Stanislaus LAFCO

Countywide Fire Services

Municipal Service Review
Final Report

March 2007

Emergency Services Consulting inc.

Stanislaus LAFCO

Countywide Fire Services Municipal Service Review

Prepared by:
Ronny J Coleman
Robert Miller
Paul Rottenberg
Robert Marcucci
Alan Wright
Robert McNally

25200 SW Parkway Ave., Suite 3
Wilsonville, OR 97070
503-570-7778
800-757-3724
fax: 503-570-0522
www.esci.us

March 2007

Countywide Fire Services Municipal Service Review

Chair: Barbara Rouse	Public Member
Vice-Chair: John Lazar	City Member
Pat Kuhn	City Member
Thomas Mayfield	County Member
William O'Brien	County Member
Brad Hawn	Alternate City Member
Ray Simon	Alternate County Member
Tia Saletta	Alternate Public Member

Staff

Marjorie Blom	Executive Director
Debbie Hamilton	LAFCO Clerk
Dean Wright	LAFCO Counsel
Fran-Sutton-Berardi	Former Executive Officer
Elizabeth Contreras	Assistant Executive Director

This page intentionally left blank

Table of Contents

Table of Figures

This page intentionally left blank

Executive Summary

Project Initiation

In July of 2005, the Stanislaus Local Agency Formation Commission (LAFCO) entered into an agreement with Emergency Services Consulting inc. (ESCi) to complete a Countywide Municipal Service Review (MSR) of the county's fire protection services. The purpose of this MSR is to comply with the service review requirements set forth in the California Government Code Section 56430.

Scope of Work

ESCi agreed to perform the following tasks:

1. Develop a project action plan meeting the criteria of the agreement.
2. Conduct an initial stakeholder's entrance conference.
3. Collect and evaluate data on county fire service systems in accordance with the 20-point criteria outlined in the agreement.
4. Conduct a complete analysis of fire protection within Stanislaus County (County) based on Objectives A – I of the agreement.
5. Attend and facilitate public hearings and meetings as set forth in the agreement.
6. Deliver the drafts, copies, and final report to the LAFCO Commission in accordance with the agreement.

With delivery of this report, ESCi is confirming that the agreed services are completed, or will be completed, in accordance with the contract.

Acknowledgements

ESCi acknowledges and appreciates the cooperation and assistance provided by fire department members, LAFCO Staff, county employees, commission members, and residents of the County over the past year in our efforts to gather and review information to complete this project.

We recognize that information, by its very nature, is often incomplete and that active and dynamic fire agencies tend to undergo a process of continuous change. However, ESCi has made every effort to compile data that is accurate and comprehensive and to ensure that our analysis is based on objective findings. ESCi's evaluation methodology included the process of comparing Stanislaus County fire data with state and nationally recognized standards and professional practices.

Contents of the Report

A brief summary of the report chapters is provided to give an overview of the project.

Chapter 1 - Introduction

This chapter includes the history of LAFCOs and their responsibilities. It outlines the scope and content of the report and suggests how this information may be used for evaluating fire protection services. A listing of all fire protection agencies included in this report has been included.

Chapter 2 - Overview of Fire and Emergency Services in Stanislaus County
This chapter identifies the six municipal fire departments and the 14 special districts that provide fire protection services. Background information is provided on the development of fire protection agencies within the area.

Considerable detail is given to current, ongoing cooperative efforts utilized to share resources and provide a higher level of service. Finally, ESCi has identified key economic considerations and community expectations.

Chapter 3 - Description of Fire Protection Agencies
This chapter contains a brief description of each fire agency within Stanislaus County providing jurisdictional boundaries, area served, revenue base, types of services provided, staffing levels, and workload.

Chapter 4 - Growth and Development
In this chapter, ESCi identifies critical growth factors that impact the delivery of fire protection. Each fire district and city area is reviewed based on current population and density.

Chapter 5 - Government Funding
This chapter provides background information about how funding for counties and special districts has evolved over the years. The impact of Propositions 13, 172, and 218 are addressed. The loss of county revenues due to the Educational Revenue Augmentation Funds (ERAF) is identified. All available revenue sources for fire agencies are identified and explained: limitations on such funding are addressed.

Chapter 6 - Principles of Fire Protection Service Delivery
In this chapter, ESCi defines the guiding principles used in establishing fire service delivery. These include the concepts of Standard of Cover, Level of Effort, Level of Service, Effective Response Force, Concentration, and Distribution. Staffing configurations are reviewed along with an explanation of factors dealing with alarm response times. Finally, this section addresses the impact of the insurance rating bureau (or Insurance Services Office - ISO) factors and the impact of federal and state laws on fire service delivery.

Chapter 7 - Current Delivery Systems: Issues, Analysis, Options, and Alternatives
This chapter identifies current issues facing the Stanislaus County fire protection delivery system. A major goal in this review is to evaluate infrastructure needs and deficiencies of jurisdictions providing emergency services throughout the County. A complete review of important considerations is identified.

Chapter 8 - Service Review Determinations and Recommendations
In this concluding chapter, ESCi addresses each of the nine categories LAFCO is required to review by state law. These include infrastructure needs and deficiencies, growth and population projections, financial constraints and opportunities, cost avoidance opportunities, opportunities for rate restructuring, opportunities for shared facilities and resources, government structure options, and evaluation of management efficiencies.(GCS 56430)

This chapter provides both a broad based look at the overall system and a table of the specific department's determinations

In the concluding section, ESCi provides a series of recommendations and options for the Local Agency Formation Commission to consider. These recommendations look toward short- and long-range implications for the enhancement of fire service delivery throughout Stanislaus County.

Summary

To those fire agencies in Stanislaus County much of what is contained in this report is not going to be new information. The challenges faced by the fire service have been accruing for many years. Without specifically naming any one agency, this report presents a theme that needs to be considered. That theme is the essence of why Municipal Service Reviews are developed in the first place. There is a need for concerted, jointly supported effort for these fire agencies to work together to address current and future challenges.

The challenges that face the fire service can be grouped into three different perspectives. They are financial, operational, and political. This was identified by one of the letters ESCi received from a department involved in this process. What is important, in the context of this report, is to recognize that these factors are not independent of each other. They are linked; one is affected by the other. Service levels are a function of having sufficient funds to provide services. The use of resources by fire agencies along with many misunderstandings about how a fire agency performs, especially with respect to response times and staffing configurations, often results in political impacts that effect voter support for a specific course of action.

There have been difficult times in the past for many of the fire agencies. There are going to be difficult times in the future regarding both financial and governance issues. This MSR provides a baseline for those discussions but does not presume to provide a simple solution. Rather, it focuses on the need to increased cooperation, coordination, and commitment of the various entities to craft a solution that meets the fire service's needs in the future.

This page intentionally left blank

Figure 1: Major Recommendations

Recommendations Short Term	***Priority A/B/C/D***	***Time Frame for Implementation***	***Anticipated Benefits***	***Responsible Position***
Recommendation Have each agency officially adopt levels of service for– rural, suburban, and urban areas	A	As quickly as possible	Clarification of service level	Each fire agency
Recommendation Improve the ability to communicate over time and distance	B	Within 12 months	Improve upon level of awareness	Fire Chiefs Association
Recommendation Improve upon volunteer recruitment, retention, and recognition	B	Within 12 months	Improve upon conditions	County government & Fire Chiefs Association
Recommendation Provide more guidance for managing volunteer fire departments to the leadership of these organizations	A	Within 12 months	Improve upon conditions	County government
Recommendation Support the development of a universal countywide development fee to create a future infrastructure for fire stations and equipment	A	In accordance with procedures	Improved service level	All parties
Recommendation Harden stations to allow them to function better in disaster scenarios by installing emergency generators where none exist	C	Within 24 months	Improved ability to perform in disasters	County government
Recommendation Improve public awareness of the capabilities of the fire services	C	Over the next two years	Improved public support	Fire Chiefs Association

Recommendations Long-Term	***Priority A/B/C/D***	***Time Frame for Implementation***	***Anticipated Benefits***	***Responsible Position***
Recommendation Update Spheres of Influence based on existing policy and procedure, with consideration on the response polygon that is provided by each agency	A	Over next two years	Improved efficiency	LAFCO
Recommendation Re-align borders and consider district consolidations of some entities based upon level of service and response time criterion	A	Over next two years	Improved efficiency	Individual agencies
Recommendation Create a sub-committee of the Joint Powers Authority (JPA) to create a viable cost sharing agreement for consideration during annexation and detachment processes	A	Over the next year	Improved relationships and increased cooperation	JPA Board of Directors
Recommendation Continue to support the roles of the JPA among all fire agencies; county, cities, and districts to examine common issues and implement planning efforts for future options to be exercised.	A	Immediately	Economies of Scale and better utilization of resources	JPA Board of Directors
Recommendation Plan for major modifications to dispatching system. Consider allowing the JPA to operate a fire-based system	A	Over next two years	Retention of county-wide communications system	JPA Board of Directors
Recommendation Develop a countywide fire and emergency services master plan	A	Over the next five years	Improved clarity of purpose	County Fire Chiefs Association

Final Comments

Throughout this Municipal Service Review process, ESCi has identified fire service delivery factors that are working well for the county and some that are major deficiencies.

In preparing this report, two specific quotes came to mind. The first was by Benjamin Franklin. He stated, "We will all hang together – or we will all hang separately." That is in contrast to modern management guru Steven Covey's admonition, "We always start with the end in mind." Therefore, it should be noted ESCi's primary emphasis in this report is *on working more closely together, to achieve a common goal - instead of becoming more divided*.

The results of this review can be summarized into two categories - making choices and experiencing consequences.

In conducting research for this project, ESCi read the *Project 94 Report*. This was an effort to deal with a broad range of topics, not the least of which was consolidation. Much of what was discussed in that report is being re-reviewed in this document. The feeling of the group was expressed in one statement,". . . most task group members were strong to very strong toward not having a fire agency associated in any way directly with the county government as whole." That statement is now 12 years old and the problems of continuing to sustain fire protection delivery services is still a topic of discussion.

The creation of the joint power authority (JPA) is an action that can result in any number of changes over the next decade that could resolve some to the issues being expressed. However, the re-organization of fire protection services cannot be mandated. It has to come from reasoned examination of the consequences of the decisions to be made. The MSR process is not about mandating either; it points out that failure to take action will result in the continued evolution of issues and concerns. The consequences of failing to act will likely be measured by the intensity of the system failures that will occur. Avoidance of these system failures is likely to be based more on the level of cooperation and coordination of agencies than the dominance of any one of them.

This page intentionally left blank

Chapter 1 – Introduction

This chapter describes the background of LAFCO, the project scope of work, report design, and methodologies utilized in its preparation.

History of LAFCO

The end of World War II saw California experiencing a tremendous population increase, which resulted in the sporadic formation of cities and special service districts. During that period, California experienced a dramatic increase in population and economic development. These changes, together with increased personal mobility related to the popularity of the automobile, created growing demands for housing, public services, and public infrastructure, often in suburban areas.

Local Agency Formation Commissions (or LAFCOs) are a method unique to California in dealing with that population growth and public service conditions that have become increasingly apparent over the last few decades.

Before LAFCOs Were Created

Prior to 1964, decisions to expand city and special district boundaries were left to the annexing agency and the affected landowner. There was no external or third party oversight.

As a result, and due to the desires of some communities to capture their perceived share of new growth, annexation *wars* evolved between some agencies, with some expanding their area to be in a better position to annex additional territory. The creation of new cities or special districts also occurred without any third party review.

A general lack of coordination led to a multitude of overlapping, inefficient jurisdictional and service boundaries and premature conversion of much of the State's productive agricultural and open-space lands. The result was *urban sprawl*. The results of land speculation and development boom became evident as more of California's agricultural land was converted to urban use. Using various small units of local government, this premature and unplanned development created inefficient and expensive systems of delivering public services.

LAFCO
Local Agency Formation Commission

Governor Edmund G. Brown, Sr., responded to this problem in 1958 by appointing the Commission on Metropolitan Area Problems. The commission's charge was to study and make recommendations on the "misuse of land resources" and the growing complexity of overlapping local governmental jurisdictions. The commission's recommendations on local governmental reorganization were introduced in the Legislature in 1963, resulting in the creation of Local Agency Formation Commissions (LAFCOs) operating in each county except San Francisco County.

LAFCO Regulation of Boundary Changes

Beginning in 1964, local boundary changes required approval of this new commission with countywide regulatory authority. Its broad goals and objectives included discouraging urban sprawl, encouraging the orderly formation and development of local governments based on local circumstances, promoting efficient and economical local governments and, where appropriate, guiding development away from agricultural and open space resources.

LAFCO regulates by approving or denying city and special district boundary changes and the extension of public services. It is empowered to undertake studies of local agencies and to initiate updates to the spheres of influence. Typically, applications to LAFCO originate with affected landowners and/or developers and cities or districts seeking to annex territory.

The commission is an independent agency, exercising a direct grant of legislative authority from the state government. Its decisions, while subject to judicial review, are not *appeal-able* to the county or any other local or statewide administrative body.

Stanislaus LAFCO

The Stanislaus LAFCO consists of five regular members: two members appointed by the Board of Supervisors from its own membership, two members of city councils appointed by the mayors of the nine cities in the County, and one public member appointed by the commissioners.

There are also three alternates – one in each category of membership – who vote in the absence of a regular member. Commissioners are appointed to four-year terms.

The day–to-day business of the commission, including analysis and recommendations about proposals, is the responsibility of the Executive Officer. The commission has legal counsel for assistance.

Objectives

(1) To encourage the orderly formation of local governmental agencies

LAFCO reviews proposals for the formation of new local governmental agencies and changes of organizational structure in existing agencies. Agency boundaries are often unrelated to one another and sometimes overlap at random. This complexity of local government can lead to higher service costs to the taxpayer and general confusion with regard to service jurisdictions.

(2) To preserve agricultural lands

LAFCO must consider the effect that any proposal will produce on existing agricultural lands. By guiding development toward vacant urban land and away from agricultural preserves, LAFCO assists with the preservation of our valuable agricultural resources.

(3) To discourage urban sprawl

Urban sprawl can best be described as irregular and disorganized growth occurring without apparent design or plan. This pattern of development is characterized by the inefficient delivery of important urban services (fire, police, sewer, drainage, and water) and the unnecessary loss of agricultural land. By discouraging sprawl, LAFCO discourages the misuse of land resources and promotes a more efficient system of local governmental agencies.

Legislative History

Through a series of legislative amendments over the past 30 years, LAFCO has become responsible for coordinating logical and timely changes in the local governmental structure, including annexations and detachments of territory, incorporations of cities, formations of special districts, consolidations, mergers and dissolutions; and to regulate the extension of services by cities and special districts outside of their boundaries.

A brief timeline of significant legislation and litigation that has shaped LAFCO's current powers and duties is useful to understanding the need for Municipal Service Reviews.

1964 LAFCO is created as a regulatory agency in each county to regulate cities and districts, promote orderly boundaries, and discourage urban sprawl.

1971 LAFCO becomes a planning agency when directed by the Legislature to prepare and adopt a *sphere of influence* of each city and special district.

1976 Due to a legal challenge to a city annexation, the courts declared LAFCOs are subject to the California Environmental Quality Act (CEQA), and annexations are *projects* under CEQA.

1983 Responding to a lawsuit involving a special district annexation, the Legislature creates firm time limits within which LAFCOs must adopt spheres of influence, or lose the ability to approve annexations.

1985 LAFCO and boundary change statutes are combined into one volume, the Cortese/Knox Local Government Reorganization Act.

1993 Significant reforms include allowing LAFCOs to initiate special district reorganizations and waive certain conducting authority protest hearings.

2000 LAFCO is required to (1) review and update spheres a least every five years and (2) prepare Municipal Service Reviews when updating spheres.

Legislative Requirement to Prepare Municipal Service Reviews (MSR)

Two separate studies recommended that LAFCOs review local agencies.

Little Hoover Commission – In May 2000, the Little Hoover Commission report, *Special Districts: Relics of the Past or Resources for the Future?,* focused on governance and financial problems among independent special districts and barriers to LAFCO's pursuit of district consolidation and dissolution.

The report focused on the need for oversight of special districts, noting "…the underlying patchwork of special district governments has become unnecessarily redundant, inefficient, and unaccountable." It raised concerns about a lack of visibility and accountability among some independent special districts and indicated many special districts have excessive reserve funds and questionable property tax revenue. The report expressed concern about the lack of financial oversight of the districts.

The report called on the Legislature to increase the oversight of special districts by mandating that LAFCOs identify service duplications and that LAFCOs study reorganization alternatives when service duplications are identified, when a district appears insolvent, when district reserves are excessive, when rate inequities surface, when a district's mission changes, when a new city incorporates, and when service levels are unsatisfactory. To accomplish this, the report recommended that the state strengthen the independence and funding of LAFCOs, require districts to report to their respective LAFCO, and require LAFCOs to study service duplications.

Commission on Local Governance – The second report, *Growth Within Bounds: Planning California Governance for the 21st Century*, had its genesis in legislation that created the Commission on Local Governance for the 21st Century in 1997. It was established to review current statutes on the policies, criteria, procedures, and precedents for city, county, and special district boundary changes.

The Commission released its final report in January 2000; that report examined the way that local government is organized and operates and established a vision of how the state will grow by "…making better use of the often invisible LAFCOs in each county."

The report points to the expectations that California's population will double over the first four decades of the 21st century, and raises concern that our government institutions were designed when our population was much smaller and our society was less complex. The report warns that, without a strategy, open spaces will be swallowed up, expensive freeway extensions will be needed, job centers will become farther removed from housing, and this will lead to long commutes, increased pollution, and a more stressful lifestyle. The report suggests local governments face unprecedented challenges in their ability to finance service delivery since voters cut property tax revenues in 1978 and the legislature shifted property tax revenues from local government to the schools in 1993.

The report recommended encouraging effective, efficient, and easily understandable government; and suggested that LAFCOs cannot achieve their fundamental purposes without a comprehensive knowledge of the services available within its county, the current efficiency of providing service within various areas of the county, future needs for each service, and expansion capacity of each service provider. Further, the report asserted that many LAFCOs lack such knowledge and should be required to conduct such reviews to ensure that municipal services are logically extended to meet California's future growth and development.

The report's recommendations were made part of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. The law requires LAFCO to periodically update spheres of influence and review municipal services in updating the spheres.

Municipal Service Reviews (MSRs) are intended to provide LAFCO and the public with a comprehensive study of existing and future public service conditions and evaluate

organizational options to accommodate growth, prevent urban sprawl, and ensure that critical services are provided efficiently and cost-effectively.

Government Code Section 56430, which became effective on January 1, 2001, requires LAFCO to review municipal services provided in geographic areas appropriate to the service or services to be reviewed, and prepare a written statement of determinations with respect to each of the following.

1. Infrastructure needs or deficiencies;
2. Growth and population projections for the affected area;
3. Financing constraints and opportunities;
4. Cost avoidance opportunities;
5. Opportunities for rate restructuring;
6. Opportunities for shared facilities;
7. Government structure options, including advantages and disadvantages of consolidation or reorganization of service providers;
8. Evaluation of management efficiencies; and
9. Local accountability and governance.

MSRs do not require LAFCO to initiate changes based on service review findings, only to make determinations regarding the provision of public services. LAFCO, local agencies, and the public may subsequently use the determinations to analyze prospective changes of organization or reorganization, or to establish or amend spheres of influences.

MSRs are not *projects* under the provisions of the California Environmental Quality Act; they are feasibility or planning studies for possible future LAFCO action.

The outcome of conducting an MSR may be the implementation of a change of organization or reorganization. Either LAFCO, or a local agency, that submits a proposal may be the lead agency for compliance with CEQA and conduct an appropriate environmental review.

Sphere of Influence Update Guidelines

Since 1971, LAFCO has been obligated to develop and adopt a sphere of influence for each city and special district within the county. As a function of its duties and responsibilities, LAFCO is required to periodically review and update spheres of influence. Government Code Section 56425 requires the Commission to review and update, as necessary, all spheres of influence for cities and districts at least once every five years. The statute states "The Commission shall develop and determine the sphere of influence of each local governmental agency within the county and enact policies designed to promote the logical and orderly development of areas within the sphere" (Government Code Section 56425).

Section 56076 defines a sphere of influence as:

> *A plan for the probable physical boundaries and service area of a local agency, as determined by the commission*.

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires LAFCO, for the first time on or before January 1, 2008, and every five years thereafter, to "review and

update as necessary the adopted sphere of influence. (Amended January 1, 2006, Government Code Section 56425 [g].)

The initial review and subsequent five-year sphere of influence review shall be conducted in accordance with the requirements of the Cortese-Knox-Hertzberg Act and LAFCO-adopted policies and procedures, pursuant to Government Code Section 56430. The Act further requires that a municipal services review be conducted prior to or in conjunction with the update of a sphere of influence.

The purpose of a sphere of influence is to encourage the ". . . logical and orderly development and coordination of local government agencies so as to advantageously provide for the present and future needs of the county and its communities." A sphere of influence serves a similar function in LAFCO determinations as general plans do for cities and counties. Consistency with the adopted sphere of influence is critical, and a change to the sphere requires careful review. The Commission emphasizes that a sphere of influence is a planning tool and the establishment of a sphere of influence or the inclusion of territory within a sphere of influence of an existing governmental entity does not automatically mean that the area is being proposed for annexation or development.

Policy Guidelines for Spheres of Influence

The sphere of influence policies adopted by the Stanislaus LAFCO provide direction on updating an agency's sphere of influence (SOI). The following policies apply to fire districts:

(1) Zero Sphere of Influence: LAFCO may adopt a Zero SOI encompassing no territory for an agency. This occurs when LAFCO determines that the public service functions of the agency are either non-existent, no longer needed, or should be reallocated to some other agency of government. The local agency which has been assigned a zero sphere of influence should ultimately be dissolved.

(2) Assignment of an SOI: Where an area can be assigned to the SOI of more than one agency providing a particular needed service, the following hierarchy shall apply dependent upon ability to serve:

A. Inclusion within a city sphere of influence
B. Inclusion within a multi-purpose district sphere of influence
C. Inclusion within a single-purpose district sphere of influence

In deciding which of two or more equally ranked agencies shall include an area within its SOI, LAFCO shall consider each agency's service and financial capabilities, social and economic interdependencies, topographic factors, and the effect the eventual service extension will have on adjacent agencies.

(3) Exclusion of Territory: Under certain circumstances, an SOI may exclude portions of the existing boundaries of a city or district. The Commission encourages re-organization and special studies in this situation to make a final determination of which city or district should serve the excluded territory.

(4) Limited Service SOI: Territory proposed for inclusion within the SOI of a multi-service provider agency, which may be contained within the boundary of another limited purpose

district, may be included with the SOI of the multi-agency service agency and designated as Limited Service SOI area. Territory designated as Limited Service SOI shall not be considered for annexation to the multi-service agency. Territory may be included in a Limited Service SOI upon completion of a service review when any of the following determinations are made by the Commission:

A. The existing multi-service agency is the most orderly and logical provider of the service(s).
B. Existing or future services authorized to be provided by the limited purpose district are determined to be inadequate, not cost effective, or inefficient.
C. Inclusion of the territory in the Limited Service SOI is in the best interests of the residents, the local government organization, and structure for the area.
D. An agreement between the agencies exists for the provision of the limited service by the multi-service agency.

Service reviews are intended as an information tool to help LAFCO, the public, and other agencies better understand the public service structure. The service review will serve as an important resource to LAFCO in meeting its goals of preventing urban sprawl, protecting open space and agricultural lands, and ensuring efficient service provision. LAFCOs are not required to initiate boundary changes based on service review findings, only to make determinations regarding the provision of services.

Guidelines for Annexations

Cities are required to follow strict guidelines for annexations. Cities have specific plans and general plans that indicate a direction of growth and development. These regulations require that when these plans are updated, there is notification to affected parties, which includes adjacent fire districts. Fire districts are to be advised of a city's sphere of influence. Fire districts are notified of actions to be taken by cities, and they need to be prepared to respond with specific data that represents their position. The concept of standards of cover, which is discussed later in this report, will provide insight into the relationship of response polygons and the influence of automatic aid on how these decisions impact fire department operations.

Agencies to be Reviewed

This service review has been conducted on a countywide basis and includes all of the agencies that provide fire protection service in Stanislaus County. It focuses on 14 special districts that provide fire protection services as well as on the municipal fire departments of six cities. Consequently, this review includes a total of 20 agencies (see Figure 22).

Figure 2: Agencies Included in Service Review

Special Districts	Cities
Burbank-Paradise Fire Protection District	Ceres Fire Department
Ceres Fire Protection District	Modesto Fire Department
Denair Fire Protection District	Newman Fire Department
Hughson Fire Protection District	Oakdale Fire Department
Industrial Fire Protection District	Patterson Fire Department
Keyes Fire Protection District	Turlock Fire Department
Mountain View Fire Protection District	
Oakdale Rural Fire Protection District	
Salida Fire Protection District	
Stanislaus Consolidated Fire Protection District	
Turlock Rural Fire Protection District	
Westport Fire Protection District	
West Stanislaus Fire Protection District	
Woodland Ave. Fire Protection District	

The report includes information on the California Department of Forestry and Fire Protection to the extent necessary to establish relationships, quantify services, designate or map service locations/facilities, and provide a complete overview of fire protection services in the County. LAFCO has no authority over this agency.

Contents of this Report

This review provides an overview of the overall fire service provision structure in the County along with profiles of all the districts/departments that provide fire protection service. It identifies issues related to fire service provision, proposes various options for addressing these issues, and provides a brief analysis of the alternatives. Lastly, the report includes the required service review determinations for each of the 14 rural fire districts.

How the Report will be Used

A. To Update Spheres of Influence (SOI)

The information collected through the service review will be used by LAFCO specifically to update the SOIs of individual agencies (cities and special districts), including expansions or reductions in the SOI boundaries or creation of new SOIs. This report will be used to update the SOIs of the 14 rural fire districts. With regard to the cities, LAFCO will use this information along with the information gathered in subsequent service reviews to update the SOI of each city.

B. To Initiate or Consider Jurisdictional Boundary Changes

The service review contains a discussion of various alternative government structures for efficient service provision. LAFCO is **NOT** required to initiate any boundary changes based on service reviews. However, LAFCO, other local agencies (including cities, special districts, and the county), or the public may subsequently use the service reviews, together with additional research and analysis (where necessary) to pursue changes in jurisdictional boundaries. Government Code Section 56375(a) gives LAFCO the power to initiate certain types of boundary changes consistent with a service review and sphere of influence study. These boundary changes include:

- Consolidation of districts (joining two or more districts into a single new successor district)
- Dissolution (termination of the existence of a district and its corporate powers)
- Merger (termination of the existence of a district by the merger of that district with a city)
- Establishment of a subsidiary district (where the city council is designated as the board of directors of the district)
- A reorganization that includes any of the above

Any local agency (cities, special districts, or the county) which contains or would contain or whose sphere of influence contains any territory within the proposal to be reviewed by LAFCO, may apply to LAFCO for a boundary change with a resolution adopted by its legislative body. Registered voters within the proposal area or property owners owning property within the proposal area may petition LAFCO for a boundary change. The following boundary changes, in addition to those listed above, may be proposed to LAFCO:

- Formation of a new district/city
- Annexation or detachment to/from a city/district
- A reorganization that includes any of the above

C. To Consider Other Types of LAFCO Applications

LAFCO may also use the information presented in the service review to review future proposals for extensions of services beyond an agency's jurisdictional boundaries.

D. Other Uses

Other entities and the public may use this report as a foundation for further studies and analysis of issues relating to fire protection services in this County.

Service Review Process

LAFCO retained the consulting services of Emergency Services Consulting inc. (ESCi) to assist staff in preparing a countywide fire services Municipal Service Review. ESCi collected information from all the agencies/departments that provide fire services in Stanislaus County. On-site interviews were conducted with officers and/or members of almost every agency. The fire chief was not always available for the on-site interviews. The purpose of these on-site visits was to validate information provided in a mailed survey questionnaire and develop an

understanding of each agency's organization of emergency services, costs, staffing, and programs, as well as any issues potentially impacting this study.

The on-site interviews were conducted over a period of six days, encompassing two separate weekends. All of the agencies evaluated in this MSR were contacted, and most of them were physically visited. All of the documents provided in response to the data collection questionnaire were reviewed.

A brief description of each agency has been provided in Chapter 3. Photographs were taken of each station so that they could be easily identified later. GPS coordinates or addresses were documented for each of these facilities.

The consultant team was able to arrange an on-site interview or to conduct a telephone interview with representatives from all districts. Data collection from the questionnaire focused on documenting key aspects of fire service organization, including staffing, staffing policies, budgets, salaries and fringe benefits, emergency medical service delivery, fire prevention programs, training, apparatus and facilities, and call for service workloads.

A profile for each of the agencies was created using the collected information. These profiles were sent to the agencies for review and comment and have been incorporated into the final profiles included in this report. Periodic updates on the service review process by the consultant have been provided to LAFCO and the Fire Chiefs' Association.

A small technical advisory committee met with ESCi several times to discuss and review input. This group provided liaison with the Fire Chiefs' Association and LAFCO during the process.

Summary

Most of the fire districts within Stanislaus County have *diminishing spheres of influence.* In other words, territory is detached from the fire district upon annexation to a city which provides its own municipal fire services. The primary reason for detachment is to eliminate the duplication of fire service and reduce the number of resources required by service providers to achieve efficiency and effectiveness.

Chapter 2 – Overview of Fire and Emergency Services in Stanislaus County

Overview

The fire services system in Stanislaus County, as is the case in most counties in California, is a complex mix of municipal agencies, fire protection districts, and various forms of State fire protection. The following points provided a general overview of the fire protection system in Stanislaus County:

- There are six municipal fire departments in the County. Municipal fire departments are funded through general fund revenues. They include:

  - Ceres
  - Modesto
  - Newman
  - Oakdale
  - Patterson
  - Turlock

- In addition, there are 14 special districts that provide fire protection services in the County. They are funded from their own tax bases. They include:

  - Burbank-Paradise Fire Protection District
  - Ceres Fire Protection District
  - Denair Fire Protection District
  - Hughson Fire Protection District
  - Industrial Fire Protection District
  - Keyes Fire Protection District
  - Mountain View Fire Protection District
  - Oakdale Rural Fire Protection District
  - Salida Fire Protection District
  - Stanislaus Consolidated Fire Protection District
  - Turlock Rural Fire Protection District
  - Westport Fire Protection District
  - West Stanislaus Fire Protection District
  - Woodland Fire Protection District

- Two of the above districts have their fire service provided entirely by another service provider through a contract.

Jurisdiction	Service Provider
Industrial Fire Protection District	Cities of Modesto and Ceres
Ceres Fire Protection District	City of Ceres

- As noted above, the California Department of Forestry (CDF) provides service within State Responsibility Areas (SRAs), predominantly wildland and open space areas within

the County, and is also part of countywide mutual aid, with specific automatic aid agreements.

- In addition to the individual agency capabilities, there are several systems or subsystems in place within the County that support the operations of the fire delivery system and/or provide enhanced levels of service. They include the following:

  - A countywide mutual aid agreement in which any agency can request general or specialized services from another agency in the County
  - Agency automatic aid agreements in which neighboring jurisdictions drop their boundaries and practice *closest unit response*
  - Emergency communications – through the Stanislaus Regional 9-1-1 Center
  - Emergency medical services are mostly provided through an integrated system utilizing both public and private resources. Most fire agencies provide basic life support (BLS) response. Advanced life support (ALS) transport is provided by private vendors. Oak Valley Hospital District, Del Puerto Health Care District, and Westside Ambulance provide ALS level of service and are governmental agencies

Background on Providing Fire and Emergency Services by Agencies

During the past 30 years, nationwide fire protection has undergone a process of remarkable change initiated by the publication of *America Burning* in 1974. This report by the National Commission on Fire Prevention and Control raised the consciousness of the American public about the level of fire protection in the United States. About the same time, fire departments across the nation were beginning to assume a greater role in the protection of citizens from many more hazards than in the past – quickly expanding from the basic role of fire suppression, to a greater emphasis on emergency medical services, hazardous materials, and subsequently, on to fields of highly specialized rescue and being the organization of choice for deployment during a major natural disaster.

The process of change continues today. However, identifying the problems is far easier than providing solutions to them. For example, while the number of fires has decreased in the last decade, the number of firefighters that die in the line of duty has not been reduced. And the workload of fire departments has not diminished -- it has grown.

While many of the goals of *America Burning* and the National Fire Prevention Control Act of 1974 have been achieved, the basic responsibility of providing fire protection in the community is still mostly a function of local governments. Urban and suburban expansion has reached unprecedented levels across America, yet the revenues that provide funding of public services has increasingly become more complicated and convoluted. In the last 20 years, there have been a multitude of tax limitation laws, tracing their roots to California's Proposition 13, that have resulted in funding for fire protection being a lower priority than many of the other services in the community.

Well before *America Burning* and the California Tax Revolt, the private sector recognized the need to have an economic platform to conduct business; and yet sometimes mergers, collaborations, and partnerships were a means of choice to increase efficiency. For many years, critics have advised the fire service to *reinvent itself* and try to administer its programs more *like*

a business. However, many elected policy makers of any level of government have been reluctant to dabble with the organizational structure of a fire department because of the perceived political consequence associated with any mismanagement in that area.

Consequently, the process of change, which was once relatively uncommon in the fire protection industry, has become more wide spread. As fire departments react to internal forces, they are required to maximize their resources and, simultaneously, deal with external sources (i.e., expanding the scope of services, increase populations, limited capital investment, and increased demand for services). More and more local fire organizations must find ways of joining in partnerships with other jurisdictions to eliminate duplication and to focus diminishing resources on an increasing problem. Such strategic alliances have *NOT* been given consideration in the more rural areas of the State. As economic issues begin to become more complex, being able to react to change is often linked to adequate funding.

Strategic partnerships of emergency service organizations become an area of concern by many policy makers because it is not clearly understood. It is in this climate of professional and regional changes that ESCi was contracted to conduct the scope of work to look at these agencies. In this report, ESCi uses a variety of data collection techniques to pinpoint areas that could be improved with interagency cooperation, a review of whether consolidation is a reasonable solution, and a look at other potential service improvements that could be accomplished.

The destructive forces of a wildfire, a hazardous materials spill, an earthquake, or major flood pay no attention to jurisdictional boundaries. In the recent past, California has experienced all of these events. For example, the fire in the Oakland hills swept across communities at an incredible rate fanned by winds and fueled by heavy vegetation. Steep terrain and limited access added to the problems of fire personnel and evacuating homeowners. The Loma Prieta earthquake was also not limited to one community.

Problems of this nature require a high level of co-ordination of government services and community involvement. Any single local government agency has difficulty addressing a countywide issue. The composition and legislative mandate of the Local Agency Formation Commission provides a unique structure to address these issues. The Commission is comprised of a cross-section of local government and public representatives. LAFCO has the authority to study issues regarding coordination of local government services and compliance to Commission requests is required by law.

This can be a powerful tool to resolve countywide issues. Meaningful resolution can occur once the community is aware of the problem, and of possible options to address issues. Immediate solutions and long-range goals can be addressed. Since LAFCO cannot force solutions, well informed citizens can proceed faster if they have the appropriate data and information to base their decisions upon.

County Fire Warden

The County does have a Fire Warden's office currently staffed by three personnel. The position of fire warden is defined in Title 16, Chapter 16.55.050. This position is empowered to enforce the provisions of the fire code. They are also given arrest powers and are authorized to carry firearms in the conduct of their duties. This office serves to assist in the coordination of a wide variety of issues but does not operate a fire suppression force. The Fire Warden's office provides support to the fire districts in the area of administration and finance, serves as the County Coordinator for Fire and Rescue Mutual Aid on a state and local level, acts as a liaison between the local agencies and the County, acts as the administrator for the California Incident Command Certification System (CICCS), funds and administers the dispatch fees for the County on behalf of all the fire districts, and are the Operational Area Coordinator. The City of Modesto is the contract agency responsible for arson investigation in the un-incorporated area.

In June 2006, the Board of Supervisors authorized the County Fire Warden's office to begin providing fire prevention services which were previously contracted through Stanislaus Consolidated Fire District with a portion of the Less Than County-Wide Fire Tax. Services performed by the newly formed Stanislaus County Fire Prevention Bureau include new construction plan review and inspections; fire system plan reviews and inspections; new business inspections; code adoption; fire prevention ordinances; state mandated inspections such as schools, daycares, and skilled nursing facilities; code enforcement; event permits; and weed abatement. As of January 2007, the Fire Prevention Bureau consisted of three fire prevention specialists, a fire marshal, a part-time special projects manager, and an administrative assistant. The Bureau's 2006-2007 budget for providing fire prevention services is $525,000.

Local Fire Agencies

Stanislaus County's local fire agencies have done a very good job of providing fire protection while facing incredible odds in funding their services. They face increased calls and multiple types of service demands and expectations while simultaneously having difficulty with sustaining funding levels. The majority of rural communities rely heavily on the dedication of their volunteers; cities are mainly staffed with full-time personnel. There are about as many full-time firefighters as there are volunteers currently listed in the system. Not all volunteers are active and, unfortunately, the volunteer ranks continue to decline. These volunteers are regular citizens who give up their time off to respond to emergency calls and attend training sessions.

This report identifies that County fire agencies are organized under a variety of state and federal government code sections that include:

- Municipal government
- Special districts
- Fire protection districts

Historical Perspective

It should be noted that at one time all of the fire departments in Stanislaus County were somewhat isolated from one another. The municipal fire departments have evolved along a different path than the fire protection districts, due to increases in urbanization and subsequent

fiscal stability. Most of the cities were created many years ago when Stanislaus County was essentially an agricultural area, a phenomenon that is not limited to this county.

Most of the districts were created as a result of development pressure to provide some form of service as population increased in rural areas. Throughout California there are many areas in which cities have grown and encroached into what was previously agricultural land; so Stanislaus County is similar to other areas, in that it is experiencing the same pressures.

Many of the fire protection districts are independent districts and are not part of the County government structure. They continue with their historic governance model, while simultaneously having to cope with reduced area and associated property tax revenue to provide financial support. This is creating a jigsaw puzzle of level of service; a commensurate variance **exists** in the level of funding to provide basic services.

The following figure illustrates the dates for creation or recognition of the various entities involved in the study. As will be demonstrated, some are organizations with a great deal of tenure. Others are relatively new.

Figure 3: Organizational Date of Fire Service Agencies[1]

Department	Authority Having Jurisdiction	Date Formed
Modesto	City	1884
Newman	City	1888
California Department of Forestry and Fire Protection	State	1905
Turlock City	City	1908
Ceres City	City	1911
Oakdale	City	1913
Hughson	City	1915
Patterson	City	1919
Ceres	FPD	1930
West Stanislaus	FPD	1935
Denair	FPD	1942
Salida	FPD	1942
Keyes	FPD	1943
Mountain View	FPD	1943
Woodland Ave.	FPD	1946
Turlock Rural	FPD	1958
Burbank Paradise	FPD	1942
Oakdale Rural	FPD	1945
Industrial	FPD	1950
Westport	FPD	1962
Stanislaus Consolidated	FPD	1995

[1] Results from Data Collection Survey.

Challenges

The fire service in many areas of California is experiencing a difficult transition process to meet modern expectations. These difficulties are caused by the same factors that are creating challenges in the current delivery system. Some of these issues appear to be unique to this County, but they are not that unusual. Dealing with growth, increasing standards, and increased costs are common issues being faced by fire fighting agencies all over the state and nation.

Again, looking at it from a historical perspective, rural fire protection districts were not an obvious area of concern 25 years ago. The people who chose to move into rural areas were aware of the fact that they had slower response times. In fact, most individuals who lived in these areas were socially and economically connected with the volunteer fire service. Moreover, for years there were very few guidelines for the volunteer fire service to follow for operational capabilities. Over the past 25 years, the following items have occurred that have resulted in significant differences between the expectations of a rural fire department and the reality of one.

- ✓ Demands by government to meet higher standards are increasing.
- ✓ Costs of providing a broader range of services is often accompanied with an uncertain revenue stream to offset the costs.
- ✓ Fewer and fewer members of the community have an interest or desire to serve as volunteer firefighters.

One of the strategies that has been proven to be useful in dealing with challenges is to increase the level of cooperation among agencies.

Examples of Cooperative Activity

It is important to note that the current fire service delivery system has produced excellent examples of how cooperative efforts can provide for a better use of resources. There are at least four examples worthy of description:

- ✓ The Visioning Process
- ✓ The Stanislaus Regional 9-1-1 JPA
- ✓ The Modesto Training Center
- ✓ The Mutual and Automatic Aid System

The Visioning Process

Some planning processes have already been employed. On July 30, 2004, the Stanislaus County Fire Chiefs Association conducted a Strategic Visioning Meeting to discuss the *Future of Fire Protection in Stanislaus County*. A White Paper summarizing that meeting contained the following assessment.

Eight basic areas were identified where future improvements could result in a more effective and efficient service to the citizens of Stanislaus County:

1. Becoming more unified in approaching problems and solutions
2. Developing a governance model that works for everyone
3. Developing a standards of response coverage model that visualizes the service level and improves deployment capabilities

4. Developing revenue enhancement mechanisms
5. Meeting expectations of the community and the political leadership
6. Dealing with the diversity of the needs and expectations of the communities
7. Setting minimum service delivery standards for valid comparisons
8. Creating healthy relationships among the various parties as the process unfolds

Three primary goals to forward the visioning process to the next stage were identified:

1. Protecting the interest of the local jurisdictions while improving upon the effectiveness and efficiency of the delivery system through policy analysis
2. Improving the stability and sustainability of the revenue available to support fire protection on a countywide basis
3. Increasing the cooperation and coordination among agencies to reduce the gap between needs and expectation

Lastly, this same group identified:

- Stanislaus County's continued population growth and development will further increase service demands on emergency services.
- Funding of fire protection services will be an ongoing critical challenge to the success of fire departments in the future - government is being asked to do more with less.
- Community expectations with respect to the type and quantity of services provided by fire departments will continue to increase.
- Demographic changes with respect to the younger and older populations will continue to increase the demand for emergency medical services (retired, long lived, more complicated medical conditions, etc.)
- There is no nexus between the level of service and the tax base to support the development of fire departments.
- The single-family dwelling, which generates the most frequent demand for services, produces a smaller taxable base.
- There is a concern about maintaining local control among jurisdictions that may have an effect on the process.
- This process will not result in meaningful changes unless it is supported by the political entities charged with the decision-making responsibilities of the local jurisdiction.
- Lastly, it also realized that this process would not result in meaningful proposals unless the Fire Chiefs Association advocates, reviews, and responds to recommended action consistently with the support of the elected officials.

Dispatch and Emergency Communications

In many areas of California, creating a countywide fire communications system is a problem. Typically there are multiple communication centers with multiple configurations. For example, in some areas there are stand-alone fire facilities intermixed with fire and police facilities, intermixed with fire, police, and emergency medical services (EMS) facilities. The Stanislaus County delivery system has already achieved one of the most highly desired economies of scale. The Stanislaus Regional 9-1-1 Center is a joint powers authority between the City of Modesto and the County of Stanislaus. They are the current provider of emergency communications.

The emergency communications center processes approximately 40,000 alarms per year and provides dispatch services for all fire departments in Stanislaus County, except for the City of Turlock. Turlock City has its own communication center for both police and fire department and is connected to the regional center through a phone line. Recent funding has been allocated to get the Turlock Fire Department's radio frequencies into the communications center, which will enhance communications reliability for all parties.

A current proposed change revolves around the selection of a new computer aided dispatch (CAD) system. There is a Communication Advisory Committee with representatives from the following agencies: Modesto police and fire chiefs, sheriff, and the County Fire Warden's office.

The obsolescence of radio equipment and the accompanying technology dictates that the existing system be replaced. The CAD system is approximately 15 years old, with an operating system that can best be described as obsolete. The working group developed a request for proposal (RFP) for an updated CAD system, which included features desired by all stakeholders. A paramount need of the fire agencies was system capability to upgrade responses, predicated on fire weather factors. This feature is presently included in the existing system but may not be in the proposed one. The fire chiefs regard it as a very high priority item.

Modesto City was the agency responsible for submittal of the RFP to the various vendors. The vendor of the existing system did not submit a bid. The submitted bids were narrowed down to two systems - Intergraph and Visaterm. Visaterm is best suited for police dispatch and has an records management (RM) component useful to police agencies but does not have the wildland upgrade desired by fire agencies. Fire agencies are not convinced that the system will meet their particular needs, thus some expressed concerns. Selection on the CAD system will be made within the next two months.

It was acknowledged that, at times, the workload of the current system is more than the two fire dispatchers can handle, and there are gaps where the dispatchers may be delayed in acknowledging field units due to work load issues. Dispatchers also function as backup call takers and all non-emergency police phones are answered at the regional communication center. The fire pod presently has three positions, with two dispatchers at the present staffing level.

Dispatch of fire units out of County on an inter-county mutual aid response follows State Office of Emergency Services (OES) protocols, wherein the intra-county response is best described as piecemeal. Even with the present issues, there is a high degree of cooperation and effectiveness amongst agencies throughout the County using the regional communication center.

Geographical Information Systems

The County Information Technology (IT) Division provides geographical information system (GIS) support services to the various agencies. The GIS organization has a staff of two to three people using Arc View 3.1 and Arc Info 9.1. The GIS staff has developed custom programs; however, there is a backlog in updating the 9-1-1 street file due to growth in housing and new streets. Their files can be accessed through their web site at: http://www.stanco-pworks.org.

Modesto Training Facility

A regional training facility has been constructed in cooperation with Modesto Junior College. This three-acre site, strategically located right off of Highway 99, represents a very sophisticated training opportunity. While there are not that many firefighters in Stanislaus County, the training facility that has been developed to support them verges on being one of the more extraordinary in the whole state. Approximately $1 million has been devoted to the development of the following:

- An asphalted area that contains water supply and a driving surface
- A flashover simulator
- Storage facilities for firefighting apparatus and equipment
- A maintenance building to store miscellaneous equipment
- A five-story drill tower/burn building that represents some of the most intense firefighting training that is currently available

Funding of the regional training center is based on the following formula - Modesto Junior College, 55 percent; Modesto City, 20 percent; Stanislaus County, 20 percent. The remaining 5 percent is generated by fees for using the training facility. Modesto is considered to be an Accredited Regional Academy by the California State Fire Marshal's Office.

An advisory committee is composed of representatives from the County training officers, Fire Chief's Association, and Modesto Junior College. The committee meets monthly, except during the summer months, to make recommendations to the college staff on delivery of the training program. The regional training facility is an Accredited Regional Academy (ARA), as designated by the California State Marshal. The facility is also utilized by fire agencies outside of Stanislaus County. These departments, as identified in interviews, were Salinas, Monterey, Santa Cruz, and departments in San Mateo and Santa Clara counties.

According to the facility coordinator, this facility is used extensively by those departments that are engaged with the college. The program enables the facility to be utilized most every day of the week. In talking to many of the organizations within reasonable driving distance, many of these departments avail themselves of the facility's structural firefighting training as part of their annual training schedule.

Modesto Junior College has adopted a syllabus and curriculum for its firefighter certification training program. The program is definitely an asset for those volunteers who are capable of interacting with it. The deficiency in the program is that it is not based on distance learning but rather classroom contact hours, which means that those departments that are long distances away may or may not be able to avail themselves of the program without extraordinary effort on the part of their firefighters.

There is a recommendation to advocate for portions of available training information for volunteer firefighter be made available through long distance learning courses and that the California State Fire Marshal's Office support the creation of a delivery system in cooperation with California community colleges that will make distance learning part of the delivery of the volunteer firefighter certification system. The regional academy is presently formalizing a satellite system for use in delivering that long distance learning program.

Project 94 Report

The *Project 94 Report*, which was prepared for the consolidation of the Riverbank, Empire, and Waterman-Hickford fire protection districts, contains much of the same information that is required for completion of the MSR report. In reviewing the *Project 94* Committee's document, many of the ideas and suggestions that were advanced are worthy of consideration within this review as well. However, it is also true that those recommendations forecast more of a strategic planning process than is provided in a municipal service review. *Project 94* includes consideration of decisions that go beyond the scope of an MSR.

> Notable exceptions to this are the recommendations relative to a reorganization of the fire districts in the study area. Several of the recommendations cannot help but be reviewed again within the context of this document.

One of the apparent differences is that the *Project 94* departments' point of contact and their input was totally different than the point of contact of the departments in this MSR. The degree of reaction to the recommendations that were present in the interview response by the fire chiefs very definitely indicates that the process utilized by the *Project 94* Committee may have not been representative of the interests of all fire agencies that would be impacted by its findings. A large amount of support for the recommendations was not forthcoming.

Community Expectations

A survey of community stakeholders was not conducted in developing this report; therefore, no specific conclusions can be made regarding community expectations of response time performance. However, anecdotal information suggests that there could be disparity between what a single-family dwelling owner expects in the way of response time and the reality of what is available depending on where he or she lives in the County.

While it is clear that most development in Stanislaus County is focused within the cities, there may be individuals migrating from those cities into rural, single-family dwellings. Having experienced urban levels of service and moving to a rural area, there is often a lack of recognition that the service delivery platform is substantially different in rural areas.

The net result is that many fire districts are caught in a dilemma. If one were to be able to go back to 1950's and observe the relationship between fire protection and the community, there would be a minimum amount of dissatisfaction. As the factors in the previous paragraph have accrued and evolved, fire protection districts are being forced to defend themselves while simultaneously being required to behave as if they have the same funding level as a municipal fire service. The reality is that this does not occur.

Economic Considerations

Stanislaus County is a picturesque and photogenic area. However, it is not a well-developed economic area. Originally, the majority of business associated with this area came from the agricultural industry. That industry has eroded, if not evaporated, as a result of other variables. What has replaced it, in one respect, is an element of services and other forms of revenue generation. Secondarily, there are small *enclaves* of minor businesses that are predominately service-oriented dealing with the people that live, work, or recreate in Stanislaus County.

From a standpoint of risk assessment, the fire stations that are deployed across this environment are dealing with essentially five different types of fire problems.

- ✓ The first is wildland. This is primarily the responsibility of the federal and state governments. Nonetheless, it is impossible for the local fire protection district to ignore. In the event that there is a fire and it is reported through the dispatch system, local government will be on scene and will be an active player in the initial attack of wildland fires that occur within their jurisdiction.
- ✓ The second is agricultural space. There is a significant amount of agricultural land within Stanislaus County, of which the majority falls under the Williamson Act. This area does not constitute much of a fire hazard except to the degree which agricultural products could be consumed by wildfire conditions. Approximately 87 percent of lands in Stanislaus County are eligible under the Williamson Act.
- ✓ The third is open space areas which are restricted to cattle and other forms of livestock. These areas are large tracts of land similar to land that is being cultivated, with the exception that the fuel mix is considerably different. Included in this third level is the rural living environment. The rural living environments are single-family dwellings that are widely disbursed across a very large area. They consist of commercial buildings and ranchettes that are on various sizes of parcels ranging from two to up to five to ten acres.
- ✓ The fourth level of risk can best be characterized as a suburban transition zone. These are the areas that are essentially around the population areas in which the housing is moderately dense and distributed on a *Mediterranean style* travel and road network. This type of network is characterized by roads that are winding and curved instead of the *checkerboard* pattern of tracts of the past. This style of road network often includes cul-de-sacs and limited access housing tracts with many traffic-calming devices.
- ✓ The last would be classified as the suburban environment. Suburban environment is based on concentrations of population that exceed 1,000 people per square mile.

What Is Different Today From Yesterday

Fifty years ago when fire departments were isolated from one another by topography and geography, there was little need to worry about uniformity, standardization, and coordination. As communities have grown and the population has increased, the borders of cities and districts have become blurred if not totally transparent to the users of governmental services.

Starting in the 1970's with the impact of wildland fires, there has been an increasing need for fire service agencies to be able to work more closely together. Moreover, since the impact of September 11, 2001, and the transformation of emergency management into the arena of homeland security, followed most recently by the tragedy of Hurricane Katrina, the role of fire service cooperation and coordination has become more of an issue than ever before.

The following statements are symbolic of the major differences that are driving public scrutiny of local government fire services. These differences are:

- Increase in the number of mandates from state and federal government imposed on fire agencies (paid and volunteer)

- Reduction of interest and motivation by the average citizen to serve as volunteer firefighters
- *City flight* – people who move into rural areas with an expectation of an urban level of service
- Accumulative effects of property tax shift (ERAF) and other financial actions taken by the state
- Fees for county services to districts have increased due to county fiscal constraints
- Annexations by cities resulting in detachments and decreased property tax revenue to districts. There is also a loss of revenue from existing benefit assessments.
- Increased scrutiny by public interest groups

The Best of All Worlds

What would fire protection look like in Stanislaus County if funding were to be at the highest levels for everyone? In other words, what is the minimum level of service that everyone should be able to receive and what is the minimum level of effort that should be directed towards providing fire protection resources? In achieving a condition that is equitable throughout an entire county, one needs to recognize that one size does not fit all. Theoretically, if the per capita fire expenditures for a suburban fire service in the western United States were uniform throughout the county, the amount of funding for fire protection would be in excess of $52 million. This is calculated by multiplying a $100.00 per capita average cost times the current population, or a sum in excess of $52 million. That is not going to happen right now. But if one looks at Orange County 30 years ago or Sacramento County 10 years ago and now Stanislaus County of today, the growth that could occur would quite probably make that figure eventually pale by comparison.

There are three very distinct factors that place demand on the fire service and affect level of performance. The three factors are population density, structural concentration, and emergency response workload. In other words, if numerous people are living closely together, involving a variety of structural conditions, and those result in demand being placed on the fire department to respond frequently, the best policy is to have a fairly high level of service. Lower levels of risk, often do not demand the same high level of service, but there is a minimum in both cases. The issue is managing the gap between the two.

Conversely, if the scenario consists of a very low concentration of people, buildings are spaced wide apart, and the calls are coming in infrequently, the level of service that is being provided may be the best than can be offered even if it is not adequately funded. Communities that were satisfied with basic services ten years ago, are now hard-pressed to keep up with demand. Improvements almost always cost more money than is currently available. Other communities are satisfied with their current levels of service and are not willing to invest any more.

Different departments are at different levels of maturation. That is true in this County. Closing the gap between what used to be and what needs to be tomorrow is closely linked to seeing the incremental changes that need to be adopted rather than waiting until a major gap exists.

Summary

The *Project 94 Report* initially concluded that steps need to be taken to improve efficiencies in the Stanislaus fire service. That report also inferred that there is a step-by-step process; and if nothing was done, the situation will continue to deteriorate. This MSR supports that contention by noting that over the last 20 years there have been many changes in the fire service ranging from community expectations to mandatory duties to perform. Fire protection is becoming more expensive. Major differences in how to conduct services that have been generated by these changes have resulted in some specific issues emerging. However, there are no simple solutions to these issues. Some steps are needed immediately, while other steps would require further consideration. Chapter 3 will provide the reader with a description of the attributes of the existing agencies as they operate today.

This page intentionally left blank

Chapter 3 – Summary Profiles of Fire Protection Agencies in Stanislaus County

This chapter provides a brief description of the relevant data that was collected on the fire districts and contains specific details of their operations.

The following profiles were developed using the information provided through the Fire Service MSR Questionnaire completed by each of the 14 fire districts and the six city fire departments and the on-site interviews conducted by the consultant team. The data provides an overview of the agency and its operation and includes information relating to budget, staffing programs, and apparatus and equipment, as well as workload.

Institutional Memory

Institutional memory refers to the capacity of an organization to remember *the reason that it is doing what it is doing.* Some people believe that institutional memory is the mere remembrance of the tradition of their organization, but it is much more complex than that. As individuals grow up within an organization, they acquire knowledge, experience, and in some cases, wisdom that allows them to keep everything in a proper context. When the group of individuals all agree that a particular set of circumstances exists within the organization because of antecedent conditions, the organization is said to have a strong institutional memory.

The opposite of that can also be true. As a result of retirement or individuals leaving an organization prematurely, institutional memory can erode over time. In the case of many of the organizations in this report, the level of institutional memory is a variable. In some cases, it is very strong because of long-term personal commitment. In some cases, it is very weak due to the loss of experienced and knowledgeable personnel.

How it affects a study of this nature is fairly straightforward. Those organizations with strong institutional memory often have a certain difficulty in coping with change because they are basing their perspective on the way things have always been. On the other hand, those organizations with no institutional memory will often resist something because they simply don't understand why the change is needed. One of the reasons for articulating specific information is to try to restore institutional memory to the process so that changes being considered are kept in the appropriate context.

This report contains a certain amount of institutional memory and, simultaneously, incorporates a need for strategic planning thought processes. To the degree in which the former supports the latter, the organization becomes stronger over time. The degree to which either institutional memory is regarded as defense of creational thinking and/or is completely lost through erosion of the memory, the strategic planning process can be made less effective. The balance between the two is a highly desirable state of planning.

Please contact the district to verify current meeting time/place. Updated contact information for each district can be found here: http://www.stancounty.com/board/boards-commissions.shtm

Burbank - Paradise Fire Protection District

Boundaries of the Burbank - Paradise Fire Protection District include unincorporated developed territory in the southwest area of the city of Modesto. The entire district is within the city of Modesto's Sphere of Influence (SOI), district territory is not contiguous, and is comprised of four separate areas. Portions of the district's boundaries are adjacent to the Woodland and Westport Fire Protection Districts.

1313 Beverly Drive
Modesto, CA 95351-2313
Chief Les Alderson
Phone: 209-523-1129
Fax: 209-523-0283
Email: bpfd@thevision.net

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Elected,** must be a registered voter within the district Vacancies filled by remaining directors within 60 days if a quorum exists; by the Board of Supervisors between 60 and 90 days; and by election after 90 days. Appointee shall hold office until next district election. (Government Code, Section 1780)
Term:	Four-year term
Duties:	Fire protection
Meetings:	Meeting days vary, but set time is 5:30 p.m. Burbank-Paradise Fire Station, 1313 Beverly Drive, Modesto

Burbank – Paradise Fire Protection District
Funding Sources, Types of Service, Attributes, and Resources

Funding Sources	2004 - 2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$93,576.00	41%	$118,113.33	47%
Fire service fees/parcel tax	$ -	0%	$	0%
Special assessments	$115,801.00	51%	$129,290.32	51%
SB 813	$ -	0%	$	0%
Homeowners property tax relief	$1,938.28	1%	$1,913.66	1%
Subtotal Taxes and Assessments	$211,315.28		$249,317.31	
Development fees	$ -	0%	$	0%
Contracts for service	$ -	0%	$	0%
%Interest	$ -	0%	$3,647.96	1%
Sale of fixed assets	$ -	0%	$	0%
Other misc.	$17,221.64	8%	$	0%
Revenue total	**$228,536.92**	**100%**	**$252,965.27**	**100%**

Attributes	
Formation date	1942
District area (square miles)	5.5
Population	7,000
Number of stations	1
ISO rating	5 - Hydrant Areas 8 - Non-hydrant Areas

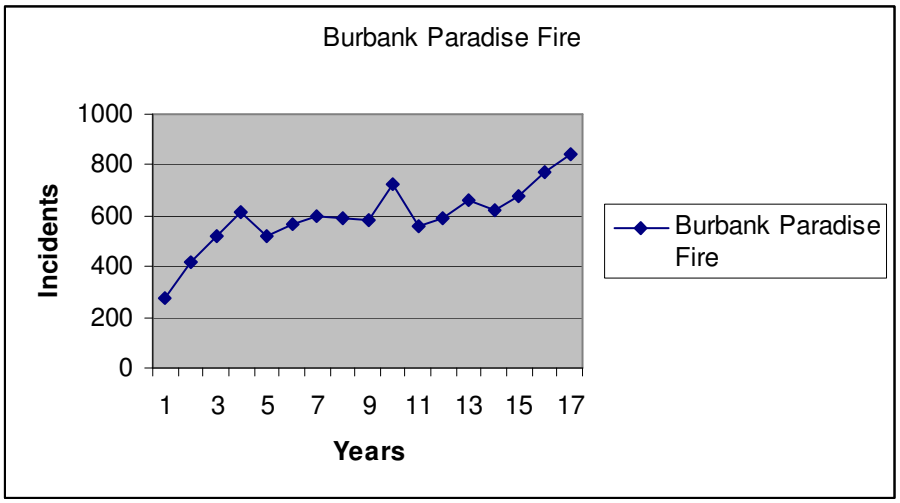
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	20 Structure 21 Structure 22 Structure
Water tenders	
Ambulance/squads/rescue	
Utility	56 Utility/wildland
Special	

Staffing	
Full-time fire suppression/shift	0
Temporary fire suppression/shift	0
Paid call firefighters/total	6
Volunteer/total	30
Non-safety regular/total	1 PT

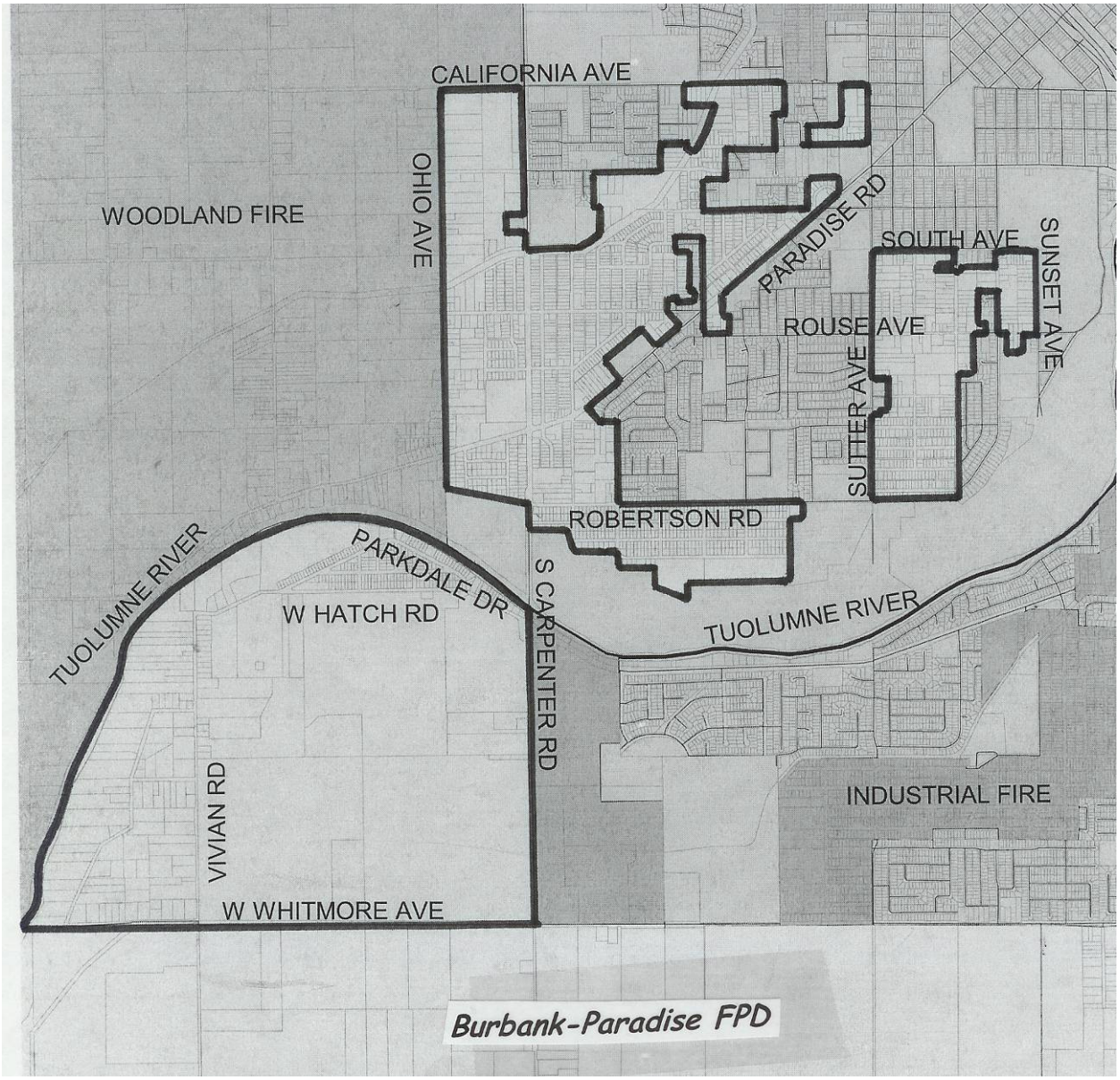
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends with 2005[2].

Burbank – Paradise Fire Protection District Response Workload, 1987-2005



[2] Stanislaus Regional 9-1-1 JPA data.

Burbank- Paradise Fire Protection District Sphere of Influence Map



Ceres Fire Department

Ceres Emergency Services
2755 3rd Street
Ceres, CA 95307-3219
Commander Dan Davis
Phone: 209-538-5701
Fax: 209-538-5681
Email: ddavis@ci.ceres.ca.us

Ceres City. The City of Ceres operates a public safety department and contracts to operate the Ceres Fire Protection District.

Ceres Fire Department Attributes, Types of Service, and Resources

Attributes	
Formation date	1911
District area (square miles)	7.05
Population	38,813
Number of stations	3
ISO rating	3
Current budget	$3,051,082

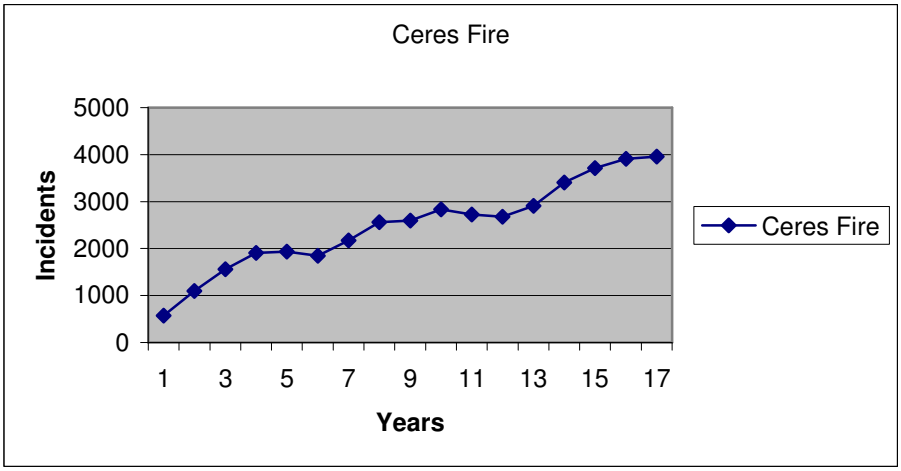
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	1996 Front Line 2003 Front Line 1995 Front Line 1990 Reserve 1985 Reserve
Water tenders	None
Ambulance/squads/rescue	None
Utility	2002 Truck Front Line
Special	R-81 Front Line, 2002 E-51 Front Line, 2004 B-04 Front Line, 2005

Staffing	
Full-time fire suppression/shift	21
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	3
Non-safety regular/total	2

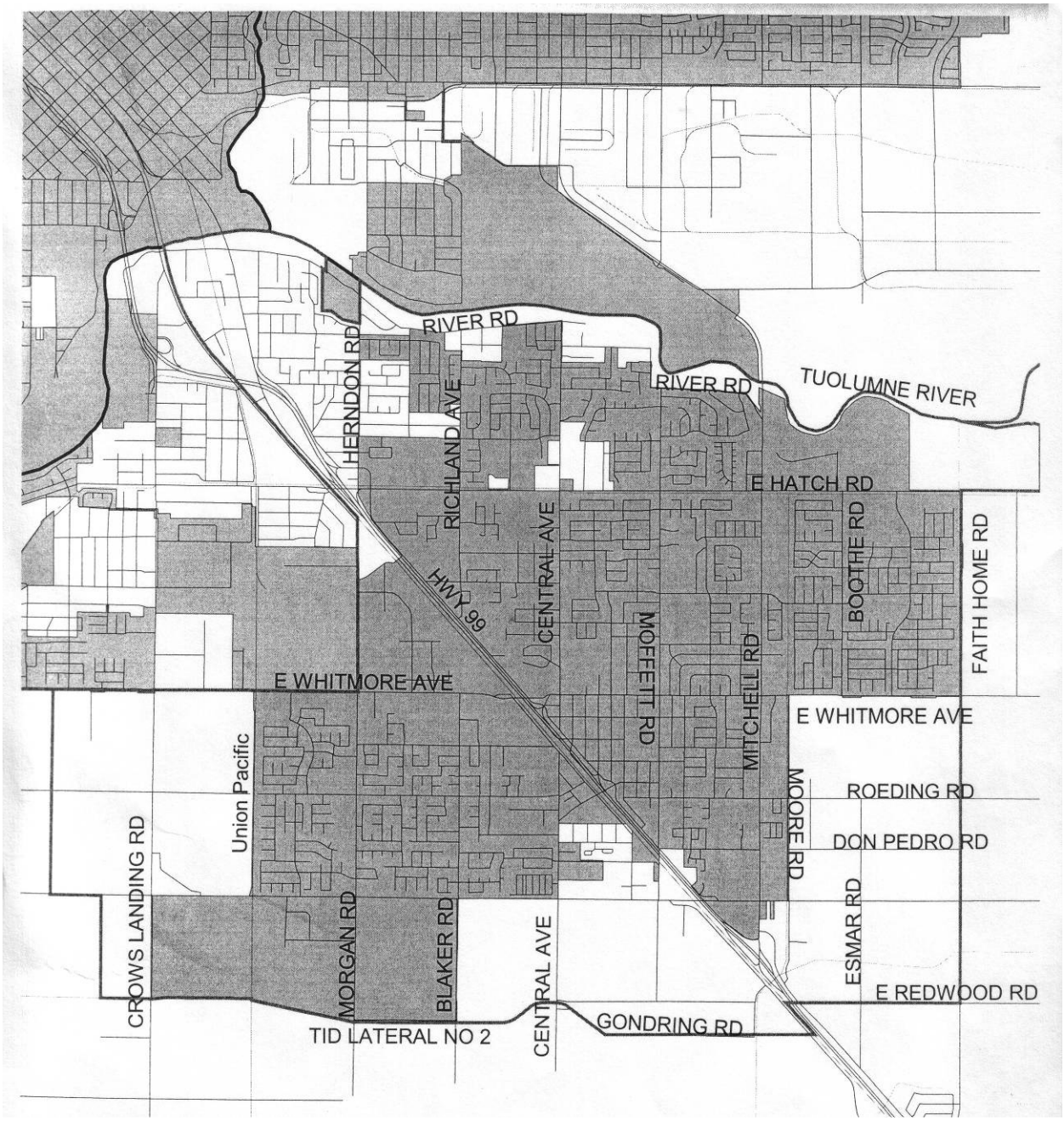
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire department over the last 16 years. The record started in 1987 and ends in 2005.[3]

Ceres Fire Department Response Workload, 1987 – 2005



[3] Stanislaus Regional 9-1-1 JPA data.

Ceres Fire Department Sphere of Influence Map



Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

Ceres Fire Protection District

Ceres Fire Protection District boundaries include unincorporated territory located southeasterly of the city of Ceres. The majority of the district territory is within the city's Sphere of Influence. Only the portion located south of T.I.D. Lateral No. 2 is outside the city's SOI. The district currently contracts with the city of Ceres to provide its fire protection services. The district lies adjacent to the Westport, Keyes, and Hughson fire protection districts.

Ceres Fire Protection District
Ceres Fire Dept Conference Room
2755 3rd Street
Ceres, CA 95307
Phone: 209-538-5701
Fax: 209-538-5681
Email: None Provided

The Ceres City Council oversees the District.

