

SERVICE LEVELS AND DEPLOYMENT GOALS

One of the recommendations from the ESCI study was to develop service levels for the various districts and service areas protected by county fire. The ESCI study references National Fire Protection Association (NFPA) 1710 and 1720 – Standard for the Organization and Deployment of Career Fire Departments, as a basis for the standards. Both NFPA 1710 and 1720, as well as NFPA 1201 – Standard for Providing Emergency Services to the Public were used in the development of these service levels and deployment goals. In accordance with these sections, staff gathered information and established standardized response times based on several factors, including the County's General Plan, existing fire safety standards within each jurisdiction, density and type of development, hazards within the jurisdiction, and allowable exceptions.

Geographical Risk (GeoCoded) Areas

The Census 2000 established, by definition, terms used to identify specific areas for data collection and analysis. Their terms, *Urban* and *Rural*, will serve as a beginning point to further define risk areas and subsequent response profiles for the County's use. The Geographic Areas Reference Manual (GARM) published by the Bureau of Census provided additional assistance. It provides the following basic geographical risk area definitions:

Urban Area – An *urbanized area (UA)* consists of densely settled territory that contains 50,000 or more people. At least 35,000 must live in an area that is not part of a military reservation.

Suburban Area – A *Suburban Area (SA)* consists of densely settled territory, of at least 2,500 people but fewer than 50,000 people. The suburban area may include population clusters near, but not adjacent to, urbanized areas.

Rural Area – A *rural area* consists of all areas outside of urban areas or urban clusters and has a higher population density than that of a wilderness area.

Wilderness Area – An area of sparse population of usually less than 10 persons per square mile in which its' general use is a conservation area for the protection of natural resources or limited low impact recreational use.

To clearly identify areas specifically related to Fire Protection and associated risks within a service area, the Census 2000 terms could be expanded to include the following; Urban Area (UA), Urban Cluster (UC), Suburban Area (SA),

Suburban Cluster (SC), Rural Area (RA), Rural Cluster (RC), and Wilderness Area (WA).

Urban Area – An *urbanized area (UA)* consists of densely settled territory that contains 50,000 or more people and contains significant retail, commercial, and industrial processes.

Urban Cluster – An *urban cluster (UC)* consists of densely settled territory that has at least 2,500 people but fewer than 50,000 people and contains retail sales and light commercial, and may contain limited industrial processes.

Suburban Area – A *suburban area (SA)* consists of settled territory that has at least 2,500 people but fewer than 30,000 people and may contain retail sales and light commercial enterprises, but does not contain industrial processes.

Suburban Cluster – A *suburban cluster (SC)* consists of settled territory that has at least 2,500 people but less than 15,000 people and contains limited retail enterprises. A suburban cluster may be a combination of several Planned Residential Developments (PRD's) linked together through common roadways or corridors.

Rural Area – A *rural area (RA)* consists of sparsely settled territory outside of all other areas and with less than 7,500 people. There may be a minimal retail support area with the primary land use of agricultural or recreational purpose.

Rural Cluster – A *rural cluster (RC)* consists of a settled territory with greater density than that of a rural area and includes a small retail support area, usually in support of recreational land use. The rural cluster may include one or two planned residential developments (PRD's), which, by design, are separated geographically.

Wilderness Area – A *Wilderness Area* is an area of sparse population of usually less than 10 persons per square mile in which its' general land use is a conservation area for the protection of natural resources of for limited low impact recreational use.

While the Census 2000 terms generally speak only to population or related data, fire protection assessment considers population as only *one* of the determinant factors in establishing protection recommendations. Several other factors including commercial and mercantile centers, transportation corridors, recreation areas, or specific risk elements such as hazardous materials processes are included in the community evaluation.

