

**COUNTY OF SHASTA
SOUTH CENTRAL REGION
FIRE PROTECTION STUDY**

**Provided To The
Community Services Department**

**BY
VSP ASSOCIATES, INC.**

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~~the districts include Pine Bluff, Mountain Gate, Summit City, Shasta, and probably Coltonwood.~~ We believe it is not in the County's best interests to perpetuate the existence of these weak districts, or to allow the formation of new ones.

The California Department of Forestry and Fire Protection (CDF) provides fire protection for state responsibility lands. These are defined by the State Board of Forestry. In addition to its full-time headquarters, CDF operates seasonal stations in the study area. The CDF is responsible for all vegetation fires in the study area, except those on lands within the cities of Anderson and Redding. Where there are volunteer fire companies and special districts responsible for structural fire protection, the CDF is also there for vegetation fire suppression. There can be at least two fire protection authorities in the fire districts located in the unincorporated areas.

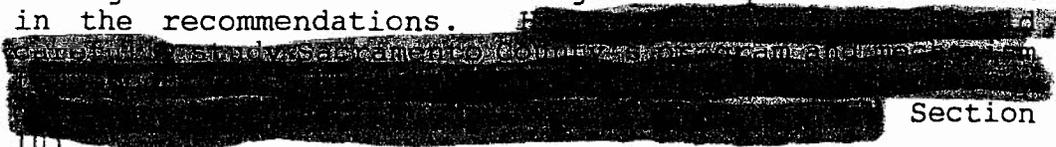
Volunteer fire companies (seven in the study area) evolved from community-based concerns about fire protection. Financing was largely dependent on donations and proceeds from fund raising events. The quality of such companies varies greatly depending on local commitment, leadership, fire experience, availability of volunteers and other factors. If a volunteer company ceased operating, the county was faced with the dilemma of how to provide fire services in areas with low demand and a limited tax base.

The Shasta County Fire Department was organized to provide administrative, fiscal, and logistics support needed to sustain the VFCs. The county also established two paid fire companies, one of which is at the Redding Municipal Airport. Because of some controversial and difficult personnel problems, the county decided a few years ago to contract with the CDF for operation of the SCFD.

Principal Conclusions

We reached several principal conclusions that have guided our thinking throughout this report. They are:

1. Fire stations generally are located in the appropriate places. Further, residential and commercial development should be the deciding criterion for constructing new fire stations. Impact fees should be the principal way to finance the construction of new stations and the purchase of equipment. (See Section 3.3).
2. For the most part, existing service levels are adequate, but during the last ten years the workload has shifted heavily toward emergency medical response. Wildland fire activity has remained about constant, and structural, vehicle, and related fires have declined. (See Sections 2.5 and 3.3).

3. The consolidation of seven districts and volunteer units into four will increase efficiency, thereby increasing funds for the replacement of equipment, improving communications, paying of insurance, and making related operational improvements. (See Sections 4.2.1, 4.2.2, and 4.2.3).
4. Shasta County's current contractual arrangements with the California Department of Forestry and Fire Protection are satisfactory. Unless conditions change dramatically, we believe that it is in the county's best interest to continue this relationship for the foreseeable future rather than create a separate "County Fire Department." (See Section 10).
5. Volunteers are cost effective, but in some areas major problems exist with their recruitment, retention, and availability. More vigorous or new efforts are needed to maintain this commitment because converting to partially or fully paid departments will be expensive. (See Section 4.2.6).
6. Although we did not identify any significant sources of new funds, better use of existing funds can be achieved through consolidation and making other improvements noted in the recommendations.  Section 10).
7. Regular and practical training is especially important to maintaining skills. Several improvements can be made in Shasta County's fire services training programs. One of these is to expand the role of the Shasta Community College's Fire Technology program and facilities. (See Sections 5.3.4 and 5.3.5).
8. Prevention has been effective, but it has to be maintained and expanded in some cases. This includes adopting a county-wide sprinkler code, enacting the proposed hillside ordinance, improving the organization of fire prevention activities, and continuing permit and educational programs. (See Section 9).
9. In the final analysis, the full spectrum of fire protection services are provided by more than fire departments. It involves hazard mitigation and prevention, fire suppression capabilities, and public education and commitment. This requires extensive interagency cooperation among law enforcement, health, building, planning, water supply, utility, and other

agencies and organizations. We believe that more effort must be made to link the resources of all local, state, federal, and private organizations in the SCR area, so as to enhance effective response to the full range of likely emergencies.

Principal Recommendations

We offer the following main recommendations to improve fire protection services in the South Central Region area. They are discussed in detail in the main part of the report. Our general approach is to continue the existing organization, largely as it is, but strengthen the special districts by merging the weaker with the stronger ones. We expect there will be controversy and that implementation will take several years, but the proposed changes will benefit the county in the long term.

1. Shasta County and the special districts should adopt policies for the delivery of fire services in the South Central Planning Region that relate to the density of future development, magnitude of fire risk and distance from fire stations. (See Section 3.3).
2. In the north, the Buckeye, Summit City and Central Valley Fire Protection Districts should be consolidated, and the fire protection responsibilities of the Mountain Gate Community Services District should be included in a new district with a larger sphere of influence. (See Section 4.2.1).
3. In the south, the Anderson and Cottonwood Fire Protection Districts should be consolidated and the resulting sphere of influence expanded. The operation of the County's Fire Company 47 should be terminated or relocated to areas of greater need and financial support. (See Section 4.2.2).
4.  Also, over the long term, a single sphere of influence should be created for the Shasta Community Services District and the Keswick and Centerville VFCs. (See Section 4.2.3).
5. Improvements on the eastern side of the SCR are more complex. In the short term, efforts should be undertaken to recruit leadership for the Bella Vista VFC from within the community, and Shasta College could establish a special interdepartmental project to help rebuild the capabilities of the Bella Vista VFC. Simultaneous dispatching of units north and south of Highway 299 should be continued until Bella Vista can respond

adequately. New districts should not be formed, and consideration should be given in the longer term to a consolidated "East Side Fire Protection District." (See Section 4.2.5)

6. Unless current conditions change dramatically, the county should continue the existing contract with the CDF for operation for the SCFD. However, this arrangement should be reviewed periodically, and a contingency organization and staffing plan for a county operated department should be maintained. (See Section 10).
7. The roles of the Shasta Community College's Fire Technology program should be greatly expanded. A jointly funded training facility should be constructed. It should help support the reinvigoration of the Bella Vista Fire Protection District. It could provide additional training to the volunteer fire companies. Should current discussions be successful with elements of the State College and University System, it could expand educational opportunities to the Bachelor Degree level in Fire Protection Administration. (See Sections 5.3.4 and 5.3.5).
8. It is cost effective to maintain a strong prevention program. This should be done by adding a few additional personnel or contracting for the services during peak periods and by adopting a county-wide sprinkler ordinance and the proposed hillside development ordinance. (See Section 9).
9. The county should continue with all deliberate speed to organize and finance a joint dispatch and emergency communications center. (See Section 8.4).

A summary of all of the recommendations is presented in the following pages, and they are repeated in the applicable sections of the report.

DIGEST OF RECOMMENDATIONS

Fire and Emergency Medical Services (Chapter 2)

1. Provide call screening by tying in or using one of the fully staffed emergency rooms as the EMS dispatch center until the joint dispatch center is operational (in which call screening should be continued);
2. When medical calls become excessive in those areas served by volunteer personnel, request that a private ambulance service assume the responsibility, or provide full-time EMS staff to handle only this duty; and
3. Work with the local medical community to encourage the support and use of walk-in urgent care centers in the Central Valley, Shasta, and Anderson areas. Complementary efforts should be made to encourage public awareness and use of these facilities.

Policies and Criteria (Chapter 3)

1. The Board of Supervisors should adopt as part of its fire protection policies one that states fire stations should be located within five miles of any built-up area, and not more than 10 miles where densities are one unit or less per acre. If the area is more densely populated than either of these, fire stations should be within three miles. Generally, stations within the SCR presently meet these criteria.
2. Shasta County and the special districts should adopt policies for the delivery of fire department services in the South Central Region that relate to the density of structural development, magnitude of fire risk and distance from fire stations.

Organizational Structure and Boundaries (Chapter 4)

1. Reorganize the Northern Districts.
2. Reorganize the Southern Districts.
3. ~~new sphere of influence for the Happy Valley~~

4. Establish a single sphere of influence for the Shasta Community Services District, and the Keswick and Centerville VFCs.
5. Establish a sphere of influence for the potential organization of a consolidated fire protection district to serve Jones Valley, Bella Vista, Palo Cedro and Millville.
6. Strengthen the roles of the volunteers and the Shasta Community College.

Operations, Staffing and Training (Chapter 5)

1. The special districts and the SCFD should continue to cooperate closely in the adoption and execution of reasonably uniform and mutually supportive fire scene operating policies.
2. The districts and the SCFD should agree to an area-wide policy of dispatching the closest fire company regardless of boundaries.
3. The districts and the SCFD should agree that fire ground command should be exercised by officers who have demonstrated competent command skills.
4. A minimum of four trained persons in any combination of paid and volunteer fire fighters should respond with each apparatus to fires.
5. Volunteers should be recruited, trained and assigned in sufficient numbers to provide the designated response at all hours of the day.
6. The county and the districts should cooperate in the development of a comprehensive program to recruit and retain volunteer fire fighters.
7. The county should provide a continuous program of basic and advanced training in manual fire control skills and procedures to all fire departments. A minimum of one trained instructor should deliver training services to the fire departments in the SCR.
8. The county and the special districts should cooperatively plan and finance the development of training facilities.

9. Shasta County should negotiate with the Shasta Community College District to deliver increased fire protection training to the SCFD and to all participating city and special district fire departments.
10. The county and the participating cities and fire districts should agree to assist the college in its ability to develop and present courses of instruction either as Shasta College or in a consortium of institutions of higher learning.

Stations and Apparatus (Chapter 6)

1. The Shasta County Fire Department and the special districts should establish and contribute to apparatus replacement funds.
2. All apparatus should be procured by open competitive bids using carefully prepared performance standards.
3. Used apparatus should only be acquired if it has an assured remaining useful life of at least ten years and has performance characteristics that meet the real needs of the purchaser.
4. The SCFD should assume primary responsibility for the maintenance and repair of all county fire apparatus and mechanical equipment. The smaller special districts should participate in this program.
5. The SCFD and the fire companies should agree to a reasonable plan for the division of maintenance effort between the SCFD maintenance force and the fire companies.

Water Supplies (Chapter 7)

1. The fire departments should locate, evaluate and classify all potentially reliable and useful sources of water for fire fighting purposes in areas that are not adequately serviced by fire hydrants.

Communications (Chapter 8)

1. Establish a joint emergency communications facility for service to all fire department, law enforcement and emergency medical service providers.

Fire Prevention (Chapter 9)

1. One person should be assigned to handle a public education program within the study area. The program should concentrate on residential fire prevention and include information on wood burning stoves and open burning.
2. New personnel should be hired on a consulting basis to review plans and inspect new construction. The new personnel should be paid solely from permit fees, and if there is a slowdown in new construction, the positions should be eliminated. These personnel should be placed under the supervision of the SCFD or the County Building Department.
3. Existing personnel should be assigned to handle the tasks of issuing permits (to regulate the more hazardous occupancies) as required by the Uniform Fire Code and making inspection of critical facilities. Places of assembly, schools, and hospitals should be inspected semi-annually. Hazardous occupancies, such as, lumber yards, restaurants, and large repair shops should be inspected quarterly (the number of fires in these occupancies is low, but they would be expected to increase in time without regular periodic inspections).

4. An ordinance similar to the proposed Hillside Development Standard should be adopted by the county. The county may want to put implementation of these recommendations on hold pending the resolution of legal cases which are challenging these types of ordinances (i.e. any ordinance which is more restrictive than the Uniform Building Codes as adopted by the state.)

5. A uniform sprinkler ordinance should be adopted throughout the study area. The ordinance should apply to all new buildings larger than 5,000 square feet and to all buildings which undergo major remodelling. Reasonable exception should be made for buildings which have noncombustible contents.

6. More stringent controls should be developed to control open burning and wood burning stoves.

Financing for County (SCR) Fire Protection (Chapter 10)

1. The CSA one and CDF budgets should be revised to show the flows of revenues and expenditures by the Shasta County Fire Department in a more consistent and traceable manner.

2. The county should work with all the districts now receiving SDAF revenues to reform the process in a way similar to that now being done in Sacramento County. Incentives for consolidating districts should also be included.
3. ~~Those districts who are not imposing parcel charges~~ ~~are to be considered also,~~ preferably after some consolidation has taken place. Parcel charges should be simple just as is now being done under Measure B.
4. ~~One-time development fees should also be investigated in~~ ~~order to capture the immediate impacts of new development~~ ~~in the county.~~

Local Administration of Shasta County Fire Department (Chapter 11)

1. Shasta County should continue the existing contractual arrangement for management of the Shasta County Fire Department with the California Department of Forestry and Fire Protection for the immediate future.
2. The County should develop a contingency plan for local operation of the County fire department. The plan should be brought up to date at intervals no greater than four years.

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1. Introduction

1.1 Background and Objective

In just 10 years Shasta County is conservatively projected to increase in population from 148,200 (1990) to 179,800 (2000). This will be comparable to an increase of one-half of the current population of Redding. The great majority of these people will reside and work in the South Central Region (SCR)--the study area for this report. Contrast this growth with the fact that many fire protection organizations--some of our earliest forms of government --have changed little in several decades since their formation. Thus, the challenge to public service organizations--counties, cities, special districts, and others--is to adapt to such rapid change. This often means finding new ways of organizing to provide the needed services on a logical, efficient, and economical basis.

The growth is more than just added numbers of people. The composition of the population also is changing. Retired, weekend commuter professionals, and those with lower or subsidized incomes seeking a lower cost of living than can be found in the major metropolitan areas compose the bulk of new residents. The results are new or changing expectations about public services. For example, it may be difficult to raise money for schools, but improved emergency medical services are often advocated.

Within this changing context, and with an eye toward the long-term future, the objective of this study of the fire services in the South Central Region was to:

Evaluate the fire protection services and needs of the area and recommend changes that when implemented will effectively, efficiently, and economically meet future needs.

The fire protection and related services in the SCR area have made several improvements in recent years. Among these are greatly improved working relationships between the CDF, FPDs, and VFCs; the ongoing development of an "Enhanced 911" service; the negotiation of automatic aid agreements; the adoption of fire safe standards; consideration of a hillside fire protection ordinance; enactment of Measure B to help finance the acquisition and maintenance of volunteer fire company equipment; initial planning work on joint dispatch center; and others. This study was done in the context of a change process that is underway already, and it is our intention to build on these improvements.

Throughout this report, references are made to County Service Area #1 (CSA #1), and the Shasta County Fire Department (SCFD). The SCFD is funded by revenues from CSA #1. CSA #1 consists of all lands not included in any city or special district that is now providing fire protection service. CSA #1 monies go to the California Department of Forestry and Fire Protection (CDF) for administration of the SCFD and the purchase and maintenance of equipment.

We expect that the adoption and implementation of our suggestions will occur over a period of several years, with some modifications along the way. In some cases, implementation will be facilitated by other organizational and staff changes. We also caution the Shasta County officials to keep the long term results in mind and to resist changes that only solve short term problems, as that may complicate the longer term implementation process.

