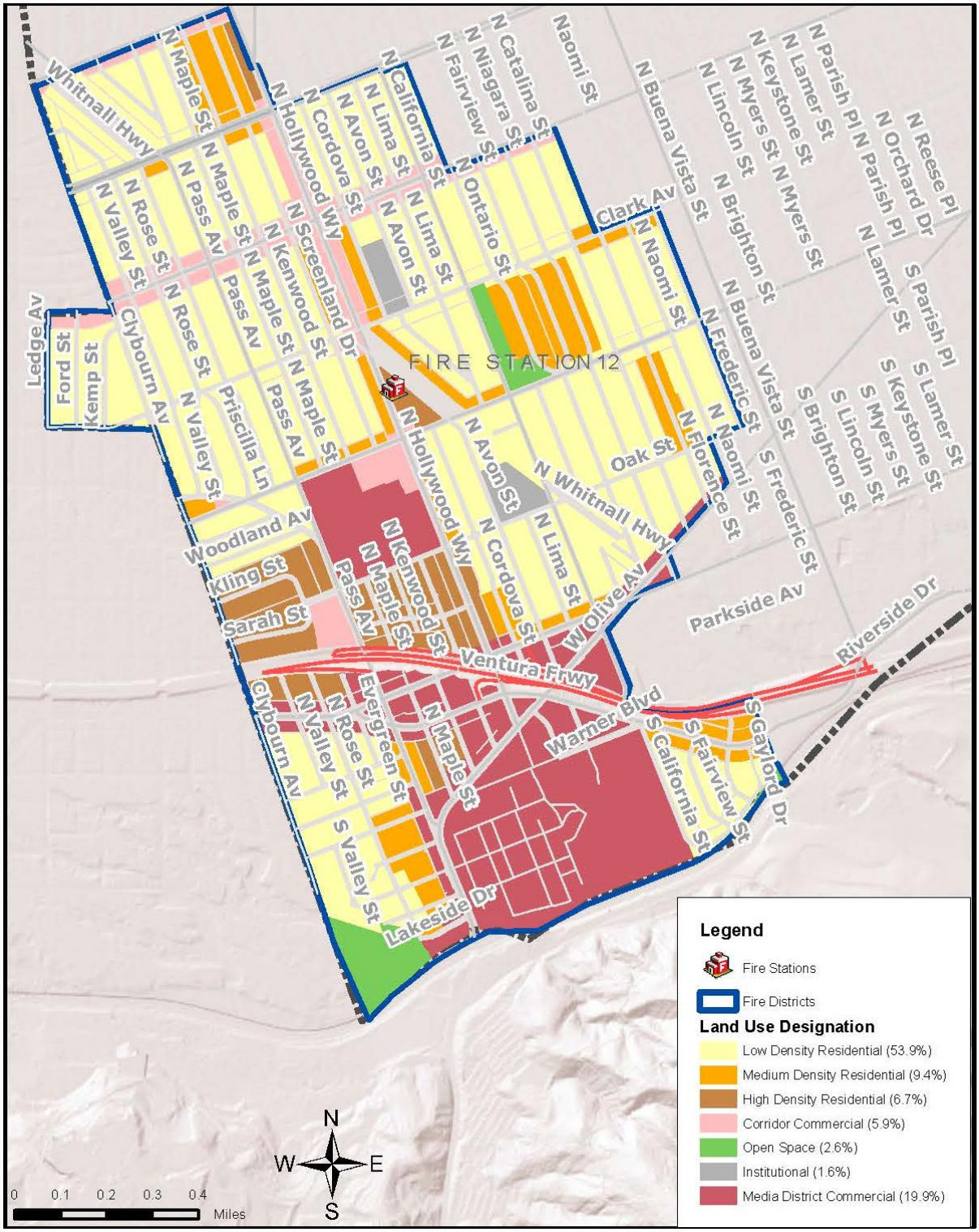
EMS Transports and Non-Transports with Engine 12 or Truck 12 Response

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	345	515	529	536	540
BLS Total	1,137	831	842	741	527
ALS Transport	317	488	489	484	457
BLS Transport	642	322	336	331	228
ALS Non-Transport	28	27	40	52	83
BLS Non-Transport	495	509	506	410	299

Source: Medic Clipboard

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22.

Fire District 12 Land Use Map



Fire District 12 Building Occupancy Classification and Risk Category

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	0	59	0	2	**61**
Business	0	691	0	0	**691**
Educational	0	0	9	0	**9**
Health Care	0	0	2	0	**2**
Mercantile	0	0	102	0	**102**
Hazardous	0	0	0	46	**46**
Factory/Industrial	0	16	0	0	**16**
Storage	0	16	0	0	**16**
Residential	0	6,292	4,715	0	**11,007**
High-Rise	0	0	0	7	**7**
Total	**0**	**7,074**	**4,828**	**55**	**11,957**

Source: Firehouse

Fire District 13

Station 13 is at 2713 Thornton Avenue and its first in response district is 3.41 square miles. Testing and maintenance of hoses and fire extinguishers are handled at this station. Fire District 13 contains the Empire Center, a large shopping and dining destination. The Hollywood Burbank Airport and two high-rise buildings are some of the maximum risk occupancies in this district.

FY24-25 Station 13 Responses by Unit

Unit	Staffing Level	Responses
Engine 13	4	2,262
Rescue Ambulance 13	2	3,158
Total	6	5,420

Source: Microsoft Power BI

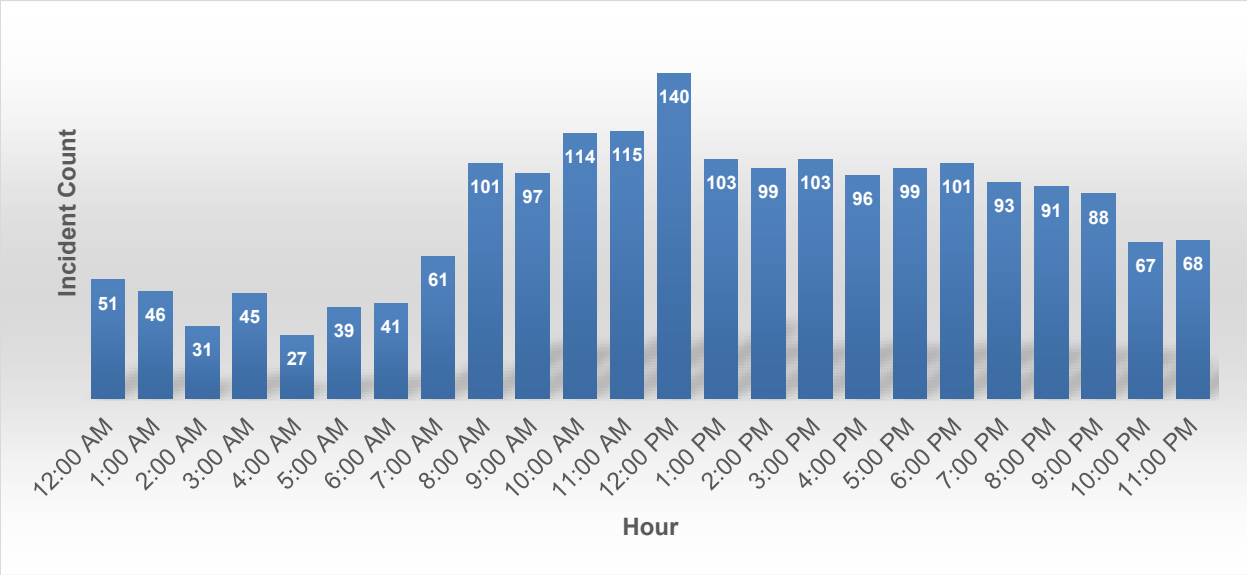
Fire District 13 Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	223	171	285	249	237
EMS	1,614	1,511	1,340	1,210	1,260
Technical Rescue	6	9	10	9	4
Hazardous Materials	11	3	4	10	31
Wildland Fire Services	3	8	3	2	3
Service (e.g., elevator rescue)	59	61	45	41	47
Other (non-emergency)	-	-	-	-	-
Total	1,916	1,763	1,687	1,521	1,582

Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 5:00 AM and starts to decline at 7:00 PM.

Fire District 13 FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

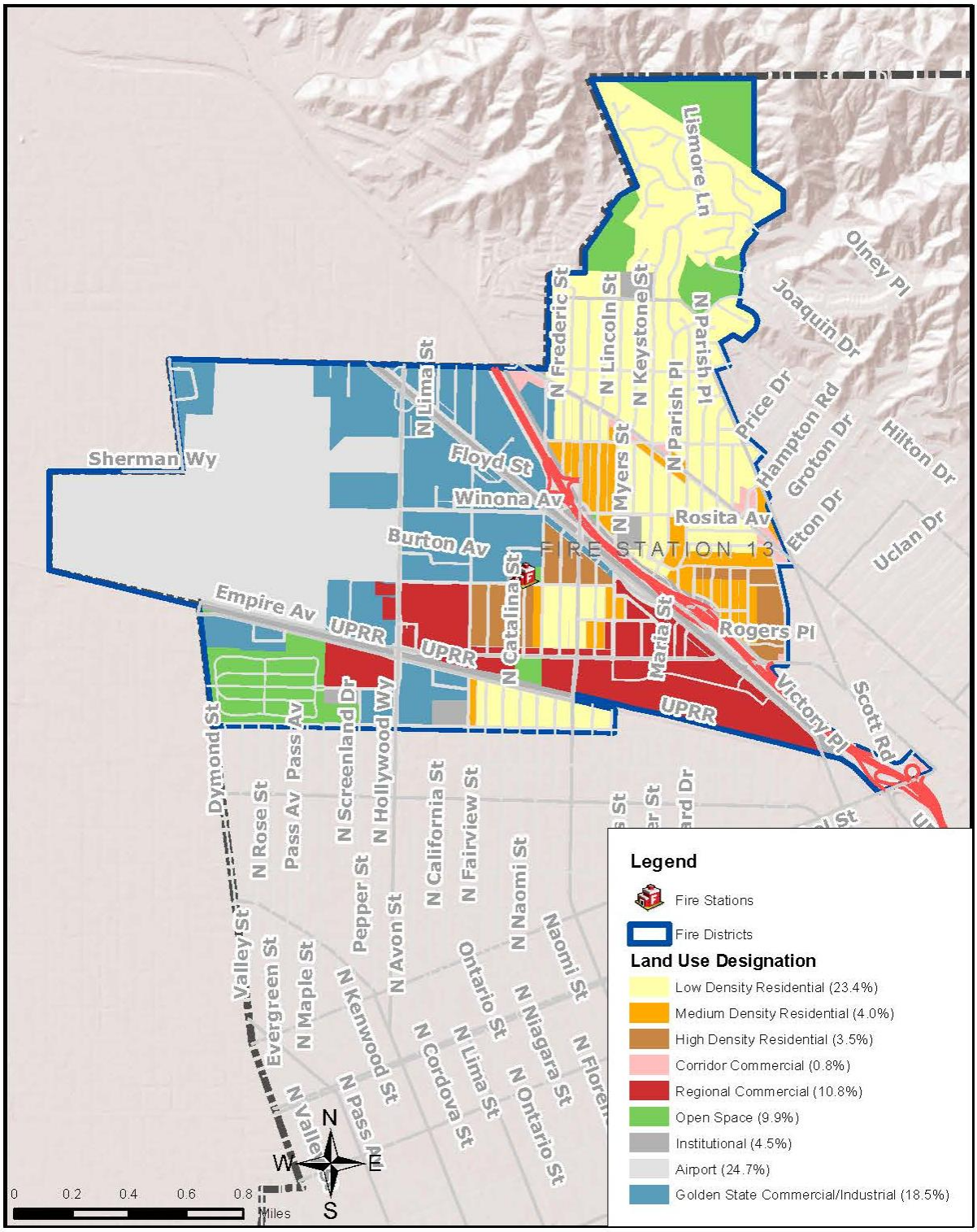
EMS Transports and Non-Transports with Engine 13 Response

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	347	518	462	441	413
BLS Total	1,063	879	868	667	651
ALS Transport	305	470	417	372	379
BLS Transport	509	286	246	196	193
ALS Non-Transport	42	48	45	69	34
BLS Non-Transport	554	593	622	471	458

Source: Medic Clipboard

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22.

Fire District 13 Land Use Map



Fire District 13 Building Occupancy Classification and Risk Category

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	0	59	0	1	**60**
Business	0	332	0	2	**334**
Educational	0	0	10	0	**10**
Health Care	0	0	2	0	**2**
Mercantile	0	0	120	1	**121**
Hazardous	0	0	0	129	**129**
Factory/Industrial	0	186	0	0	**186**
Storage	0	113	0	0	**113**
Residential	0	3,177	1,875	0	**5,052**
High-Rise	0	0	0	2	**2**
Total	**0**	**3,867**	**2,007**	**135**	**6,009**

Source: Firehouse

Fire District 14

Station 14 is at 2305 West Burbank Boulevard. Its first in response district is 2.38 square miles. Due to its central location in Burbank, this crew is frequently on any multi-engine assignment. Personnel at this station maintain and repair the self-contained breathing apparatus (SCBA), as well as test all firefighters in the proper fit of the SCBA masks. Also, these personnel maintain and order BFD's small tools.

FY24-25 Station 14 Responses by Unit

Unit	Staffing Level	Responses
Engine 14	4	1,805
Rescue Ambulance 14	2	768
Water Tender 14	Staffed as Needed	4
Total	6	2,577

Source: Microsoft Power BI

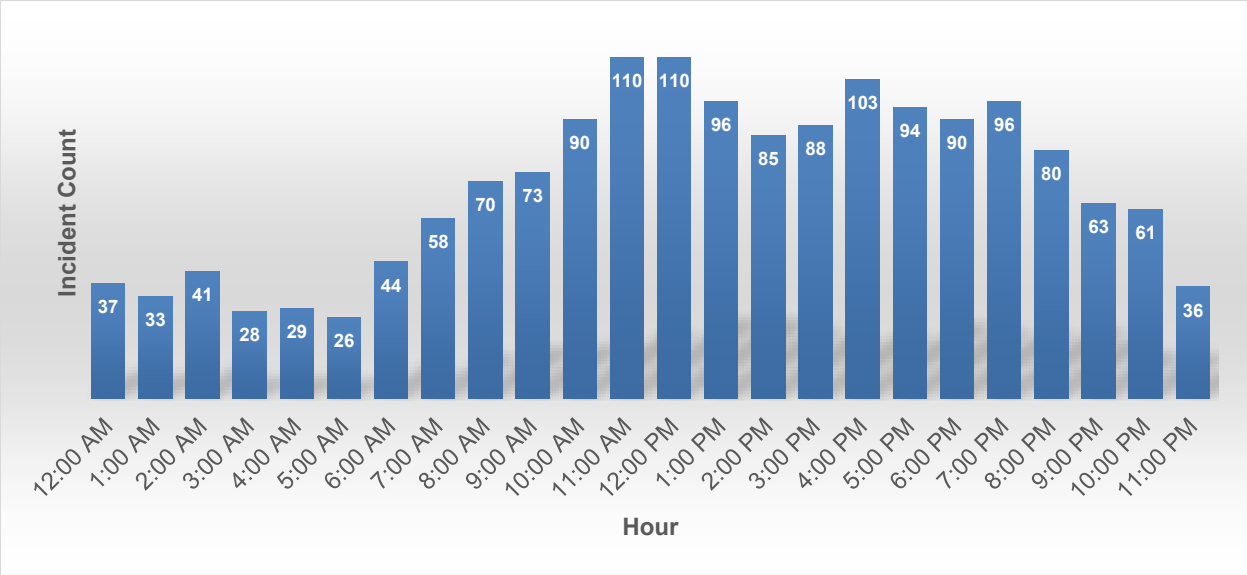
Fire District 14 Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	111	131	143	133	161
EMS	1,476	1,425	1,459	1,271	1,085
Technical Rescue	10	9	8	12	5
Hazardous Materials	4	6	-	5	8
Wildland Fire Services	1	1	4	1	4
Service (e.g., elevator rescue)	39	53	44	36	41
Other (non-emergency)	-	-	-	-	-
Total	1,641	1,625	1,658	1,458	1,304

Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 6:00 AM and starts to decline at 7:00 PM.

Fire District 14 FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

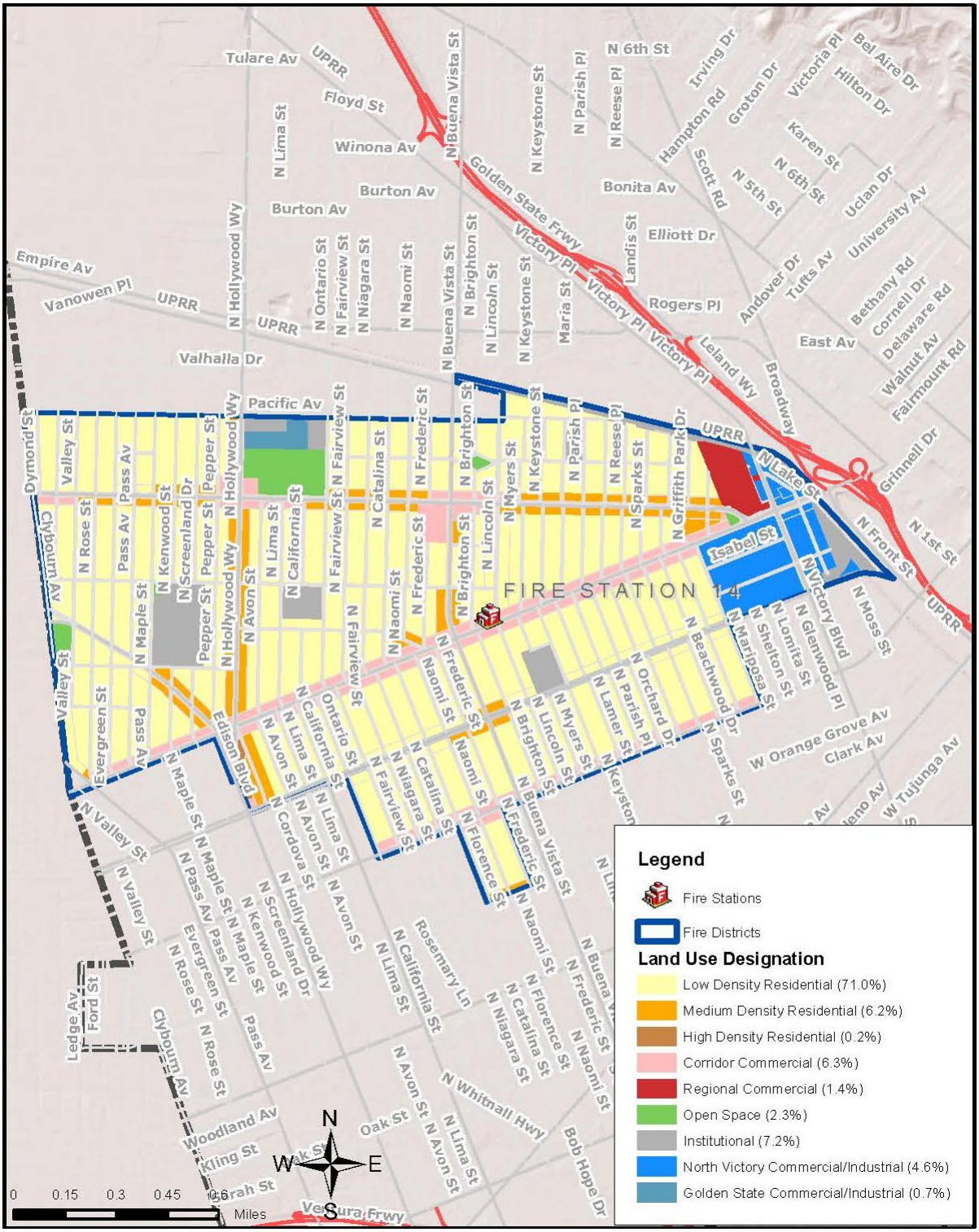
EMS Transports and Non-Transports with Engine 14 Response

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	310	404	384	406	332
BLS Total	870	654	580	538	425
ALS Transport	283	390	353	362	298
BLS Transport	499	286	246	208	168
ALS Non-Transport	27	14	31	44	34
BLS Non-Transport	371	368	334	330	257

Source: Medic Clipboard

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22.

Fire District 14 Land Use Map



Fire District 14 Building Occupancy Classification and Risk Category

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	0	37	0	0	**37**
Business	0	621	0	0	**621**
Educational	0	0	25	0	**25**
Health Care	0	0	4	0	**4**
Mercantile	0	0	102	0	**102**
Hazardous	0	0	0	68	**68**
Factory/Industrial	0	79	0	0	**79**
Storage	0	0	113	0	**113**
Residential	0	6,267	1,392	0	**7,659**
High-Rise	0	0	0	0	**0**
Total	**0**	**7,004**	**1,636**	**68**	**8,708**

Source: Firehouse

Fire District 15

Station 15 is at 1420 West Verdugo Avenue. BFD's EMS Program is partially handled at this station, staffed by three EMS Captains (one assigned to each shift) who share Paramedic Coordinator duties. Station 15's first in response district is 2.46 square miles. It contains the unique land use designation of Rancho Commercial, which allows for the keeping of horses on single-family residential properties. This Rancho neighborhood borders the City of Los Angeles' Calamigos Equestrian Center. Fire District 15 contains the maximum risk occupancies of Providence Saint Joseph Medical Center, Walt Disney Company, The Burbank Studios, Nickelodeon and four high-rise buildings. This district has the second highest call volume in Burbank.

FY24-25 Station 15 Responses by Unit

Unit	Staffing Level	Responses
Engine 15	3	2,887
Rescue Ambulance 15	2	3,665
Total	5	6,552

Source: Microsoft Power BI

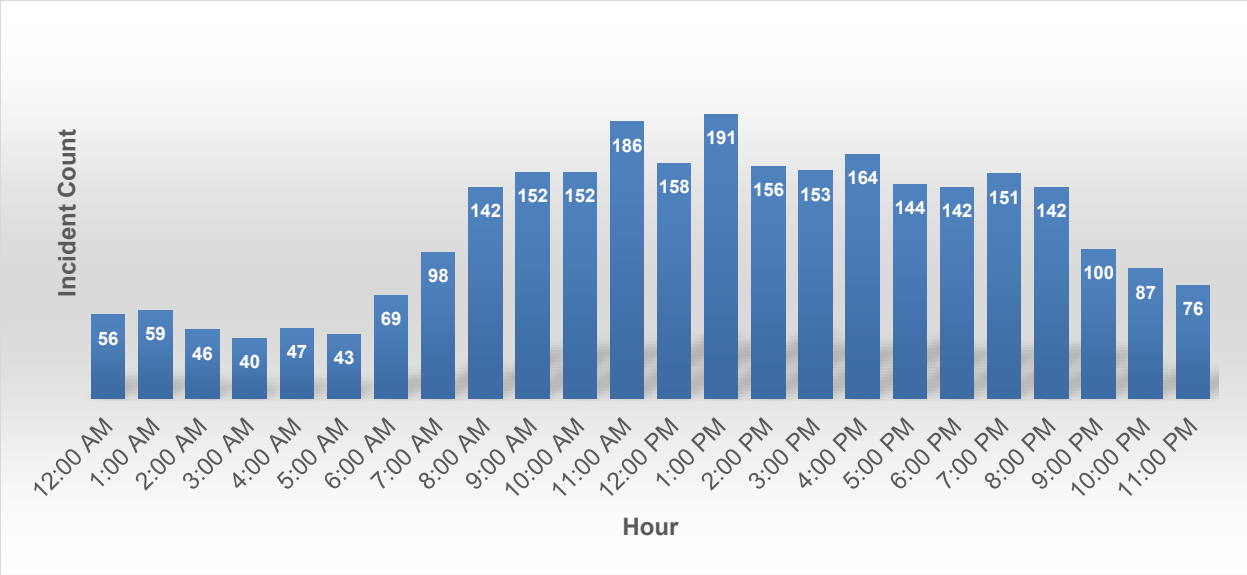
Fire District 15 Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	281	250	318	307	240
EMS	2,353	2,309	2,132	2,008	1,726
Technical Rescue	12	11	10	5	11
Hazardous Materials	6	4	8	8	6
Wildland Fire Services	7	8	4	1	7
Service (e.g., elevator rescue)	95	94	76	69	74
Other (non-emergency)	-	-	-	-	-
Total	2,754	2,676	2,548	2,398	2,064

Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 6:00 AM and starts to decline at 8:00 PM.