Response profiles per Geographical Risk (GeoCoded) Areas

Staffing

The National Fire Protection Association (NFPA) outlines the recommended standards for fire companies, with a minimum staffing of four firefighters arriving on the scene of an emergency within five minutes (one-minute turnout and four-minute travel) with one being an officer. The standards also include the recommended on-scene staffing for a single alarm fire at 14 or 15, including a chief officer, and arriving on scene within 9 minutes (one minute turnout and 8 minute travel) to perform the necessary functions required while maintaining a reasonably safe working environment for the firefighters. The difficulty in implementing NFPA 1710 or 1720 is simply that many areas within our jurisdiction are unable to afford this level of fire staffing given the current funding arrangements. Additionally, the level of participation by paid-call firefighters has been dropping due to work or familial commitments, or the lack of qualified and acceptable personnel. Consequently, a tiered response profile for the GeoCoded areas may be the only reasonable approach available for the near future as the Department works towards establishing service planning goals. Should the tiered response profile prove acceptable and useful, the level of performance goals of each fire company must be adjusted to correspond to their capabilities.

Deployment

In conjunction with the recommended staffing levels of apparatus, the deployment of fire companies within the service area play an important role in effective community fire protection. The NFPA standards import a four-minute response time for the first arriving unit, and/or an eight-minute response time for arriving first alarm personnel. Due to the varied composition of our communities, and changes in community expectations, the fixed four or eight minute travel times are not practicable in much of our service area. The consolidation effort over the last several years has worked to provide centralized functions in administration, vehicle services, and other support areas. This same consolidation has affected the widespread deployment of resources.

Previously, a small community may have one, two, or three fire stations serving the local populace on an infrequent basis, usually with a core of paid-call firefighters. The fire stations within the community were, or are, located near the center of activity and often attached to recreational facilities. The larger communities usually employed a career-based fire department with tangible guidelines on the placement of fire stations and staffing levels. As the consolidation progressed, we began to look like a single agency, establish operating guidelines as a single agency, and promote ourselves as a single agency. Consequently, there is a tendency, by some, to foster a single, isolated viewpoint, regarding response and staffing levels. Unfortunately, as with most large service agencies, disparity in the level of service provided range from career staffing of four firefighters on each apparatus with single digit response

times in our highly urbanized areas to paid-call staffing of one or two firefighters with double digit response times in our rural areas. A tiered response, including staffing levels, response times, and performance goals, seems the only reasonable conclusion for the near future as the Department works towards establishing service planning goals. Matching the service levels with the GeoCoded areas will provide several things including: base line service, knowing when the area will move to the next level of service, reasonable stabilization of current service, allow for community identity and choice, allow for the projection of future service levels, and lay the basic blueprint for our department.

Expectations

Performance expectations are a required element for each level of service. It is unreasonable to expect a three-person crew to perform all of the functions of a four-person crew within the same time limitations. Either the number of tasks must be reduced, or the time allowed be extended. The same is true for any other staffing options. A four-person company should be able to complete a simple task evolution consisting of a hydrant connection (*forward lay*), deploy and engage a single 1 ¾" attack line, and coordinate (*command*) the next arriving units within one minute and thirty seconds. The same evolution with a two-person company would exclude the hydrant connection and, most probably, the engagement of the attack line leaving only the deployment of the hose line and coordination of the next arriving units. The same change in expectations can be identified for traffic collisions and medical services, as well as other fire scenarios. The same four-person company can accomplish the following during a traffic collision: Command structure and coordination, scene safety, patient contact and treatment, extrication, and packaging for transportation. A two-person company may only be able to provide patient treatment and minor extrication leaving the other tasks undone or rely on the next arriving units. The next few pages represent response profiles for each of the GeoCoded areas and show recommended response times, staffing levels, and performance goals.

