

# SOUTH COUNTY FIRE SERVICE STUDY

Public Review Draft



May 2007

PREPARED FOR  
Local Agency Formation Commission  
of Santa Cruz County  
701 Ocean Street, Room 318-D  
Santa Cruz, California 95060

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May 2007

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#### **Appendix A: Fire Service Glossary**

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## Acronyms

ALS	Advanced Life Support
AMR	American Medical Response
BLS	Basic Life Support
BOF	Board of Forestry and Fire Protection
CAL FIRE	California Department of Forestry and Fire Protection
CPI	Consumer Price Index
CSA	County Service Area
FPD	Fire Protection District
GPM	Gallons per minute
IDHL	Imminent danger to health and life
ISO	Insurance Service Office
JPA	Joint Powers Authority
LAFCO	Local Agency Formation Commission
MOU	Memorandum of Understanding
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration (federal)
PRC	Public Resources Code
PVFPD	Pajaro Valley Fire Protection District
SCCECC	Santa Cruz Consolidated Emergency Communications Center
SRA	State Responsibility Area

## 1.0 EXECUTIVE SUMMARY

The South County Fire Service Study was initiated by the Santa Cruz Local Agency Formation Commission (LAFCO) to evaluate whether there are opportunities to improve fire service efficiencies through organizing service providers in the southern portion of the county differently. With recent cost escalation and increasing funding constraints, a reorganization alternative would be considered beneficial if it sustains or improves current service levels and minimizes the potential for future service reductions. In the southern portion of the county, fire and emergency medical service levels vary significantly along with the underlying costs. Adequate funding for fire protection continues to be a critical issue for local governments. The existing operational structure within southern Santa Cruz County, long-standing agency relationships and geographic conditions provide an opportunity to consider alternatives that may increase economies and service efficiencies and/or stabilize fire protection service levels in a time of increasing financial constraints.

### 1.1 Fire Service Providers

The South County Fire Service Study Area is comprised of the southern portion of County Service Area (CSA) 48, CSA 4 – Pajaro Dunes, the Pajaro Valley Fire Protection District (PVFPD), and the City of Watsonville. The County (CSAs 4 and 48), PVFPD, and City of Watsonville demonstrate the strongest nexus in terms of reorganization alternatives; therefore, the Aptos-La Selva, Aromas Tri-County, and North (Monterey) County Fire Protection Districts were consulted but are not included within the Study Area.

- **County Fire.** The County of Santa Cruz contracts with CAL FIRE (California Department of Forestry and Fire Protection) to provide fire protection services for CSAs 4 and 48, including the supervision of volunteer fire companies, training and education, and fire prevention services such as Fire Marshal, plan check, and inspection. County Fire provides Basic Life Support (BLS) emergency medical services.
- **Pajaro Valley Fire Protection District.** The PVFPD contracts with CAL FIRE to administer the district, staff the main station and supervise volunteer firefighters in the Mount Madonna Station. The PVFPD also contracts with the Watsonville Fire Department to serve that portion of the district which includes the Freedom community and adjacent areas north of the City. The PVFPD provides BLS emergency medical services.
- **City of Watsonville.** The Watsonville Fire Department is a full-service municipal fire department, managed and staffed by City employees. The Watsonville Fire Department provides fire and emergency medical services throughout the city and to the area north of the city by contract with the PVFPD. Watsonville also responds into the Pajaro community and a segment of Highway 1 in Monterey County through an automatic aid agreement with the North (Monterey) County Fire Protection District. Watsonville is equipped to provide an urban level of service, including an aerial ladder truck and hazardous material response. Watsonville has firefighter/medics which provide Advanced Life Support (ALS). Because there is only one

ambulance in the south county area, the Santa Cruz County Health Services Agency contracts with Watsonville to provide a paramedic on one engine at each of its stations at all times.

The current configuration of fire service within the Study Area is shown in *Table ES.1* below.

**Table ES.1**  
**Study Area Fire Service Configuration**

Station	Facility Owner	Engine Personnel per Shift	Emergency Medical Service
Corralitos	State	CAL FIRE Fire season: 2 3-person engine companies Non-fire season: 1 3-person engine company + volunteers	Basic Life Support
Station 61 – Pajaro Valley	PVFPD	1 2-person engine company – CAL FIRE	Basic Life Support
Mount Madonna (PVFPD)	Private	Volunteer – under CAL FIRE supervision	Basic Life Support
Pajaro Dunes	County	1 2-person engine company – CAL FIRE; volunteers	Basic Life Support
Station 1 (Downtown)	City of Watsonville	1 3-person engine co – City 1 3-person truck co – City	Advanced Life Support
Station 2 (Airport)	City of Watsonville	1 3-person engine co – City	Advanced Life Support

## 1.2 Fire Service Funding

Fire protection services and capital improvements are funded through a combination of property taxes, Proposition 172 funds, fees, and special levies. The following *Table ES.2* summarizes the funding for each of the agencies:

**Table ES.2**  
**2006-2007 Budgeted Fire Service Funding**

Agency	Total Land+Imp Value (in millions)	Property Tax Revenue for Fire Agency	Special Levies- Parcel Tax, Fire Suppression Assessment, etc.	Other Fees/ Revenues	Total Revenue 2006-07	Parcel Count
Watsonville	\$2,998.3	\$4,766,581 <sup>(1)</sup>	0	\$442,000	\$5,208,581	9,441
PVFPD	\$1,076.7	\$1,244,100	\$140,000	\$232,000 <sup>(2)</sup>	\$1,616,100	4,148
CSA 4	\$263.3	\$521,633 <sup>(3)</sup>	\$374,496	\$10,000	\$906,129	625
CSA 48 (Study Area only) <sup>(4)</sup>	\$883.2	\$504,726	\$288,650	\$43,295 <sup>(5)</sup>	\$836,671	2,935
Total	\$5,221.5	\$7,037,040	\$803,146	\$727,295	\$8,567,481	17,149

<sup>(1)</sup>Watsonville General Fund allocation to Fire Services Budget – FY 2006/07

<sup>(2)</sup>PVFPD Other Revenue includes \$168,000 CAL-STAR Dispatch Contract

<sup>(3)</sup>Includes Secured, Unsecured and Supplemental property taxes, and Homeowners' property taxes

<sup>(4)</sup>CSA 48 Study Area data based on FY 2005/06 Adjusted Net Value

<sup>(5)</sup>Includes interest, inspection charges, and other charges budgeted for County Fire for FY 2006/07. County Fire other revenues and costs are assumed to be shared equally between the four year-round stations.

In addition to the budgeted revenues shown above, the PVFPD has approximately \$470,000 in reserves and CSA 4 has approximately \$330,000 as of the beginning of FY 2006/07.<sup>1</sup> Anticipated property tax revenues for FY 2007/08 reflect an estimated 7% increase.

### 1.3 Alternatives for Reorganization

Based on a set of goals and objectives for fire service in South County, three alternatives were considered in this study:

1. Form one new Fire Protection District to serve the South County
  - a. With service provided through a CAL FIRE contract
  - b. With service provided through a Watsonville Fire Department contract
2. Expand the boundaries of PVFPD to include all unincorporated area and form a new subsidiary Fire Protection District to serve Watsonville
3. Maintain the status quo, with potential service improvements through 3-person engine companies and ALS service, and efficiency improvements through functional consolidation for response, training, fire prevention, joint purchasing, and management

Due to escalating costs and funding constraints, local governments will continue to be challenged to maintain current service levels. The County's January 23, 2007 report to the Board of Supervisors noted that current funding streams could not continue to support County Fire without either a reduction in service levels or an increase in fees. Faced with increasing challenges, the South County fire agencies have forged strong relationships in an effort to maintain service levels and leverage resources. The agencies are dependent on each other for resources when responding to a structural fire and work cooperatively to provide service through automatic aid. However, given costs and financing trends, it is expected that service levels in the majority of South County will degrade in the future under the current funding structure. Maintaining the status quo with no service level changes is always an option for agencies, and it will be each agency's decision whether to proceed with additional analysis on an alternative level of service or organizational structure.

Based on the analysis completed for this study, either maintaining the current organization of fire agencies or forming a single fire protection district in the entire study area would result in substantially the same operating costs to upgrade service to a uniform 3-person paramedic company in all stations. There would be some non-monetary operational benefits from forming a single district. Consolidation of fire agencies has been recommended in previous studies but not been implemented for a variety of reasons, including political will, union issues, and funding constraints.

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<sup>1</sup> The PVFPD reserves are typically \$200,000 to \$300,000; the \$470,000 is higher than normal due to a timing difference in recording CAL FIRE service charges.



There are significant economic factors associated with consolidating into one fire protection district. Within South County, 91% of fire service costs are labor related. The importance of the union issue should not be understated, as it is very challenging to merge these two types of labor contracts without significant cost. In order to successfully transition to a single department, seniority, pay scales, and benefits must be maintained in order to successfully integrate two programs, which typically results in costs rising to the highest common denominator. In addition, the difference in the shift schedules between CAL FIRE and Watsonville is important; CAL FIRE has 72-hour work weeks including 19 hours of overtime whereas Watsonville has 56-hour work weeks with minimal overtime.<sup>2</sup>

The current budgeted annual costs for fire service in the South County area are approximately \$8.3 million. Based on the financial analysis completed for this study, the alternatives include upgrades to ALS coverage in each station and would have the following annual costs:

- Alternative 1: One Independent Fire Protection District
  - CAL FIRE Service Model - \$9.9 million
  - Watsonville Service Model - \$12.3 million
- Alternative 2: One Independent Fire Protection District and One Subsidiary District - \$12.6 million
- Alternative 3: Status Quo with Service Level Improvements - \$9.6 million

Alternative 1 and Alternative 3 take advantage of some economies that diminish in Alternative 2 due to staff duplication.

Prior to implementation of any alternative, additional study would be needed to further determine more detailed resource needs and allocation, including staffing, equipment and administration. This would include both capital and operational costs. The study should also include further evaluation of funding opportunities and the impact on County Fire. Given the recent changes with detachments from CSA 48 and interest in increasing service levels at three stations, any proposed reorganization that affects County Fire should be done within the context of a master plan for County Fire.

The Santa Cruz County Fire Department Advisory Commission provided its annual report to the County Board of Supervisors on March 20, 2007. The report identified seven goals of the Commission for the upcoming year, including several applicable to the future of fire service in the South County:

- Review and discussion of efforts by the Fire Chiefs Association to use fire resources within the county more effectively;
- Review and discussion of efforts to improve the operational functions within the County Fire Department;

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<sup>2</sup> The CAL FIRE overtime is due to the requirements of the Fair Labor Standards Act which allows firefighters a 53-hour duty week with subsequent hours being compensated at the time-and-a-half rate. Watsonville employees may be compensated for the difference of 3 hours per week/shift (56 hours scheduled less 53 hours at regular rate), unless they have negotiated another specific remedy.

- Review impacts to County Fire from proposed annexations by Fire Protection Districts;
- Review potential opportunities to improve service delivery through cooperative arrangements with other local agencies; and
- Assess the ability of the County Fire Department to maintain existing service levels given increasing demands on CSA 48 funds.

The County's Office of Emergency Services, the Fire Department Advisory Commission, LAFCO, and the fire agencies recognize the critical interdependence of the fire service providers within Santa Cruz County. With boundary changes and State negotiated labor agreements, the County believes it has reached a tipping point where it is no longer economically feasible for County Fire to continue to provide services without a change in service levels or increased funding. Considering a change with CSA 48 in South County further highlights this issue. LAFCO has authority over boundary changes, and part of the Commission's consideration is economic impacts and changes to the level of service, to both the annexing and detaching areas. CAL FIRE is likely to continue to have a presence in Santa Cruz County due to the State Responsibility Areas; however County Fire may choose to alter its services over time such that structural fire and life safety are provided through a different approach, such as independent fire protection districts.

## 2.0 INTRODUCTION

The South County Fire Service Study was initiated by the Santa Cruz Local Agency Formation Commission (LAFCO) to evaluate whether there are opportunities to improve fire service efficiencies through organizing the service providers in the southern portion of the county differently. With recent cost escalation and increasing funding constraints, a reorganization alternative would be considered beneficial if it sustains or improves current service levels and minimizes the potential for future service reductions. Fire service throughout Santa Cruz County was studied in the Countywide Service Review conducted by LAFCO in 2005. The Countywide Service Review was completed in accordance with Government Code §56430 in preparation for updates to the Spheres of Influence for the four cities and special districts within the county. Government Code §56430 identifies nine areas for which determinations are to be made, including government structure options, cost avoidance opportunities, opportunities to share facilities, and rate restructuring.

LAFCO has jurisdiction over boundaries for cities and special districts within the county. In fulfilling this responsibility, LAFCO has the authority to initiate and make studies of existing governmental agencies (Government Code §56378). LAFCO also has the authority to approve reorganizations, including annexations and detachments as well as consolidation and dissolution of current districts and the formation of new special districts. In the southern portion of the county, fire and emergency medical service levels vary significantly along with the underlying costs. Adequate funding for fire protection continues to be a critical issue for local governments. The existing operational structure within southern Santa Cruz County, long-standing agency relationships and geographic conditions provide an opportunity to consider alternatives that may increase economies and service efficiencies and/or stabilize fire protection service levels in a time of increasing financial constraints.

### 2.1 Fire Service Providers

The South County Fire Service Study Area (see *Figure 2.1*) is comprised of the southern portion of County Service Area (CSA) 48, CSA 4 – Pajaro Dunes, the Pajaro Valley Fire Protection District (PVFPD), and the City of Watsonville. The western boundary of the Study Area was set at the Sphere of Influence for the Aptos/La Selva Fire Protection District; the remaining study area boundaries were determined by existing jurisdictional boundaries. The County (CSAs 4 and 48), PVFPD, and City of Watsonville demonstrate the strongest nexus in terms of reorganization alternatives; therefore, the Aptos-La Selva, Aromas Tri-County, and North (Monterey) County Fire Protection Districts were consulted but are not included within the Study Area.

#### ***County Fire***

The County of Santa Cruz contracts with CAL FIRE (California Department of Forestry and Fire Protection) to provide fire protection services for CSAs 4 and 48, including the supervision of volunteer fire companies, training and education, and fire prevention services such as Fire Marshal, plan check and inspection. The current configuration of County Fire is as follows:

Table 2.1  
County Fire Configuration

County Fire – Volunteer Stations	CAL FIRE Stations (Staffed Year Round)	CAL FIRE Stations (Seasonal)	County Fire (CSA 4)	Volunteer Companies (County Fire Jurisdiction)
Bonny Doon (2)	Burrell	Jamison Creek	Pajaro Dunes	Bonny Doon
South Skyline	Saratoga Summit	Felton		South Skyline
Loma Prieta	Big Creek	Soquel/Olive Springs		Loma Prieta
Davenport	Corralitos			Davenport
				Corralitos
				Pajaro Dunes

### ***Pajaro Valley Fire Protection District***

The PVFPD contracts with CAL FIRE to administer the district, staff the main station and supervise volunteer firefighters in the Mount Madonna Station. The PVFPD also contracts with the Watsonville Fire Department to provide first response to Code 1 emergency calls in the Freedom community and adjacent areas north of the City. Watsonville is compensated at \$695 per call for this service.

### ***City of Watsonville***

The Watsonville Fire Department provides fire and emergency medical services throughout the city and to the area north of the city by contract with the PVFPD. Watsonville also responds into the Pajaro community and a segment of Highway 1 in Monterey County through an automatic aid agreement with the North (Monterey) County Fire Protection District. The Watsonville Fire Department is managed and staffed by City employees. Watsonville is equipped to provide an urban level of service, including an aerial ladder truck and hazardous material response. Watsonville has firefighter/medics that provide Advanced Life Support (ALS). Because there is only one ambulance stationed in the south county, the Santa Cruz County Health Services Agency contracts with Watsonville to provide a paramedic on one engine at each of its stations at all times.