1.2 Focus of the Study

The SCR is served by a variety of city, county, state, special district, and volunteer fire services. In addition to the City of Redding's relationship with these, the following organizations have been reviewed:

- Shasta County Fire Department
- Jones Valley VFC
- Bella Vista VFC
- Palo Cedro VFC
- Millville VFC
- Keswick VFC
- Centerville VFC
- West Valley VFC
- Buckeye FPD
- Summit City FPD
- Central Valley FPD
- Mountain Gate CSD
- Cottonwood FPD
- Anderson FPD
- Happy Valley FPD
- Shasta CSD
- Shasta Community College

1.3 Population Growth: A Closer Look

Shasta County's population is expected to be more than 148,000 by the middle of this year. According to the State Department of Finance, the county's population will approach 180,000 by the end of the century and reach approximately 227,300 by the year 2020. The State has not revised its projections since 1986 and will probably not do so until after the 1990 Census results. Because

population projections for smaller counties are difficult to make, the present projections may be significantly revised -- probably upwards -- but they will be retained for the purposes of this study.

During the 1980's, Shasta County's population increased at an annual rate of 2.6 percent. In this decade, growth is projected to decline to a 1.9 percent rate. Much slower rates are expected after the year 2000 (see Table 1.1). More than half the county's population is in the unincorporated areas -- 75,125 persons as of January 1, 1989. The City of Redding had 59,800 people as of the same date while the City of Anderson was estimated to contain 8,175 persons.

The greatest component of change in the last decade has been net in-migration. (See Table 1.2). Between July 1, 1980 and July 1, 1989 the county's population increased by 30,885. More than three-fourths of this growth (23,534 persons) is due to the net influx of new people into the county. Most observers believe that many of these new households consist of older retired people who have sold more expensive housing in urban areas and exchanged lifestyles for retirement in less hectic surroundings. If these observations hold up after the 1990 Census, they will have implications for staffing the county's mostly volunteer fire departments.

1.4 Structure of the Report

The remainder of our report focuses on several key subjects. They include the fire history and our analysis of the potential threat; fire protection policies and criteria, including levels of service; organizational structure and boundaries, fire protection operations, staffing, and training; station location and the status of apparatus; adequacy of water supplies; effectiveness of communications services; status of fire prevention activities; financial implications; local versus state administration of the SCFD; and some additional considerations. Appendices containing additional materials are included.

TABLE 1.1
POPULATION ESTIMATES AND PROJECTIONS, SHASTA COUNTY, 1980-2020

COUNTY AREAS	(a) ACTUAL		(b) ESTIMATED		(c) PROJECTED			
	Jan 1, 1980	% DISTRIB	Jan 1, 1990	% DISTRIB	July 1, 1990	July 1, 2000	July 1, 2010	July 1, 2020
Anderson	7,350	6.4%	8,400	5.7%	<d>	<d>	<d>	<d>
Redding	41,450	36.0%	63,400	42.9%	<d>	<d>	<d>	<d>
Unincorporated	66,200	57.6%	75,900	51.4%	<d>	<d>	<d>	<d>
SHASTA CO.	115,000	100.0%	147,700	100.0%	148,200	179,600	204,000	227,300
			ANNUAL GROWTH RATES FOR PERIODS SHOWN:		2.6%	1.9%	1.3%	1.1%
					1980-90	1990-00	2000-10	2010-20

SOURCES:

California Department of Finance
 (a) Report 89 E-2
 (b) Report 90 E-1
 (c) Report 86 P-1 (Latest)
 (d) Not Available

TABLE 1.2
COMPONENTS OF POPULATION GROWTH BETWEEN 1980 & 1989
SHASTA COUNTY

	POPULATION	
	July 1, 1989	July 1, 1980
TOTAL CHANGE	30,885	
COMPONENTS	% DISTRIB	
Births	18,371	59.5%
Deaths	11,020	35.7%
Natural Increase	7,351	23.8%
Net Immigration	23,534	76.2%
TOTAL CHANGE	30,885	100.0%

SOURCE:

California Department of Finance

2. Fire and Emergency Medical Services

2.1 Environmental Influences

In spite of a history of relatively good experience, the South Central Region of Shasta County presents an environment that is conducive to destructive fires. The native vegetation, some steep and rugged topography, and hot dry weather with low humidity over long periods of time increases the combustibility of native vegetation. When compared to other regions of California with a worse record of destructive fires in wildland areas, Redding compares favorably.

The area surrounding Redding presents a mix of wildland and structural development. Increasing population introduces ever greater numbers of people into the area, and this presents greater opportunities for accidental fires. The severity of exposure varies according to the density of structural development, the types of buildings, the occupancies (residential, business, industrial), and the general level of maintenance of the structures and the land around the buildings.

2.2 Urban Fire Potentials

2.2.1 Urban Areas

For the purposes of this study, the City of Redding, the lands within the Central Valley Fire Protection District, the City of Anderson and the Cottonwood Fire Protection District are considered to be urban in character because of the prevailing population density. Structural conditions in these areas include the typical mix of one and two story wood frame dwellings usually on 6,000 or greater square foot lots, and in poor to good condition, depending on the age of the neighborhood.

There is some potential for group fires in the older neighborhoods of Redding, the more densely developed portions of the City of Anderson, the older area of downtown Cottonwood, and to a lesser extent, in the Central Valley Fire Protection District.

~~Suburban Areas~~

The principal suburban areas include Jones Valley, Palo Cedro, Keswick, Shasta College, Old Shasta, ~~Happy Valley~~, Centerville, parts of Mountain Gate, Summit City, and some parts of the Buckeye Fire Protection District. Suburban areas consist mostly of widely spaced single family dwellings where most of the dwellings are on large lots up to 2.5 acres in size. Suburban areas generally are

in areas of vegetation which dries out by the end of the summer and presents an exposure to brush and wild grass. Frequency of fires is relatively low when compared to other hot, dry areas of California.

~~_____~~
Rural areas include those in, around, and near Millville, ~~Happy~~
~~Valley~~, West Valley, and Centerville where homes are mostly located on parcels five acres or larger with considerable separation between structures. Structures in these areas have a high degree of exposure to wildland fires. However, the proper maintenance of vegetation around most properties is fairly good, and this is reflected in the overall favorable fire experience of the study area.

2.3 Fire History

Fire department responses for the years 1984 through 1988 were studied to determine the actual fire experience in the study area. Each fire agency furnished data for all five years with the exception of Summit City Fire Protection District, Shasta Community Services District, and the City of Redding. Summit City, Shasta, and Redding submitted information for the year 1988 only. The Cottonwood Fire Protection District did not submit any written information.

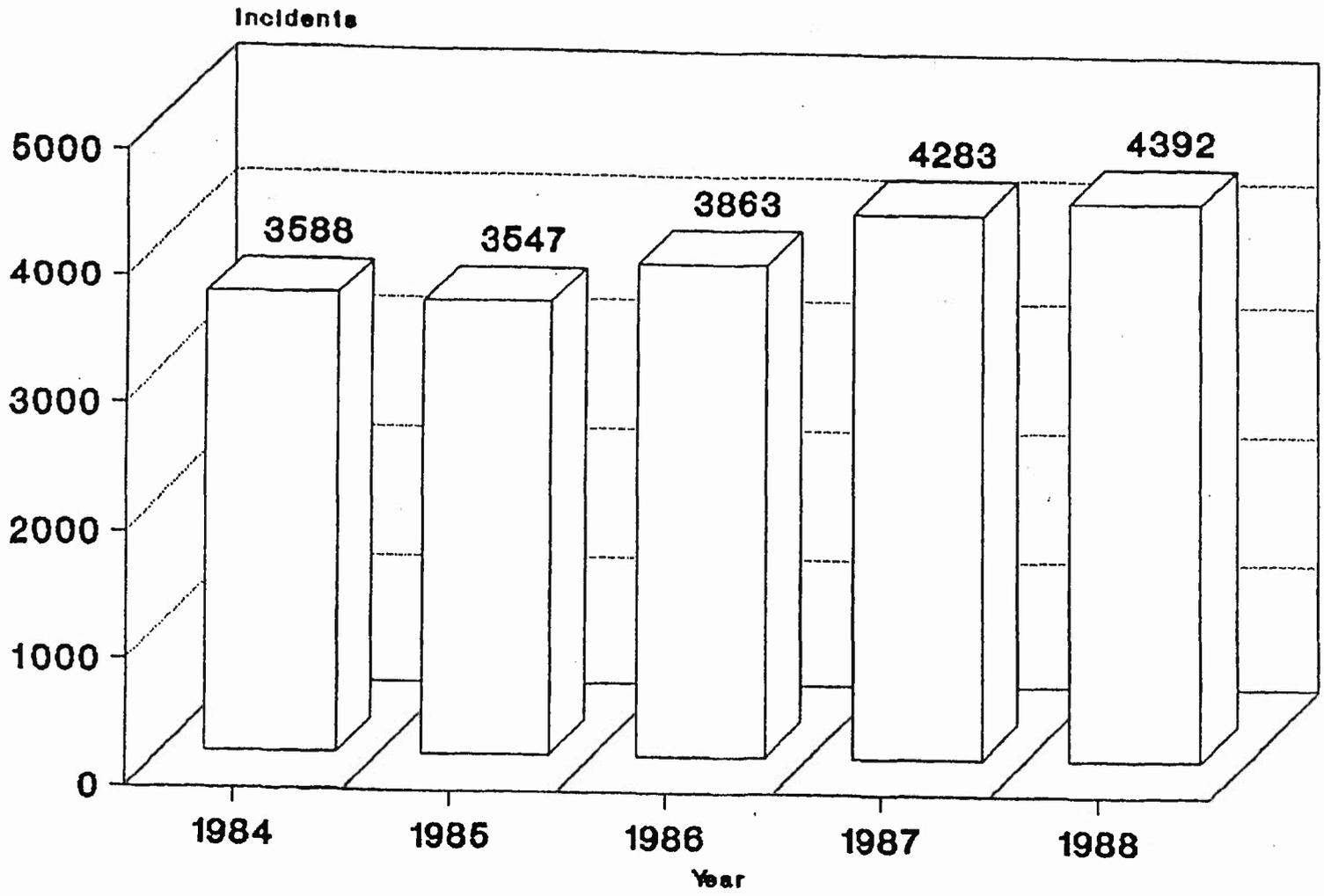
See Figures 2.1, 2.2, and 2.3 for the five year experience of the agencies that reported. This data includes all of the Shasta County Fire Department Volunteer Fire Companies in the study area.

The populations for the two years 1984 and 1988 are included for purposes of comparison. The population of Shasta County increased 9% during that period (the populations of the various fire districts in areas reporting in this study are not known). Fires in buildings during this period of population increase have decreased by 22% while the people-caused incidents, such as outdoor fires of all types and the non-fire and non-medical emergency responses, increased by 18% and 56% respectively. Further, medical calls increased 30% during the same period of time.

2.4 Emergency Medical Services

The provision of emergency medical services by fire personnel is one of the most complicated issues in the SCR. This is common in other areas as well. Initially, providing both services through the fire protection organizations looks like a "natural marriage." But often it does not work well, especially, where full time paid

Figure 2.1
TOTAL EMERGENCY RESPONSES
South Central Region (1984-88)



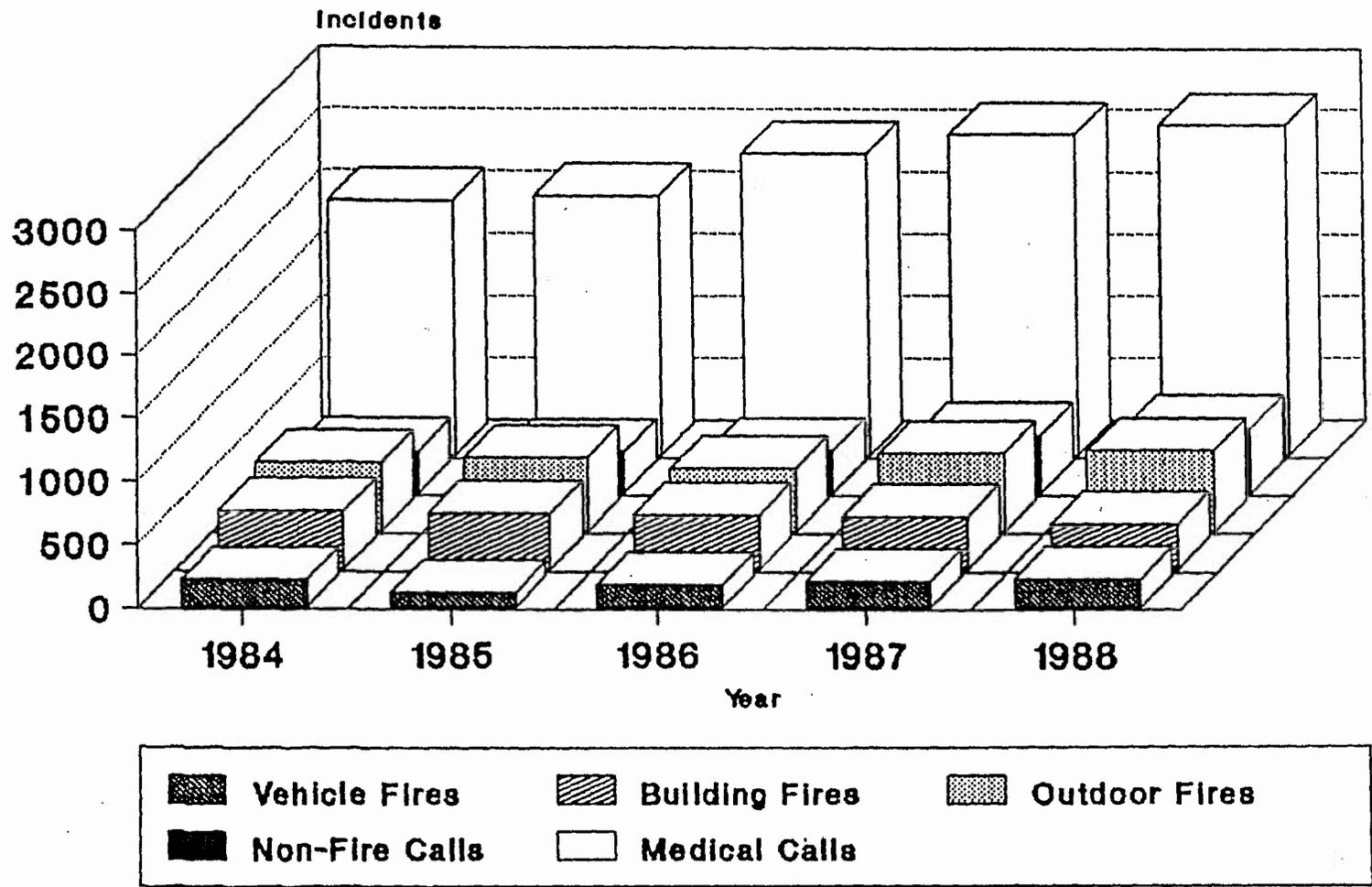
SOURCE: Fire Department Records

Figure 2.2

EMERGENCY RESPONSE EXPERIENCE
1984-1988

TYPE INCIDENT	1984	1985	1986	1987	1988	5 Yr. Avg.
Fires, Buildings	455	441	427	417	354	419
Fires, Outdoor	543	581	498	617	640	576
Fires, Vehicle	214	113	180	209	222	188
Subtotal	1,212	1,135	1,105	1,283	1,186	944
Non-Fire	336	331	341	462	524	399
Medical	2,040	2,081	2,417	2,578	2,652	2,354
Total Responses	3,588	3,547	3,863	4,283	4,392	3,935

Figure 2.3
RESPONSES BY INCIDENT TYPE
South Central Region (1984-88)



SOURCE: Fire Department Records

personnel are on duty and there is no call screening. This steadily leads to increasing dependence on EMS services, even for the most minor of medical problems.

Although there are some uncertainties about reconciling the data from the fire agencies and the Northern California EMS, Inc., two things are clear: (1) EMS calls are the greatest--and growing--part of the fire services' workload, and (2) they are much higher in those areas served by paid fire fighters. For example, Figure 2.2 shows that about 60 percent of total responses in 1988 were medical. If the City of Redding and the excluded districts (Cottonwood, Summit City, and Shasta) are included, medical calls exceed 70 percent. There is disagreement among those interviewed that the training and certification requirements, as well as the frequency of EMS calls, especially at night, leads to "burn out" and the consequent loss of volunteers. There are also some fire fighters who just do not want to be medics.