Fire District 15 FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

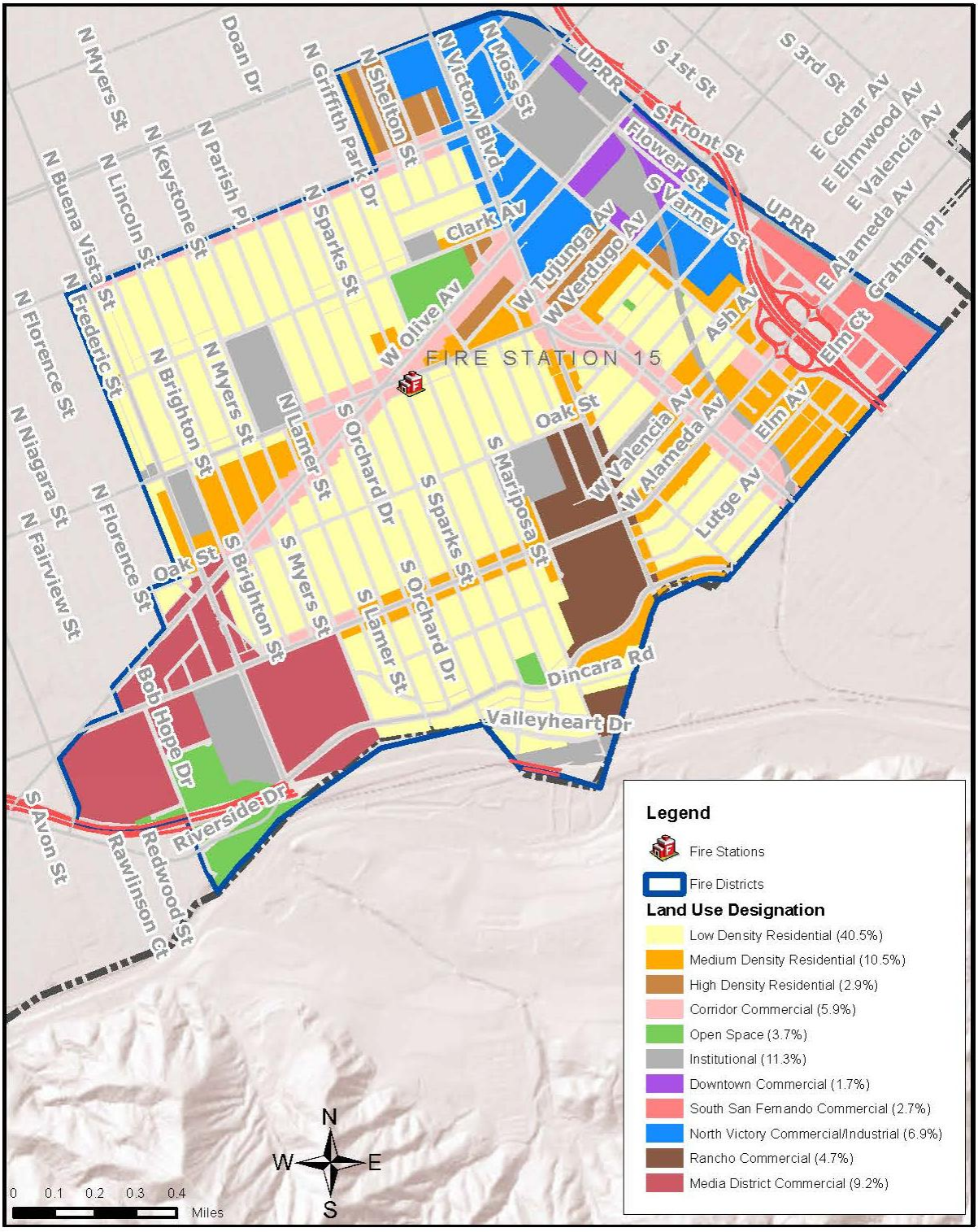
EMS Transports and Non-Transports with Engine 15 Response

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	535	772	681	680	722
BLS Total	1,366	976	916	888	669
ALS Transport	484	739	635	609	665
BLS Transport	822	402	370	400	316
ALS Non-Transport	51	33	46	71	57
BLS Non-Transport	544	574	546	488	353

Source: Medic Clipboard

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22.

Fire District 15 Land Use Map



Fire District 15 Building Occupancy Classification and Risk Category

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	0	45	0	3	**48**
Business	0	765	0	0	**765**
Educational	0	0	28	0	**28**
Health Care	0	0	23	1	**24**
Mercantile	0	0	118	0	**118**
Hazardous	0	0	0	104	**104**
Factory/Industrial	0	0	88	0	**88**
Storage	0	78	0	0	**78**
Residential	0	4,947	3,923	0	**8,870**
High-Rise	0	0	0	4	**4**
Total	**0**	**5,835**	**4,180**	**112**	**10,127**

Source: Firehouse

Fire District 16

Station 16 is at 1600 North Bel Aire Drive. Its first in response district is 3.98 square miles, which mainly consists of wildland/urban interface. Gator 16, a crossover utility vehicle, is located at this station so it may be used during mountain rescues. Fire District 16 has the lowest population density and call volume in Burbank.

FY24-25 Station 16 Responses by Unit

Unit	Staffing Level	Responses
Engine 16	3	1,357
Gator 16	Staffed as Needed	1
Total	3	1,358

Source: Microsoft Power BI

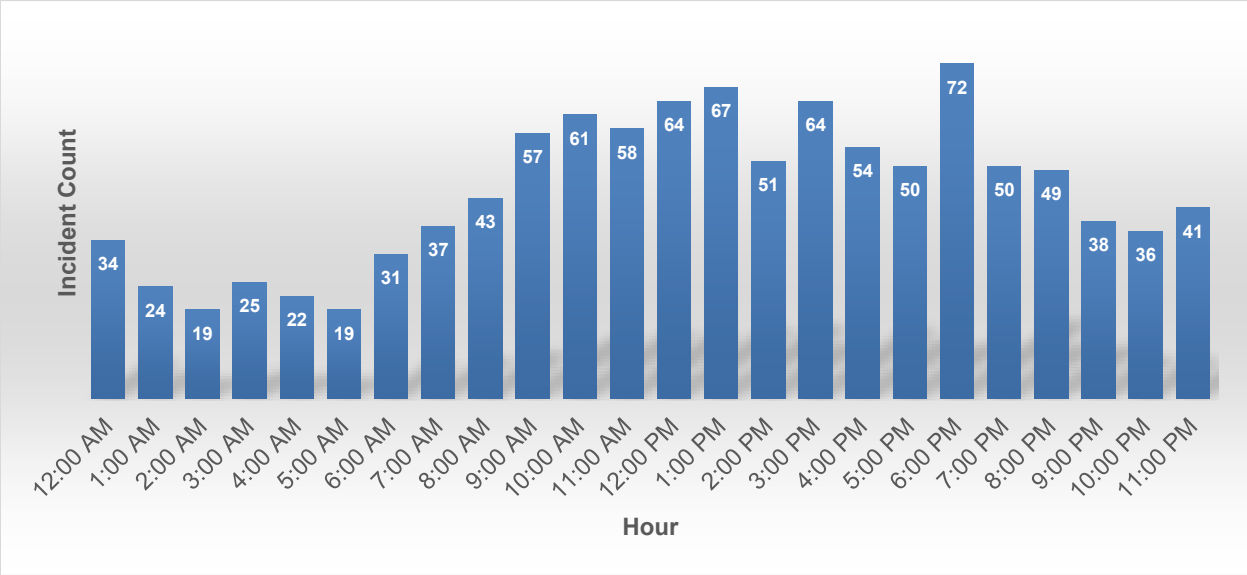
Fire District 16 Incident History

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Fire Suppression	70	70	94	77	78
EMS	946	863	854	773	735
Technical Rescue	6	5	10	15	7
Hazardous Materials	-	1	3	2	2
Wildland Fire Services	6	3	1	2	6
Service (e.g., elevator rescue)	35	42	18	33	27
Other (non-emergency)	3	4	5	4	-
Total	1,066	988	985	906	855

Source: Microsoft Power BI and Tableau

A review of incidents by time shows when the greatest demand occurs. The following chart illustrates how requests for assistance flow by the hour of the day for all responses. Incident activity generally begins to increase at 6:00 AM and starts to decline at 7:00 PM.

Fire District 16 FY24-25 Incidents by Time of Day



Source: Microsoft Power BI

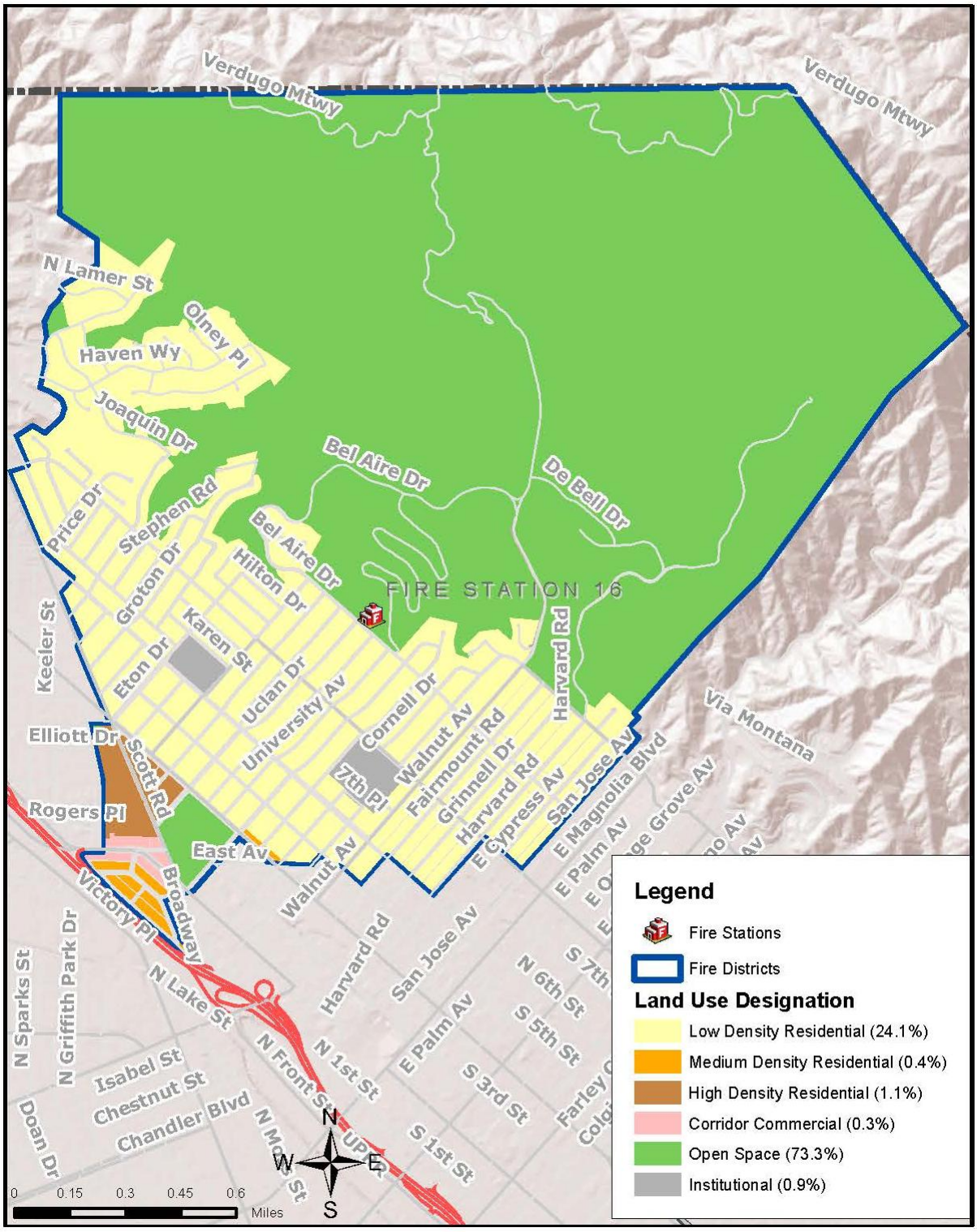
EMS Transports and Non-Transports with Engine 16 Response

	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
ALS Total	233	305	291	281	306
BLS Total	727	493	530	349	327
ALS Transport	216	286	262	234	258
BLS Transport	394	203	191	132	110
ALS Non-Transport	17	19	29	47	48
BLS Non-Transport	333	290	339	217	217

Source: Medic Clipboard

In the above table, an electronic patient care report was generated for an assist the invalid incident starting in FY21-22.

Fire District 16 Land Use Map



Fire District 16 Building Occupancy Classification and Risk Category

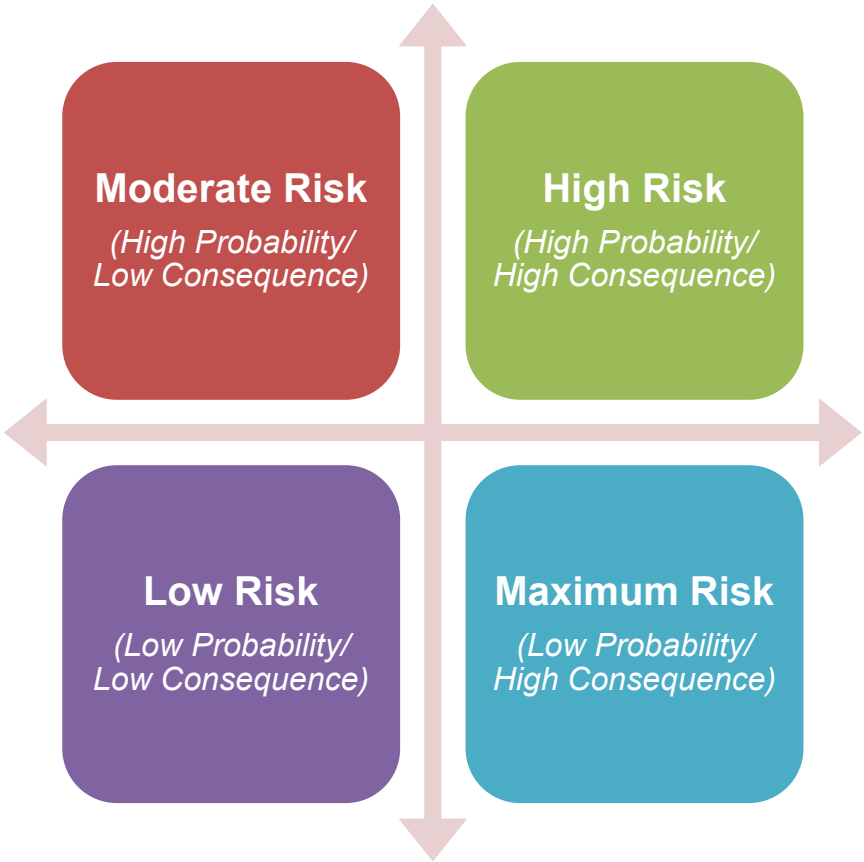
Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	0	11	0	0	**11**
Business	0	42	0	0	**42**
Educational	0	0	8	0	**8**
Health Care	0	0	0	0	**0**
Mercantile	0	0	5	0	**5**
Hazardous	0	0	0	11	**11**
Factory/Industrial	0	0	0	0	**0**
Storage	0	0	4	0	**4**
Residential	0	4,044	1,210	0	**5,254**
High-Rise	0	0	0	0	**0**
Total	**0**	**4,097**	**1,227**	**11**	**5,335**

Source: Firehouse

Section Three: Community Risk Assessment and Risk Levels

The City of Burbank provides all-hazard risk mitigation to the community through planning, preparation, prevention and continuous training. A comprehensive analysis of risk factors specific to Burbank was conducted to determine the overall community risk levels for this CRA & SOC. The evaluation of community risk factors included the assessment of community demographics and development, geographic planning zones (fire districts), natural hazards, technological/human hazards, transportation hazards and security hazards. This comprehensive risk assessment was conducted and based on both fire and non-fire related hazards.

The two primary components of a risk assessment are an analysis of probability and consequence. Probability is the likelihood that a particular event will occur in a given time period. An event that occurs daily is highly probable. An event that occurs once every century is very unlikely. Consequences measure the impact of an event on an individual, the community and the agency. There are three areas of concern when evaluating consequences: 1) life safety (danger to occupants); 2) economic (loss of property, income, historic or irreplaceable assets; and 3) environmental (irreplaceable or long-term damage to the environment). From the risk analysis, the matrix below can be utilized to show hazards based on the probability and consequences.



Community Risk Factors

Natural Hazards

Burbank has a relatively high to moderate risk level with moderate frequency for natural disasters that are deemed to be inherent to the jurisdiction. These hazards may include earthquakes, wildland fires, landslides, floods and severe weather. Natural hazards such as hurricanes, tornados and tsunamis are not of considerable risk. Although the frequency is moderate in relative terms, the consequences of such natural hazards may pose a significant economic disruption and/or human loss potential.

Earthquake *(High Risk/Moderate Frequency)*

There are numerous active and potentially active faults in Southern California, which in the event of an earthquake, have the potential to generate strong ground motions in Burbank. A far-field earthquake on one of the more distant faults, such as the San Andreas Fault, would be less damaging in Burbank than a near-field earthquake on a closer fault such as the Verdugo Fault. However, modeling suggests that the more distant faults surrounding the area may produce a seismic event of a lesser degree but have a high probability of occurrence. The Verdugo Fault, Sierra Madre Fault and San Fernando Fault are all near-field faults that can produce a forcible shaking event that can precipitate ground liquefaction in various areas of the city, most notably those areas that are adjacent to the Los Angeles River in the southwest quadrant of the city.

Earthquake Faults Near Burbank

Source: United States Geological Survey

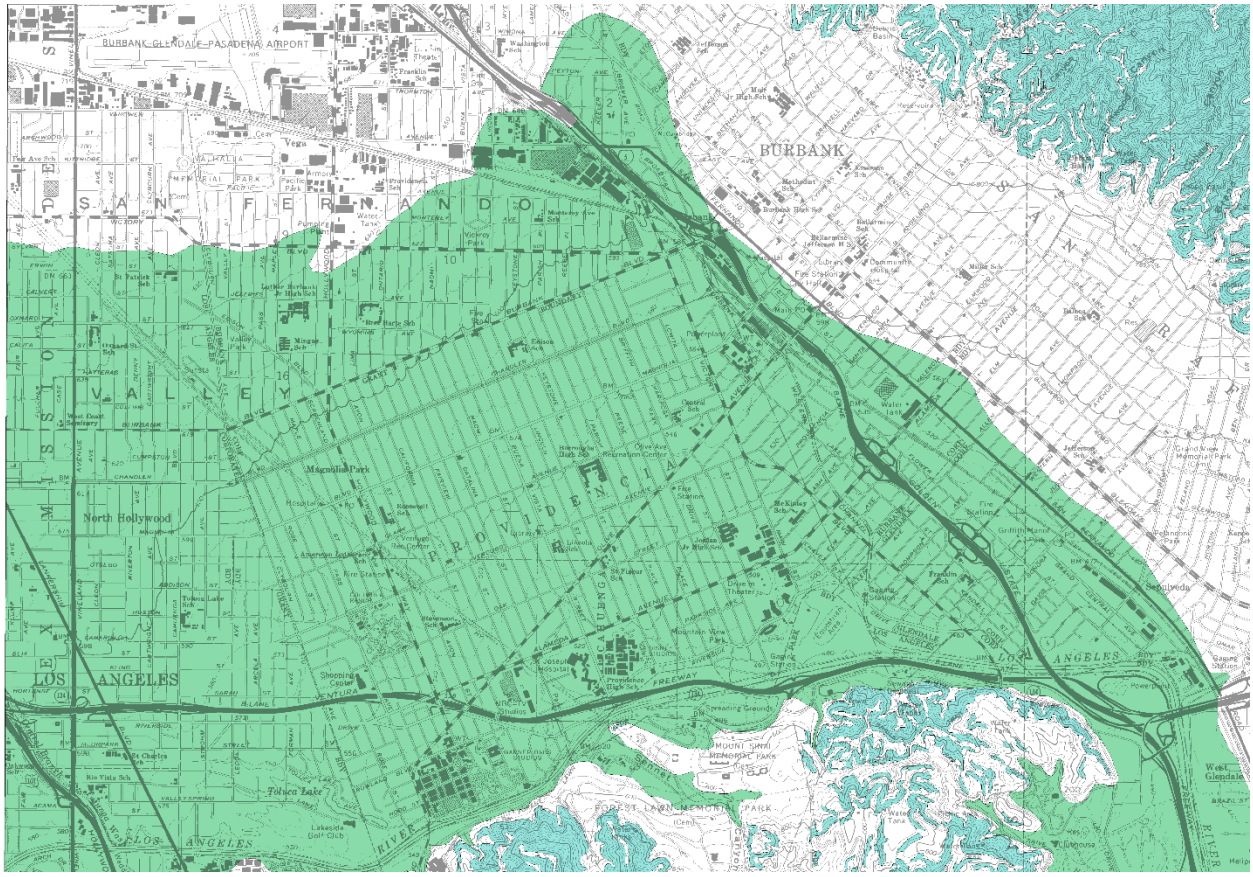
The faults shown above include the following (also listed are the potential magnitudes for earthquakes within the next 25 years):

- San Andreas Fault: red line near Palmdale
  - M5.6 to M7.9
- Verdugo Fault: green/yellow line southeast of the Interstate 5 symbol
  - M6.7 to M6.9
- San Gabriel Fault: green lines near Santa Clarita
  - M7.0 to M7.2
- Northridge Fault: green lines above West Hills
  - M6.9 to M7.0
- Sierra Madre – San Fernando Fault: red lines near Interstate 210 symbol
  - M6.0 to M6.7

Liquefaction is a process where loose, wet sediments lose strength during an earthquake and behave similarly to a liquid. Once a soil liquefies, it will tend to settle and/or spread laterally. With even slight slopes, liquefied soils tend to move sideways downhill (lateral spreading). Settling or lateral spreading can cause major damage to buildings and to buried infrastructure such as pipes and cables.

The map below shows areas with liquefaction potential in the green-shaded areas.

Liquefaction Potential Areas



Source: California Department of Conservation, Division of Mines and Geology, Seismic Hazard Zones, Burbank Quadrangle (Excerpt), March 25, 1999.

The liquefaction-prone area adjacent to the Los Angeles River, which consists of approximately 140 acres, is the general location of Providence Saint Joseph Medical Center, Warner Bros. Studios and Walt Disney Company, as well as several mid-rise commercial buildings. Liquefaction mapping indicates that all areas of Burbank west of the Interstate 5 and south of the Hollywood Burbank Airport have been subject to recent sedimentation that may include potentially liquefiable layers. By identifying these vulnerable areas of the city, BFD can use this information to target this high value, high population quadrant of the city.

Response plans have been developed specifically for seismic events and are exercised on an annual basis. Automatic and mutual aid is available upon request through VFCC. All other requests for aid will be directed to the LA County Office of Emergency Management at the County Emergency Operations Center through the Operational Area Response and Recovery System. Additionally, registered emergency support volunteers of the Burbank Fire Corps Program are trained in the areas of radio communications,

logistical support, canteen support, Community Emergency Response Team and other areas of professional expertise to support BFD as dictated by the emergency incident.

Wildland/Urban Interface Wildfire *(High Risk/Low Frequency)*

Wildland fires refer to those fires which occur in undeveloped areas and have the potential to destroy vegetation, wildlife habitats, watershed and structures. Wildfires can be human-caused through acts such as arson or accidental fire starts, or natural events such as lightning. The severity of wildland/urban interface fires relies on the relationship between topography, fire weather and fuel availability. Wildland fires usually begin in areas that are steep in slope and where there is limited or no access for firefighting apparatus. The potential of these wildland fires to sweep into the residential areas of Burbank is always a major threat.

Burbank's wildland includes the area above Sunset Canyon Drive, generally following the contour of the foothills of the Verdugo Mountains. This area falls within a designated as Fire Hazard Severity Zone (FHSZ) and is characterized by mountains, heavy vegetation and narrow streets. These conditions, combined with the local climate, exacerbate the potential for wildland fires to ignite and spread. The FHSZ, composed of moderate, high, and very high zones, is comprised of a total of 4,265 acres of both private and public land: 1,702 acres are undeveloped mountain reserve land belonging to Burbank, 652 acres are developed public park land, 1,232 acres are developed residential areas, and the remainder falls within property belonging to commercial interests.

Flood *(Moderate Risk/Moderate Frequency)*

It is a relatively rare occasion when Burbank is vulnerable to floods and mudslides with the exception of post-fire water and mud run-off from the 2017 La Tuna Fire. The winter storms in 2018 caused post-fire debris flows and mudslides. During the next three to five years, similar occurrences may be expected if there are significant rainstorms. In an effort to mitigate potential flooding conditions, the Burbank Public Works Department plays a key role in maintaining streets, monitoring draining channels, clearing debris basins and flood control channel inlets and working with LA County agencies to assist in restoring flood damaged areas of the Verdugo Mountains.

BFD is prepared to respond to all types of flood situations including flooded structures, street and intersection flooding, hillside flooding and mudslides. Individual engine and truck companies routinely carry equipment necessary in the majority of storm-related calls. There are, however, certain situations in which specialized training and equipment are needed, specifically for swift water rescue emergencies. In the event of a flood control channel rescue, BFD immediately deploys its own swift water rescue personnel and receives assistance from neighboring jurisdictions through automatic and mutual aid agreements.

Severe Weather *(Moderate Risk/Moderate Frequency)*

The potential risk of damage in Burbank from severe weather such as windstorms or extreme heat is not as significant as the risk from earthquakes or wildland fires. Nevertheless, severe weather and windstorms pose a significant risk to life and property by creating conditions that disrupt essential systems such as public utilities, telecommunications and transportation routes.

Severe windstorms can present a very destabilizing effect on the dry brush that covers local wildland/urban interface areas and increase wildland fire threat. Destructive impact to trees, power lines and utility services also are associated with high winds. Based on local history, most high wind incidents in Burbank are the result of Santa Ana wind conditions that typically occur during the period between October and March.

Santa Ana winds travel from a stable, high-pressure weather system called the Great Basin High through the canyons and towards a low pressure system off the Pacific Ocean. Burbank is in the direct path of the ocean-bound Santa Ana winds. There are instances when Santa Ana winds are in effect, but due to the orientation of the Verdugo Mountains the winds are diverted above and around Burbank reducing the effects of the winds.

Severe weather in most instances mimics the same threatening conditions as would a severe windstorm. Flooding and mudslides would be an added consideration when predictions of prolonged precipitation or periods of torrential rain are forecasted.

The level of emergency response would not change for severe weather. However, the level of awareness and preparedness would certainly escalate during the period of the event, particularly during red flag warnings. There is no significant history of severe weather that would be considered disastrous in nature, but rather a disruption. These disruptions can be managed with day-to-day operations within the city.

Technological/Human Hazards

HazMat Incidents *(High Risk/Low Frequency)*

BFD is responsible for responding to all HazMat incidents in the city. BFD has personnel trained as HazMat Specialists assigned to fire stations throughout the city as well as a Type 1 HazMat Unit (HazMat 12) located at Station 12. Information regarding the residential, commercial and industrial occupancies in the city, including site plans, existing inventory and location of hazardous materials at the site and hazardous materials plans, are kept on HazMat 12. HazMat Specialists are trained to respond to incidents with methods of monitoring, containment and stabilization.

HazMat 12 is a specialized vehicle that is equipped to assist or manage incidents. It is cross-staffed by the truck company at Station 12. VFCC coordinates the response to all calls for HazMat assistance in Area C. Mutual aid is also available upon request. BFD has tested plans and procedures to manage all-risk HazMat incidents.

Utility Failure *(High Risk/Low Frequency)*

Damage to Burbank's utilities infrastructure would certainly cause a major disruption in the delivery of needed power, water, sewer and natural gas services within the city limits. There would be potentially serious consequences for the delivery of emergency services. These include numerous service delivery issues, such as emergency notification systems, limited healthcare capability, emergency and non-emergency communications and basic welfare needs.

Each fire station is equipped with a fixed stationary generator and fuel to provide electrical power in the event of a power failure. BFD will remain self-sustaining during periods of infrastructure failure. Communications, staffing, functional apparatus and equipment, facilities and nutrition are all considerations in emergency preparations. Immediate concerns will focus on repairs necessary to restore utilities to areas of greatest need such as hospitals and medical care facilities, public health and safety, water pumping stations, sewage treatment facilities, etc. For prolonged periods of utility failure, outside assistance will be requested to fill any necessary need.