### ***Study Area Fire Service Configuration***

The three fire service providers within South County are dependent on each other for resources when responding to a structural fire. The current configuration of fire service within the Study Area is shown in Table 2.2 below. The location of the six (6) fire stations is shown on Figure 2.1:

Table 2.2  
Study Area Fire Service Configuration

Station	Facility Owner	Engine Personnel per Shift	Emergency Medical Service
Corralitos	State	CAL FIRE Fire season: 2 3-person engine companies Non-fire season: 1 3-person engine company + volunteers	Basic Life Support
Station 61 – Pajaro Valley	PVFPD	1 2-person engine company – CAL FIRE	Basic Life Support
Mount Madonna (PVFPD)	Private	Volunteer – under CAL FIRE supervision	Basic Life Support
Pajaro Dunes	County	1 2-person engine company – CAL FIRE; volunteers	Basic Life Support
Station 1 (Downtown)	City of Watsonville	1 3-person engine co – City 1 3-person truck co – City	Advanced Life Support
Station 2 (Airport)	City of Watsonville	1 3-person engine co – City	Advanced Life Support

## 2.2 Current Fire Service Issues

Fire service has come to the forefront of municipal service issues in Santa Cruz County as well as many areas of the state, primarily as a result of funding constraints, growth, and the increasing complexities of providing fire protection and emergency medical response in a manner which meets local and state service standards. Over the past year the County, the City of Watsonville, and the communities of Pajaro Dunes and Corralitos have been evaluating fire service levels and alternatives in order to determine the appropriate service approach and funding needs.

### *County Fire*

The County Board of Supervisors is currently evaluating service delivery options and associated costs for CSA 48. As reported by the Office of Emergency Services on February 27, 2007, the cost to maintain the current level of service for CSA 48 for FY 2007/08 through a contract with CAL FIRE is expected to increase by an estimated \$570,000, a 31% increase over the current \$1.8 million contract. This can be covered for one year through an anticipated revenue increase and reserves. However, an additional \$500,000 is needed annually to fully fund the vehicle replacement program, and \$25,000 is needed annually to address facility maintenance needs.<sup>3</sup> This would mean that for FY 2008/09, fire flow fee assessments for CSA 48 would need to increase by approximately 32% to maintain current staffing levels plus an additional 55% for equipment replacement and facility maintenance, with an estimated overall increase of 87%. Lastly, the County is looking at the issue of providing dedicated, year-round staffing at three stations in order to avoid situations where CAL FIRE sends local companies to wildfires elsewhere in the region and state. The cost to provide 24-hour coverage with two dedicated paid firefighters per engine per shift during the five-month fire season, including fleet replacement and facility repairs, is estimated at \$438,000 per year per station. These changes would require an increase in CSA 48 fees from

<sup>3</sup> The Fire Department Advisory Commission recommends an annual funding requirement of \$250,000 for facility reconstruction.

\$56.68 per fire flow unit to \$148.06, or a fee of approximately \$296.12 per year per single-family residence. The County is currently conducting a public opinion survey to receive input on the proposed service alternatives and fee changes.

There are other factors which directly affect funding for County Fire, including annexation of portions of CSA 48 by independent fire districts, increasing contract costs with CAL FIRE, and the use of the Consumer Price Index as the basis for periodic adjustments to CSA fees. County Fire's revenue for FY 2006/07 is approximately \$2.9 million. The Aptos-La Selva Fire Protection District recently annexed area which will reduce CSA 48 funding by an estimated \$88,000 per year. A proposed annexation by the Ben Lomond Fire Protection District and formation of a new district in Bonny Doon could result in annual funding decreases of \$70,000 and \$427,000, respectively.<sup>4</sup> Since FY 2000/01, the cost of the County's contract with CAL FIRE has increased 56% while the CPI has increased 20%.

### ***Watsonville***

In July 2006 the City of Watsonville accepted the recommendation of its Blue Ribbon Committee on providing a sustainable revenue source to pursue the formation of a subsidiary fire protection district which would be funded by fees and property assessments. As a first step towards evaluating the feasibility of a new district, the City completed a *Fire Department Needs/Gap Analysis*<sup>5</sup> which includes a GIS analysis of community risk, a review of the response performance against benchmark information, and a limited baseline study to establish the level of effort and level of services currently being provided. The report finds that the Department's response times are exceeding the national standard; however, the concentration of resources is an issue as the Department cannot produce an effective response force with its own resources for a moderate risk structural fire. The study further concludes that service levels are likely to deteriorate if the utilization rate increases as a result of growth and development. Recommended options include additional staff, a new station, and government structure options to combine resources with adjacent fire agencies.

### ***Communities of Corralitos and Pajaro Dunes***

Although there is a fire station in Corralitos, the community does not have guaranteed coverage at all times. Given the population and number of homes in the area, this may not be an adequate level of service even though it is a rural area. The Corralitos community is interested in exploring opportunities to ensure 24-hour coverage on a year-round basis. During the 2005 fire season the Corralitos station was without coverage 70 times for less than one hour, and 31 times for more than one hour and less than three hours.<sup>6</sup> During those periods incident coverage was provided by CAL FIRE units in the PVFPD and Pajaro Dunes, as well as Aptos-La Selva FPD, City of Watsonville, and volunteers.

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<sup>4</sup> Office of Emergency Services report to the County Board of Supervisors, February 27, 2007

<sup>5</sup> Emergency Services Consulting, Inc. Gap Analysis, Fire Department Deployment (City of Watsonville). November 2006

<sup>6</sup> Office of Emergency Services report to the County Board of Supervisors, September 26, 2006

The Pajaro Dunes community is concerned over the escalating cost of fire service. Property owners fully fund the cost of fire protection within the community. For FY 2006/07 the CSA assessment increased from \$164.48 to \$324.52 per fire flow unit, a 97% increase in one year. This increase merely maintained existing service levels of two firefighters per engine. Even with a fire station in the community, Pajaro Dunes is dependent upon automatic aid from Watsonville and the Corralitos station in the event of a fire.

### 2.3 Regional Factors to be Considered

There are a number of factors to be considered when evaluating reorganization alternatives:

#### *Jurisdictions*

Both local and state governmental agencies have responsibility for providing fire protection within the Study Area. As shown on *Figure 2.1*, a large portion of the Study Area lies within a designated State Responsibility Area (SRA), where the State has the primary responsibility for providing wildland fire protection. SRAs are determined by the State of California Board of Forestry and Fire Protection (BOF) and contain timber, brush or other vegetation that serves a commercial purpose or has a natural resource value such as providing watershed protection. SRA boundaries are reviewed every five years; there was no change to the Santa Cruz County SRA during the 2005 review. Although SRA lands may have structures, areas are generally removed from an SRA when housing density exceeds three units per acre. CAL FIRE crews are based in the State-owned Corralitos fire station to carry out their primary responsibilities for wildland fire protection within the local SRA. The State provides full staffing during the fire season (June through October), and limited staffing during the remainder of the year. The County of Santa Cruz contracts for and pays for supplemental staffing during the winter at four stations: Burrell, Saratoga Summit, Big Creek, and Corralitos.

At CAL FIRE's discretion, engine companies may be dispatched to wildfires elsewhere in the region and state. Dispatching is based on proximity and response mode (immediate versus planned need). Whenever possible, CAL FIRE avoids depleting local resources from any one station. When a station is vacated due to emergency response, the station is covered with another engine from within the local CAL FIRE Unit.

State law does not require local governments to provide fire protection within an SRA, but most local governments assume the responsibility for providing structure protection and basic medical assistance within those areas. This is consistent with BOF policy that life and structure fire protection within an SRA are the responsibility of private citizens and local government. Furthermore, the governing statutes for fire protection districts give the districts authority to provide wildland fire protection in watershed areas. Thus, the County Fire and PVFPD service areas overlap SRA lands.

The County Fire Department is responsible for providing services in unincorporated areas outside the boundaries of autonomous fire districts. Services include structural fire protection, first responder emergency medical services, Fire Marshal, public fire safety education, and inspection. The County

contracts with CAL FIRE to fulfill these responsibilities, with the services provided under the operational supervision of CAL FIRE's San Mateo/Santa Cruz Unit headquartered in Felton. Staffing includes both career CAL FIRE firefighters and volunteer/paid call firefighters. The County provides fire protection to Pajaro Dunes as a discretionary service that is funded entirely through property taxes and assessments on properties within CSA 4.

Watsonville is responsible for providing fire protection and emergency medical services within city boundaries, and is first responder to the Freedom community and adjacent areas under a contract with the PVFPD. Watsonville has a much shorter response time than the PVFPD for the area adjacent to the northern boundary of the City.

The PVFPD was formed in 1995 through a consolidation of the Freedom and Salsipuedes Fire Districts. The District is responsible for fire protection within its boundaries, which it provides through contracts with CAL FIRE and Watsonville.

Regardless of jurisdictional boundaries, the fire agencies within the Pajaro Valley (including two Monterey County agencies) have agreed to "first due" service areas for each station, as shown on *Figure 2.2*. The agencies have collaborated on this effort to improve coordination, efficiency, and response times.

### ***Geography***

Geographic conditions and associated development patterns are a factor in evaluating efficient and economic fire protection services. The Study Area includes urban areas, agriculture, heavily forested mountainous terrain, and isolated communities. Access is an issue in areas with narrow mountain roads, and distance can be an issue when populated areas are separated by large agricultural areas. These conditions impact first due response areas and response times, and may require that fire protection and emergency medical response be provided outside of a jurisdiction in order to maintain acceptable service levels.

### ***Economics***

Adequate, sustainable funding for fire protection is an ongoing challenge for local governments across the state. The rate of increase in underlying costs for personnel, training, equipment, operations, and maintenance frequently outpaces an agency's ability to increase revenue. CAL FIRE contract rates are determined by the State; the only real flexibility a local agency has in lowering contract costs is by adjusting service levels. Watsonville also has constraints for funding fire and other essential services; the City is committed to providing a high level of service that includes Advanced Life Support. Watsonville voters did approve a 0.25% sales tax increase in November 2006 to fund "critical city services"; however this may not be sufficient to fund all services at a sustainable level.

As noted above, boundary changes can exacerbate the financial situation. In most detachments, the County or special district loses the property tax revenue and/or assessments from the detaching area, but



cannot fully compensate with a decrease in the costs necessary to serve the remaining service area. In other words, although the service area may now be smaller, it does not necessarily mean that a station, engine, or engine company can be taken out of service or that administrative and overhead costs can be reduced proportionately.

Within the County's jurisdiction, the County Fire Department, including fire protection and the Fire Marshal's Office, are funded through property tax revenue and assessments from CSAs 4 and 48. The portion of CSA 48 within the Study Area contains a higher proportion of developed parcels than other areas of the county, and therefore is an important source of revenue for funding fire service countywide.

Pajaro Dunes is in a somewhat different position than the other agencies as the property owners fully fund fire protection services for the community. The CSA 4 assessments have financed the fire station and a new engine, as well as operations. The first due response area for the Pajaro Dunes station extends beyond the community into CSA 48 along Beach Road and north to Sunset Beach Road. The cost differential of \$267.84 per fire flow unit between the assessments for CSA 4 and CSA 48 is due to the number of contributing parcels supporting fire service in a given area and the fact that CSA 48 benefits from State resources assigned to the area to protect the SRAs. This raises the issue of parity and whether there may be economies in a reorganization alternative.

Figure 2.1  
South County Fire Service Study Area

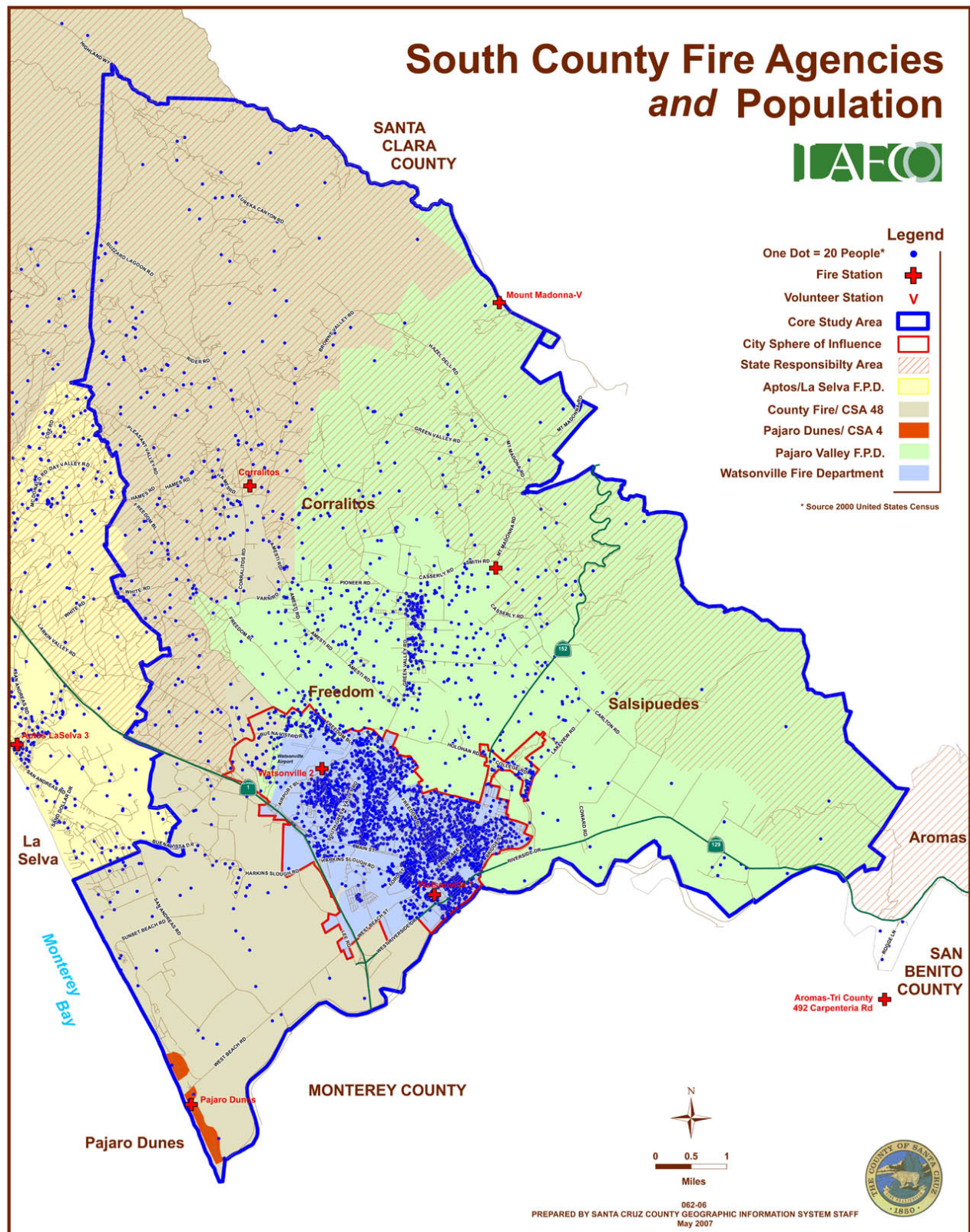
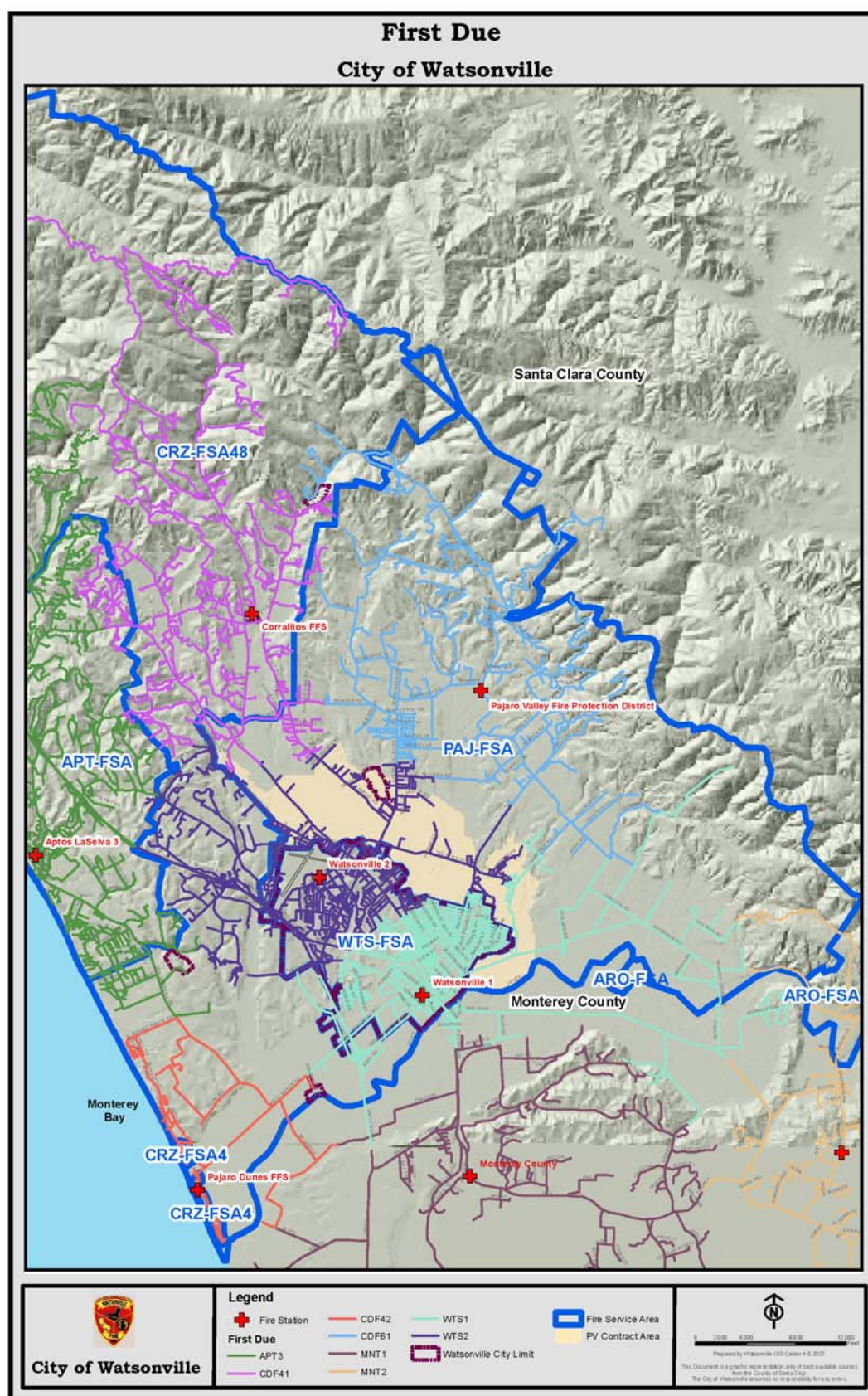