2.4.1 Service Delivery

First responder emergency medical service is delivered by all of the volunteer fire department companies and special district fire departments in the study area. Substantial numbers of volunteer fire fighters in both the districts and the county volunteer fire companies have attained Emergency Medical Technician I (EMT I) status, and they are in the process of becoming certified to operate automatic defibrilators. Shasta County will be the first in the state to have all departments so qualified. The City of Redding's Fire Department offers first responder service only. Full paramedic level service is delivered by the private ambulance services in the region from the two medical centers and one independent provider. No fire departments transport patients as a part of their services.

2.4.2 Conclusions

The total fire calls are far below the medical calls in each of the reporting years, and the difference has been increasing. Emergency medical responses have become the most active part of fire department activity in the area. In 1988, about 72 percent of the total fire department emergency responses (exclusive of false alarms) were for emergency medical reasons. As the population increases in the South Central Region, emergency medical responses will continue to accelerate at a greater rate than fire protection responses.

In spite of the readily combustible vegetation in the area combined with the extremely hot and dry weather, the actual fire experience over the past few years demonstrates that fires in buildings need not increase proportionately to population growth. A combination of continued and improved levels of fire prevention and public fire prevention education will result in continued favorable experience.

The overall fire experience will be below that considered normal in the United States. This is a good record and is encouraging from the point of view of controlling governmental costs while providing an adequate level of fire protection service.

On the other hand, the influx of older people (age 55 and up) is an indication that the demands for emergency medical service will continue to increase as the population increases. The existing emergency medical service delivery system is an eminently sensible division of responsibilities between the public fire service and the private health services. The fire services are providing immediate response to provide the necessary emergency intervention to sustain life until the arrival of Advanced Life Support (ALS) units. The ALS units in turn are privately owned and privately financed. Two of them are directly connected with hospitals that provide definitive medical care. Thus, the ALS service is really an extension of the hospital emergency room. This is considered to be a high level of service.

2.5 Recommendations

We believe a number of actions might be taken, however, to smooth out the workload and enhance the service in the areas outside of Redding. These include the following recommendations:

1. While recognizing previous efforts, there is a continuing need to provide call screening by tying in or using one of the fully staffed emergency rooms as the EMS dispatch center until the joint dispatch center is operational (in which call screening should be continued);
2. When medical calls become excessive in those areas served by volunteer personnel, request that a private ambulance service assume the responsibility, or provide full-time EMS staff to handle only this duty; and
3. Work with the local medical community to encourage the support and use of walk-in urgent care centers. Complimentary efforts should be made to encourage public awareness and use of these facilities.

3. Policies and Criteria

3.1 Policies

Fire protection policy in the South Central Region is established by the Redding and Anderson City Councils, the Fire District Boards of Directors, and the Boards of Directors of the two Community Services Districts. The County Supervisors, in conjunction with the California Department of Forestry and Fire Protection, establish policy for fire protection in the parts of the County that are not within cities or fire protection districts.

Governmental concerns with fire protection originated early in American history. Cities consisted of closely built wood frame buildings, and one person's fire could and did destroy the wealth of entire communities. At first, there was no public concern for isolated rural properties that did not pose a threat to neighbors. The scope of public interest has broadened during the ensuing 200 years, and public fire protection policies continue in a state of flux, driven by diverse interests, not the least of which are insurance companies and public employees' demands.

No official statements of general fire protection policy have been adopted by the governing bodies of agencies performing fire protection in the SCR region. The unofficial policy that appears to exist is that the fire protection agencies and associated fire companies are organized to respond to and extinguish or control dangerous fires, prevent such fires, and perform such emergency services for the public, including first responder medical response, as the public may request or expect.

3.2 Criteria

There have been no officially adopted comprehensive criteria for the performance of fire protection responsibilities other than those adopted unofficially by the City of Redding and the county's Fire Safety Standard for subdivisions. The balance of the fire protection agencies appear to be operating at a level and in a manner that responds to the perceived public needs.

3.2.1 Insurances Services Office

The Insurances Services Office (ISO), an organization sponsored by the property and casualty insurance companies, establishes certain criteria for the purposes of rating public fire protection. The ISO recognizes fire protection when there is an organized fire department sponsored by a public agency that has definite boundaries. For minimum recognition, a fire department must have

a fire pumper with a minimum 250 gallons-per-minute capacity, 300 gallon water tank, certain minimum equipment, housing for the apparatus, a communication system and an organized group of personnel trained to respond to fires. A minimum total of four persons must respond to fires in buildings. One of these persons may be the fire chief. The ISO gives credit for additional facilities and personnel over and above the minimum and by establishing 10 public fire protection classifications for fire insurance rating purposes. These classes range from Class 1, which would be the maximum credit for fire protection, to Class 10, which represents very weak or unrecognizable fire departments. Generally, the fire insurance rates that apply for a given Public Protection Class (PPC) apply to all properties within the service area that are within 1,000 feet of a fire hydrant and 5 miles of a fire station.

Those properties more than 5 miles, but not more than 10 miles, from the closest fire station are classified as Class 9. Those properties more than 1,000 feet from a hydrant but within 5 miles of a station are also classified as Class 9, except for one and two family dwellings not over two stories in height when the fire department has demonstrated its ability to deliver water at a rate of 200 gallons a minute without interruption for a period of at least 20 minutes. This qualifies one and two family dwellings not more than two stories in height for Class 8, a substantial savings in fire insurance premiums.

In addition to the foregoing, the Insurance Services Office will recognize water supplies where a delivery of a minimum of 250 gallons per minute can be maintained for a duration of two hours with consumption at the maximum day rate.

There are no government or other officially recognized criteria for the delivery of fire protection in the United States.

3.3 Recommendations

To establish a basis for reviewing fire services, we suggest that:

1. The Board of Supervisors should adopt as part of its fire protection policies one that states fire stations should be located within five miles of any built-up area, and not more than 10 miles where densities are one unit or less per acre. If the area is more densely populated than either of these, fire stations should be within three miles. Generally, stations within the SCR presently meet these criteria. See the levels of service discussed below.

2. Shasta County and the special districts should adopt policies for the delivery of fire department services in the South Central Region that relate to the density of structural development, magnitude of fire risk and distance from fire stations. There are three levels of need that are characterized by distinct differences, as follows:

Service Level I

Service Level I should be based on the ability to arrive at an emergency within five minutes 80% of the time, and within 10 minutes 100% of the time by a force that is able to confine a serious fire to the building of fire's origin. Personnel should be available in sufficient numbers to assure a first alarm response of 12 members (combination of paid and volunteer) to all building fires.

Service Level I should apply to the cities of Anderson and Redding and to the Cottonwood and Central Valley Fire Protection Districts.

Service Level II

Service Level II should constitute a fire department service with the ability to arrive at an emergency within 10 minutes from a station within five miles, and to meet the water delivery requirements for Service Level I in all areas not served by fire hydrants.

Areas recommended for Service Level II include those lands where densities are between one dwelling unit per acre and one dwelling unit per five acres.

Service Level III

Service Level III should constitute the minimum structural fire suppression effort to be provided in the SCR area. All lands within the service zone should be within 10 miles of a fire station, or closer if emergency response travel time is greater than 15 minutes. The responding apparatus should be capable of delivering 200 gallons of water per minute without interruption for 20 minutes. The responding apparatus should be staffed by a minimum of five trained personnel. This should prevent a building fire from spreading to the surrounding wildlands.

Areas recommended for inclusion in Service Level III are those where densities are one dwelling unit or less per five acres.

4. Organizational Structure and Boundaries

4.1 Current Situation

Fire department services are delivered in the SCR area by one city, two community services districts, six fire protection districts, seven volunteer fire companies of the Shasta County Fire Department, two paid county companies (CDF staff), the California Department of Forestry and Fire Protection (CDF), and the Shasta Community College. The Shasta County Fire Department is administered by the CDF under a contract with Shasta County. Some volunteers are paid a small stipend for each call.

4.1.1 Cities

The City of Anderson is included within the boundaries of the Anderson Fire Protection District.

The City of Redding delivers fire department service from seven fire stations. Redding is governed by an elected city council, and the staff is administered by a City Manager who has the authority to appoint or remove all department heads, including the Fire Chief. The city also provides police service, potable water, and electric power, and other more traditional municipal services. Redding is the commercial center of the study area. The fire department personnel include full-time career and paid-on-call volunteer members. Most fires and emergency incidents are controlled without resorting to the use of volunteers.

The City of Redding contracts to deliver fire services to the Buckeye Fire Protection District.

4.1.2 Community Services Districts

Two community services districts, Mountain Gate and Shasta, have fire department service as one of the voter-approved purposes of the districts.

The Mountain Gate Community Services District delivers potable water and fire protection service. An elected board of directors governs the district and employs a full-time manager. A district employee has been serving as the part-time paid chief of the all-volunteer fire department.

The service area is approximately six square miles. The southwest corner of the district is adjacent to the east boundary of the Central Valley Fire Protection District. The service area is parallel to Interstate Highway 5 (I-5).

Shasta Community Services District also is responsible for the delivery of potable water and fire protection services within its approximately eight square mile territory. An elected board of directors governs district operations. The all volunteer fire force is supervised by a fire chief who is elected by the members subject to the approval of the district's board of directors.

The eastern boundary of the district is adjacent to the City of Redding on U.S. Highway 299.

4.1.3 Fire Protection Districts

The Anderson Fire Protection District includes the City of Anderson. The service area is approximately six square miles and adjoins the north boundary of the Cottonwood Fire Protection District. Lands are developed to urban densities. A commercial district is divided by the Southern Pacific Railroad right-of-way.

The District is governed by a five member board of directors who are appointed by the Shasta County Board of Supervisors and the Anderson City Council.

The fire department is staffed by a combination of career paid and volunteer personnel. There is a full-time Fire Chief who is assisted by five full-time employees. The paid personnel are supplemented by 21 volunteers.

An CSA #1-financed engine is assigned to the Anderson fire station. It is staffed by at least one and sometimes two CDF personnel.

The Buckeye Fire Protection District includes approximately four square miles. The governing board of directors is appointed by the Shasta County Board of Supervisors. The district contracts with the City of Redding for the delivery of structural fire suppression services. Wildland fires within the district are the responsibility of the CDF.

The district is bounded by the Summit City FPD on the north, Central Valley FPD on the east, the City of Redding on the south, and by National Forest lands on the west. More than one-half of the service area is within the City of Redding's sphere of influence.

The Central Valley Fire Protection District is approximately six square miles in area. The district is governed by an elected board of directors. A full-time Fire Chief, five full-time and three part-time paid employees are supplemented by 12 to 14 volunteer personnel.

The district joins National Forest lands on the north, Mountain Gate CSD and SCFD service areas on the east, the City of Redding and the Buckeye FPD on the south, and both the Buckeye and Summit City fire protection districts on the west.

The Cottonwood Fire Protection District is located on the south boundary of Shasta County and includes approximately 11 square miles of level and gently rolling land. The district is governed by a three member board of directors. The service area is a mix of urban density residential and small commercial development and rural farmlands. Some industrial development has occurred, and it includes a sizeable energy co-generation facility. The paid Fire Chief and two paid members are supplemented by 20 volunteer personnel.

 is approximately 29 square miles in area. The district is rural agricultural in character. The  member governing board is elected. The service area is almost entirely within the T30N R5W MDBM sections, and joins the City of Redding on the northeast quadrant of the district.

The volunteer Fire Chief is assisted by a paid assistant fire chief. A volunteer force of 28 persons performs functions of the fire department.

The Summit City Fire Protection District is slightly more than one square mile in area. The area is wholly residential in character. The service area is bounded by National Forest lands on the north and for more than half its length on the east and west. It is bounded by Central Valley FPD on the east and south and by the Buckeye FPD for a short distance on the west.

The district is governed by an elected board of directors. A part paid Fire Chief heads a ten member force of volunteer personnel. The volunteer force was recently reduced from 15 to 10 members to reduce workmens' compensation insurance costs.

4.1.4 Shasta County Fire Department

The Shasta County Fire Department (SCFD) is responsible for delivering fire department services outside of cities and fire districts in the SCR area. The department is governed by the Shasta County Board of Supervisors, and it is administered by the Shasta-Trinity Ranger Unit of the California Department of Forestry and Fire Protection under a contract.

The Shasta County Fire Department commenced operation in 1976 as a separate county department. The organization was headed by a county appointed Fire Warden (fire chief) and included one fire captain and two paid fire companies of six members each and 16 volunteer fire companies. The two paid companies and six of the

volunteer fire companies were located within County Service Area One which was approximately the same area as the SCR. Funding was from two service areas which raised approximately \$330,400 in excess of operating costs in that year according to the SCFD's 1977-1978 annual report. Approximately 83 percent of the total SCFD revenue was raised in CSA #1 that year.

Proposition 13 reduced ad-valorem tax revenues. Internal problems beset the department and a change in leadership was made. Some problems did not abate, and the County Board of Supervisors chose to contract with the CDF to assume responsibility for and administration of the SCFD. CDF has operated the SCFD since 1980, and several aspects of county fire department operations are fully integrated into CDF operations. These include training, fire prevention, purchasing, and emergency communications. The function of the SCFD County Fire Warden is performed by the CDF District Ranger.

The SCFD operates seven fire stations in the SCR area that are staffed by volunteer personnel. One CDF station located at the Redding Airport is staffed year around by career CDF personnel, and the post-fire season service is funded from SCFD revenues under the terms of an "Amador Plan" contract. One SCFD company staffed by CDF personnel is located in the Anderson FPD station and is funded from SCFD revenues in accordance with a "Schedule A" agreement with the CDF.

The seven volunteer fire companies elect their own fire chiefs and other officers. The volunteer fire companies maintain an average total of 107 members. Each company conducts fund-raising events throughout the year, the proceeds from which fund equipment purchases and maintenance over and above the money received from ad valorem taxes and Measure B sources.

CDF personnel provide a variety of administrative and management functions, including budgetary, planning, coordination, purchasing, fire prevention, training, fire investigation and related services.

The CSA #1 budget pays for operation and administration of the CDF/SCFD contract. We estimate that an approximate total of 36 state personnel participate in SCFD operations to some degree. Some of these positions are funded as "Amador Plan" expenses and some as "Schedule A" expenses. The state is compensated for Amador costs on the basis of differences in costs between fire season and post-fire season costs of personnel and stations. Schedule A charges pay for the state operation of a county-owned engine. The year-round operation of the Redding Airport and the Burney forest fire stations are paid for at Amador rates. The operation of Company 47 at the Anderson FPD station is paid for at Schedule A rates. There have been many concerns expressed about the cost of the Schedule A operation at Anderson.

4.1.5 Shasta Community College

The college campus is located within the City of Redding sphere of influence and east of the existing city boundary. The college operates a fire department in conjunction with a fire technology program. Fire technology students staff (and live in) the fire station under the supervision of the fire coordinator and a small staff of paid assistants. The entire operation is funded by the college district.

The college fire department will respond to off-campus incidents, and it participates in mutual aid pacts.

4.1.6 California Department of Forestry and Fire Protection

The Shasta-Trinity Ranger Unit headquarters of CDF is located in Redding. The CDF is responsible for fire prevention and suppression on wildlands outside of incorporated cities. It also operates staffed fire companies on a seasonal schedule. A CDF aerial attack service base is located at the Redding airport.

The CDF ranger unit furnishes fire emergency communications services to all SCR fire agencies, except the Cottonwood FPD and the City of Redding.