Transportation Hazards

Rail Systems *(High Risk/Low Frequency)*

Burbank is the point of divergence for two of California's major rail corridors: Metrolink connects the Burbank Metrolink Station with Ventura via the Ventura County Line and Lancaster via the Antelope Valley Line. The Amtrak Pacific Surfliner also utilizes this rail corridor with service from San Diego to San Luis Obispo. A high volume of rail traffic passes through Burbank every day including Metrolink and Amtrak passenger trains and Union Pacific freight trains carrying a wide variety of goods, including hazardous materials. While most of Burbank's street crossings have been eliminated over the years through the construction of grade separations, several street crossings remain, including major crossings at the intersections of Buena Vista Street and San Fernando Boulevard as well as Buena Vista Street and Vanowen Street.

Major rail incidents typically result from collisions between trains and vehicles at or near crossings, or from mechanical or track failure resulting in a derailment. The most common type of rail incident in Burbank has been train vs. vehicle and train vs. pedestrian collisions. In addition to the loss of life from train collisions, a hazardous materials release as a result of a rail accident is considered to be a realistic threat scenario for BFD.

Metrolink and Amtrak service which run along these lines would be interrupted as the result of a derailment, rail damage or rail obstruction. After it was determined that the freeway system was not functional, the Metrolink commuter rail proved to be a critical transportation resource in bringing employees, as well as commuters from other areas to Burbank after the 1994 Northridge Earthquake.

For a transportation accident whether by rail, road or air, BFD will respond and manage all aspects of the emergency specific to rescue, medical, fire suppression, HazMat, etc. Assisting agencies will be requested to aid in the response effort as needed.

Streets and Highways *(Moderate Risk/High Frequency)*

Burbank is traversed by two freeways: Interstate 5 (Golden State Freeway) which travels in a north/south direction parallel to San Fernando Boulevard and Routes 134/US 101 (Ventura/Hollywood Freeway) which travels through the southwestern corner of Burbank through the Media District. These freeways were built as part of a freeway expansion program in the 1950's and 1960's.

Along both freeway corridors, passenger vehicle collisions dominate the number of occurrences for freeway collisions. Rescue and medical aid is a typical freeway response for BFD in cooperation with the California Highway Patrol. The most serious HazMat incident that could occur in Burbank would involve a release from a transportation accident. Commercial vehicles and vessels transport hazardous materials such as petroleum products, industrial wastes and toxic gases. Transportation-related HazMat incidents can range from a chlorine spill resulting from an overturned pool maintenance vehicle, a derailed train or tank car hauling toxic waste products, or an aircraft that disperses a highly toxic product.

Burbank's Traffic Management Center in cooperation with law enforcement would be instrumental in managing alternate routes of travel for incidents affecting normal arteries of travel on city streets while BFD's HazMat Unit determines the best course of action to rectify the emergency at hand. Outside agency assistance is available upon request.

Natural Gas Facilities and Petroleum Pipelines *(High Risk/Low Frequency)*

The natural gas utility network in Burbank is operated by the Southern California Gas Company (SoCalGas). SoCalGas embarked on a retrofitting program of their steel and cast iron pipelines 4 inches in diameter and smaller after the 1971 San Fernando Earthquake exposed the vulnerability of the gas distribution system. About 90% of the distribution supply pipeline replacements have been done with plastic polyethylene pipes. Damaged pipelines may result in service disruption, flash fires and explosions due to ignition of natural gas from severed or leaking distribution lines.

A maximum credible earthquake on the Verdugo Fault could result in numerous damaged and leaking mains, valves and service connections associated with the small diameter gas supply system underlying surface streets. Damage would be concentrated along and adjacent to the predicted zone of rupture that extends northwestward from easternmost Sunset Canyon Drive to the point where the fault leaves Burbank at its juncture with Interstate 5. Pipes not made with earthquake-resistant plastic would most likely break and leak, causing fires along these streets. Similar scenarios are possible along and adjacent to the liquefaction-prone areas along Interstate 5 and the Los Angeles River,

especially as a result of a maximum credible event on the Hollywood Fault. Damaged house line connections, overturned water heaters and malfunctioning electrical utilities could also cause fires throughout Burbank.

A petroleum pipeline is in Burbank. Damage to this pipeline, as a result of an earthquake, would most likely cause localized contamination and disruption of service. There is also a risk of fire as a result of damage to these lines, but is not considered to be the primary hazard risk.

The condition of the pipeline systems is remotely monitored and maintained very carefully by the Plains Pipeline Group. Leaks, breaks and releases can be determined by drops in pipeline pressure thus generating an alert to the pipeline company. A robust pipeline manual that includes emergency procedures, mapping and general pipeline information resides with BFD's HazMat 12. Additionally, a quick reference emergency response guide is available to all first responders.

In most cases of a hazardous materials release, BFD procedures will be to isolate the affected area, identify the product and provide spill containment. Public safety will be accomplished by coordinating plans and efforts with law enforcement. Automatic and mutual aid may be requested to augment on scene staffing, expertise and equipment.

Security Hazards

Terrorism *(High Risk/Low Frequency)*

Burbank is the epicenter for many major motion picture, television and animation studios in Southern California. Numerous iconic features combine to make Burbank a potential target for both domestic and international terrorist attacks: population, industrial infrastructure, economic importance, international reputation and media industry. Burbank is also a transportation hub for much of northern LA County with its far reaching passenger and cargo rail lines, commercial airport and two major freeway arteries that support statewide commerce and travel.

Increased terrorism awareness and training have gained footing in the fire service, law enforcement and emergency management communities. Various terrorism intelligence groups such as Terrorism Early Warning Group and Joint Regional Intelligence Center provide first responders with critical intelligence to prepare for anticipated acts of terrorism. There are numerous designated Terrorism Liaison Officers within the BFD and Burbank Police Department. The goal of terrorism is clear; it is to create fear and disruption in society by acts of violence and/or technological disruption to essential systems and services.

BFD continues to acquire training at the first responder level as well as specialized terrorism training for the HazMat Unit. Cooperative training between HazMat teams in LA County continues to improve awareness and response.

Civil Disorder/Unrest *(Moderate Risk/Low Frequency)*

The potential for civil unrest originating in Burbank is considered very unlikely; however, the potential for civil unrest in LA County that could negatively impact the Burbank area is more plausible. Civil unrest is generally a police issue, but associated events may require the assistance of BFD. Medical aid and fire suppression are areas of assistance that may be necessary if the unrest escalates. Burbank would not influence the risk beyond its borders but rather support LA County and adjacent jurisdictions' efforts to defuse and respond to a potential civil unrest emergency.

Gang activity and influences are considered to be root causes of many civil disturbances that evolve into widespread rioting and civil unrest. Gang-related territorial disputes and violence erode the stability of communities and can ultimately boil over into adjacent jurisdictions. Any civil unrest in Burbank would more likely be isolated incidents involving labor demonstrations or political groups demonstrating at a local venue, all of which the Burbank Police Department has already prepared for and has previously handled. The Burbank Police Department is equipped and trained to manage events of civil unrest. Any necessary assistance through mutual aid is available upon request.

Fire Suppression

Established research shows that fire progresses through various stages of development in a predictable sequence. As a result, firefighters encounter a wide range of fire conditions at each fire depending on when they arrive on scene and initiate suppression activities. Fires may be at an early stage while others may have already gained control of an entire structure. Regardless of the speed of growth or length of burn time, all fires go through the same stages if the fire is allowed to continue unchecked. According to NFPA, the following are the four stages of fire growth within a structure: ignition, growth, fully developed, and decay.

Ignition Stage - Fuel, oxygen and heat join together in a sustained chemical reaction and open flame is visible. During the ignition phase, fire has not spread beyond the initial source and a fire extinguisher usually can control the fire.

Growth Stage - After the initial flame as a heat source, additional fuel ignites. Many factors can affect the growth of the fire, including fuel loading, air supply and conditions inside the structure. Convection and radiation ignite more surfaces. The size of the fire increases and the plume reaches the ceiling. Hot gases collecting at the ceiling transfer heat, allowing all fuels in a room to come closer to their ignition temperature at the same time. This is where the growth stage reaches its maximum and flashover is imminent and is extremely dangerous for any trapped victims.

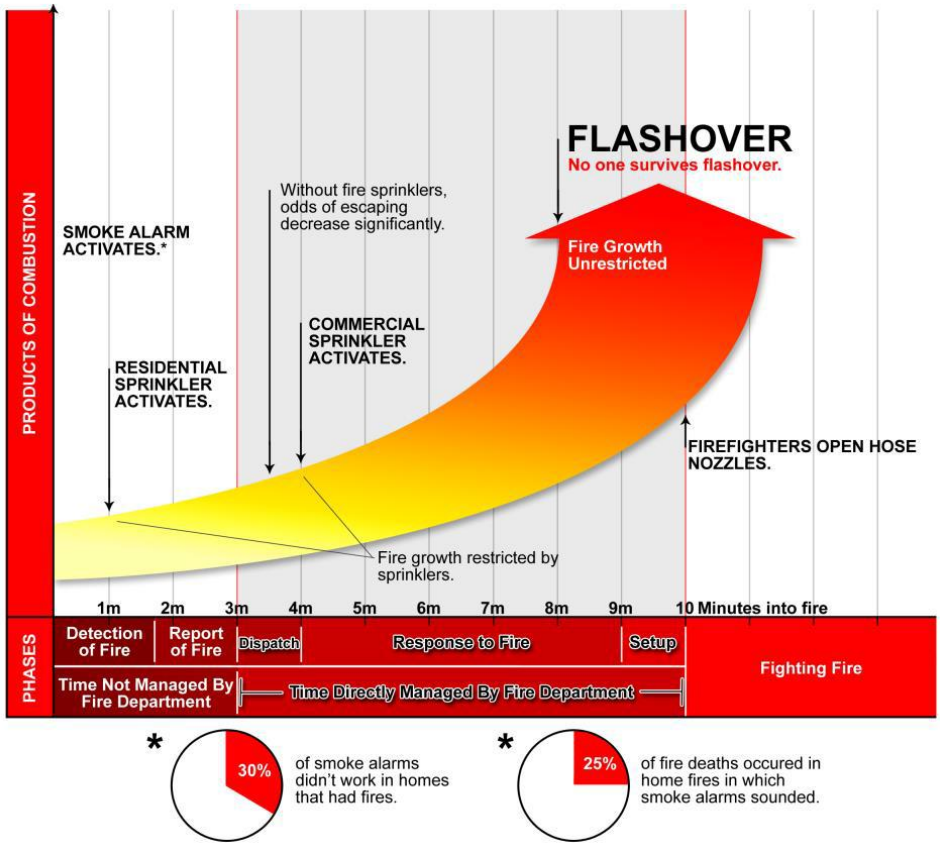
Fully Developed Stage - Although flashover is not a stage of fire, the transition between the growth stage and fully developed stage is typically where flashover occurs. Flashover is a catastrophic event where exposed surfaces are heated to their auto-ignition temperature and emit flammable gases. These gases are then ignited simultaneously at a temperature between 932 to 1,200 degrees Fahrenheit and the gaseous atmosphere becomes fully involved with fire. Because of the varied fire conditions that can be encountered during a structure fire, a common reference point needs to be identified so that comparisons and performance objectives can be set under equal conditions. The most critical time for life safety and property conservation is the point at which flashover occurs. It is at this point that the escalation in fire conditions significantly challenges BFD's resources and the safety of its personnel. Thus, a key performance objective is to interrupt the fire's progression before the point of flashover occurring. In the fully developed stage, fire has spread over much if not all the available fuel; temperatures reach their peak, resulting in heat damage. Oxygen is consumed rapidly and human survivability is highly improbable. Even if a person is not directly exposed to the fire, they have a significant reduction in survivability due to the amount of lethal gases they are exposed to during this stage of fire.

Decay Stage - The final stage of fire is decay. At this point, the fire is running out of fuel. The atmosphere is still hot and heat energy is still being released; however, the rate of combustion is slowing down. The intensity of the fire decreases to the point where there is only smoldering fuel. It is important to note that, without proper cooling, the fire in this

stage still has adequate heat to sustain combustion. An explosive event called a backdraft can occur if oxygen is reintroduced into this environment. Eventually, all of the fuel will be consumed and the fire will go out.

The figure below illustrates the growth or history of a fire event.

Time vs. Products of Combustion



Source: firesprinklerassoc.org

Flashover is a significant event for two reasons. First, the chance of survival for anyone (including firefighters in full protective clothing) in a room when flashover occurs is unlikely. Second, a flashover creates an exponential growth in the rate of combustion, which in turn requires a greater amount of water and resources to reduce the fire's burning temperature to below its ignition temperature. Measuring the time to flashover is a function of time and temperature. While variable, the time to ignition to flashover in residential and commercial occupancies with typical, modern day, hydrocarbon based contents is often 8 to 12 minutes. The optimum performance objective is to maintain enough strategically located staffing and equipment/apparatus, so that the minimum effective response force can reach a fire incident to prevent a flashover event and extinguish the fire as close to the point of its origin as possible.

Fire Flow and Water Supply

A reliable public water system that provides adequate volume, pressure and flow duration in close proximity to all buildings is a critical factor in mitigating a community's fire risk. The City of Burbank has its own water utility, Burbank Water and Power (BWP) that provides potable and reclaimed water for the community. The Burbank Domestic Water Distribution System consists of three major pressure zones and eight smaller hillside zones. The system has 30 storage facilities with a total capacity of 58 million gallons, and 19 booster stations. All firefighting capabilities and hydrants in Burbank are supplied from the potable water system with the exception of a small area near the Starlight Mesa. A one million gallon, recycled DeBell Golf Course Tank services hydrants from the Burbank landfill up to and including the Stough Canyon Nature Center. These hydrants are colored purple to indicate that they are reclaimed water and are from a separate supply system.

The sources of water supply to the City of Burbank include locally produced and treated groundwater as well as water purchased from the Metropolitan Water District of Southern California. Sixty percent of the water supply comes from locally produced and treated groundwater. The City's water supply to the eight smaller hillside zones is provided from storage tanks and is delivered via gravity feed and/or pump to the potable system and customers. A system-of-pumps are in place to fill tanks as they reach minimum standards established by BWP. In times of crisis, BFD can augment these pumps for a more rapid recovery of water levels during high water usage such as brush fires. This is referred to as the "Supply and Demand" system located in a small area of the wildland/urban interface portion of Burbank. One additional water source is BFD's 2,500-gallon Water Tender. This piece of equipment is mobile and capable of delivering water to anywhere in Burbank.

The evaluation of water supplies needed once a structure has become fully involved is known as fire flow and is a vital component of assessing fire risk. The fire flow evaluation does not address other equally important issues such as occupant risk and content vulnerability to fire. Fire flow requirements are factored into the risk assessment. Burbank has established minimum fire flow requirements and total water supply needed for existing structures and other anticipated fire locations. BFD adheres to the California Fire Code's minimum fire flow requirements, which are enforced by BWP.

BFD personnel are knowledgeable about the water system and its delivery. BFD personnel are trained to recognize and maximize its capability. A System Description and a map of Potable Water Pressure Gradients are maintained by BWP and updated with relevant information, as necessary.

The Fire Prevention Bureau performs plan checks on all new construction and building modifications for fire protection and construction features based on the adopted California Fire Code. Plan checks review construction, fire sprinkler and standpipe systems. Plan checks also consider the required fire flow for building size, usage, design, etc. The City of Burbank currently mandates that all new construction have fire sprinkler systems

including single family residences. Modifications to residential and commercial buildings may require sprinkler systems if construction costs exceed certain percentages of the present day replacement value of the building. The Fire Prevention Bureau works closely with the Community Development Department - Building Division and BWP to enforce the Burbank Municipal Code, Title 9, Chapter 2 Fire Sprinkler Ordinance. Significant changes in the system are monitored and the Hydrant Map Book and other supporting hard copy documents are updated as necessary. The potable water system has 1,841 hydrants and the recycled water system has 41 hydrants within the City of Burbank. Based on the California Fire Code guidelines, hydrants located in residential areas are spaced 500 feet apart and 300 feet apart in commercial zones. They are easily located in the sidewalk near all street corners or mid-block when a street is double in length. A blue reflector is also placed in the middle of the street to indicate a hydrant location. The system of identifying hydrants within the City is multi-faceted. All standard hydrants supplied with potable water are painted orange. Several hydrants in the hillside zone are identified with a white painted top and orange body, which are the Supply and Demand hydrants. Hydrants that are painted purple are supplied with reclaimed, non-potable water. Private hydrants not maintained by BWP are painted red for easy identification. BWP monitors and tracks all City hydrants, and provides the Agency with updated Hydrant Map Books and Supply and Demand Fire Hydrant reference sheets.

Fire Risk Assessment

The majority of Burbank is wood frame residential construction or low, mid and high-rise commercial development that meets current building standards. There are 30 mid-rise and 18 high-rise buildings, as well as multiple high occupancy buildings housing limited or non-ambulatory populations requiring special fire logistical demands. Burbank has numerous areas that can be considered wildland/urban interface where the growth and spread of fire may begin in the brush but quickly enter an urban context. The majority of the direct interface is along the Verdugo Mountains while a small portion of the city is vulnerable to a section of the Hollywood Hills.

The fire risk analysis takes into account fire potential, life hazards, economic impact, occupancy use, construction features, fire protection systems, fire flow requirements and community risk factors. The following charts show the number and occupancy type by risk category within each of BFD's fire districts:

Number of Commercial Occupancies by Risk Category

Fire District	Low	Moderate	High	Maximum	Total
11	0	908	99	74	**1,081**
12	0	782	113	56	**951**
13	0	691	132	135	**958**
14	0	737	244	68	**1,049**
15	0	888	257	112	**1,257**
16	0	53	17	11	**81**
Total	**0**	**4,059**	**862**	**456**	**5,377**

Source: First Due

Number of Residential Occupancies by Risk Category

Fire District	Low	Moderate	High	Maximum	Total
11	0	5,242	7,578	9	**12,829**
12	0	6,292	4,715	0	**11,007**
13	0	3,177	1,875	0	**5,052**
14	0	6,267	1,392	0	**7,659**
15	0	4,947	3,923	0	**8,870**
16	0	4,044	1,210	0	**5,254**
Total	**0**	**29,969**	**20,693**	**9**	**50,671**

Source: First Due

Hazard Levels

The following hazard levels have been established for fire risk assessment:

Low Risk: Small structures that are remote from other buildings are considered low hazard occupancies. This includes storage sheds, small outbuildings and similar buildings that pose a relatively low risk of harm to life, environment or property if damaged or destroyed by fire. Also, included in this category are vehicle fires, rubbish fires and dumpster fires.

Moderate Risk: Moderate hazard areas are also known as typical hazards. Most of Burbank falls into this category: one and two family dwellings, detached garages, sprinklered commercial and industrial buildings less than 10,000 square feet without a high hazard fire load, sprinklered storage facilities or similar buildings where loss of life, environment or property damage is limited to the single building and vacant buildings.

High Risk: These properties are typically substantial structures that in an emergency may bear the risk of large loss of life, environment or property. This includes schools, office buildings, low and mid-rise hotels, garden apartments, large apartment or condominium complexes (100+ units), large commercial buildings (>9,999 square feet) or commercial and industrial buildings with high hazard fire load or hazardous materials (not meeting the CERS threshold), senior citizen housing, convalescent homes, churches, commercial or industrial non-sprinklered buildings, and non-sprinklered strip malls. Lastly, any commercial or multi-family dwelling under construction, and similar occupancies that have the potential for substantial loss of life, environment or property. For Burbank this equates to the following:

- 85 Schools
- 24 Hotels
- 30 Mid-rise buildings
- 35 Senior Care Facilities
- 2 Convalescent homes
- 1 Dome (used for visual and concert testing)

Maximum Risk: This includes buildings or facilities with unusually high risk that would involve a significant augmentation of resources and personnel, and where fire would pose the potential for a catastrophic event involving large loss of life, environment or property. They also present unique challenges that firefighters face when combating fires in these types of buildings. This risk level includes high-rise buildings, hospitals, airports, movie theaters, movie studios, large shopping centers, and hazardous materials businesses that meet the CERS threshold. For Burbank this equates to the following:

- 18 High-rise buildings
- 1 Industrial park (65 acres)
- 10 Multi-story senior residential buildings
- 1 Providence Saint Joseph Medical Center
- 1 Hollywood Burbank Airport
- 3 Movie theaters (16 theater, 8 theater and 6 theater buildings)
- 5 Studio campus lots (Warner Bros. Studios, Warner Bros. Ranch, Walt Disney Studios, The Burbank Studios and Nickelodeon)
- 1 Mall (Burbank Town Center)
- 2 Large shopping centers (Empire Center and IKEA)
- 422 Hazardous materials businesses
- 59 Underground storage tank sites, totaling 152 underground storage tanks

Probability

In order to assess the risks associated with fire suppression, BFD must take into consideration the hazards within the city limits. Hazards such as schools, high-rise buildings, mixed use occupancies, film studios, railways, highways and the Airport pose the greatest threats to life, property and the environment. The likelihood of incident frequency is always there but increases during business hours as the Burbank population doubles during this time of day. Additionally, lack of personnel on three-person engine companies makes BFD less efficient and requires multiple units to mitigate these incidents. The training and pre-planning of the routine, large-scale and novelty incidents will allow BFD to be better prepared to serve the community. This along with fast response times that are within NFPA standards will make for a positive outcome when dealing with these incidents.

Consequence

The consequence of fire suppression events can have various outcomes depending upon the incident and the danger it poses to the community. This can be loss of life, infrastructure and current or future revenues to all that are affected. These events often have emotional, economic and historical ties associated which can have long or short-term effects.

Impact

The impact depends upon the type of incident. Small-scale or low risk incidents will have little impact with no interruption or delay of services but could have an emotional impact. Large-scale or maximum risk incidents will require depleting multiple resources while bringing in automatic and mutual aid agencies to assist with the incidents and cover fire districts. This could also cause a financial burden to the community if a building produces, sells or manufactures goods and is a source of income for multiple families. Bringing in outside resources to assist during maximum risk incidents limits the city's coverage for emergencies and increases response times. A community's threat of injury or loss increases as fire and emergency resources become depleted and are less available for emergency incident mitigation.

Mitigating Factors

Reducing the risk associated with fire suppression would positively affect the outcomes. Features such as fire protection sprinkler systems help reduce the potential or loss of life or property. Effective training and preplanning along with effective staffing will also assist in this area. Automatic and mutual aid agreements are a key factor when bringing high and maximum risk incidents to a close. Regular replacement of aging or broken BFD equipment will reduce down-time of apparatus and will keep response times to a minimum. Ensuring that BFD personnel are well trained and equipped to handle fire suppression incidents will reduce the impact that these incidents have on the community. Also, fire prevention and community education will help with keeping the community fire safe.

Negative mitigating factors are when incidents go on for an extended amount of time and are complex. A fire at a facility that contains hazardous materials will take additional resources and can last for long hours. This would require BFD to back-fill stations with personnel recalled to work in order to release the assisting units back to their assigned district. During this drawdown on resources, only the key fire stations would be covered until either units are released from the incident or the incident comes to a close.

Fire Suppression Critical Tasks

The following description identifies the methodology for determining staffing levels for different incident types, the number of units needed and the critical tasks that must be performed to mitigate the incident effectively and efficiently.

The variety of fireground factors, including the building and occupancy type as well as the size and intensity of the fire and life hazards, determine the tasks required to deal with the incident and the level of risk that will be taken in completing those tasks. These tasks are interrelated but can be separated into two basic types: fire suppression and life safety. Fire suppression tasks are those related to extinguishing the fire. Life safety tasks are those related to finding trapped victims and removing them from a building.

Fire suppression tasks, specifically as they apply to the application of water, can be accomplished with handheld hoses or master streams. Each 1¾" hose line requires a minimum of two firefighters to advance into a structure. A 1¾" hose line can flow 160 gpm, so when these lines are used the fire flow is 80 gpm per firefighter. The 2½" hose line can flow 250 gpm and requires a minimum of two or three firefighters to effectively manipulate it, yielding a flow of 80 to 125 gpm per firefighter. Master streams can flow from 500 to 1,000 gpm each. Fewer firefighters are required to operate these large caliber streams because they are fixed to the apparatus. The decision to use hand lines or master streams depends upon the stage of fire and threat to life safety or savable property. If the fire is in a pre-flashover stage, generally an offensive fire attack strategy is engaged in which firefighters take smaller diameter hand lines into the interior of the building. The hand lines are used to attack the fire and shield trapped victims until they can be removed from the building. If the fire is in its post-flashover stage and the fire has extended beyond the capacity or mobility of hand lines, or the structural damage is a threat to the firefighters' life safety, then a defensive strategy is employed. Firefighters are removed from the building and master streams are employed to keep the fire from advancing to surrounding buildings.

The life safety, rescue tasks are based upon the number of occupants, their location, their status (awake vs. sleeping) and their ability to take self-preserving action. For example, ambulatory adults need less assistance than non-ambulatory. The elderly and small children usually require more assistance. BFD performs aggressive offensive attacks whenever possible, with the objective of first putting a hose line between potential victims and the fire while containing the fire to the room of origin.

Incident progression beyond the capabilities of the initial response requires additional command support for such tasks as planning, logistics and administrative positions. Additional firefighting personnel may reinforce the points of attack, provide relief or staff additional support positions. The quantities of personnel and equipment necessary will vary with any of the factors listed below:

- building construction
- number of occupants
- physical and emotional condition of occupants
- extent of fire upon arrival (flashover)
- built-in fire protection
- area of fire involvement
- firefighter or civilian injuries
- equipment failure
- structural collapse/explosion
- flammable/hazardous materials involved

Critical tasks are those tasks that must be conducted in a timely manner by firefighters to effectively manage an emergency incident. NFPA 1710 outlines critical tasks that must be completed by an initial response to a structure fire. The basic goal of structural firefighting is to control the fire before it reaches the flashover stage. Critical tasks that must be accomplished by the effective response force at a structure fire are identified in the following pages. Dependent on the situation, these tasks may be performed sequentially or concurrently.

Critical tasking represents the minimum amount of firefighters needed early during the fire scene. Several other tasks must be performed before termination of the scene such as salvage, overhaul and fire investigation. Additional units may be summoned for these tasks increasing the number of firefighters on scene.