Figure 2.2 – First Due Response Areas for South County



## 3.0 FIRE SERVICE CONCEPTS

This section provides an overview of concepts related to fire protection and emergency medical services in order to facilitate discussion and understanding of fire protection services. Definitions for additional fire service terms are included in the Fire Service Glossary in *Appendix A*.

### 3.1 State Contracting

The Public Resources Code (PRC) authorizes CAL FIRE to enter into cooperative fire protection agreements where there are economic and social benefits to the people of the state. This allows a local government to contract with CAL FIRE to provide year-round fire protection services. CAL FIRE may provide personnel for command, administration, training, fire prevention, or emergency command center services. Under an Amador Plan agreement (PRC §4144), existing CAL FIRE personnel provide contract off-season fire protection services within a local area from CAL FIRE facilities used to protect SRAs. The local government bears the cost for extended staff availability beyond the fire season, unplanned overtime, operating expenses and an administrative charge. A major change that went into effect July 1, 2006 places rank-and-file fire protection personnel on year-round duty. The State will now cover the costs during the non-fire season of three permanent employees (Fire Captain or Fire Apparatus Engineer staff type) and the local government is required to provide two firefighters. This ensures a minimum two-person staffing on each engine in an Amador Plan agreement.

A local government may also contract with CAL FIRE to provide year-round structural fire protection and emergency response services through a Schedule A agreement (PRC §4142). The local government owns the facilities and equipment; the personnel are provided by CAL FIRE and are employees of the State. The agreement stipulates service levels and costs for personnel, equipment maintenance, utilities, and other operating costs.

Under both types of agreements, CAL FIRE provides the administration and supervision of all staff. Salaries and expense rates are established by the State and are not negotiable. Within the South County, CAL FIRE is providing services under an Amador Plan agreement (Corralitos) and two Schedule A agreements (County Fire administration and operations, Fire Marshal, etc. and CSA-4 Pajaro Dunes). The PVFPD has a Schedule A agreement with CAL FIRE.

### 3.2 Automatic Aid / Mutual Aid

Automatic aid is assistance dispatched automatically by contractual agreement between multiple communities or fire agencies. Mutual aid occurs upon request on a case-by-case basis. The fire protection agencies within Santa Cruz County all participate in an automatic aid agreement such that resources and specially trained staff are shared as needed across all agencies in the event of an emergency. In addition, there is a statewide mutual aid agreement whereby resources throughout the state are dispatched to assist in major emergencies. Watsonville and the North County Fire Protection District of Monterey County have a formal automatic aid agreement in which Watsonville provides structural fire protection and emergency medical services in the Pajaro community and for a segment of Highway 1 in

northern Monterey County. In turn, the North (Monterey) County Fire Protection District responds to all confirmed structure fires in the Watsonville Station No. 1 area. Watsonville is working to expand this to be citywide in order to balance the reciprocity of aid.

### 3.3 Basic Life Support / Advanced Life Support

**Basic Life Support:** Basic Life Support (BLS) provides emergency first aid and cardiopulmonary resuscitation procedures. At a minimum this includes recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life without invasive techniques until the victim may be transported or until advanced life support is available (Health and Safety Code §1797.60). County Fire and the PVFPD provide a BLS level of service.

**Advanced Life Support:** Advanced Life Support includes special services designed to provide definitive pre-hospital emergency medical care, including, but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs and other medicinal preparations, and other specified techniques and procedures administered by authorized personnel under the direct supervision of a base hospital (Health and Safety Code §1797.52). Watsonville provides an ALS level of service, as does American Medical Response (AMR), the County's contract ambulance service provider.

### 3.4 Insurance Service Office Protection Class Rating

The Insurance Service Office (ISO) rating determines risk based on a number of factors within a specified service area, including fire protection resources, infrastructure and service area characteristics. The ISO evaluates local fire protection capabilities in service areas and assigns a protection class rating from 1 to 10. Class 1 represents exemplary fire protection, and Class 10 indicates that the area's fire-suppression program does not meet the ISO's minimum criteria. Split ratings are common; the first class usually applies to properties within five road miles of a fire station and within 1,000 feet of a fire hydrant. The second class applies to properties beyond five road miles of a fire station with no fire hydrants.

The ISO requires that minimum facilities and standards be in place before an area is rated<sup>7</sup>:

- The community must have a fire department, organized permanently under applicable state or local laws. The organization must include one person responsible for the operation of the department, usually with the title of "Chief."
- The fire department must serve an area with definite boundaries. If a community does not have a fire department operated solely by or for the governing body of that community, the fire department providing such service must do so under legal contract or resolution. When a fire department's service area involves more than one community, each of the communities served should have a contract.
- The department must have sufficient membership to assure the response of at least four members to fires in structures. The chief may be one of the responding members.

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<sup>7</sup> Source: [www.isomitigation.com](http://www.isomitigation.com)

- The fire department must conduct training for active members, at least two hours every two months.
- Alarm facilities and arrangements must be such that there is no delay in the receipt of alarms and the dispatch of firefighters and apparatus.
- The department must have at least one piece of apparatus meeting the general criteria of National Fire Protection Association (NFPA) Standard 1901, Automotive Fire Apparatus.
- The department must house apparatus to provide protection from the weather.

Independent insurance companies use the rating to determine fire insurance premiums, with a lower rating providing financial benefit to local property owners. The level of service, funding, and resources committed to fire protection by a local government has a direct relationship to the ISO rating received. Currently, Watsonville has an ISO rating of 2/9 and Pajaro Dunes has a rating of 5. The PVFPD area has ratings of 6/8 as does the Corralitos area. Areas that are ten road miles out with no hydrants have a rating of 9.

## 4.0 CURRENT FIRE SERVICE STRUCTURE

The service area characteristics within the Study Area vary significantly, including densely developed urban area within Watsonville, lightly populated rural areas such as Corralitos, and isolated communities in wildland areas. Areas with higher density are generally more cost-effective to serve; conversely, large lot, low-density development increases population but not density and is relatively more expensive to serve. The Study Area contains State Highway Routes 1, 129 and 152, which increase the demand for emergency medical services.

### 4.1 Fire Service Funding

Fire protection services and capital improvements are funded through a combination of property taxes, Proposition 172 funds, fees, and special levies. The following *Table 4.1* summarizes the funding for each of the agencies:

Table 4.1  
2006-2007 Budgeted Fire Service Funding

Agency	Total Land+Imp Value (in millions)	Property Tax Revenue for Fire Agency	Special Levies- Parcel Tax, Fire Suppression Assessment, etc.	Other Fees/ Revenues	Total Revenue 2006-07	Parcel Count
Watsonville	\$2,998.3	\$4,766,581 <sup>(1)</sup>	0	\$442,000	\$5,208,581	9,441
PVFPD	\$1,076.7	\$1,244,100	\$140,000	\$232,000 <sup>(2)</sup>	\$1,616,100	4,148
CSA 4	\$263.3	\$521,633 <sup>(3)</sup>	\$374,496	\$10,000	\$906,129	625
CSA 48 (Study Area only) <sup>(4)</sup>	\$883.2	\$504,726	\$288,650	\$43,295 <sup>(5)</sup>	\$836,671	2,935
Total	\$5,221.5	\$7,037,040	\$803,146	\$727,295	\$8,567,481	17,149

<sup>(1)</sup>Watsonville General Fund allocation to Fire Services Budget – FY 2006/07

<sup>(2)</sup>PVFPD Other Revenue includes \$168,000 CAL-STAR Dispatch Contract

<sup>(3)</sup>Includes Secured, Unsecured and Supplemental property taxes, and Homeowners' property taxes

<sup>(4)</sup>CSA 48 Study Area data based on FY 2005/06 Adjusted Net Value

<sup>(5)</sup>Includes interest, inspection charges, and other charges budgeted for County Fire for FY 2006/07. County Fire other revenues and costs are assumed to be shared equally between the four year-round stations.

In addition to the budgeted revenues shown above, the PVFPD has approximately \$470,000 in reserves and CSA 4 has approximately \$330,000 as of the beginning of FY 2006/07.<sup>8</sup> Anticipated property tax revenues that will accrue to the agencies for FY 2007/08 reflect an estimated 7% increase.

The FY 2006/07 budgeted revenues for County Fire include \$1.6 million in property taxes, \$940,000 in CSA fees and \$360,000 in other revenue. Per the calculations completed by the County for this study, the

<sup>8</sup> The PVFPD reserves are typically \$200,000 to \$300,000; the \$470,000 is higher than normal due to a timing difference in recording CAL FIRE service charges.

assessed value of the Tax Rate Areas within the Study Area comprises approximately 32.8% of total assessed value for all of County Fire.<sup>9</sup>

### 4.2 Study Area Fire Service Providers

#### *County of Santa Cruz and CAL FIRE*

The County Fire Department, the Fire Marshal's Office, and the two CSAs are administered by the County's Office of Emergency Services. The County Fire Department is responsible for structural fire protection, first responder emergency medical services, Fire Marshal, public fire safety education, and inspection services for the unincorporated area of Santa Cruz County outside the boundaries of autonomous fire districts. CSA 48 was established to help finance the cost of fire protection within this area and CSA 4 was established to fund services for the Pajaro Dunes community. County Fire operates from 10 stations, including two in the Study Area (Corralitos and Pajaro Dunes). The State owns the Corralitos Fire Station, which provides a base to serve the State Responsibility Area shown in *Figure 2.1*.

The County contracts with CAL FIRE to provide operational and support services to fulfill its fire protection responsibility, including training and communications for the volunteer fire companies. CAL FIRE staffs and maintains 7 fire stations throughout Santa Cruz County during fire season (typically June through October). Four of these stations remain open throughout the rest of the year, including Corralitos (see *Table 2.1, County Fire Configuration*).

As discussed in *Section 3.1*, the Public Resources Code<sup>10</sup> provides a means for local governments to contract with CAL FIRE to keep a State-owned facility staffed during the non-fire season (the Amador Plan) and to provide full service fire protection in facilities owned by the local agency (Schedule A Program). Under an Amador Plan agreement, CAL FIRE retains the right to assign fire protection resources to other areas of the state during periods of critical fire weather or major fires; these assignments take priority over agreements made with local agencies, although the State is obligated to backfill local staff when resources have been directed elsewhere.

The County of Santa Cruz contracts with CAL FIRE under both Amador Plan and Schedule A agreements. For the Corralitos station the Amador Plan agreement includes one Battalion Chief, one 3-person engine company, and 25% of the cost for three Emergency Command Center Fire Captains. In addition, under a Schedule A agreement, the County funds year-round countywide command and support services, Fire Marshal, and related operational functions. These agreements do not guarantee full coverage for Corralitos, 24 hours per day throughout the year. The Pajaro Dunes station is under a separate Schedule A agreement, with CSA 4 funding for 2-person engine staffing and related operational expenses. The Schedule A agreement requires continuous coverage; so, the Pajaro Dunes company is not deployed to wildfires in other regions of the state.

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<sup>9</sup> Data provided by County of Santa Cruz Assessor-Recorder's Office, April 2006

<sup>10</sup> State of California Public Resources Code, Sections 4142 and 4144



### ***City of Watsonville***

The City of Watsonville Fire Department has two fire stations, one located downtown near Second and Rodriguez Streets and the other adjacent to the airport. The Department has 3-person engine staffing, with one staff being a firefighter/paramedic. The Department also has a 3-person aerial ladder truck company. There is a Battalion Chief on duty 24 hours per day. All engine companies are able to provide first response to hazardous material incidents. The Department provides services by contract to the PVFPD for the Freedom community and areas north and east of the city as Watsonville has a much shorter response time than engines coming from the Corralitos or PVFPD stations. Watsonville is compensated at \$695 per call for this service and has budgeted \$157,000 in revenue for FY 2006/07 (approximately 225 calls).