4.1.7 Discussion

The ultimate expansion of the City of Redding to the limits of its designated sphere of influence is assumed. This sphere includes most of the Buckeye FPD and some of the Central Valley FPD. Annexation to the city ultimately will have financial impacts on the county's abilities to support the other fire organizations.

Financial support of the Summit City FPD and the fire protection function of the Mountain Gate CSD is weak because of the limited tax bases of the small service areas. These offer little hope for revenue-producing development sufficient to independently attain and reliably maintain a reasonable level of fire department service.

The annexation of unincorporated areas to the City of Redding will reduce revenues to the SCFD and several VFCs and FPDs. Also, the city will be required to assume all costs of wildland fire protection in the annexed areas. However, most of the land is unimproved at present and the drop in revenues to the SCFD may not be severe.

The Buckeye FPD depends totally on the City of Redding for fire department service. There is no indication that the district will ever organize, staff and equip an independent fire department. There is little potential for annexation of new territory to the district. Present development is sparse.

The Summit City FPD is small and lacks the tax base necessary to support a strong operation. There is no potential for the annexation of additional land. Also, it appears that there is no pressure for extensive new development or redevelopment within the area. A planned special benefit assessment fee will raise approximately \$25,000 per year if approved, but this amount will barely support one full-time employee.

Central Valley FPD appears to be a stable operation that is delivering a relatively high level of fire department service. Development in the service area dates from the Shasta Dam construction era. Most structures were built prior to the application of building codes to unincorporated areas in California. A redevelopment district has been formed, which includes the commercial lands on Shasta Dam Boulevard.

Mountain Gate CSD has operated the volunteer fire department under supervision of a district employee who has served as a paid fire chief on a half-time basis. This chief has managed to stabilize the volunteer membership during his tenure, but he has announced his intention to resign from his fire department responsibilities. The financial prospects for the district's fire operation are not sufficient to make continued independent operation an attractive option.

Shasta Community Services District appears to be able to respond adequately to the 130 or more emergencies per year. They have been able to maintain a full roster of volunteer personnel. Although Shasta has been able to respond with six or seven volunteer members for day time fires, the chief feels that it may be necessary to employ day time personnel in the not too distant future.

The present system of locating a CDF Schedule A engine (Company 47) in the Anderson station to serve the County responsibility areas near Anderson, Cottonwood, Redding and Happy Valley is operating at a deficit. The area includes agricultural, residential, highway commercial, and some large industrial development. A report on this operation which was prepared by the CDF in 1988 concludes that costs of this arrangement exceed revenues within the service area by nearly 49 percent (\$123,153 in revenues vs. \$182,133 in costs), not including Measure B funds. This deficit of nearly \$59,000 per year is projected to increase to more than \$91,980 over the next five years (from the date of the study). The money to fund this deficit is raised outside the service area of Company 47, and it reduces the support available to the balance of the County Fire Department operations. The operational cost of this station is the subject of considerable criticism and warrants early attention. The problem is further complicated by the volume of incidents (approximately 630 per year) handled by Company 47. It is estimated the Anderson FPD assists at approximately 290 of these responses.

The Anderson and Cottonwood fire districts are adjacent to each other. Some improvement in overall efficiencies could be realized from a consolidation. More importantly, consolidation can reduce the potential for duplication of costly administrative personnel and some facilities. We were informed that the Anderson governing board does not favor expansion. However, consolidation of the Anderson and Cottonwood districts, and their expansion to include the SCFD Company 47 service area, can be supported. Consolidation of the Anderson and Cottonwood districts and expansion to include the SCFD Company 47 service area will forestall the duplication and underutilization of expensive administrative overhead. The estimated current total cost of the two districts and SCFD No. 47 (\$1,100,000) can adequately support a good level of service. Some difficulty in financing a consolidated district might be encountered, however. If costs of all newly consolidated personnel are allowed to escalate to the highest prevailing salary and benefits package, there could be a shortage of money.

The SCFD operation is successful largely because of continued participation of more than 100 volunteer personnel in the seven volunteer fire companies in the SCR. The volunteer companies retain considerable independence, electing their chiefs, raising and controlling funds, and participating in the decision-making process with the SCFD/CDF management.

Some stresses are evident, but they appear to be manageable. Free and open give and take discussions among the VFC chiefs and the SCFD/CDF management take place at monthly meetings. The VFC chiefs participate in determining the distribution of Measure B proceeds. There is always some dissent, but the system works. Obviously, the continued success of the system is highly sensitive to the leadership and political skills of the top management. The personalities and philosophies of assigned CDF managers and subordinates will always be a factor and the selection and the assignment of CDF personnel is only rarely influenced by Shasta County officials.

Some VFCs experience recruiting difficulties. Citizen support of the system varies by service area. These problems will grow as the average age of the population increases. Some potentially valuable volunteer candidates are "turned-off" because of statutory performance requirements, insurance criteria and related reasons.

The Shasta College fire technology program is a unique and valuable asset that has not been exploited to the maximum possible benefit to the county. Employment opportunities are limited in Shasta County, and the program has a good record of placing students in fire protection jobs outside of the county. Several local departments cooperate with the college program by using student "sleeper" personnel.

The territory south of [redacted] Happy Valley FPD is a void that must be filled by the SCFD. The eastern district boundary varies from two to four miles from the west boundaries of the Anderson and Cottonwood districts. North-south access east of the district is practically non-existent for emergency response purposes. The area between the south Happy Valley boundary and Cottonwood Creek is sparsely populated. It is too small to develop proper support for a volunteer fire company.

The Cottonwood FPD operation is an enigma. The reluctance of the Anderson district to expand to the south, and the absence of sufficient revenues to eliminate the SCFD Company 47 operating deficit complicates the development of cost effective fire services for this segment of the study area.

✓ In sum, there are significant advantages to reorganizing fire protection responsibilities in both the north and south ends of the study area. Reorganization can prevent severe funding problems in districts that are too small to afford routine compensation and liability insurance protection and other basic costs associated with the delivery of even minimum fire protection services.

The SCFD's operations are fairly efficient and will remain so as long as sufficient volunteer members can be recruited. In some cases, it may become desirable to staff selected stations with career personnel for daytime coverage. General administration and fiscal management of the SCFD appears to be sound and reasonably efficient.

While this study focused only on the SCR, it is worth noting that if all the proposed reorganizations are implemented, impacts would occur in other areas of the county. Revenues for CSA #1 subsidize some fire protection services outside the SCR, and if CSA #1 monies are absorbed, then nothing could be left for the outlying areas.

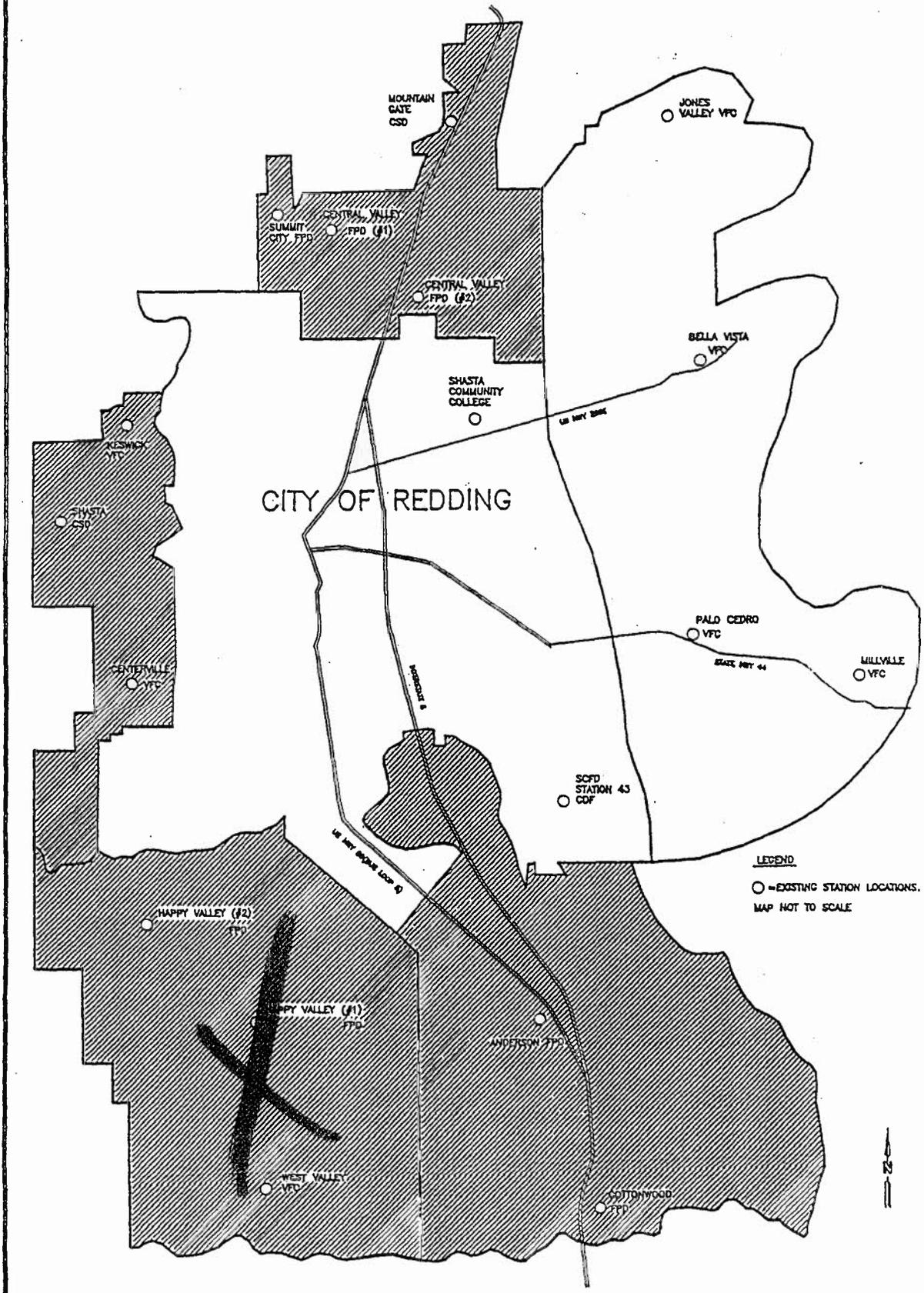
The following recommendations focus on revising the spheres of influence of existing fire districts, establishing spheres of influence for the recommended new districts and joint powers authorities, and annexing some SCFD territory to fire districts.

The following map illustrates how we recommend they should be consolidated. Consolidation means that the Local Agency Formation Commission (LAFCO) will delete the existing spheres of influence for some organizations, such as the Buckeye FPD, and redraw others to expand their service area.

2 Recommendations

These recommendations present the alternatives we consider that will best meet the needs and conditions of the South Central region. Other alternatives are available, including a county fire

PROPOSED NEW FIRE DISTRICT BOUNDARIES SOUTH CENTRAL REGION



LEGEND
 ○ - EXISTING STATION LOCATIONS.
 MAP NOT TO SCALE

L1

department and eliminating all self-governing fire protection districts, or eliminating the county fire department and changing the government of special districts from elected to appointed directors. Our recommendations should not be construed as inflexible. ~~For example, we recommend expansion of the Happy Valley FPD's sphere of influence to the Wehama County territory. To do this, we consider one residential parcel out of the district to be annexed to adequately support the financial needs of the community in WEST VALLEY. Alternatively, the desired financial base can be obtained by dissolving the Happy Valley district and merging it with the SCFD.~~ The ultimate choice is up to the voters or their elected representatives. The intent is to provide a solid organizational foundation to support fire department services to a rapidly changing region.

Annexation of SCFD lands to cities and districts causes a reduction of revenues to CSA #1. Ultimately, these withdrawals must result in reductions in SCFD's operations. The potential for adverse effects from large withdrawals is easily recognized, but the cumulative result of piecemeal small withdrawals may not be noticed in time for proper development of mitigation measures. Therefore, the LAFCO should require all annexation or reorganization proposals to identify any adverse effects on CSA #1/SCFD so that they can be evaluated.

4.2.1 Reorganize the Northern Districts

Revise the Central Valley Fire Protection District's sphere of influence. Reorganize the Buckeye, Summit City and Central Valley Fire Protection Districts. Incorporate the fire protection responsibilities of the Mountain Gate Community Services District into the new fire protection district.

Discussion

The consolidated Central Valley FPD's sphere of influence should be revised to include all of the Summit City FPD; all of Sections 20, 21, 27, 28, 29, 31, 33 and 34 of T33N R4W; all of Sections 3 and 4 and the north 1/2 and the east 1/2 of the southeast 1/4 of Section 5, and the north 1/2 of Section 10 of T32N R4W. This includes the proposed "Perry Development" south of Mountain Gate.

More than three square miles of the Buckeye FPD are within the City of Redding's sphere of influence, and the remainder of the area will be unable to support a separate fire department. The Summit City FPD's service area is very small. Although community pride in the fire department is very high, its tax base is insufficient to sustain a strong operation. In fact, the Summit City board of directors limits the volunteer force to ten active members because of the cost of workmens' compensation insurance. If the remainder of the Buckeye FPD were annexed to Summit City, the total revenue would be insufficient to support an effective fire department.

The Central Valley Fire Protection District enjoys fairly adequate financial support. The six member paid staff is able to provide a formal fire prevention service in addition to training volunteers and handling most routine emergency services.

The Mountain Gate fire operation has functioned fairly effectively under the leadership of the present half-time paid chief, who is an employee of the community services district. The incumbent chief has announced his intention to resign as fire chief and return to full-time water service duties. District management is considering recruiting a half-time fire chief at a nominal salary. We believe that this plan has a limited chance of long-term success. Also, discussions have taken place with both Central Valley FPD and SCFD officials, but they have not been productive.

The perpetuation of inadequately funded marginal fire protection districts should be discouraged. A single adequately funded organization can deliver a higher quality of service than any combination of smaller organizations. Sensitive leadership can preserve and enhance each community's identification with its fire department.

Should the Mountain Gate district choose not to be annexed to Central Valley, the Buckeye, Summit City and Central Valley districts should be consolidated. The Mountain Gate CSD can enter into a joint powers agreement with the Central Valley FPD when its board deems proper.

4.2.2 Reorganize the Southern Districts

1. Establish a sphere of influence for a consolidated Anderson-Cottonwood Fire Protection District.
2. Consolidate the Anderson and Cottonwood Fire Protection Districts.
3. Immediately discontinue the Schedule A operation of County Fire Company No. 47, and enter into a contract with the Anderson and Cottonwood FPD's to provide the services.
4. Contract for interim response services to SCFD fires and emergency medical incidents with the Anderson and Cottonwood Fire Protection Districts.

Discussion

The new Anderson-Cottonwood sphere of influence should include all of the existing Anderson and Cottonwood FPDs. It should also include those lands south of the southern boundary of the City of Redding's sphere of influence, the west bank of the Sacramento River as far south as Shasta County's southern boundary, and the

Churn Creek Bottom area. Engine Company 47 at the Redding Airport and the Anderson station are the closest fire companies to most of the Churn Creek Bottom area.

The area between the City of Redding and Tehama County presents some complex issues.

First, County Fire Company 47 at the Anderson fire station operates at a cost which exceeds the tax revenues generated from its service area. Thus, it is partially supported at the expense of reduced funding for other county fire companies. However, the company is normally the first responder to the high value wood product plants in the area.

Second, the Anderson FPD governing board has been slow to expand its boundaries beyond the Anderson City limits because they wished to use fire department service as an enticement to annexation. The fire chief fears that the revenue increase to be gained from our recommended annexations would not cover the increases in operating costs.

Third, presently, there is no volunteer fire company in the area east of the Anderson and Cottonwood districts.