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Urban Area Services

Geo-Risk Area	Incident Type	Staffing	On-scene staffing	Travel Time	Goals
Urban Area (UA)	Fire	4 personnel for each unit, staffed ladder company and support units	15 to 17	< 4:00 minutes for first arriving or < 8:00 minutes for all assigned units	Confine fire to room of origin Protect internal and external exposures from fire/water damage Prevent flashover Recovery time < 1:00:00 (one hour)
	Traffic Collision	Same	8 to 9	Same	Scene Safety and Command Extrication Patient treatment and packaging Transportation coordination Recovery time < 45:00 minutes
	Medical	Same	4 to 6	Same	ALS intervention within 8 minutes of medical event
	Fire	3 personnel for each unit, staffed ladder company and support units	12 to 13	< 6:00 minutes for first arriving or < 10:00 minutes for all assigned units	Confine fire to area of origin Protect external exposures from fire/water damage Recovery time < 2:00:00 (two hours)
Urban Cluster (UC)	Traffic Collision	Same	6 to 7	Same	Scene Safety and Command Extrication Patient treatment and packaging Transportation coordination Recovery time < 60:00 minutes
	Medical	Same	4 to 6	Same	ALS intervention within 8 minutes of medical event

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Suburban Area Services

Geo-Risk Area	Incident Type	Staffing	On-scene staffing	Travel Time	Goals
Suburban Area (SA)	Fire	3 personnel for each unit, support units as needed	8 to 10	< 8:00 minutes for first arriving or < 12:00 minutes for all assigned units	Confine fire to area of origin Protect external exposures from fire/water damage Recovery time < 2:00:00 (two hours)
	Traffic Collision	Same	6 to 7	Same	Scene Safety and Command Extrication Patient treatment and packaging Transportation coordination Recovery time <60:00 minutes
	Medical	Same	4 to 6	Same	ALS intervention within 8 minutes of medical event
	Fire	3 personnel for each unit, support units as needed	8 to 10	< 8:00 minutes for first arriving or < 12:00 minutes for all assigned units	Confine fire to area of origin Protect external exposures from fire/water damage Recovery time < 2:00:00 (two hours)
Suburban Cluster (SC)	Traffic Collision	Same	5 to 6	Same	Scene Safety and Command Extrication Patient treatment and packaging Transportation coordination Recovery time <60:00 minutes
	Medical	Same	4 to 6	Same	BLS within 8 minutes, ALS within 10:00 minutes of medical event
	Fire	3 personnel for each unit, support units as needed	8 to 10	< 8:00 minutes for first arriving or < 12:00 minutes for all assigned units	Confine fire to area of origin Protect external exposures from fire/water damage Recovery time < 2:00:00 (two hours)

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Rural Area Services

Geo-Risk Area	Incident Type	Staffing	On-scene staffing	Travel Time	Goals
Rural Area (RA)	Fire	3 personnel for each unit	6 to 10	< 10:00 minutes for first arriving or < 15:00 minutes for all assigned units	Confine fire to building of origin Protect external exposures from fire/water damage Recovery time > 2:00:00 (two hours)
	Traffic Collision	Same	3 to 6	Same	Scene Safety Extrication Patient treatment and packaging Recovery time <60:00 minutes
	Medical	Same	3	Same	BLS within 10 minutes, ALS within 15:00 minutes
	Fire	3 personnel for each unit, staffed ladder company and support units if available	6 to 7	< 12:00 minutes for first arriving or < 18:00 minutes for all assigned units	Confine fire to building of origin Protect external exposures from fire/water damage Recovery time > 2:00:00 (two hours)
Rural Cluster (RC)	Traffic Collision	Same	3 to 4	Same	Extrication Patient treatment and packaging
	Medical	Same	3	Same	BLS within 12 minutes, ALS within 18:00 minutes
	Fire	3 personnel for each unit, staffed ladder company and support units if available	6 to 7	< 12:00 minutes for first arriving or < 18:00 minutes for all assigned units	Confine fire to building of origin Protect external exposures from fire/water damage Recovery time > 2:00:00 (two hours)

Wilderness Area Services

GeoCoded Area	Incident Type	Staffing	On-scene staffing	Travel Time	Goals
Wilderness Area (WA)	Residential Fire	2 personnel for each unit, staffed ladder company and support units	2 to 6	< 20:00 minutes for first arriving or < 30:00 minutes for all assigned units for career staffing or >30:00 minutes for Paid Call	Prevent or limit the spread of fire into the wildland interface or forest areas. Initiate command structure for fires expected to advance beyond the initial attack sequence.
	Traffic Collision	Same	3 to 4	Same	Simple Extrication Patient treatment and transportation
	Medical	Same	3	Same	BLS within 20:00 minutes, ALS within 45:00 minutes