Compensation:	$100 per meeting

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Three Directors
Qualifications and Residency Requirements:	**Elected**, must be a registered voter within the district Vacancies filled by remaining directors within 60 days if a quorum exists; by the Board of Supervisors between 60 and 90 days; and by election after 90 days. Appointee shall hold office until next district election. (Government Code, Section 1780)
Term:	Four-year Term
Duties:	Fire protection
Meetings:	Third Thursday of each even month at 5:00 p.m. 2755 3rd Street—Fire Station, Ceres

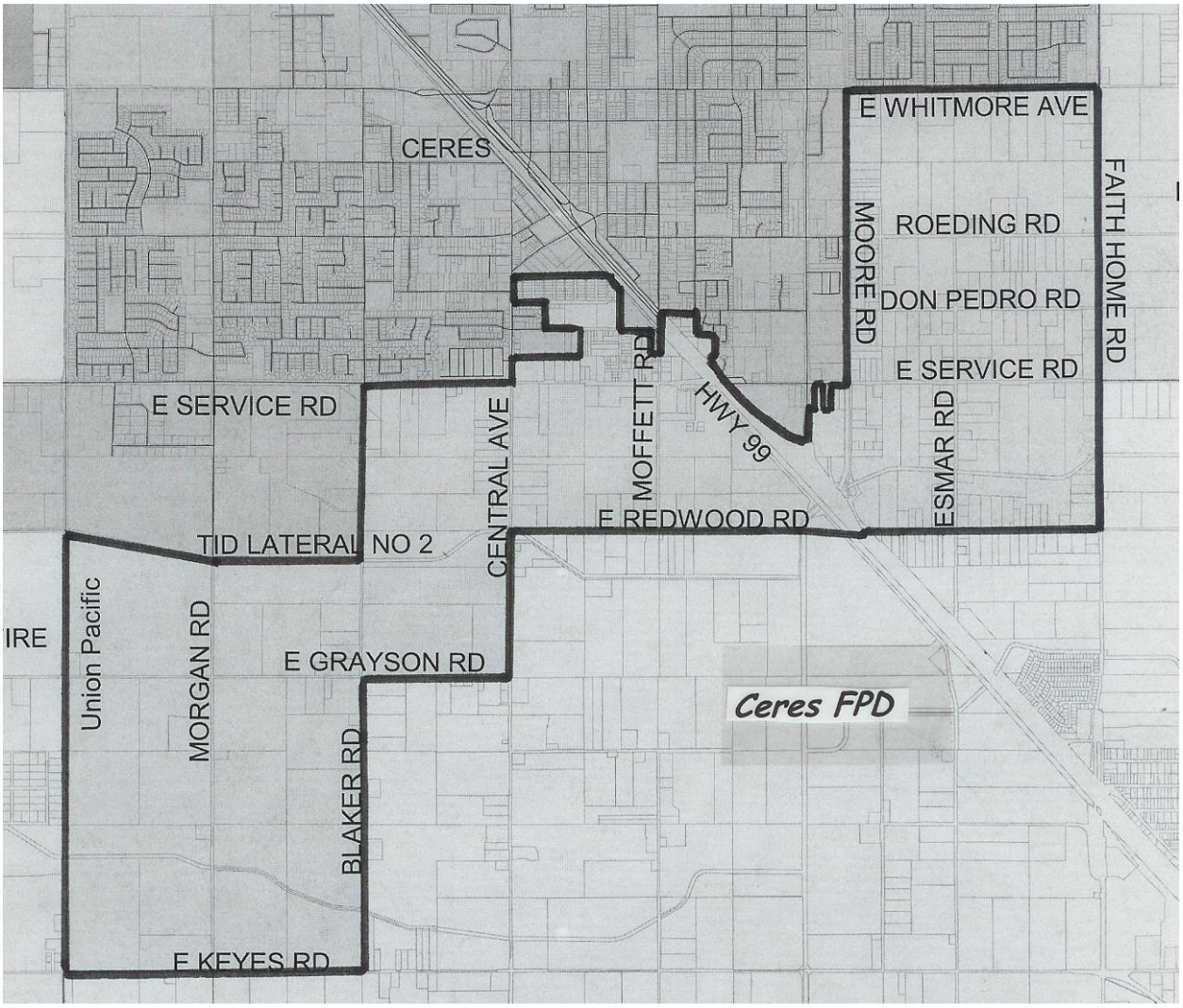
Ceres Fire Protection District Funding Sources, Attributes, and Types of Services

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$22,818.00	27%	$24,950.53	29%
Fire service fees / parcel tax	$	0%	$	%
Special assessments	$62,771.00	73%	$60,706.38	71%
SB 813	$	0%	$	0%
Homeowners property tax relief	$439.00	<1%	$391.00	<1%
Subtotal Taxes and Assessments	$86,028.00		$86,047.91	
Development fees	$	0%	$	0%
Contracts for service	$	0%	$	0%
%Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$	0%	$	0%
Revenue total	**$86,028.00**	**100%**	**$86,047.91**	**100%**

Attributes	
Formation date	1930
District area (square miles)	14
Population	2,553
Number of stations	Under contract
ISO rating	9

Types of Services	
Fire	No – Under contract
EMS	No
Paramedic	No
Ambulance	No
Rescue	Yes

Ceres Fire Protection District Sphere of Influence Map



CDF Unit – Stanislaus/Santa Clara

CDF – Stanislaus/Santa Clara
15670 S. Monterey Street
Morgan Hill, CA 95037-5431
Chief John Ellis
Phone: 408-779-2121
Fax: 408-779-1679
Email: john.ellis@fire.ca.gov

CDF Unit – Stanislaus/Santa Clara
Attributes, Types of Service, and Resources

Attributes	
Formation date	1905
District area (square miles)	316,000
Population	NA
Number of stations	2
ISO rating	NA
Current budget	NA

Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	No

Apparatus	
Engines	2 International Type III
Water tenders	0
Ambulance/squads/rescue	None
Utility	2 Chevy PU 4x4 ½ ton (1) Bulldozer Cat D6C
Special	N/A

Staffing	
Full-time fire suppression/shift	7
Temporary fire suppression/shift	10
Paid call firefighters/total	0
Volunteer/total	0
Non-safety regular/total	0

CDF – Stanislaus/Santa Clara Emergency Response Workload, 2002 – 2004

Emergency Response Workload				
Year	Fire	EMS	Other	Total
2004	207	40	25	272
2003	204	65	17	286
2002	185	51	16	252

It is important to note that only one CDF station is located in Stanislaus County. The other station is in Santa Clara County. Furthermore, these two stations are not available on a regular basis from November through March of each year. This factor prevents them from being a reliable first alarm resource.

Please contact the district to verify current meeting time/place. Updated contact information for each district can be found here: http://www.stancounty.com/board/boards-commissions.shtm

Denair Fire Protection District

Denair Fire Protection District is located east of the city of Turlock and includes the unincorporated community of Denair. A small portion of the district is within the westerly portion of the city of Turlock's SOI. District boundaries extend south to the Stanislaus-Merced County line. The district is adjacent to the Turlock Rural, Keyes, Stanislaus Consolidated, and Hughson Fire Protection Districts.

P.O. Box 262
Denair, CA 95316-0262
Chief Karl F. Curnow
Phone: 209-632-5032
Fax: 209-632-1488
Email: denairchief1@aol.com

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Appointed** by the Board of Supervisors
Term:	Three-year term, with two-term limitation
Duties:	Fire protection
Meetings:	First Tuesday of each month at 8:00 p.m. Fire Station, 3918 N. Gratton Road, Denair

Denair Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$87,633.00	37%	$104,276.53	35%
Fire service fees / parcel tax	$	0%	$	0%
Special assessments	$	0%	$	0%
SB 813	$	0%	$	0%
Homeowners property tax relief	$1,702.16	<1%	$1,672.76	1%
Subtotal Taxes and Assessments	$89,335.16		$105,949.29	
Development fees	$146,190.00	62%	$173,874.45	58%
Contracts for service	$	0%	$	%
% Interest	$	0%	$	%
Sale of fixed assets	$	0%	$	%
Other misc.	$1,553.55	<1%	$18,202.88	6%
Revenue total	**$237,078.71**	**100%**	**$298,026.62**	**100%**

Attributes	
Formation date	1942
District area (square miles)	42
Population	5,200
Number of stations	1
ISO rating	5 - City 9 - Rural 10 - Further than 1,000 feet of hydrant/ five miles to station

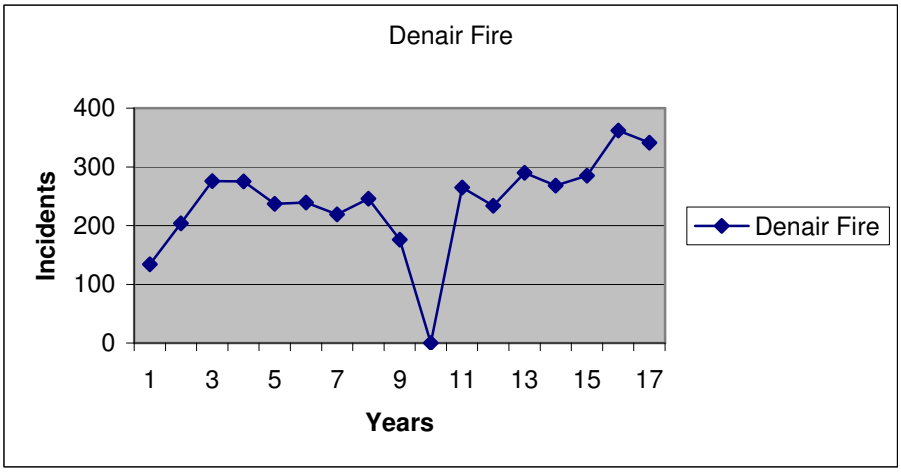
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	28/1992 KME, Type 1 23/1972 International, Type 1 47/1986 Van Pelt, Type 2 46/1963 Van Pelt, Type 2
Water tenders	65/1985 GMC, Type 2
Ambulance/squads/rescue	84/1988 GMC, 1 ton 81/1976 Chevy
Utility	92/1996 Ford F250 Command/wildland
Special	None

Staffing	
Full-time fire suppression/shift	0
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	23
Non-safety regular/total	0

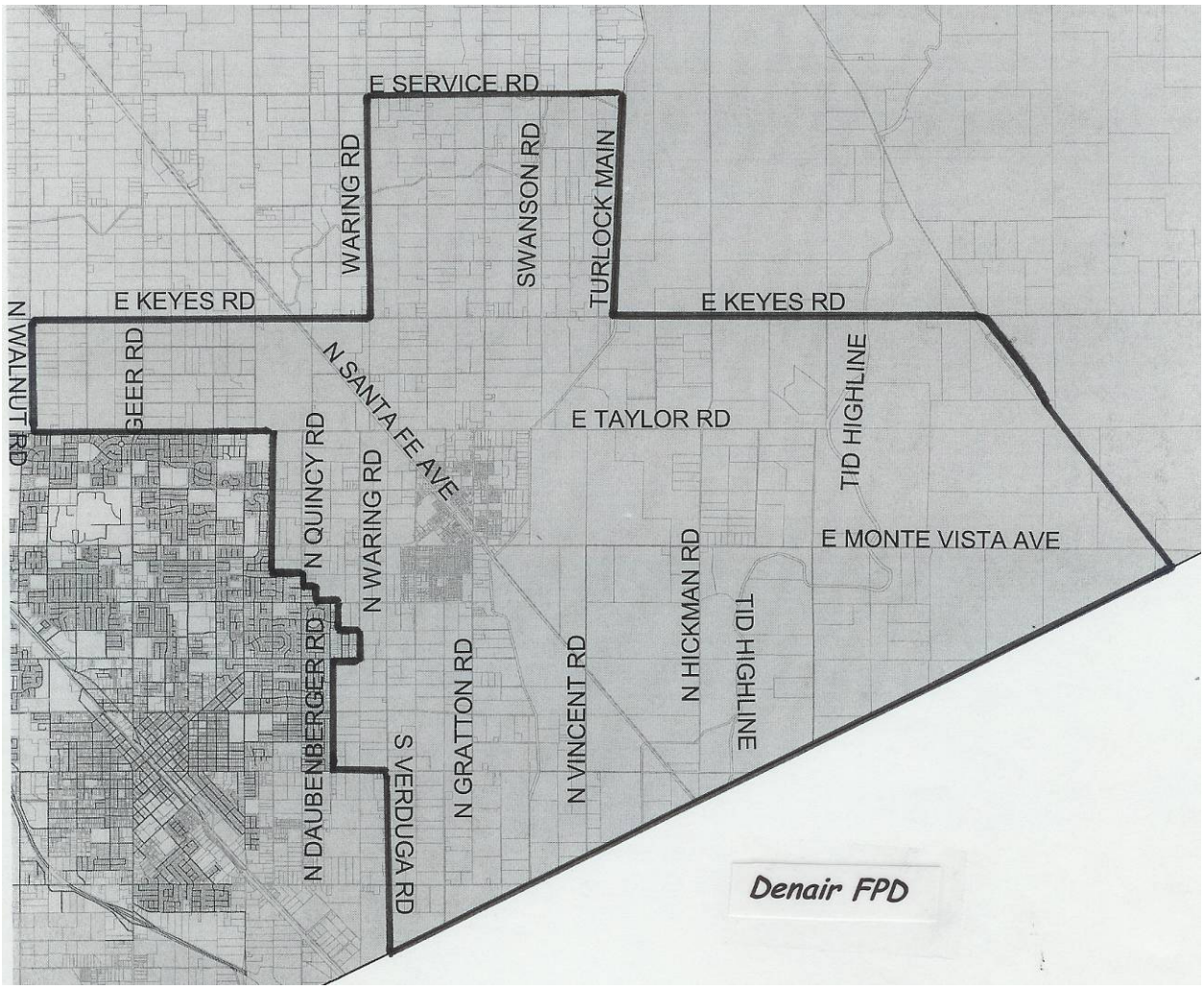
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[4]

Denair Fire Protection District Response Workload, 1987 – 2005



[4] Stanislaus Regional 9-1-1 JPA data.

Denair Fire Protection District Sphere of Influence Map



Please contact the district to verify current meeting time/place. Updated contact information for each district can be found here: http://www.stancounty.com/board/boards-commissions.shtm

Hughson Fire Protection District

Hughson Fire Protection District lies south of the Tuolumne River and east of the City of Ceres. The district is adjacent to the Keyes, Denair, and Stanislaus Consolidated Fire Protection District boundaries. District boundaries include the City of Hughson. A small portion, containing approximately 80 acres, located at the northwest corner of the District lies within the city of Ceres' SOI.

P.O. Box 37
Hughson, CA 95326-0037
Chief Scott Berner
Phone: 209-883-2863
Fax: 209-883-2362
Email: sburner@hughsonfire.com

Compensation:	$25.00 per meeting

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors (modified from three in 11/8/05 election)
Qualifications And Residency Requirements:	**Elected**, must be a registered voter within the district Vacancies filled by remaining directors within 60 days if a quorum exists; by the Board of Supervisors between 60 and 90 days; and by election after 90 days. Appointee shall hold office until next district election. (Government Code, Section 1780)
Term:	Four-year term
Duties:	Fire protection
Meetings:	Second Wednesday of each month at 7:00 p.m. Fire Station, 2315 Charles Street, Hughson

Hughson Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$205,558.00	57%	$267,808.74	46%
Fire service fees / parcel tax	$	0%	$	0%
Special assessments	$107,934.00	30%	$110,996.33	19%
SB 813	$	0%	$	0%
Homeowners property tax relief	$4,015.00	1%	$4,309.52	<1%
Subtotal Taxes and Assessments	$317,507.00		$383,114.59	
Development fees	$36,243.00	10%	$189,957.37	33%
Contracts for service	$	0%	$	0%
% Interest	$2,686.00	<1%	$5,157.93	1%
Sale of fixed assets	$6,013.00	2%	$	0%
Other misc.	$	0%	$	0%
Revenue total	**$362,449.00**	**100%**	**$578,229.89**	**100%**

Attributes	
Formation date	1915
District area (square miles)	35
Population	10,000
Number of stations	1
ISO rating	4 - City; 8B - County

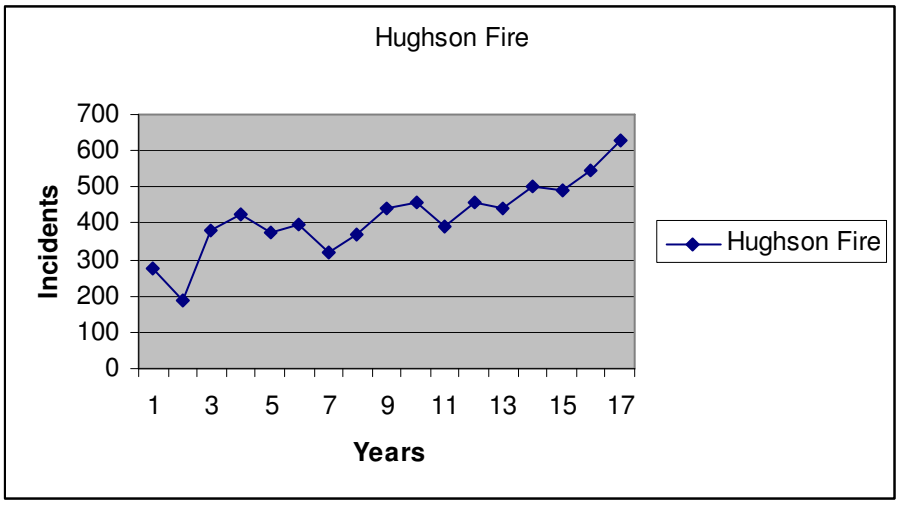
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	23 Structure 21 Structure 24 Structure 52 Wildland
Water tenders	63 Structure & Wildland
Ambulance/squads/rescue	None
Utility	91
Special	None

Staffing	
Full-time fire suppression/shift	2
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	25
Non-safety regular/total	0

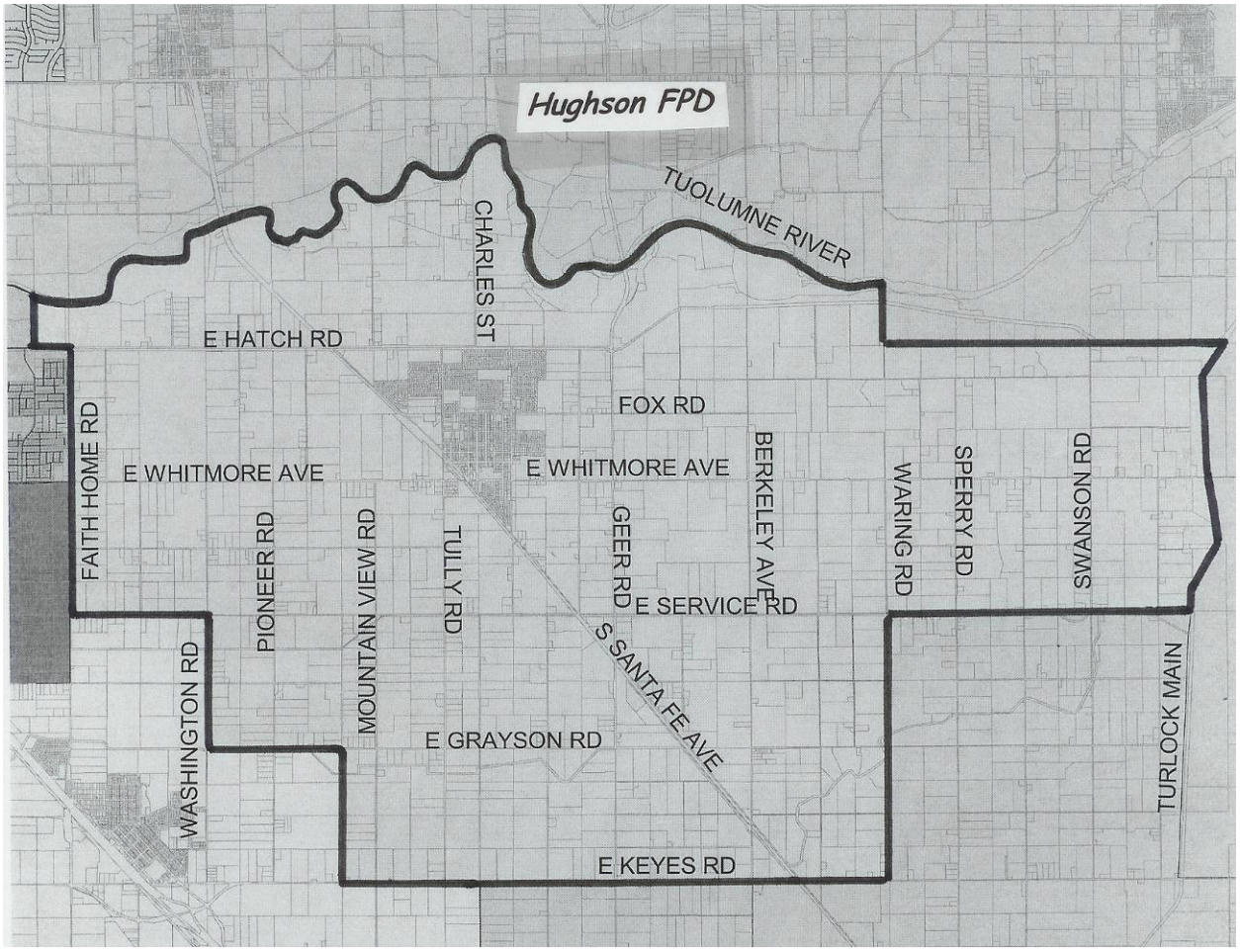
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[5]

Hughson Fire Protection District Workload, 1987 – 2005



[5] Stanislaus Regional 9-1-1 JPA data.

Hughson Fire Protection District Sphere of Influence Map



Industrial Fire Protection District

Industrial Fire Protection District is located between the cities of Ceres and Modesto, and consists of predominately developed territory. The entire district boundaries are located within the city of Modesto's and the city of Ceres' SOIs. The district contracts with both cities to provide fire protection services and is currently exploring dissolution options.

Industrial Fire District
148 Imperial Avenue
Modesto, CA 95358
Phone 209-537-3660
Fax: None Provided
Email: None Provided

Compensation:	$100.00 per board meeting

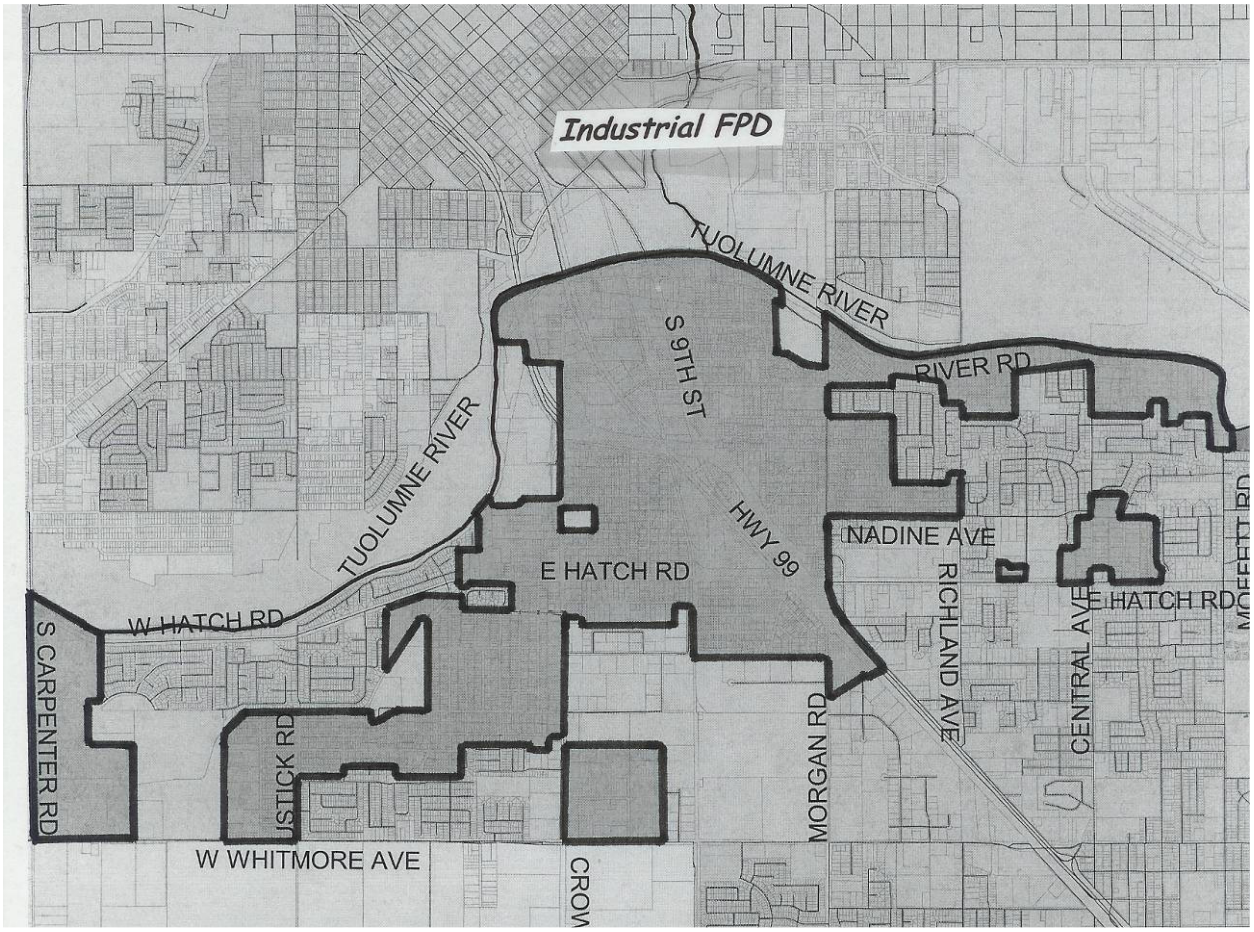
Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications And Residency Requirements:	**Elected**, must be a registered voter within the district Vacancies filled by remaining directors within 60 days, if quorum exists; by the Board of Supervisors between 60 and 90 days; and by election after 90 days. Appointee shall hold office until next district election. (Government Code, Section 1780)
Term:	Four-year term
Duties:	Fire protection
Meetings:	Quarterly meetings are held on second Thursday of March, June, September, and December. Industrial Fire Station #1, 148 Imperial Ave., Modesto

Industrial Fire Protection District
Funding Sources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$170,335.00	33%	$183,853.26	36%
Fire service fees / parcel tax	$	%	$	0%
Special assessments	$299,744.00	57%	$322,116.59	63%
SB 813	$	0%	$	0%
Homeowners property tax relief	$2,986.00	<1%	$2,662.34	<1%
Subtotal Taxes and Assessments	$473,065.00		$508,632.19	
Development fees	$	0%	$	0%
Contracts for service	$	0%	$	0%
%Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Redevelopment	$50,000.00	10%	$	0%
Other misc.	$	0%	$26.86	<1%
Revenue total	**$523,065.00**	**100%**	**$508,659.05**	**100%**

Industrial Fire Protection District Sphere of Influence Map



Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

Keyes Fire Protection District

Keyes Fire Protection District is located between the cities of Ceres and Turlock, and along Hwy 99. The boundary includes the unincorporated community of Keyes and is adjacent to the Ceres, Hughson, Denair, Turlock Rural, and Mountain View Fire Protection Districts. Small portions of district boundaries are currently within the city of Ceres' and city of Turlock's SOIs.

Keyes FPD
P.O. Box 577
Keyes, CA 95328-0577
Fire Chief Doyle Christopher
Phone: 209-634-7690
Fax: 209-634-0695
Email: dchristophere@stan-co.k12.ca.us

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications: And Residency Requirements:	**Appointed** by the Board of Supervisors
Term:	Three-year term, with two-term limitation
Duties:	Fire protection
Meetings:	Third Wednesday of each month at 7:00 p.m. Keyes Fire Station, 5625 7th Street, Keyes

Keyes Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$89,108.00	32%	$104,046.91	36%
Fire service fees / parcel tax	$	0%	$	0%
Special assessments	$80,386.00	29%	$87,608.51	30%
SB 813	$	0%	$	0%
Homeowners property tax relief	$1,717.00	<1%	$1,658.22	<1%
Subtotal Taxes and Assessments	$171,211.00		$193,313.64	28%
Development fees	$102,570.00	37%	$79,956.09	0%
Contracts for service	$	0%	$	0%
% Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$635.00	<1%	$14,934.03	5%
Revenue total	**$274,416.00**	**100%**	**$288,203.76**	**100%**

Attributes	
Formation date	1943
District area (square miles)	20
Population	4,700
Number of stations	1
ISO rating	5 - City 9 - Rural

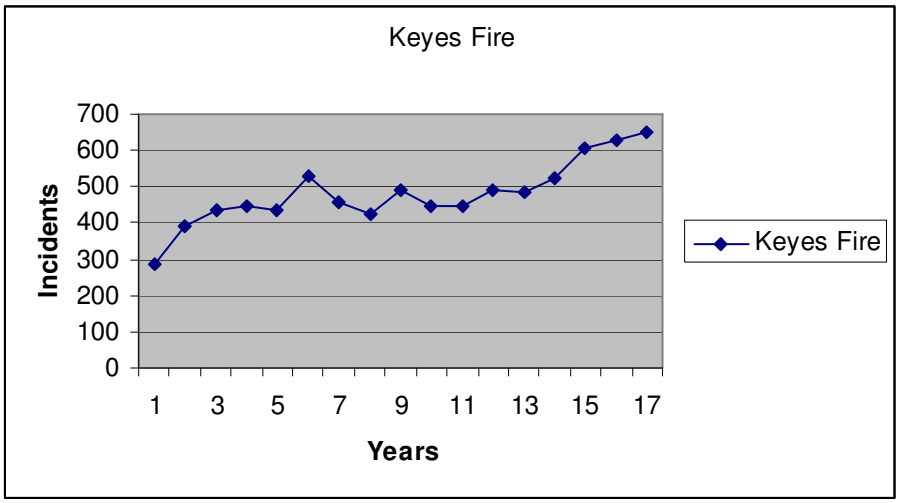
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	25, Type I 26, Type I 51, Type III
Water tenders	61, Type I
Ambulance/squads/rescue	81
Utility	91
Special	None

Staffing	
Full-time fire suppression/shift	1
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	28
Non-safety regular/total	0

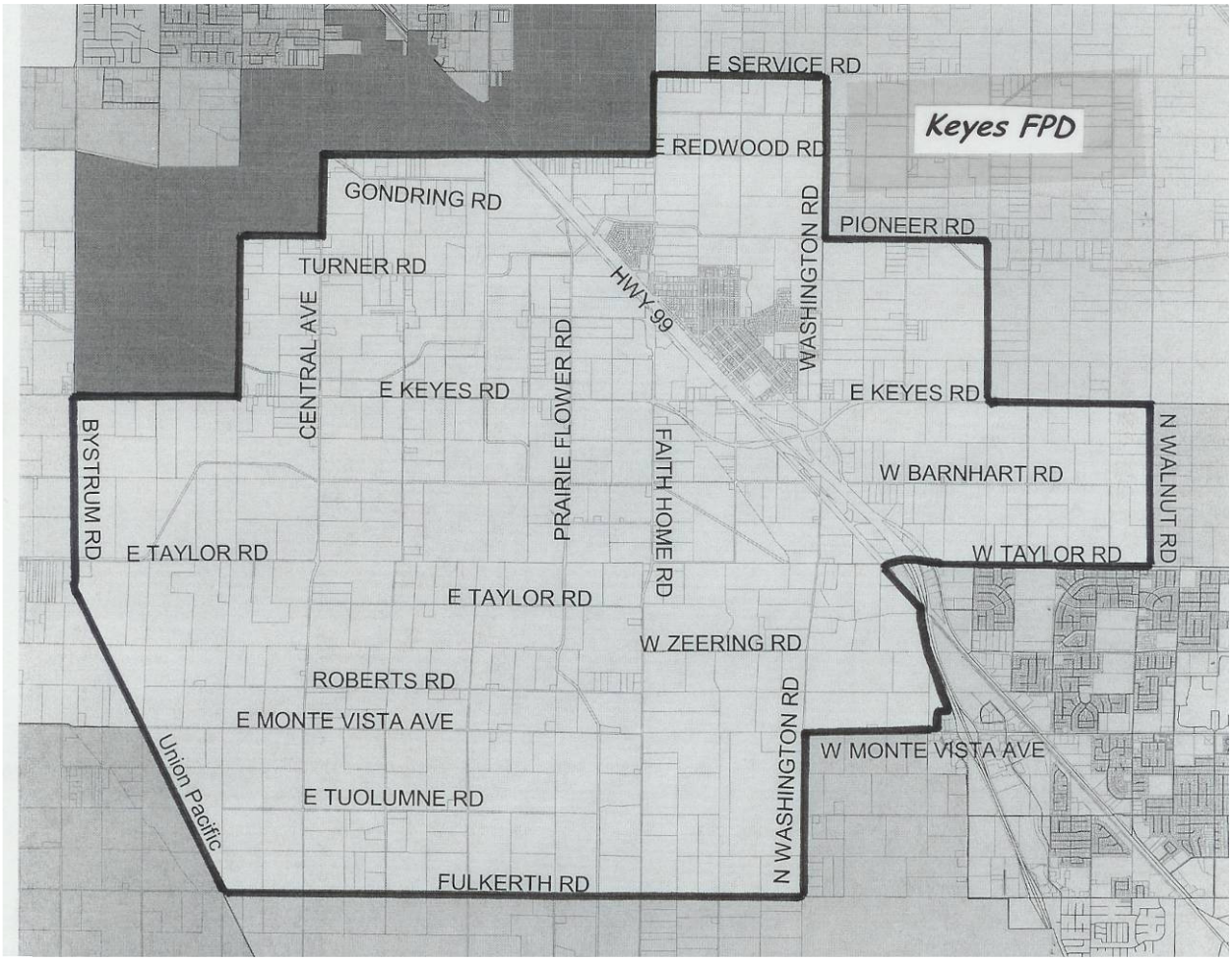
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[6]

Keyes Fire Protection District Workload, 1987 - 2005



[6] Stanislaus Regional 9-1-1 JPA data.

Keyes Fire Protection District Sphere of Influence Map



Modesto Fire Department

600 11th Street
Modesto, CA 95354-3511
Chief Jim Miguel
Phone: 209-572-9590
Fax: 209-578-9591
Email:

City Government

Modesto Fire Department
Budget, Attributes, Types of Service, and Resources

Budget				
Year	Personnel	Capital	Grants	Other
2005	19,201,260			592,236
2004	17,802,475			564,229

Attributes	
Formation date	1884
District area (square miles)	40
Population	206,000
Number of stations	11
ISO rating	2
Current budget	25,716,020

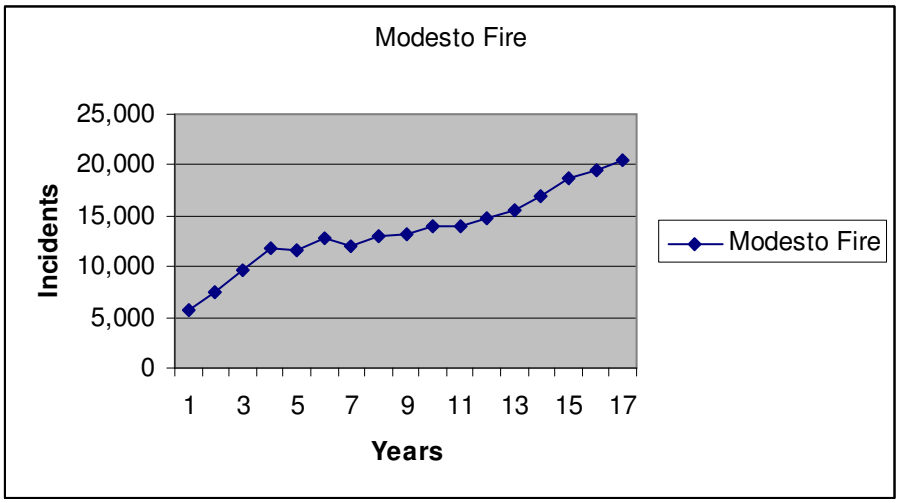
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	Yes
Ambulance	No
Rescue	Yes

Apparatus	
Engines	E21 Pierce 2004 E31 Pierce 2004 E22 Pierce 1998 E23 Pierce 1994 E24 Pierce 2001 E34 Van Pelt 1982 E25 Pierce 2003 E35 Pierce 1990 E36 Pierce 1989 E52 Brush Ford 2003 E53 Brush Ford 2004 E26 Pierce 1994 E27 Pierce 1996 E28 Pierce 1989 E29 Pierce 1996 E20 Pierce 2005 E38 Van Pelt 1979 E11 Pierce 1990
Water tenders	
Ambulance/squads/rescue	R85 Van Pelt A91 E-One 2000 A92 IH 1972
Utility	T71 Pierce 1996 T75 Pierce 2002 T11 Pierce 2006
Special	

Staffing	
Full-time fire suppression/shift	176
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	0
Non-safety regular/total	15

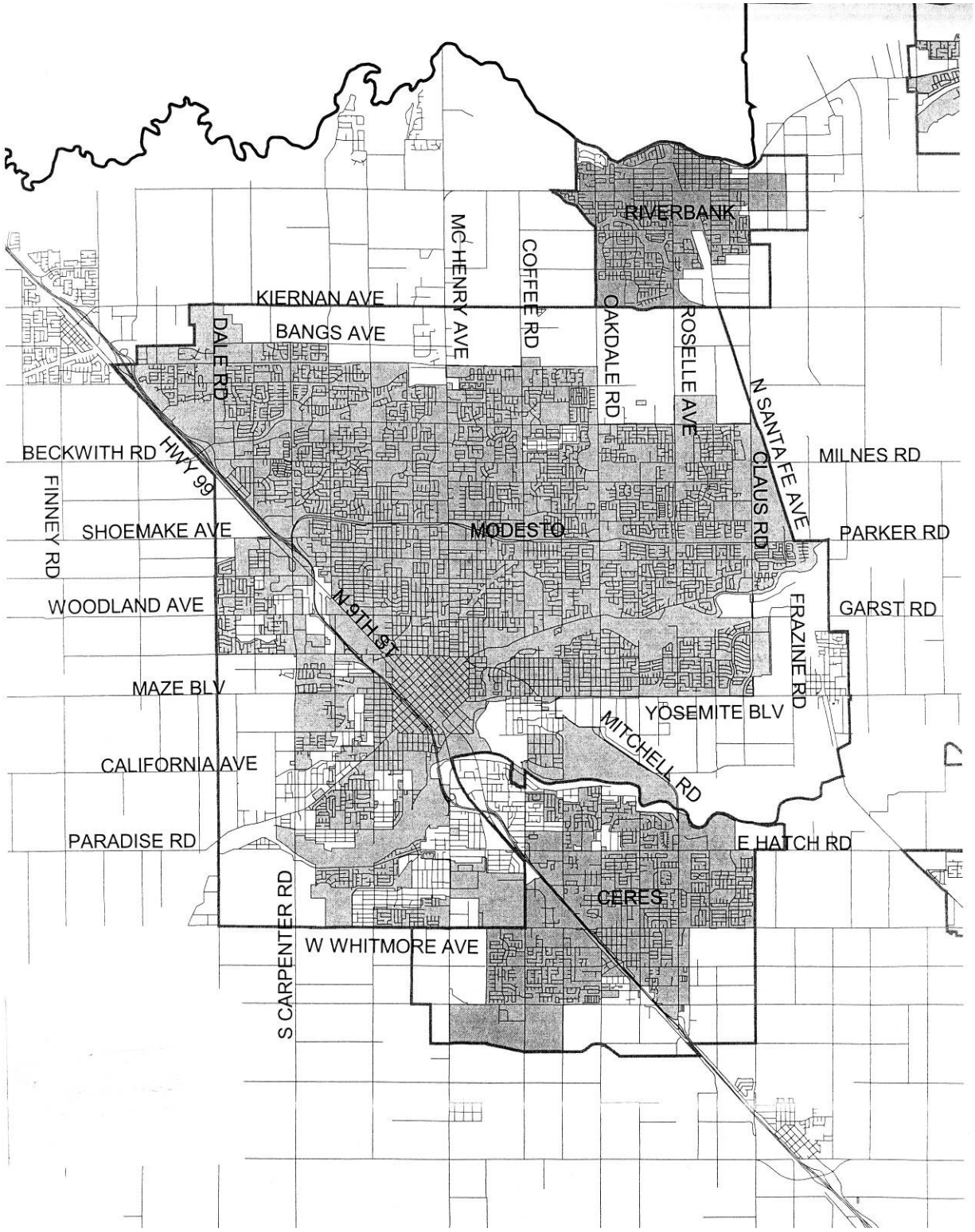
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire department over the last 16 years. The record started in 1987 and ends in 2005.[7]

Modesto Fire Department Workload, 1987 – 2005



[7] Stanislaus Regional 9-1-1 JPA data.

Modesto Fire Department Sphere of Influence Map



Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

Mountain View Fire Protection District

Mountain View Fire Protection District is located east of the San Joaquin River and adjacent to the Stanislaus-Merced County line. The district includes territory described as entirely agricultural and rural. There are no unincorporated communities within district boundaries, and it has no territory within a city SOI. District boundaries are adjacent to the West Stanislaus, Turlock Rural, Keyes, and Westport Fire Protection Districts.

9633 Crows Landing Road
Crows Landing, CA 95313-9602
Chief Kevin Blount
Phone: 209-634-4766
Fax: 209-634-9852
Email: None Provided

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications And Residency Requirements:	**Appointed** by the Board of Supervisors Must reside within the boundaries of the district
Term:	Three-year term, with two-term limitation
Duties:	Fire protection
Meetings:	Second Wednesday of each month at 4:30 p.m. Fire Station #1, 9633 Crows Landing Road, Crows Landing

Mountain View Protection Fire District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$65,318.00	48%	$72,409.25	49%
Fire service fees/parcel tax	$	0%	$	0%
Special assessments	$65,853.00	48%	$68,072.99	46%
SB 813	$	0%	$	0%
Homeowners property tax relief	$1,270.00	1%	$1,162.20	1%
Subtotal Taxes and Assessments	$132,441.00		$141.644.44	
Development fees	$	0%	$	0%
Contracts for service	$	0%	$	0%
% Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$4,457.00	3%	$6,397.29	4%
Revenue total	**$136,898.00**	**100%**	**$148,041.73**	**100%**

Attributes	
Formation date	1943
District area (square miles)	53
Population	2500
Number of stations	2
ISO rating	9
Current budget	$148,041.73.00

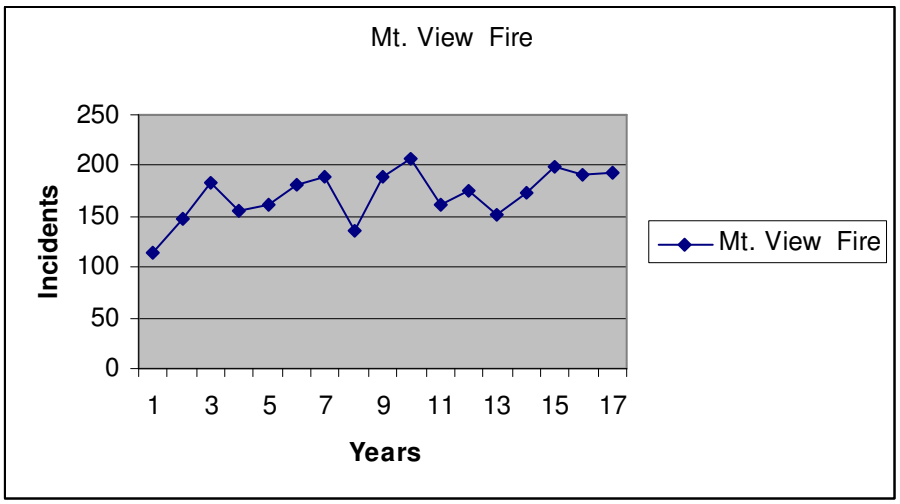
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	21 Structure 32 Structure 50 Wildland
Water tenders	61 Structure
Ambulance/squads/rescue	None
Utility	None
Special	None

Staffing	
Full-time fire suppression/shift	0
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	18
Non-safety regular/total	0

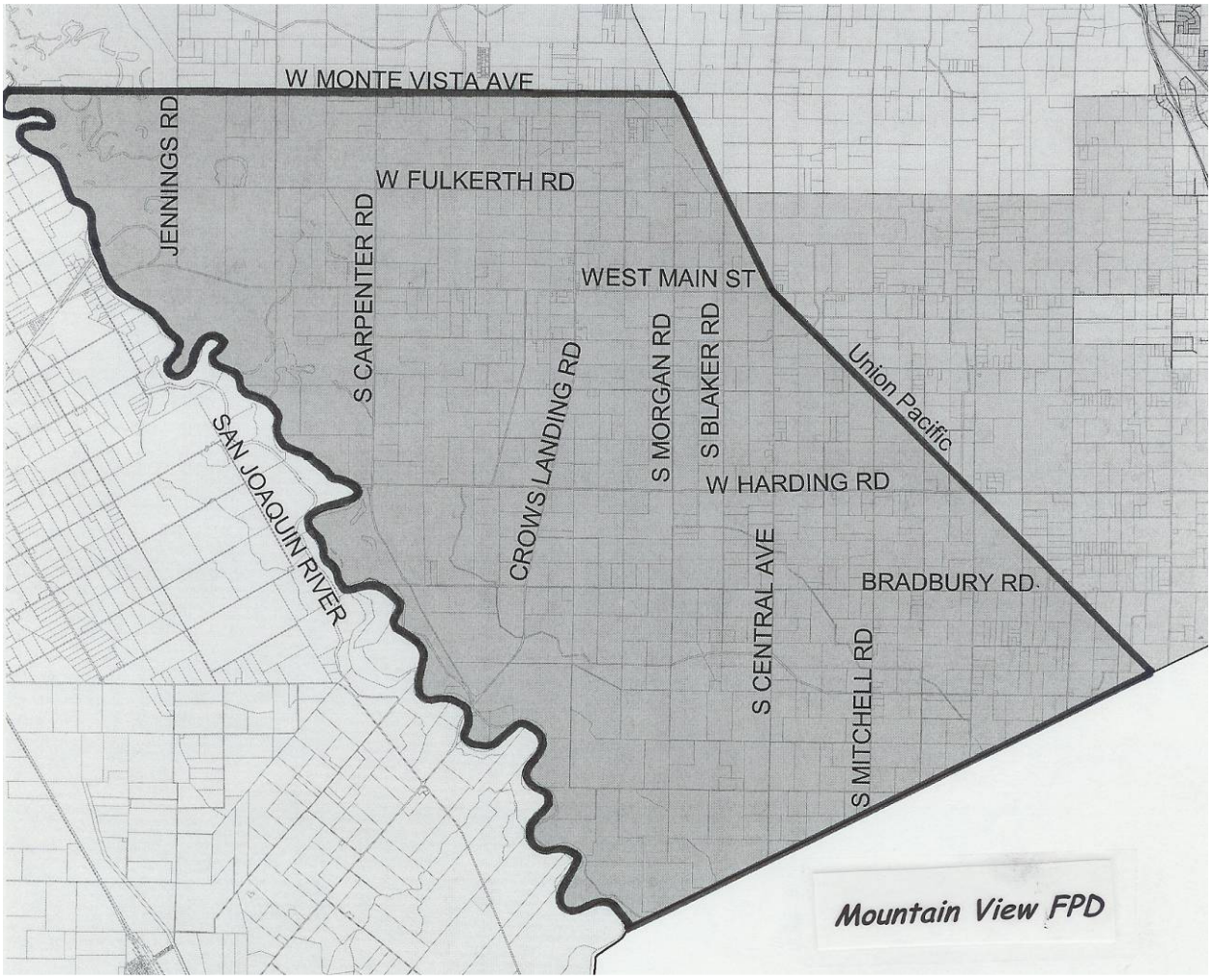
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[8]

Mountain View Fire Protection District Workload, 1987 – 2005



[8] 9-1-1 Communications Center data.

Mountain View Fire Protection District Sphere of Influence Map



Newman Fire Department

1622 N Street
Newman, CA 95630-1248
Chief Mel Souza
Phone: 209-862-1389
Fax: 209-862-3525
Email: None Provided

Newman Fire Department
Attributes, Types of Service, and Resources

Attributes	
Formation date	1888
District area (square miles)	4
Population	10,000
Number of stations	1
ISO rating	3

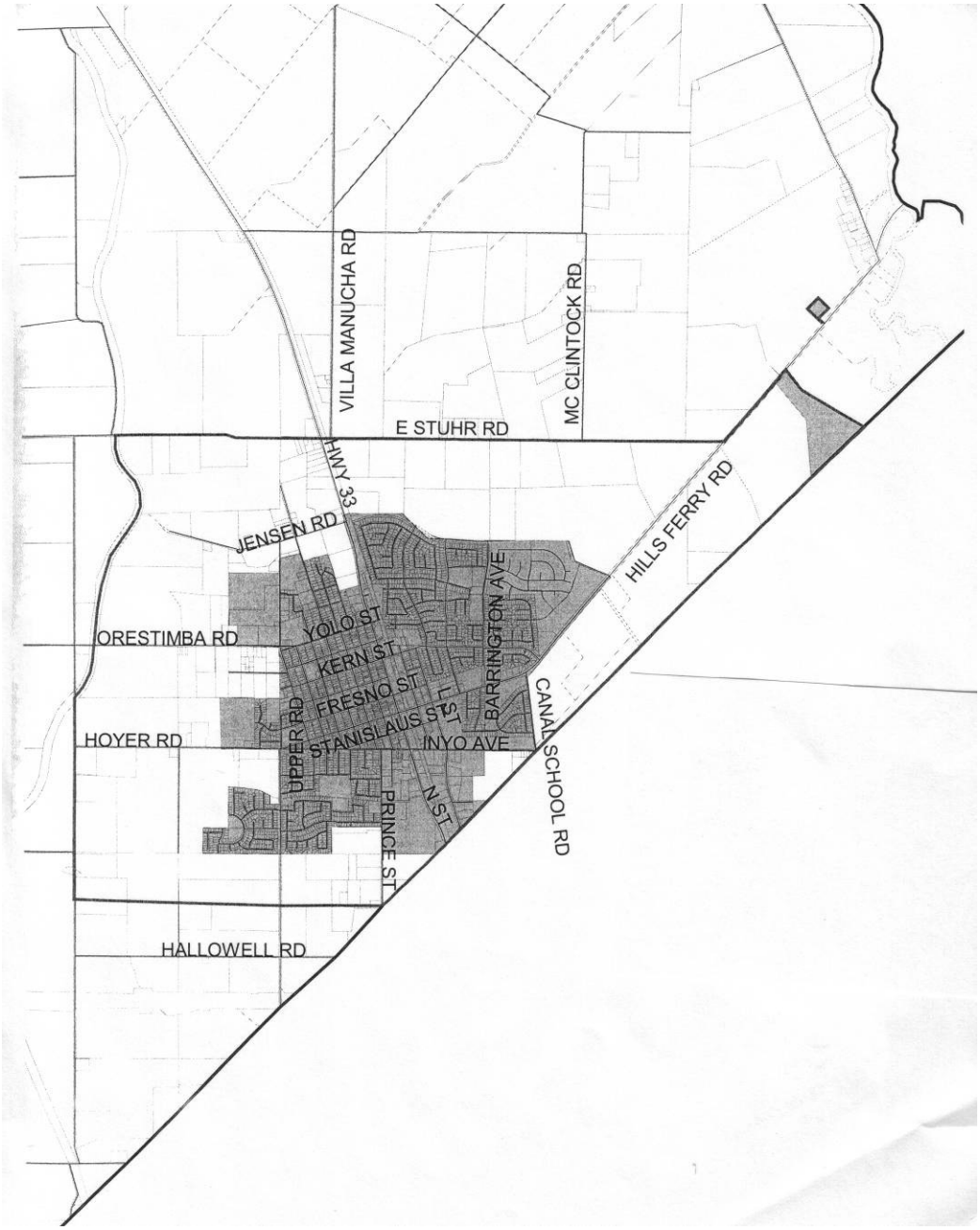
Types of Services	
Fire	Yes
EMS	No
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	Structure Structure Structure
Water tenders	Structure
Ambulance/squads/rescue	
Utility	
Special	

Staffing	
Full-time fire suppression/shift	Shared
Temporary fire suppression/shift	1
Paid call firefighters/total	0
Volunteer/total	14
Non-safety regular/total	0

See West Stanislaus Fire Protection District for additional information.

Newman Fire Department Sphere of Influence Map



Oakdale City Fire Department

325 E G Street
Oakdale, CA 95361-3911
Chief Michael R. Wilkinson
Phone: 209-847-5904
Fax: 209-847-5907
Email: mwilkinson@ci.oakdale.ca.us

City Government

Oakdale City Fire Department
Attributes, Types of Service, and Resources

Attributes	
Formation Date	1913
District Area (square miles)	5.5
Population	17,500
Number of Stations	2
ISO rating	4 - City 6 - Rural
Current Budget	$2,557,233.00

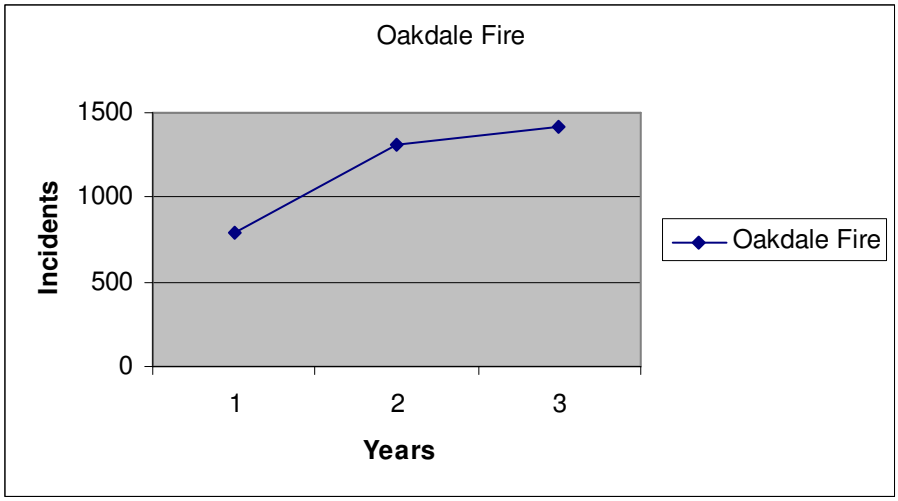
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	Yes
Ambulance	No
Rescue	Yes

Apparatus	
Engines	25 Type I 1990 23 Type I 1986 54 Type III 1978 52 Type III 2001
Water tenders	None
Ambulance/squads/rescue	Type II Rescue/Boat Trailer Technical Rescue Trailer 2004
Utility	76 Type II Truck 1979 Ford F150 4x4 1997 Chevy ¾ Ton PU 1998 Ford Expedition 2002 Ford Expedition 2002
Special	OES Type I

Staffing	
Full-time fire suppression/shift	20
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	2
Non-safety regular/total	1

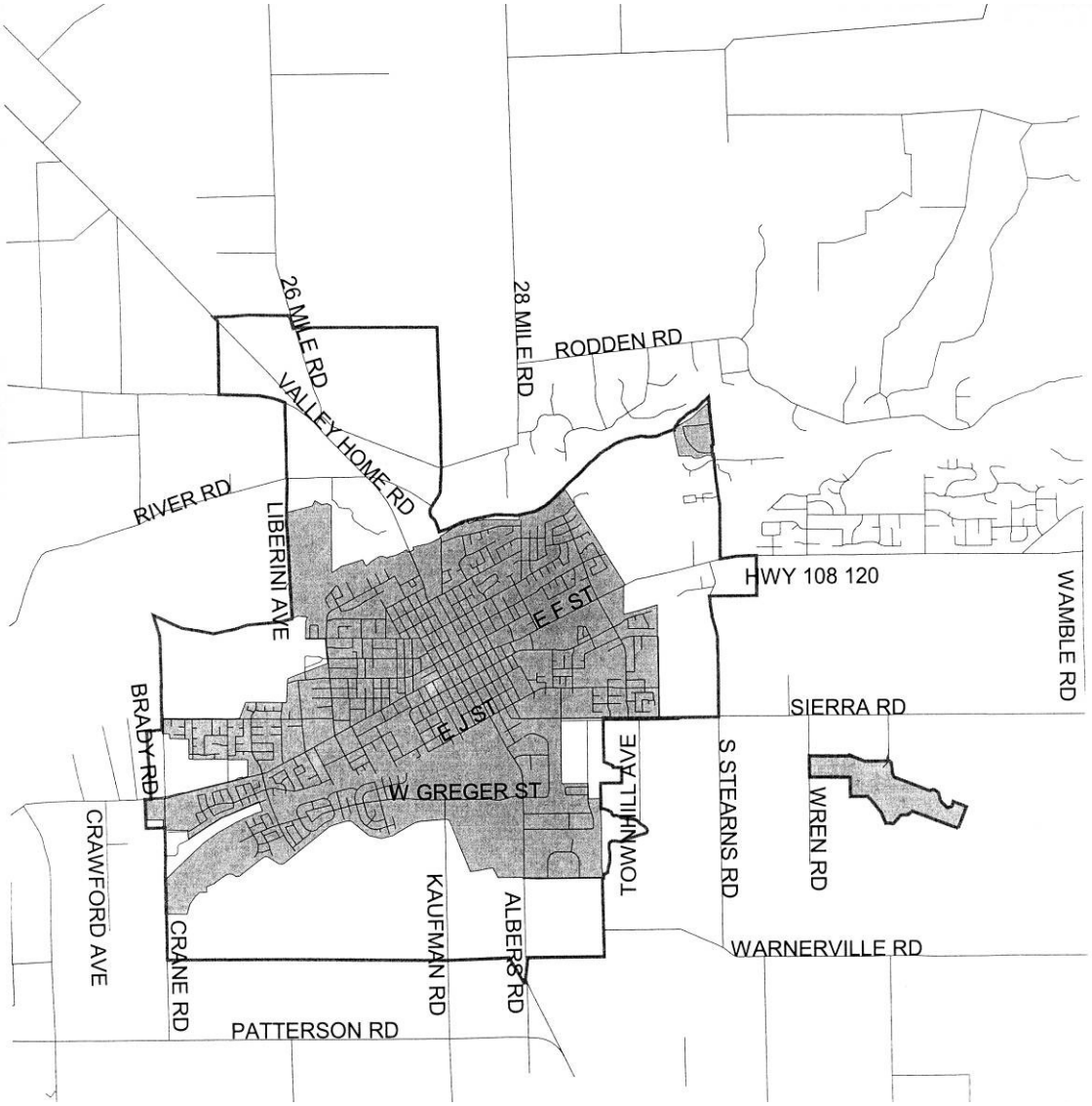
Response Workload Since 2003:
The following chart illustrates the increase in the workload of the fire department over the last three years. Oakdale maintained its own 9-1-1 center until 2003. Consequently, workload data is limited to records from 2003 through 2005.[9]

Oakdale City Fire Department Workload, 2003 – 2005



[9] Stanislaus Regional 9-1-1 JPA data.

Oakdale City Fire Department Sphere of Influence Map



Please contact the district to verify current meeting time/place. Updated contact information for each district can be found here: http://www.stancounty.com/board/boards-commissions.shtm

Oakdale Rural Fire Protection District

Oakdale Rural Fire Protection District is located in the northern portion of Stanislaus County. The district serves the unincorporated communities of Valley Home, Knights Ferry, and the E*ast Oakdale* area. District boundaries surround the city of Oakdale; and, as such, portions are within the city of Oakdale's SOI. Boundaries are adjacent to the Stanislaus Consolidated Fire Protection District and the n*orth area* of the County, which is currently an area outside any organized fire protection district boundary.

1398 East F Street
Oakdale, CA 95361-4115
Interim Fire Chief Robert Hoyer
Phone: 209-847-6898
Fax: 209-847-1520
Email: hoyerorfd@sbcglobal.net

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Appointed** by the Board of Supervisors Must reside within the boundaries of the district
Term:	Three-year term, with two-term limitation
Duties:	Fire protection
Meetings:	Third Tuesday at 7:00 p.m. Fire Station #1, 1398 East F Street, Oakdale

Oakdale Rural Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$ 354,210.00	36%	$ 406,136.76	24%
Fire service fees / parcel tax		0%	$	0%
Special assessments	$ 415,243.00	43%	$ 1,118,891.36	66%
SB 813	$	0%	$	0%
Homeowners property tax relief	$ 6,892.00	1%	$ 6,519.14	0%
Subtotal Taxes and Assessments	$ 776,345.00		$ 1,531,547.26	
Development fees	$ 176,890.00	18%	$ 141,637.72	8%
Contracts for service	$ 1,100.00	0%	$ 1,100.00	0%
Interest	$	%	$	0%
Sale of fixed assets	$	%	$	0%
Other misc.	$ 20,057.00	2%	$ 13,220.19	1%
Revenue total	**$ 974,392.00**	**100%**	**$ 1,687,505.17**	**100%**

Measure M passed on 6-15-05
2005-06 Revised Budget - $1,512,000
2006-07 Revised - $1,567,000

Attributes	
Formation date	10/29/45
District area (square miles)	230
Population	11,000
Number of stations	3
ISO rating	4 - w/in five miles from station/ 1,000' from hydrant 9 - all other areas

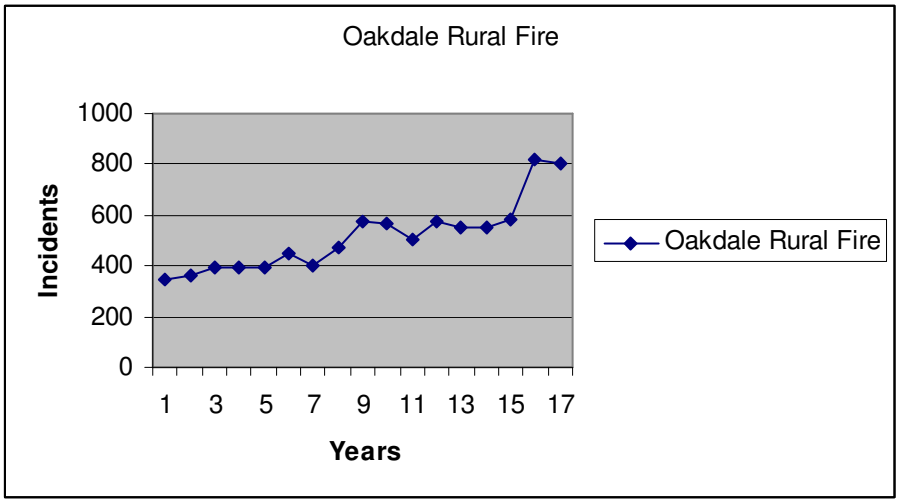
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Staffing	
Full-time fire suppression/shift	19
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	30
Non-safety regular/total	1

Apparatus	
Engines	HiTech Engine 21-Type One, 2005 HiTech Engine 22-Type One,1993 Van Pelt Engine 23 – Type One, 1985 Van Pelt, Engine 31 – Type Two, 1977 Van Pelt, Engine 43 – Type Two, 1977 International Engine 51 – Type Three, 1984 American La France Engine 52 – Type Three, 2001 American La France Engine 53 – Type Three, 2003
Water tenders	Hi Tech Tender 61- Type One, 1991 Hi Tech Tender 63 Type One, 1984
Ambulance/squads/Rescue	Hi Tech Rescue 81 – Type Two, 2000 GMC Rescue 82, Type Three, 1987
Utility	Tahoe Command Vehicle, 90- 2005 Chevy Pick-up Command Vehicle, 1999 Dodge Pick-up Command Vehicle, 1999
Special	Zodiac Rescue Boat Mobile Breathing Air Compressor, High Pressure Mobile Generator, 65,000 watts.

Response Workload since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[10]

Oakdale Rural Fire Protection District Workload, 1987 - 2005

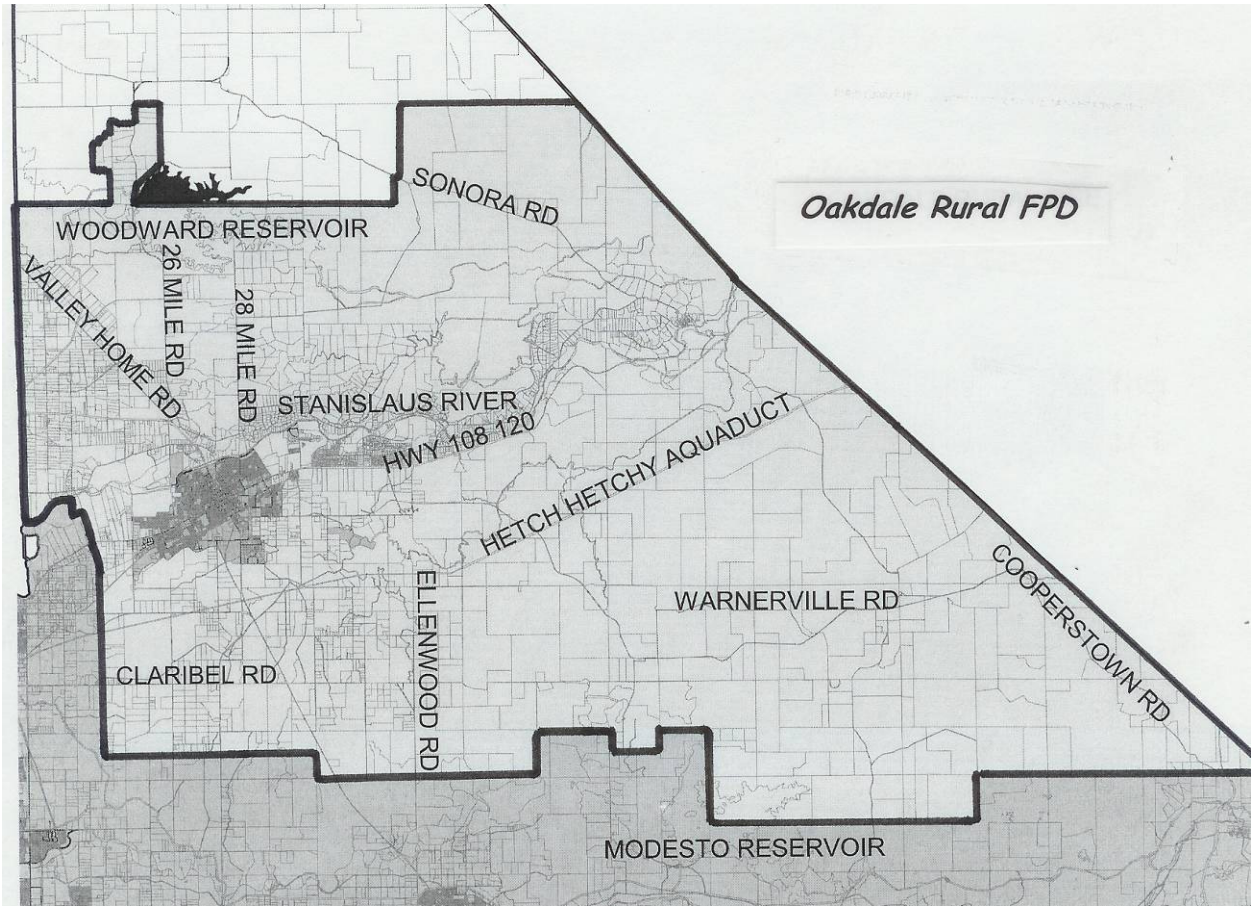


The Last Five Years

Year	Number of Calls
2005	1027
2004	1016
2003	962
2002	975
2001	894

[10] Stanislaus Regional 9-1-1 JPA data.

Oakdale Rural Fire Protection District Sphere of Influence Map



Patterson Fire Department

P.O. Box 565
Patterson, CA 95363-0565
Chief James W. Kinnear
Phone: 209-892-5621
Fax: 209-892-7896
Email: wsidefd@evansinet.com

Part of West Stanislaus

Patterson Fire Department
Attributes, Types of Service, and Resources

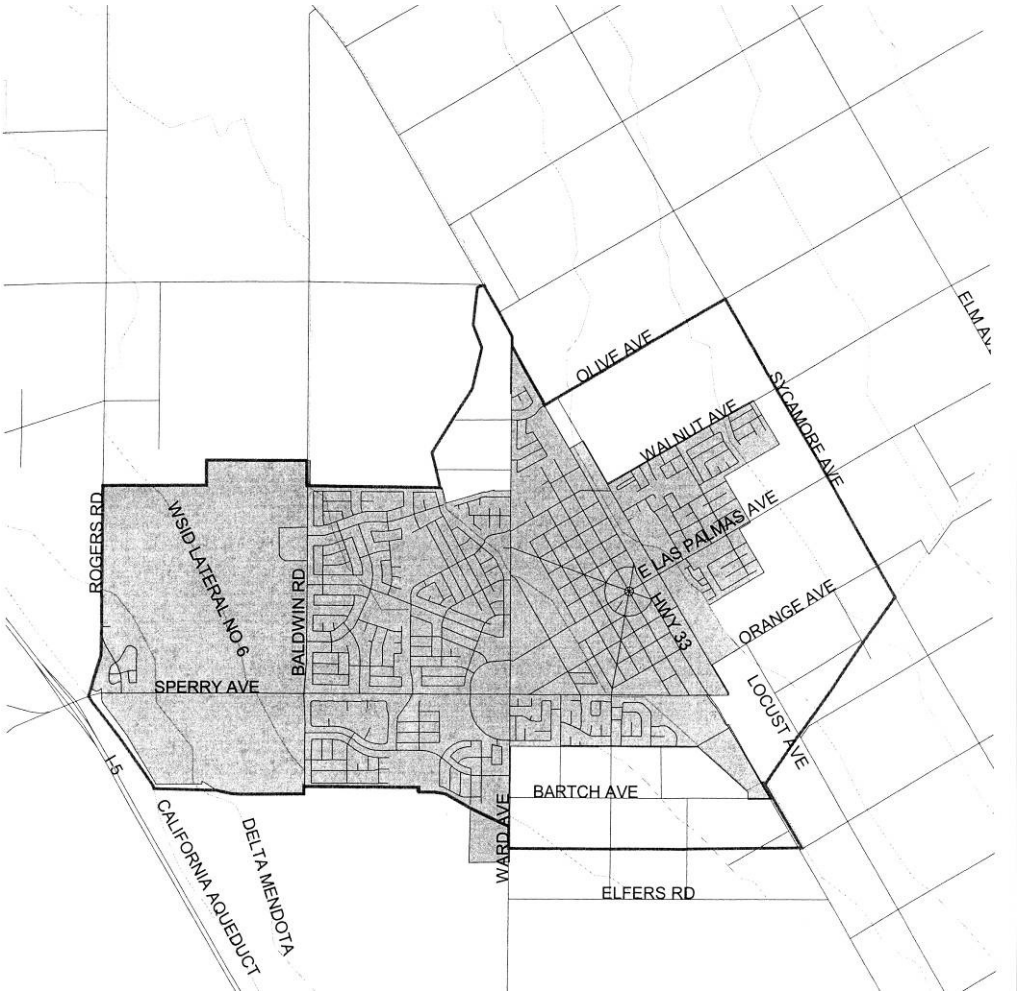
Attributes	
Formation date	1919
District area (square miles)	4
Population	17,000
Number of stations	1
ISO rating	5

Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	34 Front Line 2004 35 Front Line 2002 37 Front Line 1991 36 Reserve 1976
Water tenders	None
Ambulance/Squads/Rescue	Rescue 82 Front Line 1994
Utility	None
Special	None

Staffing	
Full-time fire suppression/shift	6 (3 shared)
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	40
Non-safety regular/total	2

Patterson Fire Department Sphere of Influence Map



See West Stanislaus Fire Protection District for additional information.

Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

Salida Fire Protection District

Salida Fire Protection District is located south of the Stanislaus River, west of McHenry Avenue, and north of Shoemake Avenue. The district is adjacent to the northwesterly portion of the city of Modesto and includes the unincorporated community of Salida, the largest in Stanislaus County. Portions of the district's boundaries are within the city of Modesto's SOI. The district is adjacent to the Stanislaus Consolidated and Woodland Fire Protection Districts.