The Watsonville Fire Department is the only fire agency in the Study Area that has firefighter/paramedics providing Advanced Life Support. American Medical Response (AMR), the County's ambulance service provider, provides ALS ambulance service. There is one ambulance stationed in South County, and when it is on a call the response time for the second ambulance can be lengthy. To meet an eight-minute response time for first responders to a medical emergency, the Santa Cruz County Health Services Agency contracts for Watsonville Fire to staff one engine at each station with a paramedic at all times. Watsonville is compensated for this service, which essentially covers the cost for the paramedic pay increment and some equipment. The commitment to continuously staff two units requires nine paramedics. Watsonville's paramedic program has been chronically understaffed, with staffing covered by firefighter/paramedics working overtime. This situation is further impacted by increasing seniority as staff continues to accrue more vacation time. The City needs to hire/promote additional firefighter/paramedics in order to sustain its ALS program.

### ***Pajaro Valley Fire Protection District***

The Pajaro Valley Fire Protection District service area is primarily rural with low-density development and includes the unincorporated Freedom and Salsipuedes areas north and east of the City of Watsonville. The District has one fire station located on Casserly Road that is staffed full-time. The Mount Madonna Station is staffed by volunteer firefighters working under CAL FIRE supervision. The District contracts with CAL FIRE through a Schedule A agreement to manage and staff the district, including personnel, administration, communications, and fire protection planning services. The CAL FIRE contract includes a Battalion Chief, 2-person engine staffing, fire prevention, and related support and operational services. The District has added an additional staff person in order to provide coverage for sick time, vacations, etc. When available, this additional staff also serves as a third person for engine response; this is occurring on approximately 10% of calls. As noted above, the District has an agreement with the City of Watsonville for Watsonville to provide fire and emergency response to the Freedom community and other areas adjacent to the City.

### 4.3 Adjacent Fire Service Providers

#### ***Aptos-La Selva Fire Protection District***

The Aptos-La Selva Fire Protection District serves the unincorporated communities of Aptos, Rio del Mar, Seacliff, Seascapes, Day Valley and La Selva Beach. The District provides automatic aid for County Fire and Watsonville. The District's service area is mostly residential, with some light commercial and visitor recreational uses. The District has three fire stations located in Aptos, Rio del Mar and La Selva Beach. The District has 3-person engine companies at each of the three stations. The on-duty personnel are supplemented by off-duty response and automatic aid from neighboring districts. The Aptos-La Selva FPD provides Advanced Life Support services.

#### ***North (Monterey) County Fire Protection District***

The North County Fire Protection District in Monterey County serves a 140 square-mile area extending from the coast eastward to the San Benito County line. The area has a population of approximately 40,000 persons. The North County FPD has three engine companies and the three fire stations are staffed 24 hours a day. Station No. 1 located in Castroville accommodates the administrative offices for the District and contains the most firefighting/emergency response equipment. Station No. 2 is located on Pesante Road in Prunedale. Station No. 3 at 301 Elkhorn Road, Royal Oaks, is located closest to Watsonville. Engine companies have been downsized from three to two permanent staff due to funding constraints. The District has ten reserve firefighters that can be used to augment permanent staff.

Watsonville and North County FPD have an automatic aid agreement for Watsonville to provide first due fire response in the Pajaro community and for emergency medical calls on a segment of Highway 1 in Monterey County. The North County FPD responds to all confirmed structure fires within the Watsonville Station No. 1 area. There is now triple redundancy in dispatch for this area, including Watsonville Fire, North County FPD, and County Fire. This redundancy improves response times and efficiency, ensuring that the nearest available unit is dispatched.

#### ***Aromas Tri-County Fire Protection District***

The Aromas Tri-County Fire Protection District service area lies within Monterey, San Benito, and Santa Cruz counties. Within Santa Cruz, the District serves 70 parcels in a rural unincorporated area along Highway 129 and Rogge Lane. The District has one fire station located in the San Benito County portion of Aromas and contracts with CAL FIRE to operate it.

The fire service providers within the Study Area are summarized in *Table 4.2* below:

## 4.0 CURRENT SERVICE STRUCTURE

Table 4.2  
Summary of South County Fire Service Providers

Jurisdiction Size / Population est.	Contract	2006-07 Budgeted Revenues	2006-07 Budgeted Expenses	Annual Call Volume (First-in)	First-in Calls Outside Boundaries	On Duty Staffing	Stations/ Equipment*
<b>Watsonville</b> 47,927 pop 6.3 sq miles	None	\$5,208,581	\$4,794,982	3,372	168 to PVFPD 88 to Larkin Valley Area	3 per engine ALS	2 Stations 2 Type I 1 Truck
<b>PVFPD</b> 16,438 pop 47 sq miles	CAL FIRE 70%, Schedule A  Watsonville 30%	\$1,616,100	\$1,866,489 (includes CAL FIRE carryover costs from prior year)	541	78 to Watsonville	2 per engine plus 5 volunteers BLS	1 Station 1 Type I 1 Tender
Mt. Madonna (PVFPD)	--Included above--					5 volunteer Firefighters and staffed engine from PVFPD	1 Station 1 Type II
<b>County Fire (CSA 48)</b> Corralitos Station only 6,180 pop 39.5 sq. miles	CAL FIRE, Amador Plan and Schedule A, plus State engines during fire season	\$836,671	\$759,115	257	15 to Watsonville	2 3-person companies in fire season 1 3-person company remainder of year BLS	1 Station 1 Type II 2 Type III 1 Tender 1 Rescue 1 Light/Air
<b>County Fire (CSA 4- Pajaro Dunes)</b> 565 homes, 0.2 sq miles	CAL FIRE Schedule A	\$906,129	\$913,960	238	129 outside gates	2 per engine; sleeper program** and volunteers BLS	1 Station 2 Type I
<b>Totals</b>		\$8,567,481	\$8,334,546 (\$1,190,649 per company)	4,408	478	21	6 Stations 7 Companies

\*Note: Equipment type is defined in Appendix B, Fire Service Equipment

\*\*A sleeper program provides for a paid-call volunteer to be in the station, available to respond on calls with the permanent staff

### 4.4 Ambulance

The County of Santa Cruz contracts with American Medical Response (AMR), a private ambulance company, to provide Advanced Life Support emergency ambulance services countywide. One is stationed in South County. Fire agencies often provide the first response to emergency medical service calls. In 1997 the Santa Cruz County EMS Integration Authority (EMSIA) was formed as a joint powers authority to integrate fire-based medical resources with the County's ambulance provider so that there is efficient coordination for call response. As noted above, the County contracts with Watsonville to staff two units with paramedics at all times in order to meet an eight-minute response time for first responders to a medical emergency.

### 4.5 Dispatch

The current dispatch system operates on a boundary drop/closest engine response system. There are two dispatch centers: the Santa Cruz Consolidated Emergency Communications Center (SCCECC) and the CAL FIRE Emergency Communications Center. SCCECC uses Netcom, a state of the art system for countywide dispatch. The Netcom dispatch system has facilitated a "boundary drop" with respect to dispatching fire engines so that regardless of jurisdiction, the closest engine company available responds to emergencies.<sup>11</sup>

For County Fire dispatching, the calls are transferred from the SCCECC to the CAL FIRE Emergency Communications Center. The SCCECC has reported that it takes between 10 and 25 seconds to transfer an emergency call. Pre-alert pagers have been issued to volunteer fire companies to reduce the dispatch time.

### 4.6 Fire Prevention

County Fire contracts with CAL FIRE to provide a Fire Prevention officer. The City of Watsonville recently approved a Fire Prevention Captain position to be funded from user fees. The effective start date is July 1, 2007.

### 4.7 Training

The CAL FIRE training officers and the station Captains are responsible for the training program for CAL FIRE personnel and the volunteer fire companies. Training for the Watsonville firefighters is done by the Shift Battalion Chiefs and station Captains. There is a training center in Watsonville at Station 2.

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<sup>11</sup> The actual response assigns are shown on *Figure 2.2 First Due Map*, page 14.

#### 4.8 Current Fire Response Configuration

The current response configuration for the Study Area is shown in *Table 4.3* below:

Table 4.3  
Current Fire Response Configuration

Jurisdiction	First Alarm Structural Fire Response #/Type of Units	Total Staffing on First Alarm Structural Fire and Total Time for all to arrive on scene	First Alarm Vegetation Fire Response #/type of units.	Total Staffing on First Alarm Vegetation Fire, and Total Time for all to arrive on scene	Fire Response Dependent upon Automatic/Mutual Aid?	EMS Response BLS or ALS Quantity and Type of Units (engine, squad, ambulance)	Driving Time of First-in unit; 90% of time to fire or EMS	Driving time for Medic Company or Ambulance; 90% of time
Watsonville	1 Battalion Chief 3-4 engines 1 truck	10 in 8 minutes, 12-14 within 14 minutes	1 Battalion Chief 2 Type I and 1 Type III engines 1 tender	7 in 8 minutes, 12 within 14 minutes	Yes	2 Type 1 ALS engines 1 ALS Ambulance	4:46 minutes	4:46 minutes AMR amb. 5:24 minutes from dispatch 2006=1,083 calls
PVFPD	1 Battalion Chief 2 Type I engines 1 Type II engine + possible volunteer eng	9 total (arrive time would depend on location – 47 sq mile district)	<i>See text below</i>	Total depends on dispatch level. Arrive time depends on location	Necessary for any fire requiring a 2-engine response	1 BLS engine 1 ALS ambulance 1 volunteer rescue for portions of district	9:35 average 7:10 median	AMR: 8:28 minutes from dispatch 2006 = 230 calls
Corralitos	1 Battalion Chief 2 Type III 1 Type II engines + volunteer eng	9 total (arrive time depends on location)	<i>See text below</i>	Total depends on dispatch level. Arrive time depends on location	Necessary for any fire requiring a 2-engine response	2 BLS engines in fire season; 1 in winter 1 ALS ambulance 1 volunteer engine	11:15 average 7:40 median	AMR: 8:50 minutes from dispatch 2006 = 111 calls
Pajaro Dunes	1 Battalion Chief 3 Type I engines + 1 volunteer eng	9 total (arrive time 12 minutes)	<i>See text below</i>	Total depends on dispatch level	Necessary for any fire requiring a 2-engine response	1 BLS engine 1 ALS ambulance	8:16 average 6:59 median	AMR: 5:57 minutes from dispatch 2006 = 16 calls inside gates and 47 calls outside gates (not in Watsonville)
Mt. Madonna	1 Battalion Chief 2 Type I engines 1 Type II engine + possible volunteer engine	9 total (arrive time dependent on location of alarm)	<i>See text below</i>	Total depends on dispatch level. Arrival time depends on location	Necessary for any fire requiring a 2-engine response	1 BLS engine 1 ALS ambulance 1 volunteer rescue or engine	N/A ; volunteer	AMR = 22 calls

## 4.0 CURRENT SERVICE STRUCTURE

Vegetation fire response dispatch levels are based on the weather, location, and fuel conditions. Response for PVFPD, Corralitos, Pajaro Dunes, and Mount Madonna is as follows:

- Low dispatch level: 48 personnel, 6 engines plus air attack, bulldozer, 1 fire crew and overhead.
- Medium dispatch level: 67 personnel, 7 engines plus air attack, bulldozer, 2 fire crews and overhead.
- High dispatch level: 81 personnel, 9 engines, air attack, 2 crews, bulldozer and overhead.

### 4.9 Fire Employee Unions

Two unions are represented within the Study Area: CAL FIRE personnel are State employees and part of Bargaining Unit 8 and Local 2881. Watsonville firefighters are part of the Watsonville Professional Firefighters Local 1272. Both Locals are affiliated with the International Association of Firefighters. However there are key differences between the two labor contracts, including pay scales and work schedules:

Table 4.4  
Fire Service Union Comparison

	CAL FIRE	Watsonville
Hours per week	72 hrs	56 hrs
Planned Overtime per period	19 hrs (paid at 1.5 time)	3 hrs
Shift	3 consecutive days on, 4 days off	24 hrs on , 24 hrs off
Schedule	12 24-hour shifts in a 28 day period	10 24-hour shifts in a 30 day period (avg)
Retirement Benefits	3% at 50	3% at 50
Benefit Rate – safety personnel	52.1%	58.0%
Benefit Rate - support personnel	45.24%	41.24%

CAL FIRE personnel are on duty for 72 hours (3 days) then off for 4 days. The shifts are staggered so all days are covered. CAL FIRE Battalion Chiefs hired prior to 2006 work a 72-hour week, followed by a 96-hour week.

Watsonville personnel work four 24-hour shifts (one day on, one day off) followed by four consecutive days off. This is followed by another four 24-hour shifts followed by 6 days off. This equates to a 56-hour week.

## 5.0 EVALUATION OF CURRENT RESOURCES

The current fire protection resources within the Study Area were evaluated based on fire protection standards promulgated by the National Fire Protection Association, Occupational Safety and Health Administration (OSHA) and the Insurance Service Office. Fire service levels within a jurisdiction are determined by local decision-making and policies, with funding a critical consideration. While fire service in the South County is not seriously deficient in any area, the evaluation does identify areas where service improvements should be considered.

### 5.1 Critical Tasking Scenarios

The following three typical scenarios outline the critical tasks that must be carried out at a fire. It should be noted that the following scenarios do not reflect large fires. These scenarios provide an objective means to evaluate the adequacy of resources within the Study Area.

Table 5.1  
Scenario 1: Single Family Residence  
Single room, fully involved with fire in a detached, non-sprinklered residence, at night

Task	Number of Firefighters Needed	Fireflow (GPM) Being Delivered	Number of Engine/Truck Companies Needed
Incident Command	2 (Incident Command and Safety)	None	None
Hand Held Hose Lines	2 Firefighters	180 GPM	1 Engine
Rapid Intervention Team	2 Firefighters	None	Same as above
Search and Rescue	2 Firefighters	None	1 Engine or Truck
Ventilation and Smoke Removal	2 Firefighters	None	1 Truck Co
Utilities	1 Firefighter	None	Same Truck Co
Salvage/ Damage control	1 Firefighter	None	Same Truck Co
Rehab/ Relief personnel	2 Firefighters	None	1 Engine Co
Total	14	180 GPM/ 12.8 per firefighter	3 Engines, 1 Truck, 2 Chiefs

## 5.0 EVALUATION OF CURRENT RESOURCES

Table 5.2  
Scenario 2: Commercial Building  
10,000 square foot, one story, sprinklered building; 25% involved at night (after hours)

Task	Number of Firefighters Needed	Fireflow (GPM) Being Delivered	Number of Engine/Truck Companies Needed
Incident Command	3 ( Incident Command, OPS and Safety)	None	None
Hand Held Hose Lines; 2 lines	4 Firefighters	360 GPM	2 three-person Engines
Water supply and sprinkler supply	1 Firefighter/engineer	None	One from above company
Rapid Intervention Team	4 Firefighters	None	1 three-person engine + one from above company
Search and Rescue, ventilation	3 Firefighters	None	1 Truck Co
Salvage/ Damage control/utilities	3 Firefighters	None	1 Truck Co
Rehab/ Relief personnel	3 Firefighters	None	1 Engine Co
<b>Total</b>	<b>21</b>	<b>360 GPM/ 18 GPM per firefighter plus sprinklers</b>	<b>4 Engines, 2 Trucks, 3 Chiefs</b>

Table 5.3.  
Scenario 3: 30-Acre Vegetation Fire  
Fuel model 3 grass with oak woodland; hot, dry weather, low fuel moisture, wind 15 mph, slope 10%; structures 1000' away

Task	Number of Firefighters Needed	Fireflow (GPM) Being Delivered	Number of Engine Companies needed
Incident Command	3 (Incident Command, OPS and Safety)	None	None
Hand Held Hose Lines; 4 lines	8 Firefighters	500 GPM (125 each line)	3 three-person Engines
Water supply	2 Firefighter/engineer	Supply to engines	2 Water tenders
Construct line ahead of fire	2; dozer operator and swamper	O	Dozer
Air attack	2 (pilot, observer)	N/A	O
Downwind patrol	6	N/A	2 three-person Engine Companies
Rehab/ Relief personnel	4 Firefighters	None	1 three-person Engine Co and one from other engines
<b>Total</b>	<b>27</b>	<b>500 GPM/ 18.5 GPM per firefighter</b>	<b>6 Engines, 2 Tenders, 3 Chiefs</b>

### 5.2 Resource Concentration and Response

The National Fire Protection Association (NFPA) has established standards for fire protection service. Standard 1710, “Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations by Career Fire Departments” recommends 14 firefighters on scene for a first alarm within 8 minutes driving time. As shown in *Table 4.3, Current Fire Response Configuration*, the on-scene staffing for a structural fire within the Study Area does not meet this standard. Watsonville has 10 firefighters on the scene within 8 minutes, with 12-14 personnel in 14



## 5.0 EVALUATION OF CURRENT RESOURCES

minutes. County Fire and PVFPD have 9 total personnel for a response, with arrival time dependent on the incident location. When comparing the critical tasking matrices in *Tables 5.1* through *5.3* above to the Current Fire Service configuration shown in *Table 4.3*, it is clear that no one agency is able to respond adequately to any significant structure fire without outside help. Any significant structural fire requires response from other agencies, through mutual aid or automatic aid; however, automatic aid and mutual aid is not guaranteed response, so on-scene forces may be inadequate. The number of fire engines in the Study Area is adequate; the issue is in the number of firefighters available and the response time. The fire agencies cannot respond adequately and in a timely manner to a second significant fire occurring during the first fire. Multiple queuing of alarms (where successive calls are received while companies are responding to another call) cannot be handled effectively due to a lack of concentration of engine companies.

