



PACIFIC GROVE FIRE DEPARTMENT 2007 STAFFING AND RESPONSE CRITERIA

The fundamental mission of the Pacific Grover Fire Department (PGFD) is to protect life, property and the environment. The PGFD has consistently provided an efficient, cost effective, minimally staffed fire protection system to the community that is consistent with nationally recognized standards and mandates for staffing and response times such as the National Fire Protection Association (NFPA) and the Occupational Safety and Health Administration (OSHA).

PGFD response and performance objectives are based on firefighting and emergency medical services functions. Objectives for these two functions are based on two nationally accepted concepts; fire growth and brain death. These two concepts provide fire departments with benchmark times for response.

FIRE GROWTH AND FLASHOVER

The "flashover" stage of fire growth is a critical point in time with which fire departments want to arrive and deploy their resources. Flashover is a critical stage of fire growth for two reasons. First, no living thing in the room of origin will survive, so the chances for firefighters to save lives drops dramatically. Second, flashover creates a quantum jump in the rate of combustion and a significantly greater amount of water is needed to reduce the burning material below its ignition



temperature. Flashover also creates the need for more staffing to handle the larger hose streams needed to extinguish the fire. A post-flashover fire burns hotter and moves faster, compounding the search and rescue problems in the remainder of the structure. Listed below is a quick comparison of fire conditions and fire fighting operations before flashover and after flashover:

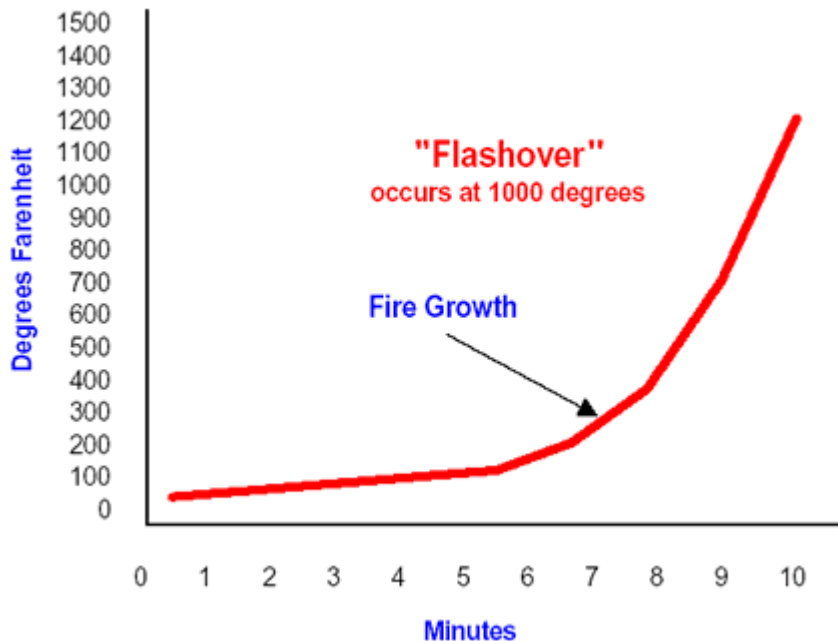
Pre-flashover

- Fire is limited to one room
- Fire fighters operate using small hoses
- Search and rescue is easier
- Initial resources can handle the fire

Post-flashover

- Fire may spread beyond one room
- Larger and more hoses are needed
- Search and rescue is compounded
- Incident requires additional resources

Predicting when flashover occurs is fairly easy to do. Tests have been conducted and conclude that flashover occurs between six and ten minutes of ignition. Measuring flashover is a function of time and temperature. Fire growth occurs exponentially; fire doubles itself every second of free burning that is allowed. We can plot fire growth on what is known as the time and temperature curve:



EMERGENCY MEDICAL SERVICES

Emergency Medical Services (EMS) identifies brain death as a critical point in time around which to deploy resources. When breathing stops, the brain undergoes potential irreversible damage within four to six minutes without oxygen. After ten minutes without oxygen the chances of survival are minimal. Most EMS systems strive to:

- Provide basic life support first responder units (Emergency Medical Technicians) on-scene within five minutes or less in urban areas 90% of the time.
- Provide advanced life support paramedic units on-scene within 8 minutes in urban areas 90% of the time.