P.O. Box 1335
Salida, CA 95368-1335
Chief Dale Skiles
Phone: 209-545-0365
Fax: 209-545-3840
Email: dskiles@salidafire.com

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Elected**, **per Measure U, December 4, 2001** Must reside within the boundaries of the district
Term:	Four-year term
Duties:	Fire protection
Meetings:	Third Wednesday of each month at 7:00 p.m. Salida Fire Station, 4820 Salida Blvd, Salida

Salida Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$522,588.00	36%	$587,828.79	39%
Fire service fees / parcel tax	$	0%	$	0%
Special Assessments	$327,658.00	22%	$339,748.18	23%
SB 813	$	0%	$	0%
Homeowners property tax relief	$10,215.00	1%	$9,461.68	1%
Subtotal Taxes and Assessments	$860.461.00		$937,038.65	
Development fees	$404,193.00	28%	$435,405.37	29%
Contracts for service	$44,032.00	3%	$10,500.00	1%
Interest	$88,528.00	6%	$110,194.10	7%
Sale of fixed assets	$	0%	$3,600.00	<1%
Other misc.	$65,584.00	4%	$2,190.21	<1%
Revenue total	**$1,462,798.00**	**100%**	**$1,498,928.33**	**100%**

Attributes	
Formation date	1942
District area (square miles)	42
Population	18,100
Number of stations	3
ISO rating	4 - Hydrant Area 9 - Non hydrant Area

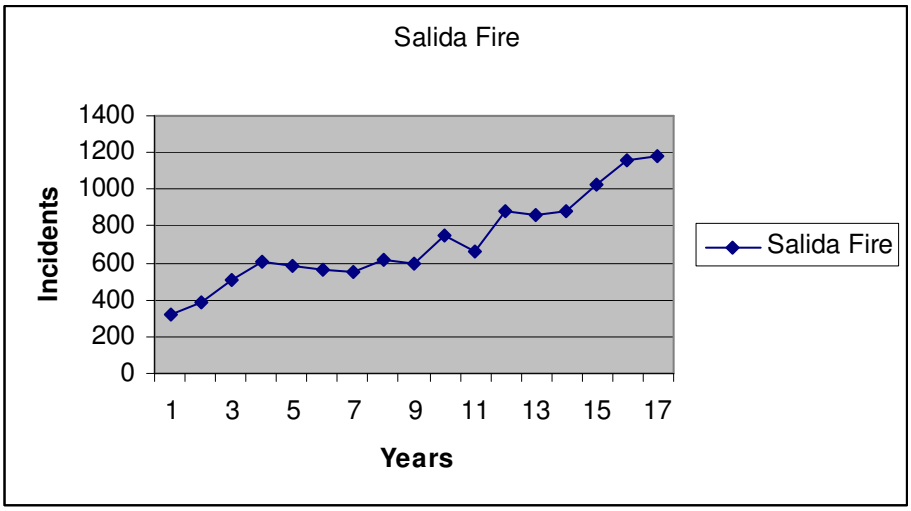
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Staffing	
Full-time fire suppression/shift	11
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	26
Non-safety regular/total	1

Apparatus	
Engines	E21 Pierce 2000 E22 Pierce 2000 E23 Pierce 1990 E31 Int. 1990 E32 Ford 1987 E51 Ford 1997
Water tenders	T61 Int. 1996
Ambulance/squads/rescue	R81 Ford 1990 R82 Ford 1992
Utility	C91 GM 2006 C93 Ford 1999 C94 Ford 2001 C95 Ford 1996
Special	B90 Boat/Trailer 2000

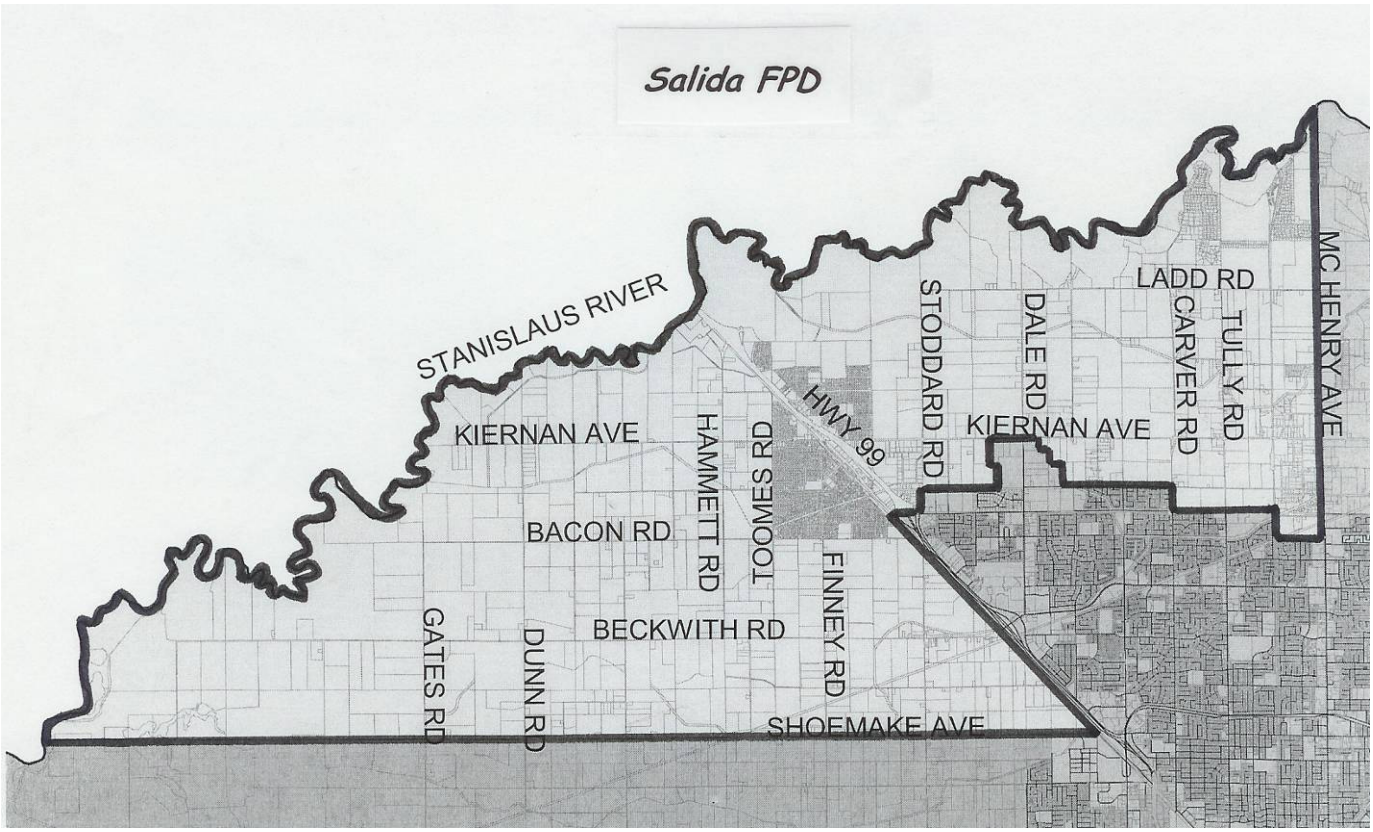
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire department over the last 16 years. The record started in 1987 and ends in 2005.[11]

Salida Fire Protection District Workload, 1987 – 2005



[11] Stanislaus Regional 9-1-1 JPA data.

Salida Fire Protection District Sphere of Influence Map



Please contact the district to verify current meeting time/place. Updated contact information for each district can be found here: http://www.stancounty.com/board/boards-commissions.shtm

Stanislaus Consolidated Fire Protection District

Stanislaus Consolidated Fire Protection District is located in the part of the County stretching east from McHenry Avenue to the Stanislaus-Merced-Tuolumne-Calaveras County lines. The district services the cities of Riverbank and Waterford, as well as the unincorporated communities of Empire, Hickman, and La Grange. It also includes Turlock Lake and portions of Modesto Reservoir. The district includes territory within the city of Modesto's SOI, including the Beard Industrial Tract, the Airport Neighborhood, and Empire. The Stanislaus Consolidated Fire Protection District was formed in 1995 with the consolidation of the Riverbank, Empire, and Waterford-Hickman fire protection districts. The district boundaries abut the Modesto Fire Department and the Oakdale Rural, Salida, Hughson Ceres, and Denair Fire Protection Districts.

Headquarters
3705 Oakdale Road
Modesto, CA 95357-0723
Fire Chief Steve Mayotte
Phone: 209-552-3700
Fax: 209-552-3705
Email: smayotte@scfpd.us

Compensation: $50.00 per meeting

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	California Health and Safety Code, Section 13800, know as the Fire Protection District Law of 1987. Reorganization procedures complied with the California Government Code, Section 56001, Cortese-Knox Reorganization Act.
Membership:	Five directors comprised of:
Qualifications and Residency Requirements:	One director appointed by city of Riverbank One director appointed by city of Waterford One resident in the old Empire Fire Protection District appointed by the Board of Supervisors Two public members-at-large (residents of the district) appointed by the Board of Supervisors
Term:	Four-year term, with two-term limitation
Duties:	Fire protection
Meetings:	Second Thursday of each month at 6:00 p.m. Meetings rotate between Riverbank, Waterford, and Empire

Stanislaus Consolidated Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$2,001,986.00	32%	$2,381,560.24	29%
Fire service fees / parcel tax	$	0%	$	0%
Special assessments	$2,004,012.00	32%	$4,476,508.83	55%
SB 813	$	0%	$	0%
Homeowners property tax relief	$38,960.00	<1%	$38,228.26	<1%
Subtotal Taxes and Assessments	$ $4,044,958.00		$6,896,297.33	
Development fees	$806,579.00	13%	$466,303.67	6%
Contracts for service	$1,247,959.00	20%	$783,668.36	10%
Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$216,233.00	3%	$1,068.00	<1%
Revenue total	**$6,315,729.00**	**100%**	**$8,147,337.36**	**100%**

Attributes	
Formation date	1995
District area (square miles)	217
Population	38,380
Number of stations	7
ISO rating	4 - hydrant areas 8 – non-hydrant areas w/in five miles of fire station 9 – La Grange or >5 miles of fire station

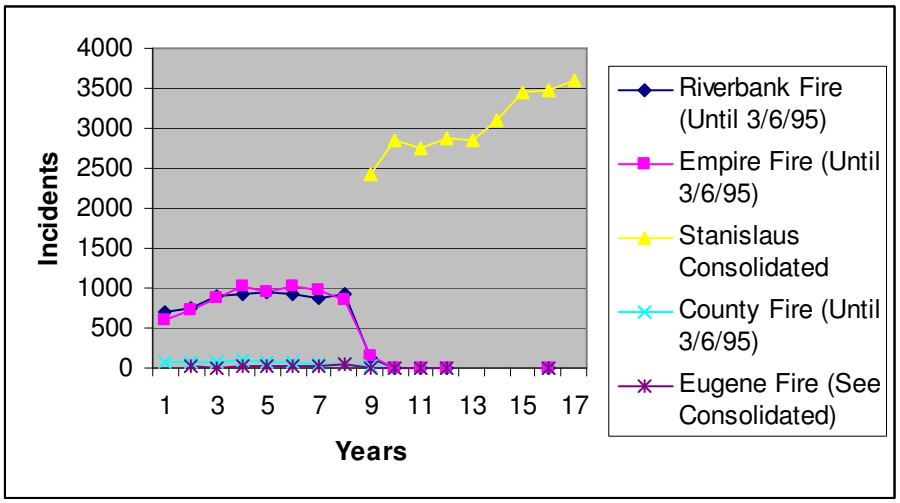
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	SC21 SC72 SC23 SC24 SC25 SC26 SC27 SC31 SC33 SC51 SC52 SC53 SC54 SC55 SC56
Water tenders	SC62 SC64 SC66
Ambulance/squads/rescue	SC81 SC84 SC85
Utility	SC01-Expedition SC03-Tahoe SC04-Expedition SC06-Expedition SC07-Ram P/U S105-Tahoe Prev/18-Dakota P/U Prev/19-Ford P/U Prev/20-Ford P/U Staff Car Staff Car
Special	Rescue Boat Rescue Boat

Staffing	
Full-time fire suppression/shift	50
Temporary fire suppression/shift	1
Paid call firefighters/total	0
Volunteer/total	30
Non-safety regular/total	0

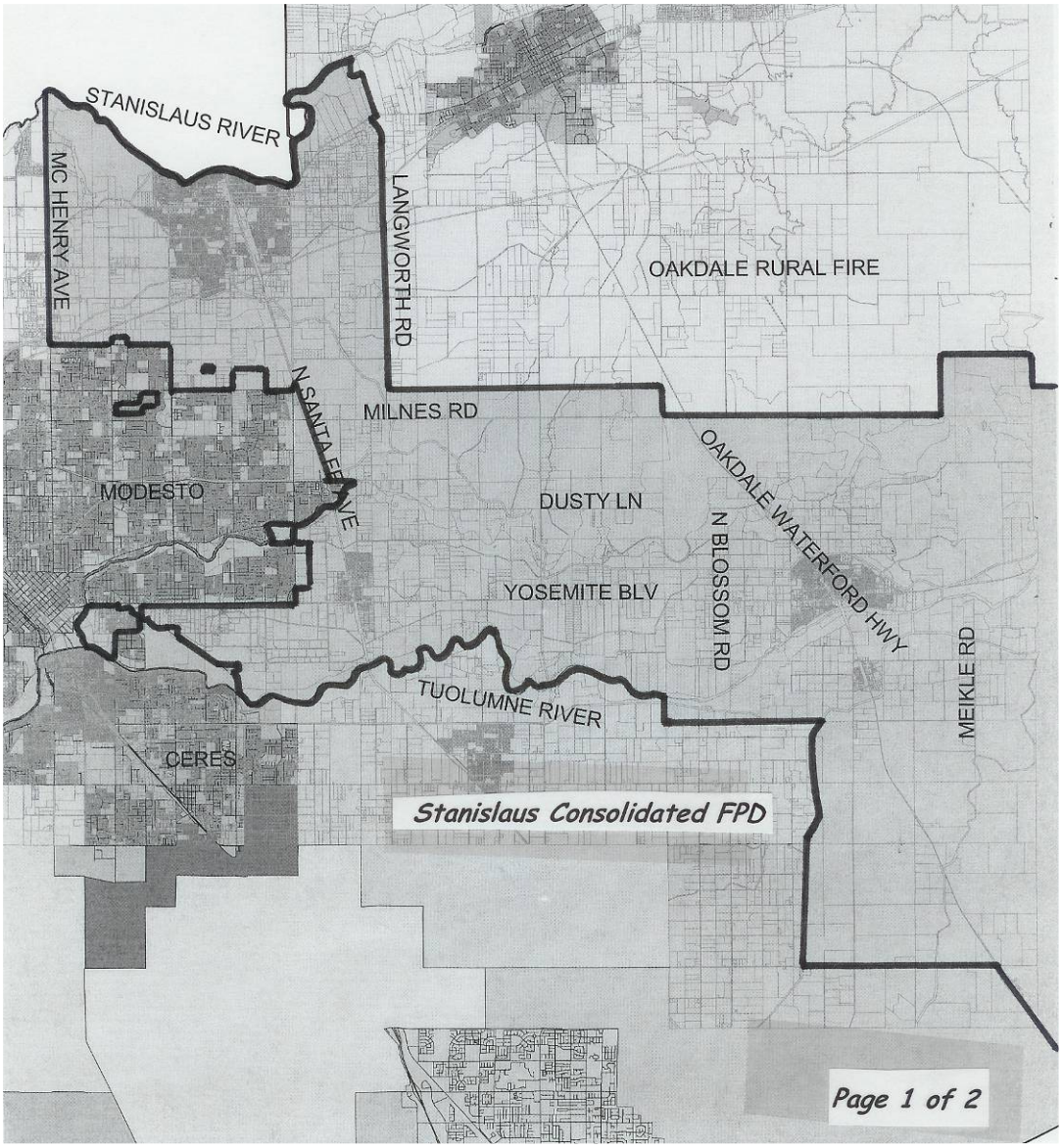
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[12]

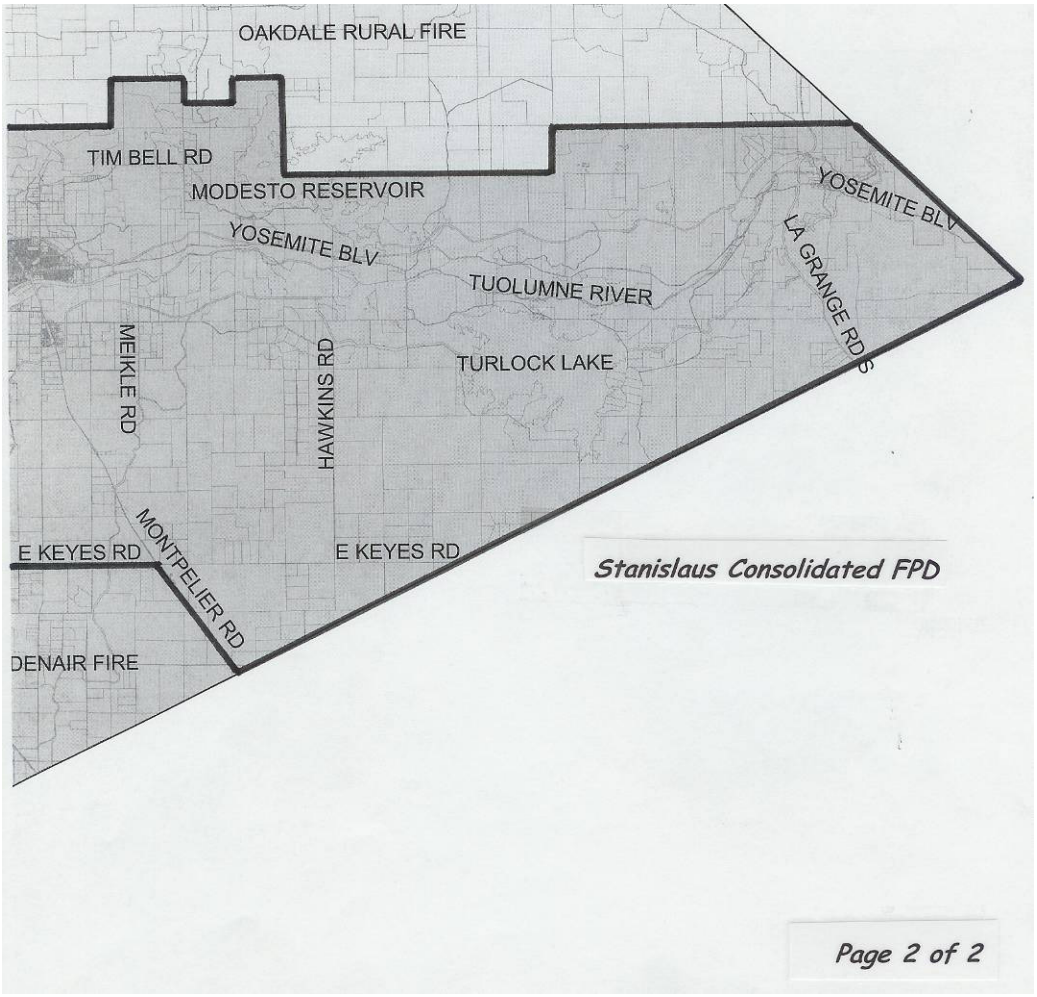
Stanislaus Consolidated Fire Protection District Workload, 1987 – 2005



[12] Stanislaus Regional 9-1-1 JPA data.

Stanislaus Consolidated Fire Protection District Sphere of Influence Maps




OAKDALE RURAL FIRE
TIM BELL RD
MODESTO RESERVOIR
YOSEMITE BLV
YOSEMITE BLV
TUOLUMNE RIVER
LA GRANGE RD S
MEIKLE RD
HAWKINS RD
TURLOCK LAKE
E KEYES RD
MONTPELIER RD
E KEYES RD
DENAIR FIRE
Stanislaus Consolidated FPD
Page 2 of 2

Turlock City Fire and Emergency Services

156 S. Broadway Ste 250
Turlock, CA 95380-5454
Chief Mark Langley
Phone: 209-668-5580
Fax: 209-668-5558
Email: mlangley@turlock.ca.us

City Government

Turlock City Fire and Emergency Services
Attributes, Types of Service, and Resources

Attributes	
Formation date	1908
District area (square miles)	14.58
Population	69,000
Number of stations	4
ISO rating	3
Current budget	5,158,932

Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	31 Front Line 2000 32 Front Line 1996 33 Front Line 2005 34 Front Line 2005 35 Reserve 1989
Water tenders	None
Ambulance/squads/rescue	None
Utility	Truck-71 Front Line 2002
Special	None

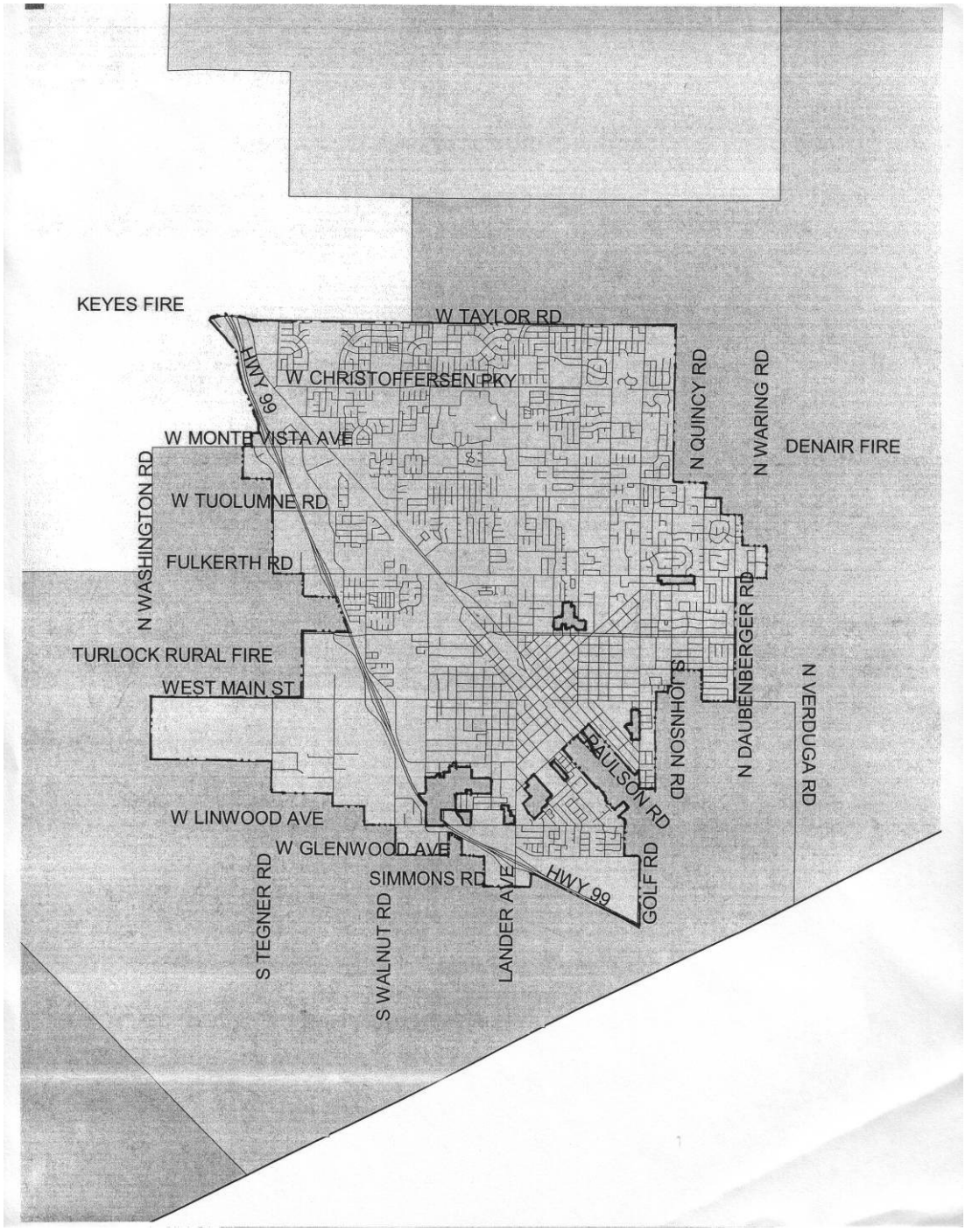
Staffing	
Full-time fire suppression/shift	33
Temporary fire suppression/shift	0
Paid call firefighters/total	20
Volunteer/total	0
Non-safety regular/total	3

Response Workload Since 1987:
The department's records are not kept by Stanislaus Regional 9-1-1 JPA. The fire department was able to provide three years of back data.

Turlock City Fire and Emergency Services Workload, 2002 – 2004

Current Emergency Response Workload				
Year	Fire	EMS	Other	Total
2004	283	2711	1284	4278
2003	271	2539	1403	4213
2002	297	2363	1403	4063

Turlock City Fire and Emergency Services Sphere of Influence Map



Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

Turlock Rural Fire Protection District

Turlock Rural Fire Protection District is located south and west of the City of Turlock, stretching to the Stanislaus-Merced County line. The district includes territory which is within the city of Turlock's SOI. The district is adjacent to the Keyes, Denair, and Mountain View Fire Protection Districts.

690 W. Canal Drive
Turlock, CA 95380-3821
Chief Rick Fortado
Phone: 209-632-3953
Fax: 209-632-1172
Email: trfd@hotmail.com

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Appointed** by the Board of Supervisors Must reside within the boundaries of the district
Term:	Three-year term with two-term limitation
Duties:	Fire protection
Meetings:	Second Tuesday of each month at 7:30 p.m. Fire Station, 690 W. Canal Drive, Turlock

Turlock Rural Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$106,288.00	59%	$117,399.00	52%
Fire service fees / parcel tax	$	0%	$	0%
Special Assessments	$71,442.00	40%	$105,111.07	47%
SB 813	$	0%	$	0%
Homeowners property tax relief	$1,995.00	1%	$1,810.44	1%
Subtotal Taxes and Assessments	$179,725.00		$224,320.51	
Development fees	$	0%	$	0%
Contracts for service	$	0%	$	0%
Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$83.00	<1%	$295.00	<1%
Revenue total	**$179,808.00**	**100%**	**$224,615.51**	**100%**

Attributes	
Formation date	1958
District area (square miles)	27
Population	4,000
Number of stations	1
ISO rating	4 & 8 in outlining areas

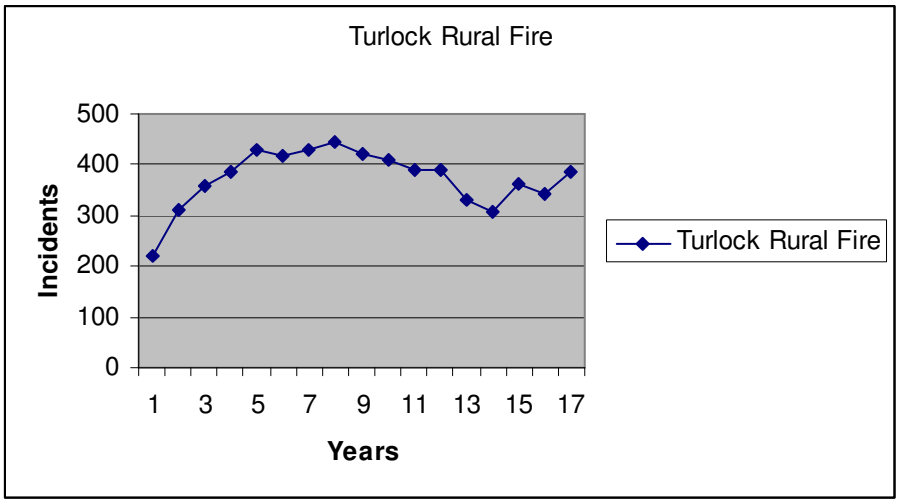
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	26, Type 1 45, Type 2 50, Type 2/3 51, Type 4 53, Type 3
Water tenders	63, Type 1
Ambulance/squads/rescue	85, BLS
Utility	96, Type 2 52, Type 2
Special	None

Staffing	
Full-time fire suppression/shift	0
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	300
Non-safety regular/total	

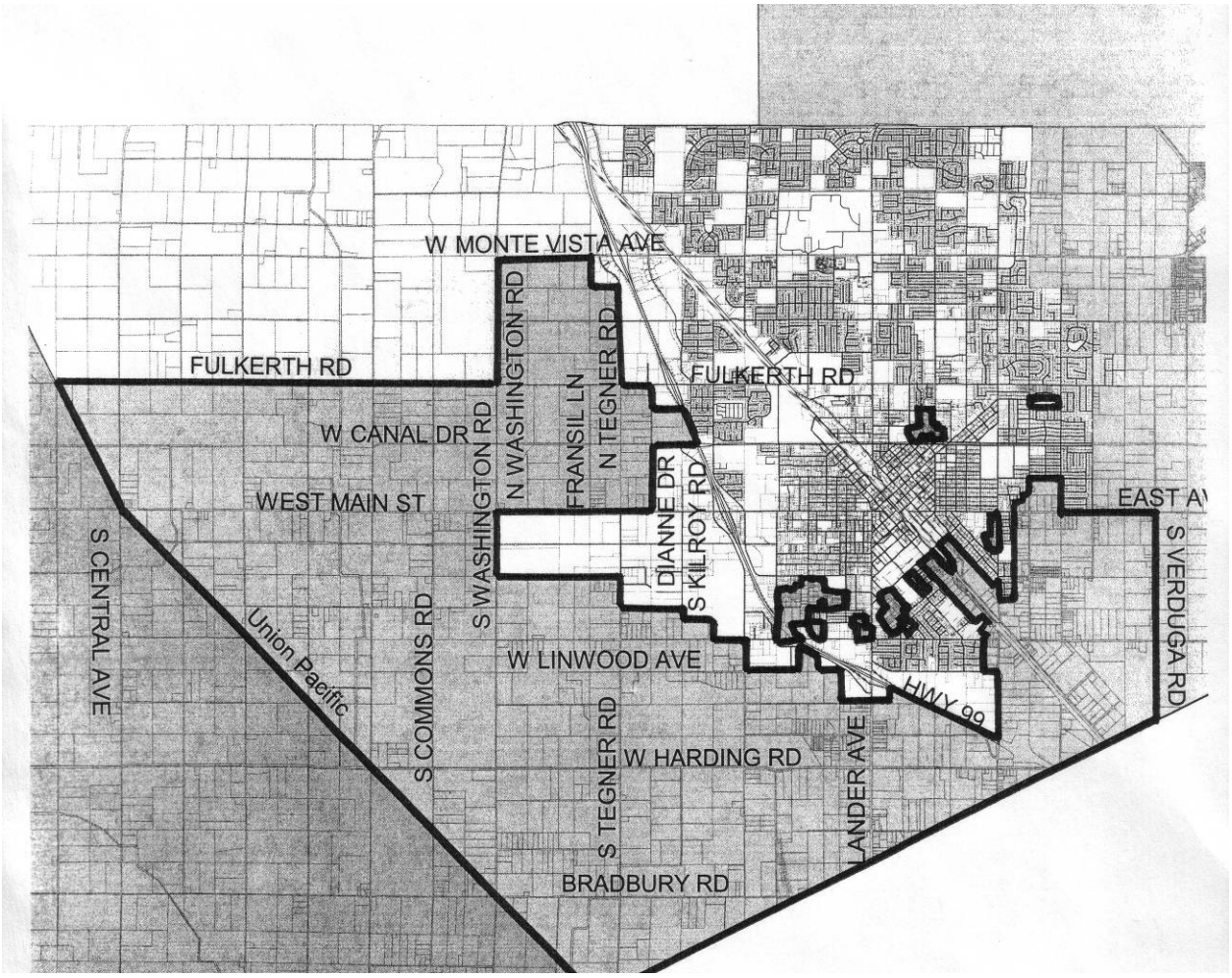
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[13]

Turlock Rural Fire Protection District Workload, 1987 – 2005



[13] Stanislaus Regional 9-1-1 JPA data.

Turlock Rural Fire Protection District Sphere of Influence Map



Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

West Stanislaus Fire Protection District

West Stanislaus Fire Protection District boundaries include the western portion of the County, located west of the San Joaquin River, excluding the cities of Patterson and Newman. Included in the district are the unincorporated communities of Grayson, Westley, Crows Landing, and Diablo Grande. The district is adjacent to the Woodland, Westport, and Mountain View Fire Protection Districts.

PO Box 565
344 West Las Palmas Avenue
Patterson, CA 95363
Chief James W. Kinnear
Phone: 209-892-5621
Fax: 209-892-7896
Email: wsidefd@evansinet.com

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Appointed** by the Board of Supervisors Must reside within the boundaries of the district
Term:	Three-year term, with two-term limitation
Duties:	Fire protection
Meetings:	Second Monday of each month at 7:00 p.m. District Headquarters, 344 West Las Palmas Avenue, Patterson

West Stanislaus Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$231,554.00	30%	$278,419.00	30%
Fire service fees / parcel tax	$	0%	$	0%
Special assessments	$246,453.68	32%	$303,568.00	33%
SB 813	$	0%	$	0%
Homeowners property tax relief	$4,314.00	<1%	$4,314.00	0%
Subtotal Taxes and Assessments	$482,321.68		$586,301.00	
Development fees	$284,060.05	37%	$320,647.11	34%
Contracts for service	$	0%	$	0%
Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$8,679.00	1%	$26,706.00	3%
Revenue total	**$775,060.73**	**100%**	**$933,654.11**	**100%**

Attributes	
Formation date	1935
District area (square miles)	625
Population	9,800
Number of stations	6
ISO rating	10 - More than 5 miles from fire station 8 - Within 5 miles of fire station 5 - Within 5 miles of fire station and has fire hydrants

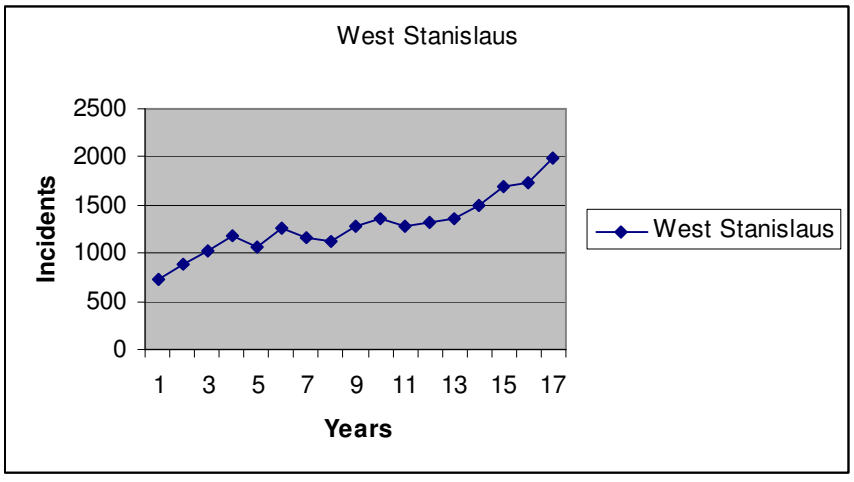
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Staffing	
Full-time fire suppression/shift	5 (shared)
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	100
Non-safety regular/total	1

Apparatus	
Engines	Engine 20 Engine 21 Engine 29 Engine 32 Engine 33 Engine 44 Engine 50 Engine 52
Water tenders	60 61 62 63 64
Ambulance/Squads/Rescue	80 82 83 (Westley) 84 Reserve
Utility	C1 4x4 Expedition C2 4x4 Expedition C3 4x4 pickup C4 4x4 pickup Electric 92 - Generator Trailer Air 94 - Mobile breathing air
Special	Stationary breathing air unit (Newman) Stationary breathing air unit (Patterson)

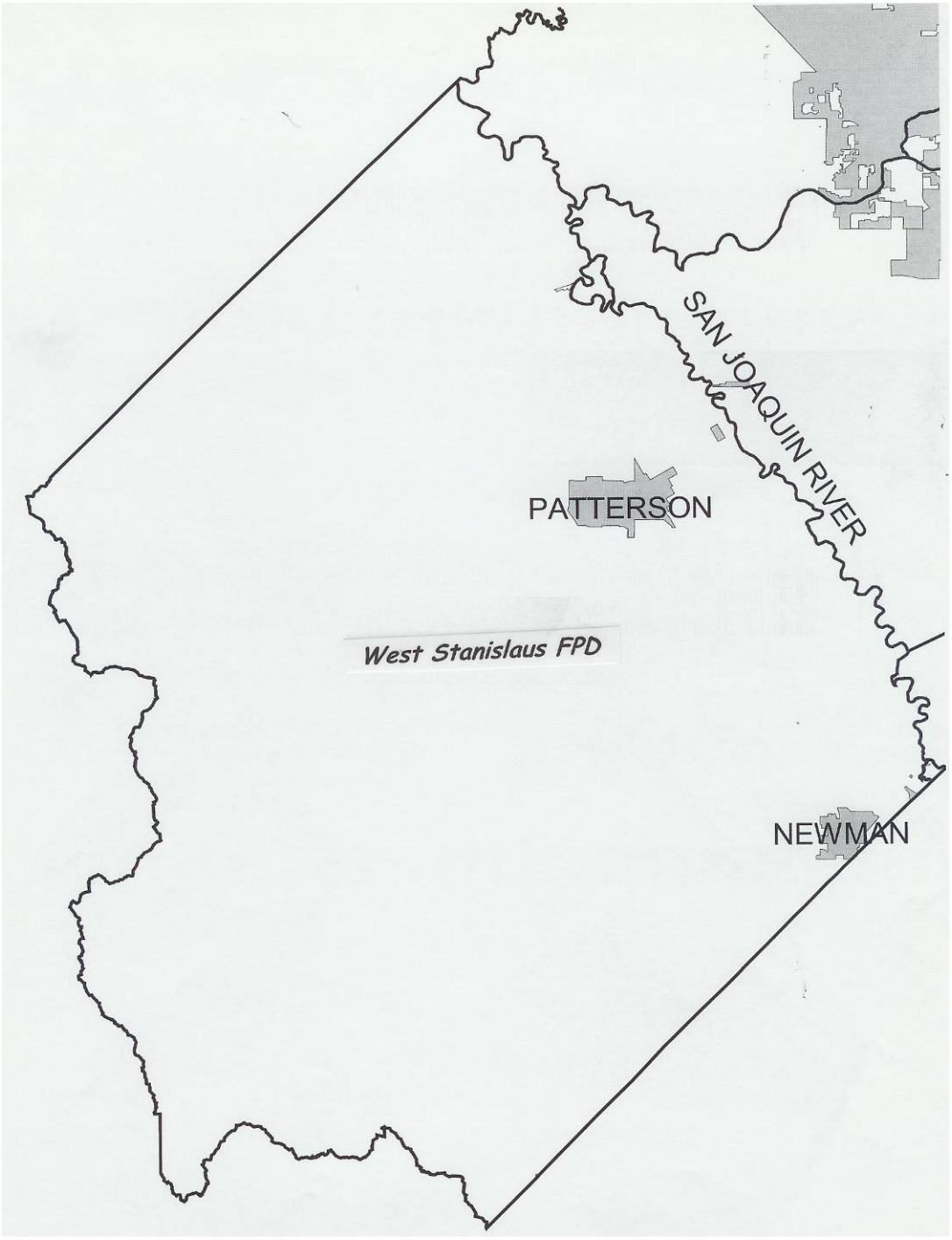
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[14]

West Stanislaus Fire Protection District Workload, 1987 – 2005



[14] Stanislaus Regional 9-1-1 JPA data.

West Stanislaus Fire Protection District Sphere of Influence Map



Please contact the district to verify current meeting time/place.
Updated contact information for each district can be found here:
http://www.stancounty.com/board/boards-commissions.shtm

Westport Fire Protection District

The Westport Fire Protection District lies south of the city of Modesto and west of the city of Ceres. The western edge of the district lies along the San Joaquin River. The small unincorporated communities, commonly known as the Monterey Park Tract and the Cowan Tract, are within the district's boundaries. Also, the northeast portion of the district is within the city of Ceres' SOI and includes the Stanislaus County Center VI Complex and G3 Properties, formally the site of Proctor and Gamble. The district is adjacent to the West Stanislaus, Woodland, Industrial, Burbank-Paradise, Ceres, Keyes, and Mountain View Fire Protection Districts.

5160 S. Carpenter Road
Modesto, CA 95358-8718
Chief Gary Thompson
Phone: 209-537-1391
Fax: 209-541-0912
Email: gtwestport1@aol.com

Compensation:	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Elected**, must be a registered voter within the district Vacancies filled by remaining directors within 60 days if a quorum exists; by the Board of Supervisors between 60 and 90 days; and by election after 90 days. Appointee shall hold office until next district election. (Government Code, Section 1780)
Term:	Four-year term
Meetings:	Second Tuesday of every month at 7:00 p.m. at fire station

Westport Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$48,910.00	36%	$56,043.60	41%
Fire service fees / parcel tax	$	0%	$	0%
Special assessments	$63,363.00	47%	$61,024.40	45%
SB 813	$	0%	$	0%
Homeowners property tax relief	$937.00	1%	$891.68	1%
Subtotal Taxes and Assessments	$113,210.00		$117,959.68	
Development fees	$	0%	$	0%
Contracts for service	$	0%	$	0%
Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$22,127.00	16%	$19,027.84	14%
Revenue total	$135,337.00	100%	$136,987.52	100%

Attributes	
Formation date	1962
District area (square miles)	45
Population	2,500
Number of stations	1
ISO rating	8 within 5-mile radius of station

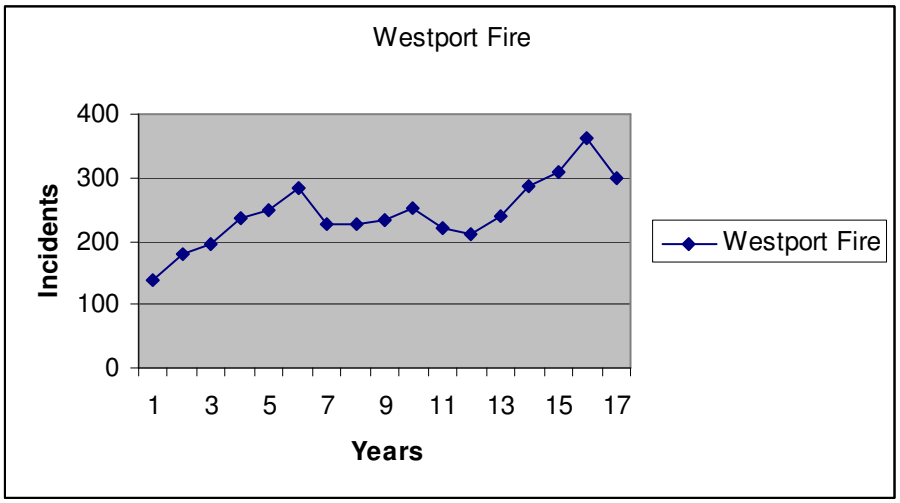
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	1996 International Pierce, Type 1 1973 Ford Howe, Type 1
Water tenders	1983 Ford Van Pelt, Type 1
Ambulance/squads/rescue	Rescue, 1989 GMC Hi-Tech
Utility	None
Special	None

Staffing	
Full-time fire suppression/shift	0
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	17
Non-safety regular/total	0

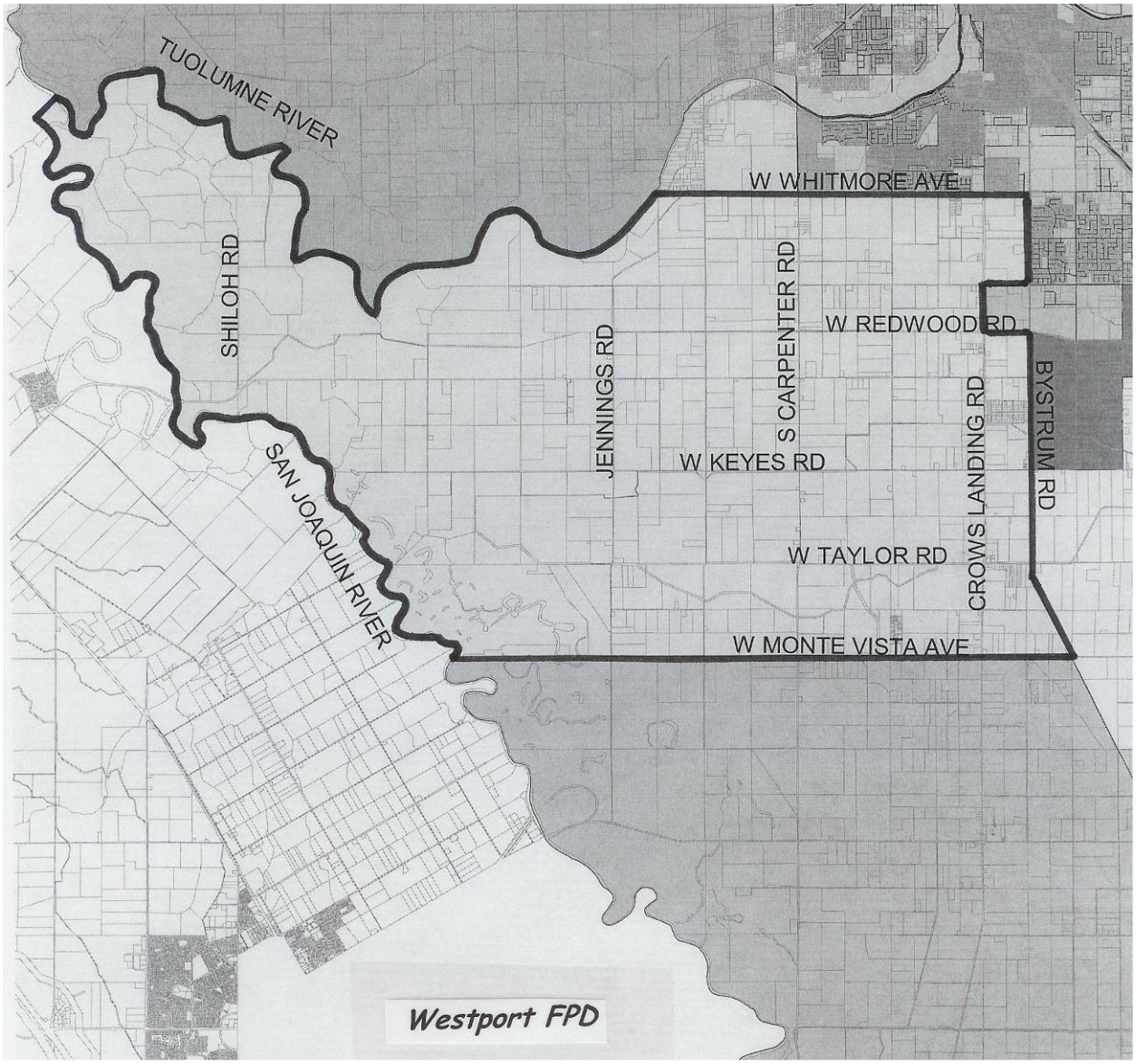
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[15]

Westport Fire Protection District Workload, 1987 – 2005



[15] Stanislaus Regional 9-1-1 JPA data.

Westport Fire Protection District Sphere of Influence Map



Woodland Avenue Fire Protection District

Woodland Fire Protection District is located north of the Tuolumne River and west of the city of Modesto. District boundaries include six small areas surrounded by the Modesto city limits. The easterly portion of the district is within the city of Modesto's SOI. The boundaries are adjacent to the Salida, Burbank-Paradise, Westport, and West Stanislaus Fire Protection Districts

Mike Passalaqua
Woodland Avenue Fire Protection District
3300 Woodland Avenue, Modesto, CA 95358
Phone: 209-524-4239
Fax: 209-571-3385
Email: wafdone@gmail.com

Compensation	None

Members of this board are required to file Conflict of Interest Disclosure Statements

Legal Authority:	Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.
Membership:	Five directors
Qualifications and Residency Requirements:	**Appointed**, by the Board of Supervisors Must reside within the boundaries of the District
Term:	Three-year term, with two-term limitation
Duties:	Fire Protection
Meetings:	Third Thursday of each month at 7:30 p.m. Fire Station, 3300 Woodland Avenue, Modesto

Woodland Avenue Fire Protection District
Funding Sources, Attributes, Types of Service, and Resources

Funding Sources	2004-2005		2005-2006	
	Amount	**% of Total**	**Amount**	**% of Total**
Property tax	$142,959.00	86%	$160,314.06	85%
Fire service fees / parcel tax	$	0%	$	0%
Special Assessments	$	0%	$	0%
SB 813	$	0%	$	0%
Homeowners property tax relief	$2,793.00	2%	$2,581.00	1%
Subtotal Taxes and Assessments	$145,752.00		$162,895.06	
Development fees	$18,297.00	11%	$22,843.95	12%
Contracts for service	$	0%	$	0%
Interest	$	0%	$	0%
Sale of fixed assets	$	0%	$	0%
Other misc.	$2,411.00	1%	$4,151.36	2%
Revenue total	**$166,460.00**	**100%**	**$189,890.37**	**100%**

Attributes	
Formation date	1946
District area (square miles)	45
Population	5,500
Number of stations	2
ISO rating	6 in hydrant areas 8 in non-hydrant area

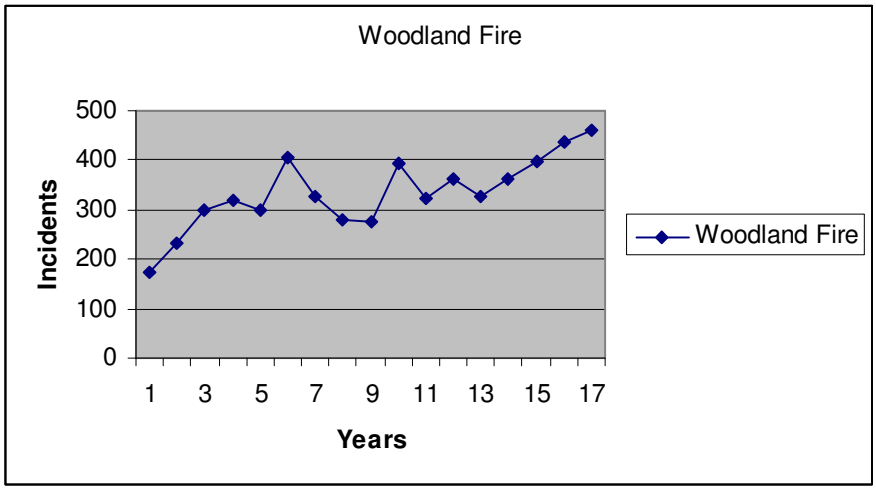
Types of Services	
Fire	Yes
EMS	Yes
Paramedic	No
Ambulance	No
Rescue	Yes

Apparatus	
Engines	#42 Ford, 1985 #21 International 4900, 1999 #31 International, 1992
Water tenders	#62, 1983 2003 Pierce
Ambulance/squads/Rescue	Rescue #81
Utility	None
Special	None

Staffing	
Full-time fire suppression/shift	0
Temporary fire suppression/shift	0
Paid call firefighters/total	0
Volunteer/total	6
Non-safety regular/total	0

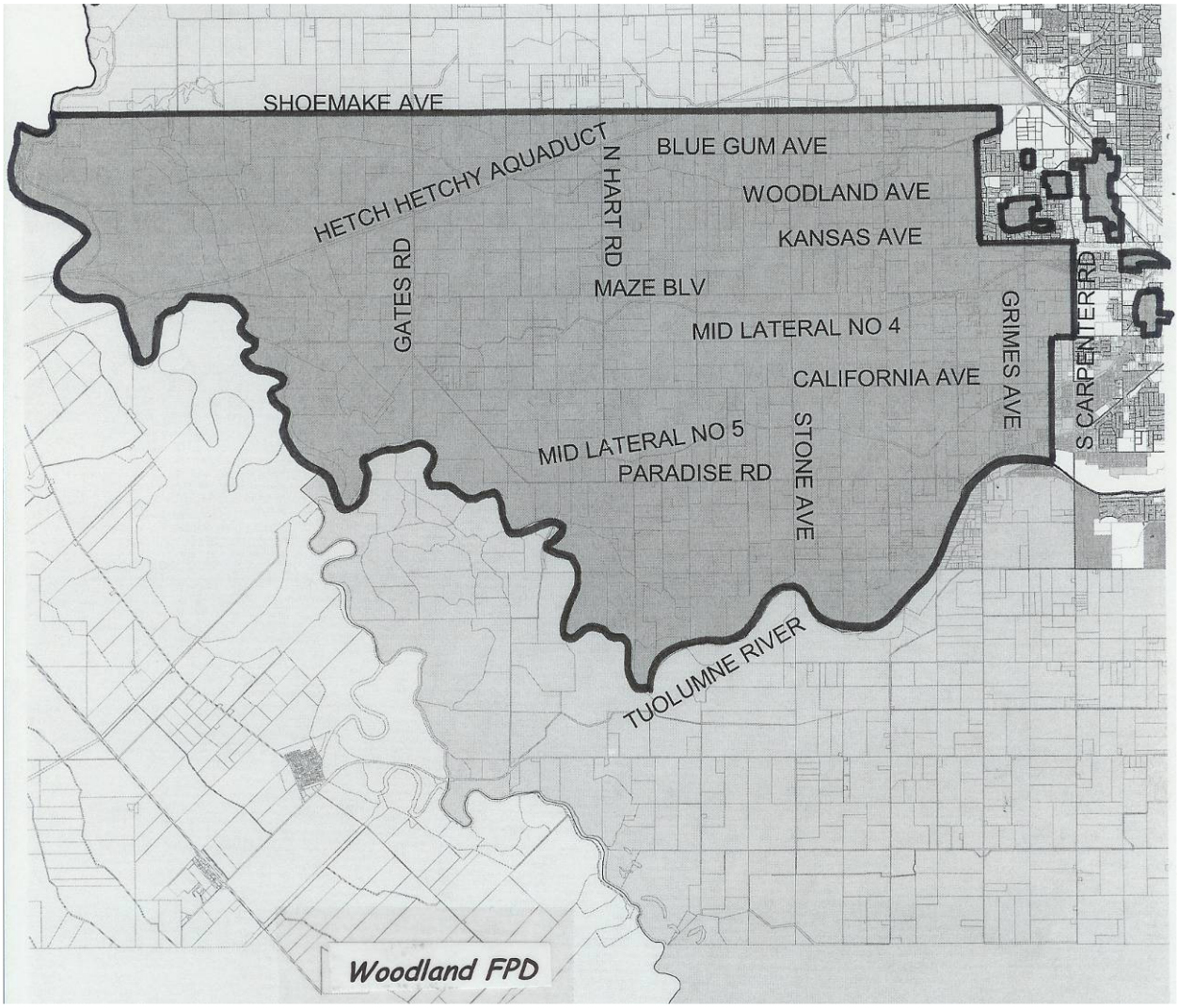
Response Workload Since 1987:
The following chart illustrates the increase in the workload of the fire district over the last 16 years. The record started in 1987 and ends in 2005.[16]

Woodland Avenue Fire Protection District Workload, 1987 – 2005



[16] Stanislaus Regional 9-1-1 JPA data.

Woodland Avenue Fire Protection District Sphere of Influence Map



Summary of Data Collection

The information contained in this chapter is but a small fraction of the data that is available on the fire protection delivery system in the county. However, it serves the purpose of establishing a baseline from which all future discussions of the changes made will be compared. It will also serve to help identify where and when certain changes should be made. Those that are the targets for improvement that will make the fire service even more productive in the future and then can be referenced.

Baselines and Benchmarks

In *Reinventing Government*, authors Osborne and Gaebler describe the power of performance measurement:

> ". . . organizations that measure the results of their work….find that the information transforms them."

Trends are moving towards greater implementation of fire department performance measurement. Many fire agencies find that developing performance measures helps them better explain their services to both policy makers and constituents. In order to achieve a common understanding of how fire agencies operate and interact, the reader should be familiar with three terms: performance measurement, baseline, and benchmark.

***Performance Measurement*:** A system of collecting data on specific outcomes that allows an organization to determine if it is improving or deteriorating with respect to the service being provided. Performance measures should be tied to key functions and should be outcome based. They should provide the basis for the creation of organizational goals to improve.

***Baseline*:** A baseline is a database from which something can be judged. A baseline is the level of performance at which a department, a process, or a function is operating at any given point in time. This chapter is a baseline in that it reports the current conditions in Stanislaus County.

When examining operations over a period of time, some date needs to be established for the baseline; otherwise, the target is always elusive. The date chosen in this MSR is 2006. Baselines are best derived from data created by the agency seeking improvement. Data should be as *hard* as possible, such as dollar, response times, staffing levels, fire loss etc. Although they are important, *soft* data like community attitudes and feelings of goodwill are not good measures of performance. However, it is also true that most fire agencies want to improve over time so that means they must set benchmarks, or targets, for improvement.

Benchmark: A benchmark is a standard from which something can be judged. Benchmarks are like goals, in that they are things to be achieved. Starting from a baseline, an organization may wish to seek a better response time, better staffing, or lower fire loss.

Baselines exist in an organization whether or not anyone is collecting data. Benchmarks exist only if they are sought out as targets for improvement. Performance measurement only occurs when leaders are paying attention to the activity of an organization. This chapter serves as a baseline for discussion on the levels of service being provided by the Stanislaus County fire service organizations. It is anticipated that benchmarks will be set in the use of this information and that subsequent reviews of the data will be based upon performance measurement.

This page intentionally left blank

Chapter 4 – Growth and Development

Growth and Population Projections for the Affected Area

Overview of Stanislaus County

Stanislaus County has a current population of about 522,822 people (2006). The median age in the County, according to the 2000 Census is 31.7 years old, with about 12.4 percent of the population being over the age of 65. The average family is about 3.5 persons. There are approximately 150,807 housing units in the county, with 61 percent being owner occupied. The median household income is about $40,000 in 1994 dollars; approximately 12.3 percent of the population lives in the poverty range. [17]

Efficient provision of public services is linked to an agency's ability to plan for future need. For example, a fire protection district must be prepared to provide emergency services for existing and future levels of demand, as well as be able to determine where future demand will occur. Municipal Service Reviews will enable LAFCO, affected agencies, and the public the ability to examine both existing and future need for public services and evaluate whether projections for future growth and population patterns are integrated into the agency's planning function.

Population Data

Cities and fire protection districts in Stanislaus County rely on various data sources for determining service population (e.g., U.S. Census, California Department of Finance, and the Stanislaus County Council of Governments (StanCOG). In addition, some fire protection districts estimate their service population based on the number of parcels within their districts. Therefore, when contacted, some of the fire districts did not have current (2006) estimates on the number of persons in their district.

The Stanislaus Council of Governments recently published a 2003 Projection Report, which included population estimates for Stanislaus County covering the period 2000 - 2030. The forecast was developed using a regional economic-demographic forecasting model developed by the Association of Bay Area Governments (ABAG). It was developed for use in StanCOG transportation modeling and provides general insight into future changes in the region.

According to the report, Stanislaus County saw substantial population growth between 1990 and 2000, increasing by 20.6 percent from 370,522 to 446,997. This growth rate was significantly higher than California's statewide 13.6 percent increase during the same period.

[17] 2000 Census data.

Population Data for Fire Service Agencies in Stanislaus County

The following figure highlights current estimate of population figures for the city fire departments within Stanislaus County:

Figure 4: Population Figures for City Fire Departments within Stanislaus County

City Fire Department	Population
Ceres	38,813
Modesto	207,634
Newman	9,134
Oakdale	17,349
Patterson	19,000
Turlock	67,009

Source: California Department of Finance, January 1, 2005.

Population figures for each of the fire protection districts were developed using the 2000 U.S. Census.

Figure 5: Population Figures for Fire Protection Districts

Fire Protection District	Population
Burbank-Paradise	8,176
Ceres	2,553
Denair	5,729
Hughson	11,249
Industrial	11,831
Keyes	4,575
Mountain View	2,351
Oakdale Rural	8,989
Salida	18,100
Stanislaus Consolidated	38,380
Turlock Rural	5,016
Westport	2,272
West Stanislaus	7,070
Woodland	4,488

Source: 2000 Census.

Population Projections

Detailed population data for the model came primarily from the U.S. Census and the Demographic Unit of the California Department of Finance. The forecast indicates that there will be moderate growth in population, with a population increase from approximately 447,000 people in 2000 to approximately 822,000 people in 2030, for an increase of nearly 375,000. In percentage terms, the population in Stanislaus County is forecasted to increase by 84 percent over the next 30 years. The following outlines population projections for Stanislaus County for the period of 2000-2025:

Figure 6: Population Projections for Stanislaus County and its Nine Cities, 2000-2025

City	2000	2005	2010	2015	2020	2025
Ceres	34,609	40,607	46,605	52,604	58,602	64,600
Hughson	3,980	4,586	5,191	5,797	6,402	7,008
Modesto	188,856	239,035	289,214	339,392	389,571	439,750
Newman	7,093	7,931	8,769	9,607	10,445	11,283
Oakdale	11,503	14,775	18,047	21,320	24,592	27,864
Patterson	11,606	13,233	14,861	16,488	18,116	19,743
Riverbank	15,826	18,188	20,550	22,913	25,275	27,637
Turlock	55,810	64,137	72,465	80,792	89,120	97,447
Waterford	6,924	8,076	9,228	10,379	11,531	12,683
Balance of County	110,790	112,254	113,717	115,181	116,644	118,108
Total	**446,997**	**522,822**	**598,647**	**674,473**	**750,298**	**826,123**

[18]*Several of the cities within the County are in the process of updating their general plans. The nine cities and the County decide land use within fire district boundaries and city spheres of influence, which can ultimately affect a district's current and future service plans.*

Areas of Expected Growth

The following unincorporated communities are guided by community plans and are expected to experience future growth. They are served by special districts, which provide the sewer and water systems necessary to accommodate development:

- Denair, Diablo Grande, Keyes, and Salida
- Affected fire protection districts: Denair, Keyes, Salida, and West Stanislaus

The following unincorporated communities are only expected to experience minor infill growth, as the necessary public systems are either at capacity or non-existent:

- Crows Landing, Del Rio, East Oakdale, Grayson, Knights Ferry, La Grange Valley Home, and Westley
- Affected fire protection districts: Oakdale Rural, Salida, Stanislaus Consolidated, and West Stanislaus

The unincorporated community of Crows Landing may face considerable growth pressure due to the County's acquisition and expected development of the former site of the Crows Landing Naval Air Base.

[18] Source: 2000-2025 Growth Projections – Inter-Regional Partnership Report, 2003.

Based on the population projections and city and County general plan policies, the majority of the growth is expected to occur in the nine cities. (Affected fire protection districts: Hughson and Stanislaus Consolidated. Affected city fire departments: Ceres, Modesto, Newman, Oakdale, Patterson, and Turlock.)

Effects of Population Growth

Because projected growth patterns should influence the location and sizing of future public facilities, it is essential that population and development forecasts be integrated into the region's planning process. StanCOG forecasts indicate that between 2000 and 2030, the County's population is expected to increase by 84 percent, adding another 375,000 residents that will need emergency services. If growth is unevenly distributed throughout the County, each fire protection and emergency medical service provider will experience distinctly different impacts on existing facilities, planning, capital needs, and staffing.

Figure 7: Agency Population Density per Square Mile

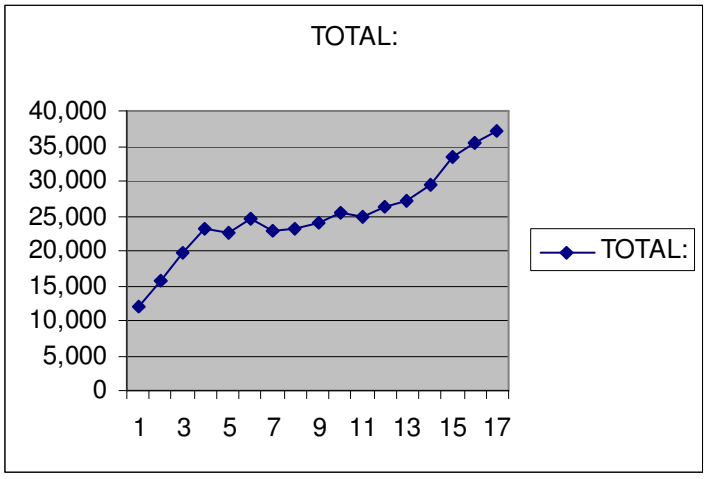
Department	Population	Estimated Current Density*
Mountain View	2,351	47
Westport	2,272	66
Turlock Rural	5,016	148
Keyes	4,700	174
Denair	5,729	123
Woodland	4,488	122
Burbank Paradise	8,176	1,572
West Stanislaus	7,070	15
Hughson	11,241	285
Newman	10,000	2500
Oakdale Rural	8,989	47
Patterson	17,000	4,250
Oakdale	17,500	3,181
Salida	18,100	430
Stanislaus Consolidated	38,380	176
Ceres	38,813	5,505
Turlock City	67,009	4,751
Modesto	207,634	5,150
CDF	Not Calculated	Not Calculated
Ceres FPD	5,729	
Industrial	4,575	

**Calculated from population figures in comparison to square miles*

Growth in Call Load

The following chart illustrates growth in emergency call load over the last 16 years for the fire services in the county. In 1987, the departments responded to about 11,900 calls for service. Today, they are responding to nearly 38,000 calls for service. That is an increase of more than 200 percent; about 13 percent per year. That growth rate can be reasonably expected to continue.

Figure 8: Chart of Growth in Emergency Call Load



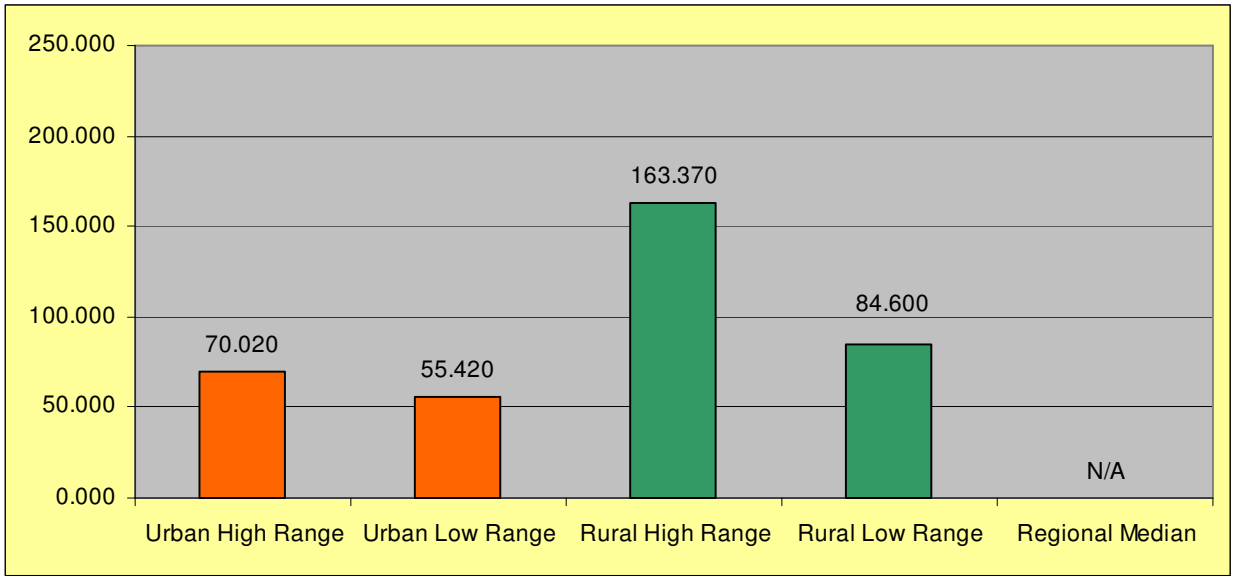
Source: County Communications Center E-911

Call workload for overall delivery system results in a call factor of 73 calls per 1,000 population. This is derived by taking the current population (in thousands) and dividing it into the current workload. Based on the fact that the nature of the calls in Stanislaus are consistent with benchmark data from the U.S. Fire Administration, it can be expected that the trend will continue with a large majority of the calls for medical emergencies and a much smaller portion for fires. If population figures stay on target, the workload of the fire agencies should track the same.

The current population projection for 2010 is 598,647. That should generate an additional call workload of 5,727 calls for service. The population protected by each entity currently averages 1,454 persons per square mile. The distribution of future calls will not be on the basis of commercial or industrial development but will follow population and center on population density areas.

The following chart is from the United States Fire Administration's Annual Review of Fire Departments. This is the benchmark data for the Western United States and illustrates that the workload for the fire services in Stanislaus is within the normal range for both the urban and rural areas.

Figure 9: Comparison of Incidents per 1,000 Population



Growth Reflected in Property Values

On July 1, 2005, Stanislaus County Assessor Doug Harms released an announcement that the 2005-2006 Regular Assessment Roll totaled $33,412.511,370. This was a 14.71 percent increase over the previous year. The net increase was $4,283,596.187, and was the largest increase in value in the history of the Stanislaus County. The roll includes more than 175,000 units of real property. The report went on to state that the assessment roll will generate over $340,000,000 in revenue. The state received $247,000,000 of that revenue, with the rest going to the County, cities, and special districts.

The following chart is a reflection of the growth pattern over the last decade.

Figure 10: Regular Assessment Roll Increase, 1992 – 2005

Year	Change in Assessment from Previous Year
2005	14.71%
2004	9.88%
2003	9.26%
2002	8.80%
2001	8.04%
2000	6.42%
1999	4.44%
1998	2.38%
1997	2.28%
1996	1.58%
1995	2.23%
1994	1.73%
1993	5.56%
1992	5.58%

Figure 11: Area in Acres

Fire Agency - Districts	Area in Acres*
Burbank - Paradise	1,695
Ceres	2,544
Denair	22,457
Hughson	19,810
Industrial	1,959
Keyes	14,085
Mountain View	31,023
Oakdale Rural	149,057
Salida	26,756
Stanislaus Consolidated	139,087
Turlock Rural	13,739
West Port	26,977
West Stanislaus	390,469
Woodland	28,547
Fire Agency – Cities	
Ceres	4,950
Modesto	23,305
Newman	1,397
Oakdale	3,224
Patterson	3,132
Turlock	9,333

**Inasmuch as most annexations are conducted in terms of acreage instead of square miles, ESCi provided this table as a perspective on the impact of potential changes in area in the future. For example, the current cities, with exception of Modesto, are moderate in acreage; while the districts range in size from small to very large in acreage. Reduction of acreage for a smaller district will have more of a profound impact than it would for a large agency. Based on this listing, the areas that are likely to be subject to annexation considerations in those districts are those areas immediately adjacent to cities' boundaries.*

Figure 12: Area not in Any Agency

Location	Population#	Area (In Acres)*
"North Area" North of Oakdale Rural Fire Protection District Boundaries	898	58,115

 # Department of Finance, January 1, 2005
** Stanislaus LAFCO files*

Summary

There are several observations that are relative to the ability to provide a level of service when the population increases and the density gets heavier in developed areas. These observations are:

- The fire districts cover larger areas with lower population density than cities. They lack as many roads per square mile. They experience long travel times to remote areas.

- The cities are more compact and densely populated and have a street network grid which is easier to serve than rural areas with long distances between cross roads.
- The tax rate is very low in many district areas.
- The per capita fire funding level is very low in many district areas.
- Response times to cities are consistent with a suburban level of service.
- Response times to cover the large district areas are consistent with rural level of service.
- The unit utilization workload per fire company, in the districts, is still fairly low but rising.
- The risks, hazards, and values in fire protection districts are dispersed and are not highly concentrated.
- Infill growth does not place as much of a new demand on fire services as tract development does.

Chapter 5 – Government Funding

This chapter provides an assessment of revenue sources which are available to support fire service operations. ESCi has identified limitations that may restrict the use of such resources.

Background

Adequate Funding: An Issue

The discussion of adequate funding for a fire agency is often very confusing to the layperson. The average person who lives in a home has an assumption that a fire agency will respond when the 9-1-1 system is activated, but they seldom understand how that level of service comes into existence; nor do they understand what it takes to adequately fund a fire station on a long-term basis.