Fire Suppression Critical Tasks by Risk Level

Critical Task	Low Risk	Moderate Risk	High Risk	Maximum Risk
Incident Commander	1	1	2	1
Public Information Officer				1
Operations Section Chief				1
Planning Section Chief				1
Attack Lines	1	2	6	10
Search and Rescue		2	5	8
Water Supply		1	2	2
Exposure Lines		2	4	4
Ventilation Team		3	4	6
Salvage Team		1	4	5
Utilities Shut-off		1	1	1
Rapid Intervention Crew		4	5	6
Back-up Hose		2	3	4
Pump/Aerial Operator	1	1	2	3
Medical Group		2	2	4
Minimum Total	**3**	**22**	**40**	**57**

Critical Task Definitions

Incident Commander - The successful mitigation of any emergency incident requires the implementation of an effective command structure. This task involves one officer who coordinates the attack, evaluates results and redirects the attack as necessary, arranges for more resources, monitors conditions that might jeopardize crew safety, and maintains personnel accountability. The Incident Commander is generally located outside of the structure at an established command post.

Public Information Officer - The individual who is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations.

Operations Section Chief - The Operations Section Chief is responsible for managing all tactical operations at an incident. The build-up of the Operations Section is generally dictated by the number of tactical resources involved and span of control considerations. The Operations Section consists of the following components:

- Ground or surface-based tactical resources
- Aviation or air resources
- Staging areas

Planning Section Chief - The Planning Section is responsible for managing all information relevant to an incident. The Planning Section collects, evaluates, processes, and disseminates information for use at the incident. Dissemination can be in the form of the

written Incident Action Plan, formal briefings, or through map and status display boards. This Section is managed by the Planning Section Chief.

Attack Lines - Personnel deploy a 1¾" hose line that produces 160 gpm and is usually handled by one or two firefighters, or a 2½" line that produces 250 gpm and is handled by two or three firefighters. Each engine carries a set of attack lines that are either pre-connected to the pump, folded on the hose bed, or in a special pack for carrying into high-rise buildings. The selection of which attack line to use depends on the type of structure, distance to the seat of the fire and stage of the fire. Due to their size and weight, 2½" attack lines are less often used in interior fire attacks.

Search and Rescue - This task involves the search for living victims and their removal from danger while the attack crew moves between the victims and the fire for protection. A four-person search and rescue crew is normally sufficient for most moderate risk structures, but more crews are required in multi-story buildings or structures with people who are not capable of self-evacuation.

Water Supply - An engine has about two to three minutes of water if one 1¾" hose line is flowing at full capacity. In order to maintain a continuous flow of water for longer periods of time, the engine's pump must be connected to a hydrant. This task requires one or two firefighters to deploy the large diameter (4") hose between the engine and the nearest hydrant before the engine's water tank runs dry.

Exposure Lines - Personnel deploy an attack line to prevent fire expansion. This exposure line requires a minimum of two firefighters to deploy and use. An exposure line can protect internal exposures, such as the floor above the fire in multi-story buildings or adjacent occupancies within the building. An exposure line may also be used externally to protect nearby structures from igniting from the radiant heat. In situations where the heat release is great or structures are built close together, a 2½" hose line or master stream would be used. If a 2½" line is used, the staffing requirement is increased.

Ventilation Team - Personnel open a vertical or horizontal ventilation channel when the attack crew is ready to enter the building. Ventilation tasks require a company with four or more firefighters for effective completion. Ventilation removes superheated gases and smoke, preventing flashover and allowing attack crews to see and work closer to the seat of the fire. It also gives the fire an exit route so the attack crew can "push" the fire out the opening they choose and keep it away from endangered people or unburned property.

Ventilation must be closely timed with the fire attack. If it is performed too soon, the fire will get additional oxygen and grow. Instead, the gases and smoke will be forced back toward the firefighters and their entry point, endangering themselves, as well as any victims and unburned property they may be protecting.

Salvage Team - This task involves saving or rescuing of property in danger; to limit damage incurred from the uncontrolled presence of water from activated sprinklers, leaking water pipes, and other sources, as well as smoke, heat, and related elements that are the intrinsic by-products of fire.

Utilities Shut-off - This task involves at least one firefighter who secures natural gas, electrical supply and water to the affected structures before interior firefighters open any concealed spaces, such as walls or attic spaces.

Rapid Intervention Crew - This task involves the staging of firefighters in a position of tactical advantage, equipped with rescue tools and a 1¾" hose line, ready to enter the structure and perform firefighter rescue if something goes wrong. This establishment of a rescue crew is an Occupational Safety and Health Administration requirement. Current procedures call for a minimum of four firefighters to assume this role as soon as possible; on larger structures, multiple companies may be assigned.

Back-up Hose - Personnel deploy a 1¾" or 2½" hose line that is taken in behind the attack crew to cover their path of egress or support the attack crew. This task requires a minimum of two firefighters if a 1¾" line is used. A 2½" line may be used in lieu of a 1¾" line if the situation requires a larger volume of water at the point of attack.

Pump Operator - One fire engineer effectively operates the engine's water delivery system. The pump operator monitors water pressure and flow on each hose line and ensures that the apparatus is operating within designed parameters. The pump operator also completes the hose hookups to the correct discharges and completes the water supply hookup to the correct intake. If hydrant location allows, the pump operator may also connect the supply line to the hydrant without assistance, although this task is usually assigned to an additional firefighter or engineer.

Aerial Operator - This task involves positioning the aerial ladder for aboveground rescues, roof access and elevated master streams for firefighters. The aerial operator is responsible for operating the ladder within its safety parameters to prevent overloading the device or injuries to firefighters or civilians. Positioning takes an additional firefighter known as the tiller-man to help maneuver the ladder into place. Once in position, it becomes a single person operation which makes it an efficient piece of equipment.

Medical Group - This task involves at least two firefighter paramedics who establish a treatment and rehabilitation area to prepare for any victims found and any firefighters who are injured or physically exhausted.

Wildland Fire Services

Wildland/urban interface fires refer to those which occur in undeveloped areas in the City of Burbank and burn in natural vegetation. Wildland fires pose a threat to human life, property, wildlife habitats, critical infrastructure and watershed areas. The severity of a wildland fire is dependent on the location in which it originates, its relationship to fuel sources, weather, topographical influence and available resources at hand to mitigate it. Wildland fires that start in areas which are steep, where thick and continuous vegetation is present and have limited access for firefighters to engage, have the potential to grow quickly and pose a major threat to all of the aforementioned values at risk.

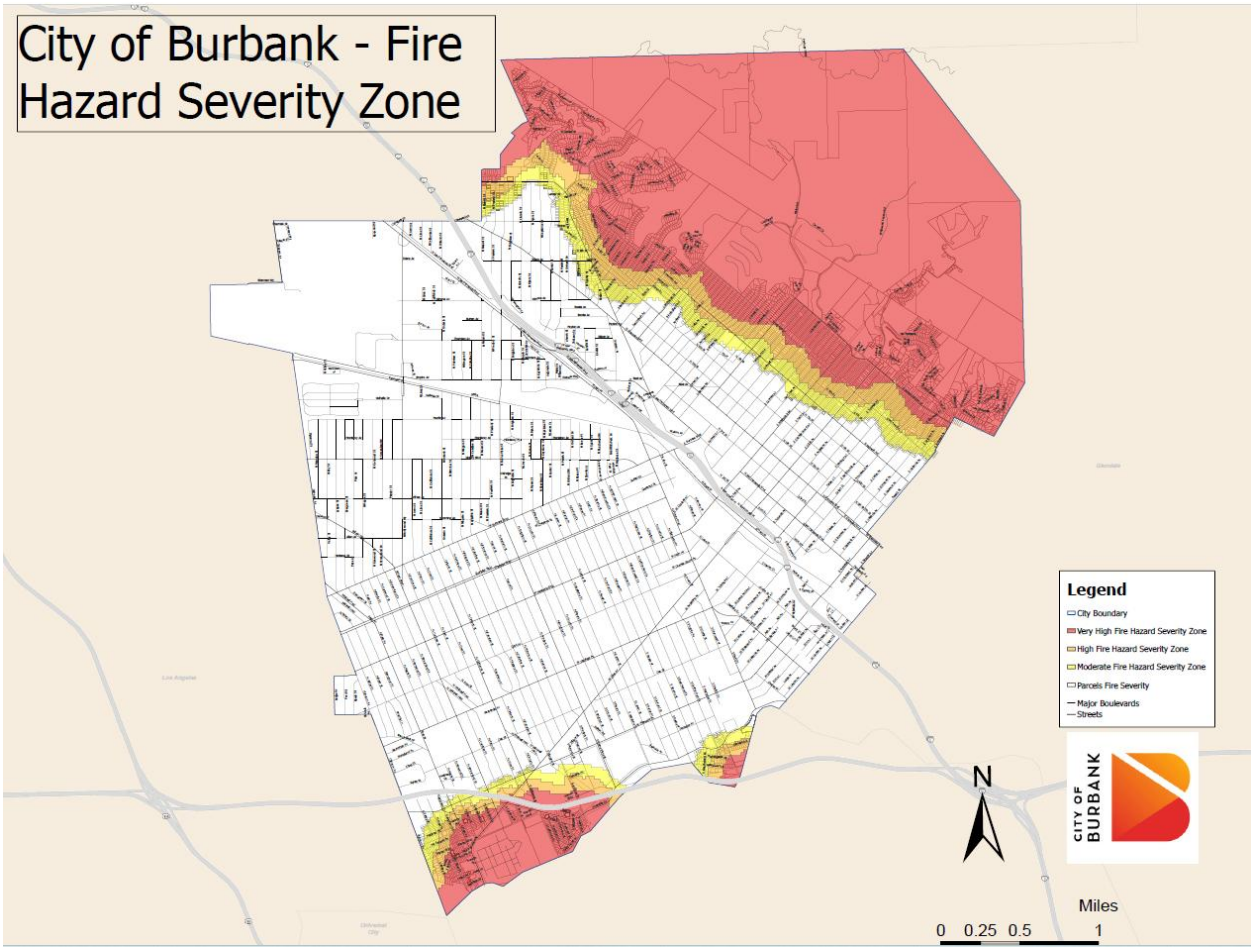
As a courtesy to fire departments throughout the state, CAL FIRE has developed Fire Hazard Severity Zone (FHSZ) maps. The State uses gathered data on local vegetation, weather and topography as well as fire history for criteria when developing the FHSZ maps. These maps and the data associated with them have helped fire departments develop their deployment models for responding to wildland fires. CAL FIRE has identified all of the wildland within the City of Burbank to be in the category of *very high fire hazard severity*.

Most of Burbank's wildland includes the hillside areas in Station 11, 13 and 16's response districts. Collectively, these areas fall within designated Fire Hazard Severity Zones (FHSZ), which are characterized by mountainous areas of dense and continuous vegetation, narrow streets and intermixed structures. In addition to the historical data collected, BFD recognizes that Southern California has experienced drought or near drought conditions for several years, which has put the live and dead fuel moisture content in the city's hillsides at critical lows during the summer and fall months. Lower live and dead fuel moistures, along with record breaking high temperatures in recent years have increased the potential for large fire growth and its impact on the City of Burbank.

The remaining area identified by CAL FIRE as a VHFHSZ is in the City's south area in Station 12's response district. Any wildland fire in this area poses a significant threat to the 134 Freeway, the Disney Animation Building, Warner Bros. Studios and residences. All other open space areas in the City of Burbank include undeveloped land adjacent to the freeways and vacant lots.

The following map shows the Fire Hazard Severity Zones in Burbank:

Fire Hazard Severity Zone Map



Probability

The cause of wildland fires can be broken down into two major categories: nature and human caused. Natural fires are typically caused by lightning. Human caused fires are either intentional as in the case of arson or unintentional (e.g., operating machinery, carelessly discarding heat sources, vehicle accidents and downed power lines). Since much of Burbank's 4,625 acres of FHSZ is comprised of undeveloped mountain reserve and developed park land, it is heavily used daily by hikers and mountain bikers. This, along with the rest of the VHFHSZ being developed residential area, as well as a growing homeless population, increases the probability of a wildland fire during the summer and fall months.

The high potential for the rapid spread of a wildland fire in the City of Burbank is due in large part to steep topography and available fuels including native brush and grass. This

potential increases in the summer months due to higher temperatures and low relative humidity.

Consequence

The consequence of a wildland fire to the City of Burbank may include loss of lives or structures, displacement of its residents, interruption of emergency communications and closure of recreation areas such as the Starlight Bowl, DeBell Golf Course and hiking trail system.

The entire eastern and most of the northern edges of the city are classified as wildland/urban interface areas and as such is heavily populated with residences. Any fire in this area poses a significant threat to life and property due to the vegetation and steepness of the topography. This threat is significantly compounded during red flag days when there are high temperatures, low relative humidities and strong Santa Ana winds predicted. A fire under these conditions has the threat of damaging or destroying hundreds of homes and displacing hundreds of Burbank residents under mandatory evacuation orders.

In addition to residential life and property loss, a wildland fire in the City poses a significant threat to commercial life and property. Depending on the point of origin, a fire on Burbank's hillside has the possibility of impacting the Castaway Restaurant and Banquet Hall which has an over 1,000 person capacity and DeBell Golf Course/Hilltop Restaurant and Bar. The secondary consequence of a fire impacting any of these venues would be a loss in commerce as local businesses will need to be evacuated and could sustain damage.

Impact

An initial attack response to a wildland fire in the City of Burbank consists of five fire engines, two Battalion Chiefs and one RA. As a six station department, any fire on the city's hillside results in a major impact to BFD's coverage levels. If an incident grows from an initial attack phase into a large-scale multi-day extended attack phase, it can result in a drawdown in BFD staffing levels as most of our personnel are recalled to work overtime on the fireline as well as backfill for citywide coverage. As BFD relies heavily on mutual aid in the form of engines, hand crews, bulldozers, helicopters, fixed wing air tankers and overhead personnel to mitigate any large-scale wildland fire, the potential fiscal impact may be in the millions.

Impacts from a wildland fire to other City services include the Burbank Police Department, BWP, and Parks and Recreation Department. Due to BFD's reliance on the Burbank Police Department for evacuations and road closures, there is an impact to their staffing levels. Additionally, the Burbank Police Department shooting range, which has structures on site, is in Wildwood Canyon and any fire near there will affect training. BWP has multiple water tanks and pump houses in the mountains and any fire threatening them poses a risk to keeping them full for municipal water services. As a wildland fire poses a high threat to damaging the Starlight Bowl, Stough Canyon Nature Center, DeBell Golf

Course and Vital Link trail system, the impact to the Parks and Recreation Department would be high.

Mitigating Factors

BFD's strategy to mitigate the start and spread of wildland fires begins with fire prevention and concludes with training, rapid response and mutual aid agreements. Reducing the ignition and spread of wildland fire begins with fire prevention. Through BFD's website, social media and community interaction, the Fire Prevention Bureau provides public education to the residents on how to enjoy their open space without putting it at risk. If a wildland fire does occur, BFD's ongoing code enforcement of providing defensible space between structures and vegetation reduces the risk of damage and destruction.

Rapid and efficient response to a wildland fire begins with training and having the proper equipment. As a progressive agency, BFD takes part in ongoing training that includes in-house training and preparation, annual wildland fire refresher training and comprehensive drills with neighboring agencies, as well as off-site live fire training with the LA County Fire Department. Additionally, as many BFD personnel are qualified in line supervision and overhead incident management positions in response to wildland fires statewide, they play key roles in suppressing fires as they occur in Burbank.

Control and containment of a wildland fire takes a considerable amount of resources that demand more than what most local fire departments can provide. As an incident begins to grow beyond the initial stage of containment, BFD relies on automatic aid and mutual aid agreements with neighboring agencies. These agreements include the limited use of additional fire engines, hand crews, helicopters, bulldozers and line supervision. Ongoing training and communication with BFD's cooperating agencies have proven to contribute to the success in containing wildland fires and limiting damage.

Hazard Levels

The following hazard levels have been established for wildland fire risk:

- **Low Risk:** Small vegetation fire outside the VHFHSZ
- **Moderate Risk:** Wildland fire of less than 5 acres
- **High Risk:** Wildland fire of 5-20 acres and/or significant infrastructure threatened
- **Maximum Risk:** Large-scale, multiple operational period incident which has moved into the extended attack phase

Wildland Fire Services Critical Tasks

BFD uses the Cal OES Region I Area C recommended response levels to determine its own response level to wildland fires. Wildland fires in the City of Burbank are broken up into two categories: those that are reported in the VHFHSZ and those that are not. A fire that is reported outside the VHFHSZ (such as a grass fire along the roadside or freeway) will typically get a single or two engine response because it is unlikely to spread to a significant level. On the other hand, any fire reported inside the VHFHSZ will trigger a full first alarm "Brush Response" consisting of five Type 1 fire engines, two Battalion Chiefs and one RA. As an incident grows, requests for assistance come in the form of additional "alarms" consisting of five engines, one Battalion Chief and one water tender. Additional requests from cooperating agencies can be made for other specialized equipment mentioned in Mitigating Factors. Logistical support for BFD firefighting resources is provided by the Fire Prevention Bureau and Burbank Fire Corps volunteers, as well as the Emergency Management Administrator for mass notification and liaison to City departments.

Depending on the size and complexity of a wildland fire, critical tasks can be broken up into two categories: incident command system (ICS) positions that are typically filled with the Battalion Chief rank or higher and individual firefighter (line personnel) positions. The numbers in the following table reflect a typical wildland fire with the minimum number of personnel to staff a minimum of two divisions for perimeter control.

Wildland Fire Services Critical Tasks by Risk Level

Critical Task	Low Risk	Moderate Risk	High Risk	Maximum Risk
Incident Commander **(IC)**	1	1	1	1
Safety Officer		1	1	1
Public Information Officer		Performed by IC	1	1
Liaison Officer		Performed by IC	1	1
Operations Section Chief		Performed by IC	1	1
Planning Section Chief		Performed by IC	1	1
Division/Group Supervisor (Captain minimum)		2	2	2
Lookout		2	2	2
Water Supply	1	1	1	1
Perimeter Control and Structure Defense	1	7	20	21
Perimeter Control and Structure Defense		7	20	21
Line Safety Officer (Captain minimum)			2	2
Fireline Medic			2	2
Staging Area Manager			1	1
Heli-base Manager		1	1	1
Helicopter Refill Pump Operator		1	1	1
Helicopter Refill		1	1	1
Minimum Total	**3**	**25**	**59**	**61**

Critical Task Definitions

Incident Commander - This person is responsible for all aspects of an emergency response; including quickly developing incident objectives, managing incident operations, application of resources and responsibility for all persons involved as well as maintaining personnel accountability.

Safety Officer - All agencies stress the importance of safety as both a management and an individual responsibility. In addition, the Command Staff position of Safety Officer may be assigned to develop and recommend measures for assuring personnel safety, and to assess and/or anticipate hazardous and unsafe situations.

Public Information Officer - The individual who is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations.

Liaison Officer - Incidents that are multi-jurisdictional, or have several agencies involved, may require the establishment of the Liaison Officer position on the Command Staff. The Liaison Officer is the contact for agency representatives assigned to the incident by assisting or cooperating agencies.

Operations Section Chief - The Operations Section Chief is responsible for managing all tactical operations at an incident. The build-up of the Operations Section is generally dictated by the number of tactical resources involved and span of control considerations. The Operations Section consists of the following components:

- Ground or surface-based tactical resources
- Aviation or air resources
- Staging areas

Planning Section Chief - The Planning Section is responsible for managing all information relevant to an incident. The Planning Section collects, evaluates, processes, and disseminates information for use at the incident. Dissemination can be in the form of the written Incident Action Plan, formal briefings, or through map and status display boards. This Section is managed by the Planning Section Chief.

Division/Group - Divisions are used to divide an incident geographically. Groups are used to divide an incident functionally.

Division/Group Supervisor - The individual in charge of the division/group to maintain an effective span of control.

Lookout - The lookout is a vital element in the risk management process and one of the key positions to fill prior to engaging in fighting a wildland fire. A lookout is a firefighter of

any rank who is in a position to notice the cumulative changes in fire behavior and its potential impact on the firefighters fighting it.

Water Supply - A fire engine pumping a minimum two 1" hose lines at a wildland fire will be able to do so for approximately 7-8 minutes before running out of water. In order to maintain a continuous flow of water on the fireline, the engine pumping it must secure an additional water source. The additional water supply is usually provided by a fire hydrant, water tender or fire engine.

Perimeter Control - Using water from a hose line and or hand tools to establish a control line around the edge of the fire to halt its spread. Due to the low complexity and slow rate of spread of low to moderate risk wildfires, these tasks can be performed by engine company firefighters. As the rate of spread and complexity grow into the high and maximum risk category, additional resources such as hand crews and bulldozers are required to perform this task.

Structure Defense - The strategy of using fire resources to defend structures which are threatened by wildfire. These resources include 3-4 person fire engine crews, 18 person hand crews, bulldozers and aircraft.

Line Safety Officer - The firefighter on the fireline who is identifying, assessing and mitigating risk while firefighters are engaged in firefighting.

Fireline Medic - The firefighter on the fireline who immediately treats injuries and arranges transportation of injured firefighters off the line.

Staging Area Manager - Staging areas are locations set up at an incident where resources can be placed while awaiting a tactical assignment on a three minute available basis. The Staging Area Manager is responsible for managing all activities within the staging area.

Heli-base - An area away from the fireline where helicopters can stage, refill their water tanks, refuel and pick up firefighters or logistical supplies to deliver them to the fireline.

Heli-base Manager - The Heli-base Manager is responsible for managing all operations at the heli-base and coordinating the efforts between air and ground resources.

Helicopter Refill Pump Operator - The Helicopter Refill Pump Operator secures a water supply at the heli-base and establishes a hose line to deliver water to the helicopter.

Helicopter Refill - The firefighter who is in direct communication with the helicopter pilot while operating the hose line which fills the water tank on the helicopter.

Non-Fire Risk Assessment

The non-fire emergency services provided by BFD include EMS, technical rescue and HazMat response. Risk assessment for non-fire hazards incorporates many of the same factors evaluated during the fire risk assessment, including historical demand for these types of services, community characteristics and demographics. Non-fire hazards often present multiple risk types (i.e., EMS, technical rescue and HazMat response). Compound incidents require staffing that address all components of the incident.

Emergency Medical Services

EMS requests are the most frequent type of service provided by BFD. EMS incidents account for 83% of emergency activities and correspondingly have the greatest impact on resources. As such, it is essential the Department maintain its paramedic ranks. During Fiscal Year (FY) 2025-26, the agency restored its paramedic ranks to 2016 levels and will continue its commitment to maintaining paramedic capacity by sending members to paramedic school.

Furthermore, several factors contribute to the volume and consequence of EMS calls. The hazards that dictate the EMS risk assessment are attributed to demographics, lifestyle, acute and chronic medical conditions, socioeconomic factors, human action, transportation accidents and natural disaster.

Probability

The following table depicts the distribution of EMS call volume by district, total volume and percentage of total incidents:

EMS Incident History by Fire District

Fire District	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21	Total	% of EMS Incidents
11	3,315	3,175	3,159	3,008	2,565	13,957	31%
12	1,499	1,421	1,425	1,220	1,096	6,117	13%
13	1,614	1,511	1,340	1,210	1,260	6,286	14%
14	1,476	1,425	1,459	1,271	1,085	6,156	13%
15	2,353	2,309	2,132	2,008	1,726	9,476	21%
16	946	863	854	773	735	3,642	8%
Total	11,203	10,704	10,369	9,490	8,467	45,634	100%
% of Total Call Volume	86%	86%	84%	84%	83%	83%	

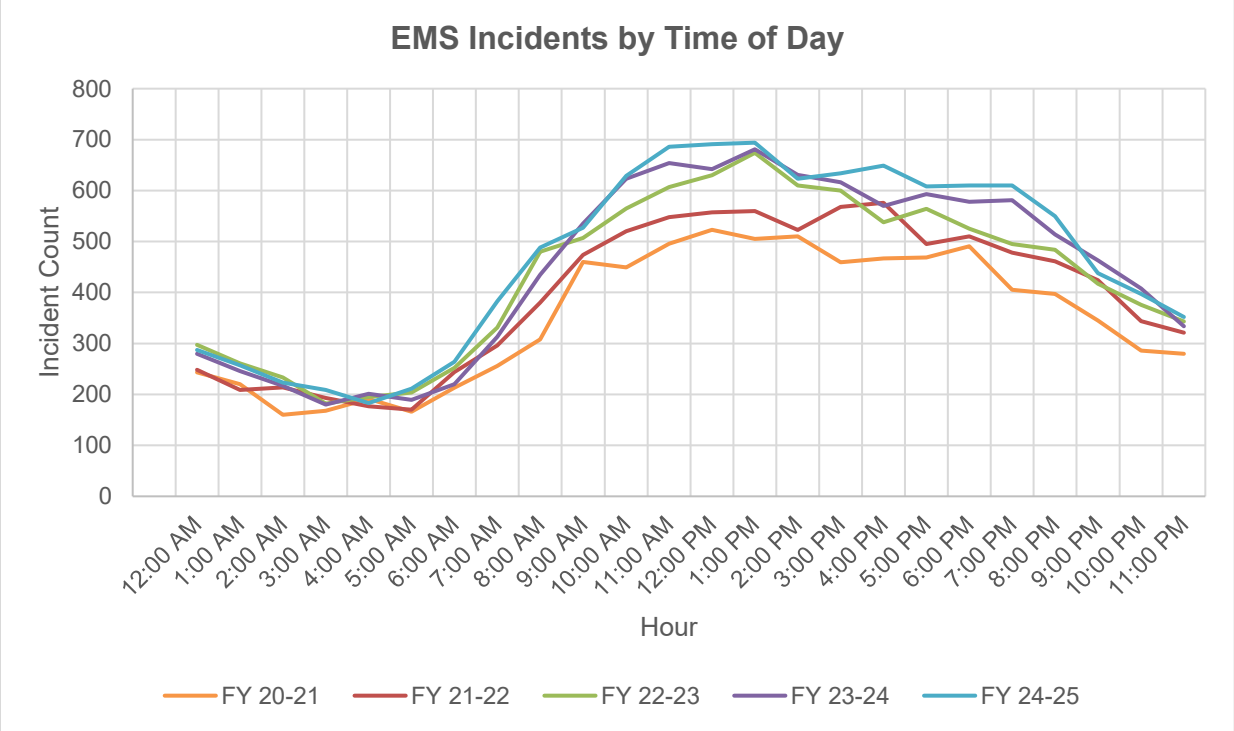
Source: Microsoft Power BI and Tableau

The probability or likelihood of demand for EMS services has been steadily increasing over the past several years. Factors influencing the probability of EMS within BFD's

jurisdiction, as well as most communities are predominantly a function of population density, demographics, violence and vehicle traffic. Relative to population demographics, EMS risk tends to be higher among older and poorer populations. According to the 2025 Claritas Pop-Facts Demographics Report, 18.03% of the City's population is 65 or older and 1,747 families are below the poverty level. As would be expected, EMS risk is also higher in communities with higher rates of violence; however, the city has a very low incidence of violence. EMS risk also increases in areas of a community with high traffic volume and high speeds, which is why transportation is a contributing factor in EMS response. Burbank has two major freeways (Interstate 5 and State Route 134) carrying high traffic volumes at high speeds.