Our recommendation provides the best economy of scale. There are presently 12 full-time employees (including three CDF employees) in the three operations. Three of these positions, the chief and assistant chief of Anderson and the Cottonwood chief, are administrative. Also, a CDF battalion chief spends part of his time on the administrative needs of SCFD Company 47. Anderson operates seven apparatus, and Cottonwood has at least four operational pumpers. Each district has 20 or more volunteers.

There are sufficient apparatus and volunteer personnel to absorb the SCFD's Company 47 workload. The funding of the new district will permit providing one full-time employee on duty during daytime hours at the Cottonwood station at the Anderson's salary and benefit levels (an obvious working condition improvement for Cottonwood employees). With some planning, the increased administrative load will be hardly noticeable.

We expect that there will be considerable local resistance to implementing this recommendation, partly because of the community's identification with the fire department and partly because local employees may perceive the reorganization as a threat to their job security rather than as an expansion of their opportunities.

An option for the consolidated and expanded district exists. The entire operation can be contracted to the California Department of Forestry and Fire Protection (CDF). The advantages are that full-time employees would be available at all hours in both stations, present employees can be absorbed into the CDF with improved

benefits and much broader career opportunities, and administration can be combined with the other activities of the ranger unit. The disadvantages include the need to accept assignment of personnel by a state agency, salaries and personnel policies are determined by the state, feared loss of some local control and identity (although the contract can be terminated), and the necessity to conform to some state prescribed practices.

The report on fire protection costs in the SCFD Company 47's response area prepared by CDF in 1988 shows that the cost of operating Company 47 was \$182,133. This is nearly \$59,000 in excess of the revenue that CDF estimates is raised in the company's service area. The money required to fund this deficit reduces the financial support available for the other county fire operations.

We, therefore, recommend that the Schedule "A" operation of Company 47 be discontinued and that the SCFD enter into a contract with the Anderson and Cottonwood Fire Protection Districts for response to fires and medical emergencies in Company 47's response area. Relocation of this engine is being implemented at this time. The districts should be compensated for this service. Using the figures presented in the CDF report, we suggest that the estimated revenues be apportioned as follows:

Estimated revenue is	\$123,153
Estimated charge for contract administration, communications and training by SCFD	\$ 13,153
Apportion 50 percent of the balance to the FPDs for a standby contract; \$27,500 each per annum	\$ 55,000
Divide 50 percent of the balance between the two FPDs; according to number of actual responses; to be calculated and distributed at the end of each fiscal year	\$ 55,000

The SCFD service areas assigned to each FPD should be established by extending the Anderson-Cottonwood boundary east to the Sacramento River and west to the section lines representing the extreme eastern edge of the Happy Valley FPD.

At least one SCFD engine should be assigned to one of the cooperating districts, and it should continue to be funded for maintenance and replacement purposes by Measure B revenues. A proportionate fee increase should be allocated to whichever district responds to SCFD fires with district-owned apparatus.

time, the fire services are adequate, but the sphere should be revised as development occurs. There is logic to this since the existing water districts are adjacent in this area.

4.2.4 The East Side: A Special Case

Establish a sphere of influence for the potential organization of a consolidated fire protection district to serve Jones Valley, Bella Vista, Palo Cedro and Millville. This is a long term objective, and a feasibility study should be done before definitive action is taken.

Discussion

There is a potential for substantial development in the area east of Redding's sphere of influence. Topography, the availability of water and power, and the proximity to services available in Redding combine to make the area attractive to buyers who desire some urban conveniences in a rural area with single family dwellings on parcels one acre to five or more acres in size. Ultimately, the total area may generate a volume of fire service responses that exceed the abilities of the existing scattered system.

If a change becomes necessary, the county should review all practical alternatives before committing itself to a permanent organization. The alternatives should include, as a minimum, the existing delivery system, an autonomous fire protection district, a community services district and the expansion of the powers of the Bella Vista Water District. Above all, piecemeal formation of small special districts in the area should be avoided.

4.2.5 Strengthen the Roles of the Volunteers and the Shasta Community College

In general, positive actions should be taken to strengthen the volunteer fire companies of the Shasta County Fire Department, and to heighten the public's awareness of the contribution of the volunteers. Also, Shasta Community College should be encouraged to participate more actively in the Shasta County Fire Department.

Discussion

The history of the Shasta County Fire Department is rich in the active participation of volunteer personnel. The time and work that the volunteers give and the results of their efforts cannot be duplicated except at an expense far greater than the county can pay at the present. Volunteer help needs to be maintained at a substantial level. Public officials must do what they can to see how much of the old-fashioned prestige and status in the community can be restored to volunteer fire company membership.

Some volunteer fire companies experience difficulty recruiting members. Community pride and a desire to be of service are prime inducements to join volunteer fire departments. These motivations need to be nurtured and cultivated. Volunteers should be recruited so as to assure a more even and adequate response to both daytime

and nighttime fires. Residents who work elsewhere do well for night alarms, but applications must be sought from among those who live or work within the service area, even if they live elsewhere. The county's influence should be brought to bear on local employers so that they understand the necessity of the program and support it enthusiastically and unselfishly.

Depending on many factors, the capabilities of VFCs can vary greatly. However, improved leadership must come from within the community. The Shasta College could help by providing the special assistance that is needed to gain citizen support. A comprehensive plan to accomplish this recommendation must include several college departments. Fire company problems present a unique opportunity to develop local leadership and for college faculty and students to study and help solve a local problem. Such efforts will require cooperation among the social studies, fire technology, outreach and other departments and disciplines. The long range result will be an improved community and an enriched college curriculum.

The college could also take the lead in developing materials suitable for helping to recruit volunteers. This method will increase public awareness of the importance and value of volunteer service.

The existing policy of dispatching the local volunteer fire company and the Amador company from the airport should be revised for the area east of Redding. The two closest volunteer companies are supposed to be dispatched to all incidents which may require more than one company (fires in buildings, etc.). In the case of Bella Vista, the Jones Valley VFC usually is dispatched to assist Bella Vista at locations north of U.S. Highway 299, and the Palo Cedro VFC assists at locations south of Highway 299. The VFCs have a way of reaching the CDF dispatcher if the responses are inadequate. Since the county provides funds for all of their VFCs it is appropriate that the adjacent two provide back-up service and participate in restoring the Bella Vista VFC to a higher level of readiness. All volunteer companies in the eastern part of the SCR can handle an increase in responses. Also, the increased fire experience will be a benefit to the maintenance of their abilities. The additional visibility to the public of neighbors who are organized to help neighbors can lead to motivating citizens to participate in the volunteer fire services.

5. Operations, Staffing and Training

5.1 Operations

5.1.1 Current Practices

Response to fires by fire companies varies according to the type of fire, the resources, and the practices of each fire agency. Fires in buildings are assigned the largest number of apparatus and personnel. Vehicle fires and medical assistance calls usually are handled by one or two vehicles. Response to vegetation fires varies according to size of the fire, fuel conditions, weather, humidity, topography and related factors. Vegetation (wildland) fire control techniques are a specialty of CDF, and they have been developed over many years on the basis of analysis and experience. The remainder of this section will deal with response to and operations at fires in buildings because structural fires require the greater initial response of personnel and apparatus compared to other fire or medical emergencies.

SCFD routinely dispatches three apparatus on a first alarm to building fires. The apparatus may consist of two pumpers and a rescue vehicle, a mini-pumper, tanker and rescue vehicle or equivalent combination. They attempt to provide 12 trained personnel with the apparatus. If the needed apparatus and personnel exceed availability in any volunteer fire company, additional companies are dispatched from the closest SCFD or district fire station. Responses to vehicle fires and accidents are usually one pumper or a mini-pumper and a rescue vehicle.

The special district fire companies that utilize the CDF's Communications Center service (all do except Cottonwood) usually respond to their first alarm with their own apparatus and personnel. However, the smaller volunteer departments occasionally have been unable to respond during daytime hours. The communications center then has dispatched the next closest agency that is able to respond.

The Redding Fire Department's first alarm dispatch policies generally conform to ISO criteria. Redding's units are dispatched by city public safety dispatchers.

The CDF dispatches fire companies by radio tone circuits which activate speakers in the stations and battery-powered pagers carried by volunteer personnel and others who may be away from their stations.

Three major, but closely related subjects, are discussed in this section (operations, staffing, and training). The same format is used for each: current practices, criteria, analysis, and recommendations. There are 11 recommendations. Three each are presented for operations and staffing, and five focus on training. Where needed, brief sections discuss the recommendations.

Fire operations are conducted under the general supervision of the highest ranking officer present from the jurisdiction where the fire occurs. In the case of the SCFD, the volunteer chief of each fire company retains operational control unless he or she is relieved by a CDF battalion chief. Some differences of opinion do arise and several of the chiefs are sensitive about the perceived intrusion of the CDF into their operations. However, vegetation fires and wildland fires are clearly the responsibility of the CDF throughout the SCR, except in the incorporated areas.

The City of Redding has annexed large blocks of undeveloped land covered with combustible native vegetation. Technically, the city has total responsibility for all fire suppression on these lands. The city and the CDF ranger unit have agreed to cooperate in fire suppression in agreed upon "zones of mutual threat" where a fire in either area can threaten the other. This practice tends to protect the city from the costs that can be generated by a fire that requires the employment of aircraft, large numbers of personnel, or special equipment. We endorse this practice as long as the benefits to both parties are fairly equal. Should all factors remain as they are now, and should Redding expand to fill its sphere of influence, the arrangement will become unbalanced in favor of the city.

5.1.2 Criteria

Most authorities including ISO and NFPA agree that the minimum initial response to a fire in a building should consist of two pumpers and a ladder or squad vehicle. Obviously, this response should be augmented by tankers in areas where there are no hydrants. Hose loads on pumpers should reflect the hydrant distribution pattern in the respective service areas.

Response to other incidents should vary from one to as many units as are necessary, depending on the type and magnitude of the emergency.

Fire operations should be based on sound tactics that consider the safety of fire personnel and the public, the rescue of humans, the safety of exposed structures, and the control of fires with minimum possible damage. In general, a first alarm response should be able to apply water at the rate of 250 gpm within 90 seconds of arrival and 500 gpm within five minutes in areas where fire hydrants are available. Fire personnel should be able to properly place and

raise a 35-foot extension ladder within 90 seconds. A force responding to locations where there are no hydrants should be able to deliver 200 gpm without interruption for 20 minutes.

5.1.3 Analysis

Operations are conducted as effectively and efficiently as permitted by the wide range and combinations of apparatus, personnel, water supplies, response travel distances, experience and training. In most instances the fundamentals of fire suppression are practiced. The effectiveness of some organizations is hampered by insufficient members, lack of experience and unreliable apparatus. In general, a relatively high level of service is delivered by forces that are composed predominantly of volunteers.

5.1.4 Recommendations

1. The special districts and the SCFD should continue to cooperate closely in the adoption and execution of reasonably uniform and mutually supportive fire scene operating policies.
2. The districts and the SCFD should agree to an area-wide policy of dispatching the closest fire company regardless of boundaries.
3. The districts and the SCFD should agree that fire ground command should be exercised by officers who have demonstrated competent command skills.

Discussion

The recommended procedures do not differ greatly from present practices. However, the dispatching practices require routine monitoring to identify imbalances in mutual aid (uncompensated) response. If, for example, a fire department is so small as to require outside assistance on most important emergencies, consideration should be given to consolidation.

Traditionally, and often legally, responsibility for emergency scene management vests in the fire chief of the jurisdiction. Most fire agencies honor the practice faithfully. In some cases, less experienced chief officers seek advice and assistance from others during large or complex operations. The districts and the SCFD should agree on criteria for specific levels of command competence in advance and procedures for the temporary transfer of authority under specific circumstances that will enhance the health, safety and welfare of the public and provide greater safety to fire fighters.

5.2 Staffing

5.2.1 Current Practices

Fire protection personnel in the SCR are a combination of career employees and volunteers. Figure 5.1 shows the number and classes of fire personnel.

Several volunteer fire companies reported difficulties in recruiting members. Five of the special districts reported problems in recruiting members to be available for daytime response. In some areas the number of eligible citizens is too low to produce many volunteers. In other locations, heads of families may be working two jobs and/or commuting long distances, and they lack the time required for active participation in fire departments. Volunteers range in age from 18 to 67 years. Experience extends to more than 20 years with more than 40 percent claiming five or more years of service.

5.2.2 Criteria

ISO gives maximum fire insurance rating credit when six persons respond with each engine or ladder company. A minimum total response of four persons is needed for the ISO's recognition. The NFPA has not officially adopted any company staffing standards in spite of pressures from labor organizations to do so.

Most paid fire companies in the U.S. operate with three members. Some operate successfully (without injuries to employees) with two, but they make up for it by dispatching extra companies. Volunteer staffing varies greatly depending on several local factors.

Most knowledgeable and experienced fire officials concede that a minimum of nine and preferably 12 trained persons should respond to building fires. A force of this size is able to conduct several coordinated operations simultaneously without endangering personnel.

5.2.3 Analysis

Most of the special district fire departments are unable to respond with nine persons on a first alarm to building fires during daytime hours. Some of the SCFD volunteer fire companies experience similar difficulties. If the numbers of fires should increase, the reluctance of employers to release volunteers for fire duties may aggravate the problem. Moreover, there are a number of barriers to using retired people as volunteers. Given the general demographic trends in the SCR (and probably elsewhere), perhaps Shasta County in concert with others should seek legislation to allow local fire protection services to use retired and other people in appropriate capacities.

Figure 5.1

FIRE PROTECTION PERSONNEL

	<u>Career</u>	<u>Volunteer</u>	<u>Total</u>
Anderson FPD	6	21	27
Central Valley FPD	6	15(a)	21
Cottonwood FPD	3	21	24
Happy Valley FPD	1	29	30
Mountain Gate CSD	0.5	19.5	20
Redding FD	57	13	70
Shasta College	3	15(b)	18
Shasta CSD	0	18	18
Shasta County FPD	7(c)	95 (105-5 yr.avg.)	102
Summit City	0.25	9.75	10
CDF	Varies by season		
Totals:	<u>86.75</u>	<u>256.25</u>	<u>340</u>

- (a) Central Valley utilizes 3 part-time members.
- (b) Numbers fluctuate by semester.
- (c) Additional shared with total SCFD operation.

The above figure does not include CDF personnel who are chargeable to SCFD operations, except those assigned to Station 43 on the Amador plan and Company 47 on the Schedule A contract. Other CDF personnel who serve the entire 23 company SCFD operation include fire captains assigned as dispatchers, training officers, fire prevention personnel, battalion chiefs and other support personnel. Costs of some positions are shared with the state on a pro-rata basis. The SCFD activities in the SCR represent approximately 39 percent of the total county fire department operations.

Actual attendance at fires varies according to the availability of volunteers in most instances. Figure 5.2 illustrates the typical availability of volunteer fire personnel.

Figure 5.2

TYPICAL FIRE ATTENDANCE BY
VOLUNTEER PERSONNEL

AGENCY	DAY	NIGHT
SCFD	3/engine	4.5
Anderson	3.5	ample
Central Valley	6	7.2
Cottonwood	NO REPORT	
Central Valley	9.5	11.2
Mountain Gate	7.5	9.8
Shasta CSD	6.5	ample
Shasta College	1 pd./6 students	1 pd./6 students
Summit City	3 or less	7 to 10

5.2.4 Recommendations

- 1 A minimum of four trained persons in any combination of paid and volunteer fire fighters should respond with each apparatus to fires.
- 2 Volunteers should be recruited, trained and assigned in sufficient numbers to provide the designated response at all hours of the day.
- 3 The county and the districts should cooperate in the development of a comprehensive program to recruit and retain volunteer fire fighters.

Discussion

The safety of fire fighters requires that sufficient members be available on the fire scene to accomplish rescue and extinguishment without injury. Effort should be made to assure the attendance of a minimum of nine and preferably 12 trained persons to building fires.