Comparison of Current Levels and Proposed Recommendations

The following division breakdown lists the fire station and unit, risk area, current staffing, recommended staffing, and any change comments. It should be noted that some communities have been moved up to the next higher risk area due to specific concerns within the area. These concerns may be a major transportation corridor, a recreational venue, or a unique community hazard. The charts do not reflect the recent merger of the City of Hesperia or future fire stations currently under consideration (Valley Division) and their staffing requirements although the same measurement criteria would apply. Additionally, the charts only reflect the *fire suppression*, or field, functions and not those of support functions, which include administration, human resources, business and finance, vehicle services, community safety, MIS, and supply services. These functions will be evaluated and reported on as the needs and measurement criteria become identifiable.

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Valley Division	Risk Class	Status	Duty Staffing	Indicated	Change
Devore					
Engine 2	SC	Career/Lt	2	3	Add Career Eng Upgrade Lt to Career FF/PM
San Antonio					
Engine 12	SC	Career/Lt	2	3	Add Career Eng Upgrade Lt to Career FF/PM
Grand Terrace					
Engine 23	UC	Career/Lt	2	3	Add Career Eng Upgrade Lt to Career FF/PM
Fontana					
Medic Engine 71	UA	Career	3	4	Add FF/PM
Medic Squad 71	UA	Career	2	2	No Change
Medic Engine 72	UA	Career	3	4	Add FF/PM
Medic Engine 73	UA	Career	4	4	No Change
Medic Engine 74	UA	Career	4	4	No Change
Medic Truck 77	UA	Career	4	4	No Change
Medic Truck 78	UA	Career	4	4	No Change
Muscoy					
Engine 75	SC	Career	3	3	Convert to PM
Bloomington					
Medic Engine 76	UC	Career	3	4	Add FF/PM
Lytle Creek					
Engine 20	RC	PCF	Varies		PCF Seasonal Staffing
Mt. Baldy					
Engine 200	RC	PCF	Varies		PCF Seasonal Staffing

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Mountain Division	Risk Class	Status	Duty Staffing	Indicated	Change
Mentone					
Engine 9	SC	Career/Lt	2	3	Add Career Eng Upgrade Lt to Career FF/PM
Fawnskin					
Medic Engine 49	RC	Career/Lt	2	3	Add Career Eng
Medic Amb 49	RC	Cross-staffed w/ ME-49 crew			No Change
Arrowhead					
Engine 91	SC	Career	3	3	Upgrade FF to FF/PM
Medic Amb 91	SC	Career/Lt	2	2	Upgrade Lt Driver to Career FF
Medic Engine 92	SC	Career	3	3	No Change
Engine 94	SC	Career	2	3	Add FF/PM
Medic Amb 94	SC	Career/Lt	2	2	Upgrade Lt Driver to Career FF
Angeles Oaks					
Engine 15	RC	PCF	Varies		PCF Seasonal Staffing
Forest Falls					
Engine 128	RC	PCF	Varies		PCF Seasonal Staffing
Green Valley					
Engine 129	RC	PCF	Varies		PCF Seasonal Staffing
Oak Glen					
Engine 39	RC	PCF	Contract		No Change