In Pacific Grove, the fire department provides first responder emergency medical service within 5 minutes or less 95% of the time and West-Med Ambulance, a private ambulance company, strives to provide paramedic service within 8 minutes or less 90% of the time.

Our current staffing system has not increased in over 25 years and is based on the fire service standard 3-platoon system with 5 personnel that work 24 hours a day; 3 assigned to the truck company and 2 assigned to the engine company supplemented by part-time firefighters (volunteers). The minimum staffing level on any given day to cover vacation, sick leave and compensation leave is reduced to 4 personnel. The minimum staffing of 4 personnel is based on the need for us to operate 2 companies with 1 driver / operator and 1 company officer on each of the 2 companies. This is also the minimum staffing required for compliance with the Cal-OHSA 2-in-2-out staffing mandate. This staffing level is the absolute minimum number for initial fire and emergency medical response and thus is augmented by our part-time (volunteer) firefighters and automatic-aid companies from surrounding communities.

FIREFIGHTER SAFETY

On April 8th 1998 the OSHA / Cal-OSHA Respiratory Protection law (2-in-2-out) went into affect. Simply stated we are required to have a minimum of 2 firefighters standing by solely committed to backup the entry team. No interior firefighting can take place until this Rapid Intervention Crew (RIC) is in place, unless a rescue is imminent.

This 2 company staffing model allows us to have the back-up of a 2nd engine company when 1 of the 2 companies is committed to an emergency response thus allowing the available company to respond to the next call. In an effort to maintain the operational readiness of the 2 companies the Department maintains 2 front line apparatus and 2 reserve apparatus thus ensuring that we always have available apparatus to respond even when one of the front line apparatus is out-of-service due to mechanical issues or is committed to a mutual-aid assignment. This staffing and deployment model enables the PGFD to maintain excellent response times of 5 minutes or less 95% of the time for both fire and emergency medical responses.

PGFD staffing has not been increased in 25 years. Staff reductions have included 1 fulltime Division Chief / Fire Marshal, 1 fulltime Dispatcher, 1 part-time Fire Clerk, and 1 part-time Emergency Program Manager

Another staffing issue that needs to be taken into consideration is our Insurance Services Office (ISO) Rating. According to ISO Community Classification Services Analyst, reducing the number of full-time fire personnel could have an impact on our current ISO rating. Pacific Grove is currently rated as a Class-3 City which is an excellent rating. This number is based upon a rating system that

is made up of various criteria one of which is staffing. To achieve the Class-3 rating we needed to have a minimum of 70%. We were credited with 71.96% in our last ISO rating survey, just barely making the Class-3 rating. In the area of personnel we only received 6.73 points out of a maximum of 15.00+ available points. Losing personnel will impact our current rating which could possibly lead us to a reduced rating thus initiating a downgrade to a Class-4 ISO rating.

Furthermore, according to the International City/County Managers Association (ICMA) Performance Consortium, the national average is 1.0 firefighter per one thousand in population. Pacific Grove's current level of staffing provides for the 1.0 firefighter per one thousand population. This 1.0 per thousand does not take into account the significant increase in population that Pacific Grove experiences with the tourism impact especially on weekends, holidays and during special events.

It should be noted that the Department's 20 part-time firefighters (volunteers) are not part of the calculation since these individuals are recalled only when needed and/or work shift when available. They are however credited as a part of overall staffing in the Insurance Service Office's evaluation. Adequate training and response records are required and thus maintained to obtain that credit.

PGFD 2006 INCIDENT RESPONSE SUMMARY REPORT

Type of Call	Number	Average Response Time	Property Loss
Fire	57	3:50	\$256,650.00
EMS/Rescue	993	3:40	\$10,000.00
Hazardous Condition	148	3:54	\$17,500.00
Service Calls	330	3:37	\$25,000.00
Severe Weather	13	3:05	
False Call	89	3:46	
Total Responses	1,630		Total Loss \$309,150.00