For the most part, the existing combinations of paid career and volunteer personnel have performed reasonably well and should be continued. The generally low fire experience and limited tax base combine to make paid career fire departments an extremely expensive and probably unattainable alternative. The heavy dependence on volunteer forces will continue well into the next century.

The county, in cooperation with the volunteer fire departments, should develop and adopt a system of recruiting, utilizing and retaining a corps of residents to serve as volunteer fire fighters. The single most valuable asset of the Shasta County fire protection system is the voluntary service that is given by the officers and members of the fire departments. Given the existing and foreseeable financial constraints on local governments, the quality and level of service that can potentially be delivered by the volunteer fire departments far exceeds that which would be available from any full-time paid force that local tax revenues would support.

This report was prepared with the idea that the volunteer system should be retained, at least through the remainder of this century. Volunteer fire fighters (and volunteers who perform other important community functions) are basically generous people who are motivated to give of their time and to fill otherwise unmet community needs. They have genuine concern for the welfare of their neighbors, recognize the advantages of organized and disciplined efforts to deal with the problems of emergencies, and are willing to make personal sacrifices so that the community can enjoy an otherwise unaffordable level of protection.

Many things combine to account for a successful volunteer fire program, but not all are included here. The volunteer must feel that he or she is performing a needed service and will be for many years to come. County officials should do what they can to restore the prestige and status among the citizenry that once was accorded to volunteer membership.

Volunteers should be recruited to provide an adequate response to both daytime and nighttime fires. Residents who work elsewhere do well for night response, but applications must also be sought from those who work within a fire department service area, but live elsewhere. Shasta County's influence should be brought to bear on employers in the area, so that they understand the necessity of the program and support it. One of the most effective recruiting methods is simply personal contacts between VFC members and potential candidates.

The fire departments should accept applications for membership on a continuous basis. The requirements for membership should meet all state and national non-discrimination standards. The selection process should include a review of the candidate's physical condition, availability for service, and legal status.

While recruiting should be continuous, we recommend that the actual induction of new members occur once or twice per year simultaneously by all departments. This allows time for an effective recruit training program and the conduct of background checks and physical examinations.

Retention of volunteer members requires constant attention from the leadership. Many factors can influence the ability of a volunteer organization to retain its trained and experienced members. The circumstances of a member's employment may change. The member may leave the community. The performance expectations of the leadership may be too high. The member may lose interest or have family problems. Some experience suggests that the average length of service for a competent volunteer fire fighter is four years. Some will remain active for 30 years and others less than two because of job changes or other personal reasons. Therefore, the turnover of personnel must be anticipated by continuous recruiting and special recruit training classes at suitable intervals.

On the other hand, fire department officers must be free to reject or terminate members for cause, including unsatisfactory performance and the lack of attendance at drills, fires and work details.

Retention of volunteers requires some additional considerations. The volunteer should be entitled to many of the same benefits that are available to full-time employees. Examples include full medical care and some compensation for time lost from regular employment because of injuries sustained in the line of duty,

financial benefits for families of members killed in the line of duty, protective clothing, and a reasonably safe working environment.

Other incentives for retention should be considered. The most important is recognition. It's easy to say "thanks!" The county should give special recognition to those businesses that support the system by releasing employees to respond to fires. The county should also consider establishment of a supplemental token retirement for persons who serve for some minimum specified time.

Selected volunteer personnel who possess the attribute of leadership, experience, special skills and abilities should be trained to serve as volunteer officers. When new rules and by-laws are considered for adoption by the volunteer fire companies, they should include qualifications for the appointment and promotion of volunteer personnel. They should also include details and procedures for disciplinary actions, penalties, and appeals.

5.3 Training

5.3.1 Current Practices

Special district fire departments dedicate two to four evenings of two to three hours duration to training each month. Also, additional time is used on weekends for special training and the maintenance of apparatus and stations. Attendance averages better than 50 percent. Members are encouraged to enroll in fire technology courses at Shasta College. Special training is offered for officers on special subjects from time to time by outside sources.

The SCFD volunteer companies are scheduled for regular training by CDF certified instructors twice monthly (November through May). All companies maintain their training schedule throughout the year and several drill four times per month. SCFD/CDF staff members also offer specialized courses and drills six to 12 days annually on a county-wide multi-company system. All training is stated to meet State Board of Fire Services standards.

The Shasta College's fire technology programs cooperate fully with the local fire services. A fund is being accumulated from the volunteers to construct a training facility on the campus. Full-time fire technology students who are not affiliated with local fire departments serve as station sleepers and otherwise assist several local fire companies. Training funds generated by CSA #1 must be spent for CSA #1 activities.

State mandated minimum skills training in emergency medicine requires the dedication of a significant portion of the time allocated to training. Members of some companies are striving to exceed the required minimums.

5.3.2 Criteria

ISO standards for maximum credit are based upon paid fire department operations that were typical to large cities many years ago. They consider that a complete training facility is needed in conjunction with a full training program. To get the maximum credit, the facility consists of a two-acre site, a four-story tower, a fire resistant practice building, a 1,500 square foot combustible liquid pit; a library with training manuals; and slide and video equipment, mock ups, cutaways, and similar aids.

An ISO program consists of 240 hours recruit training during the first year; eight three-hour drill tower training sessions per year of which four must be multi-company and two held at night; 20 hours per member per month company training; 12 hours driver and operator/driver per year; 40 hours for new drivers and operators; and three hours radiological safety per member per year. Few fire departments meet these criteria.

The California State Board of Fire Services has adopted criteria for certification. These criteria closely parallel the certification standards adopted by the NFPA. The NFPA's certification standards have been developed for three grades of fire fighters, drivers, six officer grades, four instructor grades, and others for inspectors and investigators.

5.3.3 Analysis

Special district and the SCFD's training programs are meeting the basic needs in most cases. There is some evidence that some volunteers participate in fire fighting operations (probably out of sheer necessity) prior to their having the minimum exposure to all fundamental fire methods and operations.

Some complaints about the SCFD training system have been voiced. Most result from the limited availability of training personnel. Some may impact the recruitment and retention of volunteers. Problems with schedules, instructor attitudes, and time demands on volunteers were the most frequent complaints.

It is the availability of the volunteers' time that usually limits training. Administrators and instructors must see that the available time is used in a manner that motivates the trainees and improves safe fire operations.

5.3.4 Recommendations - General

1. The county should provide a continuous program of basic and advanced training in manual fire control skills and procedures to all fire departments. A minimum of one trained instructor should deliver training services to the fire departments in the SCR.
2. The county's Regional Occupation Program (ROP) could assist in the delivery of advanced and specialized training and education of fire department officers.
3. The county and the special districts should cooperatively plan and finance the development of training facilities.

Discussion

One of the objectives of this study is to utilize the personnel and resources of the SCFD and the independently operating special district fire departments to deliver fire fighting services to the unincorporated areas. Each fire jurisdiction hosts some potential fire that will require the cooperation of two or more fire departments. Thus, it is necessary that the apparatus, equipment, operating procedures and fire methods of any single fire department be compatible with those of the other organizations. The key element to successful fire scene cooperation among fire departments is an uniform training system that serves all participating agencies.

Fire fighting training programs must accomplish three objectives: (1) train new personnel in the use of tools and procedures that are used to control fires, (2) maintain the learned skills and knowledge by constant review and by practice taking advantage of actual fire fighting experience, and (3) instill new or changed information and methods as they occur.

Fire departments must deal with physical conditions that are local in character. Therefore, a good training program must be responsive to the fire suppression, rescue and other assigned emergency response missions of the local departments.

Training of fire personnel of all ranks should be continuous throughout their active membership. This is necessary because of the continually changing fire environment and the need to maintain seldom used skills at a level that will guarantee satisfactory performance when the skill is needed.

Finally, the basic training must be consistent from department to department. Otherwise, when different departments must work together, their practices and procedures will differ, resulting in inefficiencies, ineffective, and potentially dangerous operations.

Our recommendations for an effective minimum training program are classified into three categories: (1) training personnel, (2) training program, and (3) training facilities.

(1) Training Personnel: At least one fire training instructor should be provided to assist the city, district and county fire departments with hands-on basic training in the needed manipulative skills. He or she should assist the fire chiefs in analyzing training needs and in scheduling and presenting the routine maintenance training sessions. Most of the departments now train at least two times per month. The professional instructor's duty hours should be arranged so that he or she visits each of his assigned departments once each month. The instructor also should be responsible for developing and presenting volunteer recruit training programs of 40 to 60 hours periodically. He or she should assist in the development of advanced specialized training for volunteer company and chief officers. The county should seek funding and sponsorship of this position through the Shasta College.

Training Program: Recruit volunteers should participate in 40 to 60 hours minimum of basic fire fighter training prior to participating in fire fighting and rescue operations. This is not generally possible because vacancies occur singly in most instances and recruiting is sporadic (although some of the companies reported a waiting list of applicants for membership). New personnel are most easily trained in groups of six or more persons. The most practical approach is for all of the departments to combine their new recruits into suitably sized classes at a single location. The professional instructors can then provide a high quality program under controlled conditions and deliver "fire ready" recruits well trained in the basic skills.

Recruit training sessions of two, three, or more hours should be independent of routine fire department drills and can be conducted at a central location in evenings or on weekends according to the time availability of the volunteers. Probably two recruit classes per year will satisfy most department needs.

Routine skills maintenance training should take place at least two times per month and more often if the volunteer personnel are willing. The county trainer should assist every department at least once each month. Also, the county instructor should provide formal instructor training to experienced volunteer members of each department. This will assure continuity and consistency in the total training effort.

The SCR experiences very few major fires, far fewer than one per week. The average fire fighter will attend less than one-half of the fires that do occur in his or her jurisdiction. Therefore, actual fire experience cannot be relied upon to develop the knowledge, skills and judgement that are needed for satisfactory

operations. There is a potential for infrequent large magnitude fires that will be well advanced prior to a fire company's arrival. The response will require the prompt, efficient and coordinated application of many basic manipulative skills. The low fire experience creates a need for an effective skill maintenance program.

Officer training is essential for maximum vocational development of volunteer officer personnel. The fire officer is essentially a manager. He or she must instantly devise a scheme to control a dynamic physical occurrence by matching the labor and material resources at his or her disposal with the need to limit the loss of life and property. Managing a fire incident requires skills and knowledge far more sophisticated than those needed to raise a ladder or direct a hose stream. The volunteer officers should be provided suitable training to develop the needed skills and knowledge.

The instructor should arrange for specialized training from outside sources at every opportunity. The county and districts should plan to fund tuition and travel of selected volunteer officers to academies and seminars that are offered elsewhere from time to time.

(3) Training Facilities: While programs are the most important element of a good training system, most can be enhanced by the availability of fixed training facilities. Every station should have a yard area suitable for practicing basic hose and ladder operations. The yard can double as a parking lot for volunteers who respond to the station. Stations should have classrooms equipped with blackboards, video equipment and other basic teaching aids. Every station needs a training library for the use of all officers and members.

Ultimately, a fairly complete fire training facility should be built at Shasta College. This facility need not be elaborate. An area two acres in size suitable for driving apparatus, laying hose lines and handling the water discharged from nozzles is needed. A drill building at least 40 feet tall, fire hydrants, a live smoke and fire building, pumper test and training pit, sanitary facilities (including showers), and kitchen facilities should be provided.

The overall training effort should be planned to use every available resource, both local and those available from outside the county organization. Outside sources include the local community colleges, other fire departments, and programs sponsored by the State of California and the Federal Emergency Management Agency. An improved coordinated training system will produce superior service to the public and a high degree of pride and satisfaction among participating volunteer personnel.

5.3.5 Recommendations - Shasta College's Roles

1. Shasta County should negotiate with the Shasta Community College District to deliver increased fire protection training to the SCFD and to all participating city and special district fire departments.
2. The county and the participating cities and fire districts should agree to assist the college in its ability to develop and present courses of instruction either as Shasta College or in a consortium of institutions of higher learning.

Discussion

We believe that improvements in fire protection training should receive serious consideration. Shasta College is in position to expand its outreach program of service to fire departments in Shasta County. Its principal focus should continue to be on basic theory and practice, new techniques and requirements, and others consistent with its educational purposes. The running of practice drills and other routine operational exercises should remain much as it is. However, it would be useful for the fire chiefs association to explore and possibly redefine the roles of the CDF and the Shasta College in the area of training.

Shasta College has delivered non-credit, non-certificate basic skill development training to volunteer personnel, both district and SCFD. The total college program consists of resident and non-resident fire science courses leading to an Associate in Arts degree in Fire Science. The Fire Technology Coordinator coordinates the program with the Regional Occupation Program of the Shasta County Office of Education. Community outreach programs have included training assistance to local fire organizations.

The degree program has attracted students from points far beyond the immediate geographic area, and graduates are employed in a number of public fire service organizations in other sections of the state. Resident fire science students get experience in the campus fire station and in the fire stations of cooperating local fire departments. The SCFD program coordinates with the college to qualify their instruction for college credit. Also, initial discussions among Shasta College and California State Universities at Chico and Sacramento are exploring the potential for close working relationships in baccalaureate and masters degree programs in public administration and fire protection. Fire service personnel do take in-service training from CDF instructors. Some of these courses qualify towards the Associate in Arts degree.

The college is in the business of education and vocational training. Instructional methods, techniques, and results are under constant critical professional review. The process places emphasis

on benefit to the students without sacrificing performance standards. Thus, the overall acceptance of the instruction that is offered is less likely to be affected adversely by variations of instructor personalities and attitudes.

Just as the campus fire station and cooperating local fire agencies provide hands-on experience to associate degree candidates, the SCFD, the city and the district fire agencies can serve as unusually valuable laboratories for candidates for baccalaureate and masters degrees if Shasta College and the two California State Universities are able to develop a cooperative resident or non-resident program. It could benefit local agencies and help the college and deliver a superior educational experience to the California fire administration community.

If the county, college and independent fire agencies can agree on a program for the college to deliver routine training, the county could offer the college an amount of money equal to that now charged by CDF for personnel assigned to training under the SCFD contract. As noted, it could provide a very valuable service by providing video and other materials to help the fire protection agencies recruit and retain new volunteers.

6. Stations and Apparatus

6.1 Fire Stations

There are a total of 25 fire stations in the approximate 290 square mile study area, an average of one station for every 11.6 square miles. Seven of these stations are within the City of Redding. Almost all of the developed portions of the study area are within five miles response travel distance of the closest fire station.

The SCFD stations at Jones Valley, Bella Vista, Palo Cedro, Millville and Keswick are adequate to house most of the assigned apparatus. The designs are simple and functional, and they are well maintained and reasonably attractive.

The Centerville station is shared with the Centerville Community Services District's offices. It is modern and well maintained. A water tanker is stored outside because of space limitations.

The temporary station of the West Valley VFC has a single bay and some apparatus is stored outside.

Shasta College fire station is a two bay, two story building. Some apparatus must be stored outside but the station is adequate for the apparatus and personnel who are needed to protect the campus.

The Fire Protection and the Community Services Districts' fire stations appear to be adequate, except for Cottonwood, which is old and the Shasta station which is located on a narrow hillside street with difficult access to U.S. Highway 299.

The Shasta-Trinity Ranger Unit of CDF on Cypress Avenue is a complete headquarters facility. Offices, mechanical shop, storerooms, communications office and ancillary uses occupy several buildings. Only the office structure is of recent construction.

6.2 Fire Apparatus

There are 85 recognizable apparatus in service or in reserve in the SCR. Of these 46 are triple combination pumpers (main pump with 500 or more gpm, water tank and hose), 10 are mini-pumpers (main pump more than 250 gpm), seven are water tankers (tank more than 1,000 gallons), one is a ladder truck, and 16 are rescue vehicles. Also the Redding FD operates crash/fire/rescue units at the Redding airport and a state-owned (Office of Emergency Services) triple combination pumper. Brush trucks are special purpose vehicles with

some fire suppression features and which are not otherwise classified in Figure 6.1. The ownership of the apparatus is displayed in Figure 6.1.