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South Desert Division	Risk Class	Status	Duty Staffing	Indicated	Change
Yucca Valley					
Medic Engine 121	SA	Career	3	3	No Change
Medic Amb 121	SA	Career/Lt	2	2	Upgrade Lt Driver to Career FF
Medic Engine 122	SA	Career	2	3	Add FF/PM
Medic Amb 122	SA	Career/Lt	2	2	Upgrade Lt Driver to Career FF
Joshua Tree					
Engine 36	SA	Career/Lt	2	3	Add Career Eng Upgrade Lt to Career FF/PM
Engine 35	RA	PCF	Varies		No Change
Landers					
Engine 19	RA	PCF	Varies		PCF Seasonal Staffing
Pioneertown					
Engine 38	RA	PCF	Varies		No Change
Johnson Valley					
Utility 43	RA	Comm Vol	Varies		No Change
Copper Mtn Mesa					
Utility 44	RA	Comm Vol	Varies		No Change
Wonder Valley					
Engine 119	RA/WA	PCF	1	2	Career PM Capt & LT/FF
Park Moabi					
Engine 34	RC	PCF	Varies		No Change
Havasu Landing					
Engine 118	RC/WA	PCF	Varies	2	Career PM Capt & LT/FF
Big River					
Engine 17	RC/WA	PCF	Varies	2	Career PM Capt & LT/FF
Parker Strip					
Engine 21	RC	PCF	Varies	2	Career PM Capt & LT/FF
Parker Dam					
Engine 42	RC	PCF	Varies		No Change
Black Meadow					
Engine 55	RC	PCF	Varies		No Change

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North Desert Division	Risk Class	Status	Duty Staffing	Indicated	Change
Wrightwood					
Engine 101	SC	Career	1	3	Add Career Eng & FF/PM
Medic Amb 101	SC	Career/Lt	2	2	Upgrade LT Driver to Career
Phelan, Pinion Hills					
Engine 102	SA	PCF	2	2	PCF Seasonal Staffing
Engine 103	SA	Career/LT	2	3	Add Career Eng & FF/PM
Medic Amb 103	SA	Limited Term	2	2	Upgrade LT's to Career FF & FF/PM
El Mirage					
Engine 11	RA	PCF	Varies		No Change
Baldy Mesa					
Engine 16	SA	PCF	Varies		PCF Seasonal Staffing
Oak Hills					
Engine 40	SA	PCF	2	3	Upgrade PCF to Capt, Eng, FF/PM
Summit Valley					
Engine 48	RA	PCF	Varies		PCF Seasonal Staffing
Mt. View					
Engine 37	SC	PCF	2	3	Upgrade PCF to Capt, Eng, FF/PM
Helendale					
Engine 4	SC	PCF	2	3	Upgrade PCF to Capt, Eng, FF/PM
Spring Valley					
Engine 22	SC	PCF	2	3	Upgrade PCF to Capt, Eng, FF/PM
Lucerne					
Engine 111	SC	Career	1	3	Add Career Eng & FF/PM
Medic Amb 111	SC	Career/Lt	2	2	Upgrade Lt Driver to Career
Harvard					
Engine 46	RC/WA	PCF	2	4	Upgrade PCF to Capt, Eng, FF/PM & L/FF

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Baker					
Engine 53	RC/WA	PCF	2	4	Upgrade PCF to Capt, Eng, FF/PM & Lt/FF
Brush Patrol 53	RC/WA	PCF	1	2	Upgrade PCF to Career FF & FF/PM
Hinkley					
Engine 125	RC/WA	PCF	Varies	2	Career PM Capt & Lt/FF
Trona					
Engine 126/127	RC/WA	PCF	Varies	2	Career PM Capt & Lt/FF
Ambulance 127	RC/WA	PCF	2	2	Upgrade PCF to Career FF & FF/PM
Contract Cities Overview					
Adelanto					
Medic Engine 321	SA	Career/Lt	3	3	Upgrade Lt to Engineer
Medic Engine 322	SA	Career/Lt	3	3	Upgrade Lt to Engineer
Hesperia					
Medic Engine 301	UA	Career	3	4	Add FF
Medic Amb 301	UA	Career/Lt	2	2	Upgrade Lt Driver to Career FF
Medic Engine 302	UA	Career	3	4	Add FF
Medic Amb 302	UA	Career/Lt	2	2	Upgrade Lt Driver to Career FF
Medic Truck 304	UA	Career	3	4	Add FF
Needles					
Engine 31	UC/WA	PCF	3	4	Upgrade PCF to Capt, Eng, FF/PM & Lt/FF
Brush Patrol 31	UC/WA	PCF	Varies	2	Career FF & FF/PM