As noted in the *Fire Department Needs/Gap Analysis* report prepared for Watsonville, the current distribution of resources is adequate and the Fire Department's response times are better than the national standard. However, given anticipated growth within the city and adjacent areas, Watsonville will need a third station in the future in order to continue to provide adequate fire response. The participants in this study noted that a station in the area of East Lake Avenue and Holohan Road could be shared between Watsonville and the PVFPD. If future development in Watsonville includes taller buildings, the response resources may not be able to adequately protect such buildings without aid from outside the Study Area.

NFPA 1710 recommends a standard of 4 minutes driving time for 90% of all calls and ALS arrival in 8 minutes driving time. Response times in Watsonville are consistent with these standards. County Fire and PVFPD have not adopted response time standards due to the characteristics of their services areas, including distance, road conditions, and type of development.

The response to vegetation fires is adequate due to the significant CAL FIRE resources in the county.

### 5.3 Personnel

The Department Fire Chiefs consist of the Watsonville Chief, the County Fire Chief, and the Assistant Chief (both CAL FIRE). There are two on duty Battalion Chiefs: one is on duty 24 hours per day in Watsonville and the other is a CAL FIRE Battalion Chief on duty and on call. This results in coverage of two Chief Officers 24 hours per day, which is adequate for the Study Area.

Watsonville is experiencing staffing shortages. Higher salaries offered by other fire agencies in the region attract employees away. The Fire Department has been chronically understaffed for paramedics, operating with seven staff instead of nine. Half of the Department's 33 firefighters are eligible for retirement in the next five years.

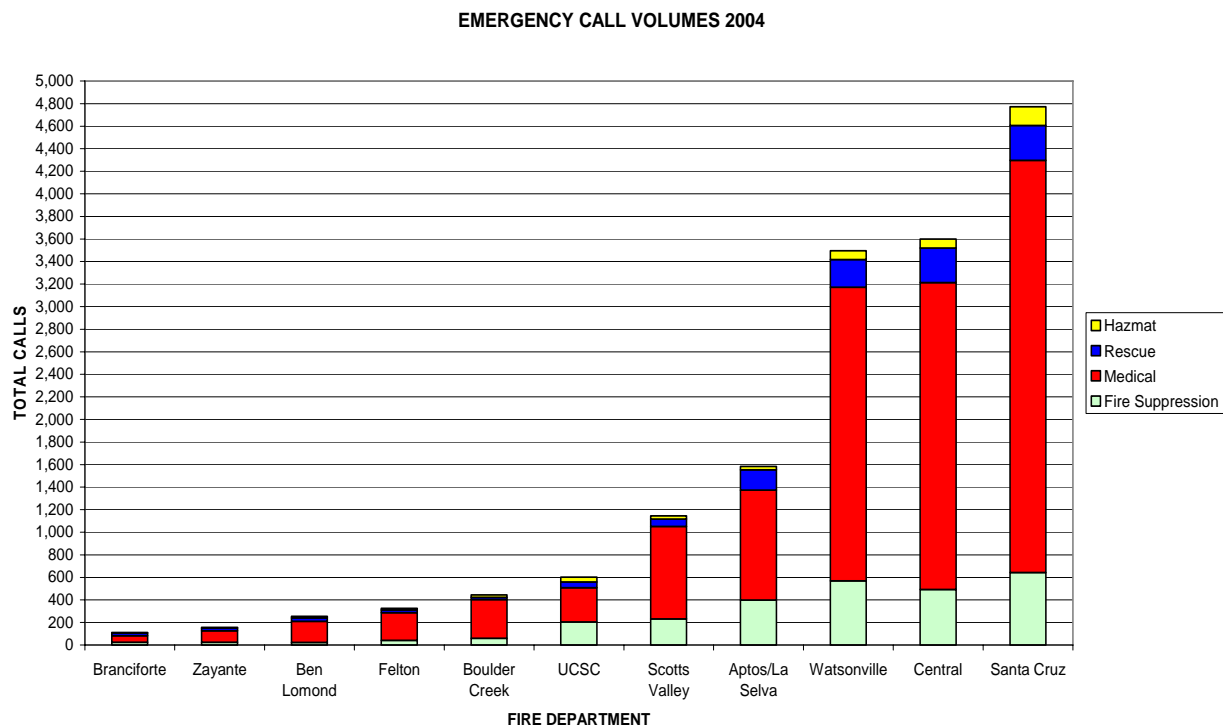
Watsonville and Corralitos have 3-person engine staffing, while Pajaro Dunes and PVFPD have 2-person staffing. In environments that pose an immediate danger to health and life (IDHL), the Code of Federal Regulations (29 CFR Part 1910.134) requires that one employee be located outside the IDHL atmosphere

## 5.0 EVALUATION OF CURRENT RESOURCES

and visual, voice or signal line communication be maintained between the employee(s) inside the IDHL atmosphere and the employee(s) located outside. For interior structural firefighting, at least two employees enter the IDHL atmosphere and at least two employees must remain outside (Rapid Intervention Team/Rapid Intervention Crew). Two or three-person companies are not OSHA compliant for Rapid Intervention Team/Rapid Intervention Crew (2 in, 2 out) and an interior attack on a significant structural fire must be delayed until at least four personnel are on site.

This is a common issue for local governments as providing four-person engine companies is desirable but it significantly increases fire service costs. Fire agencies provide the staff and equipment resources based on funding and acceptable risk levels. As shown below in *Figure 5.1* from the 2005 Countywide Service Review, the majority of calls are for emergency medical response. Due to improved building codes and more fire resistant building materials, the number of fire suppression calls has diminished. However, should a significant fire event occur, the firefighting resources must be available within an acceptable timeframe, through other stations within the agency, automatic aid, and mutual aid.

Figure 5.1



*Note: the call-type mix for County Fire and Pajaro Dunes is similar to the agencies shown above.*

Given that the majority of calls are EMS-related, one option that is available is to staff a quick response vehicle which can respond to medical calls. Watsonville may consider this as part of the City's approach to fulfilling its contract with the Santa Cruz County Health Services Agency. It should be noted that this

approach to providing emergency medical services does not reduce the need for fire stations or the number of firefighting staff.

### 5.4 Equipment

The fire apparatus within the Study Area is in reasonable condition. Watsonville's first line apparatus will be new or nearly new by the end of 2007. However, there is only one ladder truck in the study area. This area should have a second ladder truck to meet ISO standards for truck company coverage. Truck service is needed at every structural fire for manpower, critical tasking, and equipment. The second truck could be a service ladder truck rather than an aerial ladder due to lack of tall buildings or high fire flow buildings in the area outside of the city.

As noted in the February 27, 2007 report to the Board of Supervisors, County Fire has deferred purchasing replacement vehicles as a cost saving measure. County Fire currently owns and operates 8 engines, 6 water tankers, and 6 rescue vehicles. The County has not purchased an engine since 1994, and most of the engines are approximately 15 years old. Engines are typically converted to reserve status at 15 years, with an estimated remaining useful life of 5 years. The age of the equipment makes them more expensive to operate and less dependable. The County estimates that \$500,000 is needed annually to address equipment needs.

The Pajaro Dunes fire engine was acquired in 1997, so it is approximately halfway through its expected useful life.

## 6.0 KEY ISSUES

The purpose of the South County Fire Service Study is to evaluate whether there are opportunities to improve efficiencies and service levels (or sustain current service levels with increasing funding constraints) through organizing fire protection services differently. A number of issues have been identified through the service review process and in discussions with representatives from each of the agencies. Any reorganization should provide a net benefit to the residents and property owners within the affected area and should improve conditions related to the following issues:

### 6.1 Service Level Differences

Fire and emergency medical service levels vary within the more populated areas of the Study Area, which is a direct function of cost and available funding. Watsonville and Corralitos (County Fire) have 3-person engine staffing, while PVFPD and Pajaro Dunes have 2-person staffing. Watsonville provides Advanced Life Support (ALS) and the other areas have Basic Life Support (BLS). Watsonville is serving the Freedom area and adjacent communities, which offers higher service levels to those urban communities than are available in other rural areas within the PVFPD. Although these differences do not indicate that service is inadequate in any given area, it does demonstrate an opportunity for service levels to be equalized, particularly within the more developed areas.

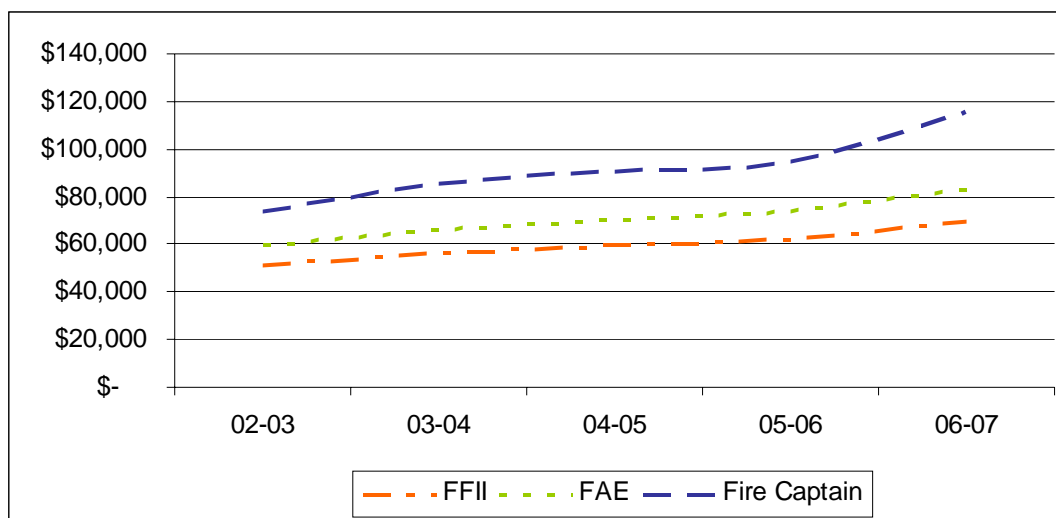
### 6.2 Increasing Personnel Costs for State Negotiated Contracts

Fire protection is labor-intensive, and personnel costs comprise a major portion of fire protection expenditures. Within the Study Area, labor represents approximately 91% of the aggregate cost. CAL FIRE personnel are employees of the State with most rank-and-file classifications represented by Bargaining Unit 8. Salary rates and benefits are negotiated by the State in fulfillment of the State's responsibility to provide for wildland fire protection. Local governments that contract with CAL FIRE to provide services are subject to the salary rates and costs adopted by the State; rates are not negotiable for local fire protection.

In 2001 the State entered into a Memorandum of Understanding (MOU) with Unit 8 that significantly changed the compensation for CAL FIRE personnel. A negotiated base compensation increase of 5% became effective July 1, 2003. Planned and unplanned overtime expenditures represent a significant portion of total costs. Planned overtime is the portion of the regularly scheduled work week for which staff is compensated at overtime rates (1.5). Due to federal labor law and contract obligations, planned overtime pay applies to scheduled work shifts that exceed 53 hours. Regular shifts for CAL FIRE staff are 72 hours, so 19 hours per shift are paid at overtime rates. Effective November 1, 2005, the compensation for the overtime hours changed from half time to time and a half. At the same time the method for determining hourly rates changed from weekly base salary divided by 72 hours to weekly base salary divided by 56 hours. Per the analysis done by the Legislative Analyst's Office, the 2001 Unit 8 MOU "will result in significant compensation increases for employee classifications within Unit 8". As

an example, from Year 2002-03 to 2006-07, the trend in total compensation for three major employee classifications is shown below:

Figure 6.1  
CAL FIRE Compensation Changes



*FFII = Firefighter II; FAE = Fire Apparatus Engineer*

Retirement benefits have increased as well. Prior to Year 2000, the firefighter retirement benefit was 2.5% at 55 years. Beginning in 2000, Chapter 555, Statutes of 1999 (SB 400, Ortiz) allowed for a benefit increase to 3% at 55 years, which was included in the 1999 and 2000 Unit 8 MOUs. In 2003, Unit 8 renegotiated the 2001 MOU to 3% at 50 years beginning January 1, 2006.

This has had a significant impact on local governments contracting with CAL FIRE as those costs are passed through. The Legislative Analyst's Office estimated that the 2001 MOU increased costs to local governments by \$9 million in 2003-04, and may have reached \$22 million annually by 2005-06.

A new MOU is now in place that extends to June 30, 2008. It continues most of the provisions in the 2001 MOU including the 3% at 50 retirement benefits. It does not include changes to the basic compensation package; however, it does reduce the scheduled work week for newly appointed Battalion Chiefs to relieve a compaction problem that was a disincentive to seek promotion.

Effective July 1, 2006, CAL FIRE revised its station staffing so that core employees will staff SRA stations year round, and local governments will pay for supplemental employees through the Amador Plan. This change benefits local governments as it reduces the personnel cost that they are responsible for in the non-fire season. In addition, the set minimum charge for Amador Plan services has been eliminated and replaced by an at-cost billing system. These changes do not benefit Schedule A (year-round)

agreements and the rates for providing service with local facilities and equipment. For FY 2006/07, the County realized a net reduction of \$403,762 in CAL FIRE costs, which consists of a reduction of approximately \$656,000 in Amador Plan costs and an increase of \$253,000 in Schedule A costs. However, as noted above in the September 2006 report to the Board of Supervisors, the cost to maintain current service levels is expected to increase in FY 2007/08 and may necessitate an increase in the assessment for CSA 48.

In September 2006, the Governor vetoed AB 2683, which would have required the State to pay rank and file members of Bargaining Unit 8 (CAL FIRE) the estimated average total compensation (for each rank) of the average salary and benefits received by other jurisdictions employing 75 or more full-time firefighters within California. It was estimated that salary costs for CAL FIRE firefighters would have increased 20% under this legislation. Because personnel is the most significant cost for fire service, this type of legislation has the potential to significantly impact the fiscal stability of local agencies that contract with CAL FIRE.