In highly densely populated areas such as cities and towns, the decision to fund and deploy fire resources is very transparent to the user because it is assumed as part of overall services. Yet, in the less densely populated areas such as rural, frontier, or wildland areas, the same lack of understanding may be as prevalent until a person experiences a fire, and then they criticize the response as being too little, too late.

Moreover, there is a lack of appreciation of the ways and means that fire protection is provided by elected and appointed officials in all type of communities, which results in misunderstandings and misinterpretations of how fire agencies operate in many communities.

Cost Realities

Whenever considering a change from a totally volunteer to a totally paid fire force, the cost of an individual fire station is one of the many variables to be examined. Historically, the construction of a volunteer fire station was not much of a financial burden on a community. In the case of most of these agencies, their fire stations were constructed in the fairly distant past when costs were much lower than today. Today, to construct a new suburban fire station (based on a statewide average) can cost between $2.0 to $3.0 million.

Staffing costs are another issue. Originally, volunteers were a very inexpensive form of fire protection because they place few demands on the tax base. When organizations start converting positions to full-time, an increased demand is placed on the tax base. It must be highlighted that volunteer fire departments are not free; they do cost money. In California, the enactment of such laws as Proposition 13, AB 8, and AB 218 has made it very difficult for a rural fire district to see an increase in its revenue stream to support full-time staff.

It is a generally accepted parameter that to place a three-person engine company in service on a 24/7/365 schedule utilizing contemporary wage rates costs about $1.5 - $1.8 million per year.

There is a commonly accepted guideline, that if a fire department provides emergency medical service (EMS) delivery and if the workload goes over a 1,000 calls per year it is very difficult to sustain a completely volunteer fire company. The net result is that many departments convert to a combination fire agency. These two trend lines are on a collision course. If workload and

demand go up, there is pressure to staff accordingly. Simultaneously, if there are not consistent increases in the revenue stream, problems in achieving community expectations can be anticipated.

Funding Mechanisms for Fire Services

The Taxpayers Rebellion

In 1978, nearly two-thirds of California's voters passed Proposition 13, reducing property tax rates on homes, businesses, and farms by about 57 percent. According to the amended State Constitution, property tax rates could not exceed 1 percent of the property's market value and valuations could not grow by more than 2 percent per annum unless the property was sold. At the time of sale the property value could be re-assessed. In addition, Proposition 13 required all state tax rate increases be approved by a two-thirds vote of the legislature and local tax rates must be approved by a vote of the people.

Since Proposition 13, many local governments have relied increasingly on other revenue tools to finance local services (to be defined later) such as assessments, property-related fees and a variety of small, general purpose taxes (such as hotel, business license, and utility user taxes).

Effect of Proposition 172 on Fire Protection Funding

Proposition 172 is sometimes referred to as the Local Public Safety Protection and Improvement Act of 1993. This Legislative Constitutional amendment was passed in 1993. This Senate Constitutional Amendment (SCA) passed statewide by a margin of 57.7 percent to 42 percent. This measure provided a dedicated revenue source for public safety purposes. Revenue was to be distributed to cities and counties for purposes such as police, sheriffs, fire, district attorneys, and corrections. Special districts were not named.

When this measure was approved by a majority of the state's voters, the tax was being collected in all counties. However, a county would be eligible to receive tax revenues beginning January 1, 1994, only if the County Board of Supervisors voted to participate or voters within the county approved the measure by majority vote. While ESCi was not able to locate the actual voting record, this appears to have occurred in Stanislaus County.

Effective January 1, 1994, this tax measure generated approximately $714 million during fiscal year 1993-94 on a statewide basis, and $1.5 billion annually thereafter in additional sales tax revenue for counties and cities. ESCi has not been able to determine how much this revenue stream contributes to the current County budget. Only some agencies receive funds from this source. Special district fire agencies do not receive any funding from Proposition 172.

Educational Revenue Augmentation Funds (ERAF)

In 1992, the State of California found itself in a serious deficit position. To meet its obligation to fund education at specified levels under Proposition 98, the state enacted legislation that shifted partial financial responsibility for funding education to local government (cities, counties, and special districts). The state instructed county auditors to shift allocation of local property tax revenues from local government to *educational revenue augmentation funds* (ERAF), directing specified amounts of city, county, and other local agency property taxes be deposited into these funds to support schools.

In fiscal year 2005-06, ERAF allocations diverted $7.2 billion in property tax revenues away from cities, counties, and special districts. Since their inception, the ERAF shifts have deprived local governments of over $58 billion. Counties have borne 73 percent of this shift, while cities have borne 16 percent.

Stanislaus County ERAF net losses in FY 2005-06 were $13,672,405, while special district net losses were $3,321,638. Cumulative losses for Stanislaus County since 1992 are $415,358,807.

These shifts occur in the context of continuing citizen demands for increased services and increases in the cost for such services.

Proposition 218

In 1996, Proposition 218 was passed. Proposition 218 is a constitutional initiative that applies to each of California's nearly 7,000 cities, counties, special districts, schools, community college districts, redevelopment agencies, and regional organizations. In general, the intent of Proposition 218 is to ensure that all taxes and most charges on property owners are subject to voter approval.[19] The following table gives a general summary of local revenues affected by Proposition 218.

Figure 13: Summary of Local Revenues Affected by Proposition 218

Affected	Not Directly Affected
Taxes	
New and recently imposed *general taxes*	Property taxes
	Bradley-Burns sales tax
	Special taxes
	Vehicle license taxes
	Redevelopment revenues
	Mello-Roos taxes
Assessments	
All new or increased assessments	Most existing assessments
Fees	
Property-related fees (Fees imposed as an *incident of property ownership*, not including gas, electric, or developer fees.)	Fees that are not property-related

The major funding source for fire districts is property tax revenue. Each local government agency shares a portion of this revenue based on an established percentage or allocation factor. Stanislaus fire districts receive 70 to 96 percent of their revenue from their share of property taxes and their assessments.

Additional taxes or assessments require voter or landowner approval. The percentage of approval required depends on the type of funding mechanism sought.

[19] Understanding Proposition 218, Legislative Analyst Report, December 1996.

Limits to Revenue Stream

Currently, state law defines the type and level of revenue that is available to special districts to support fire protection and emergency medical services. Cities and counties exercise the broad powers of taxation that are granted to general-purpose governments by the California Constitution.[20] Special districts, however, are limited to revenue sources specifically authorized by the Legislature. Each of the Stanislaus County fire protection districts, is an autonomous unit of local government with sovereignty over internal fiscal issues but is restricted to specific revenue sources by state law.

Fire districts have limited authority to collect fees to cover the actual costs of providing service or the impact of additional service needs. Generally, fees represent only a small portion of total revenue. Fees that are permitted include development impact fees, plan check fees, and false alarm fees. Areas experiencing growth would receive noticeable funds from development impact fees and plan check fees.

Revenue Enhancement

Opportunities to augment revenues for fire protection and emergency medical services in the unincorporated region are limited. Opportunities to augment revenues fall into two broad classes:

(1) Categories of *new* revenue that require voter approval
(2) Categories of revenue under the discretion of local governments

Neither is likely to be easily obtained in the near future.

Categories of Revenue That Require Voter Approval

- Voter-approved fee: Voters within each district have the authority - with two-thirds consenting - to implement local benefit fees for fire protection and emergency medical services. If past elections are an indicator of future performance, the two-thirds threshold raises a major hurdle to increasing revenues.
- Transient Occupancy Tax: This option for enhancing revenues with voter concurrence is not within the purview of fire protection districts, but is within the County's. The County may increase the County Transient Occupancy Tax (TOT) rate with proceeds specifically dedicated to unincorporated area fire and emergency medical services.
    - TOT would seem to be a relevant source of funding for agencies that expend a significant portion of their resources on transient populations. A proportionate amount of fire protection district responses are emergency medical incidents involving non-residents.
    - For example, tourists seasonally impact fire districts with an increase of accidents on state or U.S. Highways, including Highway 99 and I-5. Agencies are frequently called upon to provide vehicle rescue services to travelers who are not residents of the district.

Dedicating TOT proceeds to fire and emergency services would again require approval by two-thirds of unincorporated area voters.

[20] California Constitution, Article XI, Section 7.

Voter Approval

It is reasonable to assume that obtaining voter approval for fee increases sufficient to meet funding needs will be a politically sensitive issue.

After the passage of Proposition 13 in 1978, about the only significant source of funding for fire protection districts is a voter approved benefit fee. On a statewide basis, the passage of such benefit fees has been about 50 percent successful. Some fire district officials expressed concern that all future elections for new or increased fees will be politically difficult; and the recruiting, retention, and training of volunteers will remain a serious problem.

Without adequate funding some agencies will continue to have less than adequate forces for initial attack responses and will, therefore, have a need to maintain strong safety practices during initial attack. They will continue to have to develop strong automatic and mutual aid agreements in order to develop an effective response force on any event that is beyond initial attack capabilities.

There is no one funding formula that applies to the entire range of entities in this study; therefore, there is no one solution that will resolve the funding deficiencies for on-going operations.

Available Revenue Sources

In order for fire agencies to increase revenues, it is necessary to utilize one of the mechanisms described below. The following table describes and defines all available revenue sources and identifies their potential for use in support of the fire service.[21]

The reader will note that some are for use by all forms of local government and some are reserved.

[21] *A Primer on California City Finance* by Michael Coleman, November 2002.

Figure 14: Description and Definition of Revenue Sources

Term	Definition
Assessments	These are charges levied to pay for public improvements or services within a predetermined district or area, according to the benefit the parcel receives from the improvement or services. The rules and procedures for assessments are provided by the California constitution, Article XIII, Section C & D (Prop. 218). Assessments are usually collected on the regular property tax bill. They are different, however, from the regular one percent property tax, and property tax debt overrides in that assessment rates are not based on the value of the property. Assessments are also different from another charge that sometimes is placed on the property tax bill, parcel taxes. Unlike parcel taxes, assessments typically were not voter approved prior to Proposition 218. In addition, assessment rates were linked to the cost of providing a service or improvement, whereas parcel taxes could be set at any amount. Typical assessments include those for flood control improvements, streets, lighting, and landscaping. Use: Cities, counties, and special districts

Term	Definition
Business License Tax	Most cities in California, levy a business license tax. Tax rates are determined by each city, which collects the taxes. In all cases, cities have adopted the tax as a general tax. On average, the business license tax provides about three percent of city general revenue, and often 10 percent or more. Use: Cities – A business license tax raises general fund revenues (i.e., it is not a dedicated revenue source for fire services).
Development Impact Fee[22]	One-time charges applied to new development to raise revenue for the construction or expansion of capital facilities located outside the boundaries of the new development that benefit the contributing development. Impact fees, for example, are assessed and dedicated principally for the provision of additional water and sewer systems, roads, schools, libraries, and parks and recreation facilities made necessary by the presence of new residents in the area. The funds collected cannot be used for operation, maintenance, repair, alternation, or replacement of capital facilities. Use: Cities, counties, and special districts

[22] *Development Impact Fees: A Primer* by Carrion and Libby.

Term	Definition
Special Taxes	After the property tax, special taxes are the principal revenue source for funding fire protection operations. Section 4, Article XIII A of the California Constitution authorizes cities, counties, and special districts to impose non-ad valorem special taxes with two-thirds approval of the electors. Through a series of court cases, the California Supreme Court has found that all taxes levied by special purpose districts are to be considered special taxes – even if proceeds are used for general purposes. Accordingly, the primary alternative that fire protection districts can use to generate revenue requires two-thirds approval of the voters. Proposition 62 reinforced the two-thirds requirement in 1986 – a statutory initiative intended to close Proposition 13 loopholes, and again in 1996, by Proposition 218, which created the *Right to Vote on Taxes Act*.
Mitigation Fees	Some agencies have adopted an ordinance establishing a mitigation fee program for their area. The agency collects funds during the building permit process on behalf of the fire protection agencies. These mitigation fee revenues must be used exclusively for capital facilities and equipment.
Enterprise Service Charges and Fees	Service-fee-supported city utilities and enterprises constitute a substantial portion of most city budgets. These include water, sewer, electric, solid waste, and airport services. In some cities, a public or private agency other than the city provides and funds these services. Use: Cities, counties, and special districts

Term	Definition
Bonds	Bonds are used to finance the acquisition and construction of public facilities and real property. They may *not* be used for equipment purchases or to pay for operations and maintenance. Until 1978, local agencies had the ability - with two-thirds voter approval - to issue general obligation bonds to finance public facilities and impose property tax rates to discharge the bond debt. Proposition 13 restricted the imposition of additional property tax rates and effectively terminated the use of general obligation bonds. In 1986, California voters approved Proposition 46, a constitutional amendment that restored the authority of local government to issue general obligation bonds. Each bond measure requires approval by two-thirds of a jurisdiction's voters.
Fees	Fire districts impose fees for a variety of services including issuing service availability letters and plan checks. The California Constitution defines fees as charges that do not exceed the reasonable cost for providing the regulation, product, or service for which fees are charged. Proposition 218 introduced procedural requirements on fees imposed as an incidence of property ownership. Fees are defined as "A charge imposed on an individual for a service provided to that person." A fee may not exceed the estimated reasonable cost of providing the particular service or facility for which the fee is charged, plus overhead. Cities have the general authority to impose fees (charges and rates) under the city's police powers granted by the California Constitution (Article XI, Section 7; Proposition 218). There are specific procedures in state law for related fees used to fund property-related services. Examples of city fees include water service, sewer service connection, building permits, recreation classes, and development impact fees. Use: Cities, counties, and special districts

Term	Definition
Inter-Governmental Revenue	Local governments also receive revenue from other government agencies, principally the state and federal governments. These revenues include general or categorical support monies called *subventions*, as well as grants for specific projects and reimbursements for the costs of some state mandates. Intergovernmental revenues provide 13 percent of city revenues statewide. In the early 1990s, the California experienced a recession and budget deficit. To offset its fiscal shortfall, the State shifted property tax revenues from cities to local schools. This ERAF shift continues today and is discussed later. Use: Cities, counties, and special districts
Mello-Roos	Fire districts are specifically authorized by the Fire Protection District Law of 1987 to finance capital facilities or pay for fire protection services with a special tax outlined in the Mello-Roos Community Facilities Act. The Mello-Roos was specifically designed to facilitate passage of the two-thirds special tax. A Community Facility District (CFD) can overlay an entire jurisdiction or it may be limited to a specific area; however, if there are *fewer* than 12 registered voters in the area, only landowners are able to vote. Landowner-developers, who vote in a CFD, can levy a special tax and pass the tax lien on to subsequent buyers. This is an area where a special tax is imposed on those real property owners within a Community Facilities District. This district has chosen to seek public financing through the sale of bonds for the purpose of financing certain public improvements and services. These services may include streets, water, sewage and drainage, electricity, infrastructure, schools parks, fire protection, and police protection to newly developing areas. The services may be financed only to the extent of new growth, and may include both services and facilities. The tax paid is used to make the payments of principal and interest on the bonds. Use: Cities and counties

Term	Definition
Property Tax	Property tax is an ad valorem (value-based) tax imposed on real property and tangible personal property. (State law provides a variety of exemptions to the property tax, including most government-owned property; nonprofit, educational, religious, hospital, charitable, and cemetery properties; the first $7,000 of an owner-occupied home; business inventories; household furnishings and personal effects; timber; motor vehicles, freight and passenger vessels; and crops and orchards for the first four years). California Constitution Article XIIIA (Prop. 13) limits the property tax to a maximum 1 percent of assessed value, not including voter-approved rates to fund debt. The assessed value of property is capped at the 1975-1976 based year rate plus inflation or 2 percent per year. Property tax declines in value may be reassessed at the lower market value. Property is reassessed to current full value upon a change in ownership (with certain exemptions). Property tax revenue is collected by counties and allocated according to State law among cities, counties, school districts, and special districts. The share of property tax revenue allocated depends on a variety of factors, including historical allocations of tax dollars, the number of taxing entities in a tax rate area, etc. Use: Cities, counties, and special districts – Property taxes raise general fund revenues (i.e. except for special districts, it is not a dedicated revenue source for fire services).
Sales Tax	The sales tax that an individual pays on a purchase is collected by the State Board of Equalization and includes a State sales tax, the locally levied "Bradley Burns" sales tax and several other components. The sales tax is imposed on the total retail price of any tangible personal property. (State law provides a variety of exemptions to the sales and use tax, including resale, interstate sales, intangibles, food for home consumption, candy, bottled water, natural gas, electricity, water delivered through pipes, prescription medicines, agricultural feeds, seeds, fertilizers, and sales to the federal government.)

Term	Definition
Transient Occupancy Tax (TOT)	Like the business license tax, TOT may be levied by a city under the police powers granted cities in the state constitution. More than 380 cities in California impose TOT on people staying for no more than 30 days in a hotel, inn, or other lodging facility. Rates range from 4 to 15 percent of the taxes, but some cities make a point of budgeting funds for tourism or business-development-related programs. The TOT typically provides 7 percent of a city's general revenues, on average, and often as much as 17 percent. Use: Cities and counties – Transient occupancy taxes raise general fund revenues (i.e., it is not a dedicated revenue source for fire service.)
Use Tax	A use tax is imposed on the purchaser for transactions in which the sales tax is not collected. Sales and use tax revenue received by cities is a general purpose revenue and is deposited into a city's general fund. Although cities vary widely, on average sales and use tax revenue provides 30 percent of city general-purpose revenue and often as much as 45 percent. Use: Cities and counties – use taxes raise general fund revenues (i.e., it is not a dedicated revenue source for fire service).

Term	Definition
Vehicle License Fee (VLF)	The VLF is a tax on the ownership of a registered vehicle in place of taxing vehicles as personal property. (Vehicles that are exempt from VLF include government-owned, diplomatic, civil air patrol, and farm vehicles; privately owned school buses; and vehicles owned by blind or amputee veterans. Various classes of specialized vehicles are exempt but are instead subject to the property tax. These include farm trailers, privately owned firefighting vehicles, and forklifts.) Since 1948, the VLF tax rate had been 2 percent. In 1998, the Legislature and Governor began cutting the tax, backfilling the loss to local governments with a like amount of state general fund money. The effective rate is now 0.65 percent. The VLF is collected by the State Department of Motor Vehicles and allocated to cities and counties according to law (after retaining several hundred million dollars for the administrative costs of state agencies). Most of all allocation to cities is based on population and provides 16 percent of general revenues to the average city budget and often as much as 24 percent. Of the $1.6 billion that will go to cities in FY 2002-03, about one-third is from actual VLF paid by vehicle owners and two-thirds is from the State general fund backfill. Use: Cities and counties – Vehicle license taxes raise general fund revenues (i.e., it is not a dedicated revenue source for fire).
Utility User Tax (UUT)	More than 150 cities, collectively representing majority of the State's population, impose a utility user tax. UUT rates vary from 1 to 11 percent and are levied on the user of various utilities depending on the local ordinance and including telephone, electric, gas, water, and cable television. For those that impose the UUT, it provides an average of 15 percent of general revenue and often as much as 22 percent. Use: Cities and counties

Distribution of Property Tax Revenue

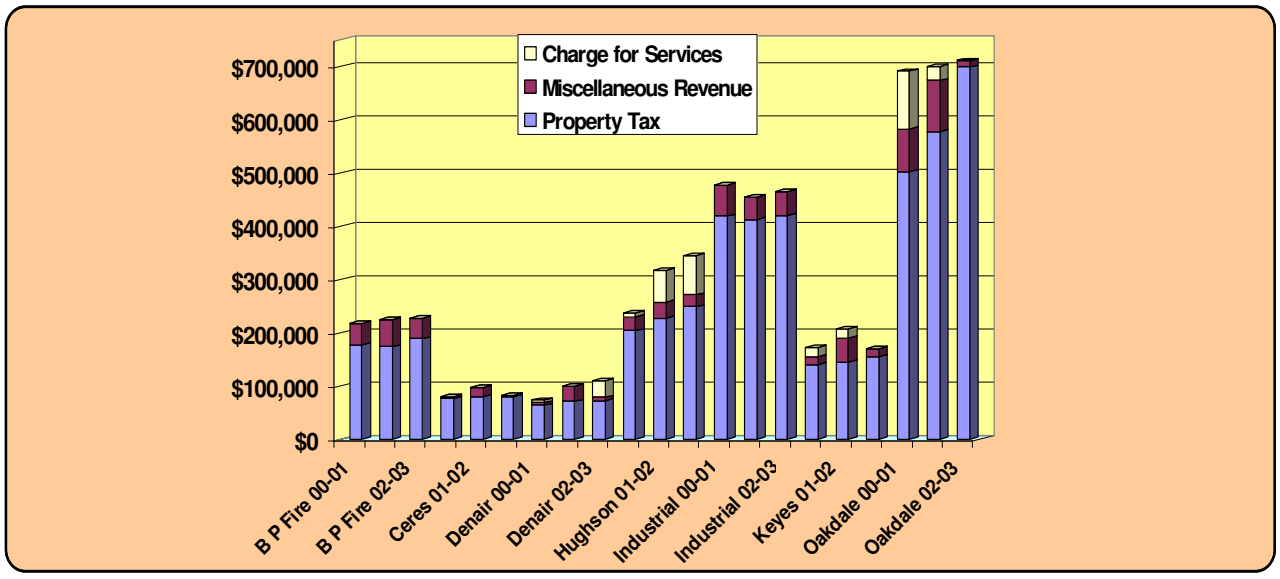
The establishment of the property tax rate and the property assessment practices are uniform statewide as a result of Proposition 13. There is, however, considerable variance in the *distribution* of property tax revenue among local governments. Generally, variation can be attributed to three factors:

(1) The level of development within a local jurisdiction
(2) The existence of redevelopment agencies
(3) State laws governing the allocation of property tax revenues

New development impacts property tax revenue; so does resale of older properties. Areas where there are high property values generally yield higher property taxes. Some communities are more recently developed and have high-value homes and businesses, while others have older properties and/or sparse development. Differences in the extent and value of land development affect the amount of property tax revenue a community generates. Market forces, natural geography, and local land use choices act together to create diversely valued communities.

The following chart provides a comparison of these revenues.

Figure 15: Comparison Chart of Revenues



Reduction in Property Tax

During the interview process, it was stated that there is a perception that fire districts are losing property tax revenue as a result of annexations. These charts would seem to indicate that the trend lines for revenues are upwards in most of these entities. A more accurate statement is that districts are losing ground to annexations, but that increased property values in the remaining area of their jurisdiction are masking the effects.

Figure 16: Property Tax Revenue – Burbank-Paradise Fire Protection District

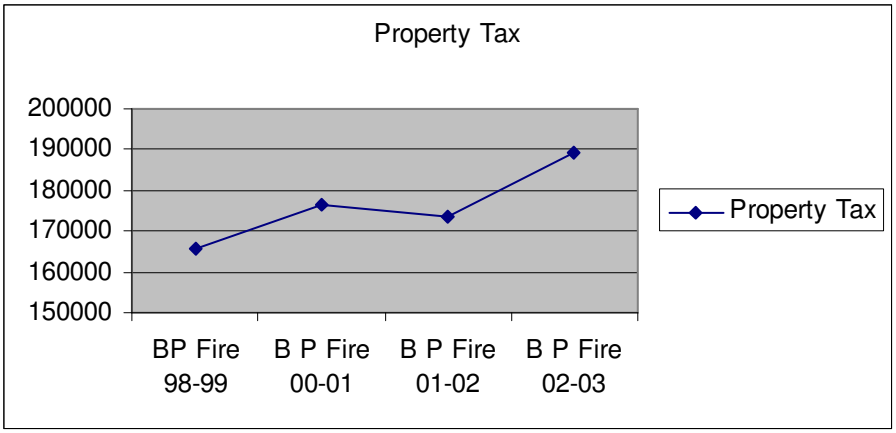


Figure 17: Property Tax Revenue – Ceres Fire Protection District

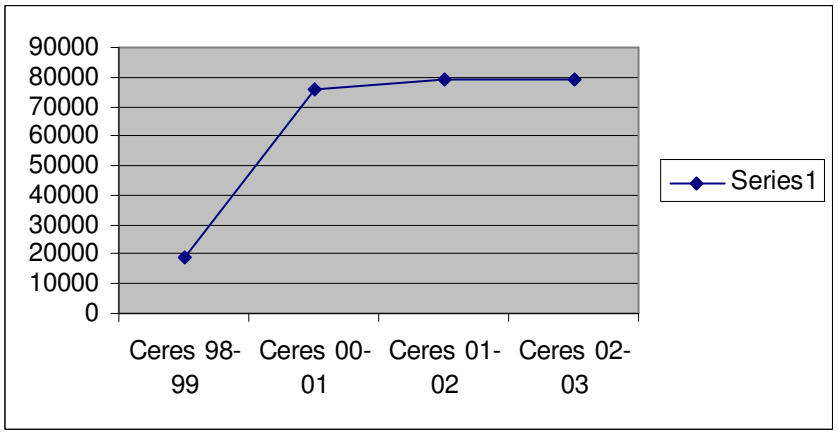


Figure 18: Property Tax Revenue – Denair Fire Protection District

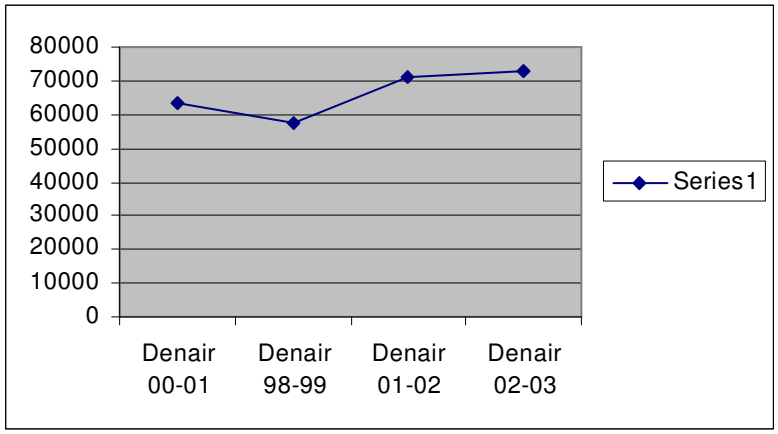


Figure 19: Property Tax Revenue – Hughson Fire Protection District

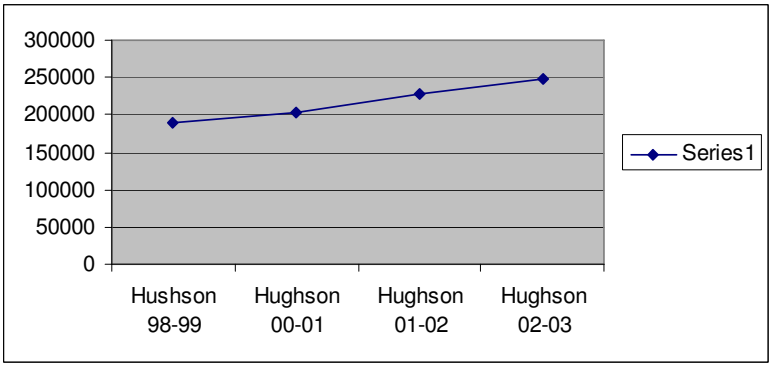


Figure 20: Property Tax Revenue – Industrial Fire Protection District

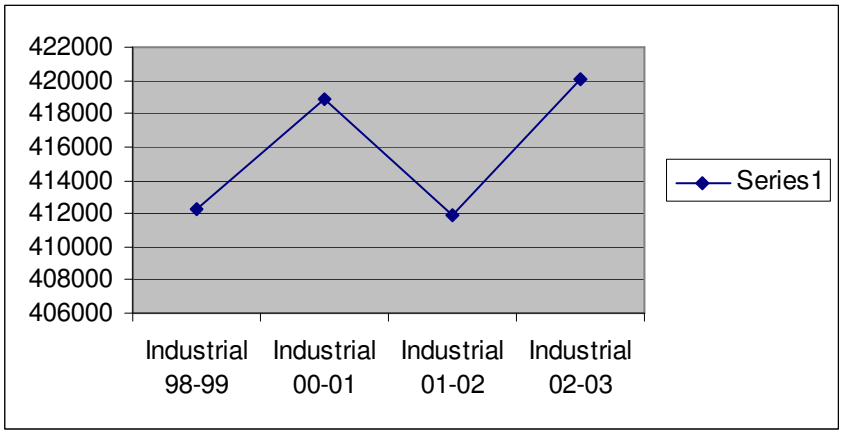


Figure 21: Property Tax Revenue – Keyes Fire Protection District

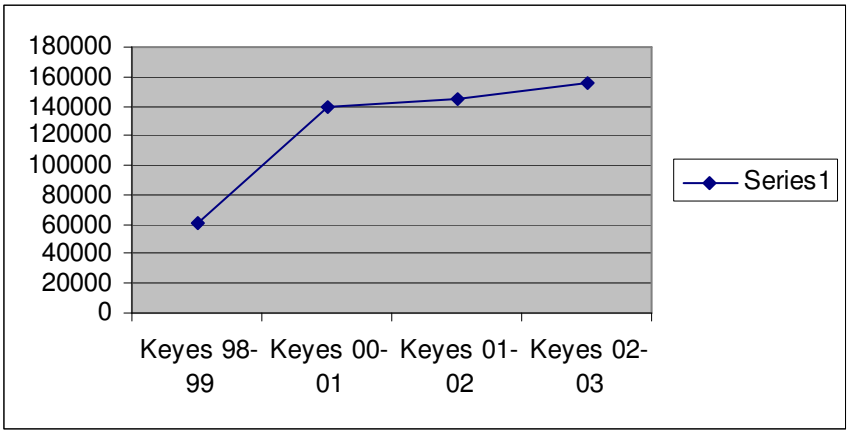


Figure 22: Property Tax Revenue – Oakdale Fire Protection District

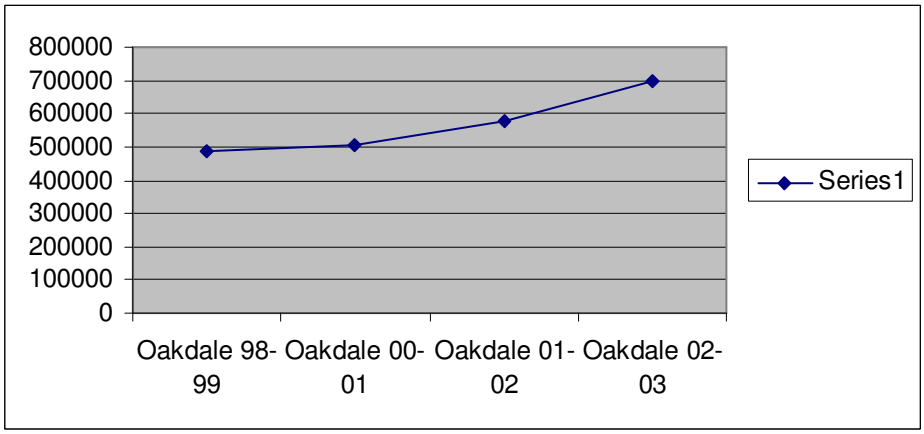


Figure 23: Financial Profile of Agencies

Department	04-05 Revenues*	CEQA Mitigation Fees*
Burbank Paradise FPD	$211,315.00	$0.00
CDF		Not calculated
Ceres City	$3,051,082.00	$0.00
Ceres FPD	$86,028.00	$0.0
Denair FPD	$89,335.16	$146,190.96
Hughson FPD	$317,506.00	$36,243.46
Industrial FPD	$473,065.00	$0.00
Keyes FPD	$171,210.00	$102,570.31
Modesto	$25,716,020.00	$0.00
Mountain View FPD	$132,440.00	$0.00
Newman	No Information	Not eligible
Oakdale	$2,557,233.00	Not eligible
Oakdale Rural FPD	$776,345.00	$176,889.69
Patterson	$602,309.00	Not eligible
Salida FPD	$860,461.00	$422,055.40
Stanislaus Consolidated FPD	$4,044,958.00	$806,579.40
Turlock City	$5,158,932.00	Not eligible
Turlock Rural FPD	$179,725.00	$0.00
West Stanislaus FPD	$482,321.00	$284,060.00
Westport FPD	$113,210.00	$0.00
Woodland FPD	$145,752.00	$18,287.30
County Fire Warden		
Total	**$45,169,247.16**	**$1,900,563.52**
Average of Districts	**$577,405.08**	**$135,754.54**

**Source of this information is a combination of the questionnaires, information from the County Fire Warden, and personal input to the process. Some cities have alternative fees. Some do not. Several districts have passed measures for increased revenue*

In examining each of the revenue streams for the fire districts, ESCi looked at the various ways that revenue streams accrue to these districts. In general, the following revenue streams could be considered relatively consistent.

- Secured
- Current unsecured
- Supplemental
- Prior unsecured
- Prior supplemental

There are three other forms of revenue streams that are not consistent and therefore cannot be relied upon for budgeting purposes. They would include:

- Federal, which consists of AFG and other grants
- State
- Miscellaneous other revenue

Assumptions Regarding Financial Growth

As reported earlier, the agencies that are reported on in the Auditor's Report are operating with most of their funds coming from the property tax base. The real growth in property assessment is only about 2.5 percent annually (this is not the Consumer Price Index - CPI). This growth is a result of new development contributing to the revenue stream that often masks the effects of the real growth rate for a district to use in planning its budgetary future. In essence, unless the new monies are discovered and/or unless actions are taken to establish a higher tax rate, when possible, the fire districts are facing certain financial difficulties in the future.

This contradiction has increased in recent years because of people migrating from a city or town into the more rural areas. The lack of understanding is based on a lack of concern about fire protection as a service need until an emergency occurs. This is not true with other services such as water, phone, and sewage. They are used daily and, therefore, are clearly adequate or inadequate. Fire protection is often an afterthought for new residences.

On the other hand, in rural areas, especially those that have operated with volunteer services in the past, there are residents that clearly know the limitations of the system. They know they have long-response times, and they know they do not pay much for fire protection. Yet, even these customers have a tendency to expect more and more from the delivery system over time. For example, for many years volunteers did not respond to medical aids. Now most do and it represents the largest portion of their emergency response workload.

The combination of these two factors - migrants and increased expectations - is raising an issue of increasing problems for under-funded fire agencies. They are expected not only to do more for less, but to also do everything with nothing.

Therefore, a discussion of how a fire agency is adequately funded should be part of the decision making process of providing fire protection by policy makers. A fire agency's budget is made up of two factors. The first is the funding base, and the second is the expenditure base.

Property Taxes and Jurisdictional Change – Detachment

One issue that will be discussed in Chapter 7 is annexation and the subsequent detachment. As noted in that chapter, this is a complex issue that often results in the development of friction and dissent when it occurs. The detachment process between cities and districts is subject to negotiation according to the California Government Code Section 57326, which states in part: "As an alternative to any procedure prescribed by law for the division of taxes or assessments collected in a district lying partially or wholly in territory annexed by an incorporated city, the city and the district may enter into an agreement providing that the district shall continue to perform services for the annexed territory until the close of the fiscal year for which the district has levied taxes or assessments."

One example of such an agreement has been developed by the city of Stockton and the county of San Joaquin. This document, entitled "AGREEMENT BETWEEN THE CITY OF STOCKTON AND THE COUNTY OF SAN JOAQUIN REGARDING DETACHMENT OF RURAL FIRE DISTRICTS UPON ANNEXATION OF PROPERTY TO THE CITY OF STOCKTON contains the following provision:

> "1. Upon Annexation of property to CITY and the detachment of the property from the rural fire district. CITY and COUNTY shall continue to pay the rural fire district the amount of property tax it received, attributable to the annexing property, prior to the annexation based upon the percentage split of property tax revenue agreed to between CITY and COUNTY pursuant to their Master Tax Allocation Agreement."

Per Capita

Per capita fire cost is not necessarily an indication of how much each individual pays in taxes, but rather the fact that a revenue stream is normalized over the population base by comparing expenditures against the number of people that live in a community. For example, if we take into consideration that fire districts are funded by their own tax levy, alternative funding sources used by cities recognize that some properties will pay more than other properties. Different forms of alternative funding yield different dollar amounts, the actual amount one person may pay is different from what another will pay. In the final analysis, however, using per capita as an indication of level of effort is clearly an indication of the impact of population upon the demands of a fire agency. Per capita is derived by dividing the budget by the population.

The funding base of almost all agencies consists of a series of opportunities to raise money from donations, tax rates, reimbursements, fees and permits, grants, or other sources. The funding base of most fire agencies is a combination of one or more of these. The best way that a funding base can be characterized is to measure it by per capita (per person) cost because the population pays the funding base. Per capita costs are an indication of how much the public – or user of fire services – is paying to support the district or city on an annual basis. For example, if the per capita costs are $10.00 per person, then for every 100 persons paying into the system, the fire agency receives $1,000.00 to support that agency. The per capita revenue stream is often referred to as the *level of effort* of the community.

Figure 24: Per Capita Fire Costs

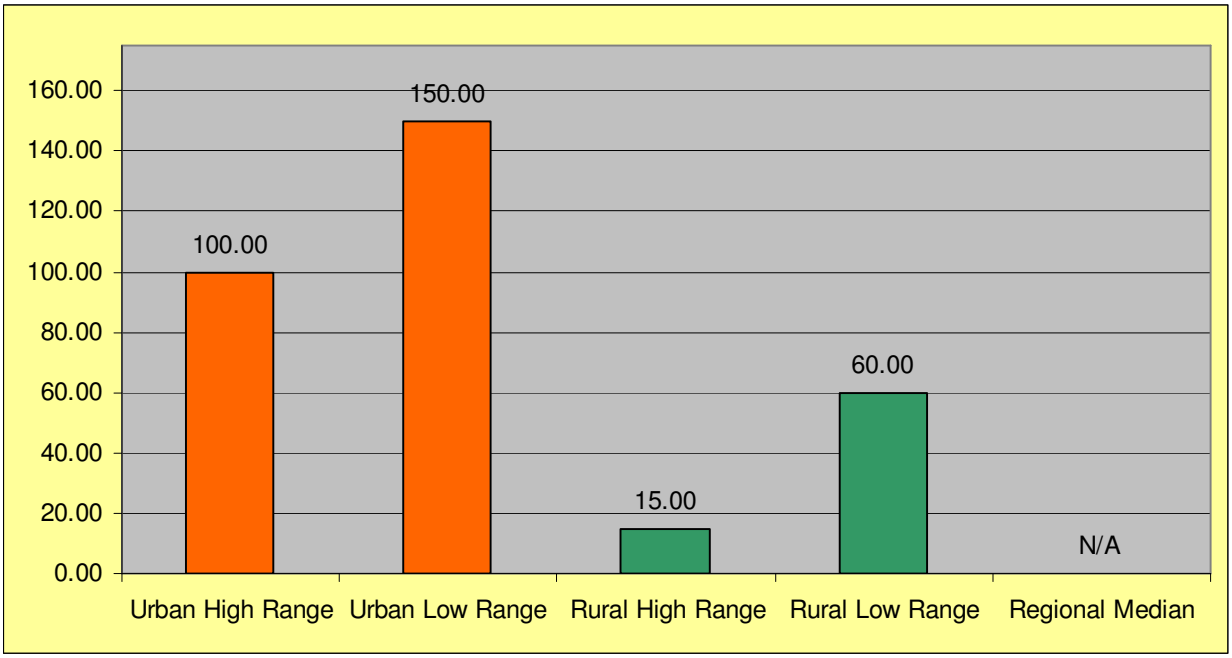
Department	Population	Per Capita*
Burbank - Paradise	7,000	32.64
CDF		Not Calculated
Ceres	38,813	80.82
Ceres FPD		63.30
Denair	5,200	15.59
Hughson	10,000	28.22
Industrial		39.38
Keyes	4,700	37.42
Modesto	206,000	111.56
Mountain View	2,500	56.33
Newman	10,000	Not Calculated**
Oakdale	17,500	101.02
Oakdale Rural	11,000	138.63
Patterson	17,000	35.42
Salida	18,100	47.53
Stanislaus Consolidated	38,380	105.39
Turlock City	67,000	76.99
Turlock Rural	4,000	35.83
West Stanislaus	9,800	64.24
Westport	3,000	49.82
Woodland	5,500	32.47

**The source of this table was a calculation made by ESCi based on the budget figures and the estimated populations from the County.*
***Several attempts made to collect data - unsuccessful*

National Benchmark Data

The following chart is obtained from the United States Fire Administration's annual data collection from the fire service. This chart provides an illustration of the average per capita fire costs for the Western United States. It should be noted that this information is always two years behind the current year. This figure is based upon 2004 data.

Figure 25: Tax Cost per Capita



The expenditure base for a fire agency consists of how it is spending that revenue on an annual basis. In general, all fire agencies have four basic cost concerns. They are personnel, facilities, apparatus and equipment, and overhead. As explained earlier, the average cost of operating a completely staffed fire station is an expensive proposition. The cost of sustaining a full-time fire agency is an investment that is highly dependent upon the community being able to sustain the costs over a period of time, not just an annual cost. The expenditure that is reflected in the budget results is a *level of service* being provided.

> ***The net result of comparing the funding base with the expenditure base is that, generally, you can only provide the level of service that you can afford.***

Sometimes that level of service is perceived as being adequate, and sometimes it is perceived as being inadequate. In general, the average citizen doesn't know the difference and may not care until it impacts them. However, this is a reality in how fire agencies are created and function on a day-to-day basis.

Per capita is considered by most taxpayers as the price they pay per person; and, therefore, most people want it to be as low as possible this also is the desire of most taxpayers. They want low costs. Yet when an emergency occurs, they want the *best* service they can get. This can create a contradiction.

Fire agencies need to be as focused as possible on the *economics* of fire protection. Every fire district has an economic profile that applies to its jurisdiction. These profiles consist of the taxpayers, the tax base, and the revenue opportunities that are present within that unique jurisdiction. In the simplest of terms, level of service (resources) = level of effort (financial effort). Low cost generally means low levels of service and high costs generally mean higher levels of service.

Redevelopment Areas

Redevelopment agencies also divert property tax revenue. When a local government creates a redevelopment project area, the growth in property tax revenue within the project area is diverted to the redevelopment agency rather than being shared by other local jurisdictions. Redevelopment agencies use the revenue from property tax growth to finance improvements intended to revitalize the project area. After the redevelopment work is complete – typically in 30 to 40 years – the growth in property tax revenues is reallocated among other local governments in the area.

Formulas contained in State Law determine allocation of property tax revenue. Immediately following the passage of Proposition 13, the Legislature adopted temporary measures to allocate the reduced property tax revenue among counties, cities, and special districts and to provide some fiscal relief to local agencies with drastically reduced revenues. In what became known as the *bailout bill,* Senate Bill 154 allocated post-Proposition 13 property tax revenues on a *pro-rata* basis.

For example, if a special district received 25 percent of the property tax revenue within a tax rate area prior to 1978, then following Proposition 13, the district would continue to receive 25 percent of the reduced revenue within the tax rate area. Senate Bill 154 also provided additional funds to counties, cities, and special districts for other programs.

Agencies that were affected by the County redevelopment projects have seen minimal expenditures on fire related issues. According to one source, it was initially estimated at the time the project was conceived, that $6.3 million would be allocated towards fire service projects.[23] In the case of one district, it will receive a 2 percent pass-through for about 20 years. The remaining 98 percent is retained by the RDA (redevelopment authority).

In subsequent legislation, Assembly Bill (AB) 8 provided a permanent solution for distributing property tax revenues. AB 8 adopted the allocation formula contained in Senate Bill 154 (SB 154); however, rather than providing the block grants of SB 154, AB 8 increased the *share* of property tax revenue allocated to local governments by shifting property tax revenue away from schools. School losses were back-funded from the State's general fund.

In the mid 1980s, the Legislature required counties to shift some of their property tax revenue to cities that had never received property tax revenue or had relatively low levels of property tax revenue. In FY 1992-93 and again in FY 1993-94, the Legislature *permanently* shifted property tax revenues from counties, cities, and special districts back to schools in roughly the same proportion as the benefit received under AB 8. The shift provides the State's general fund with partial relief from supporting schools.

In November 2004, state voters approved Proposition 1A, which establishes a constitutional amendment protecting local property tax revenue. Property tax revenue cannot be reallocated by the State unless approved by two-thirds vote of the Legislature and the Governor declares a *significant financial hardship*. Notwithstanding legislative approval and gubernatorial declarations, no reallocation may occur until FY 2008-09, and the revenue shifts will be considered loans.

[23] Input from Fire Chief Dale Skiles.

The Concept of Development Fees

Prior to the passage of Proposition 13, the manner in which most fire departments acquired capital funds to expand was to create a long-range capital outlay budget and have it funded as part of the regular budgetary process. However, those who understood the impact of Proposition 13 soon realized that it would be very unlikely that the minimal amount of property tax increase would allow enough funds to accumulate to purchase *new* additions of fire stations and fire apparatus to the inventory. This spawns the development of a concept called the *development fee*. Developer's fees have been in existence for many years for purposes of funding infrastructure expansions that were linked to property development. A classic example of this would be school districts, water systems, and other logistical infrastructure.

However, after Proposition 13 became a reality, many fire agencies began to realize that they needed to place some degree of assessment on the floor area of new properties if they ever expected to have enough money in the bank to build additional fire stations and to acquire additional fire equipment. Notably, development fees are restricted from ever being used for *staffing*. The logic behind this is relatively straightforward. Each new house, business, or industry that is built on the ground begins to occupy a certain amount of space that is going to increase the workload on the local fire department. In one case, it could be increase in demand as a result of population increases or it could be an impact on the ability of the department to reach a location in a timely fashion (response time) or it could merely mean that the size of the building places a fire flow demand upon the department.

Regardless of whatever impact would be attributed to the property, development fees were set so that each incremental improvement would result in an incremental contribution to fund for this specific purpose. Development fees can be calculated on a per square foot basis to provide a level of service in the future that is similar to the level of service in the past. That fee, applied to a new housing tract, a new business, etc., would contribute a like amount into the fund.

Development fees must be considered totally different from special taxes and any of the funds that are used to provide resources for staffing. These development fees are restricted for the very simple reason that if the building doesn't occur, costs do not incur.

The law does allow fire districts to charge different rates for service to out of district residents. This has been used in some jurisdictions for response to emergency medical calls, especially along unfunded highway areas. Usually, the bill is sent to the vehicle insurance company.

Unincorporated parcels that are not within a fire protection district do not participate in funding fire protection or emergency medical services; structural fire protection and emergency medical services are provided to these areas under a quasi-mutual aid basis.

Several of the Stanislaus County fire districts include large areas of agricultural land. This negatively impacts district funding in two ways. First, the Williamson Act designation allows property owners to lower their property taxes to reflect agricultural use. This results in lower tax revenue to the fire districts. Stanislaus County's General Plan has been effective in controlling urban sprawl and protecting agricultural land. However, it has been detrimental to fire districts. Since fire districts rely heavily on property tax revenues to fund services, annexations to cities steadily erode this revenue source. Although the service area of the district may have been reduced, it does not always correlate to reduced costs. Districts cannot purchase half a fire engine or reduce hours of operation.

Among the fire districts are *haves* and *have-nots*, meaning some have adequate funding while others struggle to get by. Few of the districts have large surpluses. Pooling of funds is an admirable concept but not often supported by taxpayers. Joining together for the purpose of achieving economies of scale for joint purchasing, training, and co-ordination of communications could benefit all concerned.

The Impact of Federal Grants

While some of the fire departments have been very successful in acquiring federal grants, a concern needs to be expressed about the future of that process. In view of other economic considerations, such as the critique of the impact of Hurricane Katrina, it is conceivable that funds being provided to Homeland Security and the U.S. Fire Administration may either be reduced or redirected sometime in the future.

In addition, agencies that have received extensive funding for items such as fire equipment, personal protective clothing, and breathing apparatus must put into place some form of budgeting practice to be prepared to replace that equipment when it is old or unserviceable. This is not the responsibility of the fire chief but rather the board of directors of the respective organizations. There is a tendency in most organizations to receive grant money and to fail to realize that the grant money imposes a planning obligation. The agencies that understand this and incorporate some form of replacement schedule will be far more successful than those that fail to recognize this. They will find themselves in a crisis similar to the one they recently faced.

Economic Infrastructure of Stanislaus County

Every fire department, whether it is a volunteer agency or a full-time agency, has a cost component. While it is recognized that most of the public, and in some cases elected officials, believe that a volunteer fire department is a *free fire department* – obviously this is not the case. In the days when volunteer fire departments had no linkage with government, they relied on donations. The purchase of apparatus, the acquisition of facilities to house that apparatus, and all the necessary accoutrements to operate as a fire department was a very risky proposition when an organization was funded by private donations.

Depending on the hospitality and idealism of the community, the level of service (the amount of resources that were made available) was often much higher than the level of effort. However, all fire departments in a modern society virtually operate as a function of government rather than the private sector.

Although there may be few exceptions in isolated parts of the country, most fire agencies today have some nexus with a district, state, municipality, or some other local governing jurisdiction in which the revenue stream is filtered prior to it coming to the fire department. The concept that the volunteer is free is based on the simple assumption that if you are not paying for personnel, the cost is minimal. At one time that might have been true, however today it is certainly not. A modern fire apparatus can easily cost $250,000 to $500,000. The acquisition of a physical place to house a fire station or create a training center is a function of the local real estate market and is never to be taken for granted.

It is also true that once a fire department starts increasing its level of service (resources), it must increase its level of effort (financial structure) in order to be able to sustain them. The purpose of

interjecting this into transition management is to recognize that there are points in time when many communities desire to have a level of service but have no ability to provide a corresponding level of effort. A typical example would be in a land-poor community in which the department must rely on the volunteer fire service to staff and equip itself with a minimal amount of support from the community.

The manner in which that local entity collects funds to support its fire protection effort is most often measured not in absolute dollars but in a per capita relationship to the community. For example, if the level of effort that we were able to generate in a community was approximately $100 per person, it is easy to see that a city of 5,000 people will not be able to afford the same level of service that a city of 50,000 can afford. There is a direct correlation between per capita fire contribution and the level of service that can be provided.

In terms of transition management, the escalation of the total number of dollars that is required to support a specific level of service has certain specific thresholds. By that, ESCi is referring to the fact that if there is a desire to add a full-time person to a fire department, there is a cost factor. Further, if that cost factor exceeds the total per capita contribution, it would be impossible to achieve the desire. Conversely, if you have a large population that has a low per capita contribution, it is conceivable that the fire demand will be considerably higher than the amount of resources available to adequately provide the necessary services. A good example would be a community of 40,000–50,000 that was still trying to provide fire protection by utilizing volunteer firefighting forces.

This is the beginning of an age-old argument. When is a fire department too small to afford full-time personnel and when is it too large to be able to rely on a volunteer fire force? That question has been answered literally thousands of times across the country but remains an argumentative issue for thousands of other agencies that haven't answered the question.

Using the per capita element as a baseline, it is relatively easy to see that population and assessed valuation together are a tax generating mechanism that will allow any specific level of service to be funded at a specific point. Specifically, if a community has a property tax base and it has a very low tax rate and the per capita figure is insufficient to pay for both apparatus equipment and staffing, then the level of service remains low.

Therefore, it becomes very critical in the transition management of a fire department that emphasis be placed on monitoring the revenue side of the budget before the department gets overly enthused about increasing expenditures.

The other side of that coin is if an agency is experiencing significant fire problems and taxpayers are not making an appropriate enough contribution to fire protection, they are increasing the vulnerability of the values at risk in an almost irresponsible way. How the organization finds that balance point, in terms of transition management, is sometimes problematic. In the past, many organizations found this decision point intuitively.

After acquiring funding sources to create a level of service, organizations may go for many years without even considering how those funding sources will be able to sustain the level of service in the future. They either use their funds in a *hand-to-mouth* fashion or use them in a fashion that is inconsistent with long range planning and find themselves in a crisis or catastrophic mode when a major event occurs and people begin to ask, "What are my tax dollars paying for?"

Issue of Funding Deficiencies

Without a doubt, the single most predominant discussion with every individual fire agency was that of funding; primarily because fire protection is financially intensive. As noted, there is a significant difference between the funding deficiencies of a fire department that has full-time staff and those that are volunteer in nature. In the case of funding deficiencies with full-time fire departments, the only solution to the problem is to either add funding or reduce personnel. That is not true in the case of the totally volunteer fire departments. Funding efficiencies in the case of volunteers usually means the inability to keep apparatus on the street or the inability to keep fire stations properly maintained and serviceable.

Closing the Gap

One of the questions that begs an answer in this discussion is "What are the reasons for the deficiency versus the gap?" The primary purpose behind government budgeting is to establish two things. The first of these is to determine how much money is going to be spent on a particular type of service being provided. In the fire service this is often referred to as the *level of effort*. This requires funding for both capital assets and staffing.

Level of effort is most often expressed in terms of per capita fire expenses. For example, if two communities have the same per capita fire cost but totally different population figures, the total amount of money being made available to provide services will be different. For example, if a community was expending funds at a per capita cost of $100 per person and had a population of 10,000, they would have a $1 million level of effort. If a neighboring community was spending money at exactly the same rate ($100 per person) but had a population of 25,000, they would have a level of effort of $2,500,000. This simplistic formula is clearly an indication of one of the most important attributes of a fire department—the number of people that are available to pay the bill for fire protection.

The second dimension of budgeting is to take into consideration the capital-intensive aspects of a fire department. Fire trucks are incredibly expensive devices to purchase. If one considers that a Type I fire pumper today, meeting just minimum specifications in accordance with NFPA Standard 1901,[24] probably costs between $350,000 to $400,000. This is easily recognized as a significant financial impact. However, the purchase of the apparatus is only the beginning of the cost. Fire apparatus must be maintained.

According to the California Fire Mechanics Association, the maintenance cost of a fire apparatus has two components. The first of these is gas, oil, and routine maintenance, which would include such things as replacement of tires and minor repairs. The second aspect is the cost of performing standardized fire department evaluations of equipment such as annual pump testing, and in the case of aerial apparatus, testing of the aerial equipment.

California Fire Mechanics Association estimates that the maintenance cost of a vehicle ***should*** range between 5 to 7 percent of the acquisition cost of that piece of equipment.

After completing the on-site review, there are several observations that need to be made. The first of these is that the vast majority of the apparatus fleet servicing these volunteer fire departments is superannuated. National fire service standards regarding apparatus in heavy

[24] *National Fire Protection Association 1901: Automotive Fire Apparatus*, 2003.

duty service, (i.e. suburban fire departments and metropolitan fire departments) indicates that a piece of fire apparatus should not be on the front line for more than ten years. Subsequent to that, many fire departments conforming to NFPA standards restrict a reserve apparatus to be in service for ten years. This gives an average service life of a piece of apparatus of 20 years.

The logic behind this is that these vehicles are on the road almost every day and subsequently, are subject to rather brutal road conditions. Firefighting apparatus is not designed like an over-the-road truck that is accustomed to logging hundreds of thousands of miles. Fire apparatus must comply with a wide variety of operational needs, which includes carrying large amounts of water that is sometimes incompatible with having tool compartments designed around those water tanks. As a net result, fire trucks in service in suburban fire departments often suffer serious stresses and strains that result in their service life being limited to those two parameters.

This is not necessarily true for fire departments in a rural area. It is not appropriate to state that a piece of apparatus must be replaced in ten years because the same operating road conditions may or may not be in existence. However, it is easy to say that with the design technology of fire apparatus, any good piece of fire apparatus that is over 30 years old is superannuated. For the most part, it lacks adequate safe guards to function as an emergency response vehicle. Granted, there is clear evidence in the volunteer fire departments that they have attempted to extend the service life of these vehicles by engaging in regular and extraordinary maintenance efforts. However, these same vehicles are expected to respond on long duration events and participate in strike team operations, which may be hundreds of miles away from home, thus placing them back into the same operational arena as a suburban piece of fire apparatus.

The continued reliance on a mutual aid system to staff equipment to respond to catastrophic events is placing an extraordinary burden on volunteer fire department apparatus. Moreover, the original design of fire equipment was not specifically aimed at emergency medical services. As a result, the number of road miles that are being put on these vehicles responding to medical calls is, at minimum, doubling the amount of mileage and in some cases tripling the amount of mileage that would be considered for service life.

The second element of the vehicle fleet that must be considered is that many fire departments today are receiving grants to purchase apparatus. On one hand this is highly desirable; it offsets the cost of local government in putting the apparatus in service. However, there is a downside. Simply stated, an apparatus that is purchased today that has not been scheduled for replacement and for which funding measures were not put into place, only means that you deferred the decision to a time in the future in which the funding source will probably be at a highly inflated rate.

Based on these two best practices – time certain acquisition of equipment and amortization of a vehicle over a period of time - the fire departments were reviewed to determine current practice. It was determined that practically none of the fire departments have any kind of amortization process in place. An absolute minimum number of them are setting aside adequate maintenance line items for their vehicles. The fact is most of these departments do not have a fully articulated apparatus replacement policy.

This is to be expected for the very simple reason that most of these departments are currently relying on second-hand apparatus and/or equipment that they are fabricating using the talents of their personnel.

Fire departments that barely have enough money to put gas and tires on fire trucks are not particularly interested in amortization. However, the other side of the coin is that failing to be able to do that kind of long range planning only stalls the inevitable. Apparatus will be rendered obsolete and rendered irreparable at some point.

During the on-site reviews, several vehicles were noted as being completely out of service. While ESCi will discuss maintenance of apparatus in the chapter on infrastructure, the primary point for several of these vehicles is that parts simply can not be obtained. These vehicles are so old that one has to engage in an extensive search merely to find someone who has an inventory of the old parts.

In a later chapter recommendations will be forthcoming regarding the need for fire jurisdictions to engage in an amortization and vehicle replacement plan at whatever level they can.

Summary

The funding of fire protection is a continuing problem. The single station, single apparatus fire department is rapidly becoming an endangered species. The costs of providing fire protection are often disconnected from the public's expectation. The per capita expenditures are an indication of the community's ability to pay, yet the service demands are often based upon other factors such as frequency and consequence of EMS calls. Those communities that have a per capita cost of less than $100 are unlikely to have the ability to provide a high level of service. Those areas that protect less than 10,000 people and concurrently have a low per capita cost are also likely to be operating with limitations. Those areas that have a per capita above $100 and are providing services to an area that is in excess of 10,000 are likely to be operating with slim margins.

- The single station fire department that covers less than nine square miles and protects less than 10,000 people is becoming less likely to be able to remain economically viable.
- Disparity exists between districts; some districts are able to fund adequate levels of service and others are not.
- City annexations have eroded the funding base of some of the districts immediately adjacent to them.
- Highways and other unfunded service areas negatively affect most districts.
- Not all districts have been able to establish funding sources in addition to property tax revenues.
- The lack of current property assessments results in reduced funding to districts.
- Inadequate reserve funds prevent long-term planning for operational demands and capital improvements.

This page intentionally left blank

Chapter 6 – Principles of Fire Protection Service Delivery

General

This Municipal Service Review was not intended to be a comprehensive evaluation of all aspects of the Stanislaus County fire protection delivery system. Nonetheless, the guiding principle is that county fire agencies must work together more efficiently and effectively. Given the fact that fire agencies often respond outside of their jurisdiction boundaries, this review is aimed at achieving a more uniform and cost efficient balance or *economies of scale* throughout the County. It is appropriate to note that the *deployment platform* of almost all fire agencies is based on certain principles that are somewhat universal. These principles include standards of cover, levels of effort, levels of service, staffing configuration, elements of time, risk assessment, distribution of resources, concentration, response time goals, Insurance Services Office review, and mandates by state and federal government. This chapter will provide an assessment of these factors in relationship to the individual county fire agencies.

Limitations to this Study

The Municipal Service Review is not intended to be an in-depth study of standards of cover (SOC), but this process cannot ignore the implications of these principles. A more comprehensive discussion of SOC concept of thresholds and triggers is included in the Appendix to help the reader understand why fire agencies must grow in conjunction with the population and development or face response failure. For this review, ESCi's observations are going to focus on the following:

- Where are the fire stations now?
- What level of service are they currently providing?
- What is the potential for expanding that level of service in the short term?
- Can any efficiency be developed from strengthening the coordination and cooperation among the agencies?
- Can any efficiency be expected from redrawing district lines or engaging in consolidation or other cooperative behavior?

Standards of Cover

One of the fundamental principles for assessing fire service delivery is known as standards of cover (SOC). The concept is simply that fire protection resources need to be distributed in a community based on risks, hazards, and values; and furthermore, they should be able to respond in a timely fashion to prevent a small fire from becoming a larger one. This involves the ability to concentrate resources, especially staffing, to be able to perform the job in a safe and effective manner on significant events.

Level of Effort

Level of effort is defined as the *level of financial resources* devoted to providing a specific level of service. It is most often expressed in terms of a *per capita* expenditure, (as defined in Chapter 5) or as a given increment of a tax rate or contribution produced by a given amount of the population. Because the primary funding sources used to provide fire services in Stanislaus County are derived from property tax, the policy question regarding level of service is based on level of effort. Financial resources must match the level of service to be provided. The level of effort is, therefore, reflected in the revenues and expenditures of the reporting agencies. The surrogate for level of effort is called *per capita costs*. This is derived by dividing the budget by the population being served. In the case of the fire agencies reported on in this study, there are multiple per capita numbers. These numbers are derived by dividing the budgets of the respective entities by the population being protected – this gives a *per person* level of effort that is often used as a means of comparison.

Secondarily, decisions must be made that require a business approach to providing a level of service consistent with the revenue. This chapter looks at compliance with regulations, response time performance, and fiscal impact of providing that level of service.

The information provides justification and fundamental orientation of the deployment system.

Levels of Service

Level of service is the method by which most fire agencies are evaluated is their ability to provide adequate resources to mitigate events. In order to understand the effectiveness of a fire department, the delivery system needs to be defined in terms that can be measured. Level of service is primarily defined as the resources needed to meet an organization's stated service level objectives. Level of service is defined only in terms of what is provided, not in terms of effectiveness and efficiency in dealing with any specific emergency.

In general, the level of service provided is described by the characteristics of the agency providing service. This includes the idea that an adequate number of personnel are placed on an adequately designed and equipped piece of fire apparatus; and they are deployed to arrive at the scene of an emergency in a timely fashion to remove the hazards, reduce the danger, or stop the emergency from progressing any further. Using these attributes, the following level of service is recognized by the fire service:

- ✓ *No Service* – No response is available for the area.
- ✓ *Wildland Level of Service* – A fire company equipped to handle wildland events will arrive within 30 minutes of travel time to intervene. There is no limit on the number of total resources that will be ultimately deployed, nor is there an expectation of the time required to complete the deployment.
    - Generally, this is any rural area not readily accessible by public or private maintained road.
- ✓ *Frontier Level of Service* – A fire company equipped to handle basic all-risk emergencies will arrive within 15 minutes of travel time. There is no expectation that the deployment of these resources will result in confining fires to the area of origin,

but that the response will result in preventing the fire from spreading from the building of origin to exposures.

- ✓ *Rural Level of Service* – A fire company equipped to handle basic structural fires and other related emergencies will arrive within 15 minutes of travel time, accompanied with other vehicles to sustain a fire flow of 500 gpm (gallons per minute) for a minimum of one hour. There is an expectation that the deployment will result in confining the fire to the room of origin, if the fire has not gone to flashover prior to arrival of the response. This level of service is the basic reason the Insurance Services Office (ISO) created its ISO 8B category.
    - o Generally this is an unincorporated or incorporated area with total population less than 10,000 people, or with a population density of less than 1,000 people per square mile.
- ✓ *Suburban Level of Service* – A fire company equipped to handle all risk emergencies will arrive within five to six minutes of travel time, 80 percent of the time, and be able to generate fire flow for 2,000 square foot occupancy for one hour. There is an expectation that the deployment will confine most fires to the room of origin.
    - o Generally this is an incorporated or unincorporated area with a population of 10,000 to 29,999 or any area with a population density of 1,000 to 2,000 people per square mile.
- ✓ *Urban Level of Service* – A fire company equipped to handle all risk emergencies will arrive within five minutes of travel time, 90 percent of the time, and be able to generate adequate fire flow for the designated risk level in the area. There is an expectation that the response will confine most fires to the room of origin.
    - o Generally this is an incorporated or unincorporated area with a population of over 30,000 people and a population density over 2,000 people per square mile.

Given the overall goal to control emergencies before they reach maximum intensity, communities must establish a level of service, in writing, that can be used to make deployment decisions. These are the day-to-day objectives of the responding units. That is the primary purpose behind this concept; to determine if the level of service meets the needs of the users of the system.

Level of service is measured by response time goals along with the types and the nature of the service being provided. For example, providing two firefighters to the scene of a medical emergency within 10 minutes with 90 percent reliability is one level of service. To provide four firefighters in five minutes with an 80 percent reliability is another. Levels of service can be modified up or down depending upon the availability of resources, deployment patterns, staffing, and other factors. This is normally called the *Standards of Cover*. (SOC)

Most of the fire agencies in this area do not have an adopted SOC document. The suburban fire station assets appear to have a de facto performance of somewhere between five and six minutes, 80 percent of the time. The accepted, albeit informal performance standard, for the rural units appears to be in the range of having a travel time of nine to ten minutes on average. Fractals are not available for review.

Based on the per capita expenditures and the area covered, each fire agency in this review has been given a definition of a *level of service*. Most of the fire districts being reviewed in this

process would be classified as rural areas; most of the cities will be considered borderline suburban/urban

.

Figure 26: Level of Service Provided

Department	Type of Service
CDF	Rural
Denair	Rural
Mountain View	Rural
Newman	Rural
Oakdale Rural	Rural
Patterson	Rural
Turlock Rural	Rural
Westport	Rural
Woodland	Rural
West Stanislaus	Rural/Suburban
Burbank-Paradise	Suburban
Salida	Suburban
Hughson	Suburban
Keyes	Suburban
Oakdale	Suburban
Industrial	Suburban
Ceres FPD	Suburban
Ceres	Urban
Modesto	Urban
Stanislaus Consolidated	Urban
Turlock City	Urban

*Source: LAFCO Survey

Staffing Configurations

There are several different staffing configurations available for a fire agency to deploy. They generally consist of three specific types of staffing resources:

Volunteers – A staffing configuration that is entirely dependent on the response of individuals that are properly equipped and trained to function as firefighters but receive no compensation for providing a level of service.

Full-Time – A staffing configuration that is dependent on individuals being on-duty, properly equipped, and trained to function as firefighters who are compensated for providing the level of service.

Part-Time – A staffing configuration that is dependent on individuals that are on-duty on the basis of working alternative work schedules other than being full-time. They are trained as firefighters, have the proper equipment, and function as firefighters but are only compensated for the hours they work in the station. They usually have an hourly wage rate.

Fire agencies, due to the amount of money that is available, often utilize a combination of ways and means of using these three types of personnel resources consisting of:

- *Totally volunteer agency* – No one is compensated
- *Combination agency* – Some are compensated, some are not. A mixture of volunteers, reserves, or part time personnel
- *Totally full-time agency* – All are compensated

A fire agency can only afford the level of service that money allows. Based on these definitions, each fire agency in this study has been given a staffing description which is shown as follows.

Figure 27: Type of Fire Department

Department	Total Staffing	Full-time	Volunteers	Type
Burbank Paradise FPD	30	0	30	Volunteer/Part Time
CDF	7	7	0	Variable
Ceres City	24	21	3	Mostly Paid
Ceres FPD	0	0	0	Under contract
Denair FPD	23	0	23	Volunteer
Hughson FPD	25	2	23	Mostly Volunteer
Industrial FPD	0	0	0	Under contract
Keyes FPD	29	1	28	Mostly Volunteer
Modesto	192	192	0	Entirely paid
Mountain View FPD	18	0	18	Mostly Volunteer
Newman	15	1	14	Mostly Volunteer
Oakdale	28	28	0	All paid
Oakdale Rural FPD	48	19	29	Combination
Patterson	5	5	0	Combination—part of another department
Salida FPD	37	11	26	Combination
Stanislaus Consolidated FPD	86	56	30	Mostly Paid
Turlock City	53	33	20	Combination
Turlock Rural FPD	30	0	30	Volunteer
West Stanislaus FPD	105	5	100	Mostly Volunteer
Westport FPD	17	0	17	Volunteer
Woodland Avenue FPD	26	0	26	Volunteer
County Fire Warden	*(4)	0	0	Paid Staff
Total	**798**	**381**	**417**	

** Non combat*

Elements of Response Time

In conducting research for the Commission on Fire Accreditation International, Inc. (CFAI), members of the initial task force spent considerable effort toward examining the factors that make up the time required to be notified of and respond to a fire emergency. A thorough understanding of the relationship of time and the progression of an emergency was fundamental to defining optimum service levels. In the process of this work, the task force noted that many fire departments are collecting data on emergency response but are not necessarily using that data to measure performance.[25]

Problems occur when fire departments use different timeframes in collecting and reporting response time statistics. For example, if a department does not include alarm processing or turnout time in its definition of response, the department's response statistics may be unfairly weighted because only travel time to the emergency is measured and reported. On the other hand, a department that does include alarm time and processing time in its collection of data may be compared unfavorably to a department that does not.

Fire emergency response times are well defined in the Stanislaus County because of the use of a single dispatch center. Definitions of the times to be measured are described in the *Cascade of Events*.

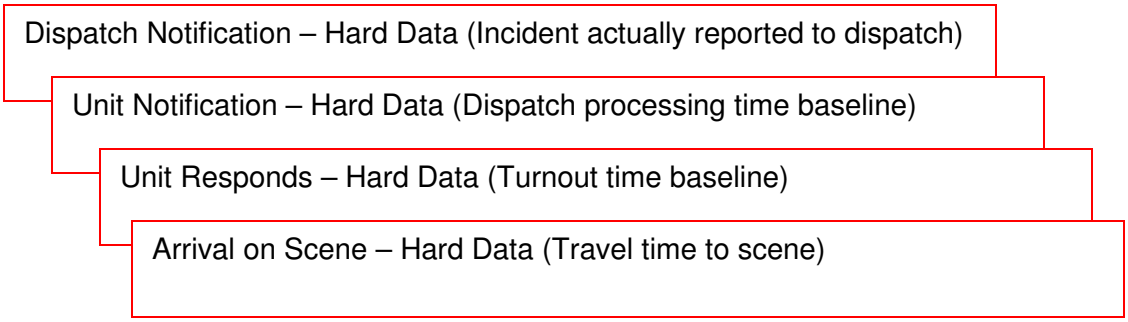
Cascade of Events

Response time elements are actually a cascade of events. This cascade is similar to that used by the medical community to describe the events leading up to the initiation, mitigation, and ultimate outcome of a cardiac arrest. It is imperative the reader keep in mind that certain intervals described can be directly influenced by the fire service (reflex interval and travel interval), while others can be influenced indirectly (through public education, engineering initiatives, and standards).

Careful definition of terminology is essential to any conversation about response performance standards. It becomes even more critical when an organization attempts to benchmark its performance against other providers. Reviewers should understand the standard response time intervals as outlined on the next page.

[25] *Creating & Evaluating Standards of Response Cover for Fire Departments*, Fourth edition, Chapter 2, Page 1, Commission on Fire Accreditation International, Inc, 2003, Chantilly, VA.

Figure 28: Cascade of Events



Time Points and the Cascade of Events

The response performance continuum is composed of the following time points and time intervals:

- **Event Initiation Point -** The point at which factors occur that may ultimately result in an activation of the emergency response system. Precipitating factors can occur seconds, minutes, hours, or even days before a point of awareness is reached. An example is the patient who ignores chest discomfort for days until it reaches a critical point at which he/she makes the decision to seek assistance (point of awareness). It is rarely possible to quantify the point at which event initiation occurs.

- **Emergency Event Awareness** - The point at which a human being or technologic sentinel (i.e., smoke detector, infrared heat detector, etc.) becomes aware of conditions requiring an activation of the emergency response system. This is considered the point of awareness.

- **Alarm** - The point at which awareness triggers an effort to notify the emergency response system. An example of this time point is the transmittal of a local or central alarm to a public safety answering point. Again, it is difficult to determine the time interval during which this process occurs with any degree of reliability.