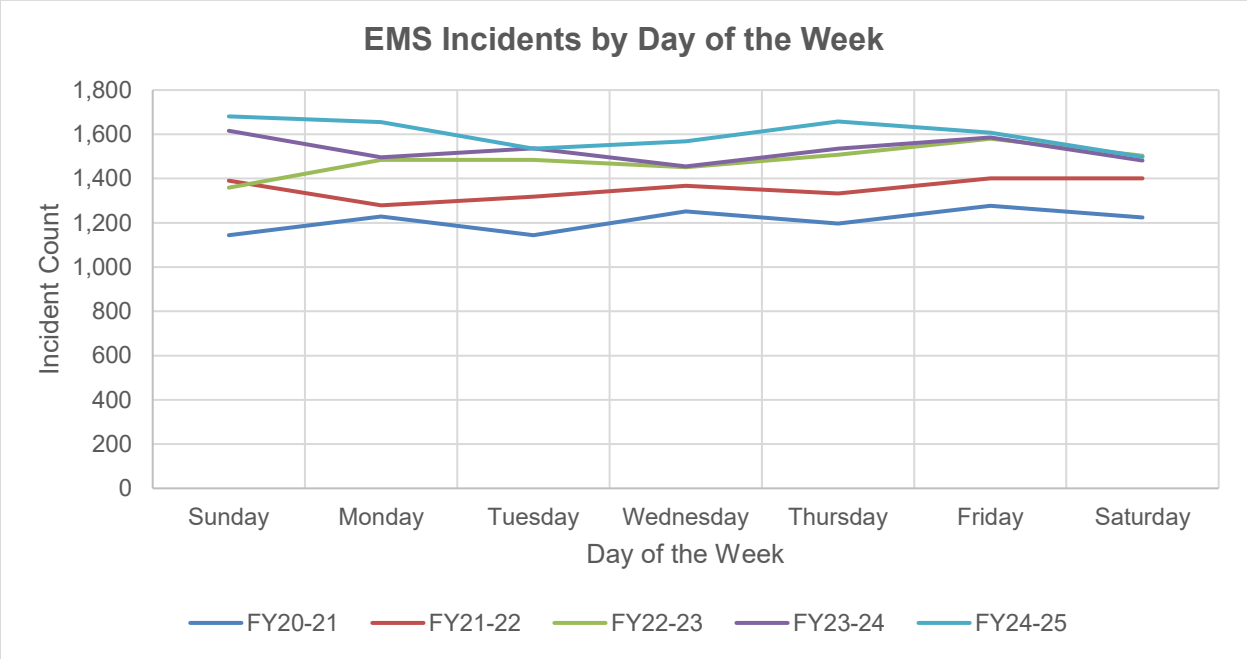
The residential and daytime population is another significant factor in assessing the probability of EMS incidents. The City's resident population is 103,084, while the daytime population increases to approximately 250,000. There are 42,234 households and 165,000 jobs in Burbank. This scenario creates a Monday through Friday daytime population surge thus increasing the probability and demand for EMS-related calls for service.

While the EMS call volume has increased, the predictability of peak hour usage shows a specific trend in the graph below. Every week, hours of EMS service demand begin to increase at 6:00 AM and start to taper off at 7:00 PM. During peak hours of demand, EMS response time will increase as resources are depleted and come from other districts or neighboring cities through mutual aid.



Source: Microsoft Power BI and Tableau

As illustrated below, call volume is relatively consistent Monday through Friday.



Source: Microsoft Power BI and Tableau

Since the available land in Burbank is built out, the future growth is expected to live in mid-rise and high-rise mixed-use buildings. Numerous construction projects are in the planning phases with the City. This mixed-use style of occupancy will cause longer response and transport times due to the utilization of elevators and stairs within denser living spaces. The proposed projects will predictably produce pockets of higher density living conditions and a further increase the EMS call volume.

As the population of Burbank ages, the demand for EMS will grow proportionately. As illustrated in the following chart, the 65 and older population accounts for 18.03% of the population but 54.13% of EMS call volume in FY24-25.

EMS Incident History by Age Range

Age Range	% of Population in FY24-25	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
0-20	20.13%	6.14%	6.25%	6.25%	6.66%	5.03%
21-34	18.24%	10.76%	10.66%	12.23%	12.90%	12.67%
35-54	30.54%	17.53%	18.64%	18.07%	18.20%	18.24%
55-64	13.05%	11.44%	11.99%	11.65%	13.13%	13.63%
65 and over	18.03%	54.13%	52.45%	51.81%	49.10%	50.43%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: 2025 Claritas Pop-Facts Demographics Report and Medic Clipboard

Several districts in Burbank have occupancies with geriatric populations ranging from independent senior living, assisted living and rehabilitation facilities. These particular occupancies account for a measurable component of call volume within some districts as shown in the following four tables.

EMS Incident History for Senior Living, Assisted Living and Medical Rehabilitation Facility by District

Fire District 11

Occupancy	Incidents from FY20-21 to FY24-25
4 Story, Senior Living	652
10 Story, Senior Living	342
9 Story, Senior Living	393
4 Story, Senior Living	352
4 Story, Senior Living	287
8 Story, Senior Living	296
8 Story, Senior Living	168
3 Story, Senior Living	255
Total	2,745

Source: Medic Clipboard

Fire District 12

Occupancy	Incidents from FY20-21 to FY24-25
3 Story, Senior Living	512
3 Story, Senior Living	100
Total	612

Source: Medic Clipboard

Fire District 15

Occupancy	Incidents from FY20-21 to FY24-25
1 Story, Assisted Living	136
2 Story, Medical Rehabilitation	1,202
3 Story, Senior Living	295
8 Story, Senior Living	656
Total	2,289

Source: Medic Clipboard

Fire District 16

Occupancy	Incidents from FY20-21 to FY24-25
2 Story, Assisted Living	444
2 Story, Assisted Living	547
Total	991

Source: Medic Clipboard

Consequence

The consequence of an EMS emergency on the public can range from physical to emotional to financial. The goal of BFD's resource deployment and response is to reduce these consequences to the public and community as a whole. In analyzing the EMS risk assessment, BFD must "compare the relative value of the probability to the relative incident consequence in the area" (*Commission on Fire Accreditation International/Center for Public Safety Excellence Community Risk Assessment: Standards of Cover, 6th Edition, 2016*). The consideration of both probability and consequence dictates the strategic placement of EMS resources and the amount of resources dispatched to mitigate an EMS call. As probability and consequence increase with each response, there is also an evaluation of the impact on BFD and the ability to respond to other emergencies with depleted EMS resources.

Impact

With each EMS call there is an internal impact on BFD that affects the resource deployment and coverage capability within the city. While each resource has a primary responsibility to its home district, the closest EMS resource is deployed upon dispatch to all districts. The number of resources available and the EMS delivery model remained static from 1999 to mid-2024. In FY2024-25, BFD began a pilot program with one peak hour RA. The strategic placement of stations and available resources has allowed BFD to maintain response objectives for emergencies in general. The goal is to dispatch a sufficient number of resources to control and terminate the incident while maintaining EMS resource ability to serve other incidents. The degree of impact on available resources is commensurate with the hazard level or risk level associated with the call. Other impacts and threats to EMS resource availability include high call volume, length

of time on scene, travel distance to specialty hospitals, and ambulances delayed due to patient drop-off times (known as wall time).

Mitigating Factors

A positive mitigating factor dictating potential positive outcomes for EMS patients in Burbank is the proximity to Providence Saint Joseph Medical Center, which maintains specialty programs and certifications. Providence Saint Joseph Medical Center maintains a STEMI Receiving Center designation that is crucial in the treatment of heart attacks. Additionally, the hospital is a Comprehensive Stroke Center that has highly sophisticated equipment and staff that treats the sudden onset of stroke symptoms. Burbank is also within 10 miles of a Level I Trauma Center, 10 miles of a Level II Trauma Center and 6 miles of a Pediatric Critical Care Hospital.

An additional positive mitigating factor in the quality of BFD's EMS service is a full-time Nurse Specialist tasked with both continuing education and continuous quality improvement efforts. Both EMT's and Paramedics fulfill the state mandated hours of continuing education on a bi-annual basis to remain current along with skills training. The Quality Improvement Program ensures compliance with LA County Department of Health Services policy, identifies trends and highlights areas to be addressed for education. Also, BFD retains the service and counsel of an EMS Medical Director who helps ensure best practices, medical direction and continuing education presentations.

Infrastructure within the city is critical to many factors that dictate timely EMS response, transport times and patient outcome. While traffic continues to get more congested, there are high quality roads, efficient traffic control and proximity to area hospitals. A critical infrastructure component of EMS response is also communication. Both pre-incident and incident communication infrastructure is exceptional and dependable thus enhancing safety and efficiency on an EMS emergency.

Hazard Levels

The following hazard levels have been established for EMS risk:

- **Low Risk:** Injured and ill person, minor trauma, lift assist, patient without airway and breathing or circulatory problems (single patient in stable condition)
- **Moderate Risk:** Cardiac chest pain, shortness of breath, diabetic, seizure and traumatic injuries (single patient in unstable condition)
- **High Risk:** Cardiac arrest, stroke, severe trauma and compound EMS incidents with a component of fire, rescue or limited ability to enter the area (single patient with potentially fatal condition)
- **Maximum Risk:** Multi-victim incidents with five or more patients such as an active threat, terrorism, hazardous materials release, infectious disease outbreak or large-scale transportation incident (multiple patients with various conditions)

Emergency Medical Services Critical Tasks

Medical emergencies range from incidents requiring one basic life support unit to large-scale multi-victim incidents requiring BFD's entire resources and mutual aid. The typical medical emergency requires one paramedic RA and one engine or truck company (between five and six firefighters). There are various critical tasks common for each incident based on the call type and risk assessment assigned. Each call type activates a pre-determined resource response based on level of severity and critical tasks. While each call can be unique, there are specific critical tasks necessary to provide effective care to a medical patient.

In the following table, a firefighter (FF) is labeled with a number. For example, FF1 indicates that person is 1 of 6 FF's at an incident. A FF may be assigned two critical tasks and thus is listed twice.

EMS Critical Tasks by Risk Level

Critical Task	Low Risk	Moderate Risk*	High Risk**	Maximum Risk
Command/Safety Officer				2
Supervisor/Scene Safety	FF1	FF1	FF1	
Patient Triage				4
Patient Assessment	FF2	FF2	FF2	
IV/IO Medication Administration		FF3	FF3	
BLS Treatment	FF3, FF4			
ALS Treatment		FF2	FF2	4
Patient Transportation	FF5			4
Documentation	FF6	FF4	FF4	2
Communication	FF6	FF4	FF4	2
Airway Management		FF5	FF5, FF6	
C Spine		FF6		
Ambulance Staging				16
Minimum Total	**6**	**6**	**6**	**34**

*<u>*Critical Tasks Specific to Cardiac Chest Pain*</u>

- *Performance of a 12-lead ECG*
- *Recognition of ST elevation*
- *Transmission of the 12-lead ECG to a STEMI Receiving Center*
- *Transport to a STEMI Receiving Center*

**<u>*Critical Tasks Specific to Stroke*</u>

- *Accurate identification of Stroke symptoms through use of Modified LA Prehospital Stroke Screen (mLAPPS) and last known well time*
- *Transport to a Primary or Comprehensive Stroke Center*

Critical Task Definitions

Command/Safety Officer - The person responsible for all aspects of an emergency response including quickly developing incident objectives, managing incident operations, application of resources and responsibility for the safety of all persons involved as well as maintaining personnel accountability.

Supervisor/Safety - The officer is responsible for supervising and monitoring personnel's actions. This position ensures personnel and patient safety. Additionally, this person calms family members or bystanders and helps obtain information about the patient and problem. The officer may also be required to perform other additional functions in the absence of available personnel.

Patient Triage - The process of sorting people based on their need for immediate medical treatment as compared to their chance of benefiting from such care. Triage is done in emergency rooms, disasters and wars, when limited medical resources must be allocated to maximize the number of survivors.

Patient Assessment - Performing a primary and secondary assessment of a patient's medical condition, chief complaint and treatment needs.

Intravenous (IV)/Intraosseous (IO) Medication Administration - IV is the act of placing an intravenous catheter to provide a non-collapsible route for the delivery of medications and fluids. IO is the act of placing an intraosseous catheter to provide a route for the delivery of medication fluids in the event that an IV is unable to be established.

Basic Life Support (BLS) Treatment - BLS treatment addresses airway, breathing, circulation and first aid needs. These functions are performed by an EMT.

Advanced Life Support (ALS) Treatment - ALS includes BLS treatment with the addition of advanced airway, drug therapy, cardiac monitoring and IV therapy. These functions are performed by a Paramedic.

Patient Transportation - Transportation of a patient to the proper medical receiving facility.

Documentation - The documentation of patient assessment/treatment ensures that the proper treatment is provided through both online and offline medical control procedures. This person identifies and makes contact with the receiving facility to ensure that the facility is prepared to receive the patient.

Communication - This person identifies and makes contact with the receiving facility to ensure that the facility is prepared to receive the patient.

Airway Management - The placement of a device into the patient's trachea to create a secure, non-collapsible airway. This action requires one ALS provider who will be committed to placement and continuous monitoring. Ventilation is the mechanical or manual inflation of the lungs. This action requires one dedicated person (ALS or BLS) who will be committed to this task until relieved or upon arrival at the receiving facility.

C Spine - Spinal precautions, also known as spinal immobilization and spinal motion restriction, are efforts to prevent movement of the spine in those with a risk of a spine injury.

Ambulance Staging - An area designated for staging of ambulance resources prior to entering a scene or being assigned to a task.

12-Lead Electrocardiogram (ECG) - The standard 12-lead ECG is a representation of the heart's electrical activity recorded from electrodes on the body surface.

ST Elevation - ST-segment elevation myocardial infarction (STEMI) is the term cardiologists use to describe a classic heart attack. The ST-segment refers to the flat section of an ECG reading and represents the interval between jagged heartbeats.

STEMI - An acute myocardial infarction (heart attack) that generates ST-segment elevation on the prehospital 12-lead ECG.

STEMI Receiving Center (SRC) - A facility licensed for a cardiac catheterization laboratory and cardiovascular surgery by the LA County Department of Public Health, Facilities Inspection Division and approved by the LA County EMS Agency as a SRC.

Comprehensive Stroke Center (CSC) - A 911 receiving hospital that has met the standards of a Center for Medicare & Medicaid Services approved accreditation body as a Comprehensive or Thrombectomy Capable Stroke Center and has been approved as a CSC by the LA County EMS Agency. CSC's have subspecialty neurology and neurointerventional physicians available 24 hours a day and 7 days a week who can perform clot-removing procedures (i.e., thrombectomy).

Primary Stroke Center (PSC) - A 911 receiving hospital that has met the standards of a Center for Medicare & Medicaid Services approved accreditation body as a PSC and has been approved as a Stroke Center by the LA County EMS Agency.

Technical Rescue

BFD provides a wide range of technical rescue services to the community. Technical rescue incidents include vehicle extrication, confined space rescue, trench collapse, rope rescue, shore-based swift water rescue and building collapse. BFD provides awareness, operational knowledge and skills in coordination with Area C US&R teams for most technical rescue incidents. Specialized technical rescue resources are available through the California Master Mutual Aid Plan. This plan allows the closest resources in Area C to be dispatched prior to Region I and statewide resource use.

Probability

In assessing risk as it relates to technical rescue, there are several potential hazards to consider within the City. Hazards can vary greatly while being a product of human behavior, mechanical failure, environmental factors or natural disaster. The likelihood or probability of occurrence is historically low but the danger and risk in mitigating the incident are potentially very high for the victim and rescuers. This type of call would be considered low volume and low frequency but high risk in many cases.

Technical Rescue Incident History by Fire District

Fire District	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21	Total	% of Technical Rescue Incidents
11	27	28	42	43	38	169	45%
12	6	7	10	9	9	52	10%
13	6	9	10	9	4	69	10%
14	10	9	8	12	5	42	11%
15	12	11	10	5	11	49	12%
16	6	5	10	15	7	51	11%
Total	67	69	90	93	74	432	100%
% of Total Call Volume	1%	1%	1%	1%	1%	1%	

Source: Microsoft Power BI and Tableau

Consequence

The consequence of the incident to the victim and community can range from minimal to catastrophic. These types of incidents are further complicated by other factors such as fire, hazardous materials, medical issues, access and weather. In a large earthquake, basic services including transportation, healthcare, water, power and communications will be significantly disrupted.

Impact

The impact of a maximum risk level technical rescue incident on BFD will be significant in terms of equipment and personnel committed thus depleting resources to mitigate other calls for service during the assignment. BFD is able to solely mitigate low and moderate

risk incidents. Area C utilizes Unified Response (automatic aid) allowing Type 1, US&R resources from surrounding agencies to work in cooperation with BFD on high and maximum risk incidents.

Consideration needs to be given to the fact that if there is a large-scale natural disaster such as an earthquake, Area C automatic aid resources will be addressing needs in their own jurisdiction. BFD will mitigate technical rescues and local issues utilizing existing available equipment and trained personnel in the short term. In a longer term operational period, resources will be available through the California Master Mutual Aid Plan.

Mitigating Factors

To address the needs for technical rescue on initial dispatch and when no US&R units are available to respond, BFD personnel are trained to an operational level in vehicle extrication, rope rescue, confined space awareness for line of sight rescue, shore-based swift water rescue and shoring of buildings with minor collapse. A complement of technical rescue equipment is also carried on apparatus to support these operations throughout the city.

Hazard Levels

The following hazard levels have been established for technical rescue risk:

- **Low Risk:** Traffic accident with entrapment
- **Moderate Risk:** Vehicle into a structure, freeway rescue and low angle rescue
- **High Risk:** Confined space rescue, swift water rescue, high angle rescue, cave in or trench collapse with person trapped, building collapse and mud flow
- **Maximum Risk:** Maximum risk incidents are high risk incidents further complicated by multiple victims with additional elements such as fire, hazardous materials, terrorism, active threat or a widespread natural disaster such as an earthquake

Technical Rescue Critical Tasks

There are various critical tasks common for each technical rescue incident based on the call type and risk assessment assigned. Each call type activates a pre-determined resource response based on level of severity and critical tasks. Tasks are deemed critical to address, manage and conclude the call for service. While each call can be unique, some critical tasks are common.

Technical Rescue Critical Tasks by Risk Level

Critical Task	Low Risk	Moderate Risk	High Risk*
Incident Commander	1	1	1
Emergency Incident Technician/Accountability Officer	1	1	1
Scene Safety	1	1	2
Entry Group Supervisor			1
Attendant			1
Entrant/Backup Entrant			2
Rigging/Hauling Team		7	8
Ventilation			2
Atmosphere Monitoring			2
Vehicle Extrication	4	4	
Patient Assessment	1	1	1
Patient Treatment	1		2
Removal of Patient	2		
EMS Documentation/ Communication	1	1	1
Minimum Total	**12**	**16**	**24**

*A maximum risk response would increase commensurate with additional elements.

Critical Task Definitions

Incident Commander - The person responsible for all aspects of an emergency response; including quickly developing incident objectives, managing incident operations, application of resources and responsibility for all persons involved as well as maintaining personnel accountability.

Emergency Incident Technician/Accountability Officer - The EIT assignment is filled by a qualified Fire Captain and works closely with the Operations Battalion Chief, providing critical support functions during incident response, including emergency driving for Battalion 1, locating and establishing a command post, managing radio communications, and monitoring resources and situation status.

Scene Safety - The person assigned to ensure and monitor overall scene safety.

Entry Group Supervisor - Personnel empowered to authorize or directly supervise entry operations in a confined space entry/rescue.

Attendant - Personnel stationed outside the confined space to monitor the conditions and locations of authorized entrants.

Entrant/Backup Entrant - Personnel designated to enter a confined space for rescue.

Rigging/Hauling Team - Personnel assigned to set up a tag line, retrieval line and hauling system for removal of rescuers and a victim through the use of ropes and mechanical advantage.

Ventilation - The act of ventilating of a potentially hazardous atmosphere through the use of natural openings and mechanical fans.

Atmosphere Monitoring - Constant air monitoring of the potentially hazardous atmosphere through the use of monitoring equipment on scene.

Vehicle Extrication - The use of truck company based specialized equipment to gain access to an occupant trapped in a damaged vehicle.

Patient Assessment - Performing a primary and secondary assessment of a patient's medical condition, chief complaint and treatment needs.

Patient Treatment - Administration of medical treatment to a patient.

Removal of Patient - Physically removing an injured patient from an entrapment or dangerous area to an ambulance requiring multiple rescuers.

EMS Documentation/Communication - The documentation of patient assessment/treatment ensures that the proper treatment is provided through both online and offline medical control procedures. This person identifies and makes contact with the receiving facility to ensure that the facility is prepared to receive the patient.

Hazardous Materials

HazMat incidents are less frequent than other BFD calls but could have the largest impact on the community. BFD maintains a Cal OES Type 1 Hazardous Materials Response Team and provides Specialist HazMat response for the region. Responses to these incidents vary from one engine for a small fuel spill to a full HazMat assignment (HazMat 12, Glendale HazMat 24, two engines, one truck, one RAand one Battalion Chief). HazMat response is a complex undertaking and successful mitigation requires a cooperative effort between multiple agencies. These resources are available through the California Master Mutual Aid Plan, mutual aid agreements with LA County Fire Department and Area C Unified Response (automatic aid) for incidents.

Probability

The potential for a hazardous materials release remains high in Burbank. This is because hazardous materials are transported on the streets, freeways, rail lines and in air cargo throughout Burbank. Also, there are 422 businesses in the city that use or store reportable quantities of hazardous materials. Any release may threaten the public and environment with possibly long-term effects. The location and storage of the reportable quantities exist amongst populated areas. The likelihood of an event has been historically low but the danger and risk in mitigating the event are potentially very high for the community and emergency responders.

Consequence

Consequences depend on the type and magnitude of the incident. A transportation incident that occurs in a residential neighborhood would have a potentially catastrophic effect. The release of large amounts of hazardous materials in this type of event could have ongoing effects on the environment lasting years or decades. Additionally, it could take an extended amount of time to mitigate the incident, which can hinder commerce and revenues outside of the city that would have a fiscal impact on multiple stakeholders.

Impact

The impact of a full-scale HazMat incident would have a significant amount of resources assigned for an extended amount of time. This would reduce the available resources left in Burbank to respond to other emergencies. Additionally, this would bring Glendale HazMat 24 from Area C to assist with mitigation of the incident.

Mitigating Factors

To meet the needs for a hazardous materials incident all BFD personnel are trained to the HazMat First Responder Operational level. On duty every day at Station 12, there are between 4-8 members who are trained to the HazMat Specialist level and cross-staff HazMat 12. BFD also uses a Glendale HazMat team to assist with more complex hazardous materials incidents.

Hazard Levels
The following hazard levels have been established for hazardous materials risk:

- **Low Risk:** Incidents involving unknown substance small quantity, small fuel/fluid spills, small transportation spills and hazardous material investigation
- **Moderate Risk:** A broken gas main or natural gas release inside of a structure
- **High Risk:** Explosion or transportation accidents involving flammable or combustible materials
- **Maximum Risk:** Any weapon of mass destruction event, or any chemical, biological, radiological, nuclear or explosive or a large-scale hazardous materials release

Hazardous Materials Critical Tasks

There are various critical tasks common for each hazardous materials incident based on the call type and risk assessment assigned. Each call type activates a pre-determined resource response based on level of severity and critical tasks. Tasks are deemed critical to address, manage and conclude the incident.

Hazardous Materials Critical Tasks by Risk Level

Critical Task	Low Risk	Moderate Risk	High Risk	Maximum Risk
Incident Commander	1	1	1	1
HazMat Group Supervisor		1	1	1
Entry Team Leader		1	1	1
Entry Team	1	4	4	6
Back-Up Team		3	4	7
Decontamination Team	1	4	4	7
Medical Monitoring		2	3	3
Site Access Control Leader		1	4	4
Assistant Safety Officer		1	1	1
Technical Reference			1	1
Safe Refuge Area Manager		1	4	4
Defensive Actions	1			
Minimum Total	**4**	**19**	**28**	**36**

Critical Task Definitions

Incident Commander - This person is responsible for all aspects of an emergency response; including quickly developing incident objectives, managing incident operations, application of resources and responsibility for all persons involved as well as maintaining personnel accountability.

HazMat Group Supervisor - This person is responsible for the implementation of the phases of the Incident Action Plan dealing with the Hazardous Materials Group operations and directs the overall operations of the Hazardous Materials Group.

Entry Team Leader - This person is responsible for all activities occurring in the exclusion zone, including multiple team entries, repeated entries and multi-jurisdictional entries.

Entry Team - This two-member team is tasked with making entry into the exclusion zone/hazardous area to identify the chemical threat and mitigate any leak or spill.

Back-up Team - A minimum two-member team that are the rescuers of the entry team. The back-up team also assists with providing equipment for the entry team inside of the exclusion zone.

Decontamination Team - This team is responsible for the operations of the decontamination element, providing decontamination as required by the Incident Action Plan.

Medical Monitoring - This person monitors vital signs and weight of the entry team before and after an entry is made. This person ensures that all HazMat personnel are rehabilitated and suited for entry.

Site Access Control Leader - This person controls the movement of all people and equipment through appropriate access routes at the hazard site and ensures that contaminants are controlled and records are maintained.

Assistant Safety Officer - This officer coordinates safety activities directly relating to the Hazardous Materials Group operations as mandated by 29 CFR Part 1910.120 and applicable state and local laws.

Technical Reference - This person provides technical information and assistance to the Hazardous Materials Group using various reference sources such as computer databases, technical journals, CHEMTREC and phone contact with facility representatives.