The age of apparatus ranges from new to 39 years. Shasta College maintains a 1951 model pumper. Thirty three of the 63 units owned by the college, the special districts, and the SCFD are more than 20 years old (14 of the 27 SCFD units).

Most apparatus is maintained in reasonably good condition. Maintenance of the older units is sometimes difficult because of the limited availability of parts. Several of the older vehicles are "hand-me-downs" from other agencies.

SCFD is purchasing with Measure B funds replacement triple combination pumpers that are constructed to uniform specifications. Also, water transport tankers are being built using heavy duty diesel powered three axle commercial chassis. The new units are apportioned among all 22 SCFD companies and stations. Older units are assigned to less active companies.

The condition of the apparatus owned by the special districts varies. Much of the mechanical maintenance work must be done by volunteers.

6.3 Discussion

There are a sufficient number and variety of fire apparatus in the SCR. Most apparatus are in satisfactory operating condition although slightly more than half (exclusive of the City of Redding) are more than 20 years old. The SCFD apparatus procurement program, which covers the entire 22 station county operation, is purchasing pumpers at a regular rate and has developed an economical method of building water transports on heavy duty commercial chassis. Equipment inventories on the SCFD's vehicles are funded cooperatively by the proceeds from Measure B and fund raising events sponsored by the individual volunteer fire companies.

The SCFD's apparatus maintenance responsibilities are divided between Measure B funds and VFC funds according to a formula developed by the volunteer fire chiefs.

The county should retain title to all SCFD apparatus. The county should fund the purchase of all apparatus and equipment up to the cost of county-approved basic specifications. Should any fire company desire features that exceed the basic specifications, the cost of those features should be borne by the fire company from donations, a local benefit assessment fee, or other alternative sources of money.

Figure 6.1

PRINCIPAL
FIRE APPARATUS
IN SERVICE AND RESERVE

Agency	Triple Pumpers	Mini Pumps	Brush Trucks	Water Tanker	Ladder Truck	Rescue Vehicles
SCFD	10	4	1	5		7
Redding *	11	3		1	1	
Anderson	3	2		1		1
Central Valley	3	1	1			1
Cottonwood	4					1
[REDACTED]	3	3	2			2
Mountain Gate	2			1		1
Shasta College	2		1			
Shasta CSD	3					1
Summit City	2					1
Totals	43	13	5	8	1	15

* Does not include the OES pumper, airport crash/fire/rescue vehicles, or passenger cars.

A reasonable service life should be established for each new apparatus. A county-wide fund should be established to replace apparatus at the end of its normal service life. The fund should be started when new or additional apparatus is acquired. Each pumper should have a normal first line service life of 13 to 20 years. Replacement apparatus would be funded by budgeting 1/13th to 1/20th of the then current replacement cost each year and investing it. Additional apparatus should be funded as an original capital outlay. Apparatus should be insured so that it can be replaced if destroyed accidentally before the end of its normal service life. Apparatus replacement funds should be financed by general tax revenues (much as though the apparatus were leased or rented).

Sufficient reserve apparatus of each basic type should be maintained in fully loaded ready-to-respond condition. At least one reserve unit should be maintained for every eight or fraction thereof in service.

The county may consider funding a one-time purchase of needed apparatus by general obligation bonds. This type financing permits spreading the initial cost of apparatus over the expected useful life of the units. Bonds should NOT be used to finance normal apparatus replacement.

The purchase of used apparatus can sometimes appear to be a means of acquiring needed assets that are otherwise unaffordable. Sometimes this is reasonable, but often these older units were designed for specific conditions in the jurisdiction of the original purchaser. Used under different conditions, they may create problems as large as the ones that they are intended to solve. The original manufacturer may have gone out of business and some important components may not be available. Also, a unit designed for urban service may lack many features that are needed in the service area of the purchaser. Most often, used apparatus is acquired because of the limited financial capacity of small under-funded fire agencies. There are opportunities in the SCR to limit this problem by combining the weaker agencies into larger and stronger operations.

The effective delivery of fire department and other emergency services is dependent on the reliability of apparatus and equipment. This reliability is dependent on adequate original purchase specifications, careful inspection and testing of delivered items prior to their acceptance, and a program of preventive maintenance and timely repairs during the useful life of the apparatus.

The cost of routine maintenance and ordinary repairs presently are divided between the fire companies and the SCFD. Volunteer personnel expend a considerable portion of their time performing repairs and maintenance in several of the fire departments.

We believe that the SCFD should assume primary responsibility for the maintenance and repair of all county fire apparatus and mechanical equipment. The SCFD should consolidate the vehicle and mechanical maintenance activities of all companies and small districts into one organization. One shop facility should service all of the SCFD's vehicles, control costs, and develop a core of experienced mechanics and maintenance personnel who will be familiar with the fire apparatus.

The fire companies should continue providing day-to-day maintenance, fueling and cleaning of the apparatus. Responsibilities should be assigned as follows:

SCFD maintenance forces should perform all mechanical repairs and routine tune-ups and adjustments; conduct annual pump tests; change oil and filters and lubricate vehicles; purchase and maintain a stock of frequently used parts and materials; develop and conduct a preventive maintenance program; instruct fire company personnel on how to perform routine operation and maintenance duties; and maintain all maintenance, repair and testing conducted by SCFD maintenance personnel.

Fire companies' personnel should assign one person to assist the chief as the vehicle operations and maintenance supervisor; conduct routine fueling and maintain all fluid levels (crankcase, radiator, transmissions, etc.); clean apparatus, including flushing of pumps with fresh water, washing undercarriage and rinsing exterior surfaces of apparatus weekly, and after every use when contaminated water has been used; and maintain records of operations, fuel consumption and routine maintenance.

The SCFD maintenance organization should be furnished with a lubrication and tire servicing vehicle. This vehicle would be similar to those used by the larger general contractors to service trucks and earth moving equipment. Complete lubrication, oil change and tire repair equipment, air compressor, jacks and similar tools should be carried. This vehicle, staffed by one qualified vehicle maintenance service person, can travel to each fire station (and to any locations where SCFD trucks and equipment require service) on a schedule that meets the needs of the apparatus and equipment.

6.4 Recommendations

Of the five recommendations below, three address the replacement of apparatus, and two focus on maintenance.

6.4.1 ~~Fire~~ Apparatus Replacement

1. The Shasta County Fire Department and the special districts should establish and contribute to apparatus replacement funds.
2. All apparatus should be procured by open competitive bids using carefully prepared performance standards.
3. Used apparatus should only be acquired if it has an assured remaining useful life of at least ten years and has performance characteristics that meet the real needs of the purchaser.

6.4.2 Fire Apparatus Maintenance

1. The SCFD should assume primary responsibility for the maintenance and repair of all county fire apparatus and mechanical equipment. The smaller special districts should participate in this program.
2. The SCFD and the fire companies should agree to a reasonable plan for the division of maintenance effort between the SCFD maintenance force and the fire companies.

7. Water Supplies

Water supplies for fire fighting in the SCR are available from fire hydrants supplied by public water systems, water carried in apparatus tanks (up to 5,000 gallons) and some static sources including ponds, swimming pools, and streams.

7.1 Criteria for Fire Protection Water Supplies

There are two generally recognized sources of fire protection water supply criteria: (1) the Insurance Services Office (ISO) and (2) the National Fire Protection Association (NFPA). Also, Shasta County has developed a set of good property development standards.

ISO criteria uses a needed fire flow (NFF), which represents the amount of water estimated to be needed to confine a serious (total loss) fire to the building or group of buildings of fire origin. The NFF calculations are based on the area, height, type of construction, occupancy, and exposure from other buildings. The water requirements can range from 500 gallons per minute (gpm) to 8,000 gpm. The NFF is the key to the fire insurance public protection rating system, and is the basis for rating the water system and the fire department. ISO evaluates water systems on the basis of ability to deliver water at a minimum 20 psi residual pressure when domestic consumption is at the maximum day rate for the estimated fire duration of two, three or four hours. ISO recognizes water systems that can deliver a minimum of 250 gpm at a residual pressure of 20 psi for two hours with domestic consumption at the maximum day rate.

NFPA is an organization that develops nationally recognized standards that relate to the protection of life and property from fire. Two of their standards, NFPA 13: Installation of Sprinkler Systems and NFPA 1231: Water Supplies for Suburban and Rural Fire Fighting, have applicability in the SCR.

7.2 Existing Conditions

7.2.1 Public and Private Water Systems

There are ten public water delivery agencies in the SCR. Data have been received from eight of the public agencies and four private mutual systems. Of these 14 reporting systems, ten can deliver at least 250 gpm for two hours with domestic consumption at the assumed maximum day rate. The City of Redding's system was not evaluated, but its favorable ISO rating is a reliable indication of a strong water system. The reporting agencies use wells or

surface water sources. Several receive water from the Central Valley Project. More than 1,400 fire hydrants are installed in the SCR outside of the City of Redding.

7.2.2 Water Transport Vehicles

SCFD operates 20 apparatus in the SCR which carry 300 or more gallons of water. Three tankers carry 2,200, 3,600 and 5,000 gallons respectively. SCFD has the ability to deliver 200 gpm without interruption for 20 minutes, which is a recognized benchmark for evaluating rural fire departments in the western United States. Several of the fire districts meet this standard.

7.2.3 Other Sources

Most apparatus in the SCR are equipped to draw water from static sources that may be available reasonably close to points of potential need.

7.3 Analysis

Considerable planning for fire protection water supplies has been accomplished. County development standards assure reasonably adequate water supplies for new developments.

Some systems may not precisely meet ISO's standards. However, ISO's needed fire flow rates assume a worst case scenario. Also, ISO flows, which are almost the same as the County's standards, are arbitrary and have no scientific basis. Most actual fires are extinguished with far less water. Most dwelling fires that are within five miles of a fire station, and that involve less than one-third of the building at the time of the fire department's arrival, are extinguished by less than 1,000 gallons of water.

Adequate water supplies that are readily available to fire fighting forces are necessary for successful control of serious fires. The needed capacity of the fire protection water supply is a function of the area, height, type of construction, occupancy, exposure from other buildings and the built-in-place fire protection of each building, such as, automatic sprinkler systems. Fire protection water supplies are usually delivered to points of potential need through systems of mains and fire hydrants in areas where property has been developed to urban densities. The economics involved often precludes the installation of public water systems adequate for extended fire suppression operations in areas where development densities are less than one dwelling unit per acre. The provision of fire protection water becomes more the responsibility of the property owner or developer in this situation. Development will tend to continue within the districts where public water supplies

are available. The county's minimum requirements for fire protection water supplies are adequate as a condition of development.

Figure 7.1 presents a means of estimating water needs where fire hydrants supplied by mains are available. Figure 7.2 suggests minimum needs for water systems that supply automatic sprinkler systems.

Available water supplies should be inventoried and compared to the water supply needs. A long range improvement program should be developed to reduce the difference between needed and available water.

The county should take steps to encourage development of fire protection water supplies convenient to locations of existing buildings. These locations should be surveyed to determine needs in accordance with the criteria in NFPA 1231.

The water requirements for buildings protected by automatic sprinkler systems may be reduced to that adequate to provide water to the sprinklers for a duration equal to that specified in Figure 7.2, providing that:

1. Building codes do not require installation of the automatic sprinklers; and
2. The building meets all requirements of the Uniform Building Code (current edition) for an unsprinklered building.

7.4 Recommendations

We suggest one action be taken to assure adequate water supplies for fire fighting, as follows:

1. The fire departments should locate, evaluate and classify all potentially reliable and useful sources of water for fire fighting purposes in areas that are not adequately serviced by fire hydrants.

Figure 7.1

RECOMMENDED MINIMUM FIRE FLOW REQUIREMENTS
FROM PUBLIC
WATER SUPPLY SYSTEMS

LAND USE	FIRE FLOW (gpm @20 psi)	DURATION
Sparsely Built cabin Areas (Minimum)	Use NFPA 1231	
Rural Residential Average Separation 100 Ft.	500-750 gpm	2 hours
Suburban Residential Not more than 2 stories. Separations greater than 10 feet.	750-1000 gpm	2 hours
Neighborhood Commercial not over 5,000 Sq. Ft. (Wood frame buildings separated by 10 feet minimum)	1000-1500 gpm	2 hours
Minor Commercial	1500-2500 gpm	2 hours
Institutional (Hospitals, Schools)	2000-3000 gpm	3 hours
Major Mercantile, Industrial, unsprinklered	3500 gpm or more	3-6 hours

- NOTE:
- (1) These are adaptations, not duplications of Insurance Services Office fire flow tables.
 - (2) Add 250 gpm if wood shake or shingle roofs are present or permitted.
 - (3) Fire flows from public mains should be available at a residual main pressure of 20 pounds per square inch with system consumption at the maximum day rate.

Figure 7.2

REQUIREMENTS FOR
LIMITED WATER SUPPLY SPRINKLER SYSTEMS

OCCUPANCY	DURATION OF WATER FLOW BASED ON NFPA 13 DEMAND (MINUTES)
A-1 ASSEMBLY, LARGE; with working stage	
Multi Story	30
One Story Only	15
A-1 ASSEMBLY, LARGE; without working stage	
Multi Story	30
One Story Only	15
A-2 ASSEMBLY, SMALL; with working stage	
Multi Story	30
One Story Only	10
ASSEMBLY, SMALL; without working stage	
Multi Story	30
One Story Only	10
B BUSINESS	
Multi Story	30
One Story Only	10
E EDUCATIONAL	
Multi Story	30
One Story Only	20
F FACTORY-INDUSTRIAL	
Multi Story	40
One Story Only	20
I INSTITUTIONAL-UNRESTRAINED	
Multi Story	30
One Story Only	15
R RESIDENTIAL	
Single Family	10
Multi Family	
Multi Story	20
One Story Only	10
S STORAGE	
One Story, Ceiling to 12'	20
One Story, Higher Ceiling	45

8. Communications

8.1 Criteria

Emergency communications is defined for purposes of this study as the receipt and handling of reports of fires, medical and other emergencies from receipt of the alarm through dispatch of the proper response of emergency personnel and vehicles, inter-unit and inter-agency communications during the course of the operation until the incident has been secured. Emergency forces include fire forces, law enforcement agencies and emergency medical responders, and occasionally, other cooperating agencies.

NFPA has developed one set of criteria for emergency services communications systems (NFPA 1221). Also, the International Municipal Signal Association and similar organizations have each developed criteria for various aspects and applications of emergency communications systems.

Most of these criteria deal with the reliability, physical security and operation of systems. Most practitioners agree that complete adherence to existing published criteria results in costly unnecessary redundancies that cost more than most small to medium jurisdictions wish to spend. However, Shasta County has need for coordinated communications that are reliable, effective and economically feasible.

8.2 Existing Situation

The SCFD, the special districts, the City of Redding, the CDF and the US Forest Service (USFS) operate fire protection organizations in the SCR. The cities of Redding and Anderson and the Shasta County Sheriff operate law enforcement organizations. The California Highway Patrol (CHP) cooperates in many emergency operations.

At present, CDF receives and handles fire alarms for all jurisdictions except the City of Redding and the Cottonwood FPD. Redding public safety dispatchers dispatch the Redding Police and Fire Departments. The Sheriff dispatches sheriff units, CHP operates an independent communications system.

An estimated 53 persons are employed full time to operate the existing systems, exclusive of CHP. These numbers do not include maintenance which is contracted for in some cases.

Planning has been initiated to develop two potentially very useful systems for supporting the fire services and other first response organizations. These include a Joint Dispatch Center and a common geographic reference system. The center probably will evolve through a Joint Powers Agreement, and each participating agency probably will have its own equipment and personnel located in a common facility. For purposes of this study, we recommend continued work on these items because it will increase the effectiveness of the fire services in the study area.