  A sub-interval which we shall call the alarm transmission interval lies between the awareness point and the alarm point. This interval can be significant, as when the alarm is transmitted to a distant commercial alarm monitoring organization, which then must retransmit the alarm to the local 9-1-1 and dispatch facility. When there is an automatic transmission of the signal, the fire department gains valuable time in controlling the event.

- **Notification** - The point at which an alarm is received by the public safety answering point (PSAP). This transmittal may take the form of electronic or mechanical notification received and answered by the PSAP.

- **Call Processing Interval** - The interval between the first ring of the 9-1-1 telephone at the dispatch center and the time the CAD operator activates station and/or company

alerting devices. This can, if necessary, be broken down into two additional parameters: *call taker interval* (the interval from the first ring of the 9-1-1 telephone until the call taker transfers the call to the fire department dispatcher) and *dispatcher interval* (the interval from the time when the call taker transfers the call to the dispatcher until the dispatcher [CAD operator] activates station and/or company alerting devices).

- **Dispatch Time** - The time when the dispatcher, having selected appropriate units for response, initiates the notification of response units.

- **Reflex or Turnout Interval** - The interval between the activation of station and/or company alerting devices and the time when the responding crew activates the *responding* button on the mobile computer terminal or notifies dispatch by voice that the company is responding. During the reflex interval, crews cease other activities, don appropriate protective clothing, determine the location of the call, and board and start the fire apparatus. It is expected that the responding signal will be given when personnel are aboard the apparatus and the apparatus is beginning to roll toward the call.

- **En-route Time** – The point at which the responding apparatus signals the dispatch center that they are responding to the alarm.

- **Travel (Interval)** – Begins at the termination of the reflex interval and ends when the responding unit notifies the dispatcher unit that it has arrived on scene (again, via voice or electronic notification).

- **On Scene Time –** The point at which the responding unit arrives on scene.

- **Initiation of Action** – The point at which operations to mitigate the event begin. This may include size-up, resource deployment, etc.

- **Termination of Incident** – The point at which the unit(s) has completed the assignment and is available to respond to another request for service.

- **Total Response Interval –** Alarm processing time + turnout time + travel time.

- **Operations Interval –** This time measurement is an indicator of the customer's perception of the performance of the emergency service system after they are on-scene. It includes those factors that, in the customer's perception, reflect the performance of the fire service whether or not the fire service directly controls those elements. This interval adds the call-processing interval to the response interval.

In general, what the public sees is:

- **Total Response Time** — The time required for response, measured as the time between when the emergency responder is notified of an incident by the dispatch agency and when the responder's vehicle comes to a complete stop at the scene (or staging area).

What fire agencies must plan for and keep track of is:

- **Turnout Time** — The time measured between when the emergency responder is first notified of an incident by the dispatch agency and when the responder's vehicle begins moving toward the incident.

- **Travel Time** — The time measured between when the emergency responder's vehicle begins moving toward the incident and when that the vehicle comes to a complete stop at the scene (or staging area).

Risk Assessment

The Standards of Cover incorporate the idea that the level of service being provided be compared to the level of risks, hazards, and values being exposed. This concept, while it is basic to the Standards of Cover concept, does not always apply itself well to issues of overlap and redundancy. It is clear from the Municipal Service Review that there is a desire is to eliminate redundancy. However, before deciding whether something is actually a duplicate, one has to evaluate the underlying premise as to why a fire station is already in a general area to begin with.

This Municipal Service Review process does not specify an extensive risk assessment program. However, data was collected from several different points of view to take a look at recognized fire problems in the area relating to population and the concentration of buildings that have an economic impact on the community. Population has been mapped according to the 2000 Census data; and clearly shows that there are density concentrations in the cities and along the two transportation corridors, with large areas in the County currently undeveloped.

One data element reviewed was the Insurance Services Office's Needed Fire Flow (NFF) studies for Stanislaus County (see ISO information in this chapter). In spite of the fact that the County covers a very large amount of area, the ISO has very few buildings that have assigned needed fire flow requirements within this County. These ISO-rated buildings are identified in *Appendix E: Map Atlas* and are described as a density map of Needed Fire Flow locations. Specific addresses are available on request.

Distribution

Distribution is the attribute of a fire station being located so that personnel can respond to an event in a timely fashion based on the aforementioned *Cascade of Events*.

Standards of Cover principles incorporate this concept called *total response time* to measure distribution. In the most simplified terms, the closer fire stations are together, the quicker personnel can get to an emergency. The further apart they are, the longer it takes. While this may seem intuitive, it is not a well known factor to many stakeholders in the system.

For example, a person who lives in a well developed city may have an expectation that the fire service will be to the front door within a matter of only a few moments. A person moving out of that city into a residential area that is locally very densely populated area, may have the same expectation (in a tract development). Yet, the reality is that the levels of service provided by that city may be significantly different than the level of service provided by a department that is primarily serving a rural area around a newly developed tract.

For explanation the response time by all Stanislaus fire agencies must also be broken into three components - alarm processing time, turnout time, and travel time. The element of time for alarm processing is in the hands of the dispatch and communication system. The amount of time it takes to turnout a fire apparatus is different depending on whether or not the station is staffed by full-time, permanent personnel, or otherwise assigned personnel, or whether staffing is recalled (volunteer). Travel time is a function of speed and the availability of a road network to get to the scene of an emergency. This results in different levels of service being provided in different areas.

The *Map Atlas* (See Appendix E) illustrates each agency's response pattern from a perspective of travel time only. It should be recognized that the travel time polygons (areas) often go well beyond the boundaries of an agency. That is considered to be part of the relationship between adjacent engine companies. There will also be areas that are not covered by a travel time polygon. These represent areas that are currently underserved by fire suppression capability.

Concentration

Concentration is used in the Standards of Cover process to describe the ability of a fire agency to put enough personnel on the fireground to make a safe and effective attack upon a structural fire or other emergency. The term *concentration* is used in concert with the concept of an effective response force.

Effective Response Force

The term effective response force means that a fire department places a sufficient number of people on responding fire equipment to perform specific duties that would mitigate the emergency within a certain time frame. For structure fires, this equates to a first alarm assignment. An effective response force has three areas of application - emergency medical incidents, structural fires, and all other emergency responses.

In the simplest of terms, sending one person on a fire truck does not constitute an effective response force. By the same token, waiting until there are ten people on a fire truck does not constitute an effective response time if it takes 20 minutes. Generally accepted practices in the fire service are that it requires a minimum of two people on a vehicle to be able to treat effectively a minor emergency such as a medical aid; a traffic collision; or, for that matter, a fire of minimum consequence, such as a fire in a trash container or an insipient wildland fire. Contemporary fire service practices also indicate that it takes a minimum of three people on a vehicle to do an effective job of mounting an attack on a fire of any consequence, i.e. a beginning fire in a structure or a major fire in a vehicle. Four persons are preferred in urban areas.

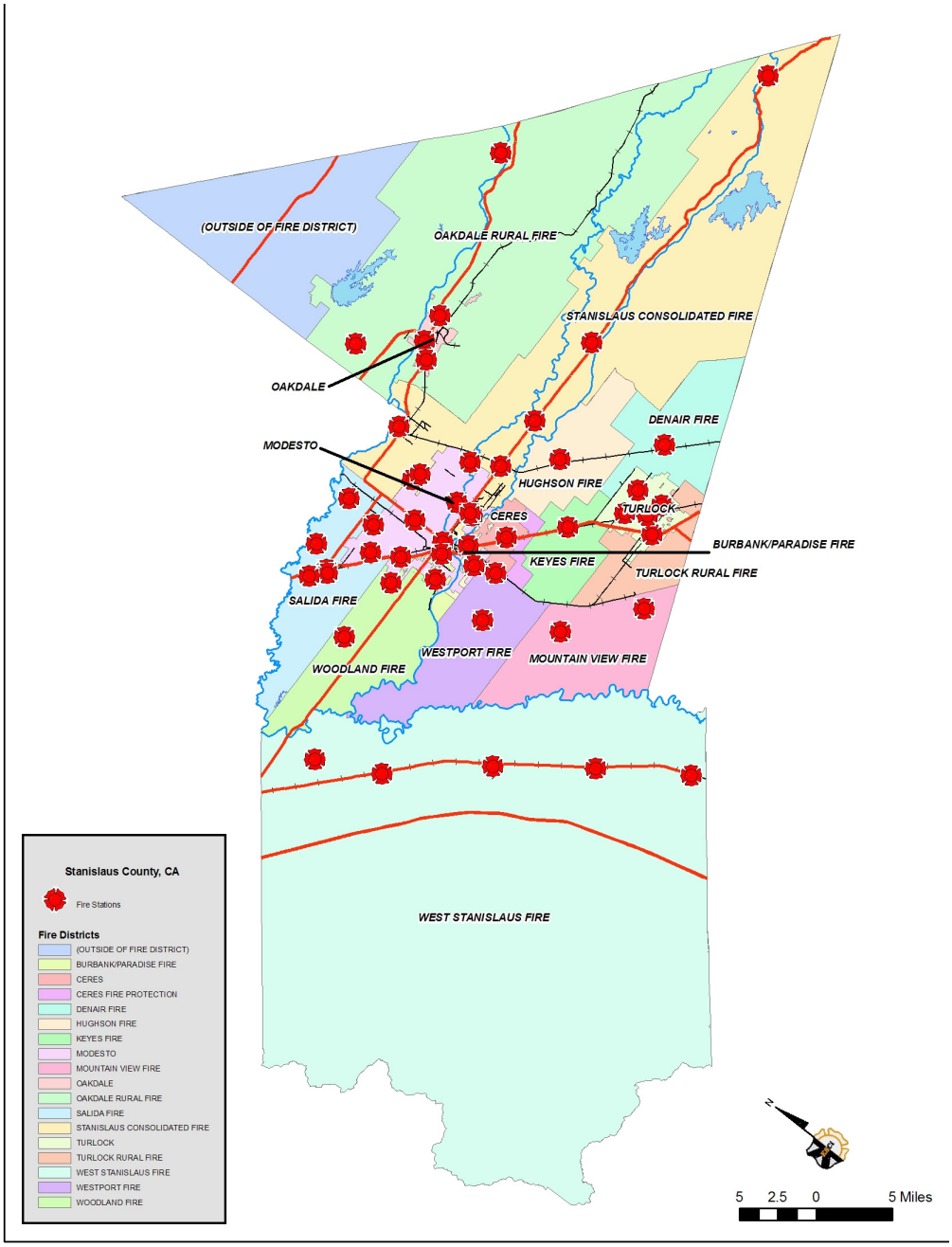
Federal law and national standards establish a firefighter safety requirement known as the *two in-two out* rule. This rule states that it takes four people to be on the fireground before anyone is authorized to enter a building unless there is a life being threatened.

In addition, the ISO has made a determination that unless six people are on the fireground within a reasonable timeframe, it is unlikely that the department will be able to do anything to reduce structural fire loss effectively.

The current delivery system utilizing volunteers, paid call, reserves, sleepers, or interns all create a similar type of deployment pattern. The major issue with all volunteer fire departments relates to the reliability of the volunteer fire force depending upon two different modalities - time of day or time of year.

There is a significant difference between the level of service that is provided to urban or suburban communities with respect to distribution and concentration criteria and those that are emerging in underserved areas or rural areas. The ability to mount an effective response force is also impacted by the lack of available personnel to staff equipment in a timely fashion.

Figure 29: Map of the Current Fire Station Locations in the County for Local Government



Structural fire protection is a function of providing a response to two risk factors - people and their property. People who are living or working in buildings that present fire hazards have emergencies. The more people there are, the more calls for service. The more buildings there are, the more the potential for loss. The following two charts provide an insight into the distribution and concentration of both people and density in this study area.

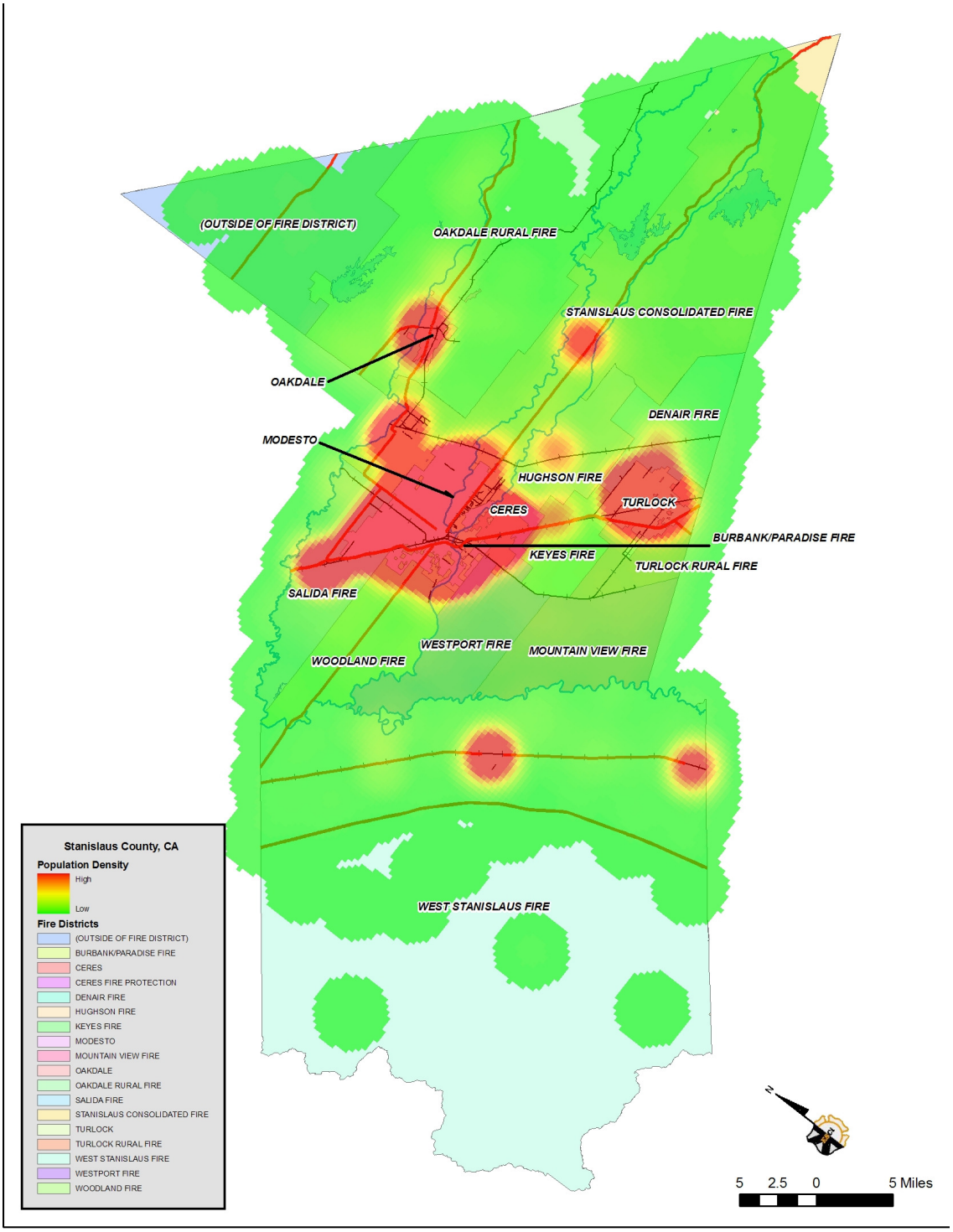
The following chart illustrates the relative rating of the population densities from high to low in the County.

Figure 30: Density Comparison

Department	Population	Density*
Ceres	38,813	5,505
Modesto	206,000	5,150
Turlock City	67,000	4,751
Patterson	17,000	4,250
Oakdale	17,500	3,181
Newman	10,000	2,500
Burbank -Paradise	7,000	1,572
Salida	18,100	430
Hughson	10,000	285
Stanislaus Consolidated	38,380	176
Keyes	4,700	174
Turlock Rural	4,000	148
Denair	5,200	123
Woodland	5,500	122
Westport	3,000	66
Mountain View	2,500	47
Oakdale Rural	11,000	47
West Stanislaus	9,800	15
CDF	N/A	N/A
Ceres FPD	N/A	N/A
Industrial	N/A	N/A

**People per square mile*

Figure 31: Map of Population Densities



Response Time Goals

As describe previously, response time must be broken down into three components - alarm processing time, turnout time, and travel time.

Alarm processing time is a function of how well organized the communications centers operate. In Stanislaus County, all of the fire districts are served by the same dispatch center. Data is available on alarm processing time.

There are significant differences in the turnout time among these districts because all have staffing patterns that rely on recalls. Travel distances reflected by the large amount of area to be served clearly demonstrates that response times are not the equivalent in urban and suburban areas.

Official Response Times to Deal with the Range of Risk

Most of the firefighting agencies examined in this Municipal Service Review do not have an officially adopted response time. Nor have they adopted a risk assessment model that addresses the range of fire flows indicated in this study. Notably, this MSR was not intended to be a deployment analysis. Nonetheless, one cannot look at service levels without having some assessment of response time and the types of risks involved. That is the primary performance measure by which a community determines whether a fire department is meeting its expectations or not.

In assessing the response times in Stanislaus, there were three factors taken into consideration:

1. All of these organizations are dispatched by the same Regional Communications 9-1-1- Center (SR9-1-1) that is managed by the JPA in Modesto. It is estimated by the Regional Center that they may be performing between 90–120 seconds to initially dispatch a call. (This is called alarm processing time.)

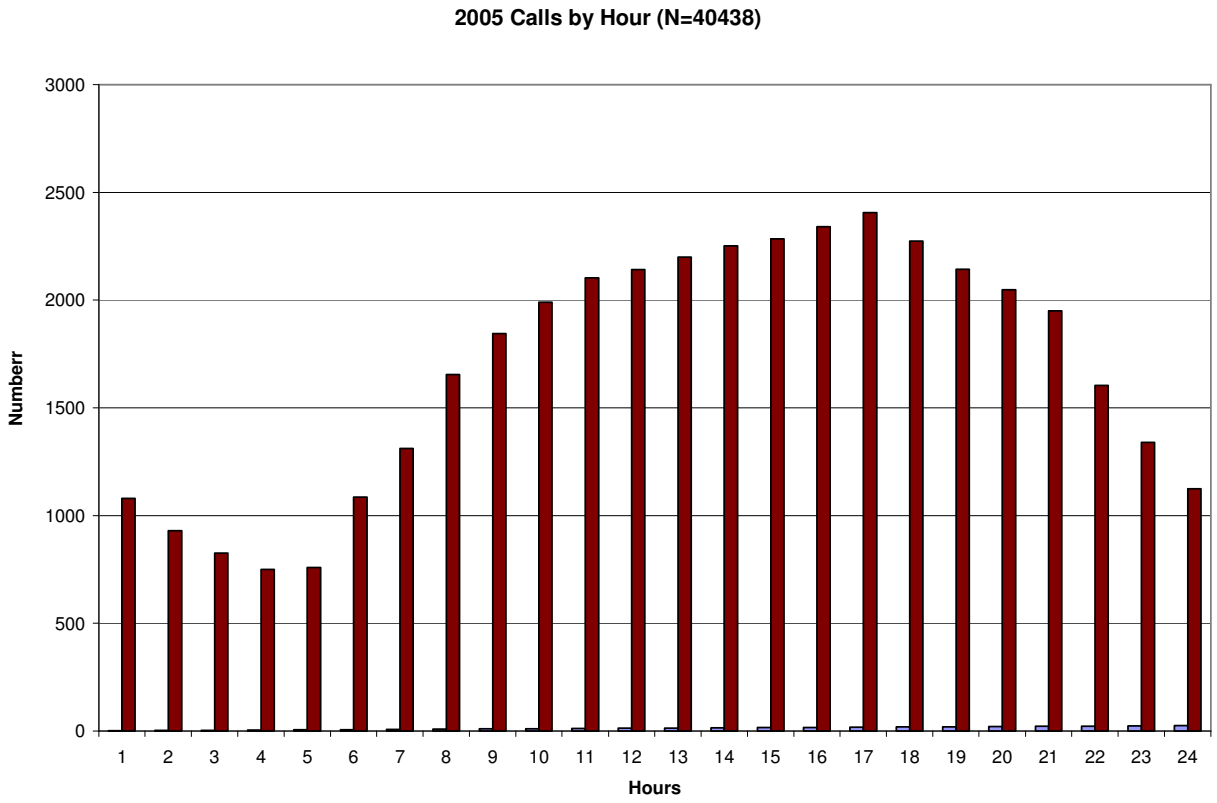
2. Most of these organizations are predominately volunteer organizations and upon notification of an occurring event, there is a period of time in which the volunteer needs to go to the fire station. This could and likely will include such things as disengaging in personal or professional business, driving a private vehicle to the fire stations to staff the equipment, and availing themselves with protective clothing. It is estimated that the majority of the fire departments take 2.5 to 3 minutes to ready themselves for departure. (This is called turnout time.)

3. Once the vehicles depart, the operator must locate the scene of the emergency. Depending upon the nature of the roadbed that is available and the distance that must be covered, this results in what is commonly called travel time.

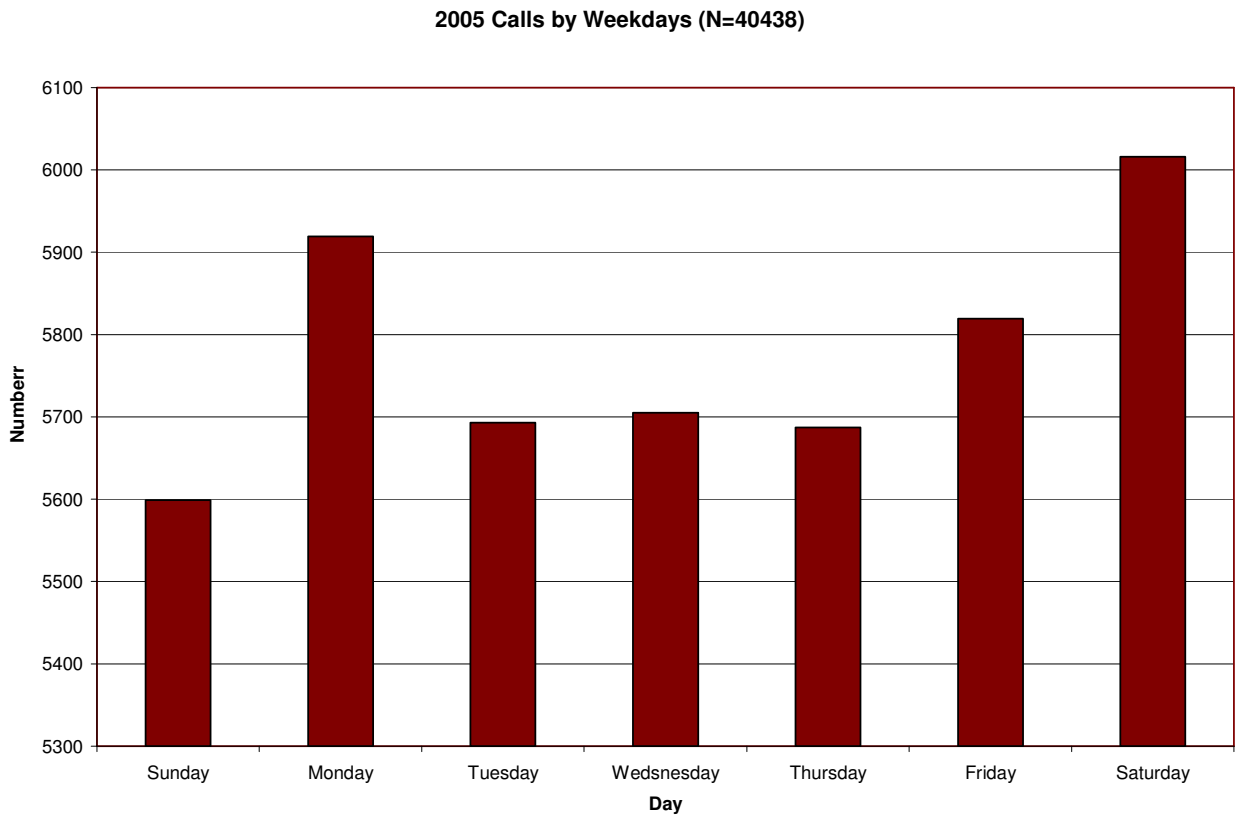
The combination of these three is often referred to in the vernacular as response time.

Assessment of Response Time Performance

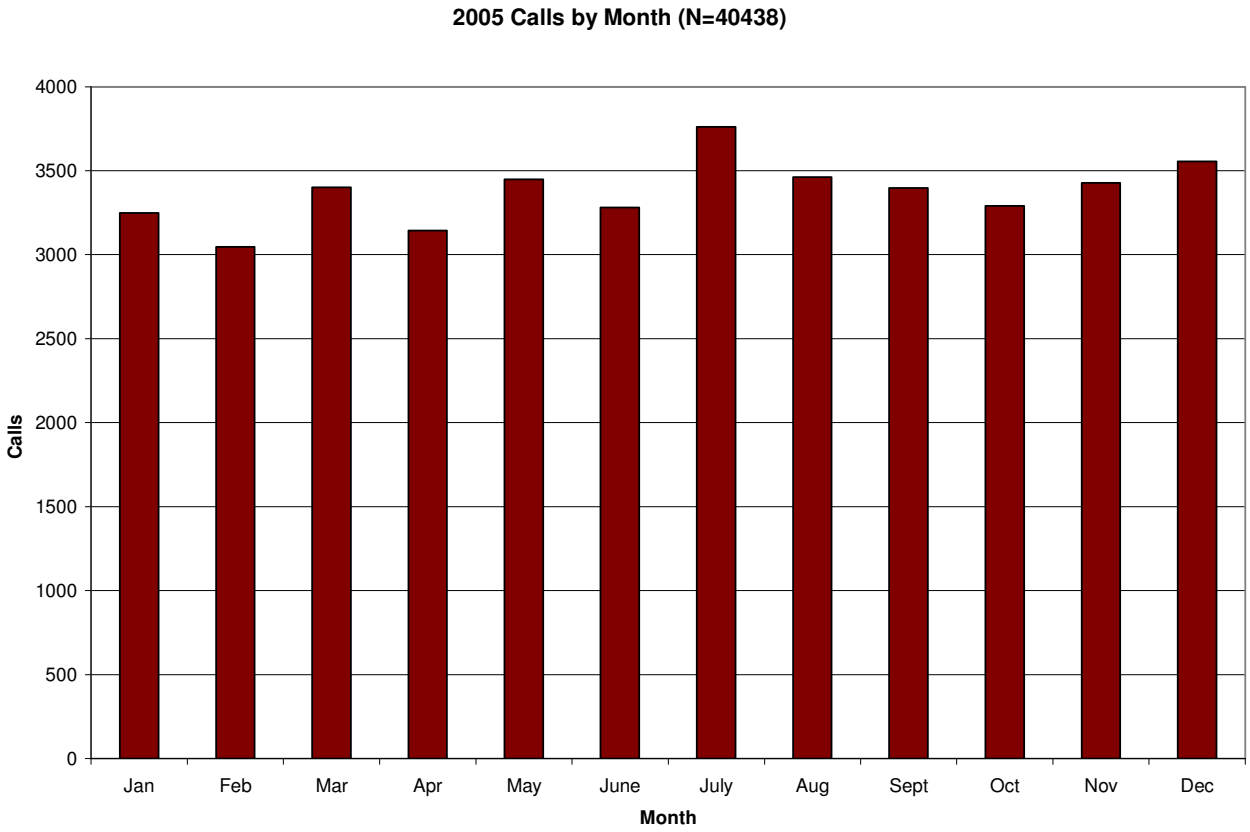
The following four charts are based upon the 2005 data from the Stanislaus 9-1-1 Communications Center. These four charts reflect a normal distribution of response patterns for the fire service in California.

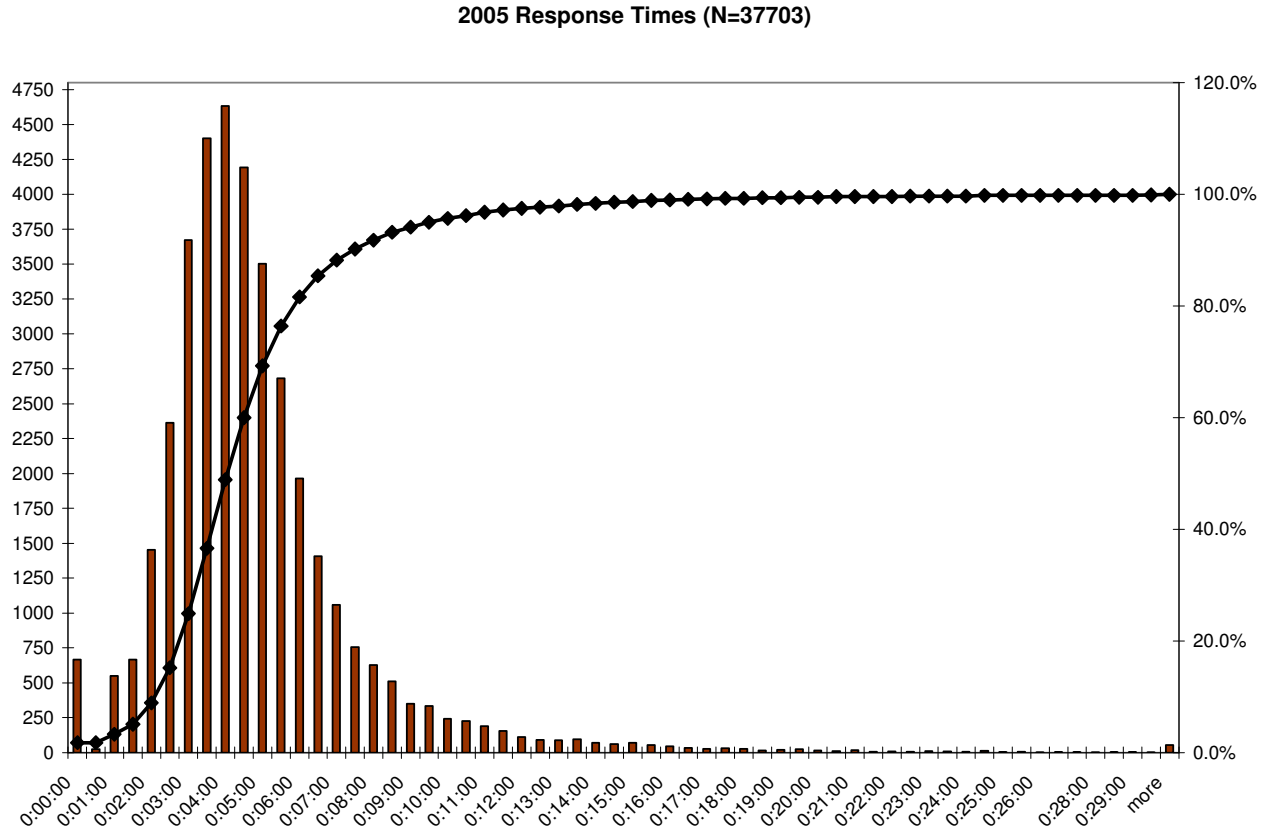


This is a typical pattern for fire and emergency service call distribution.



There is no explanation for the increased call load on Mondays evident in the data


2005 Calls by Month (N=40438)
Calls
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Dec
Month



This figure shows the overall system as having a five-minute travel time about 80 percent of the time. The data is for the overall system and reflects the heavier workload of Modesto and the other cities. Most of the fire districts are providing a response time that is essentially a combination of a suburban level of service in the densely populated areas and a rural level of service in the less dense areas. Data was reviewed from the emergency call center in an attempt to make a determination of the distribution of travel time statistics for each individual company, but a data dictionary was not provided. The general facts that can be observed in the chart are that the majority of the calls are being handled in a five-minute travel time. Intuitively, most of the more rural fire chiefs feel that their average travel time is between seven and eight minutes. This would likely mean a total elapsed time even for the rural areas is between seven and nine minutes for about 80 percent of the calls. This is because the chart illustrates that by 8.00 minutes the response curve hits the 90 percent level for all calls.

That same observation does not appear to be relevant to the city fire departments that are examined in this study. Most of the city fire departments cover a much more limited area (an average of less than six square miles). This places them within a different category of travel time. The cities are providing what could be classified as a suburban level of service.

In both cases, rural and city alarm time and turnout times are similar. What is essentially different is that the density of the population in cities is a response travel time of between five and six minutes.

This does not mean that rural fire departments are slower. Nor does it mean that city fire departments are faster. What it means is that the concentration of population and the size of the area being protected make a significant differentiation between rural fire protection and a suburban fire protection.

Criterion and Performance Indicators

The Commission on Fire Accreditation International, which publishes the Standards of Cover document, has also conducted research with the Insurance Services Office and fire departments that have conducted self-assessments. It has been determined that total response time is linked to the following attributes:

- The total area the company is responsible to protect
- The availability of the street and highway system on which to respond
- The total number of parcels in which development has occurred
- The density of population per square mile
- The density of housing units in a given square mile

Therefore, in assessing response times of the various organizations evaluated in this MSR, it is fair to state that a rural fire department has a wide range of travel times to negotiate the extremely large areas they are protecting. City fire departments have shorter travel distances, and, therefore, have a significantly lower total elapsed time. This is a function of a more compact response area.

Being a city or a district seems to make no significant difference in terms of performance. The factors that drive the performance are related to the attributes listed in the previous paragraph.

Those volunteer departments that maintain sleeper programs or student interns may actually have a foreshortened turnout time. Those departments that eventually will add full-time personnel to their staff will also have an impact on turnout time. However, one should not jump to the conclusion that merely putting a person in a fire station and allowing them to get on the apparatus and leave by themselves constitutes an effective fire force.

Distribution of Rural Fire Stations based on ISO Data

Contemporary literature based on a study of approximately 24,000 fire agencies by the Insurance Services Office, indicates that ***rural*** fire departments have an ***average*** of only 1.5 fire stations protecting an area on average of 68 square miles with a population density of 160 people per square mile with an average response time of 12 to 13 minutes.

The data collected on these study departments indicates that these attributes could also describe most of the rural Stanislaus agencies very closely.

Insurance Services Office Ratings

Government rarely evaluates levels of service provided by fire departments in terms of specific impacts on the economy. In the private sector, the Insurance Services Office (ISO) prepares reports on local fire defenses. ISO looks at the community's commitment to its fire suppression service for buildings. Once it has completed and filed the report, ISO sells this information to insurance underwriters who may use this rating to set premium rates.

The system uses ten different public fire protection classifications which define the various levels of public fire protection. Property insurance premiums are often based on the public fire protection (PPC) classification rate and the type of occupancy asking for insurance. Notably, life safety issues are not considered in this evaluation system, and the fire department evaluation does not include a review of fire prevention or public education activities.

Once completed, the ISO report puts a city into a specific class. A Class 1 is considered to be the best rating; Class 10 is considered to be the lowest rating. The ISO publishes the Fire Suppression Rating Schedule (FSRS), which provides a list of features that have a significant influence on minimizing damage once a fire has started. The elements evaluated include handling of fire alarm communications, the fire department's equipment, personnel and training, and the portion of water supply that is set aside for fire fighting purposes. A city can be penalized by divergence points.

ISO: Divergence

Even the best fire department will be less than fully effective if it has an inadequate water supply. Similarly, even a superior water supply will be less than fully effective if the fire department lacks the equipment or personnel to use the water.

Preliminary score is subject to modification by a divergence factor which recognizes any disparity in the effectiveness of the fire department or water supply. The divergence factor mathematically reduces the preliminary scores if the scores are out of line with each other.

Commonly, the community will have a different grading than the fire department because the overall score is only determined after evaluating the water system and measuring the difference in divergence between water and fire. The public fire protection class given to a city is based on the percentage of credits that the city earned in the evaluation process.

The following figure describes the categories:

Figure 32: ISO Grading Schedules

Classification	% of Points
1	90% or more
2	80% to 89.99%
3	70% to 79.99%
4	60% to 69.99%
5	50% to 59.99%
6	40% to 49.99%
7	30% to 39.99%
8	20% to 29.99%
9	10% to 19.99%
10	0% to 9.99%

Every fire agency that has been evaluated within the recent past has received an ISO classification detailed report. The document does not provide a list of recommendations with

respect to specific actions that would improve grading. However, a review of the points that were assessed would provide direction for improvement.

In view of the growth in this area and the actions needed to be taken by the districts to respond to this growth, it is likely that the ISO's next grading would focus attention upon the same factors. In the event that fire stations, staffing, training, water supply, communications, and other factors have not kept pace, agencies may not retain their class and would not likely improve to another insurance class.

It needs to be noted that there is very little incentive to improve beyond a Class 4 community with respect to homeowners' insurance. Industry practices result in very little differences in the rates of homeowners in communities that have lower classifications. The area that could provide significant impact is in large, non-sprinklered businesses or industries. The group of occupancies that would benefit the most from an improved ISO grading is older buildings, especially non-sprinklered ones. Notably, the ISO classification detail report indicates that the local grading classification system only applies to properties with a fire flow of less than 3,500 gpm.

In areas where there are buildings over the 3500 gpm fire flow, each receives a unique public fire protection classification number based on the combined fire department response and water supply availability to those high demand buildings.

Note: (1) This information is unedited and. is provided exactly as it is given to ESCi by the ISO. These are actual records and cannot be altered by the consultant.

The following is a list of the current ISO ratings for the respective fire districts:

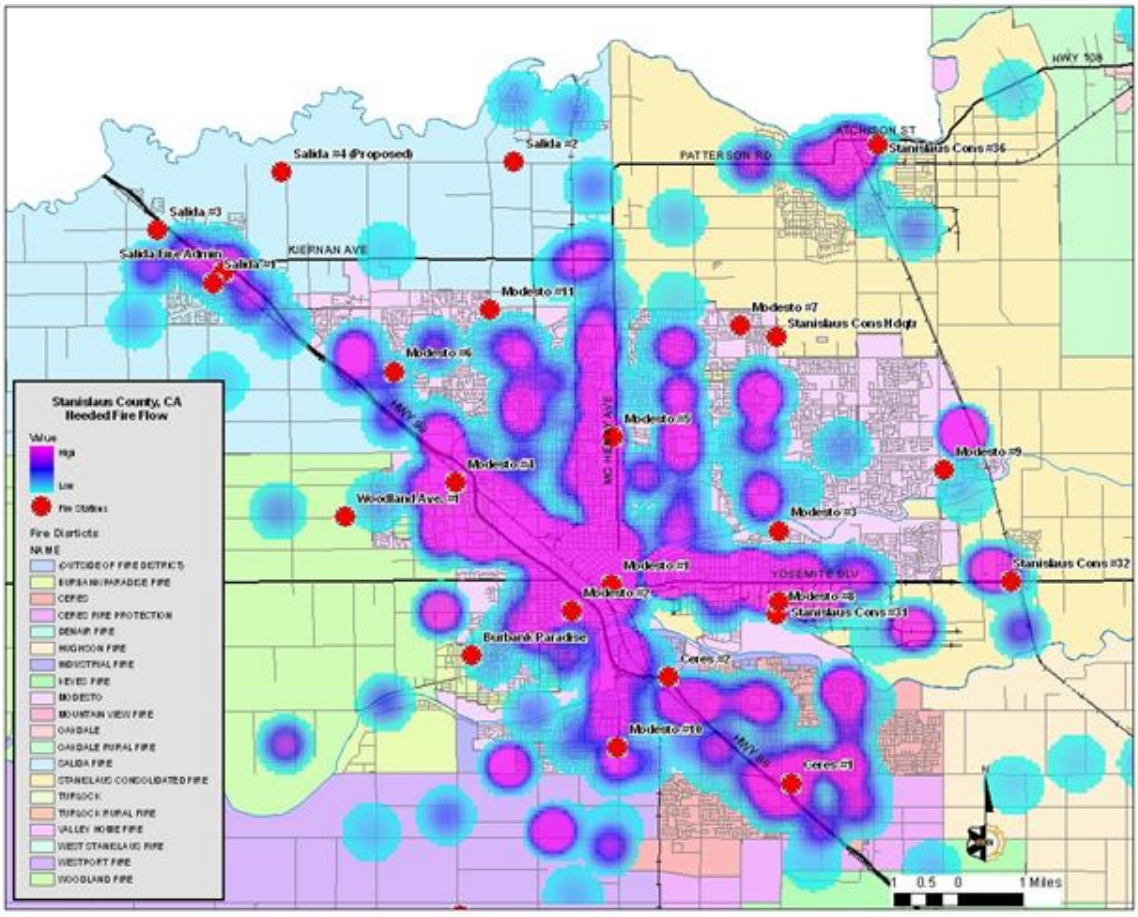
Figure 33: Stanislaus County Fire District ISO Grading Schedule Listings

Department	ISO Rating
Modesto	2
Ceres	3
Newman	3
Turlock City	3
Oakdale	4/6
Turlock Rural	4/8
Hughson	4/8B
Oakdale Rural	4/9
Salida	4/9
Stanislaus Consolidated	4/8/9
Patterson	5
Burbank Paradise	5/8
West Stanislaus	5/8/10
Denair	5/9
Keyes	5/9
Woodland	6/8
Westport	8
Ceres FPD	9
Mountain View	9
Industrial	3
CDF	Unknown

ISO: Database of Fire Flows

The ISO was contacted to find out how many buildings within Stanislaus County are class-rated buildings by the ISO coding system. The following figure shows geographical distribution and the range of fire flows designated by the ISO that could generate fire department response in the respective areas. A complete list of ISO Needed Fire Flows is available but not included in this report.

Figure 34: Map of Needed Fire Flow



ISO: Eligibility to Achieve Class 8B Rates

As noted, several of the departments in this MSR have Class 9 ratings. The ISO does have a class rating designated as Class 8B. It is intended to recognize jurisdictions that have a base Class of 6 or better, that are dispatched in a timely manner, and are able to effectively utilize limited water supplies for suppression of fires in structures in areas that otherwise would be classified as Class 9. Class 8B is applicable to jurisdictions meeting all of the established 8B criteria to at least 85 percent of the built-upon area in their jurisdiction within five all-weather-road miles of a recognized fire station.

Furthermore, the five-road miles can be created with the help from automatic aid fire departments. The criteria is that the first alarm assignment must be able to sustain 200 (gpm) for 20 minutes, beginning within five minutes of the first arriving engine company. Furthermore, 8B criteria require a minimum of six people on scene. In addition, the fire department needs to have a minimum of 24 hours of training per year in structural firefighting.

Mandates that Effect Structural Firefighting

State Mandates

Contemporary fire service management recognizes that each and every fire agency has to determine its policies and procedures based on local conditions. However, it should also be recognized that fire agencies are *mandated* to adhere to specific federal and state regulations under some specific conditions. Furthermore, the fire profession is one that has adopted a wide variety of technical standards that now must be utilized by all agencies, whether full-time, combination, or volunteer. However, these recognized professional standards are not consistently implemented or enforced from one agency to another. For example, a fire agency has to address Federal Occupational Safety and Health Administration (OSHA) requirements for compliance with protective clothing and fire attack practices. However, the manner in which the agency complies varies from community to community. In another instance, all cities must enforce the provisions of local and state fire codes. The manner in which they conduct that enforcement varies according to a wide variety of variables.

Federal Standards

In 1999, OSHA interpreted an existing federal standard regarding respiratory protection. The actual law and the interpretation are quite lengthy and subject to so many refinements that it would not be appropriate to reproduce it in this document. However, it is important to recognize the far-reaching implications of one of its provisions, the commonly called *two-in, two-out* rule. The expression refers to conditions where firefighters must enter an atmosphere that is *immediately dangerous to life and health* (IDLH). Two firefighters are required upon entry and two other firefighters must remain outside of the structure. This crew is designated as a rapid intervention team (RIT). This provision has profoundly influenced fireground operations for structural firefighting.

Time of Day

The time of day for responding to alarms is an important consideration with volunteer firefighters; it is not so important to full-time personnel. Most volunteer fire departments are staffed with individuals who either work or live within a reasonable driving distance to the fire station. A person cannot live or work 20 miles away from a fire station and expect to be a viable member of an effective response force. However, time of day does have a bearing upon the availability of individuals. If a person lives close to the firehouse but works elsewhere, it creates one set of circumstances. Conversely, if an individual works close to the firehouse but lives further away, that creates a different environment. It is not uncommon in volunteer fire departments for organizations to create staffing patterns based upon lifestyle.

The International Association of Fire Chiefs, through its Volunteer Combination Officers Section (VCOS), has published documents that clearly illustrate that dealing with time of day issues is a management and leadership issue within all volunteer organizations. This is one of the reasons why it is important for fire departments to keep attendance records on recalls. In the event a department has a very unreliable response force at any given time of day, how they recruit and retain volunteer firefighters is a major consideration.

Quality of Staffing Resources

Chapter 7 of this report includes information on recruiting and retaining staff members. In the context of this chapter the only thing that is important to understand is that the modality of time of day of a response creates concern in many volunteer fire departments.

There is also an element of time of day having to do with the type of call. It is not uncommon for volunteer firefighters to show up en-masse when there is a working structure fire but to only have one or two individuals show up if the nature of the call is to put someone back in bed that has merely fallen out. While it is difficult to explain this to the average citizen, the fact is that volunteer firefighters do choose the nature and type of call that they want to be committed to.

This particular phenomenon has a different consequence within the context of fully paid and staffed engines. In conducting studies of fire departments, it has been noted that even in paid fire forces, turnout and the travel times are statistically longer when paid personnel are dispatched to what are considered *undesirable* calls. In both cases, the phenomenon is the same. The type of call and the time of day do have a bearing on reliability.

Impact of Fire Season on Staffing

Seasonality is an entirely different issue. In conducting on-site reviews and discussing recruiting and retention of volunteers, it is clear that in the Stanislaus environment, there are fire departments availing themselves of personnel who are also seasonal firefighters. The net result is that in the winter time, the reliability factor for these personnel is higher. In the summer time, the reliability factor is lower.

One explanation for this is that many individuals who are seasonal firefighters are engaged in volunteer fire departments in the winter time in hopes of increasing their ability to be a candidate to be a full-time firefighter somewhere else.

The ISO draws no distinction in staffing patterns between the number of people on the fire ground in regard to paid staff and volunteers. However, it does draw a distinction between the numbers of people given credit on overall staffing. The ratio normally considered is that it takes four volunteers to equal one paid firefighter. That doesn't mean that it takes four volunteers to be the same as one paid firefighter; it is an estimate of reliability factor. If one looks at the total number of volunteers on any given organization and looks at the recall numbers, the ratio is usually about 25 percent. For example, if a fire department had 20 volunteers on board – referring to those that are adequately trained, adequately equipped, and are notified in accordance with policy – that for those 20 personnel it would be estimated that five of them would show up on a recall – 25 percent.

It will not always be the same individuals. In addition, the combination of qualifications and competencies are not always the same. It is common for this to relate back to the modality of time of day. Depending on whether volunteers are recruited and deployed between daylight hours, one might get fewer officers or more officers because of the mix of residency and places of business.

All of this is brought to bear at one point in time – the arrival of a piece of fire apparatus at the scene of an emergency. In the event that a sufficient number of personnel arrive at the scene to

be able to engage in appropriate mitigation, it is likely that the emergency will be remedied. In the case of an organization that cannot provide an effective response force on a reliable basis, the community's confidence that they have adequate fire protection will be eroded. To the degree that events result in tragic loss of life or property, the credibility of the fire department will be eroded.

Five Miles or Five Minutes

A map has been prepared by ESCi that shows a five-mile polygon around *each* of the fire stations operated by the agencies being studied. These maps are provided in the Departmental Description chapter and are also provided in a *Map Atlas* for larger scale viewing. Because the vast majority of the response is with volunteers, ESCi felt it was not appropriate to talk strictly about minutes of response but rather to emphasize what areas these departments can respond to in order to provide a minimum amount of service in a reasonable timeframe. The five-mile polygon is consistent with the ISO criteria for a suburban department. This map, if compared to the population density map, clearly illustrates that there is a correlation between population and demand for service levels. If you place any departmental map along side of the population density map, the basic pattern of coverage will easily be seen.

GIS Analysis of the Road Network

The method used to develop the maps that display the degree of coverage a fire station can provide on the road network is based upon Geographic Information Systems (GIS) software. The system used in this report was *ArcView*. ESCi utilizes both the 3.2 and 8.1 versions of this software. The analysis of the road network utilizes a commercial software package named *TeleAtlas*, or *Tiger data*, whichever is provided. Furthermore, in order to perform that analysis a special software extension called *Network Analyst* is employed. Both *ArcView* and *TeleAtlas* are considered industry standards in performing this type of analysis.

All maps in the *Map Atlas* were prepared using this software configuration. Travel speeds are based on reasonable and prudent road speeds as defined in contemporary traffic engineering standards. Coloring of the streets and the creation of polygons identify the area where the road network can be expected to provide access to an address on that network within a reasonable timeframe. There are many different models that can result in different polygons being created to answer various questions, such as what can happen when a road speed is increased or new roads are added to the network. Readers are encouraged to look at the polygons in the *Map Atlas* for each respective fire station. These polygons are not response zones that are based on jurisdictional boundary. They indicate capacity of individual stations utilizing Code 3 response to cover geographical areas within contemporary travel times. These polygons will change constantly depending on the design of the highway and traffic conditions. They are included to provide readers with an assessment of two things. The first is the area being covered by respective stations. The second is the area that is not covered by these polygons. These areas will be considered underserved.

It should be noted that these are theoretical travel times. The ability for a vehicle to traverse any given section of roadbed is dependent on many variables. These variables have been identified in another section of the report. The report provides *best estimate* response times polygon based upon the assumption that the apparatus is leaving the station and travels continuously at the posted speed limit for each section of travel.

Community Perception of Fire Service Delivery

During the on-site review, a series of questions were addressed by the respondents relating to how the community sees its organization. In an almost overwhelming response to this inquiry, the respondents believes that their community loves, respects, appreciates the firefighters; but, in almost every instance in which they offered that opinion there almost was a negative comment. The negative implication is that most communities simply do not know what kind of fire protection they currently have. As stated by many individuals, in spite of the fact that they have to do fund raising events to raise money, and the fact that they are always involved in recruiting volunteer firefighters, the majority of citizens in the community remain ignorant to what kind of fire department they have.

There may be an explanation for that phenomenon. In the case of individuals who lived in the area for a lengthy period of time, they may well know that the department is volunteer and take it for granted. In the case of individuals who recently moved into an area, especially those that emigrated from areas of more suburban orientation, they may assume that the fire department was something that it is not. According to the information collected, there is a significant number of retirees buying and moving into properties that are serviced by these volunteer fire departments that are not knowledgeable about what services are being provided.

The flight to the country life is not necessarily limited to Stanislaus County. It is being reflected in other rural counties all over the State of California. The dilemma created for the fire department is that retirees move to these areas to have the lowest possible living expenses and yet simultaneously place an increased level of impact on the emergency medical services system and usually don't want to pay for it. This could be classified as an operational *Catch 22*.

The answer to this dilemma is not simple. One end of the answer needs to be dealt with through the concept of community and public education, yet none of these fire departments have extensive public education resources or staff to develop a program. In the context of this discussion, several organizations indicated that they do door-to-door annual solicitations in which they attempt to explain to the public that they are a volunteer fire department and are relying upon community support to deal with their funding deficiencies. Even those departments admit that their points of contact are not always as comprehensive as desired, and none of them reported having an extensive public education instrument which they can provide to the public which differentiates between the types of services that they may have had in the past versus the type of services being provided by the volunteers.

One observation is that many of the fire departments do not have significant signage that clearly indicates that they are a volunteer fire department. They are identified as a fire protection district or some other form of organization or structure but the word 'volunteer' does not appear in the signage. While this may not be of great significance in altering public opinion, it is part of the fabric of underestimation of the role of volunteers within the system. The Volunteer and Combination Officers Section (VCOS), in conducting officer training programs for chiefs, has placed emphasis on the fact that signage is part of marketing of a fire department.

Response Reliability with Volunteers

Response reliability is a factor when staffing an organization with volunteers. In essence, the numbers of volunteers that are considered part of the table of organization are a reflection of the total number of volunteers that can be brought to bear on a major event. However, they are not a reflection of the numbers that will turn out for a normal event. The Insurance Services Office considers the ratio of volunteer personnel to paid personnel to be a 4-1 ratio. Therefore, an organization with 12 volunteers can be expected to field three individuals under most ordinary conditions. If they have 16, they will likely produce four. As one can tell by looking at Figure 27 (page 153) it is highly unlikely that any of these departments will be able to field an adequate number of people to staff and deploy all their apparatus without having to request additional recalls.

Summary

The level of service is a function of the level of effort. A fire agency with limited financial resources cannot provide a high level of service. A fire agency with adequate financial resources still has to be prudent with its expenditures. This chapter describes the current level of service as being a function of rural or urban economic scenarios. As an area evolves from low population to higher densities, the level of effort generated will likely result in the fire agency needing to make transition to higher levels of service.

The fire service agencies that protect the citizens of Stanislaus County are a combination of cities that are predominantly paid with a median range of per capita cost and rural areas that are predominantly volunteer organizations. The latter operates with relatively low per capita financial support. Both maintain a fairly high level of service. Fire facilities are located primarily with respect to historical response to community demand rather than any empirical study, yet they are relatively well located to cover the majority of emergency incidents that occur. This is primarily because the older stations were located at the crossroads of population centers.

The departments have increased demands from federal and state mandates, while concurrently maintaining a response level that has, so far, not resulted in severe loss of life or property or injury to firefighters. However, increasing population along with increasing demands for service will lead to the time where response failures can and probably will occur.

The real dilemma is when the service expectations are not supported by adequate financial support. This creates the operational gap that many fire agencies are struggling with today. This phenomena often results in a need to leverage all opportunities for containing costs and obtaining assistance by combined efforts that are explored in the next chapter.

Chapter 7 – Current Delivery System: Issues, Options, and Alternatives

Can the individual Stanislaus County fire districts and cities keep pace with the rapid changes occurring and increasing demands on their ability to provide service?

Issue Clarification

This chapter identifies issues with the current fire services delivery system in Stanislaus County. One of the stated purposes of the MSR process is to evaluate infrastructure needs and deficiencies of jurisdictions in terms of availability of resources, capacity to deliver services, and condition of facilities. Therefore, the identification of issues that currently exist within the overall delivery system needs to be identified and clarified.

Clearly the answers to these issues lie in the future, but at a minimum it will require a coordinated effort of the fire districts, city fire departments, local governments, and the community at large to find solutions to current problems during each and every budget cycle over the next five years.

The answer to these questions also requires a countywide buy-in by almost all of the agencies, as the issues affect all of Stanislaus County fire agencies in one way or another. Future action may also require involvement by the state and federal governments on some aspects.

The following major issues were identified in the data collection or interview process:

1. Aging infrastructure, both apparatus and stations
2. Funding for capital and operating expenses
3. Annexation of district territory by cities
4. Commitment to planning
5. Inability to recruit and retain volunteer firefighters
6. Ability to meet training mandates
7. Large areas of under or un-served property
8. Improving on public awareness of fire service capabilities
9. Dealing with major emergency operations

1. Aging Infrastructure

Condition of Fire Facilities

Just because two building have the name of a fire department on the outside does not necessarily mean they have the same capacity on the inside. In any fire facility, there are subtle and significant differences in how they are designed, how they are staffed and what their capabilities are in being able to operate over a long period of time. In Stanislaus County, there are three types of buildings. The first of these would be classified as a *full service fire station*. The second would be classified as a full service *fire hall*. The third classification would be a *temporary structure* to house apparatus.

The term *fire station*, as used in this report, applies only to buildings that have an adequate range of services so that individuals can use it on a 24-hour-a-day basis. This would include, but not be limited to, an apparatus room, office space, sleeping quarters, dining and cooking facilities, and the necessary infrastructure to support 24-hour day utilizations.

A *fire hall* is a building that is essentially structurally sound but is designed primarily to house apparatus, an office, and perhaps adequate ability to conduct training within the building. It might contain a conference room and restroom facility but does not include consideration for overnight stays. Many fire halls contain a full-scale kitchen even if they do not contain a dormitory facility.

For this report, an improvised facility is any facility that is essentially nothing more than a floor and four walls with a minimum amount of capacity for storage and/or utilization by storage of the apparatus resources of the organization. These temporary facilities are usually defined as mobile homes used for offices, metal buildings that house apparatus only, or buildings that have no administrative facilities. ESCi conducted extensive discussions with fire department personnel regarding how they utilize their fire facilities. During the site visit every fire station but one was physically visited.

With respect to building condition, there are a wide variety of ages of buildings in the inventory. A significant number of the buildings were of modular construction consisting of either metal buildings or simple wood frame construction. Some of the stations were adequately maintained, others were in various stages of disrepair and maintenance. Some of the more basic facilities may have difficulty maintaining future serviceability.

One factor that ESCi closely examined was whether the stations had emergency power. It was pointed out by several of the departments that they sometimes go for several days at a time with power outages as a result of various infrastructure problems. It is considered to be good practice for a fire station to be capable of independent operation from the remainder of the community in the event of a major power outage. Those fire stations that do not have an emergency generator nor control over a dedicated source of fuel for their fire apparatus should be considered vulnerable for long term catastrophic operations.

Earthquake/Seismic Issues

ESCi is aware of a study being conducted by the Earthquake Engineering Research Institute (EERI). This organization is conducting a review of the buildings that house fire apparatus in the San Francisco Bay area to determine whether or not they are capable of surviving a major earthquake. The ESCi review team obtained a sample of the data collection form, but data was not available from EERI's findings as they had not completed the county field work. ESCi, however, believes that the questions and information provided by this survey are very relevant to the question of infrastructure in the study departments. Many if not most of the fire stations were built before seismic standards were available. The ability to survive a major earthquake for many of these stations is undetermined.

Replacement Cycles for Apparatus and Equipment

The number of engine companies, water tenders, and other forms of fire apparatus and the estimated replacement cost of all of this apparatus is an issue of concern. It should be noted that there is no way this apparatus can all be replaced within a single budget cycle. In other chapters, ESCi referred to amortization schedules and the need and necessity to have a long-range plan. This report notes the aging apparatus infrastructure, unless it is adequately dealt with, will eventually result in deterioration of the level of service.

As described below, the fire agencies have a fairly large inventory of firefighting apparatus. The equipment ranges from Type 1 pumpers (structural fire companies) to Type 4 pumpers (wildland fire companies). Many fire departments are operating a rescue squad; however, the design specifications of the various units are far from similar. The fleet has many vehicles that are considered to be beyond their normal service life cycle. A significant number of the fire protection districts are using recycled equipment that was placed out of service in other agencies and picked up through the second-hand exchange market.

Figure 35: Apparatus Inventory

Department	Engines	Trucks	Tenders	Rescues	Special	EMS
Burbank-Paradise FPD	3	0	0	0	0	0
CDF	2	0	0	0	1	1
Ceres City	5	1	0	1	3	0
Ceres FPD						
Denair FPD	4	0	1	2	1	0
Hughson FPD	4	0	1	0	1	0
Industrial FPD						
Keyes FPD	3	0	1	1	0	0
Modesto	15	3	0	1	2	2
Mountain View FPD	3	0	1	0	0	0
Newman	3	0	1	0	0	0
Oakdale	4	1	0	0	2	0
Oakdale Rural FPD	8	0	2	2	3	0
Patterson	4	0	0	1	0	0
Salida FPD	6	0	1	2	1	0
Stanislaus Consolidated FPD	15	0	3	3	2	0
Turlock City	5	1	0	0	0	0
Turlock Rural FPD	5	0	1	1	1	0
West Stanislaus FPD	8	0	5	3	4	0
Westport FPD	2	0	1	1	0	0
Woodland Avenue FPD	3	0	2	1	0	0
County Fire Warden						
Totals	**102**	**6**	**20**	**19**	**21**	**3**

Moreover, many of the apparatus are incredibly difficult to keep maintained. Technology has moved on significantly in the last 50 years. The net result is that most of the equipment over 30 years old is likely to be incapable of being restored to service if it suffers major damage.

However, having recognized the fact that equipment is of an older vintage, the fact is that the volunteer fire departments are doing an extraordinary job of attempting to maintain and keep them in serviceable shape. Throughout the interview process numerous pieces of equipment were singled out as being off-line because they could not be repaired. Nonetheless, there is an extensive effort by these departments to stretch the serviceable life of the apparatus even longer.

The type of apparatus is an important consideration but more important is its age. The cost to replace a fleet inventory is a major consideration in budget planning It must be realized that all fire apparatus have a serviceable life and the cost of apparatus must be amortized over the timeframe of that serviceable life.

There is ladder or truck company service provided in the County. Seven truck companies were identified as part of the overall inventory. One truck is not staffed on a regular basis. Many of these truck companies are superannuated also. In addition, one of the concerns that needs to be expressed is that aerial apparatus has a fail-safe issue much more significant than engine companies. It is appropriate that aerial apparatus be tested in accordance with industry standards on a periodic basis. Those that do not meet the minimum professional requirements should be removed from service immediately.

Apparatus Replacement Costs

The fleet inventory of these agencies encompasses over 150 fire vehicles. There are essentially two types of vehicles in the fleet. The vast majority has been purchased as second-hand vehicles or hand-me-downs from other firefighting agencies. The second type is new vehicles.

Eventually, every piece of apparatus in the fleet will have to be replaced. The average age of these vehicles reduces their overall reliability, and their replacement is a long range planning issue. It would seem appropriate to discuss at least two decisions with regard to their replacement and cost avoidance. The first question is should the fire service continue purchasing used fire apparatus? The second being to what specification should any new fire apparatus be designed if it will have to be replaced using local money?

Both of these questions pose philosophical and economic questions that are far more extensive than this report has time to address. The acquisition of used apparatus is a technique employed by fire departments all over this country that have limited funding. In fact, there is an industry based on recycled equipment. For this report, ESCi identified considerations that should be part of long range planning with regard to this issue. They are as follows:

1. The standards applied to fire equipment are becoming increasingly rigid. Firefighter safety is becoming a much valued consideration; and, therefore, old apparatus may well be rendered obsolete by the federal regulatory processes at some point.
2. Firefighting apparatus must be reliable to be useful, and reliability is often linked to repair and maintenance capability. It is becoming increasingly difficult to find parts and to keep aging apparatus on the road.

3. Fire apparatus that is specified for municipal service and purchased for rural service may not be as effective as desired. Customized apparatus that is put on the second-hand market often is difficult to adapt into another service type.

ESCi has suggested that the more rural fire departments might want to consider discontinuing the acquisition of used Type 1 pumpers and focus their energy on the acquisition of new Type III or Type IV engines. The acquisition cost of this equipment is currently in the range of $125,000 - $175,000. If we assume the replacement value for secondhand purchases at an average of $5,000 per vehicle, the *approximate* replacement value of the fleet for every truck that is over 15 years old would be approximately $5,000 to $10,000 each if purchased second hand. In both cases, there is limited money to achieve either except for the grants being received by the agencies from the Federal Emergency Management Agency (FEMA) Assistance to Firefighter Grants (AFG) program.

It should be noted that this is not a true cost but rather an estimate of the amount of money that could be involved if this apparatus were to be replaced over a period of the next ten years.

2. Funding

The condition and capacity of the fire departments studied range from being merely able to make ends meet to those that are coping quite successfully. One indicator that funding is not adequate to meet all of the fire agencies budgetary needs was where the per capita fire funding was below the state average. While there is a tremendous variation from one end of the spectrum to the other with regard to organizational capacity, there appears to be at least one factor that was predominate among all of them - the desire to seek self-improvement and to find ways of overcoming the frustration over funding levels but always accompanied by an abiding concern about the budget

It was almost a contradiction in terms, but many of the individuals who participated in the on-site reviews expressed a unique combination of being highly motivated to serve as a firefighter but being very frustrated at the same time due to financial constraints. The level of job satisfaction in achieving successes has been diminished as a result of the broad based issues facing most of the volunteer chiefs. While not as severe in the paid staffs, it exists there also. That has not prevented them from seeking options and alternatives to get around other obstacles.

One thing that needs to be remembered is that the fire service of Stanislaus County has always faced an uphill battle. It is highly unlikely that individuals who are buying new homes in the area in Hughson and Keyes, for example, will ever recall the level of innovation and adaptation that it took to create these small fire agencies, much less what it takes to operate them today.

To the contrary, many of the new individuals moving into these areas bring with them the memory of the fire department that served them when they were in more urban settings. Not uncommonly, volunteers servicing these newly emerging housing tracts are greeted with statements of astonishment when they revealed to their customers that they are volunteers. There is a lack of understanding of the significance of having a volunteer fire department when individuals have an expectation of the same level of service that they have received in urban California. This often results in lackluster support for improvements that raise property assessments.

This unsupported expectation is part of the reason that this problem will continue to get worse unless some strategy is put into place to either educate the public to reduce their expectations or to find ways of more adequately funding the fire service so that those expectations can be met. There is literally no other tactic or technique that is going to resolve this in a favorable fashion. Remaining on the edge of financial crisis and having an increase in expectations occur simultaneously could result in system failures that could have catastrophic effects in the community.

Unless the per capita revenue for all agencies is raised to a baseline of around $100.00 to $125.00, and the organizations that do not have any developmental fees accruing to build future fire stations develop and adopt development fee schedules, funding will continue to be an issue.

3. Annexation of Districts by Cities

As stated in Chapter 5, the detachment of property from a district to a city is a major area of concern for the districts. Border re-alignments are a similar concern. In Chapter 5, it was noted that the actual revenue to districts is still on the increase, but annexation by cities of vacant land does result in an erosion of the property tax base for that district. The appendix of this document includes a discussion of *Triggers and Thresholds* that lead to the installation of new firehouses. In Chapter 6, there is a discussion of Standards of Cover. The detachment process does not normally take into consideration either of these fire protection planning principles. The current response polygons for these stations as provided in the *Map Atlas* indicates that there is overlap in station coverage.

Over the last 20 years, the fire service has continually moved away from the territorial aspects that plagued the fire service for many years that prevented the closest fire company from providing the service. Many communities have now gone to automatic aid agreements to be more effective and efficient in providing fire and life safety services. *An automatic aid agreement is based on the premise that the closest fire company should be the one to provide the service regardless of boundaries.* More and more fire agencies are using automatic aid to overcome this obstacle. Many agencies are moving towards the use of automatic vehicle locators (AVL) just so the closest company will be utilized. The concept of boundary drops is very much a part of creating a more effective and efficient response platform.

While evaluating the Stanislaus fire service, ESCi noted that there are three specific conditions that exist regarding the geography and topography of all of the firefighting agencies in this County. The first of these is the existence of a homogenous area in which fire stations have already been built, constructed, staffed, and/or managed. It was observed that there is a series of geographical and topographical distribution issues associated with the boundaries of districts. There are *fingers* (defined as an area that projects out of the basic response area and creates some form of corridor). There are islands where one agency surrounds another. An island is an area that has been separated from the homogenous area and results in the fact that an engine company must go through another jurisdiction's area in response to protecting their own area.

In responding to the input that came back from the review process, it needs to be noted that there are a number of these fingers throughout the entire area, and there are a number of islands that are present at this time. To go through and enumerate how each of these fingers could or should be realigned to create a border that would be homogenous to one agency or another pits one fire department another. In ESCi's opinion, it is bad public policy to create a set of circumstances in which the level of cooperation (a desirable outcome of the MSR process) is

being impacted by the desire to comply with another process element to try to *clean up* the borders.

One cannot help but draw conclusions by looking at the map that some of these fingers will eventually be taken in through annexation by cities. It is also true, based on the attitude of the residents and property owners of those fingers and islands, that they may resist annexation.

As noted in Chapter 5, the review process could include a review of cost sharing to assure that response times are neither lengthened or service level changed in the detachment process.

4. Commitment to Planning

As stated earlier, there is no long-term comprehensive strategy within the region to improve or add to infrastructure for fire protection and emergency medical services.

There really is no central authority or cooperative organization capable of developing a cohesive strategy for a regional remedy. The closest thing to that process to date has been the visioning process and the preliminary work of the joint powers authority. Currently, planning for structural fire protection and emergency medical infrastructure is the responsibility of each independent city and special district. Each of these entities performs planning and funding activities separately without regard to implications of duplicating or under-utilizing existing regional resources. No specific collaborative program or cooperative organization oversees planning or planning and funding of replacement, upgraded, or additional infrastructure components.

Some of the agencies have formal apparatus replacement schedules or have produced master or strategic plans for adding facilities. A few of them have been able to maintain committed reserve funds and have established programs that provide support to long range planning efforts. Creating programs to ensure resources will be available when new facilities are needed is a major issue.

For example, decisions concerning apparatus replacement are generally ad hoc-driven by short term funding levels that discourage long term planning. Moreover, even better funded districts seem to make apparatus appraisal and replacement decisions an annual process rather than a long-term process.

5. Inability to Recruit and Retain Volunteer Firefighters

Staffing of Fire Stations

The staffing of fire stations is provided by either full-time or volunteer staff. There are issues with both staffing configurations. Because volunteers are such a predominate part of the districts' staffing, ESCi chose to describe this issue first.

Definition of a Volunteer

The concept of being a volunteer firefighter has its roots in Colonial America. The original idea behind the creation of volunteer fire departments was *citizens serving citizens*. For over 250 years, the vast majority of fire departments in the United States were of a volunteer nature. Currently, in Stanislaus County, they are the predominant staffing resource for responding to emergencies in the areas outside of cities.

However, volunteers cannot be taken for granted in this system. They do not materialize out of nothing, nor can they be sustained by improper treatment. Almost all of the rural fire departments have an issue of volunteer recruitment and retention. The majority of the discussions did not center on the motivation of individuals who are volunteers but the inability to find new ones. This is because the real problem is the amount of time and effort it takes to be a volunteer. As stated by a volunteer who responded to a similar study in another county, "It is not enough to just get out of a warm bed and respond on a cold night; you now also have to have the right kind of training and credentials to do the job." This was mirrored by the remarks of many of the volunteer leaders in this process.

There is no doubt that Stanislaus County benefits from the presence of volunteer firefighters. In a recent study conducted by the Volunteer Combination Officers Section of the International Association of Fire Chiefs, the economic impact of the volunteer fire service is significant. The national value of service provided by America's volunteer emergency responders is estimated to be $36.8 billion annually.

Saint Joseph's University Public Safety and Environmental Protection Institute (May 2004) developed a model to calculate the benefits to having a volunteer firefighter. According to that study, the average volunteer is saving the community between $25,000 and $45,000. This is based on the assumption of what staffing would be if all volunteers had to be replaced by a totally career service.

Moreover, this model hypothesis suggests that in order to be equitable in identifying these savings, the volunteers would need to staff apparatus to the same level suggested by *NFPA 1710*[26] - four persons on a piece of apparatus as it responds.

One issue that came up in the interviews was the definition of a volunteer. There has been a contention that a person who is a volunteer was not as qualified and competent in conducting services to the community because they are so ill defined. During the 1993 spring conference in Sioux City, Iowa, the National Volunteer Fire Council approved a new definition for volunteer. The definition reads, "Volunteers provide fire protection services and other emergency services. Volunteers either receive no compensation for expenses or reimbursement for expenses according to local custom."

The new definition also addresses the level of compensation volunteer fire persons may receive: "This compensation does not exceed the yearly compensation for an entry level fire person in the same department. In the event there are no paid fire persons in the department, than the closest fire department with an established entry level career fire person is used to gauge the maximum allowable yearly compensation."

This approved definition by the National Volunteer Fire Council (NVFC) is an attempt to ensure that federal legislation and regulations best address the needs and concerns of the volunteer fire service. The NVFC Legislative Committee, which proposed the definition, also presented a motion that the Bylaws Committee takes steps necessary for the inclusion of the approved definition in the NVFC bylaws. The motion was approved.

[26] *National Fire Protection Association (NFPA) 1710: Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2004.