Safe Refuge Area Manager - This person evaluates and prioritizes victims for treatment, collects information from victims, and prevents the spread of contamination by these victims.

Defensive Actions - This task includes damming, diking, diversion, using sorbents, application of firefighting foam and evacuation of the affected area.

Section Four: Summary of System Performance

Deployment is generally measured using three concepts: Distribution (what and where), Concentration (how much) and Reliability (how well). These concepts are used when evaluating performance objectives, performance measures for response times, and BFD's ability to provide an effective response force for each service program and risk category.

Distribution

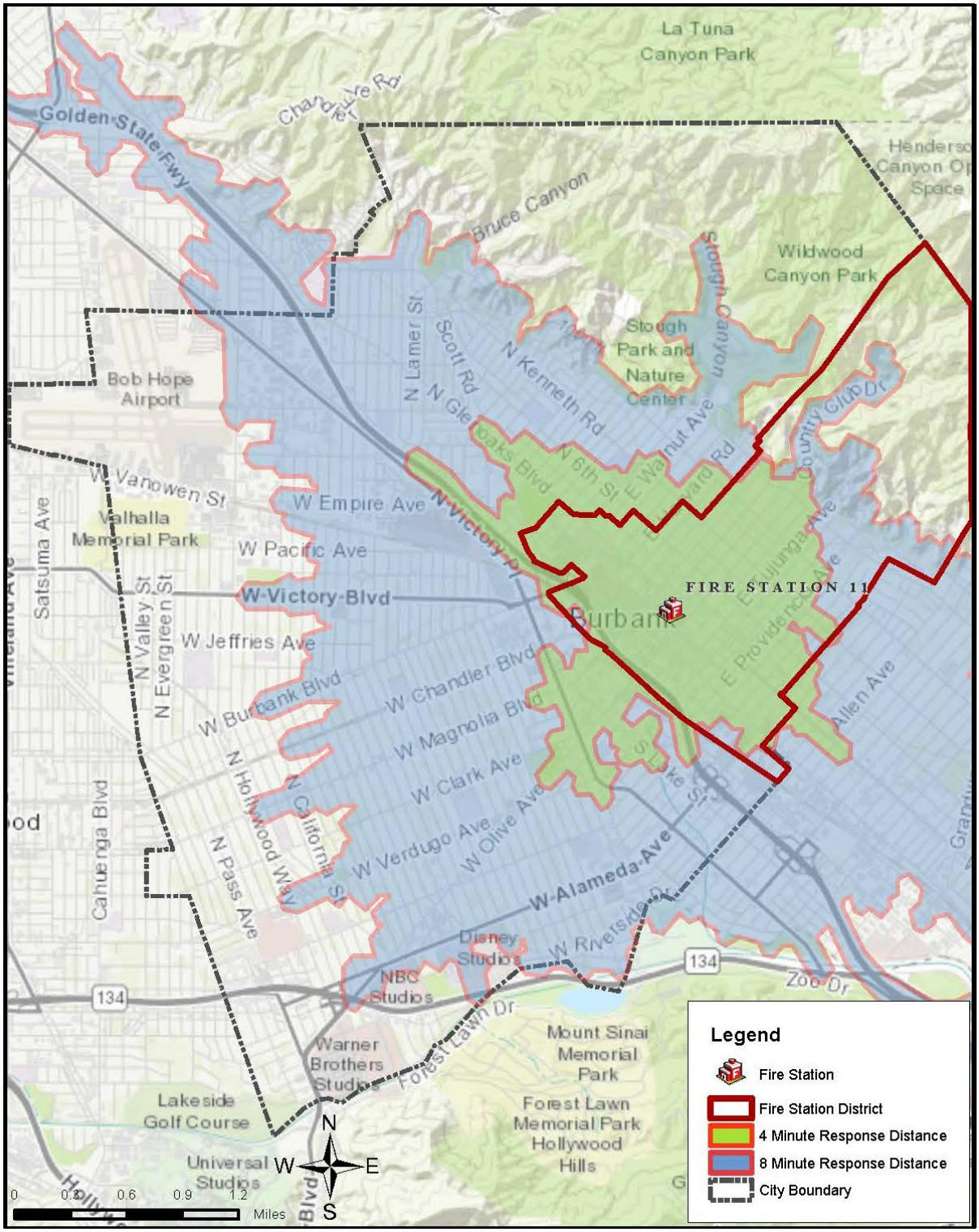
Distribution is defined as the geographic location of first in resources (such as fire stations, apparatus and personnel) for initial intervention and is expressed as a measure of time. Distribution locations (fire stations, apparatus and personnel) are established to ensure rapid deployment of initial resources to the emergency scene and ultimately its successful mitigation. Distribution is considered effective when resources are deployed to an emergency with the correct apparatus, equipment and staffing to successfully assess the situation, establish a plan of action to mitigate the emergency, request appropriate resources and stop or impede the escalation of the emergency. Distribution implies certain risks will require resources beyond that available on initial attack. BFD measures distribution by using Total Response Time - First Unit on Scene within the adopted time frames, and within each service program/risk category: Fire Suppression, EMS, HazMat, Technical Rescue and Wildland Fire Services. Total Response Time - First Unit on Scene begins when the request for emergency services is received at VFCC and extends to the arrival of the first unit at the emergency scene.

Concentration

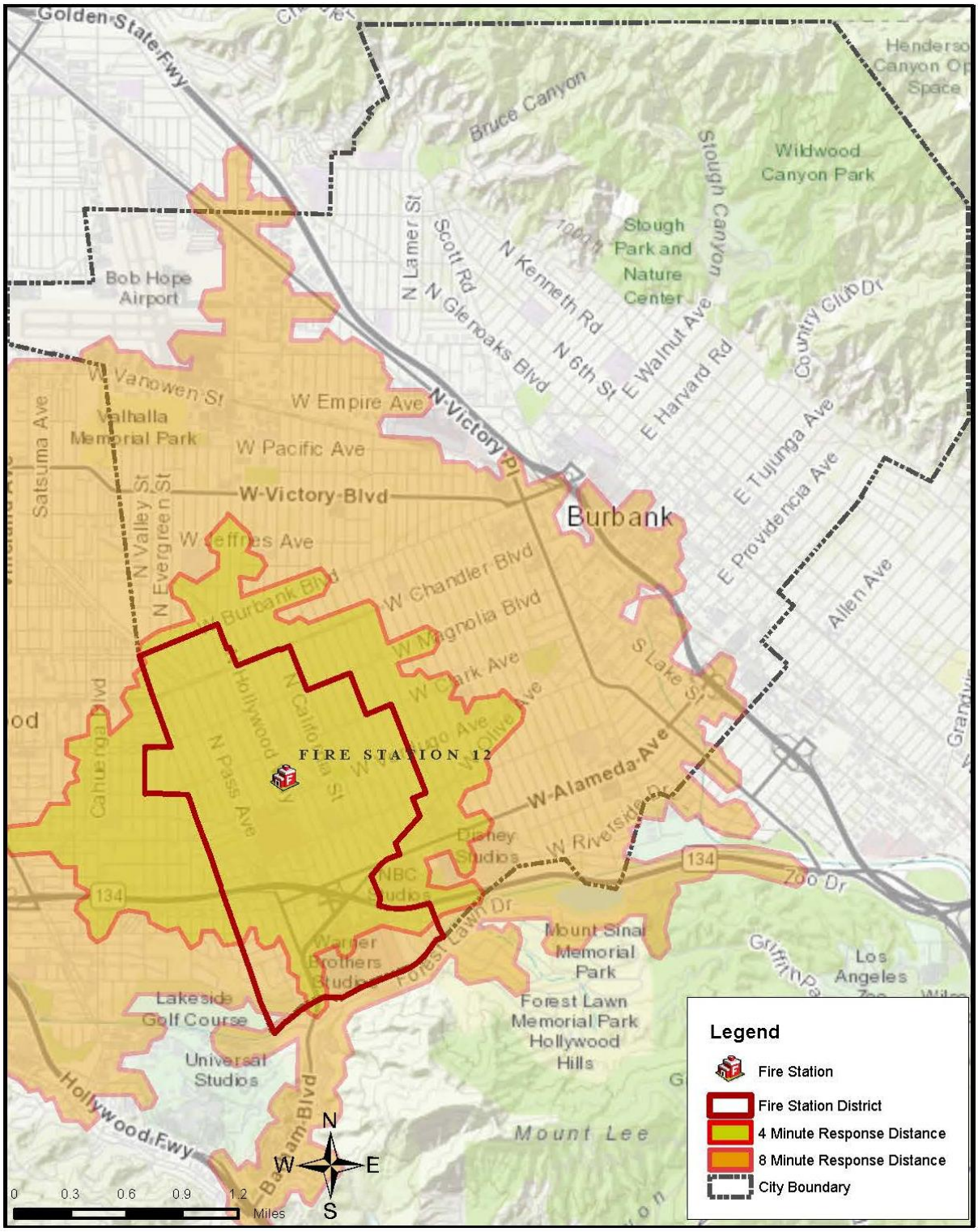
Concentration is defined as the spacing of multiple resources arranged so that an effective response force (ERF) can arrive on scene within the time frames outlined in the on-scene performance expectations. An ERF is defined as the minimum amount of staffing and equipment that must reach a specific emergency location within a prescribed total response time and is capable of initial mitigation. The ERF is the result of the critical tasking analysis conducted as part of the community risk assessment. In essence, concentration is the ability to place enough resources on a specific call to keep the event from escalating and bring it to a conclusion. A successful concentration is capable of providing the accurate amount of resources for an incident to prevent the emergency from escalating, providing for the safety of emergency personnel and citizens, completing all critical tasks in a timely manner, and providing incident management. BFD measures concentration by using Total Response Time - ERF within the adopted time frames, and within each service program/risk category: Fire Suppression, EMS, HazMat, Technical Rescue and Wildland Fire Services. Total Response Time - ERF begins when the request for emergency services is received at VFCC and extends to the arrival of the last unit at the emergency scene.

The first six maps (page 105 to 110) illustrate 4 and 8 minute response distances for each Station: 11, 12, 13, 14, 15 and 16. They account for Total Response Time - First Unit on Scene and ERF coverage. The following two maps (page 111 and 112) illustrate 8 minute response distances for the two truck companies assigned to Station 11 and 12. They account for Total Response Time - ERF coverage. The last map (page 113) illustrates overlapping 4 minute response distances for all fire districts, accounting for Total Response Time - First Unit on Scene coverage. In general, 95% of the City is drivable within 8 minutes. All maps were created using a speed of 30 miles per hour and based on ideal traffic conditions.

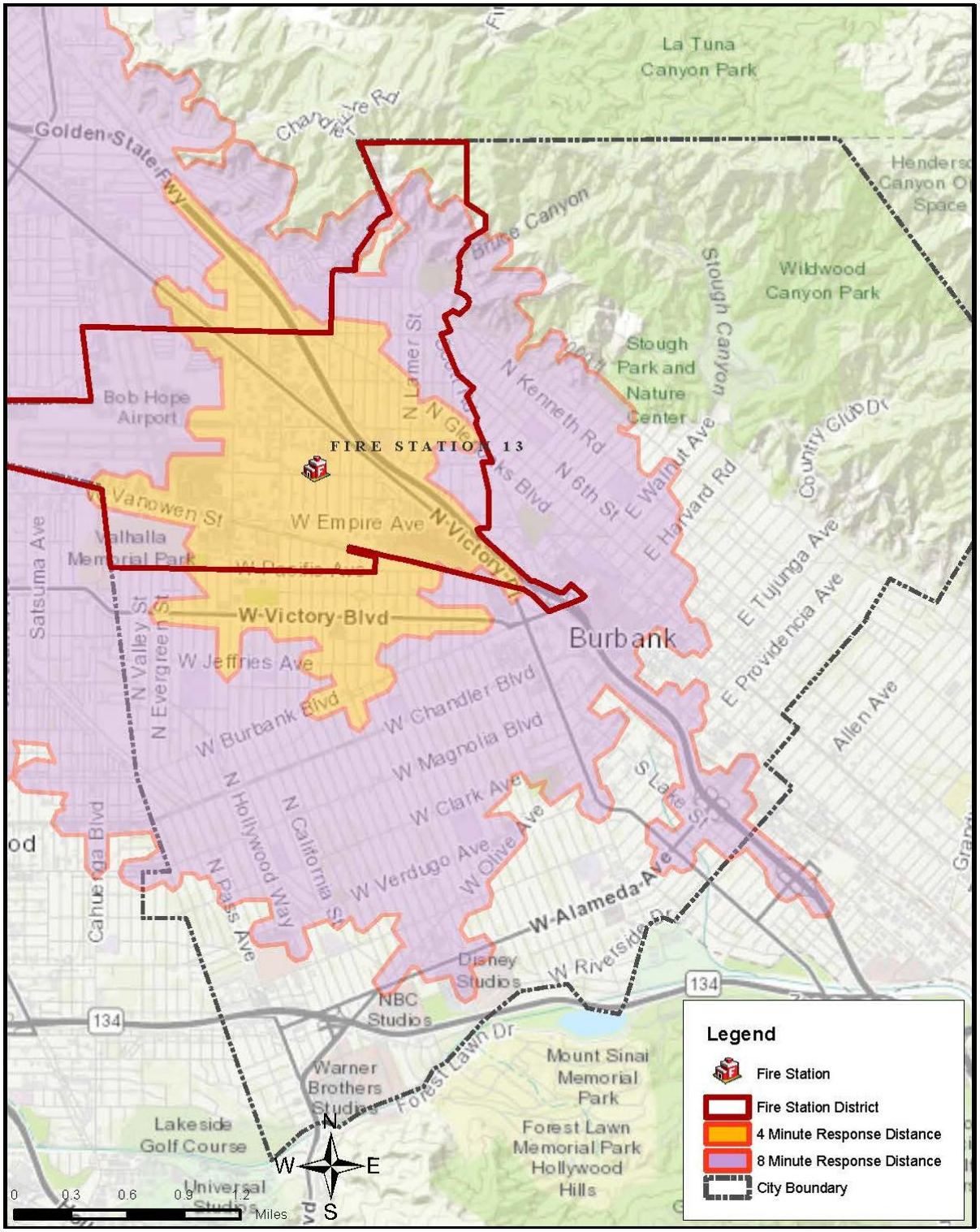
Fire Station 11: 1st Unit on Scene – 4 and 8 Minute Response Distance



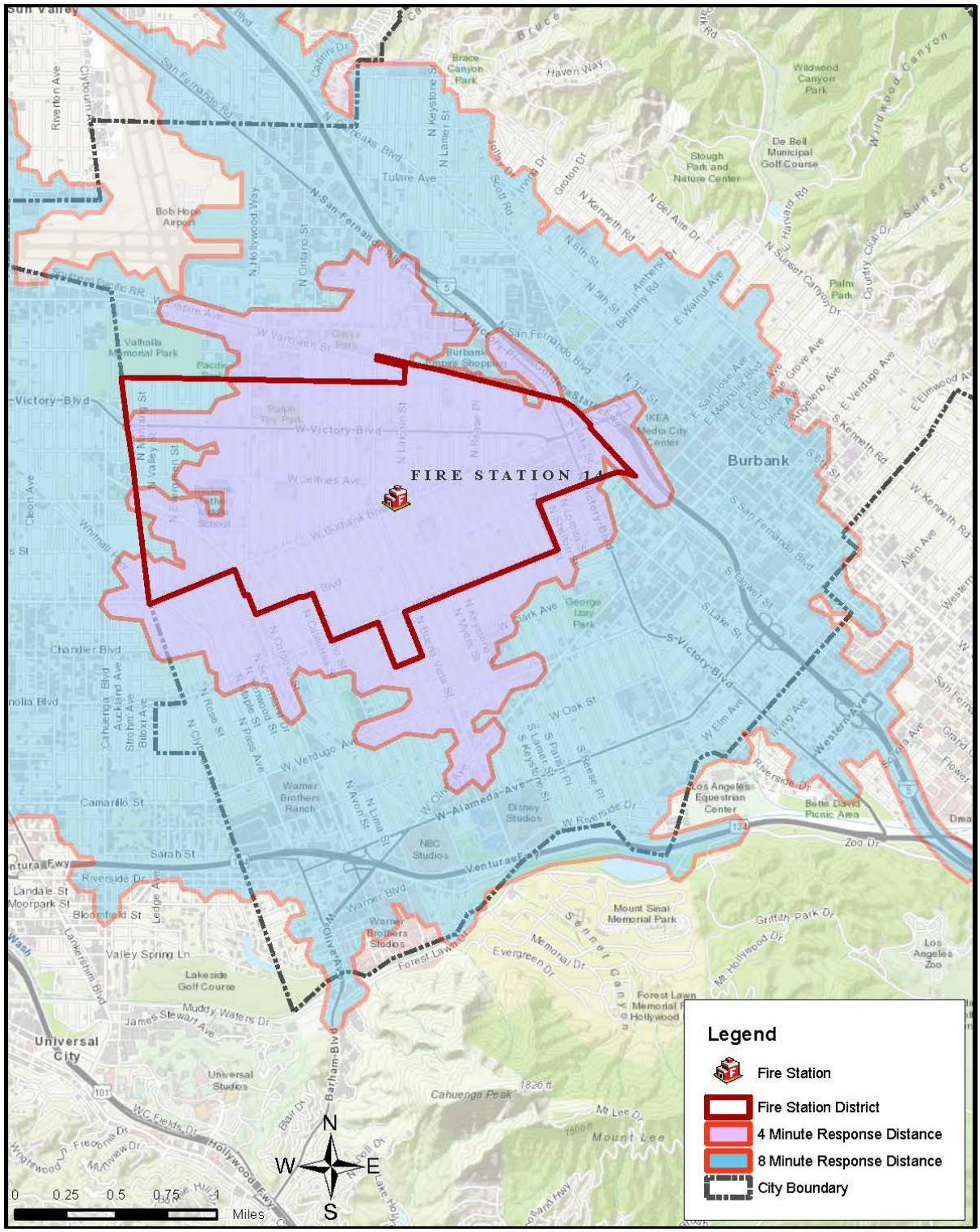
Fire Station 12: 1st Unit on Scene – 4 and 8 Minute Response Distance



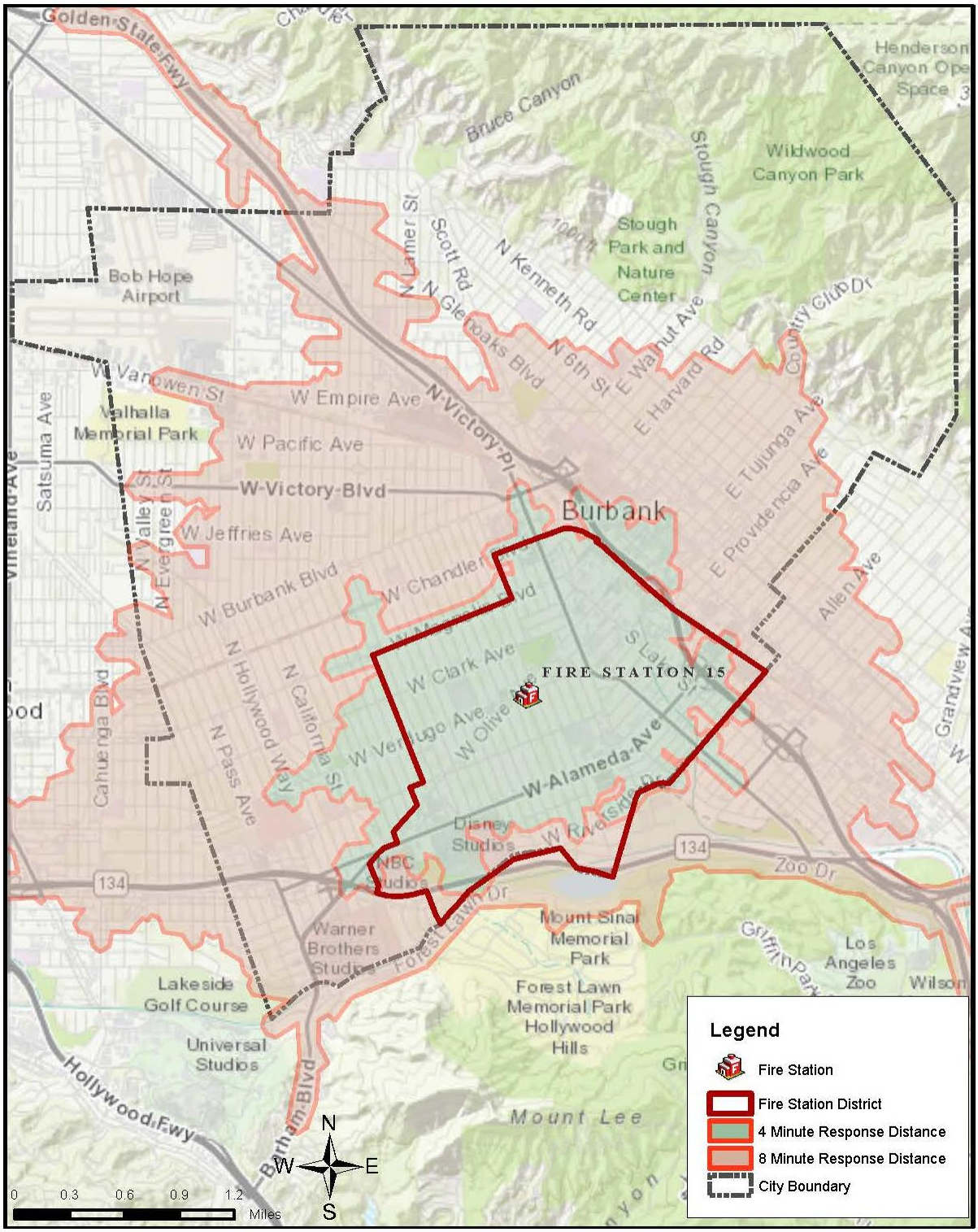
Fire Station 13: 1st Unit on Scene – 4 and 8 Minute Response Distance



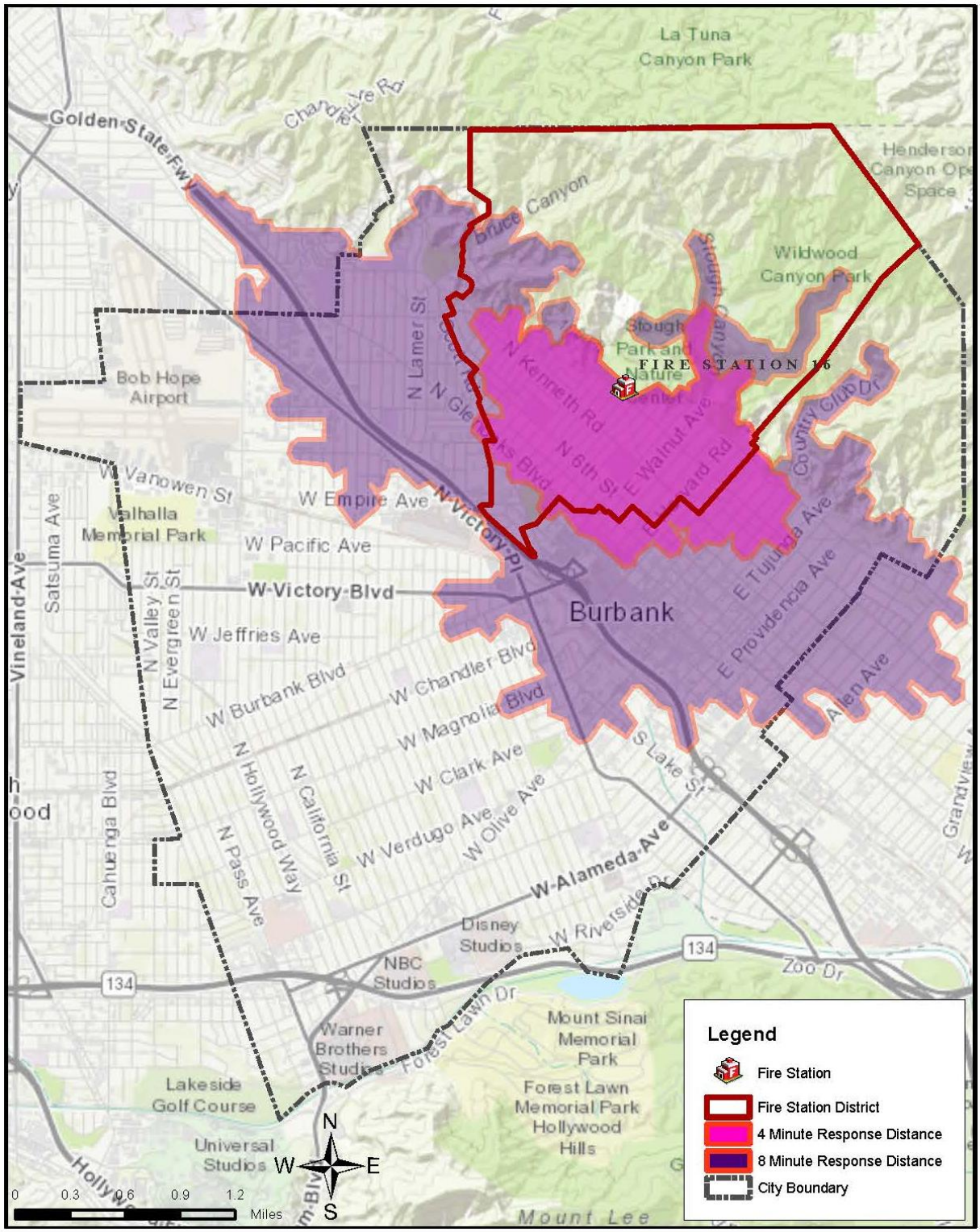
Fire Station 14: 1st Unit on Scene – 4 and 8 Minute Response Distance



