

Section 6: Hazardous Material and Technical Rescue Responses

Hazardous Material Incident Response

Hazardous Material incidents account for less than two percent of all calls to the Fire Department but could have the largest impact on the community. Response to these incidents vary from one engine company for an odor investigation to a full assignment (all Culver City units) plus specialized mutual aid resources for a major release. Hazardous materials response is a complex undertaking. Successful mitigation requires a cooperative effort between multiple response and regulatory agencies. Culver City Fire Department provides first responder operational level hazardous material response which include; assessment, command, isolating the product, establishing a safe perimeter, evacuation, containment, and documentation. Specialized hazardous materials resources are available through the California Master Mutual Aid Plan for incidents requiring entry into a “hot” zone or technician level activities.

Effective Response Force – Hazardous Material

An effective response force for low, moderate, and high risk hazardous material incidents are defined below. As previously noted, an effective response force is defined as the minimum amount of staffing and equipment that must reach a specific emergency within a targeted travel time.

	Engines	Rescues	Trucks	Battalion Chief	# of personnel
Low Risk	1	0	0	0	3-4*
Moderate Risk	4**	1	2**	2**	29**
High Risk	5**	2	2**	2**	34**

*Truck company responds in place of an engine in some circumstances.

**Additional companies/specialized resources obtained utilizing mutual aid.

The minimum mutual aid request to meet the demands of a moderate and high risk incident is a “haz mat task force” which includes one haz mat squad, one truck, two engines, and one battalion chief (16 personnel).

For 90% of all hazardous materials incidents, the Hazardous Material Effective Response Force (HMERF) will arrive within 30 minutes travel time. The HMERF is capable of

providing technical expertise, knowledge, skills, and abilities in order to mitigate a hazardous material incident.

Technical Rescue Response

The Culver City Fire Department provides a wide range of technical rescue services to the community. The most common of these incidents is vehicle extrication. Other types of incidents include confined space rescue, trench or building collapse rescue, persons trapped in elevated positions, and swift water rescue (La Ballona flood control channel). With the exception of vehicle extrication, the demand for these services has been historically low. Culver City Fire Department provides awareness, operational, and some technician level rescue services. Specialized technical rescue resources are available through the California Master Mutual Aid Plan for incidents that exceed Culver City Fire Department capabilities.

Effective Response Force – Technical Rescue

An effective response force for low, moderate, and high risk technical rescue incidents are defined below. As previously noted, an effective response force is defined as the minimum amount of staffing and equipment that must reach a specific emergency within a targeted travel time.

	Engines	Rescues	Trucks	Battalion Chief	# of personnel
Low Risk	2	1	1	1	13
Moderate Risk	3	2	1	1	18
High Risk	4*	2*	2*	2*	32*

* Additional companies/specialized resources obtained utilizing mutual aid.

The minimum mutual aid request to meet the demands of a high risk incident is a “physical rescue assignment” which includes one heavy rescue, two engines, one truck, one ambulance, and 1 battalion chief (19 personnel).

For 90% of all technical rescue incidents, the Technical Rescue Team (TRT) Effective Response Force (ERF) will arrive within 30 minutes travel time. The TRTERF is

capable of providing technical expertise, knowledge, skills, and abilities during a technical rescue incident.

Evaluating Hazardous Material and Technical Rescue Capability

Unlike fire and EMS responses there is no nationally recognized time benchmark for hazardous material and technical rescue incidents. Culver City Fire Department resources are situated to ensure that the first due unit arrives in less than 5 minutes 90% of the time. The first due unit has the capability to conduct an assessment of the situation, assume command, take initial actions, and order more resources if needed. An effective response force, determined by task analysis, has been defined for each type of response.

Location of Resources

Station	Unit	Apparatus	Minimum On-Duty Staffing
Station One	Engine 1	Engine	3
	Rescue 1	ALS Ambulance	2
	Battalion 1	Command Vehicle	1
	Engine 4	Engine	Reserve Unit
	Engine 5	Engine	Reserve Unit
	Engine 6	Engine	Reserve Unit
	Truck 1	Truck	Reserve Unit
	Battalion 2	Command Vehicle	Reserve Unit
	Utility 1	Flatbed truck	Cross staffed
Station Two	Engine 2	Engine	3
	Truck 2	Truck	4
	Rescue 2	ALS Ambulance	Reserve Unit
Station Three	Engine 3	Engine	3
	Rescue 3	ALS Ambulance	2
Total Minimum Staffing			18

Note: A new Fire Station 3 facility is currently under construction and due to be completed in July 2009. The new facility is located on Bristol Parkway approximately ½ mile from the existing station. An analysis of travel distances from the new station site indicates that there will be no increase in travel time. Some district boundaries will be modified slightly to maintain an equally distributed workload.

Deployment Configuration (Alarm Assignments)

Alarm assignments are defined in Article 302.03 of the Fire Department Rules & Regulations and outline the existing deployment of resources for all incidents as follows.

Single Company Alarm (1 Engine – 3 personnel)

- Auto accident requiring clean-up of debris
- Natural gas leaks outside building
- Smoke investigation outside building
- Power lines down - hot wires
- Power pole fire
- Mail box fire
- Fires reported out - investigation
- Lock-out - emergency situation only
- Bomb threats - Code 2 engine company
- Residential smoke/CO detector-no visible sign of smoke
- Hazardous materials investigation

Rescue Alarm Assignment (1 Engine, 1 Rescue – 5 personnel)

- All calls for illness or injury, including routine traffic accidents.

Two Unit Alarm Assignment (1 Engine, 1 Rescue or Truck – 5-7 personnel)

- Trash or rubbish fire
- Automobile fire

Three Unit Assignment (1 Engine, 1 Truck, 1 BC – 8 personnel)

- Automatic fire alarms
- Water flow alarms

First Alarm Assignment (2 Engines, 1 Rescue, 1 Truck, 1 BC – 13 personnel)

- Rescue, trapped person(s)
- Cave-in
- Excavation, person(s) trapped
- Person(s) trapped, elevated position
- Grass or brush fire
- Electrical fire or electrical short in building (TV, washing machine, etc.)
- Vehicle into a house
- Traffic accident with entrapment
- Hazardous materials incident

Full Alarm Assignment (3 Engines, 2 Rescues, 1 Truck, 1 BC – 18 personnel)

- Reported structure fires
- Fire in/under/around structure
- Fire near or endangering structure
- Auto fire in or near structure
- Natural gas leak in building
- Smell of smoke in a structure
- Rubbish, brush or grass fire near building
- Serious freeway emergencies: examples:
 - Multiple Victim Incidents (MVI)
 - Accident involving vehicle transporting flammable liquids/chemicals
 - Liquid propane gas spill or leak
- Gasoline leak from tank truck
- Aircraft crash
- Swift Water response
- Explosion