It should be noted that the limited ability for local governments to affect these State-directed costs in the future is through legislative action and not annual contract negotiations at the local level.

### 6.3 Adequate Fire Service Funding

Adequate funding for fire services is a challenge for local governments across the state, particularly with the trend toward increasing costs and limited opportunities to increase revenue. Within the Study Area, fire service is funded through property taxes and assessments as shown below in *Table 6.1*:

**Table 6.1**  
**Fire Service Funding Sources**

Agency	Funding Sources
County of Santa Cruz – CSA 48	Portion of 1% Property Tax Fire Marshal fees, Proposition 172 funds, plus Assessments = \$56.68 per fire flow unit <sup>12</sup> (2 X \$56.68 = \$113.36 per single family dwelling)
County of Santa Cruz - CSA 4 (Pajaro Dunes)	Portion of 1% Property Tax plus Assessments = \$324.52 per fire flow unit (2 x \$324.52 = \$649.04 per single family dwelling)
City of Watsonville	General Fund, Prop 172 funds, fees
PVFPD	Portion of 1% Property Tax, fees, CAL-Star Dispatch contract plus Fire Protection Tax (\$30 per single family dwelling)

State law determines the exchange of property tax revenues among local agencies in conjunction with jurisdictional boundary changes. When territory is detached or annexed to a district or a new fire agency

<sup>12</sup> A fire flow unit is a volume of water necessary to extinguish a structural fire within a given time period. The units are used to ensure adequate water service capacity as well as to quantify fire service demands. Most single-family residential properties are assigned two (2) fire flow units.

is formed, the County Board of Supervisors negotiates an exchange of property tax revenue on behalf of the districts. The exchange is limited to revenue from the annual increase in assessed value that is attributable to the affected tax rate area, referred to as the annual tax increment.

As discussed above, fire service expenditures are trending upwards faster than revenues. This is largely due to labor costs; increasing professional standards in the fire industry, changes in community demographics, and rising service level expectations are all making it more difficult to field paid-call and volunteer staff, and many local governments find this model increasingly difficult to sustain. A few years ago Watsonville ended its paid call and volunteer programs as the cost outweighed the benefits; however, in March 2007 the Watsonville City Council identified renewal of the City's volunteer firefighter program as one of the Council's priorities.

Population and level of development is a factor in fire service funding. Greater density provides increased funding due to the number of developed parcels. The 1% property tax is also a factor – increased property values provide more funding as well. As experienced by the property owners in Pajaro Dunes, spreading fire service costs over a small number of developed parcels results in higher assessments. In the Corralitos response area, there are an estimated 156 people per square mile, which represents a challenge to fund an urban level of fire service.

There are three ways to balance fire service funding with costs: 1) reduce expenditures by streamlining operations, 2) reduce expenditures by reducing services, or 3) obtain additional revenues. Revenue increases require voter or landowner approval; assessments require approval by a majority of the property owners, weighted by assessed value, and special taxes need approval by 2/3 of the registered voters. The following *Table 6.2* provides a history of the public's acceptance of fire protection assessments over the past 25 years.

**Table 6.2**  
**Successful Fire Protection Assessments**

District	Election	Type	Yes Vote	Total Raised	Typical Single Family Dwelling in 2006-07
Aptos (La Selva)	1982 June	Special tax	76% voters	\$110,000	\$60
Aptos (Day Valley)	1988 June	Special Tax	71% voters		\$60
Branciforte	1981 Nov.	Special Tax	81% voters	\$78,814	\$100
Branciforte	1988	Special Tax increase	92% voters		
Branciforte	1996 Nov.	Special Tax increase	78% voters		
Branciforte	2005	Continue Special Tax	89% voters		
Pajaro Valley	1996 March	Benefit Assessment	56% (majority required)	\$140,000	\$30
Salsipuedes	1982 June	Special Tax	70% voters		(was \$60 until reduced by 1996 PV assessment vote)
Zayante	1992 June	Special Tax	78% voters	\$68,000	\$35
CSA 48/ County Fire	1997 June	Benefit Assessment	67% weighted by assessment (majority required)	\$895,508	\$111
Pajaro Dunes	1997 June	Benefit Assessment	96% weighted by assessment (majority required)	\$368,655	\$649
Pajaro Dunes	2006 Feb	Benefit Assessment	85% weighted by assessment (majority required)		



## 7.0 FIRE SERVICE ALTERNATIVES

Fire service alternatives should be evaluated based on the following criteria: 1) long-term goals and objectives which are appropriate for the service area, 2) the number of objectives an alternative will achieve, and 3) financial feasibility. The greatest long-term benefit to the South County will occur through fire service which is consistent across jurisdictions, allows for flexibility in assigning resources, and provides for the appropriate location of resources and acceptable response times. The following discussion is focused on Pajaro Valley, Corralitos, Watsonville, and Pajaro Dunes. No service change is anticipated for the Mount Madonna station due to the service area characteristics and remote location. The following goals and objectives were used for this study:

### *Goals*

- Provide the highest level of customer service reasonably attainable within funding acceptable to the taxpayers
- Provide standardized levels of service and standards of cover in South County, dependent upon local risks
- Provide seamless, timely, response to all areas in the South County (foothills, valley and coast)
- Maintain coverage for South County fire stations 24 hours per day, 365 days/year
- Provide standardized apparatus in all stations
- Provide the appropriate concentration of response resources in South County
- Provide optimum standardized, OSHA mandated training in South County
- Strive to improve ISO ratings in areas other than Watsonville
- Improve code enforcement, fire prevention and regulation of new development

### *Objectives*

- Provide 3-person ALS engine companies as follows:
  - Three companies in, or committed to, Watsonville 24 hours per day, 365 days per year
  - One company in Corralitos station 24 hours per day, 365 days per year
  - One company in Pajaro Dunes station 24 hours per day, 365 days per year
  - One company in Pajaro Valley 24 hours per day, 365 days per year
- Provide an initial response of 2 engines and one truck company (aerial or service ladder truck) or three engines, with 3-person company plus Chief officer, to a residential structure fire in the South County within 8 minutes driving time to 90% of all calls
- Provide a 3-person ALS engine first due on scene of 90% of all structure fires within 8 minutes driving time and within 4 minutes 70% of the time
- Provide four 3-person engine companies, on scene within 10 minutes driving time, to 90% of all vegetation fires over 1 acre or with structures exposed
- Provide 3-person ALS engine on scene of an EMS call in 8 minutes driving time to 90% of all calls in study area
- Provide four engine companies and two truck companies (one may be automatic aid) to any commercial or industrial fire, within 10 minutes driving time to 90% of all calls

## 7.0 FIRE SERVICE ALTERNATIVES

- Provide one dispatch center to handle all calls for South County
- Provide full time Fire Prevention staff in South County
- Provide full time training officer(s) in South County
- Provide an efficient move up and backfill system to provide coverage to all stations within South County

Although some of the objectives may not be attainable at this time, future changes in the fire protection delivery system should be consistent with shared goals that have been agreed upon by the service providers. Based on the results of the Countywide Service Review and input from the agencies, the following alternatives were identified for consideration.

1. Form one new Fire Protection District to serve the South County
  - a. With service provided through a CAL FIRE contract
  - b. With service provided through a Watsonville Fire Department contract
2. Expand the boundaries of the PVFPD to include all unincorporated area (or form a new Fire Protection District) and form a new subsidiary Fire Protection District to serve Watsonville
3. Maintain the status quo, with service improvements through 3-person engine companies and ALS service, and efficiency improvements through a functional consolidation for response, training, fire prevention, joint purchasing, and management.

Increasing the service level to ALS is an important criterion for South County. Under the County's contract with AMR for ambulance service, one ambulance is assigned to the south county area. When that ambulance is on a call, the response time for the second ambulance is lengthy (if it is available). The Watsonville Fire Department provides ALS services on one engine in each station, but the other areas do not. Having paramedics on first response fire engines would significantly improve life safety services in this portion of the county.

Maintaining the status quo with no service level changes is always an option for agencies, and it will be each agency's decision whether to proceed with additional analysis on an alternative level of service or organizational structure.

Each alternative is summarized below, including the benefits and potential impacts. The summaries are followed by a comparative financial analysis included in *Table 7.4, Comparative Financial Analysis*.

## 7.0 FIRE SERVICE ALTERNATIVES

### 7.1 Alternative 1: One Independent Fire Protection District

Under Alternative 1, area would be detached from CSA 48 and CSA 4 would be dissolved. The PVFPD could annex all of the remaining lands within the Study Area that are outside the District's boundary, or the PVFPD could be dissolved and a new fire protection district formed.

Two service approaches were considered: the first is through a CAL FIRE contract and the second is through a Watsonville Fire Department contract.

Table 7.1

Alternative 1A: Form One Independent Fire Protection District to serve entire South County	
Governance	Independent special district with 5 Directors, elected by region
Service Level	3-person medic engines (except Mt. Madonna) Advanced Life Support
Management / Staffing	CAL FIRE contract or Watsonville contract
Revenue Sources	Share of 1% property tax (to be negotiated with County/City) Property Assessment (requires landowner approval) Fees
Estimated Cost – 5 stations, 24/7 coverage, 5 engine companies plus 1 truck company; includes facility and equipment capital funding	CAL FIRE Contract: \$9.9 million Watsonville Fire Department Contract: \$12.3 million
Benefits	Potential Impacts / Limiting Factors
<ul style="list-style-type: none"> <li>Standardizes service levels and coverage in South County</li> <li>Provides 24/7 coverage in Corralitos</li> <li>Improves ALS response times</li> <li>Seamless operation as one response system</li> <li>Provides for common fire service management</li> <li>Allows for area-wide flexibility in resource assignments</li> <li>Improves concentration of resources</li> <li>Allows for true "boundary drop" and efficient engine company move-up</li> <li>Establishes assessment parity for South County property owners</li> <li>Uses one dispatch center</li> <li>Ensures comprehensive training/fire prevention services</li> </ul>	<ul style="list-style-type: none"> <li>Detachment from CSA 48 negatively impacts funding for County Fire in remainder of CSA</li> <li>2 unions represented in area; work schedule, compensation and benefits would need to be equalized with no loss in seniority, compensation or benefits</li> <li>Watsonville has new and nearly new fire apparatus; property owners within the City would have to share in the cost of fire apparatus replacements in other areas</li> <li>Reduces benefits of economies of scale offered through County Fire</li> </ul>

The estimates used for the analysis are based on a CAL FIRE Schedule A agreement and a Watsonville-based approach. The primary difference between the two is labor costs. CAL FIRE's benefit rate for safety personnel is 52.1% versus 58% for Watsonville. For example, the annual cost for a Fire Captain is \$116,000 for CAL FIRE and \$142,500 for Watsonville. Because of the 56-hour work week, Watsonville staffs for three shifts whereas CAL FIRE's 72-hour schedule allows staffing for two shifts. It would be up to the District's Board of Directors to determine the level of service and the service provider. The Board could choose a different service provider or provide service by in-house staffing.

## 7.0 FIRE SERVICE ALTERNATIVES

This alternative offers the greatest level of benefits for resource management, seamless operations, and standardized coverage. The six stations would be under the same management structure. Response would be provided through a move-up protocol within the district rather than automatic aid. There would be one assessment structure across South County, with resources shared equally. All areas would participate in capital costs for new equipment and station upgrades, as well as the new station that will be needed in the future.

The formation of one independent fire protection district raises several issues related to funding, economies of scale and equipment status. A portion of the 1% property tax from properties within the unincorporated area is currently used to partially fund fire service. County Fire, Pajaro Dunes, and the Pajaro Valley Fire Protection District each receive a portion of the property tax from within their service area. Watsonville Fire is funded through the City's General Fund; upon the recommendation of the City's Blue Ribbon Committee, the City is considering options where fire service would be funded through fees and property assessments. However, Government Code §56810 includes provisions for the transfer of property tax to a new district based on property tax revenues and the net cost to provide the service; so, it is anticipated that a portion of the property tax revenue for properties within the city boundaries would be directed to the new fire protection district. Assessments for a new fire protection district would be based on cost less revenues from property taxes and fees.

A second issue is a loss of some economies of scale available through County Fire. Currently, Corralitos, Pajaro Dunes, and the PVFPD benefit from the ability to share management and fire prevention services provided through the County's contract with CAL FIRE. These include Fire Prevention Officers and Specialists, Training Officer, and an equipment mechanic. With the formation of an independent district, these positions would become the sole responsibility of the District, which may increase costs. For example, the new district would have its own Paramedic Coordinator, one Fire Prevention Officer, and one Fire Prevention Specialist. The Division Chief serves as the Fire Chief within the local unit and is fully funded by the State. Under a Watsonville-based model, these costs, including the Fire Chief, would be borne by the District.

The status of fire apparatus is also a consideration. The City of Watsonville has invested capital resources over the past few years so that the City's first response fire engines will be new or nearly new by the end of 2007. On the other hand, the County has deferred purchase of replacement vehicles as a cost saving measure.<sup>13</sup> The County's equipment is aging and replacements are needed. Under this alternative, property owners within the City of Watsonville would share in the cost for equipment replacements or increased maintenance costs on older equipment.

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<sup>13</sup> Office of Emergency Services report to the County Board of Supervisors, February 27, 2007

## 7.0 FIRE SERVICE ALTERNATIVES

### 7.2 Alternative 2: One Independent Fire Protection District plus One Subsidiary District

Alternative 2 is similar to Alternative 1 in that area would be detached from CSA 48, CSA 4 would be dissolved, and either the PVFPD would annex all unincorporated area within the Study Area or the PVFPD would be dissolved and a new fire protection would be formed. Watsonville would form a new subsidiary fire protection district to serve the City rather than become part of an independent fire protection district.

Table 7.2

Alternative 2: Two Fire Protection Districts to serve entire South County	
Governance	PVFPD: 5 Directors Watsonville City Council governs subsidiary district
Service Level	3-person engine companies (except Mt. Madonna) ALS in both districts
Management / Staffing	PVFPD: CAL FIRE contract or District employees Watsonville: District employees
Revenue Sources	PVFPD: Share of 1% property tax (to be negotiated with County for annexing area), fees, property assessment (requires landowner approval)  Watsonville: Share of 1% property tax (to be negotiated with City), fees and property assessment (requires landowner approval)  Watsonville to serve Freedom community by annual contract with PVFPD (eliminate per-call fee)
Estimated Cost – FPD: 3 stations, 3 engine companies Watsonville: 2 stations, 2 engine companies plus 1 truck company	Combined Cost: \$12.6 million, includes facility and equipment capital funding FPD: \$6.7 million (CAL FIRE management) Watsonville: \$5.9 million
<i>Benefits</i>	<i>Potential Impacts / Limiting Factors</i>
<ul style="list-style-type: none"> <li>Improves service levels in unincorporated area</li> <li>Improves ALS response times</li> <li>Provides 24/7 coverage in Corralitos</li> <li>Allows for flexibility in resource assignments in unincorporated area</li> <li>Establishes contract fee for Watsonville to serve PVFPD, replacing per-call fee</li> <li>Establishes assessment parity for South County property owners in unincorporated area</li> <li>Provides sustainable funding source for Watsonville Fire</li> <li>Avoids issue with 2 unions and contract differences</li> </ul>	<ul style="list-style-type: none"> <li>Detachment from CSA 48 negatively impacts funding for County Fire in remainder of CSA</li> <li>Does not fully integrate the resources within South County</li> <li>Requires staff duplication between 2 districts for Fire Chief, Fire Marshal, Training Officer, Fire Inspector, Battalion Chiefs</li> <li>Does not improve personnel training</li> <li>Does not resolve dispatch issue</li> <li>Reduces benefits of economies of scale offered through County Fire</li> </ul>

The estimates used for the analysis for this alternative are based on a Schedule A agreement with CAL FIRE and Watsonville's FY 2006/07 Fire Department budget. It would be up to the Fire Protection District's Board of Directors and the Watsonville City Council to determine the levels of service. CAL FIRE, a different service provider or in-house staffing could be used for either district.