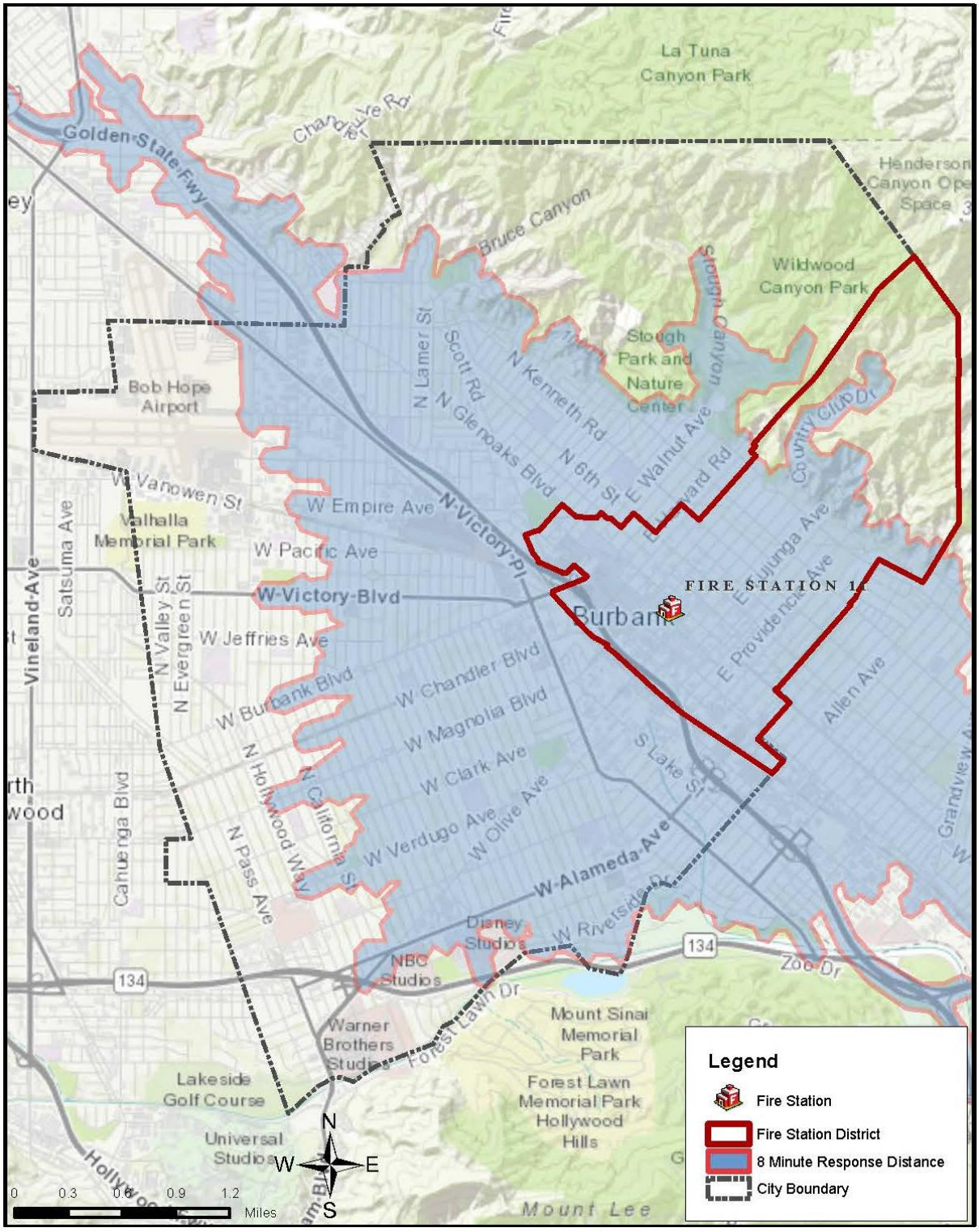
Fire Station 15: 1st Unit on Scene – 4 and 8 Minute Response Distance



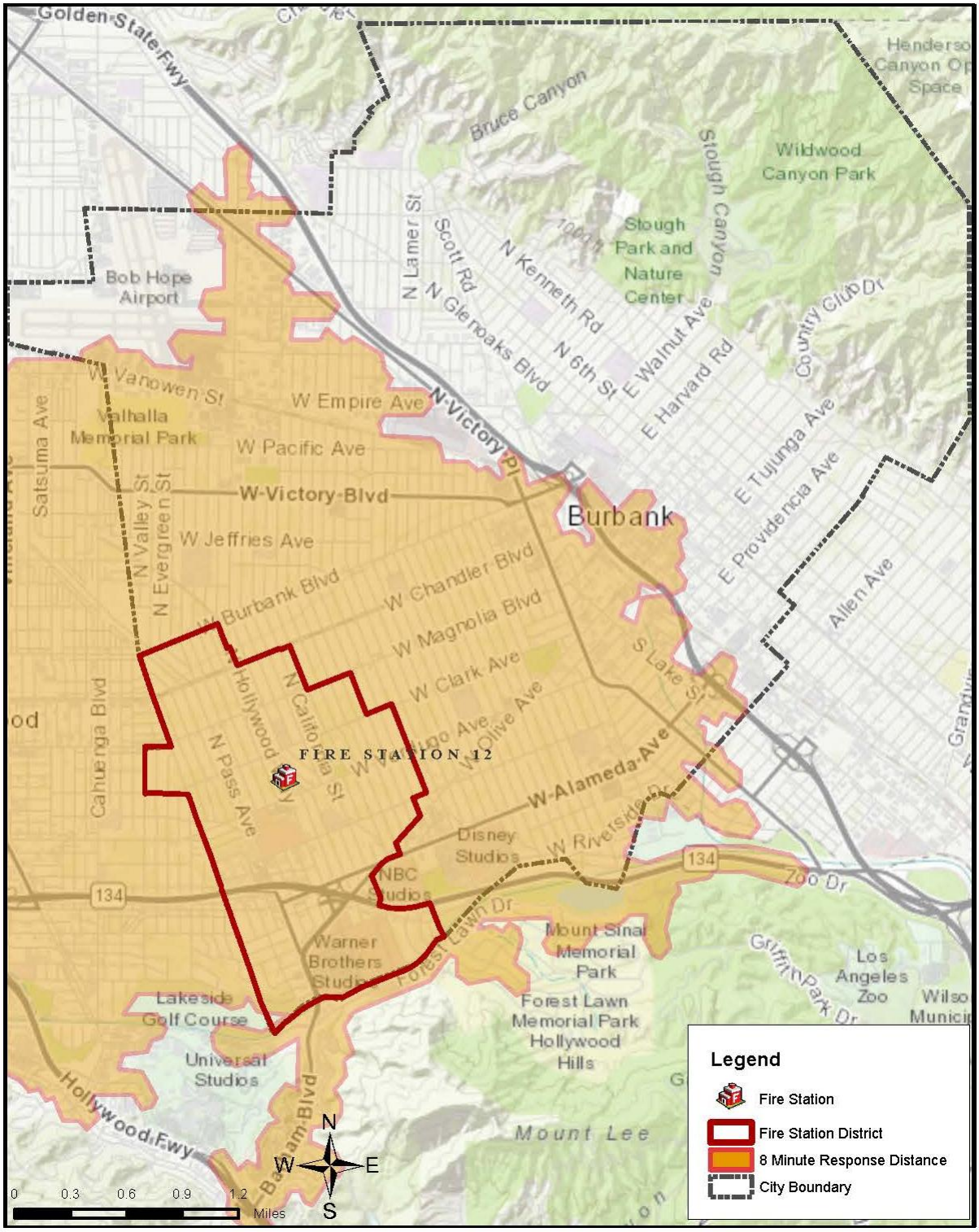
Fire Station 16: 1st Unit on Scene – 4 and 8 Minute Response Distance



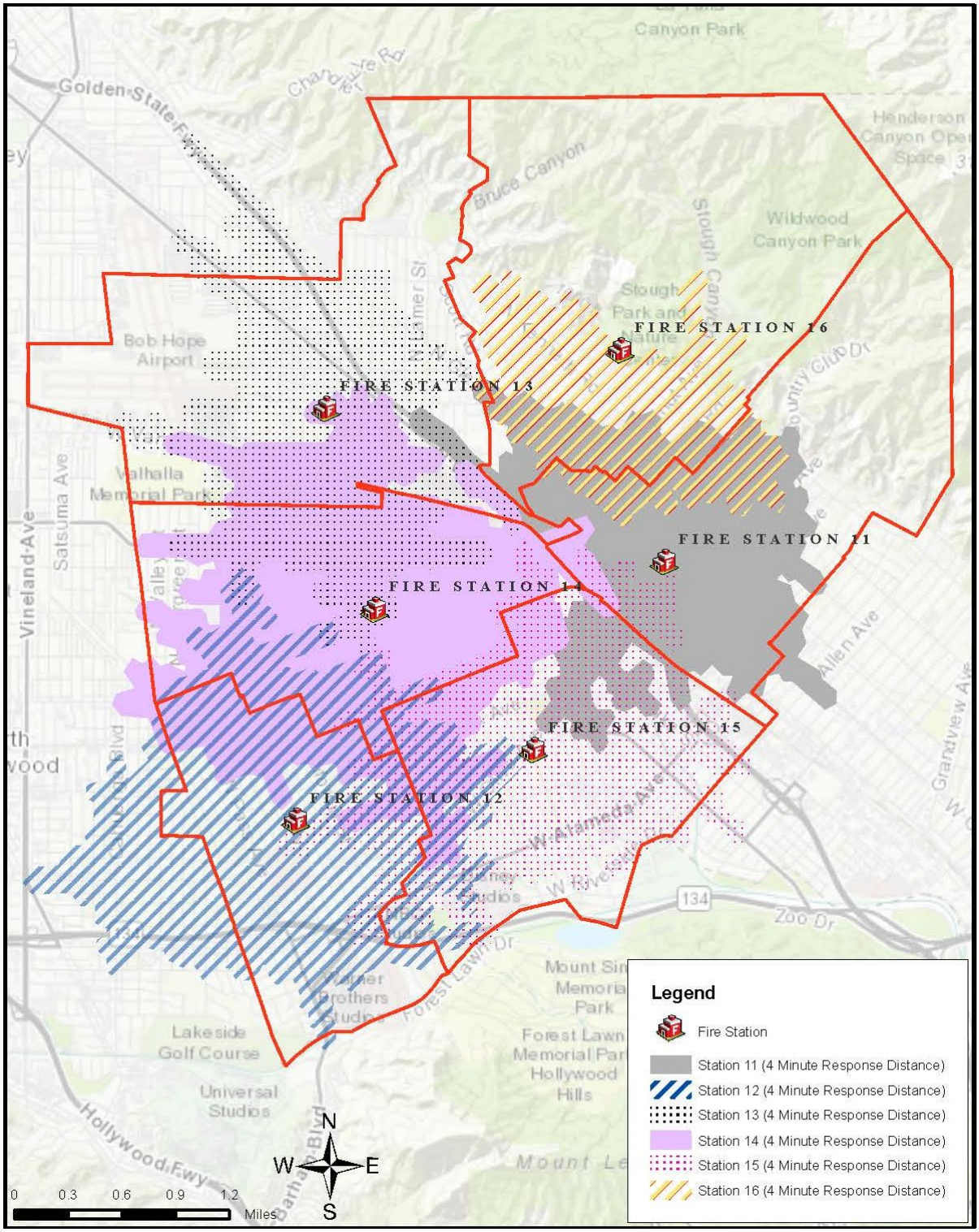
Fire Station 11: 1st Unit on Scene – 8 Minute (Truck) Response Distance



Fire Station 12: 1st Unit on Scene – 8 Minute (Truck) Response Distance



All Fire Stations: 1st Unit on Scene – 4 and 8 Minute Response Distance



Reliability

Reliability is an agency's ability to quickly recover from an incident or event, or to easily adjust to changing needs or requirements. Reliability is measured using historical performance showing the percentage of time first in companies respond within their own first in area. Various factors such as multiple incidents within the same district, availability of other closer units, and companies put out of service for training or mechanical problems are primary reasons why companies from other districts are dispatched to cover.

The following table illustrates the number of incidents in all six districts for the past five fiscal years and the percentage of which were covered by the assigned apparatus. A high percentage indicates that a district is adequately covered by its assigned apparatus. A low percentage may indicate that a district is understaffed and may need additional resources to better meet demands.

Reliability History by Fire District

Fire District	FY24-25		FY23-24		FY22-23		FY21-22		FY20-21	
	Incidents	Reliability	Incidents	Reliability	Incidents	Reliability	Incidents	Reliability	Incidents	Reliability
11	3,652	93.98%	3,476	93.39%	3,574	94.50%	3,307	94.14%	2,882	94.09%
12	1,651	92.91%	1,538	92.48%	1,603	93.14%	1,370	92.94%	1,223	92.44%
13	1,665	86.90%	1,571	89.11%	1,513	89.69%	1,383	90.93%	1,441	91.09%
14	1,325	80.74%	1,250	76.92%	1,295	78.11%	1,121	76.89%	977	74.92%
15	2,430	88.24%	2,369	88.53%	2,252	88.38%	2,111	88.03%	1,862	90.21%
16	761	71.39%	684	69.23%	755	76.65%	585	64.57%	661	77.31%
Total	11,484	88.07%	10,888	87.55%	10,992	88.78%	9,877	87.64%	9,046	88.76%

Source: Microsoft Power BI and Tableau

90th Percentile Benchmark and Baseline Performance

Establishing performance benchmark goals drives an organization towards continuous improvement and adaptation based on community needs. The information is used to compare metrics with industry best practices and evaluate what is needed to improve performance. BFD has analyzed five years' worth of data to determine its baseline performance trends and establish its benchmark performance goals.

BFD took into account the following factors when developing its benchmark performance goals: current capabilities, system demand, risk analysis, community expectations and the incremental pursuit towards ultimately meeting NFPA 1710 total response time standards. Benchmark performance goals are set for each component of total response time: alarm handling, turnout time, travel time and total response time. BFD has begun reporting 90th percentile baseline performance data by risk level for each program. In the following performance data tables, "n" refers to the number of incidents.

It is also important to note that of BFD's six fire engines, four have 4-person staffing and three have 3-person staffing. BFD recognizes that efficiency and effectiveness are tied to resource deployment and is a factor when evaluating total response time benchmark and baseline performance. BFD has used the *National Institute of Standards and Technology, Report on Residential Fireground Field Experiments (Averill et al, 2010)* and *National Institute of Standards and Technology, Report on EMS Field Experiments (Moore-Merrell et al, 2010)* as guiding documents to quantify staffing levels.

BFD bases its strategic objectives on life safety, incident stabilization and property conservation while providing for firefighters' safety, accountability and welfare. All operations are performed in accordance with departmental standard operating procedures and guidelines.

The following table shows BFD's outlier policy to exclude data below and above certain parameters.

Outliers

	Below	Above
Alarm Handling	00:01	06:00
Turnout Time	00:01	06:00
Travel Time – 1st Unit	00:01	20:00
Travel Time – ERF	00:01	25:00
Total Response Time – 1st Unit	00:01	25:00
Total Response Time – ERF	00:01	30:00

Fire Suppression

Fire Suppression Benchmark Statement

At 90th percentile of all low, moderate and high risk fires, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer, shall be: 7 minutes and 15 seconds. The first in unit shall be capable of: conducting an incident size-up, establishing command, requesting additional resources, assigning incoming resources, securing a water supply, providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity, and initiating rescue or fire attack.

At 90th percentile of all low risk fires, the total response time for the arrival of the effective response force (ERF), staffed with 2 firefighters and 1 officer, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: providing 4,500 gpm pumping capability, advancing an attack line and a backup line for fire control, establishing a rapid intervention crew, completing forcible entry, searching and removing victims from harm, providing medical care for the injured, ventilating the structure, securing utilities, and performing salvage/overhaul.

At 90th percentile of all moderate risk fires, the total response time for the arrival of the effective response force (ERF), staffed with 22 firefighters and officers, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: providing 4,500 gpm pumping capability, advancing an attack line and a backup line for fire control, establishing a rapid intervention crew, completing forcible entry, searching and removing victims from harm, providing medical care for the injured, ventilating the structure, securing utilities, and performing salvage/overhaul.

At 90th percentile of all high risk fires, the total response time for the arrival of the effective response force (ERF), staffed with 40 firefighters and officers, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: providing 4,500 gpm pumping capability, advancing an attack line and a backup line for fire control, establishing a rapid intervention crew, completing forcible entry, searching and removing victims from harm, providing medical care for the injured, ventilating the structure, securing utilities, and performing salvage/overhaul.

Fire Suppression Baseline Statement

At 90th percentile of all low risk fires, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer is: 7 minutes and 59 seconds.

At 90th percentile of all moderate risk fires, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer is: 5 minutes and 25 seconds.

At 90th percentile of all high risk fires, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer is: 5 minutes and 21 seconds.

For each risk level, the first in unit is capable of: conducting an incident size-up, establishing command, requesting additional resources, assigning incoming resources, securing a water supply, providing 500 gallons of water and 1,500 gpm pumping capacity, and initiating rescue or fire attack.

At 90th percentile of all low risk fires, the total response time for the arrival of the ERF, staffed with 2 firefighters and 1 officer, is: 8 minutes and 44 seconds.

At 90th percentile of all moderate risk fires, the total response time for the arrival of the ERF, staffed with 22 firefighters and officers, is: 14 minutes and 19 seconds.

At 90th percentile of all high risk fires, the total response time for the arrival of the ERF, staffed with 40 firefighters and officers, is: 16 minutes and 48 seconds.

For each risk level, the ERF is capable of: providing 4,500 gpm pumping capability, advancing an attack line and a backup line for fire control, establishing a rapid intervention crew, completing forcible entry, searching and removing victims from harm, providing medical care for the injured, ventilating the structure, securing utilities, and performing salvage/overhaul.

Fire Suppression
90th Percentile Baseline Performance Data

(Low Risk Level) Fire Suppression - 90th Percentile Times - Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:13	02:07	02:19	02:05	02:16	02:20
Turnout Time	Turnout Time 1st Unit	Urban		02:19	02:19	02:16	02:23	02:15	02:19
Travel Time	Travel Time 1st Unit **Distribution**	Urban		06:34	06:54	06:33	06:24	06:16	06:42
	Travel Time ERF **Concentration**	Urban		07:18	07:41	07:31	06:58	06:57	07:39
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:15	07:59	08:06	08:08	07:54	07:43	08:08
				n=4,957	n=1,004	n=896	n=1,114	n=1,025	n=918
	Total Response Time ERF **Concentration**	Urban	09:15	08:44	08:55	08:47	08:15	08:20	09:05
				n=4,939	n=1,000	n=894	n=1,108	n=1,022	n=915

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Fire Suppression - 90th Percentile Times - Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:08	02:18	01:49	02:05	02:20	01:53
Turnout Time	Turnout Time 1st Unit	Urban		01:19	00:59	01:13	01:21	01:11	01:21
Travel Time	Travel Time 1st Unit **Distribution**	Urban		04:42	04:50	04:46	04:40	04:30	04:09
	Travel Time ERF **Concentration**	Urban		12:28	09:35	13:06	12:37	10:00	13:09
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:15	05:25	05:16	05:24	05:27	05:12	05:37
				n=327	n=54	n=65	n=66	n=61	n=81
	Total Response Time ERF **Concentration**	Urban	09:15	14:19	15:54	14:21	12:53	11:25	14:53
				n=290	n=49	n=56	n=60	n=56	n=69

Source: Microsoft Power BI and Tableau

(High Risk Level) Fire Suppression - 90th Percentile Times - Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:25	03:00	02:13	02:11	02:28	02:09
Turnout Time	Turnout Time 1st Unit	Urban		01:18	00:53	01:07	01:07	01:52	00:47
Travel Time	Travel Time 1st Unit **Distribution**	Urban		04:31	04:25	04:31	04:34	04:18	04:10
	Travel Time ERF **Concentration**	Urban		16:03	16:48	15:50	12:20	16:04	08:05
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:15	05:21	04:46	05:11	05:39	06:01	04:47
				n=217	n=40	n=66	n=60	n=37	n=14
	Total Response Time ERF **Concentration**	Urban	09:15	16:48	17:40	16:10	12:57	17:02	08:47
				n=182	n=38	n=57	n=47	n=30	n=10

Source: Microsoft Power BI and Tableau

There was one Fire Suppression incident at the maximum risk level with invalid data.

EMS

Emergency Medical Services Benchmark Statement

At 90th percentile of all low, moderate and high risk EMS incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighter/EMTs and 1 officer/EMT, shall be: 5 minutes and 45 seconds. The first in unit shall be capable of: maintaining scene safety, establishing command, evaluating the need for additional resources, conducting initial patient assessment and basic life support, and initiating early defibrillation.

At 90th percentile of all low, moderate and high risk EMS incidents, the total response time for the arrival of the ERF, staffed with 2 firefighter/paramedics, 2 firefighter/EMTs and 1 officer/EMT shall be: 9 minutes. The ERF shall be capable of: conducting a comprehensive patient assessment, initiating advanced life support treatment modalities, and transporting the patient to the appropriate receiving facility.

Emergency Medical Services Baseline Statement

At 90th percentile of all low risk EMS incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighter/EMTs and 1 officer/EMT is: 6 minutes and 53 seconds.

At 90th percentile of all moderate risk EMS incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighter/EMTs and 1 officer/EMT is: 6 minutes and 44 seconds.

At 90th percentile of all high risk EMS incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighter/EMTs and 1 officer/EMT is: 6 minutes and 24 seconds.

For each risk level, the first in unit is capable of: maintaining scene safety, establishing command, evaluating the need for additional resources, conducting initial patient assessment and basic life support, and initiating early defibrillation.

At 90th percentile of all low risk EMS incidents, the total response time for the arrival of the ERF, staffed with 2 firefighter/paramedics, 3 firefighter/EMTs and 1 officer/EMT is: 10 minutes and 26 seconds.

At 90th percentile of all moderate risk EMS incidents, the total response time for the arrival of the ERF, staffed with 2 firefighter/paramedics, 3 firefighter/EMTs and 1 officer/EMT is: 10 minutes and 34 seconds.

At 90th percentile of all high risk EMS incidents, the total response time for the arrival of the ERF, staffed with 2 firefighter/paramedics, 3 firefighter/EMTs and 1 officer/EMT is: 10 minutes and 07 seconds.

The ERF is capable of: conducting a comprehensive patient assessment, initiating advanced life support treatment modalities, and transporting the patient to the appropriate receiving facility.

EMS
90th Percentile Baseline Performance Data

(Low Risk Level) EMS - 90th Percentile Times - Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:17	02:16	02:19	02:07	02:22	02:19
Turnout Time	Turnout Time 1st Unit	Urban		01:59	02:01	01:57	02:02	01:54	01:59
Travel Time	Travel Time 1st Unit **Distribution**	Urban		05:39	05:43	05:38	05:37	05:35	05:39
	Travel Time ERF **Concentration**	Urban		09:23	09:35	09:42	09:03	09:03	09:20
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	05:45	06:53	07:00	06:46	06:50	06:48	06:59
				n=19,159	n=4,337	n=4,166	n=3,831	n=3,626	n=3,199
	Total Response Time ERF **Concentration**	Urban	09:00	10:26	10:41	10:47	10:10	10:10	10:22
				n=19,106	n=4,322	n=4,152	n=3,825	n=3,610	n=3,197

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) EMS - 90th Percentile Times - Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		01:59	01:59	02:05	01:50	01:59	02:04
Turnout Time	Turnout Time 1st Unit	Urban		01:48	01:48	01:45	01:51	01:49	01:50
Travel Time	Travel Time 1st Unit **Distribution**	Urban		05:37	05:44	05:37	05:31	05:34	05:43
	Travel Time ERF **Concentration**	Urban		09:30	09:39	09:46	09:29	09:09	09:28
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	05:45	06:44	06:48	06:40	06:40	06:39	06:51
				n=24,377	n=5,587	n=5,217	n=5,173	n=4,582	n=3,818
	Total Response Time ERF **Concentration**	Urban	09:00	10:34	10:40	10:47	10:29	10:12	10:42
				n=24,299	n=5,574	n=5,204	n=5,153	n=4,559	n=3,809

Source: Microsoft Power BI and Tableau

(High Risk Level) EMS - 90th Percentile Times - Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:07	02:08	02:14	01:57	02:01	02:13
Turnout Time	Turnout Time 1st Unit	Urban		01:43	01:41	01:37	01:46	01:46	01:46
Travel Time	Travel Time 1st Unit **Distribution**	Urban		05:21	05:17	05:26	05:13	05:17	05:28
	Travel Time ERF **Concentration**	Urban		09:01	09:34	08:58	08:44	09:21	08:31
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	05:45	06:24	06:25	06:22	06:17	06:23	06:32
				n=5,180	n=1,061	n=1,023	n=1,093	n=1,042	n=961
	Total Response Time ERF **Concentration**	Urban	09:00	10:07	10:38	10:18	09:45	10:22	09:442
				n=5,141	n=1,057	n=1,017	n=1,086	n=1,032	n=949

Source: Microsoft Power BI and Tableau

Technical Rescue

Technical Rescue Benchmark Statement

At 90th percentile of all low, moderate and high risk technical rescue incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer, shall be: 7 minutes and 40 seconds. The first in unit shall be capable of: conducting an incident size up, establishing command, evaluating the need for additional resources, and controlling immediate hazards and life safety issues.

At 90th percentile of all low risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 12 firefighters and officers, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: appointing a safety officer, hazard control, establishing patient contact, and patient stabilization and transport.

At 90th percentile of all moderate risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 16 firefighters and officers, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: appointing a safety officer, hazard control, establishing patient contact, and patient stabilization and transport.

At 90th percentile of all high risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 24 firefighters and officers, shall be: 15 minutes. The ERF shall be capable of: appointing a safety officer, hazard control, establishing patient contact, and patient stabilization and transport. Additional resources would be requested via VFCC for high and maximum risk incidents requiring a Type 1 US&R Team.

Technical Rescue Baseline Statement

At 90th percentile of all low risk technical rescue incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer is: 5 minutes and 44 seconds.

At 90th percentile of all moderate risk technical rescue incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer is: 10 minutes and 15 seconds.

At 90th percentile of all high risk technical rescue incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer is: 7 minutes and 20 seconds.

For each risk level, the first in unit is capable of: conducting an incident size up, establishing command, evaluating the need for additional resources, and controlling immediate hazards and life safety issues.

At 90th percentile of all low risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 12 firefighters and officers is: 12 minutes and 59 seconds.

At 90th percentile of all moderate risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 16 firefighters and officers is: 22 minutes and 27 seconds.

The ERF is capable of: appointing a site safety officer, hazard control, establishing patient contact, and patient stabilization and transport.

The ERF is capable of: appointing a site safety officer, hazard control, establishing patient contact, and patient stabilization and transport.

At 90th percentile of all high risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 24 firefighters and officers is: 17 minutes and 2 seconds. The ERF is capable of: appointing a site safety officer, hazard control, establishing patient contact, and patient stabilization and transport. Additional resources would be requested via VFCC for high and maximum risk incidents requiring a Type 1 US&R Team.