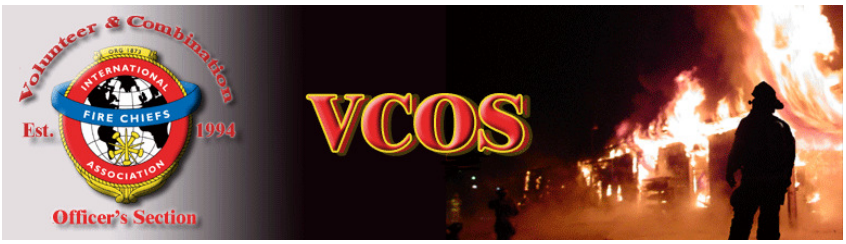
Recruiting and Retaining Volunteers

Recruiting and retaining volunteer firefighters is among the top issues associated with managing the organizations in this study. If one examines the population figures for these departments and looks at the number of volunteers that are serving, there is a large gap. In general, being a volunteer has deteriorated in many community values systematically over the last 30 years. This is not necessarily limited to just the fire service. There are organizations all across the public service spectrum that suffer from similar erosion. However, in the case of the fire service, not having volunteer firefighters has a higher consequence than the failure to achieve the same objective with other organizations. Without volunteers, apparatus cannot be staffed and incidents cannot be handled.

This discussion needs to be divided into two components. The first of these is the difficulty of recruiting personnel. The second is training and retaining the volunteer firefighter in a modern setting.

Recruiting volunteers use to be based upon the need for the community to protect itself. If one goes back to the origins of the volunteer fire service in this country, you can find examples of everyone from George Washington and Benjamin Franklin being members of the volunteer fire department up to and including the POST magazine covers of the 1950's illustrating hardware salesmen, garage mechanics, and barbers being part of the volunteer fire force. Essentially, that traditional method of acquiring volunteers was based upon the fact that people lived and worked in the same community. That is not only no longer true but actually maybe almost the direct opposite.

Many volunteer fire departments have actually recognized this phenomenon and have recruited firefighters on the basis of whether they are able to volunteer during the daytime or the nighttime.



But before discussing differential staffing, the main issue is why more people aren't volunteering. A lot of this has to do with the nature of the community itself. In those communities that have a very young population or a very old population with nobody in the middle, it is difficult to recruit either men or women to become members of the volunteer fire force.

Recruiting of volunteer firefighters cannot be a one-time effort. To the contrary, it has to be an ongoing if not outright consistent effort. A document has been placed in the bibliography of this report that addresses the issue of recruiting volunteers. It is recommended that that document and its contents be incorporated as part of the subsequent discussion of how the various fire organizations can improve upon their recruiting opportunities.

Retaining volunteers is an entirely different matter. In the first place, the minute a department brings on a volunteer firefighter, it incurs a tremendous amount of expense to adequately equip that person with personal protective equipment (PPE). It has been estimated to properly and adequately outfit a firefighter today takes approximately $1,000-$1,200 to acquire the necessary

equipment that will be properly fitted to the individual. Granted, there are many fire departments that are able to recycle protective clothing, but in general it still takes $1,000 to properly equip that person.

Once the volunteer has been properly equipped, he or she has to receive a minimum amount of training in accordance with state mandates. This is among the most difficult of tasks faced by volunteer chiefs and by their respective training officers. There has been a demonstrated effort to bring a volunteer firefighter curriculum into Stanislaus County through the community college system. However, to get someone through that extensive amount of training requires a very lengthy personal commitment. With family, friends, and other social pressures, it is becoming more and more difficult to encourage a person to give up their personal time to acquire the amount of training required merely to serve the community.

In Chapter 6, ESCi discussed state mandates. One of the most serious concerns that was expressed by the volunteer fire chiefs in this study was their inability to meet all of the training standards that have been imposed by state and federal law over the last ten years. As stated, one should not mistake that for a request to eliminate training requirements. Much of the effort over the past few years to upgrade training standards has been in the name of firefighter safety. Note however, we say “much of” not “all of.” ESCi cannot honestly say that all of it is making a contribution to firefighter safety. The challenge is to keep a person occupied and motivated at the same time as they are going through this kind of basic training.

The term *burnout* is often used to describe the phenomenon that volunteer firefighters experience by being asked to do too much. There are no written policies or procedures that outline minimum thresholds for participation, or maximum levels of involvement for volunteer firefighters. Yet, from a practical point of view, anytime a fire department is calling its volunteers out a minimum of one time a day, it is beginning to impose a great deal of pressure on that volunteer’s personal and professional availability.

A volunteer fire department’s response to at least 365 calls a year might have experiences in burnout. If one doubles that number, the amount of conflict on the volunteers increases significantly. If the number was tripled, it becomes almost impossible to have any volunteer participation.

Provide More Management Guidance for Volunteer Chief Officers

In spite of the longevity of the concept of volunteerism, there is a limited amount of guidance for volunteer chief officers. The independence generated by volunteer firefighters often makes them reluctant to accept or adopt guidance externally. There are three documents that have been recently published by the Volunteer Combination Officers Section (VCOS) of the IAFC. They are:

A Call for Action, The Blue Ribbon Report *– Preserving and Improving the Future of the Volunteer Fire Service, Lighting the Path of Evolution*

The Red Ribbon Report *– Leading the Transition of Volunteer and Combination Fire Departments*

The White Ribbon Report *– Keeping the Lights on – The Trucks Running and the Volunteers Responding*

All communities must recognize that the very forces that provide them with volunteer firefighters may subsequently result in placing excessive demands upon those same firefighters. The community's expectations about services should also include how they must assist the fire department in providing adequate resources to do the job. Such expectations are best identified in local government by finding the balance between expectations of service and what the available funding will support.

In order to monitor performance and progress of volunteer organizations, specific benchmarks should be used that are considerably different than the standard method that the community uses to evaluate its fire department. The community normally evaluates a volunteer fire department by its turnout to fires and emergencies. But to adequately evaluate a totally volunteer organization, other considerations should be evaluated. They include, but are not limited to:

- Average number of volunteers for each recall
- Average age of volunteers
- Level of training of the volunteers
- Cost associated with recruiting, hiring, and training new personnel
- Cost associated with extraordinary fund raising efforts
- Firefighter injury rate

ESCi has identified that it is virtually impossible to provide full-time fire service without an adequate funding base. Based on the demographics and the geographical distribution of almost all of the agencies involved in this study, the transition to a combination fire service might be a reasonable assumption within the horizon of the next 20 years. However, to replace all of these volunteers on an outright basis with full-time career positions is an unreasonable expectation.

Stanislaus County should recognize the benefits and risks of a system design that includes full-time personnel in densely populated areas and a volunteer and combination system in all others. The following bulleted list identifies the various aspects of continuing to support the volunteers in their efforts to protect their communities.

- High-volume staffing during major emergencies such as natural disasters. Such influxes of manpower may be contingent on employers allowing volunteer employees to leave work during such events. They need the support of the system to be able to continue.
- Unpredictable response from volunteer staff will not improve unless it is supported.
- Volunteer systems can be more challenging to coordinate because of intermittent or sporadic participation from various members. Volunteer leaders need better training.
- If a community relies on individual response, rather than system response to meet call load, it will result in unpredictable service levels. This needs to be addressed.

In the event that adequate funding is made available at some point in the future to start hiring personnel, the system design is likely to evolve into a combination system. If that occurs, the fire agencies could experience the following benefits:

- Any combination of career, volunteer, paid-on-call, and part-time personnel is an improvement over not having enough volunteers to respond.
- Enhanced staffing deployment as combination systems can capitalize on both the stability of a paid system and the manpower of the volunteer system during a major emergency, providing greater depth for staffing.
- Salary cost avoidance can occur in a combination system, which can free funds for essential equipment and apparatus on a temporary basis.
- True integration of available resources and distribution of talent resulting in greater efficiency.

There are many resources that are available to assist fire agencies in the development of a new inventory of skills and abilities in dealing with the problems or recruiting, retaining and recognizing volunteer. The following resources can be utilized to develop local or regional training programs for leaders in the fire agencies that are experiencing difficulties in this area.

Websites:

Volunteer Pros
8650 Heritage Hill Drive
Elk Grove, CA 95624
Phone 916-525-2485
Fax 916-525-2495
www.volunteerpro.com

Other locations for information that may be of value to volunteer organizations.

www.foundations.org

www.fdncenter.org

www.nsfre.org/

www.ncnb.org/

www.energizeinc.com/

www.volunteermatch.org/

www.pointsoflight.org/centers/

www.nonprofitrisk.org/

Texts and Publications

The text Recruiting, Retaining, and Training Volunteers authored by Jack Snook is available from:

Jones and Bartlett Publishers Inc.
C/O Customer Service
40 Tall Pine Drive
Sudbury, MA 01776

Phone: 1-800-832-0034

Volunteer Combination Officer Section

Increased participation in the Volunteer Combination Officer Section is of value to volunteer organizations. VCOS is a section of the International Association of Fire Chiefs. In the last several years, this organization has developed a series of documents that outline the issues facing these types of departments. They have produced two reports that are available on their website (www.vcos.org) that are called the *Blue Ribbon* and *Red Ribbon* reports. Both are excellent resources for a fire officer in a volunteer fire agency to review. A *White Ribbon* report is forthcoming within the next few months

This organization has also partnered up with fire apparatus manufacturers to provide workshops on leadership and management for volunteer and combination organizations. These workshops can be scheduled by contacting Fire Chief John Buckman, 8400 St. Wendell Road, Evansville, Indiana, 47720, (812) 963-9077, E-mail: jmbuckman@aol.com. The only costs to the hosting agency are lodging and meals for the two instructors. If these can be provided by local co-operators, the costs are absolutely a minimum.

This organization provides a support system for the volunteer fire agency that is very useful and at the same time very inexpensive.

Volunteer Incentive Program

The Volunteer Incentive Program (VIP) is an intensive six-day educational opportunity designed specifically for volunteer and combination emergency service personnel. These courses are offered four times a fiscal year and have recommended college accreditation through the American Council on Education (ACE). Personnel who meet established student criteria for the course are eligible to apply.

For purposes of VIP eligibility, the following definitions are used:

- Volunteer department - All personnel are registered as volunteers (Including those that are paid on-call per call compensated.
- Combination department - The majority of active duty personnel in the department are volunteers, which are supplemented by career staff. Volunteers or career staff representing the predominately volunteer department may apply to the VIP. (Career personnel and personnel from combination departments must submit a letter from the

chief or administrator/supervisor identifying how the training requested will help the volunteers with whom they work.)

- Career department - All personnel within the department are paid career staff. The VIP is not applicable to career department personnel, regardless of size.

Each student that is accepted into the program is eligible to receive the cost of a round-trip coach airfare ticket or actual mileage, not to exceed airfare from the point of departure; whichever is less. Lodging, student materials, books, and ground transportation from/to airports in the Washington D.C. area are provided by the National Fire Academy. Students that stay on the facility must purchase a meal ticket. The approximate cost is $20.00 per day. Other incidentals must be provided by the agency sending the student.

The VIP program begins on a Sunday morning and is completed on the following Friday at 4:00 p.m. Students are expected to be on campus by Saturday evening. Applications can be obtained by visiting the website - www.usfa.fema.gov/training/nfa/about/attend/nfa-abt1c.shtm.

Completed applications should be mailed or faxed to:

NETC Office of Admissions
Bldg 1, Room 216
16825 South Seton Avenue
Emmitsburg, MD, 21727
Fax (301) 447-1441

The VIP curriculum consists of the following courses:

- Command and Control of Fire Department Operations at Target Hazards (R825)
- Challenges for Local Training Officers (R815)
- Command Control of Local Incidents (R831)
- Community Education Leadership (R816)
- Fire Cause Determination for Company Officers (R811)
- Fire Protection Systems for Incident Commanders (R827)
- Leadership and Administration (R810)
- Advanced Safety Operations and Management (R822)
- Leading Community Fire Prevention (R823)
- Management Strategies for Success (R824)
- Presenting Effective Public Education Programs (R826)

The VIP Program Manager can be reached at (800) 238-3358.

Full-Time Staffing

Eventually, the workload on a volunteer fire agency, and in some cases the economics of the community, result in the need to transition from a combination department to a full-time agency. This is the normal transition. It has happened already to the cities that have gone to full-time staff, and it will likely occur to the districts over the next few decades. This is a planning phase that is sometimes controversial as the phasing in of full-time staff occurs, but it is probably inevitable when workloads reach the point where volunteers can no longer meet the demand. The issue, of course, will be costs of providing full-time staff. Some agencies choose to hire part-time personnel to initiate the process. In general, the transition is from volunteer to paid staff.

In terms of defining service level using full-time personnel, ESCi utilizes the concept of the FTE. This is an acronym that stands for *full-time equivalency*. Many fire departments undergoing transition will go through a period of time in which they have somebody on a part-time basis that can provide a certain type of service that supports a totally volunteer fire department. However, as work load demands increase, the concept of the FTE translates into *what position can you afford*.

As a classic example, many fire departments who find themselves with increasing demand on their volunteer fire force, find it useful at some point in their transition to hire a full-time, permanent fire chief. In other cases, the first position in a volunteer fire department might be a fire prevention officer or a fire marshal. Others often select to hire their first person as a fire mechanic to keep the apparatus operational. It really makes no difference which position you pick, but rather the fact that a full-time equivalency becomes a personnel cost that begins to shape future budgets with regard to expenditure. If the revenue stream is there to support that full-time expenditure, it is almost axiomatic that most fire departments will begin to explore how often and how comprehensive they want to add full-time staff to their organization.

Some fire agencies have even staffed with full-time personnel during the daytime, working the full-time staff on a 40 hour work week and reverting to the volunteers after 7:00 pm.

It is also important to note, that when an organizations establishes the FTE cost, and once they decide to put full-time staff on fire apparatus and house them in fire stations, they cannot hire just one FTE. They must hire a multiple of three (the actual ratio is more like 3.6 or 3.9 depending on the comprehensiveness of the employees benefit package). Then, if they wish to add more than one person on that company, they have to adopt or accept the idea that these are what they call *post positions*. A postposition is a 24/7/365 position, and that may not be the same person everyday.

Post positions mean that if the organization is going to put three people on duty, they must have enough money to hire nine people (plus a decimal point that is determined by the department's staffing configuration) in order to keep that fire station open to meet that need. This formula assumes a 56-hour work week that is contemporary in the fire service.

Firefighter Safety Concerns

Every year a ceremony is held in Emmitsburg, Maryland, in which the survivors of the 100+ firefighters who died in the line of duty commemorate the loss. The organization that supports and makes that event occur is the National Fallen Firefighter Foundation.

The mantra of the National Fallen Firefighter Foundation today is “Everybody goes home.” This is not just a cliché. It is rapidly becoming one of the most important aspects of keeping the cost of fire protection under control. At one level, the idea that everybody goes home is pretty simplistic. It implies that every firefighter who gets on a piece of fire apparatus responding to the scene of an emergency should have a reasonable expectation that they will return back to their home and/or their fire station later during that same period.

However, the other implication is that we need to reduce the number of firefighter deaths and injuries if we ever expect to be able to afford the other aspects of a modern fire department. The relationship is based on the fact that a firefighter who is injured in the line of duty has a statistically significant impact on worker’s compensation insurance, which drives up rates and drives up benefit costs, which erode the ability of a fire department to sustain its other forms of financial need.

A firefighter who dies in the line of duty has a cash value. While it is common for people to express emotional reactions to such events by talking about “our thoughts and prayers go out to the members of the family,” the reality is someone has to pay for every firefighter death. It is manifested in higher insurance rates and in the consequences of having to defend lawsuits and other forms of unintended consequence.

What most people do not realize is that a firefighter death is not nearly as expensive in the long run as a major firefighter injury. A firefighter who is injured in the line of duty and forced to retire prematurely places a burden on the benefit package that is significantly higher than firefighter mortality. Unfortunately, this cost factor is often obscured by the more emotional aspects of dealing with mortality.

The *significance of firefighter safety* in the volunteer fire service is equally as important as it is in the career fire service. There are no simple resolutions of a firefighter killed or injured in the line of duty.

Therefore, some of the issues being addressed in this report regarding training and adequate equipment are a lot more important than just the lines describing the deficiency.

It has been stated, and needs to be reinforced in the context of any evaluation of a fire department, that every firefighter – whether they are paid, volunteer, or paid-call deserve three things: to be adequately trained, to be adequately equipped, and to be adequately led under emergency conditions.

The reason for placing this information in the context of a Municipal Service Review is that this could well be one of the greatest cost avoidance tactics and strategies that any firefighting agency can engage in. Improving upon training programs, improving upon command and control of leadership under stress conditions, and properly equipping firefighters is not so much a cost as it is an investment.

6. Ability to Meet Training Mandates

Stanislaus County is a very large geographical area. The fire agencies, with the exception of those that are lined up along the I-5 and Highway 99 corridors, are widely disbursed with considerable travel distances between them. In addition to that the fact that many of these

departments are predominately staffed by volunteers, trying to gather all of the fire chiefs in one location for information exchange and training is incredibly difficult. In fact, there is clearly evidence that there has been an attempt to utilize a variety of techniques to accomplish that objective, but it is also in evidence that the information is sometimes not as widely disbursed or as readily available as it needs to be, to keep fire chiefs informed. Most of the districts indicate that they have problems meeting all of the state training mandates.

Legislative Mandates

Beginning in 2000, legislation was enacted that has had a significant impact on the California fire service and, in particular, the volunteer agencies. They are as follows:

January 2000 - Assembly Bill 1127 became effective

This Bill altered 12 sections of the California Labor Code increasing the potential for substantial civil and criminal penalties for an employer, its managers and supervisors including governmental agencies such as fire districts, cities, counties, and the state.

Of greatest concern is the potential personal liability for members and supervisors for violations of OSHA standards, such as Cal-OSHA Workplace Safety Procedures, regardless of whether it is at an emergency scene or at the workplace (fire station).

January 2002 – Senate Bill 1207 became effective

This Bill extended Cal-OSHA requirements for firefighter safety to volunteer firefighters. Specifically, Cal-OSHA employment and employee now includes volunteer firefighting and firefighters. In essence, this legislation placed the same requirements for safe operations, training, and equipment on volunteers and volunteer departments as there is on paid and combination departments.

September 2002 - Assembly Bill 2118 became effective

This Bill delayed the implementation of Senate Bill 1207 until January 1, 2004. The intent of this delay was to allow volunteer fire departments enough time to come into compliance with the OSHA mandates for work place safety, injury illness, and preventions plans, and their associated programs, training, and protective equipment.

February 2005

Although volunteer fire agencies, via Assembly Bill 2118, received a two-year grace period, many of them are to this day struggling to come into compliance. In order to fully comprehend the impact of what we are faced with, one needs to review some of the topics that come under workplace safety and training consisting of, but not limited to, the following:

- Workplace ergonomics
  1) Work stations
  2) Slippery surfaces
  3) Noise exposure
  4) Climate exposure
  5) Lifting

- Workplace hazardous materials exposure
  1) Household chemicals
  2) Paint and solvents
  3) Fuel and oils
  4) Biological exposure
     a) Ambulance linen
     b) Contaminated medical equipment
     c) Contaminated firefighting equipment

- Structural firefighting
- EMS operations
- Hazardous materials/Weapons of mass destruction operations
- Urban search and rescue operations
- Wildland firefighting

A look at mandated training has all of the above, plus:

- Hostile work environment
- Air crash rescue
- Incident commander
- SIDS, elder/child abuse
- Blood borne pathogens/communicable diseases
- Respiratory protection
- Driver training/EVOC
- Fire officer continuing education
- Incident command system
- Any new equipment or procedure

Skill competencies include all the above and:

- EMS continuing education
- Basic firefighter
- Forklift operator (when applicable)
- Apparatus engineering
- Truck operations

We then address career development:

- Firefighter development
- Fire officer development
- Chief officer development
- Fire marshal/inspector development

In addition to training requirements OSHA expects compliance with other regulations that include, but are not limited to:

- Hearing conservation
- Respiratory protection medical exams
- Communicable disease and blood born pathogen prevention
- Two in / two out structural firefighting mandates
- Tailgate safety briefings
- Workers compensation injury log postings

This level of responsibility has become a burden for many of the volunteer fire departments.

California State Fire Marshal Statewide Firefighter Certification Program

The vast majority of the fire departments reporting in this document are participants, at various levels, in the California State Fire Marshal's Office (CSFM) Firefighters Certification Program. Participation in this program provides two things. The first is a standard curriculum that establishes minimum performance for a firefighter. Secondarily, it provides credibility to the overall training process because it is consistent with professional standards that have been adopted by the California State Board of Fire Services. Those departments that are not availing themselves of the certification process should be encouraged to do so. Those departments that are currently participating in the process should document and provide visibility to their firefighters for achieving various levels of professional qualifications.

Access to Training

Time and distance are either the enemy or the ally of the fire service. When events are close to a fire station they are handled quickly. That is the primary reason that fire stations are distributed throughout an area; response time is the gold standard of performance.

When events are far away – or worse yet the fire apparatus is out of position and must travel long distances to get on–scene – events can get out of control awaiting arrival of the required resource. This translates into two problems for fire departments. The first is that they must remain in their response area as much as possible. Secondarily, they must periodically travel out of the area to get needed training if that training is not readily available in their area.

Concurrent with this is turnover within these departments as a direct result of two things. The first is that most volunteer fire chiefs are in the position as a result of an election; volunteer leadership changes often. The second thing that compounds the problem is the turnover of volunteer members. The net result is a gap in communications, which needs to be remedied.

Any suggestion of holding more meetings would only compromise the problem. The continuing communications process makes the problem even more complicated. However, there may be a possible solution in the form of technology.

There are two elements of technology that are clearly available to fire departments today which did not exist as little as ten years ago. The first of these is using the internet as a more comprehensive communications device. Granted, imposing a requirement that communications be accelerated on the internet does generate additional workload for someone. Nonetheless, email networks, fax networks, bulletin boards, websites, etc., are commonly used as forms of community and corporate communications so that information is readily available. The second of these is the use of teleconferencing bridges and other forms of electronic communications.

Video-Conferencing

Another solution is video-conferencing, a technique where one location can be chosen for the development and delivery of needed information, and multiple locations can be connected to receive; such as training in the fire station. It is a form of *long-distance learning*.

Fire agencies with multiple stations and that wish to preserve the reliability of their fire companies are installing these video conferencing systems to provide both an improvement in response time and a simultaneous improvement in the distribution of training and educational materials to widely dispersed units.

North County in San Diego has developed one such system that covers almost 50 percent of the county. Their system services over 40 separate fire stations. This system consists of a facility that houses a studio and facilities in each fire station that can receive the broadcast. The system is *two-way* in that the instructor can communicate to the stations, and individual stations can communicate questions or provide feedback in real time. Cameras and audio equipment are provided at both sites.

Many of these facilities have been funded through AFGA and DHS grants because they provide a much needed resource for fire facilities. Such a grant could also involve the community college and be integrated into the communications system and serve as a link with law enforcement. (For more information, visit www.ivci.com.)

Electronic Bulletin Boards

Another consideration to improve communications within Stanislaus County would be for the County to provide an electronic bulletin board on which essential information can be posted. By placing documents on an electronic bulletin board, they can assure access. It would not ensure that individuals access it, but it would assure that those individuals who chose to do so would not have to search extensively for information.

Secondarily, a recommendation would be for the organization to hold a monthly teleconference that would follow an agenda and be set with a consensus time and date to assure a maximum amount of participation. The purpose of the teleconference would not be so much to collect extensive input as much as it would be to assure broadcast distribution of valuable and important information.

The combination of these two techniques could improve the distribution of information. However, it is suggested that they not be used to replace physical, face–to–face communications. The dynamics of the fire service demand that there be an opportunity for people to exchange information on a one-to-one and organizational basis. However, the fact that individuals are often *out of the loop* and come to these meetings unprepared could be mitigated by the use of electronic communication's devices.

7. Underserved and Un-served Areas

When a fire station is assigned a first-in response area, there is an assumption that the fire company will respond to all incidents in that area within the response goal time frame. If a fire station is seen by persons driving down a rural road, they may assume they have fire protection within a short time frame. Neither assumption is accurate. The reality is that the area to be protected is often laid out in such a fashion that it prohibits the company from achieving that goal.

In a practical sense, the ability to actually cover an entire area depends on a number of variables. One of the major variables is the extent of the road network in providing access to all parcels requiring a potential response. The second is the assignment of responsibility to protect the area by a legally established fire company. Another variable is the competition fire vehicles encounter for priority in using the road network. In the case of the former, the road network is laid out in a fashion that will allow a fire vehicle to go from its point of dispatch (normally the station, but not always) to the location of an emergency without having to backtrack or take alternative routes that are inefficient. Theoretically, a fire vehicle should move progressively from point of departure to scene location with a minimum of lost time. In the event that the road network within a jurisdiction is convoluted and/or designed for limited access, a fire company may have to make numerous turns and directional reverses to arrive at a specific location. When this occurs, meeting a response time goal becomes harder to accomplish.

In the context of evaluating fire station location response polygons, GIS technology places polygons on a road network based on travel times and distance from the fire station only. In studying the fire stations in Stanislaus County, a map was prepared for each jurisdiction that shows the anticipated response coverage areas based upon time and distance. These maps are illustrated in the *Map Atlas* in the appendix. They are color coded to illustrate the area that a fire apparatus can cover in the designated time. The color coding used in this mapping effort was a gray color.

As a result, in any specific area of a station's response there may be areas that will not be color-coded as being within the response polygon but are still within the jurisdiction. In some maps there is an overlap between adjacent fire companies. This can generate some degree of concern for those parties living in the uncolored areas. It can create confusion in the overlapped areas; but if the response is outside of an agency's jurisdiction, they have no responsibility to respond either. In some cases the response polygons overlap. This can be an indication of excess capacity of the system, and automatic aid often blurs the distinction of these areas anyway.

ESCi defines an area as being *underserved* if the non-color-coded area is on the perimeter of an area that is considered to be within the jurisdiction but cannot be reached in a reasonable time frame. In that case, the only thing that makes an area *underserved* is that the area is beyond the color-coded polygon.

A *hard to serve* area is different. A hard to serve area is an area that is within a polygon range, but because of topography, geography, or road design, a responding apparatus cannot get to that location within the adopted response goal.

The term *un-served* means that no fire apparatus is tasked with the responsibility to respond. Is close enough.

Therefore, in an area in which the roads are not, in general, laid out to expedite travel, there can be both underserved and hard to serve areas for consideration. This is especially true in this particular countywide study.

However, being underserved or hard to serve does not always mean long response times. The reason is that fire apparatus often are dispatched from a location other than the fire station. Therefore, an actual response time within the response goal can occur into these areas.

Levels of Service for Each Region and Sub-Region

In a rural environment, response times are expected to be long. In a suburban environment, they are expected to be shorter; in an urban environment company reliability may be a more important issue. In general, most of the agencies evaluated have not adopted actual response standards. There are verbal commitments, but no actual SOC studies in most cases. The Sheriff's Office does maintain record keeping of the departments' total response workload but does not provide an annual accounting of response times. That detail needs to be improved drastically if being able to evaluate the levels of service are to mean anything.

It is recommended that *each department* consider adopting a travel time that is consistent with the size and density of the district. In Chapter 6, ESCi discussed the concept of standards of cover. A series of charts were provided that described the current level of service that appears to be present. What is not present in all agencies is well defined standard of cover statement that provides a basis for measuring performance. Based on ESCi's evaluation of current level of service, the cities and/or districts that are providing suburban level of service should adopt the following response goal:

> *The _____ fire department (district) has established a response time goal of providing a first due fire apparatus to arrive at the scene of an emergency involving fire or medical services within six minutes of travel time 90 percent of the time.*

The rural level of service agencies should adopt the following*:*

> *The _____fire department (district) has established a response time goal of providing a fire apparatus to arrive at the scene of an emergency involving fire or medical aid within eight minutes total travel time, 90 percent of the time for all locations within five driving miles of current fire stations. The department will provide fire apparatus to respond to other emergencies beyond that zone in a timely fashion.*

It is also possible for one agency to have different levels of service depending on topography, geography, and population density. Many agencies that cover large areas that have both suburban and rural areas have dual response goals based on demand zones.

8. Dealing With Major Emergency Response

There are a wide variety of cooperative agreements in existence between the various agencies in the Stanislaus study area. Appendix A (Bibliography) in this document provides an inventory of documents that were collected during the field on-site interviews. These documents clearly illustrate a high level of activity in cooperative effort between local, regional, and state fire entities. Maintaining these cooperative agreements, especially those associated with automatic aid, will be a critical part of future cost avoidance scenarios.

The Difference Between Mutual Aid and Automatic Aid

Local fire protection and emergency medical agencies assess risk against available resources and formulate plans for providing services. However, individual agencies rarely possess sufficient resources to cover extraordinary situations; moreover, unnecessary duplications of effort and needless expense would result if each fire protection agency independently acquired facilities, apparatus, equipment, and personnel to create a response capability able to confront every conceivable worst-case scenario. Accordingly, a basic component of fire protection strategy is to share apparatus and personnel among agencies as requested (mutual aid) or dispatch resources automatically upon notification of an incident (automatic aid).

Frequently, individuals will use the terms mutual aid and automatic aid as if they are interchangeable; they are not. The concept of mutual aid is described in the California Emergency Services Act as an agreement between individual departments to send resources to assist another community that has lost its capacity to cope with an emergency. The term mutual aid has been around since the origins of the paid professional fire service of the 1800s. There are examples of mutual aid being offered in almost all of the major catastrophes of the turn of the last century.

However, the primary consideration in mutual aid is that a department agrees to send resources to assist another department only if they are asked to respond. The assumption is the department will exhaust all of its resources, before it requests outside aid. The term *mutual* generally means that *aid* is between two entities and is interchangeable (City A will help City B, and City B will help City A).

Automatic aid is not based on depletion of resources. Another term frequently used to be synonymous with automatic aid is *boundary drop*. The concept of a boundary drop is simply that the dispatch center is able to send the engine that is closest to an emergency, regardless of jurisdictional boundaries. Automatic aid agreements, therefore, are not always equitable. It is conceivable that a community may sign an automatic aid agreement and go into another area, but in fact have no area in which the reciprocating agency can provide a similar service. Automatic aid has grown in stature in the California fire service over the last 15 years as a direct result to make response systems more efficient and more effective. The degree to which organizations have automatic aid agreements in existence eliminates gaps and deficiencies that otherwise would force the creation of additional fire stations or result in significantly longer response times.

Currently, the County, as well as the State of California, relies on a complex system of automatic and mutual aid among federal, state, and local agencies and volunteer organizations, in order to provide fire protection and emergency medical services to the area.

State law designates the County of Stanislaus as an *operational area* for disaster response.[27] The County's operational area, in turn, is organized into *zones*, with assigned zone coordinators who report to an area fire coordinator. Mutual emergency responses are initially generated from within zones; advanced to other operational area zones as required; and, if necessary, elevated to the regional level where the regional coordinator has authority to request response from other state regions.

Fire protection agencies also participate in individual automatic aid agreements with surrounding agencies. Automatic aid is designed to furnish response within the normal operating range of participating agencies; no added support--as would be provided by mutual aid--is required. Research is incomplete; however, preliminary and anecdotal evidence seem to indicate that automatic aid within much of the unincorporated area flows primarily in one direction-from well-funded agencies to the lesser funded. In other words, agencies with minimal resources are the largest recipients of automatic aid. This system is a logical remedy for providing effective safety service to areas with minimal resources; however, it relies on the willingness of agencies with relatively more resources to subsidize less affluent agencies.

In the context of the MSR, mutual aid should be considered an example of an agreement between agencies to support one another over the long term. Those communities that have automatic aid agreements should consider entering into cooperative agreements in a much more focused process and deal with the reality of putting services at the scene of minor emergencies to prevent them from becoming larger ones on a more effective and efficient basis.

The maintenance of these cooperative agreements requires a specific level of activity. The CDF ranger unit chief has assigned staff to perform that oversight. The Stanislaus County Fire Chiefs Association is also has an integral part in sustaining and maintaining these agreements.

Since 9/11, there has been an increase in emphasis on the development of mutual aid plans. This is reflected in the recent International Association of Fire Chiefs Strategic Plan.[28]

Disaster Readiness

In many communities, the only visible and permanent governmental structure in the community is the fire facility. In the past, the County experienced major catastrophic events that have resulted in not only impact but also isolation of some of these communities. In conducting the physical facilities review, an attempt was made to determine the degree of self-sufficiency to which each of these facilities would be able to operate independently. This included whether or not they had emergency power provisions (generators), and whether or not they had sufficient amount of fuel to allow them to operate for at least one operational period for up to four days without having to rely on exterior sources. The vast majority of the fire stations represented in this study do not have that capacity.

In the case of a countywide disaster that would damage the infrastructure of the community, specifically electrical, the fire station would be rendered as weak as any other commercial structure in the area. Good planning would seem to indicate that the use and distribution of portable generators and other provisions would be an appropriate action.

[27] Government Code 8605.
[28] A National Mutual Aid System for the Fire Service, IAFC, 2006.

Out of County Issues

One of the aspects of mutual aid is that mutual aid is not always just with your neighbors. In the State of California, mutual aid is a function that runs all up and down the state. It is not inconceivable, for example, that a piece of equipment from Stanislaus County could, and in some cases already has been, deployed as far south as San Diego. This is an issue that has both its detractors and its supporters. The concept of mutual aid and being able to stage and deploy large amounts of equipment has been a part of the integrated fire protection mobilization system in California since the early 1970s. In fact, the presence of the OES pumper inventory in California is a manifestation of how that system has grown systematically larger over time.

The downside is that in many communities taxpayers are reluctant to see their apparatus sent out of the community, especially when they are gone for extended periods of time. The perception is that this reduces the level of service to the community. And it has been true that when equipment was sent out of a county and subsequent emergencies have occurred in that county, there have been redeployment decisions that have resulted in public criticism. The up-side of this issue is that it has resulted in opportunity for the smaller fire agencies to obtain additional funding during the major fire storms of the last few years.

Nonetheless, it is unlikely that the State of California will modify its current policies and procedures. What is more likely is that more and more communities are opting out of mutual aid systems.

There is a term used in Standards of Cover documentation called *draw down*. Draw down is the minimum number of fire companies that an organization will allow to remain in position when mutual aid is evoked. In the context of this report it was difficult to determine if any of the departments have a draw down policy. Moreover, given the fact that some of the fire companies are using mutual aid reimbursement as a means of balancing their budget, this issue is likely to become more critical and not less relevant.

Specialized Emergency Operations

Stanislaus County has been the scene of many other major events over a period of the last 15 years other than fires. These events have not been limited to any specific type of emergency, but rather a reflection of the all-risk issues in the County. Among the most recent was a major hazardous materials event

The potential for mobilization of all the fire agencies in this County for a catastrophic event can best be referred to as a moderate probability, with a relatively high consequence if they actually do occur.

Few of the fire departments provided any evidence in doing extensive emergency planning.

9. Improve Public Awareness of Fire Service Capabilities

During the interviews, several questions were asked regarding community support that dealt with public perception. Without a doubt, most of the departments feel that they enjoy a considerable amount of positive support in their communities. However, that positive support may or may not translate into a complete understanding of how the fire department is actually

staffed and deployed, and it definitely does not translate into a mandate for increased funding to support growth and development of the fire department. Much of the public's perception of the industry is based upon media representation and their response to catastrophic events such as the recent exposure of firefighters during Hurricane Katrina and other major national disasters such as September 11, 2001. In addition, the public's perception is often shaped by television shows and by movies such as *Ladder 49*, *Towering Inferno*, and others.

Collectively, this perception of the fire service, results in the vast majority of individuals believing that the fire service is a ubiquitous service. There is a belief among many new homeowners in Stanislaus that the level of fire service provided is the same everywhere. Nothing could be further from the truth. In spite of the fact that firefighters might look alike in the way that they are dressed and might all arrive at the scene of an emergency on a piece of a equipment that looks typical, there are significant differences between the level of service in different communities based upon the level of community financial support that allows that level of service to exist.

Generally speaking, firefighters and their close personal friends have a real understanding of this deficiency. What is not as clearly understood is how the average citizen in a community evaluates that perception; it is even more ambiguous with regard to how elected officials and governmental authority understand the significance of those differences. But a well-informed electorate would likely chose to provide adequate financial support so that the level of service is consistent with community expectations. An adequately informed elected official would likely choose policy and procedures that would result in the level of service being consistent with their constituencies' demands. In actuality, neither of these conditions exists in a formal fashion.

In the case of rural America, those individuals who lived in a rural area for the majority of their life span are extremely knowledgeable about the deficiencies. Their support of the fire organization often remains very high, but their understanding of the performance is based on more practical observations. They don't expect much, because they know exactly *why it is the way it is.*

Options and Alternatives

As one looks at these various types of governance models, it is important to understand that there are two key elements of consideration. The first of these has to do with the distribution of powers vested in the various forms of governance. The second element is the reporting relationship between the various forms of governance. For example, a city can either be a General Law City or it can be a Charter City. The choices the city makes in creating its form of governance determines what it can and cannot do with regard to creating service levels. County governments have a specific scope as stated by the California Government Code. The same holds true with fire districts. They can be either a single purpose or multi-purpose district. They can be independent or dependent. State agencies are allowed to engage in specific behavior that they are authorized to engage in but are limited with respect to doing other things. The same limitations apply to federal agencies.

ESCi is recommending a more appropriate and strategic way of looking at incremental improvements over time to achieve a more desired state sometime in the future. We will describe each of the governance options and alternatives that are possible. They are all assessed in terms of practical application and *do-ability* by a brief review of the advantages and disadvantages of each.

Options Available for Consideration:

- Creating a countywide fire protection district as a special district
- Creating a county fire department
- Encourage regional consolidation of existing fire protection districts
- Utilize the Joint Power Authority (JPA) for functional consolidation
- Realigning borders and considering district consolidations

1. Countywide Fire Protection District

The Stanislaus County Board of Supervisors could initiate action that would lead to the development of a countywide district assuming operational responsibility for fire protection and emergency medical service in the unincorporated region. The County has no statutory responsibility to provide fire protection; however, there is precedence for its involvement. The board could also initiate a reorganization action through LAFCO that would request dissolution of all unincorporated area fire protection districts.[29] LAFCO approval of the reorganization would likely include terms and conditions to substantiate the newly formed district's obligation to assume emergency services within the unincorporated region.

The countywide fire district's service area would include all unincorporated territory, including previously un-served areas. The assets and property tax increment of each dissolved special district would transfer to the newly formed district The assets of volunteer organizations are, for the most part, private property and not subject to state law regarding transfer of public property.

As a countywide fire district, fire protection and emergency medical service in the unincorporated area would likely have to be supplemented additionally from the general fund based on the wide variation in per capita contribution. This would likely create some inevitable conflicts over level of service. A fire chief would be appointed by the elected officials.

Centralizing unincorporated area emergency services under the one district would provide unity of command and allow the public agency with land use authority to coordinate regional planning with strategic planning for emergency services. The redundancies of multiple agencies and elected offices would be eliminated. It is hoped that a single agency could use resources more effectively; however, such notions would need to be carefully examined within context of the additional administrative support that would be needed.

- Advantages
  - Consistent level of service countywide
  - Co-ordination of service especially communication, training, and planning
  - Economies of scale to reduce costs, such as purchasing equipment and supplies, providing insurance, equipment repair and maintenance, and training
  - Reduce duplication of efforts, such as administration, regulatory compliance, facilities, and equipment

- Disadvantages
  - Cost savings may be short term; increased size of agency could require paid personnel with accompanying increased funding requirements

[29] Reorganization means two or more changes of organization initiated in a single proposal (Government Code § 56073).

- Disparate funding
- Pooling and redistribution of existing districts' funds may not be acceptable due to disparity of current funding (*haves and have-nots*)
- Loss of local control
- Organization may be unable to absorb any funding short fall
- Major political conflict likely

2. Creating a Stanislaus County Fire Department

The Stanislaus County Board of Supervisors could also create a County Fire Department. As a countywide department, fire protection in the unincorporated area would likely have to be funded additionally from the general fund and be subject to the County's annual discretionary budget process. A county fire chief would be an appointed office selected by the Chief Executive Officer, unless County policy was changed to add fire chief to the list of offices appointed directly by the Board. An alternative, also requiring a County charter change, would establish a county fire chief as an elected office comparable to the office of sheriff. Operational responsibilities could be carried out by County staff within the public safety group or by contract staff similar to the model used by the Riverside and Butte County Fire Department — where even the county fire chief is a contract employee from CDF.

Centralizing unincorporated area emergency services under the County would also provide unity of command and allow the public agency with land use authority to coordinate regional planning, with strategic planning for emergency services. The redundancies of multiple agencies and elected offices would be eliminated. As with a countywide fire district, it would be hoped that a single agency could use resources more effectively; however, such notions would need to be carefully examined within context of the additional County administrative support that would be needed.

An action that would cause all current fire protection agencies to be combined into a single agency and concurrently take in any underserved or un-served territory outside of the districts cannot be processed as a *consolidation.* State law requires that such a proposal be processed as a *reorganization.*

Procedurally, current agencies could be dissolved and a new agency could be formed. LAFCO, however, is prohibited from initiating a district formation.

- Advantages
  - Consistent level of service countywide
  - Co-ordination of service, especially communication, training, and planning
  - Economies of scale to reduce costs, such as purchasing equipment and supplies, providing insurance, equipment repair and maintenance, and training
  - Reduce duplication of efforts, such as administration, regulatory compliance, facilities, and equipment

- Disadvantages
  - Cost savings may be short term; increased size of agency could require paid personnel with accompanying increased funding requirements
  - Pooling and redistribution of existing districts' funds may not be acceptable due to disparity of current funding (*haves and have-nots*)
  - Loss of local control

- County unable to absorb funding short fall
- Major political conflict

Based on the past practices of the area, this option would be heavily resisted.

3. Sub Regional Consolidation of Existing Fire Protection Districts

The Stanislaus County Board of Supervisors could adopt a resolution initiating a reorganization that would include dissolution of some the current districts plus formation of new regional fire protection districts. Considering past experience, that is not likely to happen.

The issues that were involved with forming a district over the entire unincorporated area would be similar to the issues encountered in a proposed consolidation of any sub-region unity of command, global planning, and elimination of redundancies would be positive aspects. However, including un-served territory makes securing additional funding even more crucial. Territory that is essentially unpopulated and un-served by a fire protection district does not generate adequate property tax or benefit fee revenue for emergency services. Accordingly, unpopulated and undeveloped areas would bring limited resources to a new agency and create new concerns.

- Advantages:
  - Improved coordination of services
  - Some economies of scale achieved
  - Reduction in duplication of efforts
  - Retain local control
  - Ideally win-win results can be achieved with strengths and weaknesses balanced

- Disadvantages
  - Unbalanced strengths and weaknesses could result in reduction of effectiveness of regional consolidation
  - Combining divergent communities could result in friction and inefficiency

4. Support the Joint Powers Agreement (JPA)

A Joint Powers Authority was recently created in Stanislaus County to coordinate the planning processes of the participating agencies that provide services in the County. This process has previously been used in Orange County, California, to create a system that is large enough to meet the operational demands of a rapidly growing urban county and yet representative enough to preserve some degree of local input into the outcomes.

Membership in a JPA is voluntary; however, the purpose of the authority could be to provide a unified command structure for providing fire protection and emergency medical services over an entire region. The advantage of the JPA process is that it would create a partnership between existing agencies and would not require LAFCO approval. A JPA may not decrease the current number of agencies or abridge the discretionary powers of agencies; however, the JPA board of directors, which is comprised of member-agency representatives, could assume governance over regional emergency services operations, regional emergency services planning, and allocation of regional resources for fire protection and emergency medical services. This addresses one of the main issues in this report – overall coordination.

A comprehensive JPA formed under current State statutes does not require voter approval; however, if legislative action were sought to create a special regional authority, voter approval would become necessary. Membership in a JPA would not need to be limited to unincorporated agencies – JPA models used in other counties include cities and special districts, or cities and county government. Un-served areas of the County would not be eligible to participate unless the areas received public agency representation by annexing to an existing special district or by forming a new district. Alternatively, the Board of Supervisors could become a financially contributing partner in the JPA to sponsor un-served, unincorporated areas.

A JPA could develop and oversee a unified command structure, reorganize personnel to eliminate redundant positions, and allocate resources globally to provide enhanced fire protection and emergency medical services to the entire region. The JPA would be the natural location for a study to be conducted on how to frame cost sharing agreements also. It could provide needed assistance in administrative duties, including standardizing the budget efforts.

The authority would be funded by member agencies; therefore, a threshold for JPA membership would be an adequate, stable revenue base. Because agencies with insufficient income would be unlikely candidates to join the JPA, it is possible that unless current regional revenues are augmented, the unity of command, economies of scale, and service enhancements offered by the JPA would not be available to the entire region. Moreover, territory that is not currently included in a public fire protection agency would not be eligible for JPA membership – unless represented and funded by the Board of Supervisors.

Functional JPA: A JPA to regionalize specific functional roles such as training, dispatch, geographic information services, administrative services, or apparatus maintenance is called a functional JPA. Essentially, that is what is in existence right now. The functional JPA would focus on creating economies of scale and cooperative sharing of resources, rather than creating unity of command and eliminating redundant positions. A functional JPA would not decrease the number of current agencies or infringe on local control.

Fire protection agencies which currently receive inadequate revenues would have difficulty participating in the benefits that could be generated by a functional JPA. Like the structural model, member agencies would fund the Authority; and while a JPA could be designed to allow members to *buy-in* at different levels, it is possible that agencies with minimal and/or unstable revenue bases could still be excluded.

Membership in a functional JPA would be available to cities; however, identical to a structural JPA, un-served areas of the County would not be eligible to participate unless public agency status was achieved or the Board of Supervisors sponsored and funded membership for the areas.

JPAs are not a panacea, but they have two very important factors for consideration. The first is that they provide widespread representation for stakeholders, i.e. from both the elected and appointed persons from local entities, and they provide a forum for dialogue that cannot move any faster than the consensus of the group.

- Advantages
    - Flexibility - can be designed to achieve consistent, coordinated level of service, economies of scale, and reduction in duplication of efforts
    - Local control maintained

  - Voluntary membership
  - Various types of districts may combine (city, county, and special district)
  - This process has the greatest chance of succeeding of any of the possible alternatives

- Disadvantages
  - Possible lack of permanence and long term viability
  - Loss of key members could defeat JPA
  - Sharing of resources may become imbalanced over time with changed circumstances
  - Stability of employee wages and benefits

As stated in the next chapter, each of these choices can be a consideration. Each will come with a set of issues that will have to be evaluated before choosing the course of action. Some of the reasons that the choices will be made difficult have to do with:

- ✓ Development practices
- ✓ The lack of data on triggers and thresholds for response failures
- ✓ Cost of providing full-time personnel compared to revenue sources

5. Realign Borders and Consider Adjacent District Consolidations

In reviewing each individual department, identification was made as to whom the organization was surrounded by and an evaluation made of their agreements regarding mutual aid and automatic aid coverage. Those entities that had contiguous borders or had islands that were within other fire protection entities were evaluated to determine whether or not any form of realignment was in order.

Logical Service Boundaries

There is clear evidence after reviewing the boundaries and the growth patterns in this County that some boundary realignment is in order. This is likely to be an ongoing issue with annexations and the update of the spheres of influence. There are islands and peninsulas in some areas. These are not a serious problem of governance and this configuration is perfectly legal. These types of areas are only a problem sometimes with respect to public perception. When a citizen has a problem, they seldom worry about who is providing the service. They want the closest fire apparatus. Often citizens move into occluded areas of this type and are not even aware of who their service provider is until they have an emergency. In other cases, the identity of the local fire station is very important to frequent users of the services, especially EMS.

As stated in Chapter 6, response polygons are based on time and distance, and the average person uses the element of time as their benchmark for determining satisfaction. Therefore odd shaped boundaries and islands that result in a person on one side of the street getting a service that is denied to another person on the other side of the street can often raise public relations issues. Many events have made headlines because the closest fire station has not responded.

Therefore, response polygons that do not provide for the most efficient delivery of service are potential areas of community criticism. Moreover, if land use policies allow a tract development to be built that places demands on a fire agency by its proximity and reduces the revenue to a fire district, these policies can generate potential liabilities that could result in greater

fragmentation in the future. It is clear from the history of some of the fire departments, that they were originally created in response to citizen concerns about the level of service in a specific neighborhood, and they have evolved in a fashion that may not be totally consistent with that. LAFCO cannot mandate that consolidations occur, but they can certainly encourage consideration of realignments that balance out response areas based on time and distance instead of just geographical boundaries.

Any idea that two organizations should be forced to consolidate when they don't want to be consolidated or realigned generates political activity. However, any two organizations that could benefit from consolidating or realigning should explore that possibility without prejudice. A key factor in the level of controversy is going to be the status of revenue distribution.

Tract Development

There was input from several district chiefs that homes are being built outside of the boundaries of recognized fire protection delivery systems response areas. This practice is counter productive. While it is common for there to be a disconnect between land use and fire protection planning, the reality is that of the presence of homes are the obvious generator of workload and demand placed on a fire department.

Single-family dwellings that are built in an area on an infill basis can create a similar problem over a lengthy period of time. However, housing tracts and developments that are systematically planned to put 200–300 homes into one specific area are guaranteed to create that phenomenon.

In support of this contention, ESCi have provided a fire station planning model that addresses triggers and thresholds. Later in this report ESCi has submitted several recommendations that boundary lines be redrawn or at least reconsidered for some of the areas, and to place some of these housing tracts into the fire protection zone. Notwithstanding the political response, this is good fire protection planning. Failure to even attempt to put these buildings into a fire protection planning zone could eventually be responsible for system failures.

Triggers and Thresholds Explanation

In Appendix B is an article entitled *Triggers and Thresholds* that identifies that a fire station can only cover a certain area and be within response time goals of contemporary fire service agencies. As noted before, this report is not a standards of cover document; nonetheless, the fact is that growth outside of any fire agency's response polygon raises issues of potential response failure and subsequent loss. Readers are referred to that appendix to become more familiar with the concept. It could be applied to some of the recommendations covered later in this report.

Transition into the Future

When a fire agency has a long period of time with no growth in either its area of responsibility or its funding, or an increase in demand for service, it becomes more traditional. In this context, tradition is not a negative term because it means stability. The organization develops a means of managing its activities that are somewhat predictable, and over time, usually become quite effective.

When that same organization faces growth, it has three basic options. The agency can become proactive and try to deal with the influx of changes, or it can become reactive and try to ignore or deflect the changes to limit their impact on the organization. Lastly, the organization can become in-active and be left behind by the changes.

The fire agencies reviewed in this MSR all have a long history that reflects both the communities and the fire districts' comfort with the way things have been. Population increase in an area becomes statistically important when it begins to impact service demands. The development of any community's residential, industrial, or commercial base will result in increased demands being placed on the fire department. This is an obvious consequence of growth.

What is not so obvious from this process is the impact of this transition on the need for new programs, resources, and personnel in the fire department. In its simplest terms, the initial increases in the attributes of an area are incrementally small on the fire department. Infrastructure impacts are usually not felt right away due to the time gap between the arrival of new people and the need for them to place a demand on service.

If the fire department has a record of being proactive in dealing with incremental changes, there is little reaction. However, the phenomenon of influx of sustained growth does result in consequence that is not necessarily totally compensated for by a proactive approach. This is the basic issue of transition management, and it has already occurred in the area as cities are annexing area away from the districts. When a sustained growth rate has reached a point where past practices and policies have been stretched to the maximum, things have to change.

Transition management consists of understanding that coping with rapid change is vastly different than coping with incremental change. A text has been identified in the bibliography of this report, *Managing Transition,* that more elaborately describes this phenomenon. This chapter highlights that the districts are experiencing many of the behavioral and organizational symptoms of an organization that is going through a maturation process.

This must be recognized as a key element in the development of any planning process that is used to define and direct the future activities of these districts. Failure to recognize the principles involved in transition management may have an impact on the placing of proper priorities on activities or attempting to make quantum leaps forward without adequate review of desired outcomes.

The most important consideration at this point is the acceptance by the respective fire agencies that unwillingness in the process of transition is a problem in itself. Without appropriate mechanisms in place, the process can result in inefficient use of resources, ineffective program development, morale, and interpersonal conflict, and the most important of all flawed decision-making processes.

The process used to develop this review of the Stanislaus fire districts involved making observations and findings. The recommendations are placed within a phased plan that is based on the recognition that if a fire agency is trying to remain a proactive and progressive fire district in spite of the pressures generated by this growth, it takes time to make meaningful changes.

It is anticipated that the officers and members of the respective districts will have already anticipated many of the proposed changes ESCi will be documenting. The main distinction

placed on these recommendations is that they be properly prioritized and implemented instead of being developed as a perceived reaction to a specific problem.

Summary

Any effort to reorganize multiple fire agencies is complex and fraught with political considerations. It takes a fairly lengthy period of time to complete the application processes and there are a variety of reasons that parties will either line-up to support or resist a consolidation effort. As result, a *rule-of-thumb* applies to the decision to pursue a partial or full consolidation. The group of entities that do not want to become one entity should not be forced into a bad marriage. Secondarily, any group of agencies that does want to pursue the action should not be stymied by bureaucracy and interference. It makes sense that any or all efforts to evaluate a consolidation effort be adequately reviewed before any decision is made to move ahead by policymakers.

If the decision is made to make an adjustment in governance, the discussion should center on how to make the process work as opposed to why it should or should not be accomplished. ESCi recognizes that this is a difficult environment to create.

However, the justification for any consolidation effort should be based on the overall survivability of the entities in providing for fire and emergency services. If an organization cannot survive on its own, it is good candidate for consolidation. If it can survive on its own but would have an increased capacity to perform as a result of leveraging its efforts with another agency, it is still a good candidate for consolidation.

In the strategic planning process, agencies are always advised to develop a set of observations that include challenges, opportunities, strengths, and weaknesses. This process provides one set of observations that fall into each of these areas. In general:

- ✓ All agencies are financially challenged – this is a weakness
- ✓ All agencies have opportunities to improve upon working relationships with the agencies that are contiguous with them – this is an opportunity
- ✓ All agencies have weaknesses that make them vulnerable to specific problems - this is a challenge
- ✓ All agencies have individual strengths that they can build upon - this is their collective strength

In the final analysis, most fire department planning efforts can only effectively cover about five years in the future. It has already been projected that the rate and impact of growth will continue for the next 15 to 20 years for this area. This trend and pattern indicates that managing transition is every bit as important as the incremental changes that must be made to cope with specific issues. A major part of this report, therefore, is aimed at developing a planning rationale to support the decision-making process that will need to be supported by planning efforts by local agencies.

It is recommended that this MSR not be a document that provides a snapshot in time, but become the basis for a five-year planning document that is renewed, reviewed, and updated as elements of change evolve from one issue to another by the local fire agencies.

Chapter 8 – Service Review Determinations & Recommendations

Background

This chapter addresses the requirements of the Cortese-Knox-Hetzberg Local Government Re-organization Act of 2000 (California Government Code Section 56430). This Act requires LAFCO to conduct Municipal Service Reviews prior to updating the Spheres of Influence (SOI) for local agencies within the county. As part of the review process, LAFCO is required to make *written* statements of determinations in each of the nine categories listed below.

1. Infrastructure needs and deficiencies
2. Growth and population projections
3. Financing constraints and opportunities
4. Cost avoidance opportunities
5. Opportunities for rate restructuring.
6. Opportunities for shared facilities and resources
7. Government structure options (including advantages and disadvantages of consolidation or reorganization of service providers)
8. Evaluation of management efficiencies
9. Local accountability and governance

Determinations are based on an analysis of information concerning the adequacy of local service agency conditions. Determinations are not all findings of fact; they are "…declaratory statements that make a ***conclusion*** based on all the information and evidence presented."[30]

In addition to being used in updating the SOI, the service review process provides a new set of tools that can be used by LAFCO, local agencies and the public to:

- Promote orderly growth and development with consideration of service feasibility and service costs
- Learn about service issues and needs
- Plan for the provision of infrastructure needed to support planned growth
- Address regional issues
- Develop a structure for dialogue among agencies that provide services
- Develop a support network and promote shared resource acquisition
- Provide an informational database
- Develop strategies to avoid unnecessary costs and to streamline and improve service delivery
- Provide ideas regarding different or modified government structures

[30] *Final Local Agency Formation Municipal Service Review Guidelines*, Governor's Office of Planning and Research, August 2003, page 44.

Fire protection and basic life support for emergency medical services are handled in Stanislaus County by a combination of service providers that includes both cities and districts. The delivery system has undergone significant changes over the last two decades. Communities that were once separated geographically are now merging; growth and development occurs in a fashion that does not often consider the impact on local fire agencies. The previous chapters of this report provide information on how each specific entity is staffed, how its fire stations are situated, and how the organization is coping with change.

In these ways, the analytical processes utilized can be used to further investigate an appropriate change.

1. Infrastructure Needs and Deficiencies

Purpose: To evaluate the infrastructure needs and deficiencies of a jurisdiction in terms of available resources, capacity to deliver services, and the condition of facilities.

Infrastructure is what the public thinks when they think of the fire service. If they see a fire station or they observe a fire truck on the street, they have a perception that fire protection is being provided. However, the infrastructure of a fire department encompasses a great deal more. Infrastructure has to be evaluated in terms of its adequacy to do the job, the reliability of being available when needed, and the overall need to provide the right set of tools to do the job that are current and safe to operate.

The following points were derived from the information provided in the previous chapters:

- The communities are changing with the influx of new homeowners and new businesses. The service providers are strained to keep up with the response workload, replacement of equipment, and the development of programs. The potential for remodeling fire stations of most of the smaller agencies is negligible.

- Because of the changing nature of the automatic aid and mutual aid system, jurisdictional boundaries are often transparent to the delivery of services to the citizen. The closest fire company to provide a service is used in many cases to provide initial attack.

- Building new equipment to meet nationally recognized standards is financially more expensive than past practices of purchasing recycled apparatus from other entities. Purchasing retired apparatus is becoming more of a problem due to changing standards and increased liability of poorly maintained vehicles.

- The ISO ratings generally reflect the capacity of the departments to protect their level of risk. The lower the classification, the higher the level of service.

- The majority of the agencies are making a good faith effort to conform to nationally accepted standards for fire ground operations.

- Increased development does not mean increased revenue in all cases.

- Population drives demand and demand drive resources. The two factors are not equally matched in the current system. This is reflected in the per capita costs. Lower per capita costs results in lower levels of infrastructure capacity.

- Water supplies in the rural area forces the use of water tenders to be part of the infrastructure, and they are not easily maintained.

- Demand for emergency medical services exceeds demand for fire suppression. Revenue enhancements may be needed to keep pace with demand.

- The mission statement of the recently created Joint Powers Authority to "develop current and future fire service administrative and operational standards to provide the highest level of service possible to Stanislaus County Fire Services," is an appropriate move to deal with emerging infrastructure issues.

- Design of modern apparatus is challenging the size of many of the older facilities. Fire apparatus is getting larger because of specification requirements; however, many of the stations were built for smaller vehicles.

Written Determinations – Infrastructure Needs and Deficiencies

The following represent the Municipal Service Review determinations relating to infrastructure needs and deficiencies.

Determination 1.0

- There is no long-term comprehensive strategic or master plan within the region to improve or recommend changes to infrastructure capacity for fire protection. This prevents adequate consideration of options and alternatives.

Determination 1.1

- Fire protection and emergency medical services response patterns in the study area are characterized by overlapping polygons and areas with no coverage. In certain areas, there is redundancy and other areas response times are longer than normal. This prevents the effective and efficient use of limited resources.

Determination 1.2

- Fire stations in the districts are generally aged and while still serviceable, are in need of substantial upgrades. The fire stations in the cities vary in age but are in generally better condition, and in some cases are already scheduled for replacement. There are very few new stations in the overall inventory. However, new stations that are being built do comply with contemporary standards. Specifically, these include the recent stations constructed in Salida, Oakdale, and Ceres.

Determination 1.3

- The fire apparatus inventory is also, in general, aged, and many vehicles are likely to need replacement in the next 5 to 10 years.

Determination 1.4

- Small tools and equipment range from being nearly obsolete to being relatively current, with the preponderance being older and in need of replacement.

Determination 1.5

- The level of service being provided ranges from urban to rural, with no degree of consistency in fringe areas that are hard to serve or underserved. There are large areas that are underserved with current station distribution. The area that is underserved has a very low population density.

2. Growth and Population Projections

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

Population and population density are the two driving forces that create demand for fire and emergency medical services. The manifestation of this is in the development of housing stock and the distribution of that housing stock upon the landscape. Incremental changes in population that result from infill of existing land within any jurisdiction, especially if the development is limited to the area that is already covered by the department's response pattern, is of limited impact. Major housing tract developments that bring in hundreds or thousands of people, especially when the location of the development is beyond existing response patterns, is the force behind the need for additional fire stations and additional expenditures. The risks, hazards, and values in fire protection districts are dispersed and not highly concentrated.

Currently the fire districts cover larger areas with lower population density than cities. The rural road network is also a grid but on a much larger scale, with long distances involved to reach outlying areas of some of the districts. The cities are more compact, densely populated, and have grid street networks which are easier to serve than rural areas. Infill is not much of an issue.

The actual workload of emergency calls per fire district company is still fairly low, but it is rising. The workload in the areas with population densities over 1000 people per square mile is consistent with normal workloads of suburban fire companies.

Written Determinations – Growth and Population

The following represent the MSR determinations relating to growth and population:

Determination 2.0

- The individual cities and districts do not have a standardized method of calculating population growth. Each fire agency uses its own source of data for planning purposes.

Determination 2.1

- StanCOG forecasts indicate that between 2000 and 2030, the County's population is expected to increase by 84 percent, adding another 375,000 residents that will need emergency services. Based on current emergency demand per 1000 people, that growth will increase the workload by another 25,000 calls.

Determination 2.2

- There are two distinctly different growth *corridors*. They are distributed along the I-5 and Highway 99 corridors. Growth in the area between the corridors is limited. Much of the land in between is agricultural, which will result in the focus of development sometimes occurring in a random fashion instead of a sequential pattern.

Determination 2.3

- Growth is unevenly distributed throughout the County, with each fire protection and emergency medical service provider experiencing distinctly different impacts on existing facilities, planning, capital needs, and staffing.

3. Financing Constraints and Opportunities

Purpose: To evaluate factors that effect the financing of needed improvements.

The level of effort in a community will determine the level of service. Low per capita incomes result in low levels of service. However, to acquire additional financial resources, fire agencies must utilize an array of funding mechanisms. Some of these are reasonably easy to utilize while others are very difficult; most require two-thirds voter approval for passage.

Written Determinations – Financing Constraints & Opportunities

The following represent MSR determinations relating to financing constraints and opportunities:

Determination 3.0

- Financial constraints are greater on the rural departments than on the others due to the lower density of population and the nature of the property values.

Determination 3.1

- Continued state actions regarding the budgeting aspects of local government make the prediction of the stability of all funding sources difficult.

Determination 3.2

- Capital equipment costs are increasing faster than the revenue sources, which make the purchases of high priced items more difficult.

Determination 3.3

- Local agencies' ability to generate revenue through alternative sources continues to be impacted by the need to acquire a two-thirds approval rate for most sources.

Determination 3.4

- The tax rate is very low in many of the more rural fire district areas. This keeps the per capita level of effort low.

Determination 3.5

- The per capita level of the county fire service agencies is lower overall than the benchmarks being set by the statewide and western region experience.

Determination 3.6

- The incremental costs for all elements of the budget will continue to increase which reduces the purchasing power of the agencies overtime.

Determination 3.7

- Many of the volunteer fire departments will face the need to acquire full-time staff to replace eroding volunteer forces, thus raising the costs of the department significantly when it occurs.

Determination 3.8

- Those fire departments already staffed with full-time personnel will face increased costs in both salary and benefits that may or may not be linked to the increase in revenue sources.

Determination 3.9

- Existing budgetary reserves will be eroded by increased costs of capital expenditures which will place pressure on the funding of new stations and equipment.

4. Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

There is a difference between cost savings and cost avoidance. There is a tendency in government to call them by the same name. In the case of cost savings, the term should be applied to reducing the costs of an existing commodity, i.e. paying less for something than

before. Cost avoidance is based on the idea that you do not purchase something that you do not need (i.e. not buying what you do not have to). Therefore, anything that can be reduced in cost is based on eliminating duplication of effort. In the fire service, the avoidance of adding additional fire stations is a cost avoidance maneuver. The elimination of one of two stations covering the same area is a cost savings. Actions that can be taken to eliminate redundancy and eliminate overlap are, therefore, both valuable in improving a systems effectiveness and efficiency.

Another term for cost avoidance is *economy of scale*. This term is applied to the idea that if you purchase a commodity, you get a better break on it if you purchase an amount that allows for a discount of the commodity. To translate that into fire service terms, economy of scale relates to making sure that fire stations cover the most area they can without unnecessary overlap or engaging in purchase practices that reduce the unit cost of acquisition.

The following points were derived from the information provided in the previous chapters:

- The opportunity to participate in a leveraged situation when looking at those activities that can best be done on a regional basis. This could include purchasing, administrative record keeping, training, and other programmatic functions.

- Creating cost sharing agreements when reviewing the distribution of fire stations could be instrumental in preventing the construction of fire stations that are not cost effective.

- The perception that *cost savings* is the same as cost avoidance creates a false sense of confidence that by maintaining the status quo this is an appropriate action by some agencies. They cannot see any cost savings in reducing what they have but do not have a sense of how to avoid cost increases in the future.

- Countywide specialty teams are more cost effective than individual departments attempting to field specialty groups.

Written Determinations – Cost Avoidance Opportunities

The following represent MSR determinations relating to cost avoidance opportunities:

Determination 4.0

- The existing Stanislaus County 9-1-1 center should be retained and improved.

Determination 4.1

- Provide additional support to retain and maintain volunteer fire forces.

Determination 4.2

- The existing system of operating the Stanislaus County/Community College partnership should be maintained and improved.

Determination 4.3

- The Joint Powers Authority provides an opportunity to engage in purchasing practices to reduce unit costs of acquisition if properly designed and maintained.

Determination 4.4

- The JPA could also serve as a vehicle to develop broader based specifications for purchase of other administrative services, such as liability insurance.

Determination 4.5

- Response time polygons should be considered in the analysis and development of future decisions to avoid duplication of effort.

5. Opportunities for Rate Restructuring

Purpose: To identify opportunities to positively impact rates without decreasing service levels.

This determination generally applies to enterprise districts such as water and sewer districts. The funding options that are applicable to fire districts are noted in the MSR Chapter 5 - Financing Constraints and Opportunities. There are opportunities to add revenues to the fire agencies that do not currently have a funding source for expanding their infrastructure, such as new stations and new apparatus. This requires the adoption of an appropriate development fee schedule. There are also opportunities for fire districts to take initiatives to the public for voter approval. Additionally, there is an opportunity for the development of tax sharing agreements to stabilize the funding levels process for the rural fire districts.

Written Determinations – Rate Restructuring

The following represent MSR determinations relating to opportunities for rate restructuring:

Determination 5.0

- Some of the departments are obtaining funds for future development through the CEQA process. Others do not have a development fee in place. All agencies should have a plan for the acquisition of funds for capital acquisition for future fire stations in place.

Determination 5.1

- The detachment process that occurs upon annexation needs to be thoroughly evaluated with regards to cost sharing. The concept that annexation requires future fire stations could be avoided through cooperative agreements. This consideration should be exercised before adding new stations to the inventory.

Determination 5.2

- Based on national benchmark data, every fire agency – regardless of population protected – should work to achieve a minimum of per capita level of effort equal to the baseline of $100.00 per person. This would require initiatives to be taken by each district to establish additional funding sources.

6. Opportunities for Shared Facilities

Purpose: To evaluate the opportunities for a jurisdiction to share facilities and resources to develop more efficient service delivery.

Sharing Facilities

The obvious aspect of this component is to identify opportunities to discuss the location of fire stations, training, communications centers, and maintenance facilities. Outcome of this objective is to identify opportunities to minimize duplication of services, to reduce costs, and to maintain and improve efficiency of services and programs with the intent of reducing current or potential capital improvement costs.

One of the first and most obvious resources for evaluations is fire stations and fire apparatus. They are located in a geographical distribution pattern that has been explained under the standards of cover concept. However, there are two aspects of this consideration that are not as obvious. The first is that automatic aid has been established in many areas and is already reducing redundancy of stations, minimizing the opportunity to do this. The other aspect is the idea of relocating fire stations so that they may become more effective often means separation instead of co-location.

The County fire service has already availed itself of a major opportunity to share facilities by having most of the districts dispatched by the Stanislaus Regional 9-1-1 JPA.

One aspect of this objective would be to share a training function among the districts. None of the districts have an adequate fire training program, and no single district has an adequate training facility. One future opportunity would be to enter into an agreement to have a training officer with mobile training facilities who would bring structural fire training to the districts, instead of expecting personnel to travel long distances to obtain basic training skills.

An additional suggestion is to consider the sharing of maintenance facilities. With the exception of the cities and a few of the districts, the ability to conduct major maintenance on fire apparatus is limited. This could be an excellent opportunity to utilize a JPA system. Creating a central maintenance capacity, under the umbrella of that group, would accrue benefits to all agencies. As observed by the fire chiefs, there would be geographical challenges to such a system, but the principle could work using a combination of centrally developed contacts to perform service, as well as the development of mobile equipment to service vehicles. Furthermore, there would be budgetary considerations for hiring and maintaining a workforce.

Written Determinations – Opportunities for Shared Facilities and Resources

The following represent the MSR determinations relating to opportunities for shared facilities and resources:

Determination 6.0

- Two of the most obvious sharing of facilities are already in existence – the Stanislaus Regional 9-1-1 center and the Regional Fire Academy. Each fire district is a member of the Fire Science Advisory Committee. Each of the fire districts has made a financial contribution to the Training Center. This current communications system is an excellent example of shared facilities.

Determination 6.1

- The presence of the Accredited Fire Academy at the College should be continued and expanded to better serve the needs of the volunteer fire service.

Determination 6.2

- The existence of automatic aid and the high level of cooperation among some agencies are critical to maintaining the levels of service.

Determination 6.3

- The existence of policy preferences and individual decisions to not participate in cooperative agreements is an impediment to progress.

Determination 6.4

- The opportunity, at some level, to improve vehicle maintenance through a cooperative agreement is a viable option.

7. Government Structure Options

Purpose: To consider the advantages and disadvantages of various governmental structures to provide public services.

Gertrude Stein was once quoted as saying, “A rose is a rose is a rose.” If Miss Stein had been talking about fire protection, she could not have made that simple statement. A fire department is not a fire department is not a fire department. While the public may perceive that fire protection is a monolithic infrastructure in a community, it is anything but that. In spite of the fact that we have buildings, fire apparatus, uniforms, similar equipment, wear badges, and even engage in similar types of training, there are many ways to organize and execute a fire protection agency.

Nowhere can that be any truer than in Stanislaus County. In accordance with California laws related to fires and firefighters, there are as many ways of organizing a fire protection agency as

there are colors in a Crayola box. More than 60 elected officials govern structural fire protection and emergency medical services in the unincorporated region. Eleven independent fire protection districts maintain three- to seven-member boards of directors. Most of these directors are appointed by the County Board of Supervisors.

As noted earlier in the report, special districts are often developed in a local community to address specific service needs. This chapter provides an overview of the decision-making process used by the different governance methods, the opportunity for public input, and each district's involvement with the community.

The following chart illustrates the various forms of selection and /or appointment of the Directors from the various agencies.

Figure 36: Methods of Appointment/Election

Department	Governance	Directors	Elected/Appointed
Burbank-Paradise FPD	Fire Protection District	5	Elected
CDF	State Agency	NA	NA
Ceres	City		City Council
Ceres FPD	Fire Protection District	3	Elected
Denair FPD	Fire Protection District	5	Appointed
Hughson FPD	Fire Protection District	3	Elected
Industrial FPD	Fire Protection District	5	Elected
Keyes FPD	Fire Protection District	5	Appointed
Modesto	City		City Council
Mountain View FPD	Fire Protection District	5	Appointed
Newman	City		City Council
Oakdale	City		City Council
Oakdale Rural FPD	Fire Protection District	5	Appointed
Patterson	City		City Council
Salida FPD	Fire Protection District	5	Elected
Stanislaus Consolidated FPD	Fire Protection District	5	Appointed
Turlock	City		City Council
Turlock Rural FPD	Fire Protection District	5	Appointed
West Stanislaus FPD	Fire Protection District	5	Appointed
Westport FPD	Fire Protection District	5	Elected
Woodland FPD	Fire Protection District	5	Appointed

The significance of this is that these various forms are organized in a wide variety of ways of doing business. It is important, from a standpoint of a municipal service review, that all of these forms of governance be adequately evaluated before any consideration is made of any potential modifications.