## 7.0 FIRE SERVICE ALTERNATIVES

This alternative addresses the goal of standardizing service in South County. It unifies the unincorporated area within one district, and is consistent with Watsonville's direction to form a subsidiary district. It also avoids the potential issue of one area subsidizing the capital needs of another.

However, this alternative does not provide the same economies that would be available through one district serving South County or the current governmental structure. The Corralitos area, Pajaro Dunes, and the PVFPD benefit from sharing resources with County Fire and CAL FIRE. Two districts would require duplication in command, fire prevention, and support staff, with no benefit from resources within County Fire. South County would have two Fire Chiefs, two Fire Prevention Officers, and duplication in administrative support and equipment mechanics. The two-district structure ensures efficiency within each district, but does not necessarily achieve regional efficiencies that could be available through another service approach. This could be partially resolved through an agreement to share staff resources such as a mechanic and Fire Prevention staff.

This alternative proposes an increase in service levels to 3-person engine companies and Advanced Life Support emergency medical service for the PVFPD, CSA 48 (Corralitos) and CSA 4. The consolidation would reduce the cost for property owners in Pajaro Dunes, but increase the cost for those in Corralitos and the PVFPD service area. County Fire and the PVFPD are managed efficiently and resources are shared across the county through the CAL FIRE agreements. Therefore, without offering an improved service level, consolidation offers no significant benefit over the current structure.

### 7.3 Alternative 3: Maintain Status Quo with Service Improvements

Under Alternative 3, the organization of fire service providers in South County would not change. Watsonville could proceed with forming a subsidiary district, but this would be for financial purposes and would not affect service levels area-wide. The analysis for this alternative includes service improvements of 3-person engine staffing and ALS service throughout the South County. Efficiency improvements could be achieved through a functional consolidation for response, training, fire prevention, joint purchasing, and management. This functional consolidation could occur through formation of a Joint Powers Authority (JPA) or Memorandum of Understanding (MOU).

Table 7.3

Alternative 3: Maintain Status Quo with Service Improvements	
Governance	No change
Service Level	Upgrade to 3-person ALS companies in PVFPD, Corralitos, Pajaro Dunes Maintain 3-person ALS companies in Watsonville
Management / Staffing	County and PVFPD: CAL FIRE contract Watsonville: City employees
Revenue Sources	Property tax, assessments, fees (see (Table 6.1)
Estimated Cost	\$9.6 million
<b>Benefits</b>	<b>Potential Impacts / Limiting Factors</b>
<ul style="list-style-type: none"> <li>ALS service added at PVFPD, Corralitos, and Pajaro Dunes</li> <li>Companies increased from 2 to 3 people at PVFPD, Pajaro Dunes</li> <li>Avoids issue with 2 unions and contract differences</li> </ul>	<ul style="list-style-type: none"> <li>Does not fully integrate the resources within South County</li> <li>Does not improve personnel training</li> <li>Does not improve dispatch</li> <li>Requires staff duplication between districts/City for Fire Chief, Fire Marshal, Training Officer, Fire Inspector, Battalion Chiefs</li> <li>Does not allow for flexibility in resource assignments in unincorporated area</li> <li>Continues \$157,000 annual expense for Watsonville to serve PVFPD (@ \$695 per call)</li> <li>No assessment parity for South County property owners</li> <li>Does not provide sustainable funding source for Watsonville Fire</li> </ul>

It was noted in the preparation of this study that Watsonville will need a third station to provide adequate resources to serve future growth. One option would be for Watsonville to serve Pajaro Dunes by contract. Watsonville could fund a third person/paramedic for Pajaro Dunes in exchange for that station becoming Watsonville's third station. This location is not optimal; ideally a new station would be shared with the PVFPD and be located in the East Lake Avenue/Holohan Road area. Per Government Code Section 56133(e) CSA 4 could contract with another public agency for services (continue with CAL FIRE, or new contract with City of Watsonville or a fire protection district). LAFCO approval is not required if the level of service will remain the same.

Table 7.4  
Comparative Financial Analysis

	Alternative 1		Alternative 2			Alternative 3				
	One Fire Protection District		One Fire Protection District + One Subsidiary District			Status Quo w/ increase to 3-person/ALS standard				
	1A. CAL FIRE Contract	1B. Watsonville-based	Combined Cost Est.	Fire Protection District	Watsonville Subsidiary District	Combined Cost Est.	County Fire CSA 48 - Corralitos	County Fire CSA 4 - Pajaro Dunes	PVFPD	Watsonville City Department
<b>FIRE SERVICE CONFIGURATION</b>										
# of Stations	5	5	5	3	2	5	1	1	1	2
Engine Company Size	3-person	3-person	3-person	3-person	3-person	3-person	3-person	3-person	3-person	3-person
No. of Engine Companies on duty	5	5	5	3	2	5	1	1	1	2
No. of Truck Companies on duty	1	1	1		1	1				1
Emergency Medical	ALS	ALS	ALS	ALS	ALS	ALS	ALS	ALS	ALS	ALS
<b>STAFFING</b>										
Fire Control, Emergency Svcs Staff	54	54	66	36	30	48	6	6	6	30
Command and Control (Chief Officers), Prevention, ALS, Training	10	10	12	8	4	8	2	0	2	4
Support Staff (non-safety personnel - mechanic, clerical)	4	4	4	3	1	4.4	1.4	0	2	1
<b>COST ESTIMATES</b>							-- costs based on FY 2006/07 budgets --			
Fire Control & Emergency Services	\$ 7,299,605	\$ 9,526,427	\$ 9,872,541	\$ 4,986,208	\$ 4,886,333	\$ 7,097,720	\$ 303,392	\$ 799,511	\$ 1,108,484	\$ 4,886,333
Support Services	233,023	269,751	234,865	179,865	55,000	315,225	106,532	29,996	123,697	55,000
Facility Maintenance/Capital (est.\$20,000 per station per year)	100,000	100,000	100,000	60,000	40,000	212,604	20,000	12,104	140,500	40,000
Equipment Replacement (est. \$80,000 per station per year)	400,000	400,000	400,000	240,000	160,000	372,090	80,000	17,870	114,220	160,000
District Mgmt/Other Operating Expenses (est. \$200,000 per station per year)	1,000,000	1,000,000	843,649	600,000	243,649	729,854	200,000	54,479	231,726	243,649
Increase to 3-person w/ALS						639,000	213,000	213,000	213,000	-
			-			-				
Administrative Charge (CAL FIRE 12% / Watsonville 10%)	903,915	979,618	1,114,062	619,929	494,133	273,733	74,751	25,560	173,422	-
<b>Total Cost, including Equipment Replacement, Capital Needs</b>	<b>\$ 9,936,543</b>	<b>\$ 12,275,795</b>	<b>\$ 12,565,117</b>	<b>\$ 6,686,002</b>	<b>\$ 5,879,115</b>	<b>\$ 9,640,225</b>	<b>\$ 997,675</b>	<b>\$ 1,152,520</b>	<b>\$ 2,105,049</b>	<b>\$ 5,384,982</b>
<b>REVENUE/ASSESSMENT ESTIMATES</b>										
1% Property Tax (Alt 3 Watsonville FD = General Fund allocation)	\$ 2,953,362	\$ 2,953,362	\$ 2,953,362	\$ 2,270,459	\$ 682,903	\$ 7,037,040	\$ 504,726	\$ 521,633	\$ 1,244,100	\$ 4,766,581
Other Fees/Revenues	570,295	570,295	570,295	285,295	285,000	727,295	43,295	10,000	232,000	442,000
Subtotal	\$ 3,523,657	\$ 3,523,657	\$ 3,523,657	\$ 2,555,754	\$ 967,903	\$ 7,764,335	\$ 548,021	\$ 531,633	\$ 1,476,100	\$ 5,208,581
<b>Balance to be funded through assessments</b>	<b>\$ 6,412,886</b>	<b>\$ 8,752,138</b>	<b>\$ 9,041,460</b>	<b>\$ 4,130,248</b>	<b>\$ 4,911,212</b>	<b>\$ 1,875,890</b>	<b>\$ 449,654</b>	<b>\$ 620,887</b>	<b>\$ 628,949</b>	<b>\$ 176,401</b>
Estimated No. of Parcels	17,149	17,149	17,149	7,708	9,441	17,149	2,935	625	4,148	9,441
Estimated No. of Assessable Parcels	16,439	16,439	16,439	7,092	9,347	16,439	2,495	569	4,028	9,347
<b>Average Assessment per Assessable Parcel</b>	<b>\$ 390</b>	<b>\$ 532</b>		<b>\$ 582</b>	<b>\$ 525</b>		<b>\$ 180</b>	<b>\$ 1,091</b>	<b>\$ 156</b>	<b>\$ 19</b>
	<b>**</b>	<b>**</b>			<b>**</b>					<b>**</b>
<b>Current Assessments - FY 2006/07 (Single Family Dwelling)</b>										
CSA 48	\$ 111	\$ 111		\$ 111			\$ 111			
CSA 4	\$ 649	\$ 649		\$ 649				\$ 649		
PVFPD	\$ 30	\$ 30		\$ 30					\$ 30	
<b>NOTES:</b>	Costs based on a Schedule A Agreement type with no Amador Plan				Costs reflect WFD budget plus \$390,000 for add'l personnel and capital costs for facilities and equipment		Costs based on 25% of current Schedule A and Amador agmts plus facility/equipment capital estimates	Costs include \$15,370 lease purchase pymts	Costs include \$66,800 for debt service and \$120,000 for Watsonville contract service	Costs reflect WFD budget plus \$390,000 for add'l personnel and capital costs for facilities and equipment
	**For properties within Watsonville, some amount of the assessment would be offset by a reduction in the retirement tax	**For properties within Watsonville, some amount of the assessment would be offset by a reduction in the retirement tax			**For properties within Watsonville, some amount of the assessment would be offset by a reduction in the retirement tax					**For properties within Watsonville, some amount of the assessment would be offset by a reduction in the retirement tax



### 7.4 Fire Protection District Formation

The independent Fire Protection District considered in the alternatives could be achieved through annexation to the PVFPD (with detachment from CSA 48 and dissolution of CSA 4), or creation of an entirely new district. The District would be an independent special district governed by a locally elected Board of Directors. The County's role in providing fire services within the area would be eliminated. Establishing a new Fire Protection District presents a number of challenges. The principal act for Fire Protection Districts is the Fire Protection District Law of 1987 (California Health and Safety Code §13800 et seq.). A proposal to form a new Fire Protection District may be initiated by not less than 25% of the registered voters within the area to be included, or by resolution of a County, City, or District that has jurisdiction in the area to be served. The formation election requires majority approval of the registered voters. A benefit assessment to fund District operations requires a majority vote of the landowners within the District, based on assessed property value. As discussed earlier, the City and County may negotiate the transfer of some property tax to the new district; however it would not be enough to adequately fund service. An overview of the LAFCO process for district formation is included in *Appendix C*.

Any alternative that includes detaching area from CSA 48 could have a potential negative financial impact on County Fire and its service provision to the remaining portion of CSA 48. The FY 2005/06 adjusted net value of CSA 48 parcels within the Study Area was \$883.2 million, 32.8% of the value of all properties within CSA 48.<sup>14</sup> At June 2005, CSA 48 received \$1.54 million in property tax revenue and \$880,797 in special levies. Of those amounts, \$504,726 in property tax and \$288,650 in levies is attributable to parcels in the Study Area.

The City of Watsonville's Blue Ribbon Committee on providing a sustainable revenue base has recommended that a new fire protection district be formed to serve the City. This District would be funded through assessments, reducing demands on the City's General Fund by an estimated \$4.3 million annually. This would be subject to registered voter approval for the district formation and landowner approval of the assessment. Per Government Code §56810, LAFCO could require that a portion of the property tax that was used to fund Watsonville's fire services be directed to the new fire protection district.

### 7.5 Recommendation

Due to escalating costs and funding constraints, local governments will continue to be challenged to maintain current service levels. The fire agencies in South County are dependent on each other for resources when responding to a structural fire and work cooperatively to provide service through automatic aid. With only one ambulance assigned to the south county area, an increase in ALS services provided by fire agencies would provide significant life safety benefits. However, given costs and

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<sup>14</sup> Data provided by County of Santa Cruz Assessor-Recorder's Office, April 2006

financing trends, it is expected that service levels will degrade in the future under the current funding structure.

Based on the analysis completed for this study, either maintaining the current organization of fire agencies or forming a single fire protection district in the entire study area would result in substantially the same operating costs to upgrade service to a uniform service level of a 3-person paramedic company in all stations. There would be some non-monetary operational benefits from forming a single district. Consolidation of fire agencies has been recommended in previous studies but not been implemented for a variety of reasons, including political will, union issues, and funding constraints.

There are significant economic factors associated with consolidating into one fire protection district. Within South County, 91% of fire service costs are labor related. The importance of the union issue should not be understated, as it is very challenging to merge these two labor contracts without significant cost. In order to transition to a single department, seniority, pay scales and benefits must be maintained in order to successfully integrate two programs, which typically results in costs rising to the highest common denominator. In addition, the difference in the shift schedules between CAL FIRE and Watsonville is important; CAL FIRE has 72-hour work weeks including 19 hours of overtime whereas Watsonville has 56-hour work weeks with minimal overtime.

As an interim step, the agencies could enter into a Memorandum of Understanding (MOU) or form a Joint Powers Authority (JPA) similar to that which was used when the Freedom and Salsipuedes FPD's were consolidated. With a formal agreement, the participants could establish shared policies and procedures. An MOU or JPA could facilitate the functional consolidation for response, training, fire prevention, joint purchasing, and management discussed above.

Prior to implementation of any alternative, additional study would be needed to further determine resource needs and allocation, including staffing, equipment and administration. This would include both capital and operational costs. The study should also include further evaluation of funding opportunities and the impact on County Fire. Given the recent changes with detachments from CSA 48 and interest in increasing service levels at three stations, any proposed reorganization that affects County Fire should be done within the context of a master plan for County Fire.

The Santa Cruz County Fire Department Advisory Commission provided its annual report to the County Board of Supervisors on March 20, 2007. The report identified seven goals of the Commission for the upcoming year, including several applicable to the future of fire service in the South County:

- Review and discussion of efforts by the Fire Chiefs Association to use fire resources within the county more effectively;
- Review and discussion of efforts to improve the operational functions within the County Fire Department;
- Review impacts to County Fire from proposed annexations by Fire Protection Districts;

## 7.0 FIRE SERVICE ALTERNATIVES

- Review potential opportunities to improve service delivery through cooperative arrangements with other local agencies; and
- Assess the ability of the County Fire Department to maintain existing service levels given increasing demands on CSA 48 funds.

The County's Office of Emergency Services, the Fire Department Advisory Commission, LAFCO, and the fire agencies recognize the critical interdependence of the fire service providers within Santa Cruz County. With boundary changes and State negotiated labor agreements, the County believes it has reached a tipping point where it is no longer economically feasible for County Fire to continue to provide services without a change in service levels or increased funding. Considering a change with CSA 48 in South County further highlights this issue. LAFCO has authority over boundary changes, and part of the Commission's consideration is economic impacts and changes to the level of service, to both the annexing and detaching areas. CAL FIRE is likely to continue to have a long-term presence in Santa Cruz County due to the State Responsibility Areas; however County Fire may choose to alter its services over time such that structural fire and life safety are provided through a different approach, such as independent fire protection districts.