Technical Rescue
90th Percentile Baseline Performance Data

(Low Risk Level) Technical Rescue – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:19	02:32	02:25	02:24	02:00	01:43
Turnout Time	Turnout Time 1st Unit	Urban		01:33	01:33	01:38	01:32	01:13	01:38
Travel Time	Travel Time 1st Unit **Distribution**	Urban		04:57	04:41	04:44	05:16	04:50	04:42
	Travel Time ERF **Concentration**	Urban		11:25	09:48	13:55	08:38	12:41	10:20
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	05:44	05:16	05:46	06:09	05:33	05:33
				n=202	n=44	n=34	n=42	n=48	n=34
	Total Response Time ERF **Concentration**	Urban	09:15	12:59	10:57	14:28	10:43	14:52	11:22
				n=196	n=41	n=33	n=41	n=47	n=34

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Technical Rescue – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		03:51	04:36	03:53	02:52	03:54	03:43
Turnout Time	Turnout Time 1st Unit	Urban		01:13	01:02	01:18	01:12	01:13	01:17
Travel Time	Travel Time 1st Unit **Distribution**	Urban		09:44	07:22	08:26	09:14	10:11	09:49
	Travel Time ERF **Concentration**	Urban		16:48	11:06	13:59	18:47	14:11	16:20
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	10:15	07:52	08:45	09:52	11:28	10:04
				n=109	n=14	n=18	n=25	n=26	n=26
	Total Response Time ERF **Concentration**	Urban	09:15	22:27	15:51	26:44	18:55	15:28	24:26
				n=83	n=10	n=15	n=21	n=16	n=21

Source: Microsoft Power BI and Tableau

(High Risk Level) Technical Rescue – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:15	04:09	02:00	01:30	01:44	02:43
Turnout Time	Turnout Time 1st Unit	Urban		01:24	01:16	01:14	01:22	02:14	00:43
Travel Time	Travel Time 1st Unit **Distribution**	Urban		06:41	04:54	04:16	07:17	04:37	05:32
	Travel Time ERF **Concentration**	Urban		15:37	17:17	08:25	19:35	08:39	13:27
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	07:20	05:36	05:04	07:55	05:29	05:53
				n=58	n=6	n=14	n=15	n=17	n=6
	Total Response Time ERF **Concentration**	Urban	15:00	17:02	18:36	08:29	24:41	09:08	14:03
				n=50	n=5	n=11	n=14	n=15	n=5

Source: Microsoft Power BI and Tableau

Hazardous Materials Benchmark Statement

At 90th percentile of all low, moderate and high risk hazardous materials response incidents, the total response time for the arrival of the first unit on scene, staffed with 2 firefighters and 1 officer, shall be: 7 minutes and 40 seconds. The first in unit shall be capable of: establishing command and initial isolation distance, denying entry into the exclusion zone, attempting to identify hazardous materials and gathering situational awareness, identifying potential victims and opportunities for rescues, initiating defensive mitigation efforts, evacuating and sheltering potential victims, and providing any decontamination necessary.

At 90th percentile of all moderate risk hazardous materials response incidents, the total response time for the arrival of the ERF staffed with 19 firefighters and officer, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: incident commander providing a dedicated safety officer; reinforcing initial response and defensive containment measures, atmospheric monitoring, additional evacuation needs, and making notifications to appropriate regulatory agencies.

At 90th percentile of all high risk hazardous materials response incidents, the total response time for the arrival of the ERF staffed with 28 firefighters and officers, shall be: 15 minutes. The ERF shall be capable of: providing a dedicated safety officer; reinforcing initial response and defensive containment measures, atmospheric monitoring, additional evacuation needs, and making notifications to appropriate regulatory agencies. BFD operates a Type 1 Hazardous Materials Team that is capable of handling all types of hazardous materials incidents and can be requested to help mitigate high and maximum risk incidents regionally.

Hazardous Materials Baseline Statement

At 90th percentile of all low risk hazardous materials response incidents, the total response time for the arrival of the first unit on scene, staffed with a minimum of 2 firefighters and 1 officer, is: 8 minutes and 7 seconds.

At 90th percentile of all moderate risk hazardous materials response incidents, the total response time for the arrival of the first unit on scene, staffed with a minimum of 2 firefighters and 1 officer, is: 6 minutes and 8 seconds.

At 90th percentile of all high risk hazardous materials response incidents, the total response time for the arrival of the first unit on scene, staffed with a minimum of 2 firefighters and 1 officer, is: 6 minutes and 49 seconds.

For each risk level, the first in unit is capable of: establishing command and initial isolation distance, denying entry into the exclusion zone, attempting to identify hazardous materials and gathering situational awareness, identifying potential victims and opportunities for rescues, initiating defensive mitigation efforts, evacuating and sheltering potential victims, and providing any decontamination necessary.

At 90th percentile of all moderate risk hazardous materials response incidents, the total response time for the arrival of the ERF staffed with 19 firefighters and officers, is: 12 minutes and 50 seconds. The ERF is capable of: providing a dedicated safety officer; reinforcing initial response and defensive containment measures, atmospheric monitoring, additional evacuation needs, and making notifications to appropriate regulatory agencies.

At 90th percentile of all high risk hazardous materials response incidents, the total response time for the arrival of the ERF staffed with 28 firefighters and officers, is: 21 minutes and 42 seconds. The ERF is capable of: providing a dedicated safety officer; reinforcing initial response and defensive containment measures, atmospheric monitoring, additional evacuation needs, and making notifications to appropriate regulatory agencies. BFD operates a Type 1 Hazardous Materials Team that is capable of handling all types of hazardous materials incidents and can be requested to help mitigate high and maximum risk incidents regionally.

Hazardous Materials
90th Percentile Baseline Performance Data

(Low Risk Level) Hazardous Materials – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:34	01:40	03:15	02:03	03:10	02:42
Turnout Time	Turnout Time 1st Unit	Urban		02:14	01:33	02:06	02:15	03:21	02:10
Travel Time	Travel Time 1st Unit **Distribution**	Urban		06:31	05:30	05:50	07:45	07:15	06:32
	Travel Time ERF **Concentration**	Urban	Not Applicable (only 1 unit response)						
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	08:07	06:45	06:46	09:39	08:39	07:56
				n=128	n=19	n=18	n=17	n=25	n=49
	Total Response Time ERF **Concentration**	Urban	Not Applicable (only 1 unit response)						

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Hazardous Materials – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:26	01:32	02:40	02:27	01:42	02:37
Turnout Time	Turnout Time 1st Unit	Urban		01:07	00:56	00:37	01:20	01:09	00:57
Travel Time	Travel Time 1st Unit **Distribution**	Urban		05:00	05:23	05:32	03:29	05:49	04:25
	Travel Time ERF **Concentration**	Urban		11:41	14:41	09:37	07:05	11:44	14:53
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	06:08	06:14	05:49	04:40	06:45	04:38
				n=35	n=5	n=7	n=7	n=8	n=8
	Total Response Time ERF **Concentration**	Urban	09:15	12:50	15:11	10:15	07:52	11:59	22:32
				n=30	n=4	n=6	n=6	n=8	n=6

Source: Microsoft Power BI and Tableau

(High Risk Level) Hazardous Materials – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		04:36	04:28	04:39	01:37	03:03	03:08
Turnout Time	Turnout Time 1st Unit	Urban		01:45	01:22	01:50	01:02	00:21	01:19
Travel Time	Travel Time 1st Unit **Distribution**	Urban		06:26	06:37	03:01	06:00	06:35	05:50
	Travel Time ERF **Concentration**	Urban		20:41	14:30	14:07	20:41	11:58	20:19
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	06:49	06:48	04:51	06:45	06:41	06:07
				n=18	n=5	n=2	n=4	n=2	n=5
	Total Response Time ERF **Concentration**	Urban	15:00	21:42	14:36	15:50	21:42	12:19	21:21
				n=12	n=3	n=1	n=2	n=2	n=4

Source: Microsoft Power BI and Tableau

(Maximum Risk Level) Hazardous Materials – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		-	-	-	-	-	-
Turnout Time	Turnout Time 1st Unit	Urban		03:46	-	-	-	03:46	-
Travel Time	Travel Time 1st Unit **Distribution**	Urban		10:14	-	-	-	10:14	-
	Travel Time ERF **Concentration**	Urban		-	-	-	-	-	-
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	14:00	-	-	-	14:00	-
				n=1	n=0	n=0	n=0	n=1	n=0
	Total Response Time ERF **Concentration**	Urban	15:00	-	-	-	-	-	-
				n=0	n=0	n=0	n=0	n=0	n=0

Source: Microsoft Power BI and Tableau

Wildland Fire Services

Wildland Fire Services Benchmark Statement

At 90th percentile of all low, moderate and high risk wildland fire incidents, the total response time for the arrival of the first unit on scene, staffed with 2firefighters and 1 officer, shall be: 7 minutes and 40 seconds. The first in unit shall be capable of: conducting an incident size-up, establishing command, determining incident priorities, setting incident objectives, requesting additional resources, assigning incoming resources, securing a water supply, providing 500 gallons of water and 1,500 gpm pumping capacity, initiating fire attack and evacuation of public.

At 90th percentile of all moderate risk wildland fire incidents, the total response time for the arrival of the ERF, staffed with 25 firefighters and officers, shall be: 9 minutes and 15 seconds. The ERF shall be capable of: providing 7,500 gpm pumping capability, advancing two attack lines for fire containment and control, structure defense, public evacuation, providing medical care for the injured, and performing overhaul.

At 90th percentile of all high risk wildland fire incidents, the total response time for the arrival of the ERF, staffed with 59 firefighters and officers, shall be: 11 minutes and 30 seconds. The ERF shall be capable of: providing 7,500 gpm pumping capability, advancing two attack lines for fire containment and control, structure defense, public evacuation, providing medical care for the injured, and performing overhaul.

Wildland Fire Services Baseline Statement

At 90th percentile of all low risk wildland fire incidents, the total response time for the arrival of the first unit on scene, staffed with a minimum of 2 firefighters and 1 officer, is: 8 minutes and 33 seconds.

At 90th percentile of all moderate risk wildland fire incidents, the total response time for the arrival of the first unit on scene, staffed with a minimum of 2 firefighters and 1 officer, is: 9 minutes and 37 seconds.

For the low, moderate and high risk level, the first in unit is capable of: conducting an incident size-up, establishing command, determining incident priorities, setting incident objectives, requesting additional resources, assigning incoming resources, securing a water supply, providing 500 gallons of water and 1,500 gpm pumping capacity, initiating fire attack and evacuation of public.

At 90th percentile of all low risk wildland fire incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and officers, shall be: 12 minutes and 12 seconds.

At 90th percentile of all moderate risk wildland fire incidents, the total response time for the arrival of the ERF, staffed with 25 firefighters and officers, is: 24 minutes and 45 seconds.

For the low and moderate risk level, the ERF is capable of: providing 7,500 gpm pumping capability, advancing two attack lines for fire containment and control, structure defense, public evacuation, providing medical care for the injured, and performing overhaul.

At 90th percentile of all high risk wildland fire incidents, the total response time for the arrival of the ERF, staffed with 59 firefighters and officers, is: 9 minutes and 12 seconds. For the high risk level, the ERF is capable of: providing 7,500 gpm pumping capability, advancing two attack lines for fire containment and control, structure defense, public evacuation, providing medical care for the injured, and performing overhaul.

Wildland Fire Services
90th Percentile Baseline Performance Data

(Low Risk Level) Wildand Fire Services – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:02	02:23	02:03	01:37	01:49	02:18
Turnout Time	Turnout Time 1st Unit	Urban		02:18	02:01	02:13	02:15	02:23	02:13
Travel Time	Travel Time 1st Unit **Distribution**	Urban		08:03	07:31	07:42	06:13	06:28	09:22
	Travel Time ERF **Concentration**	Urban		10:23	10:26	08:15	08:15	10:01	09:58
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	08:33	07:55	08:20	07:35	06:58	10:04
				n=107	n=22	n=26	n=13	n=15	n=31
	Total Response Time ERF **Concentration**	Urban	09:15	12:12	11:05	09:37	23:15	11:39	11:22
				n=105	n=21	n=25	n=14	n=15	n=30

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Wildand Fire Services – 90th Percentile Times – Baseline Performance	Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21

Alarm Handling	Pick-up to Dispatch	Urban		02:57	02:45	01:36	02:53	03:01	01:49
Turnout Time	Turnout Time 1st Unit	Urban		01:20	00:47	01:22	00:33	00:58	01:11
Travel Time	Travel Time 1st Unit **Distribution**	Urban		08:46	06:10	05:14	07:52	08:35	09:18
	Travel Time ERF **Concentration**	Urban		18:07	12:39	-	-	15:45	19:33
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	09:37	06:57	06:35	08:25	09:33	10:04
				n=14	n=3	n=2	n=1	n=2	n=6
	Total Response Time ERF **Concentration**	Urban	09:15	24:45	13:34	-	-	16:14	26:37
				n=8	n=1	n=0	n=0	n=2	n=5

Source: Microsoft Power BI and Tableau

(High Risk Level) Wildand Fire Services – 90th Percentile Times – Baseline Performance			Benchmark (Target)	FY24-25 to FY20-21	FY24-25	FY23-24	FY22-23	FY21-22	FY20-21
Alarm Handling	Pick-up to Dispatch	Urban		02:30	02:07	-	-	-	02:35
Turnout Time	Turnout Time 1st Unit	Urban		00:07	00:07	-	-	-	00:07
Travel Time	Travel Time 1st Unit **Distribution**	Urban		05:45	05:48	-	-	-	04:51
	Travel Time ERF **Concentration**	Urban		09:05	08:47	-	-	-	09:07
Total Response Time	Total Response Time 1st Unit **Distribution**	Urban	07:40	05:52	05:55	-	-	-	04:58
				n=3	n=2	n=0	n=0	n=0	n=1
	Total Response Time ERF **Concentration**	Urban	11:30	09:12	08:54	-	-	-	09:14
				n=2	n=1	n=0	n=0	n=0	n=1

Source: Microsoft Power BI and Tableau

In **FY20-21**, there was no incident found for the one high risk wildland fire incident. For **FY24-25**, there were two wildland fire incidents originally classified as high risk but they are actually moderate risk.

Benchmark to Baseline Performance Gaps

BFD has identified gaps by comparing response time goals (benchmarks) to actual performance (baselines) for all five service categories: Fire Suppression, EMS, Technical Rescue, Hazardous Materials and Wildland Fire Services. The performance gap review process has allowed BFD to identify deficiencies and opportunities for improvement. As previously stated, BFD considered several factors when developing its benchmark performance goals: current capabilities, system demand, risk analysis, community expectations and the incremental pursuit towards ultimately meeting NFPA 1710 total response time standards.

Fire Suppression

(Low Risk Level) Fire Suppression - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:13	01:09
Turnout Time	Turnout Time 1st Unit	Urban	01:35	02:19	00:44
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	06:34	01:34
	Travel Time ERF **Concentration**	Urban	06:45	07:18	00:33
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:15	07:59	00:44
				n=4,957	-
	Total Response Time ERF **Concentration**	Urban	09:15	08:44	-00:31
				n=4,939	-

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Fire Suppression - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:08	01:04
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:19	-00:16
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	04:42	-00:18
	Travel Time ERF **Concentration**	Urban	06:45	12:28	05:43
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:15	05:25	-01:50
				n=327	-
	Total Response Time ERF **Concentration**	Urban	09:15	14:19	05:04
				n=290	-

Source: Microsoft Power BI and Tableau

(High Risk Level) Fire Suppression - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:25	01:21
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:18	-00:17
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	04:31	-00:29
	Travel Time ERF **Concentration**	Urban	06:45	16:03	09:18
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:15	05:21	-01:54
				n=217	-
	Total Response Time ERF **Concentration**	Urban	09:15	16:48	07:33
				n=182	-

Source: Microsoft Power BI and Tableau

EMS

(Low Risk Level) EMS - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:30	02:17	01:13
Turnout Time	Turnout Time 1st Unit	Urban	01:00	01:59	00:24
Travel Time	Travel Time 1st Unit **Distribution**	Urban	04:30	05:39	00:39
	Travel Time ERF **Concentration**	Urban	06:15	09:23	02:38
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	05:45	06:53	01:08
				n=19,159	-
	Total Response Time ERF **Concentration**	Urban	09:00	10:26	01:26
				n=19,106	-

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) EMS - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:30	01:59	00:55
Turnout Time	Turnout Time 1st Unit	Urban	01:00	01:48	00:13
Travel Time	Travel Time 1st Unit **Distribution**	Urban	04:30	05:37	00:37
	Travel Time ERF **Concentration**	Urban	06:15	09:30	02:45
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	05:45	06:44	00:59
				n=24,377	
	Total Response Time ERF **Concentration**	Urban	09:00	10:26	01:26
				n=24,299	

Source: Microsoft Power BI and Tableau

(High Risk Level) EMS - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:30	02:07	01:03
Turnout Time	Turnout Time 1st Unit	Urban	01:00	01:43	00:08
Travel Time	Travel Time 1st Unit **Distribution**	Urban	04:30	05:21	00:21
	Travel Time ERF **Concentration**	Urban	06:15	09:01	02:16
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	05:45	06:24	00:39
				n=5,180	-
	Total Response Time ERF **Concentration**	Urban	09:00	10:07	01:07
				n=5,141	-

Source: Microsoft Power BI and Tableau

Technical Rescue

(Low Risk Level) Technical Rescue - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:19	01:15
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:33	-00:02
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	04:57	-00:03
	Travel Time ERF **Concentration**	Urban	06:45	11:25	04:40
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	05:44	-00:01
				n=202	-
	Total Response Time ERF **Concentration**	Urban	09:15	12:59	03:59
				n=196	-

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Technical Rescue - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	03:51	02:47
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:13	-00:22
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	09:44	04:44
	Travel Time ERF **Concentration**	Urban	06:45	16:48	10:03
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	10:15	02:35
				n=109	-
	Total Response Time ERF **Concentration**	Urban	09:15	22:27	13:12
				n=83	-

Source: Microsoft Power BI and Tableau

(High Risk Level) Technical Rescue - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:15	01:11
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:24	-00:11
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	06:41	01:41
	Travel Time ERF **Concentration**	Urban	06:45	15:37	08:52
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	07:20	-01:31
				n=58	-
	Total Response Time ERF **Concentration**	Urban	15:00	17:02	02:02
				n=50	-

Source: Microsoft Power BI and Tableau

(Low Risk Level) Hazardous Materials - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:34	01:30
Turnout Time	Turnout Time 1st Unit	Urban	01:35	02:14	00:39
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	06:31	01:31
	Travel Time ERF **Concentration**	Urban	06:45	08:04	01:19
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	08:07	00:27
				n=128	-
	Total Response Time ERF **Concentration**	Urban	Not Applicable (only 1 unit response)	10:02	02:22
				n=126	-

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Hazardous Materials - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:26	01:22
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:07	-00:28
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	05:00	00:00
	Travel Time ERF **Concentration**	Urban	06:45	11:41	04:56
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	06:08	-01:32
				n=35	-
	Total Response Time ERF **Concentration**	Urban	09:15	12:50	03:35
				n=30	-

Source: Microsoft Power BI and Tableau

(High Risk Level) Hazardous Materials - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	04:36	03:32
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:45	00:10
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	06:26	01:26
	Travel Time ERF **Concentration**	Urban	06:45	20:41	13:56
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	06:49	-00:51
				n=18	-
	Total Response Time ERF **Concentration**	Urban	15:00	21:42	6:42
				n=12	-

Source: Microsoft Power BI and Tableau

(Low Risk Level) Wildland Fire Services - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:02	00:58
Turnout Time	Turnout Time 1st Unit	Urban	01:35	02:18	00:43
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	08:03	03:04
	Travel Time ERF **Concentration**	Urban	06:45	10:23	03:38
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	08:33	00:53
				n=107	
	Total Response Time ERF **Concentration**	Urban	09:15	12:12	02:57
				n=105	

Source: Microsoft Power BI and Tableau

(Moderate Risk Level) Wildland Fire Services - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:57	01:53
Turnout Time	Turnout Time 1st Unit	Urban	01:35	01:20	-00:15
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	08:46	03:46
	Travel Time ERF **Concentration**	Urban	06:45	18:07	11:22
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	09:37	01:57
				n=14	-
	Total Response Time ERF **Concentration**	Urban	09:15	24:45	15:30
				n=8	-

Source: Microsoft Power BI and Tableau

(High Risk Level) Wildland Fire Services - 90th Percentile Times - Baseline Performance			Target (Agency Benchmark)	FY24-25 to FY20-21	Time Gap
Alarm Handling	Pick-up to Dispatch	Urban	01:04	02:30	01:26
Turnout Time	Turnout Time 1st Unit	Urban	01:35	00:07	-01:28
Travel Time	Travel Time 1st Unit **Distribution**	Urban	05:00	05:45	00:45
	Travel Time ERF **Concentration**	Urban	06:45	09:05	02:20
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	07:40	05:52	-01:48
				n=3	-
	Total Response Time ERF **Concentration**	Urban	11:30	09:12	-02:18
				n=2	-

Source: Microsoft Power BI and Tableau

Opportunities for Improvement

- ***All Categories:*** The Burbank Police Department (BPD) Communications Center is the public safety answering point (PSAP) for 911 calls in Burbank. As such, 911 calls within BFD's purview are transferred by the PSAP to VFCC. Currently, a mechanism is not in place to track the time interval from the receipt of a 911 call from the PSAP to VFCC. BFD will be working with BPD towards any possible solutions to this reporting gap.

- ***All Categories:*** The protocol of Burbank's PSAP answering a 911 call, asking questions and gathering information about the emergency and then transferring fire-based calls to VFCC causes a longer than necessary delay. VFCC has been and will continue to work with Burbank's PSAP to refine call-taking protocols that are fire-based. This includes transferring fire-based calls to VFCC immediately and then concurrently staying on the call to gather any other necessary information for the Police response component, if any.

- ***All Categories:*** Travel time currently has a margin of error due to the timing in which the Fire Captain hits the on scene button. The VFCC CAD upgrade included automatic vehicle location (AVL) technology that dispatches the closest unit and automatically time stamp apparatus movement to an incident.

- ***All Categories:*** Communicating the value of performance measures and drive for improvement is a critical aspect to accountability. BFD will publish unit responses with turnout time and distribute to all personnel.

- ***All Categories:*** CRA & SOC Committee members will review response demands within each district to determine if there have been any changes within a planning zone such as new development and/or population spikes, freeway construction, changes to service demands, or changes in operations that impact service level objectives.

- ***All Categories:*** Increase web-based training opportunities to reduce the number of hours spent at the Training Center and/or classroom and keep companies in district more often.

- ***Fire Suppression, EMS, Technical Rescue and Wildland Fire Services:*** Split of 4-person and 3-person staffing on engines results in a gap in efficiency and total response time. Building 4-person staffing across all fire engines will allow first in units to operate with optimum effectiveness when on scene of an emergency, initiate critical tasks earlier, and ultimately decrease the total response time - ERF. As BFD works to improve total response times and move towards achieving NFPA's recommended response times, the integration of 4-person staffing across all fire engines will be a compelling factor. BFD recognizes the *National Institute of Standards and Technology, Report on Residential Fireground Field*

Experiments (Averill et al, 2010) and *National Institute of Standards and Technology, Report on EMS Field Experiments (Moore-Merrell et al, 2010)* as guiding documents to quantify staffing levels.

- ***EMS:*** BFD has conducted a feasibility study on its EMS Program and the overall efficiencies of resource deployment to identify, plan and improve response objectives.

- ***Technical Rescue:*** Travel time and total response time for mountain and freeway rescues have an inherent delay due to locational factors. Both mountain and freeway incidents have indirect routes and limited access points. Additionally, for freeway incidents, truck companies typically stage at the closest bridge over the freeway and wait for confirmation from responding engine companies as to the exact location and whether there is a need for technical rescue operations. As such, there can be a significant delay when truck companies hit the on scene status indicator.

- ***Hazardous Materials:*** The Hazardous Materials Response Vehicle is located at Station 12 and is cross-staffed with Truck 12. As such, there can be an inherent delay in total response time - ERF if Truck 12 is out of the station and has to return and changeover apparatus.

- ***Wildland Fire Services:*** Travel time and total response time to mountain fires and freeway vegetation fires have an inherent delay due to locational factors. Both mountain and freeway incidents have indirect routes and limited access points. Freeway traffic and the arrival of outside resources also impact total response time - ERF.

Performance Maintenance and Improvement Plans

BFD will ensure that its current service level objectives are being met through continuous monitoring of baseline performance. The compliance team includes the CRA & SOC Committee members: Fire Chief, Deputy Fire Chief, Battalion Chiefs, Fire Administrator and Administrative Analyst. The team will monitor issues related to the CRA & SOC as well as use information and data to evaluate future operational needs and adjustments. Provided below is a summary of compliance team responsibilities:

Fire Chief:

- Liaison to City Manager and City Council.
- Lead review of published baseline performance data with CRA & SOC Committee.

Deputy Fire Chief:

- Fire Suppression Program Appraisal.
- Review and interpret all baseline performance data for each service program: Fire Suppression, EMS, Technical Rescue, Hazardous Materials and Wildland Fire Services.

Administration/Logistics Battalion Chief:

- Subject matter expert for apparatus and equipment.

EMS Battalion Chief:

- EMS Program Appraisal.
- Wellness/Fitness Program Appraisal.

Fire Marshal/Battalion Chief:

- Monitors commercial and residential developments to analyze and report potential impacts for each planning zone.
- Provides updates for fire and life safety inspection programs.
- Fire Prevention Program Appraisal.
- Fire Investigation Program Appraisal.
- Public Education Program Appraisal.
- Subject matter expert for the Fire Hazard Reduction Program.

Training & Safety Battalion Chief:

- Training and Education Program Appraisal.

A-Shift Battalion Chief:

- Hazardous Materials Program Appraisal.

B-Shift Battalion Chief:

- Technical Rescue Program Appraisal.

C-Shift Battalion Chief:

- Wildland Fire Services Program Appraisal.

Fire Administrator:

- CRA & SOC Committee Chair.
- CPSE Accreditation Manager.

Administrative Analyst:

- Publishes on-demand data.
- Maintains CRA & SOC performance tables.

Burbank Fire Department
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November 2025
Photos provided by Ross A. Benson Photography and Burbank Fire Department
Cover designed by Cassidy Allen

An ISO Class 1 Rated Department