Throughout the interview process there were many comments that significant management efficiency could be gained by consolidating the functions of some of the region's fire protection agencies. This is not the only solution, but with eight of the Fire District Boards appointed by the County Board of Supervisors, it could be considered.

Management-to-staff ratios within individual agencies are currently reasonably low. However, 11 fire chiefs oversee the provision of safety services in the unincorporated region. Layers of positions below fire chief and multiple non-safety positions are also duplicated across the region. A regional fire protection organization could eliminate redundancies among functions and rededicate personnel to purposes that would enhance fire protection services. For example, economies of scale could allow a regional system to retain professional training officers or a geographic information systems professional; whereas most fire protection districts do not have the resources to maintain such positions.

In the context of the MSR, governance is a key issue. Without considering what authority and what organizational resources an agency has to perform for any type of service, it can become extremely difficult to evaluate when it comes to considering what possibilities might occur, and what options and alternatives could be more effective in the future. This is why each option has both advantages and disadvantages.

Written Determinations – Government Structure Options

The following represent the Municipal Service Review determinations relating to government structure options:

Determination 7.0

- Sixty-six different board members govern structural fire protection and emergency medical services in areas outside of cities.

Determination 7.1

- The agency representing fire protection and emergency medical services within the unincorporated area of Stanislaus County are encouraged to establish a comprehensive fire protection system with a Master Planning effort. Cities should be encouraged to participate.

Determination 7.2

- Support of the Joint Powers Authority is essential to developing further options.

Determination 7.3

- The cities are almost all staffed by paid personnel. The districts are mostly staffed by volunteer and/or combination departments.

Determination 7.4

- The dissolution of the Burbank-Paradise Fire District would eliminate overlap of existing response coverage with the city of Modesto but would likely create political reaction.

Determination 7.5

- Dissolution of the Industrial Fire Protection District would result in more accountability to the respective agencies that now share the revenues.

Determination 7.6

- Dissolution of the Ceres Fire Protection District would reduce the levels of governance.

Determination 7.7

- Oakdale City and Oakdale Rural Fire Departments could improve operational and administrative efficiencies by entering into a joint effort selected from the various methods of contracting or joint operation such as has been demonstrated by West Stanislaus. This has been attempted several times in the past. In order for such a plan to succeed, many issues would need to be resolved. They include defining the different levels of service to the respective area. A careful consideration of how the revenue sources and the expenditures are allocated would be needed.

8. Evaluation of Management Efficiencies

Purpose: To evaluate the management structure of the organization.

Management effectiveness deals specifically with the manner in which the organizations can document, review, and evaluate both their current conditions, as well as their ability to plan for changes and make improvements in the overall organization.

The standard template for management efficiency is based on a model that includes such things as standard operating procedures (SOPs), the development of internal planning devices, and evidence that the department has rules, regulations, and policy documents that are reviewed on a periodic basis.

During the data collection, attempts were made to locate evidence of these types of documents. In general, the fire departments were lacking in written policy and procedure, evidence of master or strategic planning efforts and/or procedures and processes to address those very items

Written Determinations – Evaluation of Management Efficiencies

The following represent the Municipal Service Review determinations relating to evaluation of management efficiencies:

Determination 8.0

- There is limited master or strategic planning activity in the fire agencies. There is limited evidence of long-term budget activity to prepare to meet overall system needs in the future. There is evidence that specific agencies have developed amortization and replacement plans for apparatus and equipment, but the effort cannot be called master or strategic planning, with few exceptions.

Determination 8.1

- The creation of the current fire prevention program within the fire warden's office should assist in the standardization of the fire prevention function.

Determination 8.2

- Training is not readily available in the outlying areas and lacks standardization and ready access to all departments.

9. Local Accountability and Governance

Purpose: To evaluate the public accessibility and participation associated with the agency's decision-making processes.

As noted earlier, special districts are often developed in a local community to address specific service needs. The service review process looks at the accountability and governance component as a reflection of the degree to which the organization provides oversight in the area of performance and effectiveness as an organization. This review provides an overview of the decision-making process, the opportunity for public input, and each district's involvement with the community. When accountability is high, the decision-making processes are timely and the results are easily determined. When accountability is low, decisions are deferred and results are often sporadic.

Public Education Efforts

All the departments were queried with respect to how they saw their reputations among the public. The majority of them were satisfied that their customer base was pleased with them as an organization; but simultaneously admitted that there are considerable misunderstandings in the community, and that direct involvement with the problems of the fire department are practically non-existent.

When pressed to determine whether or not any of the departments had an active public education program, the response was minimal. In addition, the question was asked whether or not any public education material had been developed that could be widely distributed to the citizenry regarding the status of fire protection; the response here was minimal as well.

In general, since many of these fire departments have to operate by donations and through fundraisers, there is no question that there is a fairly high level of community support or none of these fundraisers would work. However, these fundraisers in and of themselves are certainly insufficient to provide adequate funds to meet all the needs of the fire department.

There is also reluctance by many of the departments to even admit that they are a volunteer fire department. This creates a built-in efficiency. If the community thinks that they have a full-time department and does not support donations and/or pass tax rates to support the organization, there is a funding deficiency. On the other hand, if the department declares that it is volunteer fire department, there may well be a perception that there are no costs involved and people may stop supporting them. This may appear to be a proverbial two-headed coin. However, contemporary literature tells us that in those areas where the community is clearly aware they have a volunteer fire department and are simultaneously aware that the department is not free, there is a tendency for the community to provide financial support.

The one issue that needs to be very clear is that volunteer fire departments are not free. The liability insurance, worker's compensation, vehicle amortization, fire station amortization, personal protective clothing, etc., are all costs of doing business.

Written Determinations – Local Accountability & Governance

The following represent the Municipal Service Review determinations relating to local accountability and governance:

Determination 9.0

- Some districts have district boards appointed by the Board of Supervisors. This is consistent with State law. Smaller districts often use this method as a cost savings technique. It is common for election costs to run several thousand dollars for each election. This cost would be paid by the district.

Determination 9.1

- Changes to the organizational structure by itself will not address the problems of either insufficient revenues or ineffective management of programs.

Determination 9.2

- Detachment, which results in reduction in revenues is a serious issue with the districts.

Determination 9.3

- There are over 60 different members of boards of directors of the districts. Most are Board appointed.

Determination 9.4

- The Boards of Directors are in compliance with the Brown Act provisions. The information provided indicates that all districts comply with open meeting requirements, including regular meeting minutes providing the public an opportunity to observe and comment upon district actions. Posting of meeting times and dates is conducted in a variety of fashions including the use of the doors on the fire stations, faxing to local newspapers, and the use of other prominent civic buildings. In addition, minutes are available for public review including board actions.

Determination 9.5

- Cities are providing both fire and emergency medical services and fire prevention, but the levels of service are often not defined so as to project the performance that can be expected.

Determination 9.6

- Districts are primarily providing emergency response services only. Fire Prevention has been delegated to the JPA under contract.

Determination 9.7

- The County Fire Warden is now providing fire prevention services, which provides an economy of scale to the process.

District-by-District Determinations

The second set of tables that have been produced are of the specific departments. The purpose of this set of determinations is to identify the specific factors that are being faced by the various organizations reviewed in this study.

Burbank – Paradise Fire Protection District	District Specific Determination
1. Infrastructure Needs and Deficiencies	This district is not currently collecting CEQA fees. A station remodel may be required in the future. Funds may not be readily available.
2. Growth and Population Projections	The area is subject to annexation and detachment of property that generates funds to support the agency. It is in the city of Modesto Sphere of Influence. This district could shrink to the point where it is no longer viable. The period of time that this will take is based upon the annexation and detachment process.

Burbank – Paradise Fire Protection District	District Specific Determination
3. Financing Constraints	The district has obtained two special assessments to augment its tax base. The per capita costs are above the regional median.
4. Cost Avoidance Opportunities	The current response polygon overlaps coverage provided by city of Modesto. The district is staffed with volunteers and part-time personnel that provide 24 hour a day coverage, 7 days a week. This approach to staffing is unique in this county.
5. Opportunities for Rate Restructuring	None contemplated.
6. Opportunities for Shared Facilities	This district could benefit from shared support service provided by the JPA.
7. Government Structure Options	This district could be faced with a need to be dissolved if it becomes under funded and cannot continue to operate through annexations and detachments.
8. Evaluation of Management Efficiencies	This district does not have any long-term planning document. This could lead to conditions that render it unprepared.
9. Local Accountability and Governance	The department does not have a standard of cover document, so level of service is not clearly defined. That makes its performance difficult to assess over time.

Ceres (City)	Determination
1. Infrastructure Needs and Deficiencies	Headquarters station and its equipment are in very good condition. Training station is practically brand new. One station is in need of replacement because of age of facility.
2. Growth and Population Projections	Residential development near Central High school is anticipated. Area near Service Road between Crows Landing and Morgan Road has possible industrial growth. This will increase demand over time.
3. Financing Constraints	Per capita expenditures are below the regional median. However, the financial resources appear very stable for this department.
4. Cost Avoidance Opportunities	Is currently involved in automatic aid which improves efficiency and effectiveness.
5. Opportunities for Rate Restructuring	None contemplated.
6. Opportunities for Shared Facilities	Contracts to serve Industrial.
7. Government Structure Options	A participant in the JPA.
8. Evaluation of Management Efficiencies	Does not have a published master plan.

Ceres (City)	Determination
9. Local Accountability and Governance	Publishes an annual report of performance Does not have a published Standards of Cover.

Ceres Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is not currently collecting CEQA fees. Contracts with City of Ceres.
2. Growth and Population Projections	Contracts with City of Ceres.
3. Financing Constraints	Per Capita expenditures are below the regional median. There are about 581 parcels in the District. Contracts with City of Ceres.
4. Cost Avoidance Opportunities	Contracts with City of Ceres.
5. Opportunities for Rate Restructuring	Contracts with City of Ceres. Has assessment fees based upon use code – rate vary from $60.00 (single family dwelling – $90.00 (multi-family dwelling) to $180.00 (hotels, motels and industrial property).
6. Opportunities for Shared Facilities	Contracts with City of Ceres.
7. Government Structure Options	Contracts with City of Ceres.
8. Evaluation of Management Efficiencies	Contracts with City of Ceres.
9. Local Accountability and Governance	Contracts with City of Ceres.

Denair Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Does not have an equipment amortization plan in place. Is discussing a second station on the other side of the railroad tracks.
2. Growth and Population Projections	Growth is limited. Is in the city of Turlock SOI. There are approximately seven proposed developments in area which will increase demand.
3. Financing Constraints	Per capita expenditures are below the regional median
4. Cost Avoidance Opportunities	Is currently involved in automatic aid which improves efficiency and effectiveness Currently relies on volunteer labor force. Currently concerned over recruiting and retaining of volunteers
5. Opportunities for Rate Restructuring	Considering asking for voter approved increase.
6. Opportunities for Shared Facilities	Participation in the JPA improves opportunity to leverage resource. This District could benefit from shared support service provided by the JPA.

Denair Fire Protection District	Determination
7. Government Structure Options	Considering adding staff to cover 8 to 5 daylight hours. On Monday through Friday. This will improve performance.
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and Governance	Does not have a Standards of Cover.

Hughson Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Headquarters is an older building that does not meet current fire station design standards. The building is maintained and kept in good working order. Plans have been made to purchase a nearby building to serve as business offices and to provide crew housing. A replacement of the apparatus building in the near future would be advised.
2. Growth and Population Projections	Overlays the city of Hughson. Expected build out of Hughson, according to recent MSR, is 15,074 people by 2025. Expected growth rate of eight percent a year.
3. Financing Constraints	Per capita expenditures are below regional median. Has passed a bond issue
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force. Is currently involved in automatic aid which improves efficiency and effectiveness.
5. Opportunities for Rate Restructuring	Could seek voter approved increase.
6. Opportunities for Shared Facilities	Planning on rebuilding station in 2007. This District could benefit from shared support service provided by the JPA.
7. Government Structure Options	Is participant in JPA.
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and Governance	Does not have a Standards of Cover document.

Industrial Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is not currently collecting CEQA fees. Contracts with both the city of Ceres and the city of Modesto to provide service.
2. Growth and Population Projections	
3. Financing Constraints	Per capita expenditures are below regional median.
4. Cost Avoidance Opportunities	
5. Opportunities for Rate Restructuring	
6. Opportunities for Shared Facilities	
7. Government Structure Options	Could be dissolved without affecting services.

Industrial Fire Protection District	Determination
8. Evaluation of Management Efficiencies	
9. Local Accountability and Governance	

Keyes Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Does not have vehicle amortization plan in place. New fire station likely to be needed to replace existing in the near future. Staffing increases to keep up with emergency demand likely to occur, but funds are not adequate to achieve.
2. Growth and Population Projections	Is in the city of Turlock Sphere of Influence. Development is occurring to the east and the south of the Keyes station.
3. Financing Constraints	Per capita costs are below regional median.
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force. Is currently involved in automatic aid which improves efficiency and effectiveness.
5. Opportunities for Rate Restructuring	Has not asked for voter approved increases.
6. Opportunities for Shared Facilities	Is a participant in the JPA which leverages opportunities. This District could benefit from shared support service provided by the JPA.
7. Government Structure Options	Participant in the JPA.
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and governance	Does not have a Standards of Cover.

Modesto (City)	Determination
1. Infrastructure Needs and Deficiencies	The City of Modesto provides protection within it boundaries and is prepared to provide services into annexed areas. New stations and equipment are contemplated. Currently rebuilding Station 2. Consideration of replacing Headquarters. Contemplating the rehabilitation of many facilities in the near future. Population growth in northwest and northeast portions of the city may require two new stations in the future. There will be an increased demand for other infrastructure enhancements.
2. Growth and Population Projections	Anticipated population at build-out is 400,000 – that is an increase of 163,900 people. MSR on Modesto reports that it will have to expand 4 stations response polygons and add six new stations.

3. Financing Constraints	Per capita expenditures are at the regional median. Is general funded by the City.
4. Cost Avoidance Opportunities	Is currently involved in automatic aid with neighboring fire districts, which improves efficiency and effectiveness of the agencies.
5. Opportunities for rate re-structuring	Currently has a capital Improvements fee in place. In 1989 Measure "S" failed by a small margin.
6. Opportunities for shared facilities	Is a participant in the JPA. Modesto has concerns over inability of partner agencies to reciprocate with like services. Is currently a participant in both the 911 JPA and the Hazardous Materials JPA.
7. Government Structure Options	Participates in the JPA.
8. Evaluation of Management Efficiencies	Does have a Current Master Plan (2003).
9. Local Accountability and governance	Does have a current Standard of Cover published of six minutes for first due equipment and 10 minutes for the arrival of an effective response force.

Mountain View Fire Protection District	**Determination**
1. Infrastructure Needs and Deficiencies	Is not currently collecting CEQA fees. No dormitory facilities in stations. If permanent staff added will need to be accomplished. Anticipates addition of rescue vehicle.
2. Growth and Population Projections	Is in the City of Turlock Sphere of Influence.
3. Financing Constraints	Per capita expenditures are at the regional median.
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force.
5. Opportunities for Rate Re-structuring	Passed a special assessment in 1986. It passed with a 2/3 vote.
6. Opportunities for Shared Facilities	Is currently involved in automatic aid which improves efficiency and effectiveness. This District could benefit from shared support service provided by the JPA.
7. Government Structure Options	Is a participant in the JPA.
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and Governance	Does not have an adopted Standard of Cover.

Newman (City)	Determination
1. Infrastructure Needs and Deficiencies	Is part of the West Stanislaus Fire Protection District. Have concerns over having enough equipment and staff to deal with demand in the future. Is currently contemplating an additional fire station.
2. Growth and Population Projections	
3. Financing Constraints	Per capita expenditures were not calculated.
4. Cost Avoidance Opportunities	
5. Opportunities for rate re-structuring	City has not pursued any benefit assessments.
6. Opportunities for shared facilities	
7. Government Structure Options	
8. Evaluation of Management Efficiencies	Has concerns over recruiting and retaining volunteers
9. Local Accountability and governance	

Oakdale (City)	Determination
1. Infrastructure Needs and Deficiencies	Headquarters does not comply with either ADA or Seismic Standards. The department is considering two options. They are: to remodel the existing station or to replace it with a station that may preclude the construction of a third station that may be required as a result of the F Street annexation.[31] Has recently added a new fire station.
2. Growth and Population Projections	Oakdale General Plan has eight areas that lie within the sphere of influence that have specific plans.
3. Financing Constraints	Per capita expenditures are at the regional median.
4. Cost Avoidance Opportunities	None contemplated.
5. Opportunities for rate re-structuring	None contemplated
6. Opportunities for shared facilities	Is a participant in the Regional JPA for communications and the Arson JPA.
7. Government Structure Options	Is participant in JPA.
8. Evaluation of Management Efficiencies	No indication of a Master Plan provided.
9. Local Accountability and governance	Has a declared response time of 4 minutes of travel time.

[31] Based on letter from Oakdale Fire Chief Wilkinson, 11/4/2006.

Oakdale Rural Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Headquarters is inadequate to serve the needs of the District. Station two is not designed for 24 hour a day staffing. Currently need at least one new Type III engine company. Also needs two new Type I pumpers. Anticipate needing command vehicle. Anticipates upgrading Rescue to Heavy Rescue.
2. Growth and Population Projections	Is in the City of Oakdale Sphere of Influence.
3. Financing Constraints	Per capita expenditures are at the regional median. Has a concern over annexations and subsequent detachment. Reserves are less than 10% of the budget.
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force. Currently a member of Fire Agencies Self Insurance program (FASIS) and Fire Agencies Insurance Risk Association (FAIRA), both of which are JPAs. .
5. Opportunities for rate re-structuring	Has attempted to increase funding in the past. Measure M passed by 2/3rds in June of 2005. $165.00 per dwelling, .14 cents per square foot per industrial building
6. Opportunities for shared facilities	Surrounds the City of Oakdale and provides a different service level. Has a cooperative agreement with Sheriffs Department to operate a rescue boat.
7. Government Structure Options	District successfully re-organized Valley Home District into Oakdale Rural. Could agree to a contract with City such as Industrial has
8. Evaluation of Management Efficiencies	Does not have a Master Plan
9. Local Accountability and governance	District is too large to ever be annexed into the City, therefore reductions through annexations and detachments are a concern regarding future stability.

Patterson (City)	Determination
1. Infrastructure Needs and Deficiencies	Is independent, but operated as part of the West Stanislaus Fire Protection District
2. Growth and Population Projections	Anticipated to grow by about 6% a year till 2010, and then drop to 3.5%. Build out population should be about 30,000 in 2020
3. Financing Constraints	City of Patterson operates from the General Fund The Per Capita expenditures are below the regional median.
4. Cost Avoidance Opportunities	Is part of the West Stanislaus Fire Protection District
5. Opportunities for rate re-structuring	Is part of the West Stanislaus Fire Protection District
6. Opportunities for shared facilities	Currently shares a fire chief with the District
7. Government Structure Options	Is part of the West Stanislaus Fire Protection District
8. Evaluation of Management Efficiencies	Is part of the West Stanislaus Fire Protection District
9. Local Accountability and governance	Is part of the West Stanislaus Fire Protection District

Salida Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. The Salida fee schedule has been in place since at least 1989. The need for a new station and administrative building is tied to future growth, and the likelihood that the present location of Station 1 and the administration building will have to move due to the Kiernan Avenue interchange expansion is likely. Plans are underway to insure any future development pays for the expansion. Station 1 and the administrative building are, and will continue to be, serviceable for many years absent future growth or forced relocation.

Salida Fire Protection District	Determination
2. Growth and Population Projections	Portions of the District south of Kiernan Avenue, including the North McHenry Corridor, are within the City of Modesto Sphere of Influence. The rest of the District, including the *urban* area of Salida and Del Rio are not (though the urban area is still within the Modesto City General Plan). Annexations and land detachment by the City of Modesto poses a threat to the continued financial health of the District. Salida is taking an active role in trying to protect its interests, and are interested in examining alternatives that protect both the City and the District. These efforts will require the active support of the County and LAFCO.
3. Financing Constraints	Annexation and detachment of income – producing properties (most notably the North McHenry Corridor and Kaiser property) threatens the finances of the District. Service response times within the urban areas of Salida are comparable to those of the City of Modesto. Comparison of rural areas due to the very nature of urban vs. rural densities. Salida feels that its ability to provide these services for less that the regional median cost should be viewed positively as evidence of efficiency and responsible expenditure of public funds. However, Salida recognizes the need to increase staffing to maintain its current level of service in the face of increasing demands. The Salida Fire Protection Distict has begun the process to increase the current assessment to meet these need.

Salida Fire Protection District	Determination
4. Cost Avoidance Opportunities	In addition to FAIRA and FASIS, Salida is changing medical benefits to obtain better cost for the same level of benefit. Further, they have proposed to contract out services to the Fire Authority for communications support, and has plans to submit a proposal for a training contract. These contracts will allow the agency to provide needed services to other agencies in the County, and to leverage resources to avoid costs. Salida is also a member of the Regional Fire Training Center JPA, and is a charter member of the Stanislaus Regional Fire Authority JPA.
5. Opportunities for rate re-structuring	Salida is currently determining the most cost-effective and promising approach to increasing District income to ensure that service levels are maintained. The Board expects to have this issue before voters before the end of 2007.
6. Opportunities for shared facilities	Salida has actively initiated and supported the creation and on-going operation of the Fire Authority JPA. Salida has proposed contracting with the JPA for communications support, and plans to also make a proposal for training support. Salida has actively investigated partnership possibilities for its future capital needs. For example, they have discussed the possibility of co-locating a future station/administrative building with the Sheriff's Office and perhaps other County Services. Salida has been involved in developing local cooperative agreements also. This activity has included the Salida Sanitary District, The Salida School District, the Sheriff's office and various other county agencies.

Salida Fire Protection District	Determination
7. Government Structure Options	Please refer to #6, above. Additionally, Salida has provided administrative services to Stanislaus Consolidated at a time when that District needed support to obtain interim financing. Salida states that they are open to doing the same in the future should the need arise for other agencies, and have proposed providing communication management services to the JPA under contract.
8. Evaluation of Management Efficiencies	The District is moving forward in implementing the Master Plan components. Salida has automatic aid and mutual aid agreements in place with all neighboring agencies, and provide aid to neighbors approximately 4.5 times to every time they request aid from others.
9. Local Accountability and governance	Several years ago, the Board recognized that local accountability would be enhanced if the Board members were elected. Therefore they asked the voters to change the Board from appointed to elected, and the measure passed. Salida is working to implement an adopted Standard of Cover, and has already adopted response time goals. The Board and management are proactive in leading efficiency reforms with the JPA. In addition to a published Operations Manual for all full-time and volunteer employees, the District has a published Board of Directors Manual. The Salida Board of Directors believes that the Special Districts must have representation on LAFCO.

Stanislaus Consolidated Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Currently has seven stations, six staffed and one which is a volunteer station. There are plans for an additional station at Oakdale and Morrill in the future. Plans set for additional resource additions.
2. Growth and Population Projections	Is in the City of Modesto Sphere of Influence. Riverbank is primary area of growth.
3. Financing Constraints	Per capita expenditures are at the regional median.

4. Cost Avoidance Opportunities	None contemplated.
5. Opportunities for rate re-structuring	Passed a benefit assessment in 2005 that created various rates for different occupancies and land uses.
6. Opportunities for shared facilities	This District could benefit from shared support service provided by the JPA. Has an expressed interest in partnering with neighboring cities.
7. Government Structure Options	Is a participant in the JPA.
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and governance	Does have performance standards for response but not in an SOC format.

Turlock (City)	**Determination**
1. Infrastructure Needs and Deficiencies	City considering new Headquarters to replace 1950's vintage station. There is new fire station projected for the Northeast area of Turlock.
2. Growth and Population Projections	2004 MSR discusses that there are 4,890 acres in the SOI. There is growth plan in effect for the City of Turlock. There is a Westside Industrial Specific Plan that indicates growth in that area.
3. Financing Constraints	Is general funded. Per capita expenditures are slightly below the regional median. City has a capital facilities fee in place. Rate set at 475.00 per unit for fire
4. Cost Avoidance Opportunities	None anticipated.
5. Opportunities for rate re-structuring	None anticipated.
6. Opportunities for shared facilities	Is not currently a member of the joint communication Center.
7. Government Structure Options	Is a participant in the JPA.
8. Evaluation of Management Efficiencies	Does have a Strategic Plan.
9. Local Accountability and governance	Does not have a published Standards of Cover.

Turlock Rural Fire Protection District	**Determination**
1. Infrastructure Needs and Deficiencies	Is not currently collecting CEQA fees. Headquarters remodeled in 1998. No additional stations or vehicles planned.
2. Growth and Population Projections	Is losing area through annexations. Limited growth in the area. Is in the City of Turlock Sphere of Influence.
3. Financing Constraints	Per Capita expenditures are below the regional median.
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force. Has a waiting list of volunteer candidates. Has developed a sleep-in program to improve response capacity of department .

Turlock Rural Fire Protection District	Determination
5. Opportunities for rate re-structuring	None contemplated.
6. Opportunities for shared facilities	This District could benefit from shared support service provided by the JPA. Conducts training with neighboring department to keep up schedules.
7. Government Structure Options	Is a participant in the JPA.
8. Evaluation of Management Efficiencies	Having difficulty with training to meet state mandates.
9. Local Accountability and governance	Does not have an adopted Standard of Cover.

Westport Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is not currently collecting CEQA fees. District is considering remodel of Headquarters in the future. Has need of replacing one of the Type I engine companies in the near future. Does not have a vehicle amortization plan in effect.
2. Growth and Population Projections	In the City of Modesto Sphere of Influence. No known growth in the District. Annexations are very likely in the near future.
3. Financing Constraints	Per Capita expenditures are below the regional median.
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force. Trains with Ceres and Salida when they can.
5. Opportunities for rate re-structuring	District pursued a special tax assessment in 1982 that was approved.
6. Opportunities for shared facilities	This District could benefit from shared support service provided by the JPA.
7. Government Structure Options	Is a participant in the JPA.
8. Evaluation of Management Efficiencies	Is experiencing difficulty in recruiting and training of volunteers.
9. Local Accountability and governance	Does not have a response time standard.

West Stanislaus Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Will need additional stations in the future Over 1.3 of the District is out of response range from the fire stations. Department anticipates the need for a vehicle maintenance facility and a training area.

West Stanislaus Fire Protection District	Determination
2. Growth and Population Projections	Diablo Grande, at the west end of area is growing rapidly and will force workload demands on the department. Population by 2025 will be estimated at 36,900 using StanCog figures.
3. Financing Constraints	Per capita expenditures are at the regional median.
4. Cost Avoidance Opportunities	As a result of being a cooperative effort of the cities of Patterson, Newman and the District many cost avoidance advantages have been enjoyed. Have needed to retain volunteer firefighters to avoid staffing cost increases. Has needed to work closely with CDF station in the area.
5. Opportunities for rate re-structuring	There is also a fire suppression assessment in place in Diablo Grande. Use of Mellos-Roos funds to capitalize growth anticipated.
6. Opportunities for shared facilities	Is already sharing facilities.
7. Government Structure Options	Already consists of two cities and district area. Is a participant in the JPA.
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and governance	Does not have published Standards of Cover.

Woodland Avenue Fire Protection District	Determination
1. Infrastructure Needs and Deficiencies	Is currently collecting CEQA fees. Has no plans for new stations. Has one station that is not currently up to contemporary standards for a fire facility and needs to be replaced.
2. Growth and Population Projections	In the City of Modesto Sphere of Influence. What growth does occur goes into City of Modesto.
3. Financing Constraints	Per Capita expenditures are below the regional median.
4. Cost Avoidance Opportunities	Currently relies on volunteer labor force.
5. Opportunities for rate re-structuring	None contemplated.
6. Opportunities for shared facilities	This District could benefit from shared support service provided by the JPA. District has stated interest in working closer together with Modesto in areas that are surrounded by the city already (islands).
7. Government Structure Options	Is a participant in the JPA.

Woodland Avenue Fire Protection District	Determination
8. Evaluation of Management Efficiencies	Does not have a Master Plan.
9. Local Accountability and governance	Does not have a Standards of Cover.

:

Figure 37: Chart of Recommendations

Recommendations Short Term	***Priority A/B/C/D***	***Time Frame for Implementation***	***Anticipated Benefits***	***Responsible Position***
Recommendation Have each agency officially adopt levels of service for– rural, suburban, and urban areas	A	As quickly as possible	Clarification of service level	Each fire agency
Recommendation Improve the ability to communicate over time and distance	B	Within 12 months	Improve upon level of awareness	Fire Chiefs Association
Recommendation Improve upon volunteer recruitment, retention, and recognition	B	Within 12 months	Improve upon conditions	County government & Fire Chiefs Association
Recommendation Provide more guidance for managing volunteer fire departments, to the leadership of these organizations	A	Within 12 months	Improve upon conditions	County government
Recommendation Support the development of a universal countywide development fee to create a future infrastructure for fire stations and equipment	A	In accordance with the procedures	Improved service level	All parties
Recommendation Harden stations to allow them to better function in disaster scenarios by installing emergency generators where none now exist	C	Within 24 months	Improved ability to perform in disasters	County Government
Recommendation Improve public awareness of the capabilities of the fire services	C	Over the next two years	Improved public support	Fire Chiefs Association

Recommendations Long-Term	***Priority A/B/C/D***	***Time Frame for Implementation***	***Anticipated Benefits***	***Responsible Position***
Recommendation Update Spheres of Influence based on existing policy and procedure, with consideration of the response polygon provided by agencies	A	Over next two years	Improved efficiency	LAFCO
Recommendation Re-align borders and consider district consolidations of some entities based upon level of service and response time criterion	A	Over next two years	Improved efficiency	Individual agencies
Recommendation Create a sub-committee of the JPA to create a viable cost sharing agreement for consideration during annexation processes	A	Over the next year	Improved relationships and increased cooperation	JPA Board of Directors
Recommendation Continue to support the roles of the Joint Powers Agreement among all fire agencies; county, cities, and districts to examine common issues and implement planning efforts for future options to be exercised.	A	Immediately	Economies of Scale and better utilization of resources	JPA Board of Directors
Recommendation Plan for major modifications to dispatching system. Consider allowing the JPA to operate a fire based system	A	Over next 2 years	Retention of county-wide communications system	JPA Board of Directors
Recommendation Develop a countywide fire and emergency services master plan	A	Over the next five years	Improved clarity of purpose	County Fire Chiefs Association

Summary

Areas that are currently not heavily urbanized are experiencing a phenomenon that is somewhat counterproductive. When conducting meetings regarding this particular study, an individual used a quote that exemplifies the phenomenon. It was in reference to the fact that someone had told him that they were moving into the county because, "This area has now been discovered." In a sense, that means that in an area of very low density of population usually there is a low cost to housing, and it is somewhat attractive to individuals who are now attempting to transfer their lifelong equity into their final residence. This translates into a problem for the fire service, because those individuals who transfer their equity also bring with them a totally unrealistic expectation of the infrastructure that they have grown accustomed to. Equity immigrants are interested in moving into an area that has the lowest potential cost to them for a capital investment; and, simultaneously, has the lowest ongoing cost with regard to taxation and/or infrastructure support.

For example, an individual who had brought property back in the 60s or 70s, and perhaps as late as the 1980s in a more urbanized part of California, saw significant increases in the value of their real estate. Their primary residence appreciated in value so high that once they were able to reach retirement age and dispose of that property to avoid their capital gains tax, most chose to do so when the tax could be deferred and sought out lower priced housing in other areas. However, they also became very accustomed to having police, fire, water, roads, garbage, and utility coverage that was consistent with urbanized communities. Once they had purchased a new home in an area that has *lower housing costs,* they probably have a residence that is significantly less in price, and in some cases larger than what they left. But, are they willing to pay for their services to protect it from fire?

What will Stanislaus Fire Services look like in Five Years – Ten Years in the Future?

In this report, ESCi identified how things have evolved up to this point. This section outlined steps that could or should be taken to improve current conditions. The next steps are the purview of leaders of the various organizations. LAFCO cannot require compliance with this report. Opposition to its various recommendations can and will delay any efforts to change the system.

Some recommendations require total cooperation of all entities. Others can be implemented with or without overall cooperation. As stated earlier, there are only choices and consequences. Cities, for example may not have any interest in a joining a consolidation effort but may have interest in how to improve upon recruiting and retention of volunteers. The County may be interested in the formation of a JPA but not be very interested in forming a county agency.

In the final analysis, the more things that the fire service can agree upon from this study, the more they can accomplish to achieve a positive outcome in the future. No one can predict what the end result will be but most assuredly the higher the level of cooperation, coordination, and consensus among the stakeholders, the stronger the solution will become.

Appendix

This page intentionally left blank

Appendix A - Bibliography

Alaskan Residential Real Property Exemption Volunteer Firefighters

Agreement between the City of Stockton and the County of San Joaquin regarding detachment of rural fire districts upon annexation of property to the City of Stockton

A Primer: California's Wildland Fire Protection System, Legislative Analyst Office, April 12, 2005

A Perspective on County Fiscal Constraints, 1996 – 1997

California Constitution Revision Commission, *Final Report and Recommendations to the Governor and the Legislature,* April 22, 1996

California Health and Safety Code, Section 13800, know as the Fire Protection District Law of 1987. Reorganization procedures complied with the California Government Code, Section 56001, Cortese-Knox Reorganization Act

Call for Action, Volunteer Combination Officers Section, IAFC, Fairfax, VA

City of Modesto, Sphere of Influence Plan, Master Services Element, and Municipal Services Review, Economic & Planning Systems, Inc., July 2004

Consideration and Adoption of Spheres of Influence for development-related Special Districts in Priority Area 1: Modest0-Ceres Area/

Consideration and Adoption of Spheres of Influence for development-related Special Districts in Priority Area 2

Consideration and Adoption of Spheres of Influence for development-related Special Districts in Priority Area 3: Turlock Area.

Consideration and Adoption of Spheres of Influence for development-related Special Districts in Priority Area 5: Patterson Newman Area

Consideration and Adoption of Spheres of Influence for development-related Special Districts in Priority Area 6: Hughson Area.

Consideration and Adoption of Spheres of Influence for development-related Special Districts in Priority Area 7: Waterford Area.

Cortese-Knox-Hertzberg, *Local Reorganization Act of 2000*, Government Code 56000

Crouch, Michael, *An Ounce of Application is Worth a Pound of Cure*, LEADS Corporation, Greensboro, NC, 1992

Exceeding Customer Expectation, Quality Concepts for the Fire Service, Commission on Fire Accreditation, International

Fire Data Analysis Handbook, Federal Emergency Management Agency, United States Fire Administration

Funding Fire Protection, An Overview of Funding Issues Facing Fire Protection Districts, San Diego Local Agency Formation Commission, November 2003

Fire Protection District Law of 1961, Division 12, Part 2.7 of the Health and Safety Code, Section 13801 et seq.

Fire and Emergency Service Self Assessment Manual, Commission on Fire Accreditation, International, 4501 Singer Court, Suite 180, Chantilly, VA 20151

Fire Suppression Rating Schedule, Insurance Services Office, 2004

General Plan Guidelines, Governor's Office of Planning and Research, State of California, Current Edition

Grand Jury Case Number 05-09; 05-18, 2004-2005, Stanislaus Consolidated Fire Protection District.

Growth Within Bounds, The Commission on Local Governance for the 21st Century, January 2000

Hughson Municipal Service Review, Design, Community and Environment, Berkeley, CA, May 26th, 2005

Keeping the Lights On, Volunteer Combination Officers Section, IAFC, Fairfax, VA

LAFCO Municipal Service Review Guidelines - Final, The Governor's Office of Planning and Research, 2003

Lighting the Path of Evolution, Volunteer Combination Officers Section, IAFC, Fairfax, VA

Making Government Make Sense; A More Rational Structure For State and Local Government, February 1993

Managing Fire Services, ICMA

Municipal Revenue Sources Handbook, 2001 Edition, League of California Cities, Sacramento, California

Municipal Service Review for the City of Turlock, Sphere of Influence, City of Turlock, April 28, 2004

Patterson, James, G., *Benchmarking Basics*, Crisp Publications, Menlo Park, CA 1996

Proposition 172 - How Did It Affect Spending for Public Safety?, Legislative Analyst Office, June 9, 1994

Public Resources Code Sections 4141-4145

Public Employee Retirement System, Volunteer Firefighters Length of Service Award System

Resolution Number 2000-0309, Resolution of the Sacramento County Board of Supervisors as conducting authority ordering the re-organization of the American River Fire Protection District and the Sacramento County Fire Protection District, 21 March, 2000

Self Assessment Manual, Commission on Fire Accreditation

Service Review of the City of Patterson, Sphere of Influence, Crawford, Multari and Claark, February 26, 2003

Special Districts: Relics of the Past or Resources for the Future? Little Hoover Commission, May 2000

City of Turlock, Municipal Services Review, April 28th, 2004

What's So Special About Special Districts: A Citizens Guide to Special Districts in California, Third Edition, Senate Local Government Committee

Why County Revenues Vary: State Laws and Local Conditions Affecting County Finance, An LAO Report, May 7th, 1998

This page intentionally left blank

Appendix B - Triggers and Thresholds

When a community creates a fire department and builds a fire station, a response time criterion is usually established by default. This response time anticipates that it applies to 100 percent of the area covered by the boundaries of that fire station. This only holds true when there is only one fire station and a small area to cover. Simply speaking, a central fire station is among the first public buildings created in most communities, now matter how small. As the community grows away from that station in incremental steps, the expectation is that the original fire station will still provide adequate coverage. It is always anticipated that at some point in the growth process some calls for assistance will fall outside of the adopted response times.

However, establishing future response time expectations are fraught with problems. In the simplest of terms, the total area covered by a fire department may or may not be highly developed initially. In addition, even if a crew fire station responds it may not do so in a timely manner. Most fire departments start off as totally volunteer. They usually operate with this staffing pattern for economic reasons. When the population and area increase, there is often pressure to add full-time staff, and consider adding additional stations. This has occurred in Stanislaus County.

In fact, there are many variations on this theme. Older established cities tend to be denser and smaller in dimension, but they often annex new areas into the city. Newer communities may be created from a much larger area than the first fire station can cover over time. Urban sprawl, which is currently an active discussion in other areas of public policy, has resulted in the timing of additional fire station construction and staffing being a major topic of concern.

The Criterion Grid (Chart V-II) that has been provided is based upon the study of the Standards of Response Coverage from approximately 50 different fire agencies. The Standards of Response Coverage is based upon two key definitions, both of which are in evidence in most fire agencies. The first is a response time standard and the second is a staffing criterion that results in an effective response force. Both of these factors are already defined in the SOC methodology.

Use of the Flow Chart

The flow chart illustrates the criterion grid has been developed to further explain the concept of how a fire department needs to perform periodic evaluations of its Standards of Response Coverage in order to assure that there are no gaps or underserved areas and that consideration is given to all service areas equitably. The flow chart works like this:

The starting point is the existing level of service. It can be a single fire station, or it can be multiple fire stations. It makes no difference exactly how many stations are in the matrix.

The next section of the chart deals with two essential planning decisions. The first of these is whether the department has established fire demand zones and that they are all within a reasonable travel distance from existing fire facilities. The standard used is 1.5 – 2 miles. The ISO polygon is usually 1.5 miles.

However, that was established 50 years ago, which was prior to the intervention of such things as traffic control devices, main thoroughfares, and traffic expediency devices. The second element is the establishment of a response time goal. As stated, it makes no difference if the

goal is three-minutes travel time, four-minute travel time, or five-minute travel time with regard to the goal. What is important is that it be established with a fractal.

For example, a response time goal of five-minute travel time, 90 percent of the time is a common industry norm in suburban areas. In a more rural area, the travel time could be eight to 10-minutes. Nevertheless, once the response time goals have been established, the department's management information system should keep track of incidents.

In the utilization of this model, the two databases from which the evaluation should emerge is the mapping environment and records management system. The former identifies the location of occupancies on the ground, and the second identifies the actual experience and performance of the department in providing protection to those facilities. The most common industry practice for those agencies that utilize a recognized Standard of Cover model is to perform an annual review to assure that both of these criterions are being met. If the answer to the questions remain *yes*, the existing level of service is satisfactory.

However, in the event that one of the two thresholds is exceeded, the department should be obligated to develop a level of service improvement. Notably, a fire agency can exceed one and not exceed the other. For example, a few scattered buildings that are beyond the range of response time goal does not mean the department has a serious problem. In the first place, these particular occupancies may not be the site of a specific emergency and therefore, would not be calculated in response time analysis. Conversely, having all of the buildings within the fire demand zone does not mean that the department will not have a response threshold failure. Many factors can cause a fire department not to meet its response time goal. These might include, but not be limited to, such things as:

- Extremely heavy traffic patterns during specific periods of time
- Concurrent alarms that result in engine companies having to come out of district more often than they should to provide first response into another district
- Seasonal weather conditions
- Specific community events that have a negative impact on the availability of a fire company to meet its response time goals

It is important to note that response time goals are on a company-to-company basis. One should not make the mistake of averaging all of the responses in an entire community in coming up with a fractal. This could result in certain outlying districts having very bad response records and the system not identifying them.

The purpose of the level of service improvement is to study fire station by fire station. The two study elements that must be looked at for service level improvements are:

- What factors are causing the response times to get lengthy? and/or
- What areas are causing a call for service that previously had not been identified?

This takes the review process to a series of potential thresholds. The factors that are being evaluated to mitigate the problem could be such things as:

- Adding an additional fire station
- Outfitting a second company in an existing fire station
- Requiring improvements in the road transportation network
- The inclusion of traffic expediting devices such as signal control by the fire service and emergency services

It is conceivable that a fire department could minimize risk by requiring built in fire protection in those areas that are beyond travel distances or response time achievement.

At this point in the model, the fire department should evaluate two conditions. The first of these is what percentage of the occupancies is outside of a normal fire demand zone. The methodology here infers that the review process should always look at the fire demand zone that is immediately adjacent to the area in which growth is occurring. For example, if it is a predominately residential area, the assessment should be residential growth. If it is in an industrial area, it is perhaps logical to look at industrial growth. To use a specific example, if an area had a total of 5,000 single and multi family occupancies that were within the time and distance of existing level of service, 10 percent of that number (if that was reflected in the new growth area) should raise the level of monitoring by the department.

Reading across the bottom of the model, there is a similar line with regard to response time thresholds. If the department's goal is to have a five-minute travel time 90 percent of the time and they are only able to achieve it 80 percent of the time, it is time to start monitoring the conditions that are causing that delay.

There are software programs that allow the fire department to not only identify the location of specific emergency events, but also to classify and categorize them by the length of time it takes to arrive. Therefore, looking at any time the performance measure drops below 10 percent, the main issue to determine is whether those long response times were within the existing level of service area, or were they being generated by the area where the new growth has occurred. Notably, on the first of this chart there is an indication that all of a department's responses stay within eight-minutes. If the department has identified a number of responses that exceed eight-minutes, it is almost always an indicator of outlying unprotected risk.

The second set of incremental observation is when the newly expanding areas goes to a 25 percent occupancy factor, and a 25 percent response time failure. These are labeled in the model as being the time and travel threshold that should generate consideration for a temporary fire station or the exercising of the other options that have been identified. If during an annual review, a department discovers that it does have up to a 25 percent occupancy distribution, the second consideration that must be evaluated is the density of that distribution.

One way is to look at approved development with regard to distribution and concentration. A single outlying building does not constitute much of a risk. However, if that building was a hotel that was eight stories tall, and it was out amidst a somewhat rural area, there should be reason to be concerned. Large housing tracks, especially those that are planned unit development, are especially important to note.

The single and multi-family dwelling occupancy is the primary occupancy for the loss of life and property according to the fire records in the United States. Therefore, any time there is a concentration of single family and/or multi-family dwellings in which there is a sense of community, there is an expectation of fire service levels being consistent with the level of service throughout the remainder of the community.

The last set of brackets constitute a 50 percent occupancy factor and a response failure of over 35 percent with response times exceeding 30 minutes. If a fire agency has not provided a temporary station and arrives at this condition, the liability for the community is extensive unless there is a specific policy made to have separate response goals in different parts of the community.

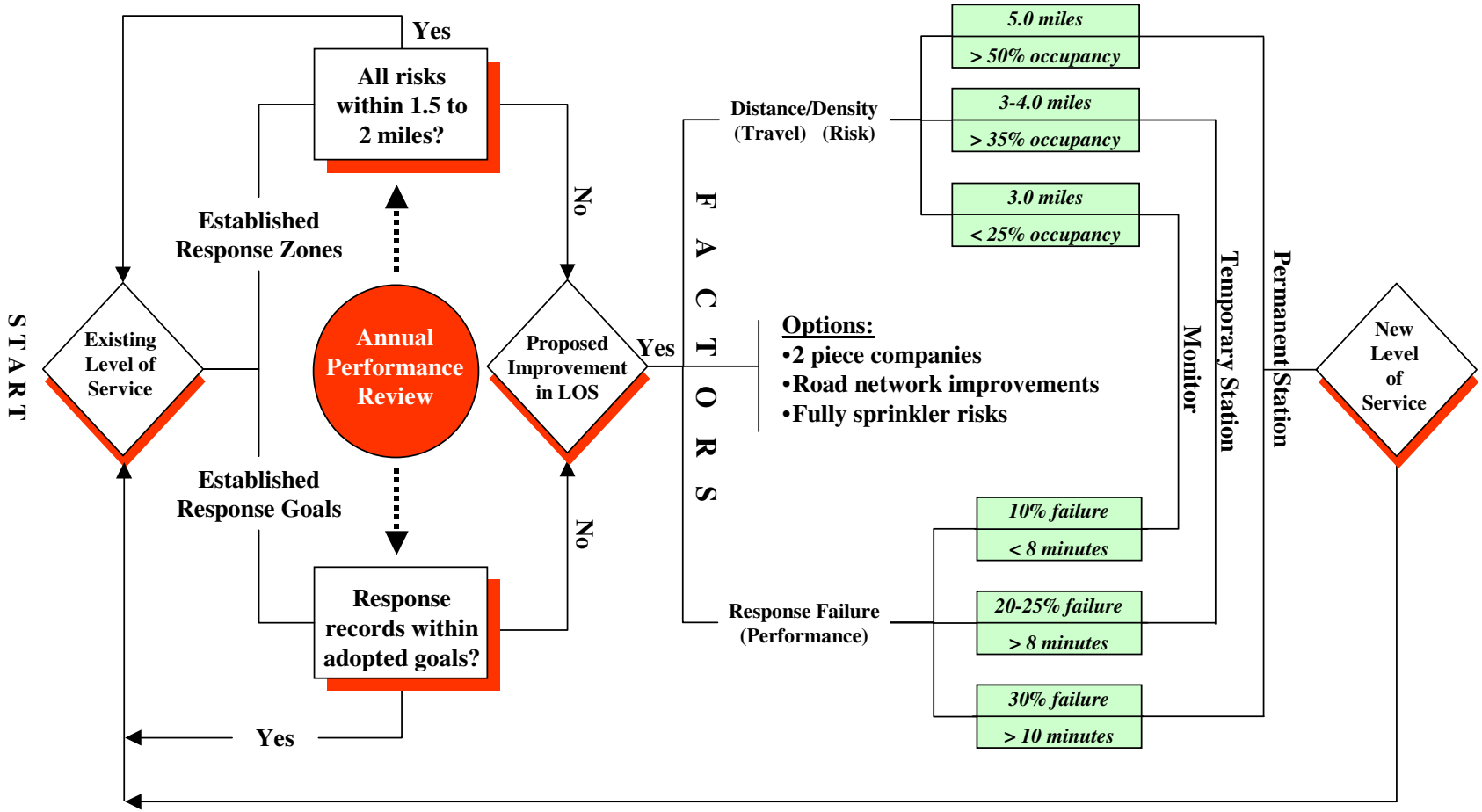
For example, in a highly rural area it is not uncommon to have a different response time goal than in an urban area. These are usually defined by the density of the dwelling units per acre or the population concentration per square mile.

In the event that a temporary station and/or a permanent station is put into position, the annual review process should provide documentation on what transpires as a result of that decision. Temporary fire stations are a common practice in the fire service. However, they have a tendency to be allowed to remain in place long after their period of usefulness. Formative fire stations should always be in place when the occupancy density is the equivalent of 50 percent of the developable land.

Chart V-II: Criterion Grid

Choices	Distance	Criterion		
		Response Time	**% of Call**	**Building Inventory**
Maintain Status Quo	All risks within 1.5 miles	1st Due Co. is within five minutes travel time 90% of the time.	100 % in district	Existing inventory and infill
Temporary facilities and minimal staffing	Risks 1.5 to 3.0 miles from existing station	1st Due Co. exceeds five minutes travel time 10% of the time, but never exceeds eight minutes.	More than 10% of calls are in adjacent area.	New area has 25% of same risk distribution as in initial area
Permanent station needed	Risk locations exceeding 4.0 miles from the station	1st Due Co. exceeds five minutes travel time 20-25% of the time. Some calls < 8 m.	More than 20-25 % of calls are in outlying area	New area has 35% of same risk distribution as in initial area of coverage
Permanent station essential	Outlying risk locations exceeding 5.0 miles from the first station	1st Due Co. exceeds five minutes travel time 30% of the time. Some calls<10 m	More than 30% of calls are in outlying area	New area has 50% of same risk distribution as in initial area.

Decision Process for Deployment Review



Appendix C - Glossary of Terms

This section provides definitions for terms often used by operational firefighters in describing their duties or activities.

ABC: Airway, breathing, and circulation.

Advanced life support (ALS): Special services designed to provide definitive pre-hospital emergency medical care such as cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs, and other specified techniques or procedures administrated by authorized personnel under the direct supervision of a base hospital or utilizing approved standing orders - Paramedic level care.

Advanced life support unit (ALSU): Emergency vehicles, such as vans, engine companies, truck companies, squad companies, helicopters, and other emergency vehicles that are especially equipped and staffed by certified emergency medical technicians – paramedics to provide advanced life support to the sick and injured at a medical emergency.

AED: Automatic External Defibrillator.

AHA: American Heart Association.

Airway bag: Bag (box) utilized to carry all the needed and state required equipment to manage a patient's airway and breathing problems. This bag/box includes oxygen, basic life support equipment, and advanced life support equipment.

Alarm: The point at which awareness triggers an effort to notify the emergency response system. An example of this time point is the transmittal of a local or central alarm to a Public Safety Answering Point (PSAP). Again, it is difficult to determine the time interval during which this process occurs with any degree of reliability.

Alarm processing time: The elapsed time from the receipt of an alarm by the dispatch center and the notification of specific fire companies that are to respond.

Apparatus: Fire suppression equipment such as engine companies, aerial trucks, crash fire rescue and command officer vehicles.

ARFF: Aircraft Rescue Firefighting vehicle

Arson: The willful or malicious burning of property with criminal or fraudulent intent.

Attack line: A 1 3/4" hose that produces 150 GPM and is usually handled by a minimum of two firefighters, or a 2 1/2" hose that produces 250 GPM and is handled by two or three firefighters.

Automatic aid: A contact between two or more agencies agreeing to an exchange of emergency response units, such as Fire apparatus, paramedic units, etc., to a predetermined geographical area, regardless of political boundaries to deal with day to day emergencies.

AVL: Automatic Vehicle Locator.

Back-up line: A 1 3/4" or 2 1/2" line that is taken in behind the attack crew to cover the attack crew in case of extreme fire conditions or a problem develops with the attack line. A minimum of two firefighters are needed for a 1 3/4" back-up line and two to three firefighters when a 2 1/2" line inch line is required. The larger back-up line is a consideration when the type of fire is one that could grow rapidly if not contained by the attack line.

Base hospital (BH): A hospital, which, upon designation by the emergency medical services agency with a written contractual agreement, is responsible for medical direction of the advanced life support system.

Basic life support (BLS): Minimum acceptable level of pre-hospital care; emergency first aid and cardiopulmonary resuscitation (and may include EMT-D) procedures to include recognition of respiratory and cardiac arrest, and starting the proper application of cardiopulmonary resuscitation to maintain life support without invasive techniques until the victim receives advanced life support services in the field, or until the patient is transported to a medical facility.

BLS: Basic life support, care provided at the emergency medical technician (EMT) level.

Business–square mile(s): Areas that have no residential population, but contain large concentrations of business occupancies.

Call processing Interval: Interval between the first ring of the 9-1-1 telephone or the first alert of the alarm panel at the dispatch center and the time the computer aided dispatch (CAD) operator activates station and/or company alerting devices.

CAD: Computer aided dispatch

CFAI: Commission on Fire Accreditation International

CPR: Cardio-pulmonary resuscitation

Deployment: The strategic assignment and placement of fire agency resources such as fire companies, fire stations, and specific staffing levels for those companies.

Dispatch time: The time when the dispatcher, having selected appropriate units for response with assistance from the CAD system, initiates the notification of response units.

Emergency event awareness: The point at which a human being or technologic sentinel (i.e., smoke detector, infrared heat detector, etc.) becomes aware that conditions exist requiring activation of the emergency response system. This is considered the point of awareness.

Emergency: A condition of situation in which an individual perceives a need for immediate medical attention or where the potential for such a need is perceived by emergency medical personnel or a public safety agency.

EMS: Emergency medical services

Emergency medical services (EMS): Those services, resources, and methodologies utilized in responding to medical emergencies.

Emergency response: Response to the scene of an incident that threatens lives or property that requires the use of emergency warning devices in accordance with the State Vehicle Code.

Emergency medical service: Medical service required for the immediate diagnosis and treatment of medical conditions, which if not immediately diagnosed and treated, could lead to serious physical or mental disability or death.

Emergency medical services system (EMSS): A specially organized arrangement that provides for the personnel, facilities, and equipment for the effective and coordinated deliver of services in an EMS area of medical care services under emergency conditions.

EMT: Emergency medical technician

Emergency medical technician - A: An individual trained in basic life support according to the standards prescribed by the Health and Safety Code and who has a current and valid certificate in the State issued pursuant to the Health and Safety Code.

Emergency medical technician - D: An individual trained in basic life support and who has received additional training to perform the advanced life support procedure of cardiac defibrillation.

Emergency medical technician – paramedic (EMT-P): An individual EMT- I or EMT-II who has received additional training in advanced cardiac life support according to the standards prescribed by the Health and Safety Code, and who has a current and valid certificate pursuant to the Health and Safety Code.

Emergency response travel times: See Service Level Objectives

Emergency operations center: A central location where those in authority congregate to allow for exchange of information and conduct face to face coordination in the making of decisions. The center, often referred to as the dispatch, provides for centralized emergency management in major disasters.

Event initiation point: The point at which factors occur that may ultimately result in an activation of the emergency response system.

Exposure line: Any sized attack line or master stream appliance staffed by two or three firefighters used to protect other parts of the fire structure or other structures endangered by the fire structure.

Firefighter: An employee who is assigned to fire fighting activity, and is required to respond to alarms and perform emergency action at the location of a fire or fire related danger. Included are the employees of fire departments, fire protection districts, state fire agencies, organized fire companies, and private fire brigades when engaged in fire fighting activity. The term does not apply to emergency pick-up labor or other persons who may perform first-aid fire extinguishment as collateral to their regular duties.

Firefighting activity: Physical action taken in the direct act of fire suppression, and rescue or hazardous duties performed at the location of a fire emergency. *(OSHA Regulations)*

Fire loss: The monetary loss incurred due to a fire incident.

Fire management area (FMA): The elemental building block upon which planning is based. An area in which it is desired to define and manage the fire situation. Also called a Fire Demand Zone.

Fire pre-plan: A document or other information source developed by a fire agency to identify hazardous situations, building information, owner information, and a variety of other data.

Fire prevention: That part of fire protection activities exercised in advance of the outbreak of fire to prevent such outbreaks and to minimize loss when fire does occur.

Fire protection: The act of shielding from loss or injury due to fire.

Fire protection environment: The conditions, circumstances, and influences, under which the fire protection system must operate. Includes population, land use, physical, structural and non-structural, financial, and water supply environments.

Fire protection system: A regularly acting or interdependent group of items employed in fire protection. Includes public and private agencies, apparatus, equipment, facilities, procedures, and people.

Fire scenario: A tabulation of fire incident, loss, and casualty data. This tabulation method, developed by the NFPCA, consolidates data collected under the NFIRS into a useful format for analysis. Further information may be obtained from the NFPCA.

Fire situation: The state or condition of the community with regard to fire protection. Includes fire related (what there is to burn) and fire system management situations.

Fire suppression: The total work of extinguishing a fire beginning with its discovery.

First responders: Personnel who have responsibility to initially respond to emergencies such as firefighters, police officer, Highway Patrol officers, life guards, forestry personnel, ambulance attendants, and other public safety personnel. Typically, the law requires such persons to have completed a First Aid course, and to be trained in cardiopulmonary resuscitation, and an EMTA Certification is desired.

Flashover: Thermal radiation feedback from the ceiling and upper walls, which have been heated by the fire. This radiation feedback gradually heats the contents of the fire area. When all the combustibles in the space have become heated to their ignition temperature, simultaneous ignition occurs (NFPA Handbook, Fourteenth Edition); Instantaneous combustion that occurs when oxygen is introduced into a smoldering fire. The stalled combustion resumes with explosive force.

Firefighting, structural: The comprehensive physical fire suppression activity of public fire departments as determined by Sections 25210.5 and 25643 of the California Government Code. *(OSHA Regulations)*

GPM: Gallons Per Minute

GPS: Global Positioning System

Harmful exposure: An exposure to oxygen-deficient atmosphere, or to dusts, fumes, mists, vapors, chemicals or gases of such concentration and duration as to cause injury. *(OSHA Regulations)*

Hazardous environment: A place where a fire fighter is likely to receive a harmful exposure to a hazardous substance, or be exposed to physical or mechanical hazards which are likely to cause injury. *(OSHA Regulations)*

High hazard: Low probability – high consequence

HMT: Hazardous Material Technician

IAFC: International Association of Fire Chiefs

ICMA: International County/City Managers Association

IAFF: Acronym for the International Association of Fire Fighters

IFSTA: Acronym for the International Fire Service Training Association

ISFSI: Acronym for the International Society of Fire Service Instructors

ISO: Insurance Services Office. An insurance grading organization, which establishes community rankings, based on the capability of the fire organization

Incident command system (ICS): A management system that is based on the FIRESCOPE System of controlling resources at the scene of an emergency. The ICS defines roles, relationships, and functions of the different individuals responding to an emergency situation.

Incident command (IC): An officer assigned to remain out side of the structure to coordinate the attack, evaluate results, redirect the attack, arrange for more resources, and monitor conditions that might jeopardize crew safety.

IV: Intravenous

Incipient stage fire: A fire which is in the initial or beginning stage and which can be controlled or extinguished by portable fire extinguishers, Class II standpipe, small hose systems or other methods without the need for protective clothing or breathing apparatus. *(OSHA Regulations)*

Injury: Includes work related illness, disease, impairment, disfigurement, loss of function of any part of the body, as well as symptoms of significant adverse effects or damage. *(OSHA Regulations)*

Ladder operations: One or more firefighters to set-up aerial operations and a secondary egress ladder if aerial operations are required.

Maximum hazard: High probability and high consequence.

MCT: Mobile computer terminal

Medical box: Also known as a drug box. This box contains all of the required items to administer fluid and or medications to a patient. This box also contains items utilized for bandaging, vital signs, and blood glucose monitoring.

Moderate hazard: High probability and low consequence.

Mutual aid: The County mutual aid plan; a written contract between all agencies in the County wherein they agree to assist each other when an emergency occurs that exceeds the capabilities of any one agency. The mutual aid plan is a countywide plan that can result in any one agency receiving assistance from any or all of the other agencies in the County. Mutual Aid extends to the Regional Area and to a statewide plan. Also, see Automatic Aid.

MVI: Abbreviation for Multiple Victim Incident. A multiple Victim Incident has more patents involved in the incident than a normal First Medical Aid Response can handle. It will usually involve the use of multiple first provider units, AIS units, and ambulances. An example would be a large traffic accident or hazardous material exposure to several people. An MVI is larger than the normal day-to-day incident, but smaller than a disaster.

NFPA: National Fire Protection Association

Notification: The point at which the Public Safety Answering Point (PSAP) receives an alarm. This transmittal may take the form of electronic or mechanical notification received and answered by the PSAP.

OSHA: Occupational Safety and Health Administration

PPE: Personal protective equipment

Probability: The frequency of the event

Pump operator: One firefighter assigned to deliver water under the right pressure to the attack back up and exposure lines, monitor the pressure changes caused by changing flows on each line, and ensure that water hammer doesn't endanger any of the hose line crews. This firefighter also completes the hose hookups to the correct discharges, and completes the water supply hookup to the correct intake. The pump operator may also complete the hydrant hookup if a hydrant is in close proximity to the pumper's location monitoring fire conditions from the exterior.

Protective clothing: Outer garments other than turnout clothing consisting of trousers, jackets, or coveralls *(OSHA Regulations).* Personal items of clothing and equipment issued to individual firefighters for protection against heat, flame, abrasion, puncture or other traumatic injury during combat operations. Includes, but is not limited to, coats, trousers, boots, gloves, helmets, personal alarm devices, fire shelters, and any other special equipment issued for evaluating exposure such as dosimeters, communicable disease shields, etc. Sometimes referred to by the acronym PPE.

Quint: A piece of apparatus that can act as either a ladder or engine.

Rapid intervention crew (RIC): A minimum of two firefighters equipped with SCBA and staged near the entry point to enter the structure to perform firefighter search and rescue or back up the interior crew(s) if something goes wrong. The RIC team is augmented by additional firefighters as additional resources arrive on-scene. A minimum of four firefighters is considered a complete rescue team.

Rehabilitation/EMS: A minimum of two firefighters to establish a treatment and rehabilitation sector to prepare for any victims found and/or to treat any firefighters who are injured or need medical attention.

Remote hazard: Low probability and low consequence.

Response time: Wheels rolling to on-scene.

Rural: Population density between one and 500 people per square mile.

Self-contained breathing apparatus (SCBA): A portable respiratory protective device, normally designed to be worn by the user by means of an incorporated harness assembly, with its own supply of air, oxygen or oxygen generating material. It is normally equipped with a full face piece. Self-contained breathing apparatus is further described in 30 CFR Chapter 1, Part 11, Subpart H. *(OSHA Regulations).*

Safety officer: One or more personnel dedicated to the exterior of the structure with the sole responsibility of firefighter safety and scene safety.

SCBA: Self-Contained Breathing Apparatus

Search and rescue: A minimum of two firefighters assigned to search for victims and remove them from danger while a crew with an attack line protects them form the advancing fire. A two-person crew is normally sufficient for most moderate risk structures, but more crews are required in multi-story buildings or structures with people who are not capable of self-preservation.

Set-up time: The point at which operations to mitigate the event begins. This may vary greatly with arrival on scene. An example would be treating a patient on the 3rd floor of an office building.

Service call: Non-emergency calls that require the assistance of the fire department, such as snake removal.

SOC: Standard of Cover

Special duty: Code 2, non-emergency, request for service. Some examples are snake removal or check hazard.

Special operations: Technical rescue of a person from a wash, trench, mountain or other rescue that requires a hirer level of skill or equipment beyond an engine company.

Suburban: Population density between 500 and 1,500 people per square mile.

Suction unit: This is a battery-operated unit, which provides suction utilized to clear a patients airway from fluid (e.g. saliva, vomitus, blood).

Termination of incident: The point at which unit(s) have completed the assignment and are available to respond to another request for service.

Training: The process of making proficient through instruction and hands-on practice in the operation of equipment, including respiratory protection equipment, that is expected to be used and in the performance of assigned duties. *(OSHA Regulations)*

Turnout clothing: Protective clothing consisting of a coat and trousers as specified in *NFPA 1971 (1981) Protective Clothing for Structural Fire Fighting* except as modified by Section 3406(b) of these Orders *(OSHA Regulations).* A synonym for protective clothing, also called bunker gear; acronym **PPE** is used in many codes and standards.

Travel time: Begins at the termination of the turnout time and ends when the responding unit notifies the dispatch center that it has arrived on the scene.

Total response time: It is the total elapsed time from the point of notification to a responding fire company and the arrival of that unit at the scene. Total response time equals notification, plus alarm processing/dispatch time plus turnout time plus travel time.

TRT: Technical rescue team

Turnout time: The time from station notification to wheels rolling of the apparatus, this would include donning appropriate personal protective gear if necessary for the call. The time it takes a fire company to discontinue routine operations and begin to respond.

To In/Two Out: Per OSHA 1910.134 a minimum of two firefighters must be outside of a structure that are staged to rescue a crew interior of a structure on fire.

Urban: Population density square mile greater than 1,500 people per square mile.

Utility assignment: One or more firefighters to secure natural gas, LPG, and/or electrical supply to the affected structure for interior crew safety during fire control and overhaul efforts.

Ventilation crew: Two or three firefighters to open a horizontal or vertical ventilation channel when the attack crew is ready to enter the building. Vertical ventilation or ventilation of a multi-story building can require multiple vent crews.

Ventilation: Allows superheated gases and obscuring smoke to escape, reducing the possibility of flashover and providing attack crews better visibility and reduced heat. It also allows the fire an exit route so the attack crew can “push” the fire out the opening they choose and keep it away from endangered people or unburned property.

Vulnerability: The risk to the community.

Water supply: One or more firefighters tasked with connecting large diameter hose between the pumper and the nearest hydrant or water supply and delivery a water supply to the pumper before the pumper’s water tank runs dry.