## **Appendix A**

### **Fire Service Glossary**

<b>TERM</b>	<b>EXPLANATION</b>
Advanced Life Support (ALS)	Highest level of pre-hospital care, normally provided by paramedics (EMT-P).
Amador Plan	A local option contract by which Cal Fire will staff outside of the fire season and respond to structure fires, automobile accidents, medical emergencies, and other emergencies.
Automated External Defibrillation (AED)	Use of a small, portable machine that automatically determines if defibrillation is appropriate, and if so, administers the appropriate defibrillating shock.
Automatic Aid (Auto Aid)	System whereby two or more agencies are automatically dispatched simultaneously to predetermined types of emergencies.
Automatic Fire Sprinkler System	A system designed to activate when exposed to heat, dispensing water to control a fire and prevent it from spreading and reaching flashover.
Basic Life Support (BLS)	The lowest level of pre-hospital care, normally administered by First Responder or EMT-B.
Battalion Chief (BC)	A mid-level management position.
Boundary Drop	A dispatch convention in Santa Cruz County whereby the closest fire company is dispatched to a call even if the call is located outside the company's jurisdictional boundary.
CAL FIRE	As of 2007, the new name of the State Fire Department, formerly known as "CDF."
Cal Star	One of the nonprofit air ambulance companies operating helicopters in the Monterey Bay region.
Call Stacking	Two or more emergency calls dispatched either at the same time or while the engine company is committed to another incident.
CalOSHA	California Division of Occupational Health and Safety Association.
Code 2	Travel protocol for a non-emergency response--observe all traffic signals.
Code 3	Travel protocol for an emergency response--flashing lights, sirens, etc.
Combination Fire Department	A fire department staffed with volunteer and paid firefighters.
Community Emergency Response Team (CERT)	Residents trained for basic disaster preparedness and response.
Company	A group of firefighters who respond together on a piece of apparatus.
County Fire	The Santa Cruz County Fire Department, as operated under contract by Cal Fire.
CPR	Cardiopulmonary resuscitation.
County Service Area 48 (CSA 48)	The funding mechanism used by the County of Santa Cruz to fund County Fire.
County Service Area Law	The California state law governing county service areas, beginning at Section 25210.1 of the Government Code.

Defibrillation	The delivery of a direct current of electrical shock to the chest over the heart. It is used to "shock" the heart back into normal rhythm.
Dispatch Time	The time to relay the emergency message from the first receipt by the communications center to the responding company.
Education Revenue Augmentation Fund (ERAF)	Legislation enacted in the early 1990's that authorized the State to shift property tax revenues from fire districts to public education.
Emergency Medical Care Commission	An advisory body to the Santa Cruz County Board of Supervisors regarding emergency medical care issues.
Emergency Medical Dispatch (EMD)	A system whereby 9-1-1 operators/dispatchers evaluate patient symptoms and help the calling party administer first aid treatment according to predetermined protocols, thus providing care at the earliest possible moment.
Emergency Medical Services (EMS)	The organized system of delivering pre-hospital care.
Emergency Medical Services Integration Authority (EMSIA)	In Santa Cruz County, a joint powers authority of fire agencies that performs planning and quality assurance for pre-hospital emergency medical care.
Emergency Medical Technician (EMT)	A member of the EMS system, trained and certified to provide advanced first aid.
Emergency Medical Technician-Defib (EMT-D)	An EMT who has additional training and is certified to operate an automated external defibrillator (AED).
Engine Company	The staff assigned to a fire engine.
Engineer/Firefighter	A firefighter trained to drive fire engine and operate fire engine pumps, analyze water flow requirements and other hydraulics, and perform traditional firefighting/fire suppression activities.
Extrication	Removal of a patient from an entrapment situation.
Fire Captain	A fire officer who is the highest ranking member of the engine company.
Fire Engine (different from a "fire truck")	A vehicle typically outfitted with ground ladders, water, hose, and a pump.
Fire Flow	The amount the water a distribution system is capable of delivering, usually expressed in gallons per minute.
Fire Marshall	An administrative staff position assigned to fire prevention and fire code enforcement.
Fire Protection District	A special district, formed pursuant to state law, responsible for providing fire and other emergency response services within its district boundaries.
Fire Protection District Law	The state law governing fire protection districts, found beginning at Section 13800 of the California Health and Safety Code.
Fire Safety Council	A voluntary organization in a community that provides leadership and support to mobilize residents to protect their homes, communities, and environment from wildfires.
Fire Suppression Assessment	A special levy collected on the property tax bill. Pursuant to Proposition 218, assessments require a 2/3's vote.
Fire Truck	Usually the largest vehicle in the fleet, it must be outfitted with an aerial ladder or platform to be considered a "fire truck," as opposed to a "fire engine."

Firefighter	Entry-level firefighting position.
First Due	In Santa Cruz County, another name for "boundary drop"--a dispatch convention whereby the closest fire company is dispatched to a call even if the call is located outside the company's jurisdictional boundary.
First Responder	The lowest level of provider in the EMS system trained and certified to provide basic first aid. They are also the first emergency response staff to respond to an emergency call.
Flashover	The point at which everything in the room reaches ignition temperature (1200-1800 degrees) and begins to burn. Once flashover occurs, little, if anything can be saved.
Golden Hour	The first 60 minutes following a traumatic, shock-inducing injury which is the most critical treatment period.
Hazardous Materials	Chemicals that are explosive, flammable, or otherwise capable of causing death or destruction when improperly handled or released. Includes such materials as household bleach, paint, motor oil, etc.
Haz-Mat	Emergency services term used to refer to incidents involving hazardous materials.
Incident Command System (ICS)	A management system designed to maintain order and assure optimal deployment of resources at an emergency scene.
Insurance Service Office (ISO)	Private organization that formulates fire safety ratings based on fire threat and the responsible agency's ability to respond to the threat, from one (excellent) to ten (no fire protection). Most insurance companies use ISO ratings to set insurance premiums.
Local Responsibility Area (LORA)	Lands in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of local jurisdiction.
Memorandum of Understanding (MOU)	An agreement between a fire agency and an employee group addressing pay, working conditions, and related issues.
Mutual Aid	A reciprocal aid agreement between two or more agencies, defining what resources each will provide to the other to respond to certain predetermined types of emergencies.
National Fire Protection Association (NFPA)	An international nonprofit organization whose mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training, and education.
Netcom	The short name for the Santa Cruz Consolidated Emergency Communications Center.
NFPA 1500	National Fire Protection Association standard on occupational health and safety for firefighters.
NFPA 1710	National Fire Protection Association standard for fire suppression operations, emergency medical operations, and specialized operations for the public by career (paid) fire departments.

NFPA 1720	National Fire Protection Association standard for fire suppression operations, emergency medical operations, and specialized operations for the public by volunteer fire departments.
Occupational Health & Safety Administration (OSHA)	The federal agency, under the Department of Labor, that is responsible for employee occupational safety.
Pager	An electronic device used to notify volunteer and off-duty firefighters when there is an emergency call.
Paid Call	Paid Call firefighters respond as needed on a part time basis to all types of emergencies. Paid Call firefighters are utilized in three different ways. "First Responder" call firefighter units are those units that are staffed entirely by paid call firefighters. These firefighters respond to all emergency incidents within their jurisdictional areas and are supported by full-time companies from adjoining jurisdictions.
Paramedic (EMT-P)	Member of the emergency medical services team, trained and certified to provide the highest level of pre-hospital care.
Pre-Alert	A page sent by a dispatcher to firefighter or medic units that there is a call being triaged and coded. Responders utilize the time between the pre-alert and the dispatch to prepare. Paid call responders can utilize this time to begin traveling to the station or the scene.
Proposition 218	The Right to Vote on Taxes Act approved by the voters of California in 1996.
Reflex Time	The period between the time an emergency response unit receives the dispatch from the emergency communications center and the time the unit leaves the station.
Rescue Squad	A fire department vehicle designed to carry equipment related specifically to rescue: scene lighting, cribbing, air bags, and other equipment used for incidents such as extrication of victims in crushed vehicles, structure collapse, ground cave-in, etc.
Residential Firefighter	An unpaid firefighter who is assigned to a regular 6:00 p.m. - 8:00 a.m. shift. (Also known as a "sleeper.")
Response Time	The amount of time between when a call is dispatched and when emergency responders arrive on the scene.
Santa Cruz Consolidated Emergency Communications Center (SCCECC)	The joint powers authority that operates police and fire dispatch to most responders in Santa Cruz County. (Also known as "Netcom.")
Schedule A	A Cal-Fire employee whose salaries and benefits are funded by local government.
Schedule B	A Cal-Fire employee whose salaries and benefits are funded by the State of California.
Sleeper	A volunteer firefighter who stays at a fire station at night in order to provide staffing for emergency responses. A sleeper shift is typically 6 p.m. to 8 a.m.
Sphere of Influence	As adopted by LAFCO, the potential future boundary or service area of a city or district.



State Responsibility Area (SRA)	Areas of the State in which the financial responsibility of preventing and suppressing fires has been determined by the State Board of Forestry pursuant to Public Resources Code 4125 to be primarily the responsibility of the State.
Tender	A vehicle that hauls a large amount of water to use in suppressing a fire.
Transport	The service of transporting a victim via a motor vehicle to a hospital or to a rendezvous with an ambulance.
Travel Time	The time between leaving the station and arriving at the scene.
Truck Company	Staff assigned to a fire truck whose duties include ventilation, forced entry, search, and rescue, etc.
Two-In/Two-Out	The safety rule requiring a minimum of two firefighters to enter a burning structure and a minimum of two firefighters to stand by outside to be available to rescue the firefighters inside the structure.
Type I Engine	Fire engine equipped primarily for urban firefighting.
Type III Engine	Fire engine equipped primarily for wildland firefighting.
Uniform Fire Code	A commonly used fire code that has been adopted by agencies in Santa Cruz County.
Volunteer Fire Department	A fire department that is fully staffed by volunteers.
Volunteer Firefighter	A firefighting professional who receives no pay for services rendered.
Wildland Urban Interface Areas	Areas mapped by the State as a severe fire hazard that include both wildland vegetation and urban or suburban housing densities.

## **Appendix B**

### **Fire Apparatus Categories**

The National Incident Management System (NIMS) has developed categories of fire equipment that is exchanged via mutual aid, by capacity and/or capability. When evaluating resources, this methodology provides a means to measure adequacy and to reallocate equipment if necessary. The classifications shown below apply to the apparatus within the Study Area.

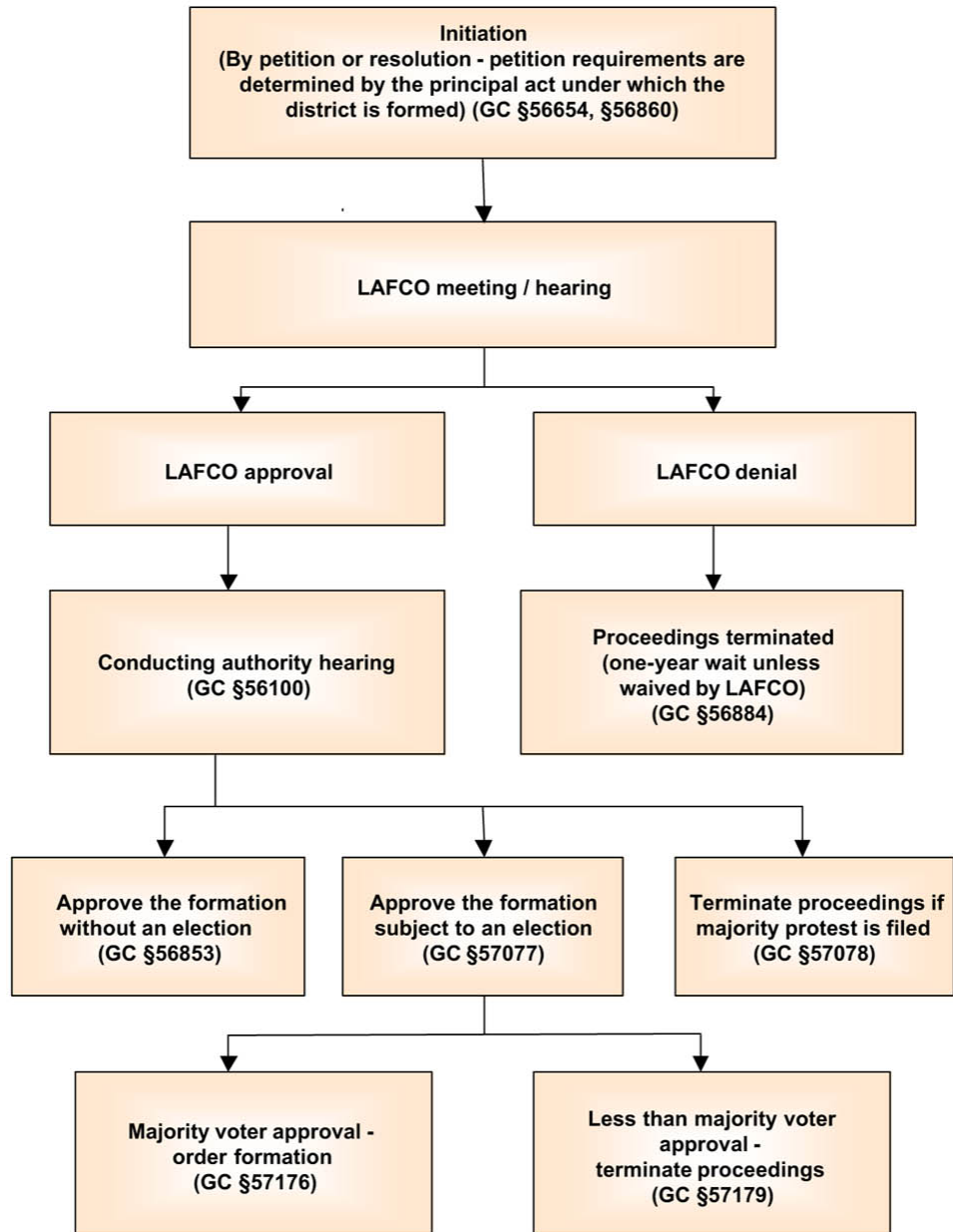
Equipment Resource Types				
Minimum Capabilities <sup>15</sup>				
Component	Metric	Type I	Type II	Type III
<i>Resource: Fire Engine (Pumper)</i>				
Equipment	Pump Capacity	1,000 gpm	500 gpm	120 gpm
Equipment	Tank Capacity	400 gal	400 gal	500 gal
Equipment	Hose, 2.5 inch	1,200 ft	1,100 ft	
Equipment	Hose 1.5 inch	400 ft	500 ft	1000 ft
Equipment	Hose 1 inch	200 ft	300 ft	800 ft
Personnel	Number	4	3	3
<i>Resource: Fire Truck – Aerial</i>				
Equipment	Aerial	75 ft	50 ft	
Equipment	Elevated Stream	500 gpm	500 gpm	
Equipment	Ground Ladders	115 ft	115 ft	
Personnel	Number	4	4	
<i>Resource: Water Tender</i>				
Equipment	2,000 gal	2,000 gal	1,000 gal	1,000 gal
Equipment	300 gpm	300 gpm	120 gpm	50 gpm

<sup>15</sup> U.S. Department of Homeland Security. Federal Emergency Management Agency. “Typed Resource Definitions – Fire and Hazardous Materials Resources” FEMA 508-4. July 2005

## **Appendix C**

### **District Formation Process**

## District Formation



Revision Date: 12/18/2002