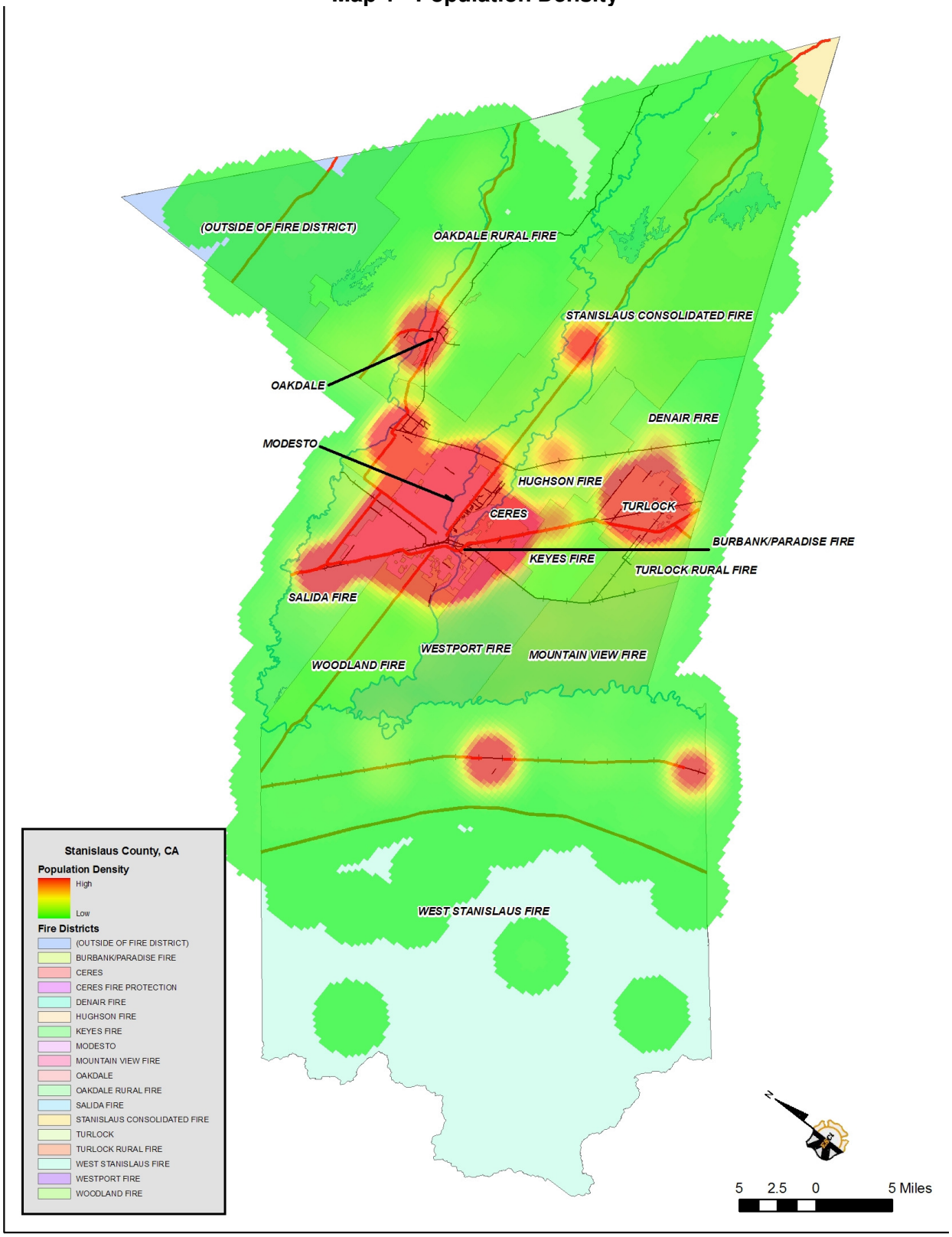
Appendix D - Map Atlas

The following maps have been developed to support the display and understanding of fire department coverage from existing fire stations. These maps are as follows:

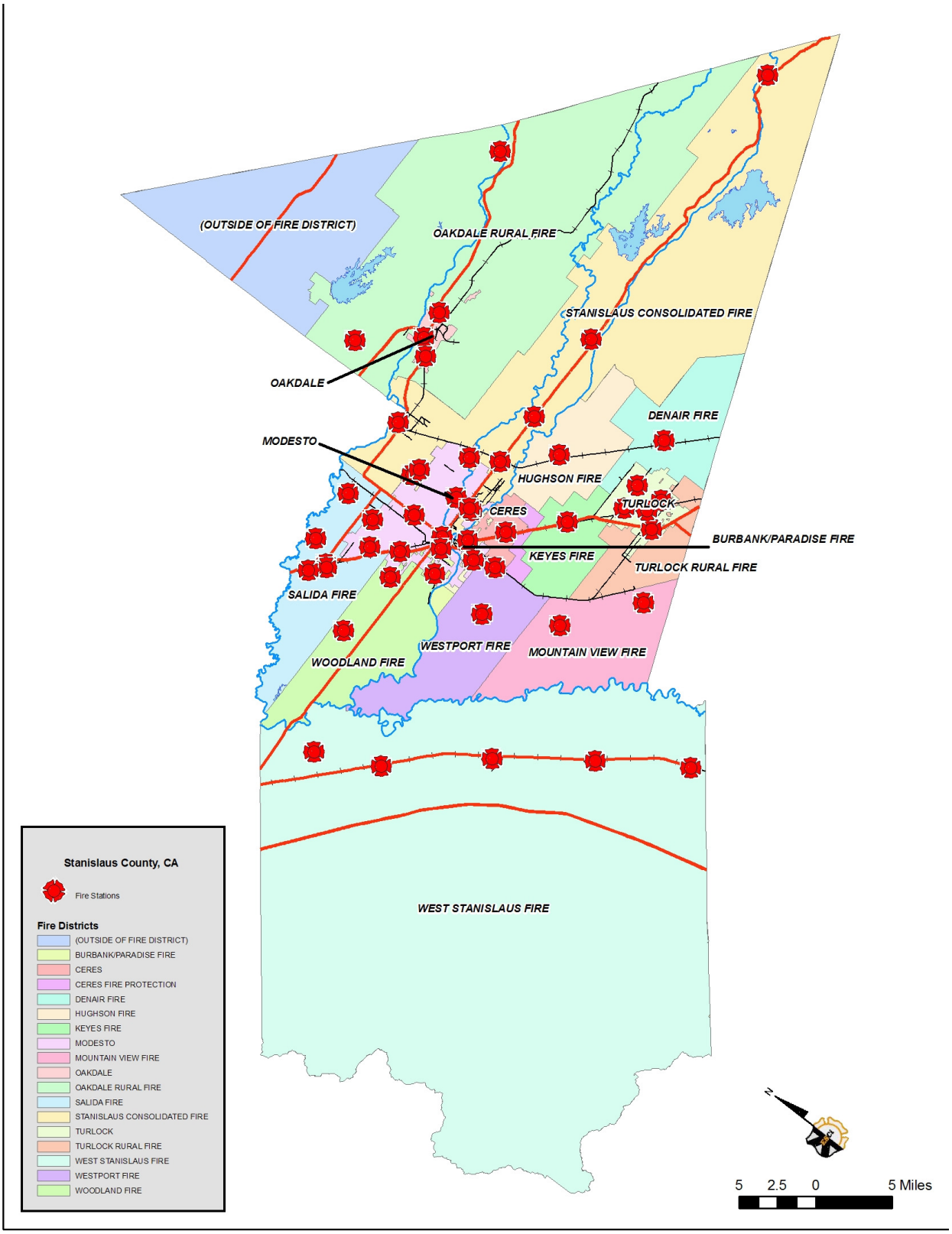
1. Population Density
2. Overall Fire Station Locations
3. Burbank Paradise, Response Travel Polygons
4. Ceres (Ceres Fire Protection District), Response Travel Polygons
5. Denair, Response Travel Polygons
6. Hughson, Response Travel Polygons
7. Keyes, Response Travel Polygons
8. Mountain View, Response Travel Polygons
9. Oakdale City, Response Travel Polygons
10. Oakdale Rural, Response Travel Polygons
11. Salida, Response Travel Polygons
12. Stanislaus Consolidated, Response Travel Polygons
13. Turlock City, Response Travel Polygons
14. Turlock Rural, Response Travel Polygons
15. Westport, Response Travel Polygons
16. Woodland, Response Travel Polygons
17. West Stanislaus, Newman, and Patterson Response Travel Polygons
18. Concentration of Fire Flows within Modesto
19. Fire Flow Concentration for all Departments in Stanislaus County
20. Needed Fire Flow for Stanislaus County

This page intentionally left blank

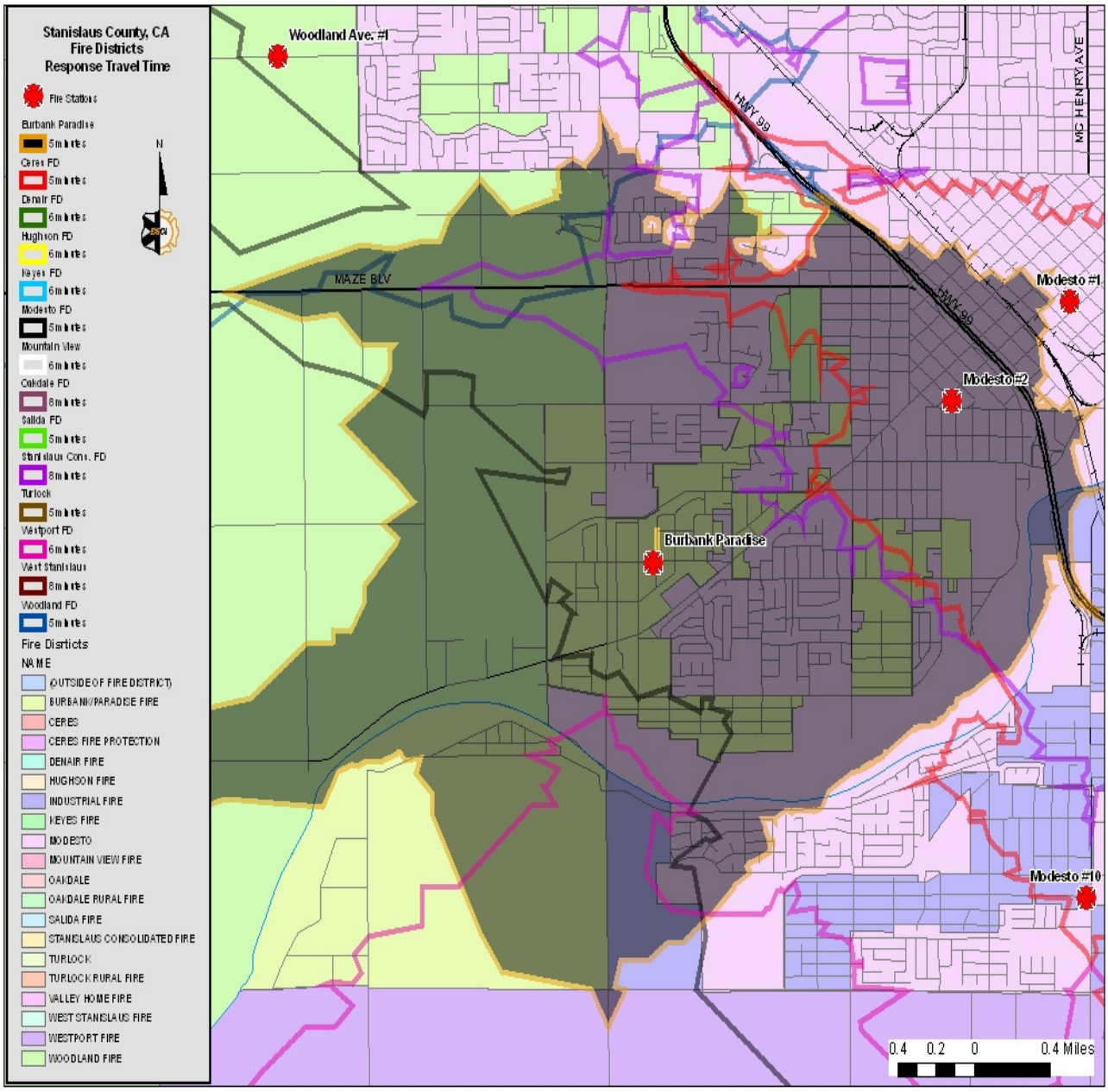
Map 1 - Population Density



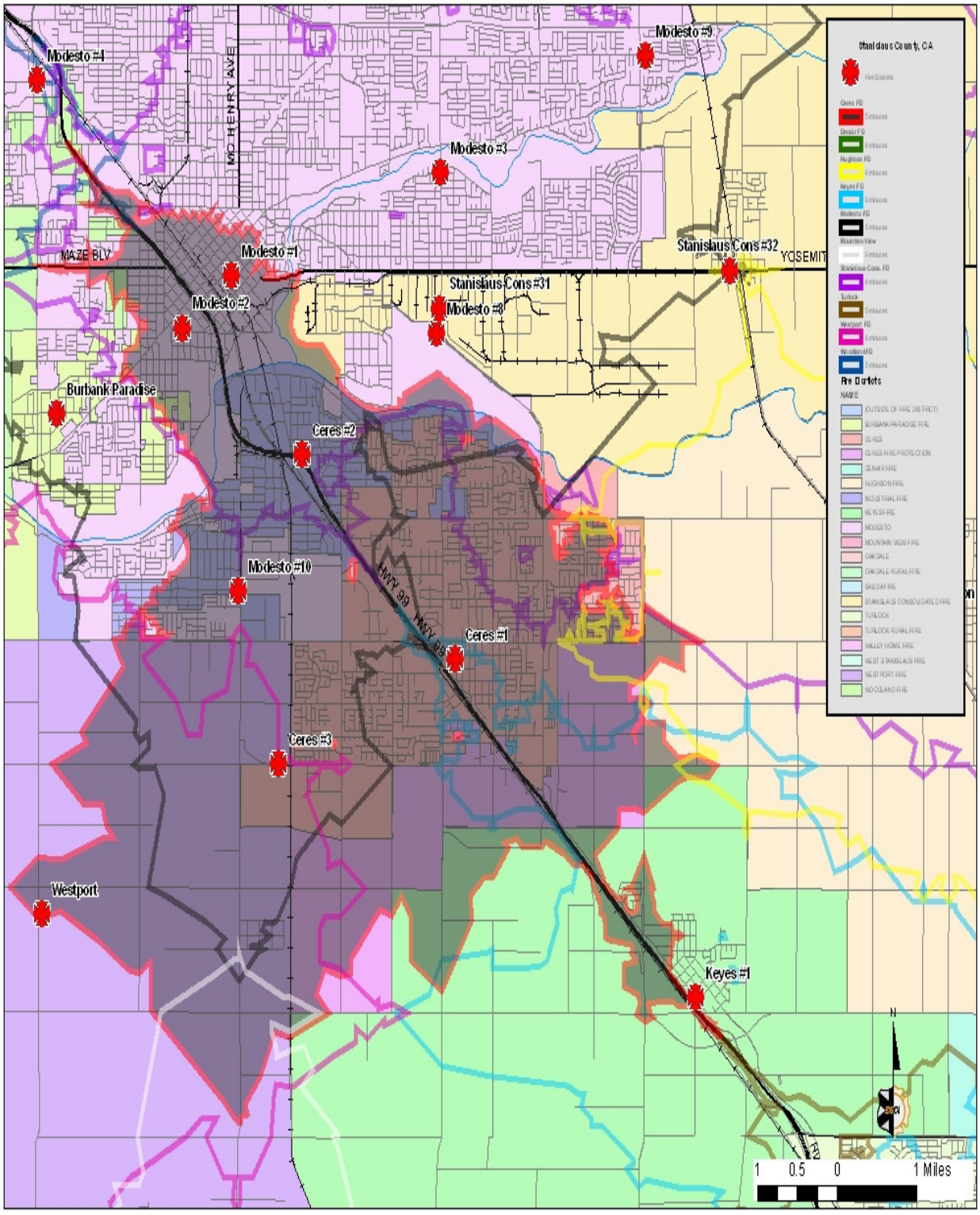
Map 2 - Overall Fire Station Locations



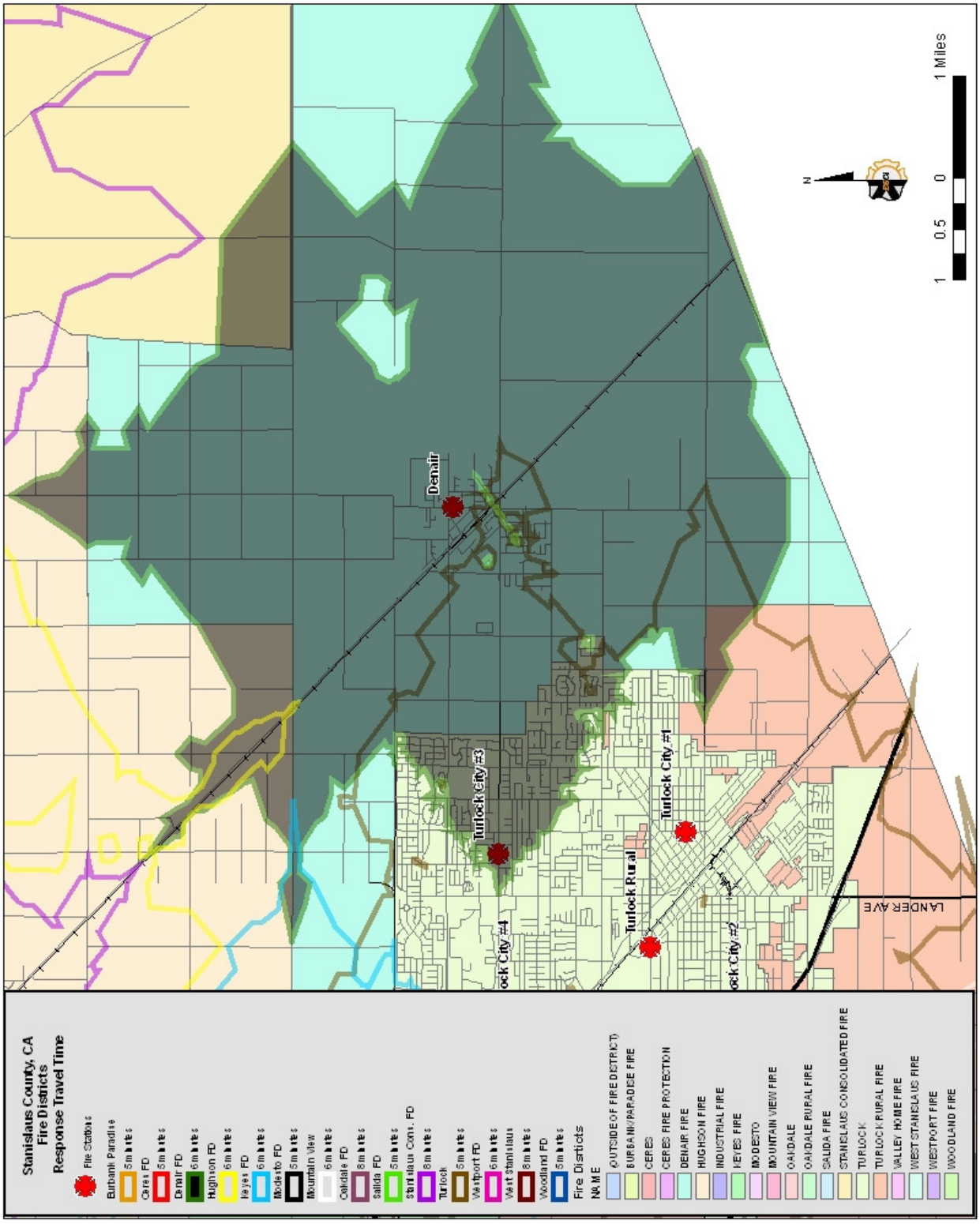
Map 3 - Burbank-Paradise Fire Protection Response Travel Polygons



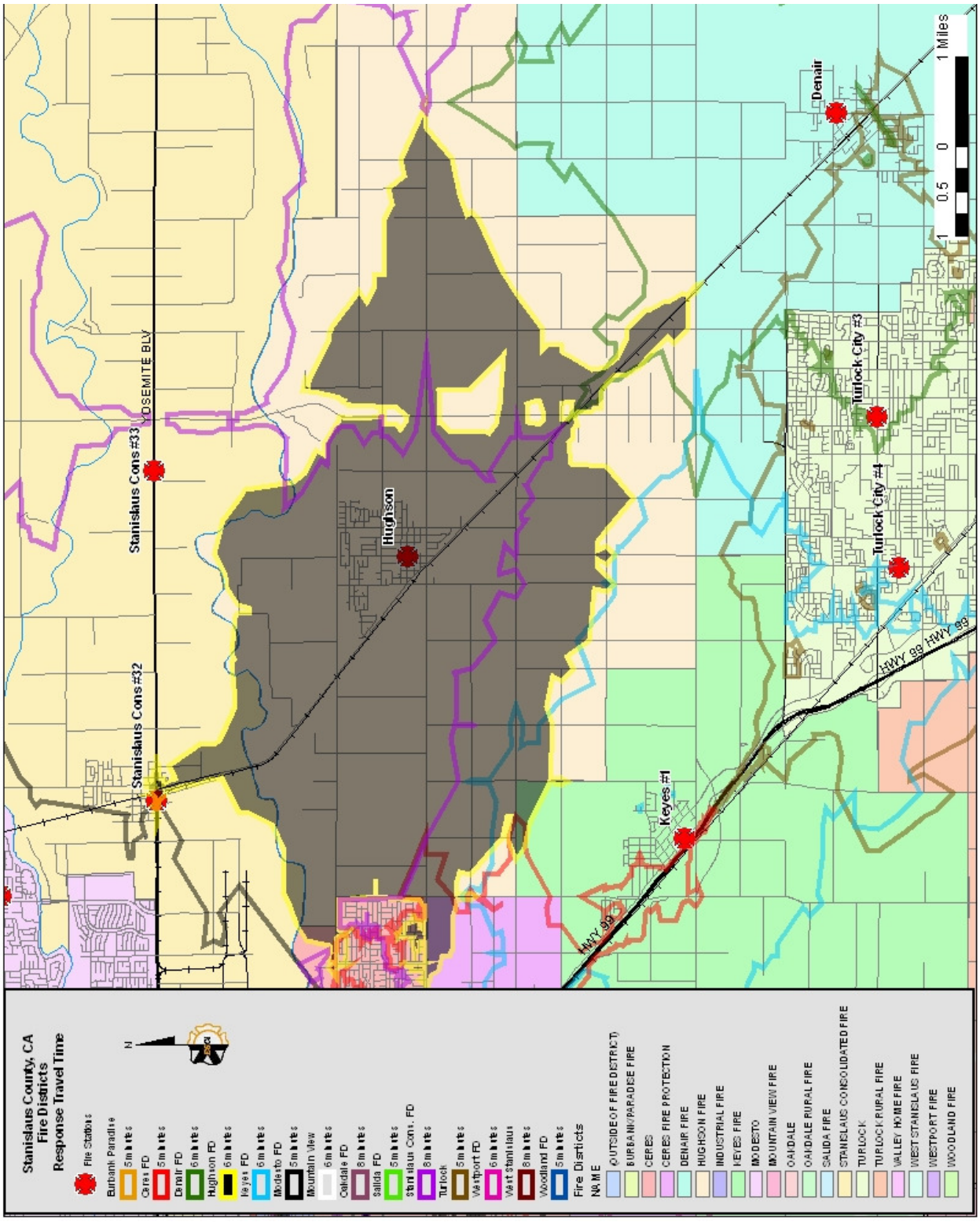
Map 4 - Ceres Fire Protection District Response Travel Polygons



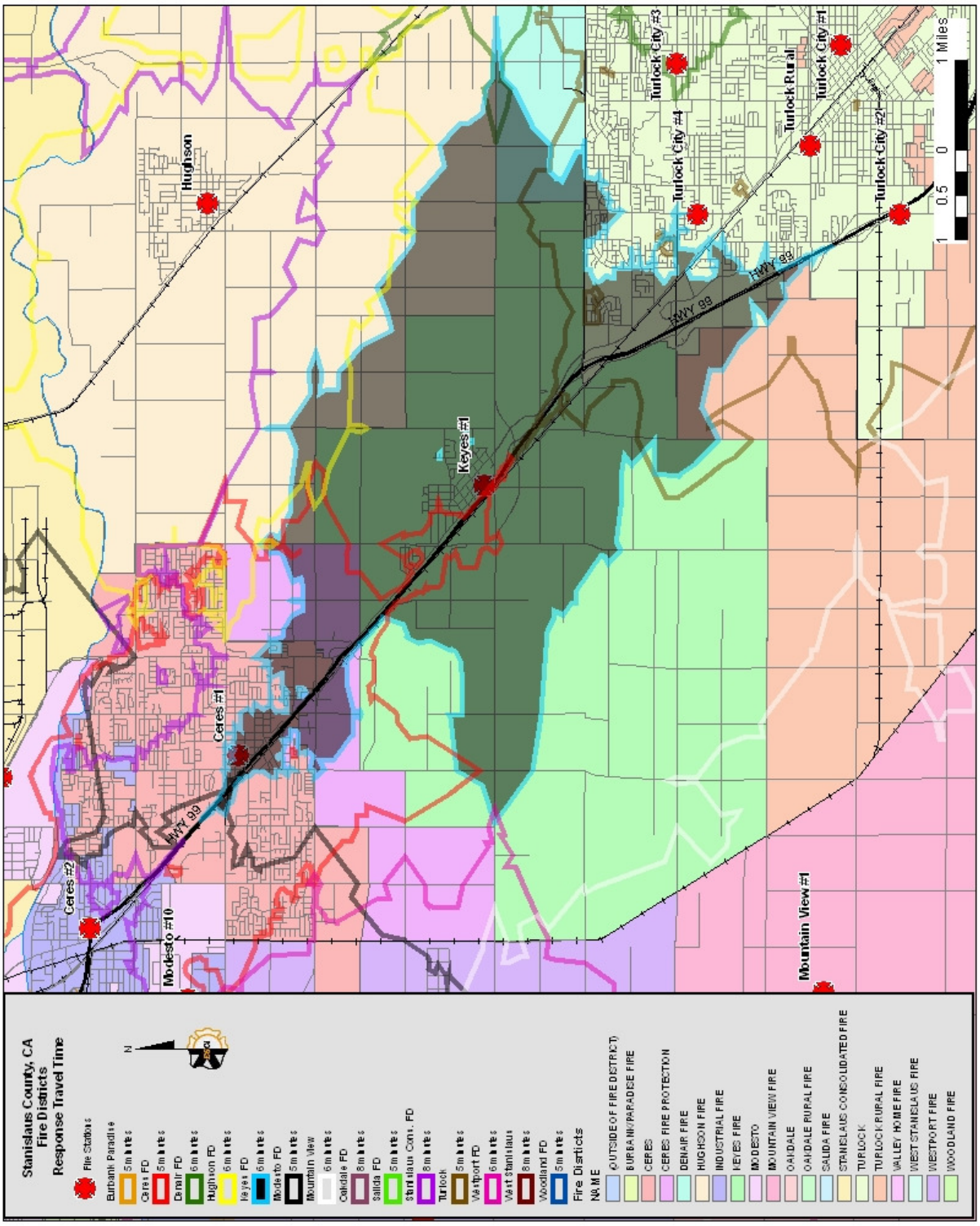
Map 5 - Denair Fire Protection District Response Travel Polygons



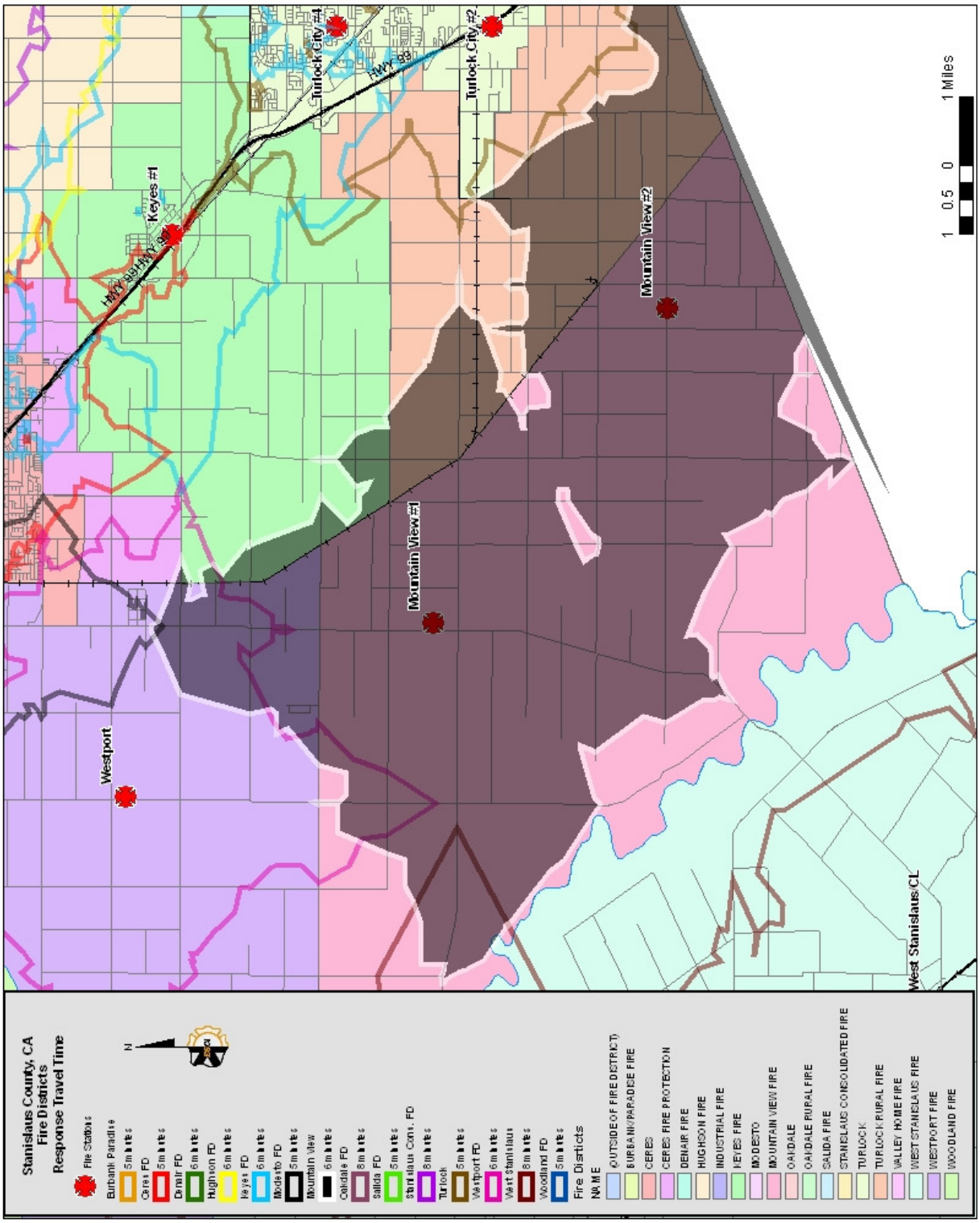
Map 6 - Hughson Fire Protection District Response Travel Polygons



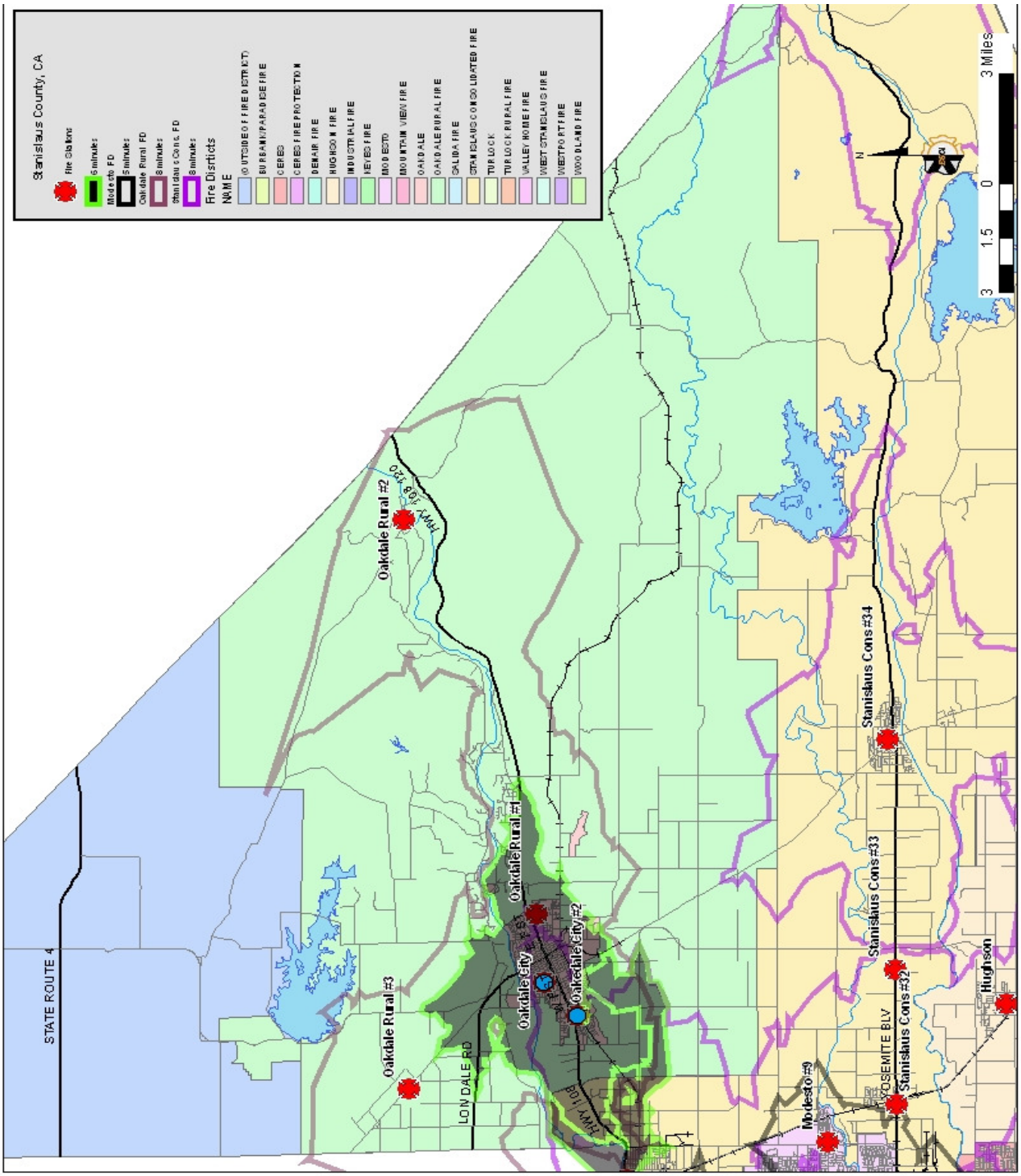
Map 7 - Keyes Fire Protection Response Travel Polygons



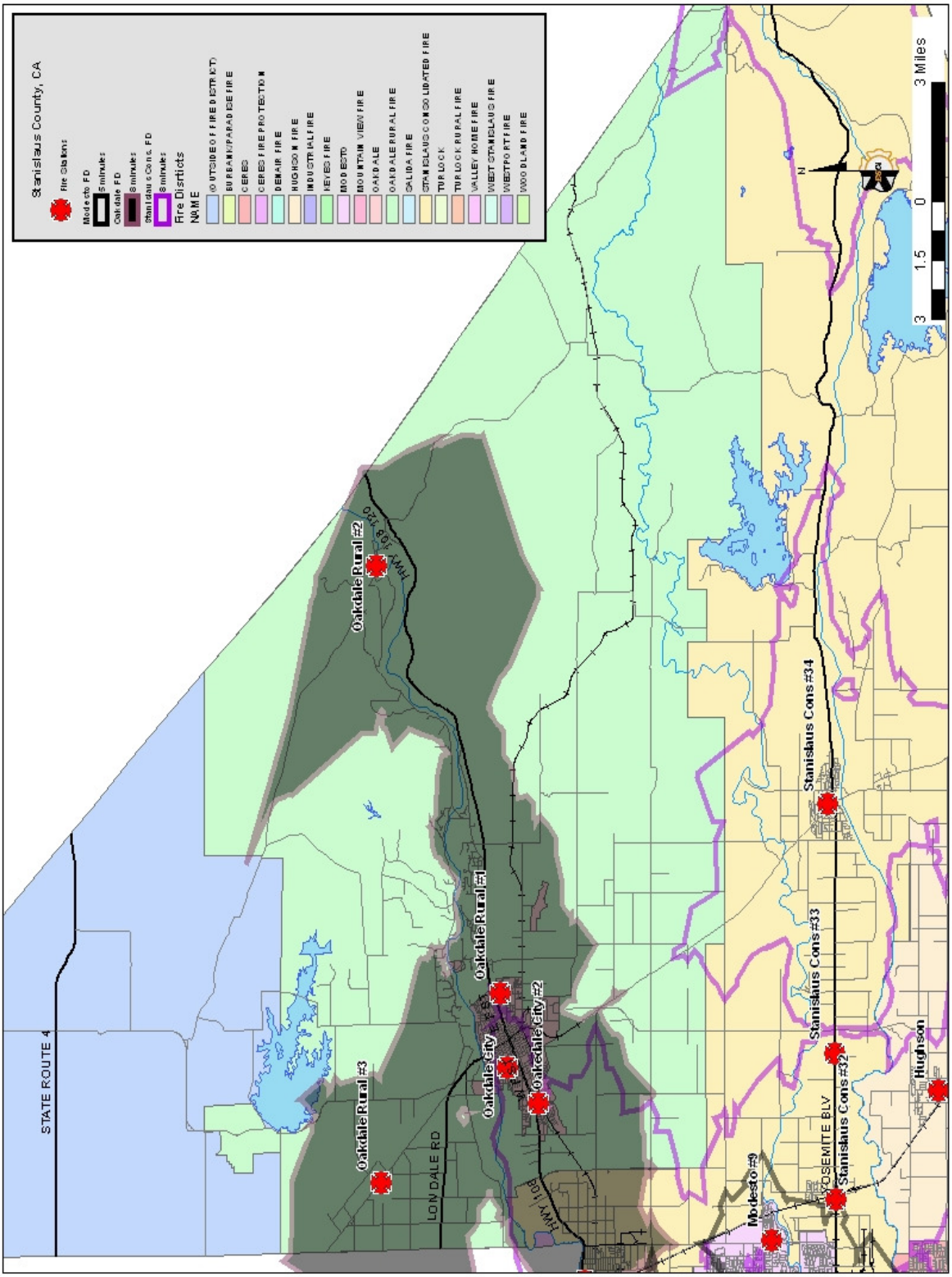
Map 8 - Mountain View Fire Protection District Response Travel Polygon



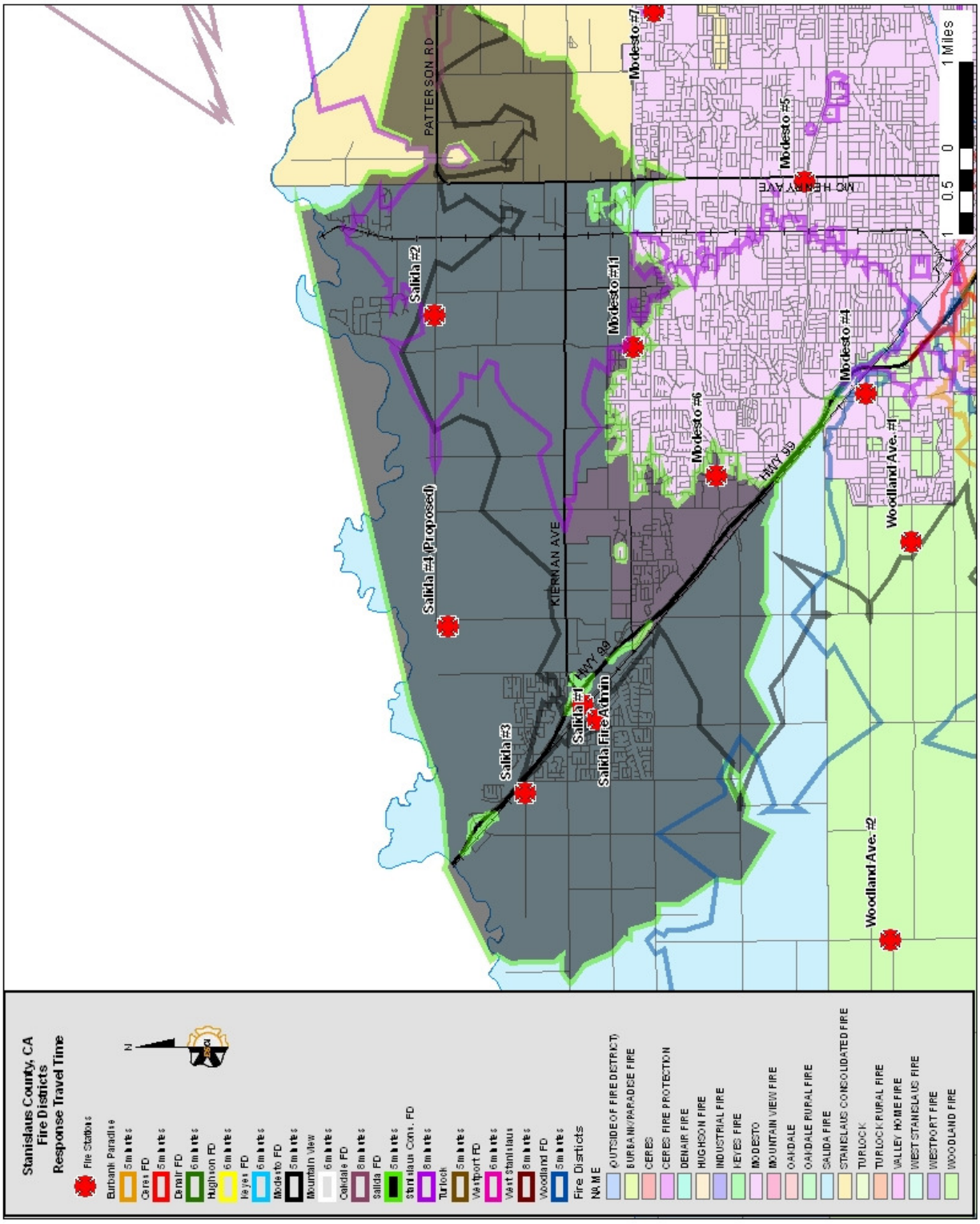
Map 9 - Oakdale City Fire Department Response Travel Polygons



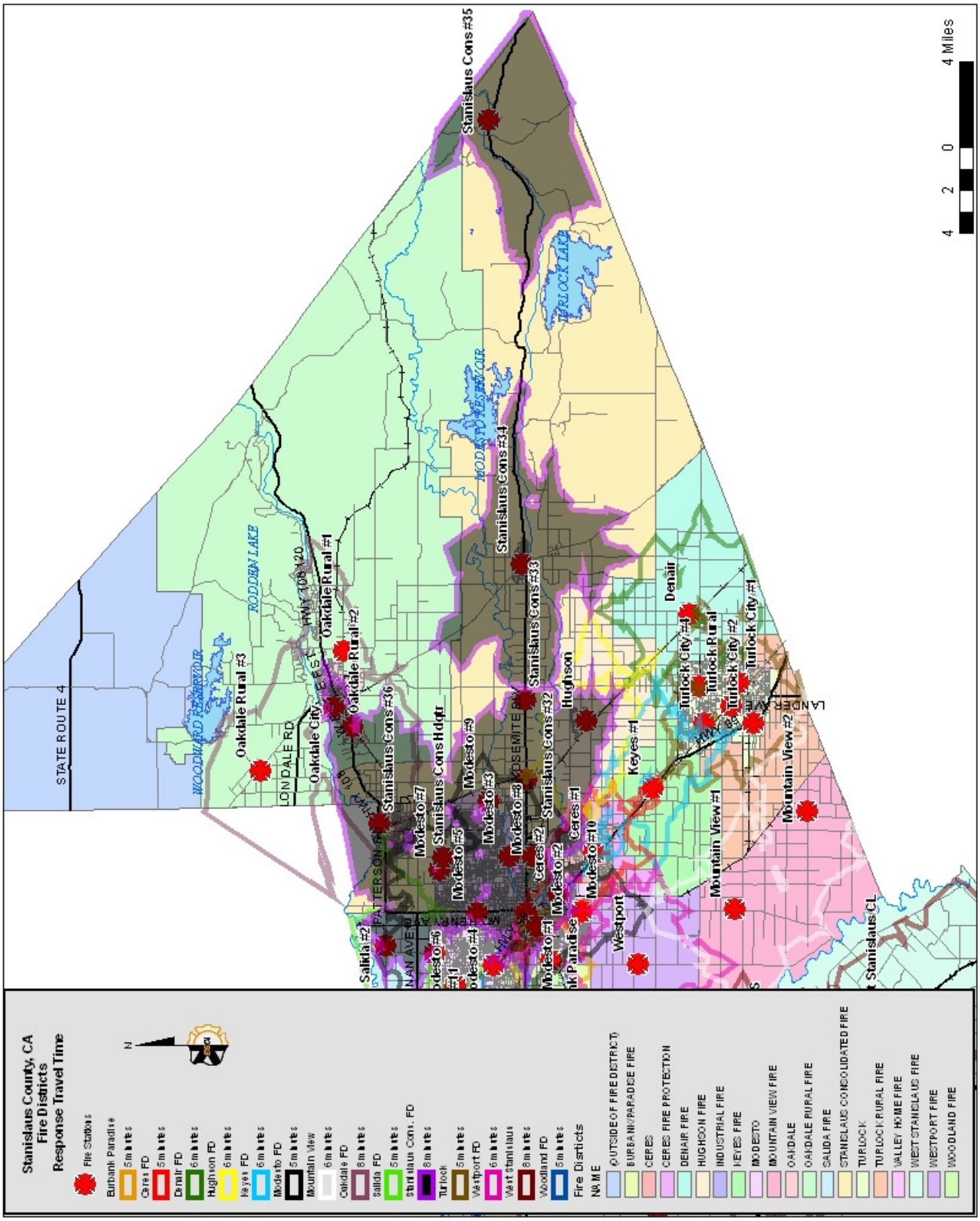
Map 10 - Oakdale Rural Fire Protection District Response Travel Polygons



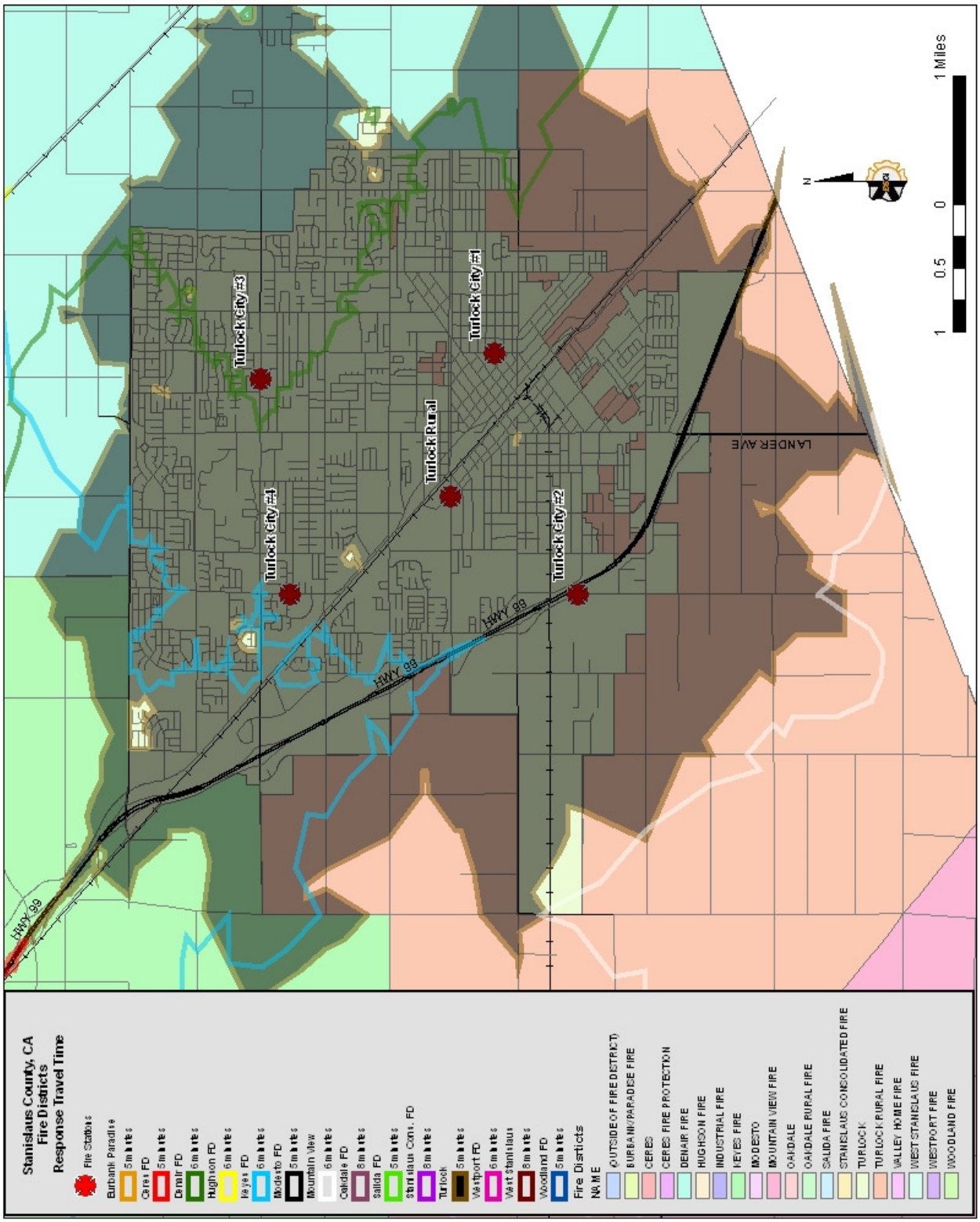
Map 11 - Salida Fire Protection District Response Travel Polygons



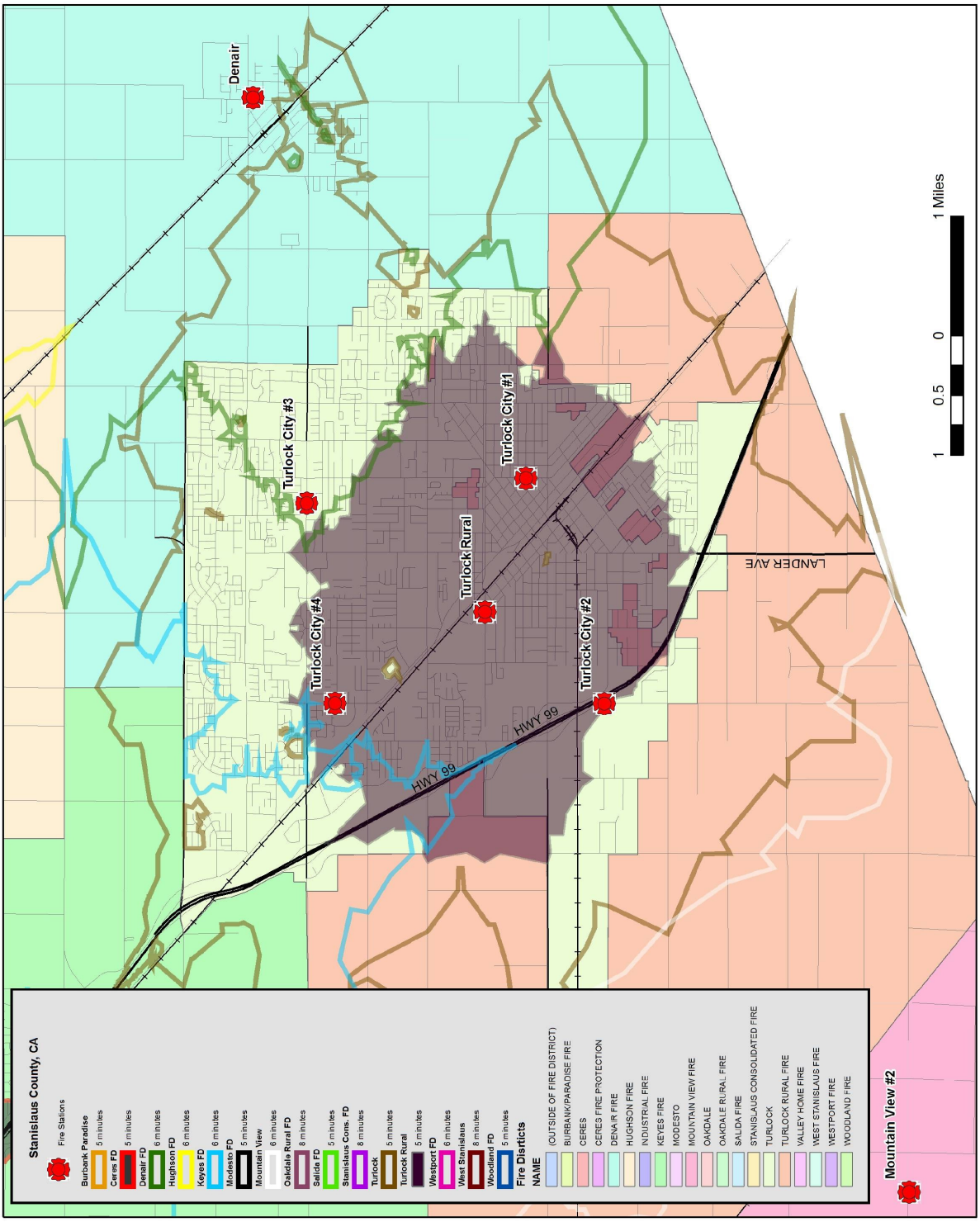
Map 12 - Stanislaus Consolidated Fire Protection District Response Travel Polygons



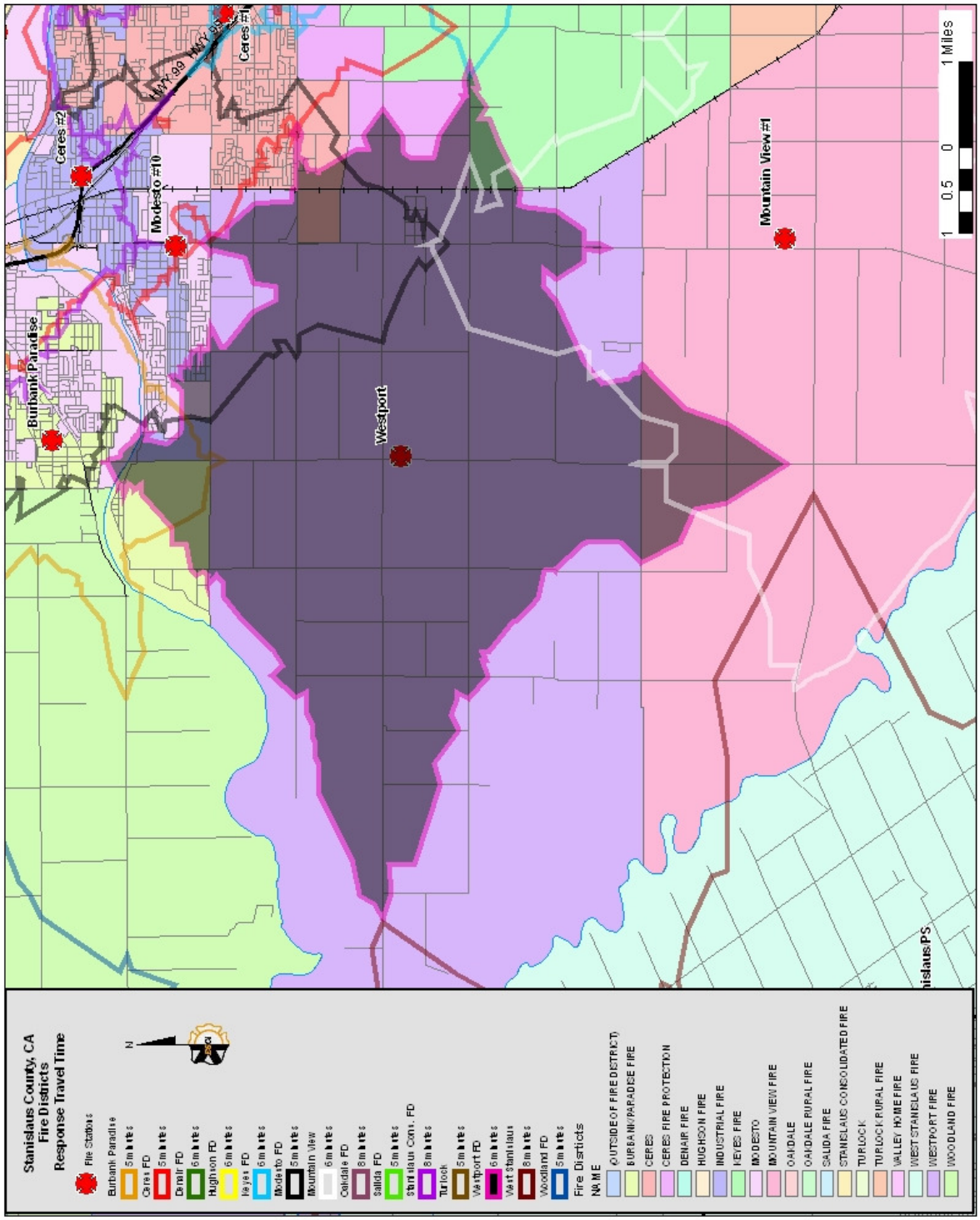
Map 13 - Turlock City Fire Department Response Travel Polygons



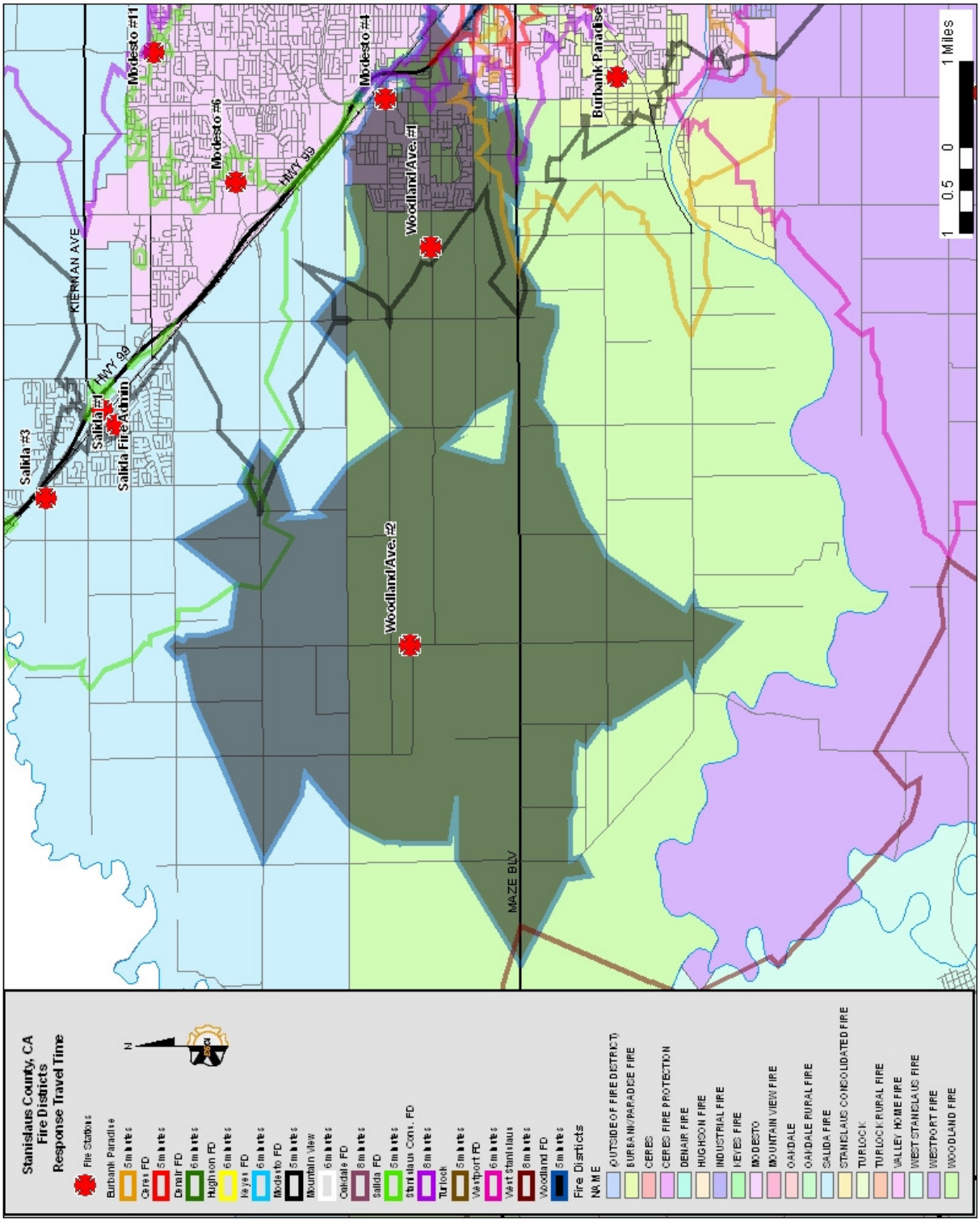
Map 14 - Turlock Rural Fire Protection District Response Travel Polygons



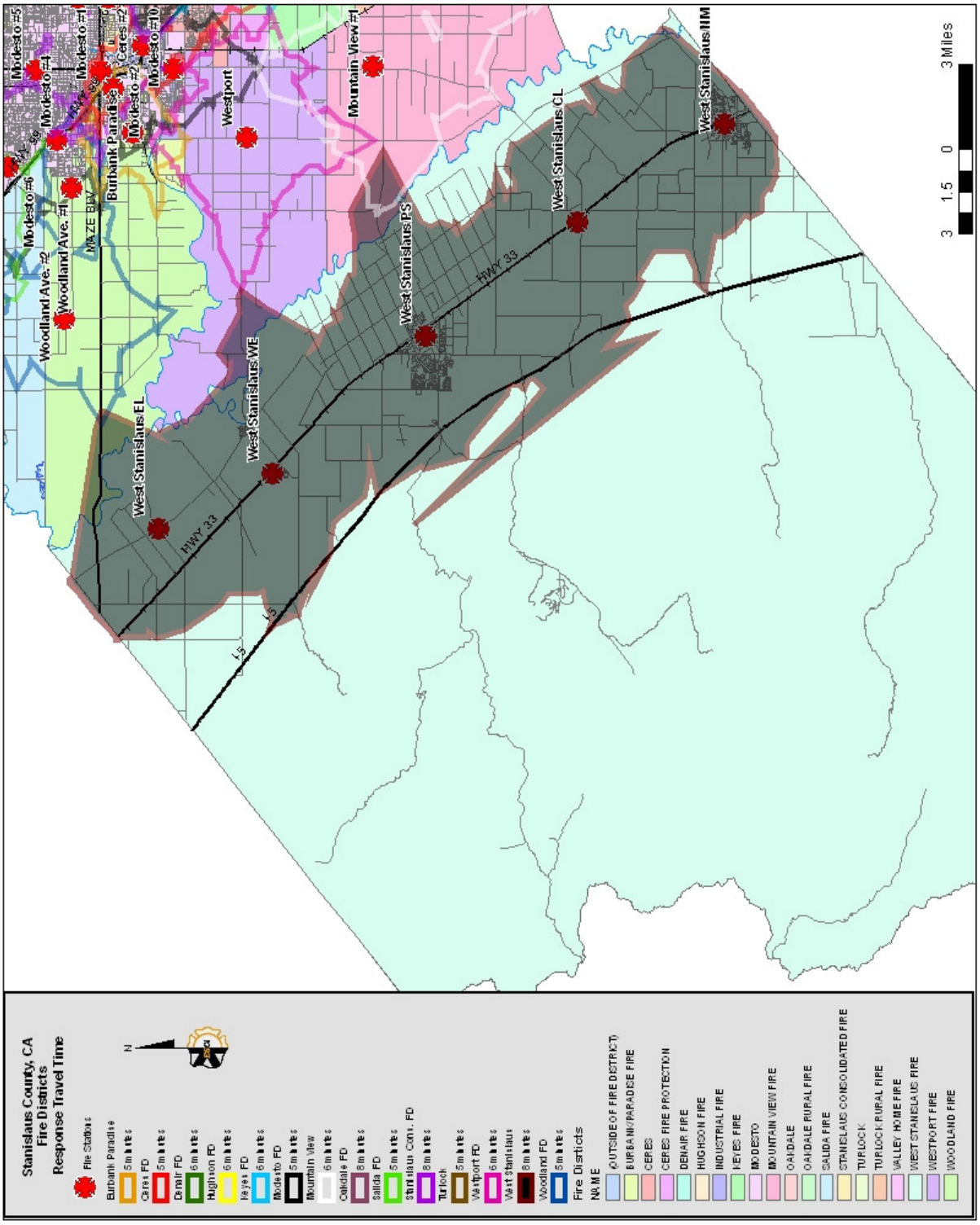
Map 15 - Westport Fire Protection District Response Travel Polygons



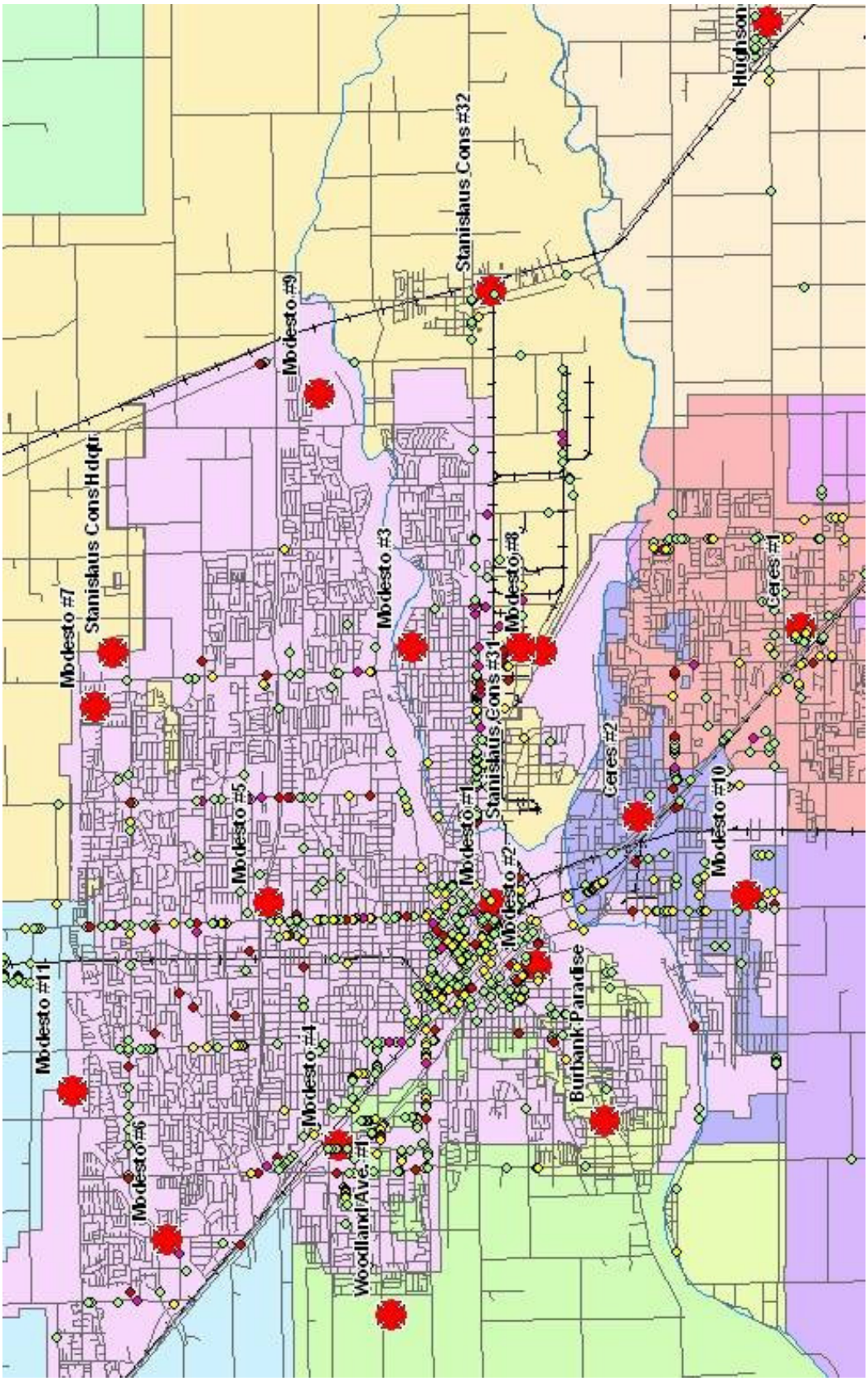
Map 16 - Woodland Avenue Fire Protection District Response Travel Polygons



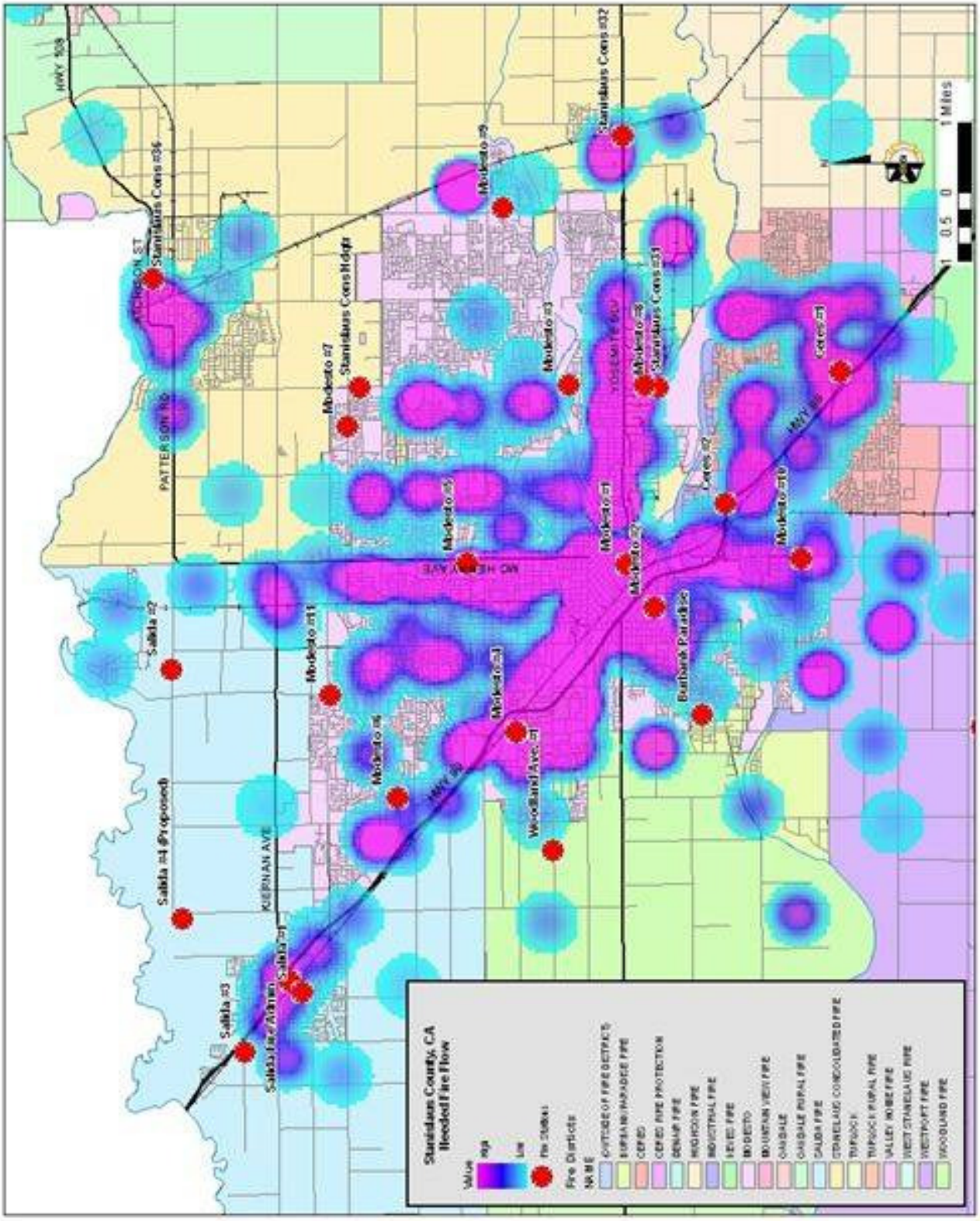
**Map 17 - West Stanislaus Fire Protection District,
Newman Fire Department, and Patterson Fire Department Response Travel Polygons**

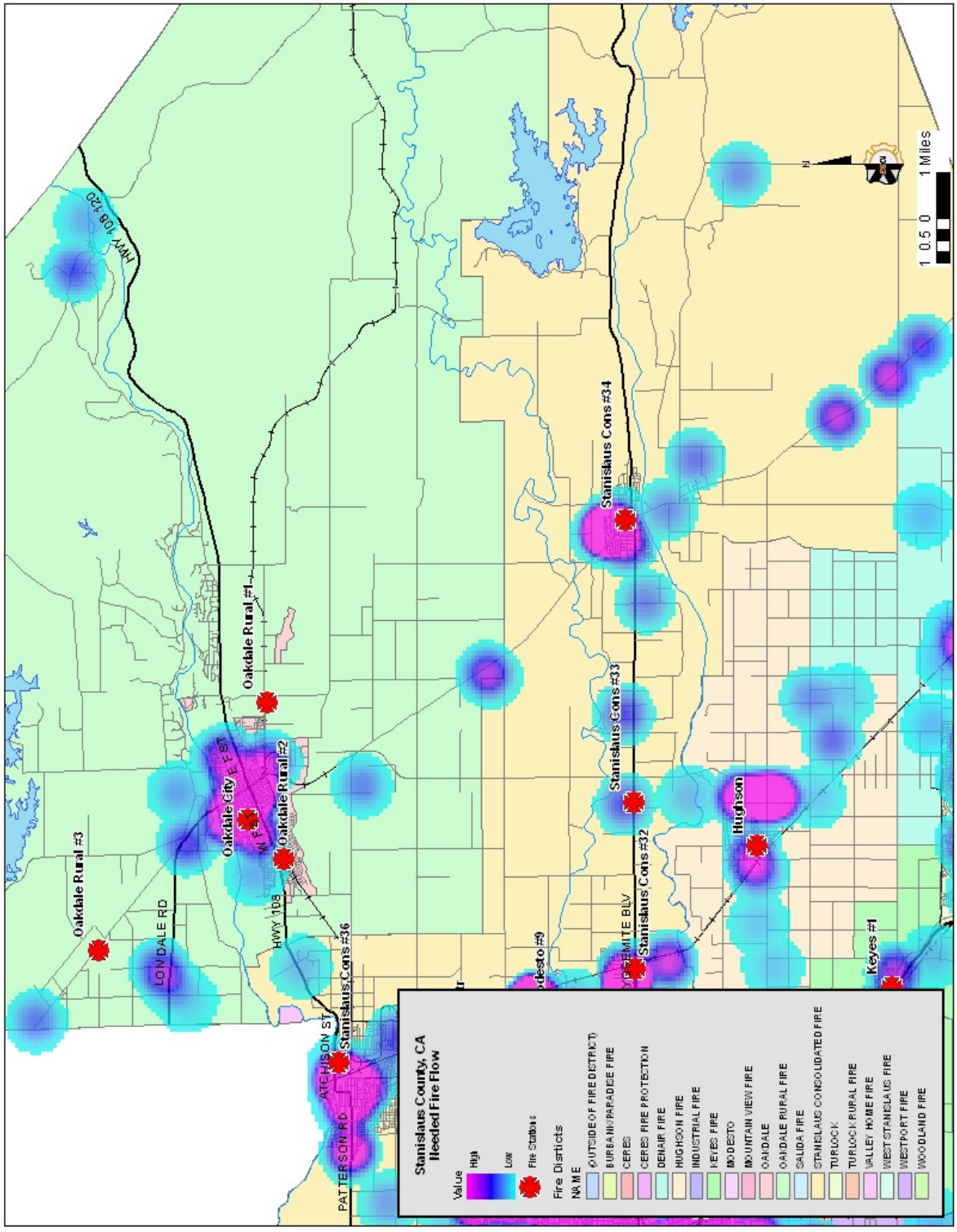


Map 18 - Concentration of Fire Flows within Modesto



Map 19 - Fire Flow Concentration for all Departments in Stanislaus County




Stanislaus County, CA
Needed Fire Flow
Value
High
Low
File Stations
Fire Districts
NAME
(OUTSIDE OF FIRE DISTRICT)
BURBANK/PARADISE FIRE
CERES
CERES FIRE PROTECTION
DENAIR FIRE
HUGHSON FIRE
INDUSTRIAL FIRE
KEYES FIRE
MODESTO
MOUNTAIN VIEW FIRE
OAKDALE
OAKDALE RURAL FIRE
SALIDA FIRE
STANISLAUS CONSOLIDATED FIRE
TURLOCK
TURLOCK RURAL FIRE
VALLEY HOME FIRE
WEST STANISLAUS FIRE
WESTPORT FIRE
WOODLAND FIRE
Oakdale Rural #1
Oakdale City #1
Oakdale Rural #2
Oakdale Rural #3
Stanislaus Cons #32
Stanislaus Cons #33
Stanislaus Cons #34
Stanislaus Cons #36
Hughson
Keyes #1
LONDALE RD
HWY 108
ATCHISON ST
PATTERSON RD
1 0.5 0 1 Miles

```
ERROR: stackunderflow
OFFENDING COMMAND: ~

STACK:
```