Taken altogether, an excessive number of personnel are employed to handle communications. Continued operation of separate facilities will become unduly expensive as increases in message unit volume reflect population growth and aging and result in piecemeal expansion of individual systems.

8.3 Discussion

The most effective, reliable and efficient system for handling the receipt of fire alarms and other requests for emergency assistance, dispatch of fire companies, ambulances and police officers, and coordination of both inter-agency and intra-agency communications is to combine the facilities and resources of all emergency service providers into one consolidated emergency communications operation. The relatively small population of Shasta County, number of potential user agencies and message traffic-load makes this alternative more attractive than each agency continuing to provide and staff separate communications operations.

A consolidated emergency communications facility should be provided. The cost of the facility and its operation should be based on a formula agreed on by the user agencies using numbers of calls to determine each's pro rata share. The operation should be organized to deliver complete communications services including operation, purchase, installation, maintenance and repair of all stationary, mobile and portable communications equipment. Operational procedures and standards for quality of service should be determined jointly by the user agencies. Staffing requirements will include administration, operators and maintenance personnel.

The consolidated communications operation should be structured to be administratively independent of any single user agency yet be responsive to the emergency communications requirements of all of those services. There will be many "turf" disputes initially but they can be resolved by responsible adults, who place the health, safety and welfare of the general public uppermost in their priorities.

The communications service should have the capability to:

1. Receive all requests for emergency assistance by the 911 emergency reporting number or other means and either transfer the call to the appropriate dispatcher (police, fire, medical) or dispatch the appropriate response. ("Transfer" means to connect the calling party to the needed emergency service whose dispatcher will determine the needed response.)
2. Serve as the base communications control for all emergency operations in progress and coordinate all emergency message traffic.
3. Specify, purchase, install, maintain and repair all fixed, mobile and portable radio communications equipment.
4. Maintain a record system that will meet the operational needs of all user agencies.
5. Serve as the designated contact for licensing by regulatory agencies.
6. Perform all necessary ancillary functions.

8.4 Recommendations

We want to reinforce current efforts to create a joint dispatch center by recommending that Shasta County:

1. Establish a joint emergency communications facility for service to all fire department, law enforcement and emergency medical service providers.

9. Fire Prevention

9.1 Fire Statistics

A review of the fire reports indicates that most of the building fires occur in residential occupancies and in related outbuildings and that most fires are caused by wood burning stoves or open exterior burning. The study area has had relatively few fires in industrial, commercial, or institutional occupancies.

Loss of life and injury from fire is at a low level, and this level is not likely to be substantially reduced.

There needs to be additional emphasis placed upon residential fire prevention. Additional emphasis should also be placed upon developing codes to control wood burning stoves, to control open burning, and to reduce the threat of fire spread in residential areas.

9.2 Fire Prevention Duties

Typical fire prevention tasks include reviewing plans for new developments, making inspections of new developments, making routine periodic inspections of existing buildings to find and eliminate fire hazards, issuing permits and responding to complaints, investigating fires, attending legal proceedings, and providing public education programs.

Most of the fire departments within the study area are currently reviewing plans for new developments, investigating fires, attending legal proceedings and making some routine periodic inspections. Many of the departments are not issuing permits or spending much time on public education. It is estimated that approximately three additional personnel would be required within the study area to increase the level of fire prevention effort to that which is considered to be typical in similar communities.

9.3 Codes

All of the departments within the study area will be adopting the 1988 Uniform Fire Code within the near future. Also there are county-wide standards for road widths, water supplies, and clearances. The City of Redding has a sprinkler ordinance which applies to new and remodelled buildings which exceed the "required fire flow." There is also a proposed Hillside Development Standard which will provide improved resistance to fire spread for homes in the hill areas.

The Uniform Fire Code is used throughout the Western United States, and it is considered to be a "good" code. If a particular hazard is not addressed by the code, the code makes references to nationally recognized standards which can be used to address the problem. The code also gives the Fire Chief the authority to require a building owner to retain outside experts who are acceptable to the jurisdiction to analyze unusual hazards such as refineries, chemical laboratories, warehouses, and hazardous materials.

The fire departments have good working relationships with the planning and building departments; i.e., the fire departments reported that most plans are circulated to them for review and that their comments and recommendations are usually accepted and implemented.

The proposed Hillside Development Standard will provide a good degree of fire resistance to rural dwellings located in the middle of highly combustible brush and trees.

Many communities currently have or are in the process of adopting a sprinkler ordinance which requires sprinklers in buildings which exceed a certain size. The City of Redding has adopted such an ordinance, but there seems to be a feeling that a similar ordinance is not needed in other parts of the study area. In reality, a sprinkler ordinance is considered to be more important in these areas because the fire departments may have less manpower, are more dispersed, and because the outlying areas attract larger and more hazardous industries.

9.4 Recommendations

We have six recommendations regarding the prevention of fires. The first three focus on duties and staffing, and the other three address local code issues. They are:

1. One person should be assigned to handle a public education program within the study area. The program should concentrate on residential fire prevention and include information on wood burning stoves and open burning.
2. New personnel should be hired on a consulting basis to review plans and inspect new construction. The new personnel should be paid solely from permit fees, and if there is a slowdown in new construction, the positions should be eliminated. These personnel should be placed under the supervision of the SCFD or the County Building Department.

3. Existing personnel should be assigned to handle the tasks of issuing permits (to regulate the more hazardous occupancies) as required by the Uniform Fire Code and making inspection of critical facilities. Places of assembly, schools, and hospitals should be inspected semi-annually. Some of these are state-mandated requirements that are not reimbursed to local governments. Hazardous occupancies, such as, lumber yards, restaurants, and large repair shops should be inspected quarterly (the number of fires in these occupancies is low, but they would be expected to increase in time without regular periodic inspections).
4. An ordinance similar to the proposed Hillside Development Standard should be adopted by the County. The County may want to put implementation of these recommendations on hold pending the resolution of legal cases which are challenging these types of ordinances (i.e. any ordinance which is more restrictive than the Uniform Building Codes as adopted by the state.)
5. A uniform sprinkler ordinance should be adopted throughout the study area. The ordinance should apply to all new buildings larger than 5,000 square feet and to all buildings which undergo major remodelling. Reasonable exception should be made for buildings which have noncombustible contents.
6. More stringent controls should be developed to control open burning and wood burning stoves.

10. Financing for SCR Fire Protection Services

10.1 Introduction

Fire protection revenues and expenditures vary widely by jurisdiction. This chapter presents the latest budget data for the principal fire protection agencies in the South Central Region. These include the six Fire Protection Districts (FPDs), the two Community Service Districts (CSDs), and the Shasta County Fire Department (which is operated by contract with the California Department of Forestry and Fire Protection). The seven volunteer fire companies in the study area are funded and operated by the County Fire Department and will be discussed in the context of that department's budget.

Following the presentation of financial data, there is a discussion of potential revenues for maintaining fire protection services in the area. These actions include potential changes in the Special District Augmentation Fund, preliminary consolidation recommendations, development charges, and parcel charges.

10.2 Current Revenues and Expenditures

In the six fire protection districts, the property tax is the major source of revenue. Table 10.1 displays the latest available revenues and expenditures for the six districts. Anderson FPD's budget represents about half the revenues and expenditures of the six FPD's in total, so it dominates the combined figures shown in the Table. Counting all six districts, the property tax represents 61.5 percent of all revenues.

Excluding Anderson, the property tax represents three-fourths of the revenues for the five remaining FPD's. The Special District Augmentation Fund (SDAF) represents the second largest source of revenue for the FPD's. Anderson was allocated \$108,709 in SDAF money for Fiscal Year 1989-1990. Central Valley FPD received \$57,875 and the other FPD's received much smaller sums, as can be seen in Table 10.1.

Before proceeding further, it should be noted that these budgets are merely snapshots of events at a particular point in time. Although the distributions shown are not very different from prior years, budgets can vary considerably from year to year, and any conclusions about future conditions should be made carefully. The purpose for presenting these and other budgets is to put the overall fire protection financing picture into some perspective, however imperfect or incomplete.

TABLE 10.1
FIRE PROTECTION DISTRICT BUDGETS
SHASTA COUNTY

FISCAL YEAR REVENUES BY DISTRICT	FINAL	PROPOSED	ADOPTED	REQUESTED	REQUESTED	ADOPTED	COMBINED TOTAL	% DISTRIB. ALL FPD's	% DISTRIB. ALL FPD's (Ex. ANDERSON)
	FY 89-90 ANDERSON	FY 89-90 BUCKEYE	FY 89-90 CENTRAL VALLEY	FY 89-90 COTTONWOOD	FY 89-90 HAPPY VALLEY	FY 88-89 SUMMIT CITY			
Property Tax	267,584	52,138	195,700	116,700	83,200	20,445	735,767	61.5%	75.0%
Augmentation Fund	108,709	1,551	57,875	8,000	5,462	3,775	185,372	15.5%	12.3%
Interest	17,000	2,400	8,000	(1,000)	3,500	500	30,400	2.5%	2.1%
HOE	9,887	2,000	7,000	4,300	3,200	400	26,787	2.2%	2.7%
Services	8,120	---	1,050	8,000	100	7,800	25,070	2.1%	2.7%
Other	160,264	12	2,700	11,000	12,312	5,763	192,051	16.1%	5.1%
Total Revenues	571,564	58,101	272,325	147,000	107,774	38,683	1,195,447	100.0%	100.0%
As % of all Dists	47.8%	4.9%	22.8%	12.3%	9.0%	3.2%	100.0%		
Fund Balance, Prior Yr	351,777	26,247	137,037	---	65,500	---	580,561		
New Fund Balance	923,341	84,348	409,362	147,000	173,274	38,683	1,776,008		
EXPENDITURES	ANDERSON	BUCKEYE	CENTRAL VALLEY	COTTONWOOD	HAPPY VALLEY	SUMMIT CITY	TOTAL ALL FPD's	% DISTRIB. ALL FPD's	% DISTRIB. ALL FPD's (Ex. ANDERSON)
Salaries & Benefits	402,286	---	186,215	82,600	53,712	17,036	741,849	43.5%	43.5%
Services & Supplies	112,503	9,931	64,310	24,200	37,270	12,297	260,511	15.3%	19.0%
Fixed Assets	174,950	10,000	38,787	40,200	3,757	5,350	273,044	16.0%	12.6%
Reserves/Contingency	233,601	64,417	120,050	---	10,000	---	428,068	25.1%	24.9%
Total Expenditures	923,340	84,348	409,362	147,000	104,739	34,683	1,703,472	100.0%	100.0%
As % of all Dists	54.2%	5.0%	24.0%	8.6%	6.1%	2.0%	100.0%		
Ending Balance	1	0	0	0	4,000		72,536		

NOTES:
See notes to budgets on following page.

SOURCES:
District budgets for years shown.

The published budgets obtained were also at varying stages of completion. Three were final or adopted, two for Fiscal Year 1989-90, but Summit City's adopted budget is for Fiscal Year 1988-89, which was the latest available. The three other budgets were in the proposed or requested stage for Fiscal Year 1989-90 and may have already been changed or adopted by the time this present study is completed. Also, two of the published budgets did not show their prior year balances (Cottonwood and Summit City), so the new fund balances may be incomplete. In any case, all the budgets are estimates and will change in the future. We should not get tangled up in the precise numbers for our purposes, but concentrate on the relative emphasis among all the budgets.

Table 10.1 also displays the distribution of expenses for the six FPD's. The combined budget shows salaries and benefits consuming 43.5 percent of all expenditures, but each district varies. Buckeye, for example, spends no funds for this category while Cottonwood spends more than 56 percent. Services and supplies consume the next largest share, but again each district varies. Before discussing these and future funding issues, we will continue to present the latest budgets for the other districts under study.

The Mountain Gate Community Services District, which provides water services as well as fire protection, allocated only \$24,513 in revenues for fire protection in its proposed 1989-1990 budget, but showed expenditures of \$82,685 for a "deficit" in its fire protection operation of \$58,172. However, the deficit assigned to fire protection is merely an accounting convenience. The district assigns all of its tax revenues to its water operations, thereby forcing most of its deficit into fire protection. It is therefore difficult, if not impossible, to allocate fire prevention costs by review of the budget alone. Both operations are presented in Table 10.2.

Table 10.3 displays the budget for County Service Area #1, whose proposed Fiscal Year 1989-90 revenues of \$1.36 million exceeded the combined revenues of the six FPD's discussed above (\$1.2 million). It too draws heavily on the property tax, expecting to receive \$768,268 in such funds for the fiscal year or 56.6 percent of all revenues. Its second major revenue source is from parcel charges amounting to \$281,190 or 20.7 percent. The SDAF contributes the third largest source.

The largest expenditure listed in the CSA #1 budget is its contract with CDF, which will amount to \$642,023 or 40.8 percent of total expenditures. Second is its fixed assets or equipment account. The CSA will also distribute more than \$100,000 to 31 fire companies in the County.

TABLE 10.2
MOUNTAIN GATE CSD BUDGET (WATER & FIRE)
FY 1989-90

PROPOSED FISCAL YEAR 89-90 REVENUES	FIRE OPERATIONS		WATER OPERATIONS		COMBINED OPERATIONS	
	\$	% DISTRIB	\$	% DISTRIB	\$	% DISTRIB
Property Taxes	---	---	130,000	44.2%	130,000	40.8%
Water Sales	---	---	115,000	39.1%	115,000	36.1%
Automatic Aid Agreements	5,000	20.4%	---	0.0%	5,000	1.6%
Augmentation Fund	11,313	46.2%	---	0.0%	11,313	3.6%
Interest	1,200	4.9%	10,850	3.7%	12,050	3.8%
Rural Fire Prot. Fees	2,000	8.2%	---	0.0%	2,000	0.6%
Other	5,000	20.4%	38,000	12.9%	43,000	13.5%
Total Revenues	24,513	100.0%	293,850	100.0%	318,363	100.0%
EXPENDITURES						
General Administration	---	---	150,471	52.0%	150,471	40.5%
Operations	47,935	58.0%	114,700	39.7%	162,635	43.7%
Capital Outlay	34,750	42.0%	24,000	8.3%	58,750	15.8%
Reserves/Contingency	---	---	---	---	---	---
Total Expenditures	82,685	100.0%	289,171	100.0%	371,856	100.0%
Deficit	(58,172)		4,679		(53,493)	

NOTES:

SOURCES:
Mountain Gate CSD Budget for FY 1989-90

TABLE 10.3
COUNTY SERVICE AREA #1 BUDGET
FY 1989-90 & 1988-89

FISCAL YEAR REVENUES	RECOMMENDED FY 89-90		ACTUAL FY 88-89	
	\$	% DISTRIB	\$	% DISTRIB
Property Tax	768,268	56.6%	708,032	41.3%
Augmentation Fund (a)	167,500	12.3%	77,500	4.5%
Interest	28,000	2.1%	28,089	1.6%
HOE	27,629	2.0%	25,712	1.5%
Parcel Charges	281,190	20.7%	283,000	16.5%
Other (b)	85,972	6.3%	63,836	3.7%
Long-term Debt Proceeds	0	0.0%	528,465	30.8%
Total Revenues	1,358,559	100.0%	1,714,634	100.0%
EXPENDITURES	FY 89-90 \$	% DISTRIB	FY 88-89 \$	% DISTRIB
Salaries & Benefits	116,534	7.4%	0	0.0%
Services & Supplies	230,421	14.6%	64,550	2.8%
Fixed Assets	318,133	20.2%	826,666	35.7%
Other:				
CDF Contract	642,023	40.8%	518,275	22.4%
Automatic Aid Calls	29,000	1.8%	29,000	1.3%
Retire Long-Term Debt	107,573	6.8%	96,803	4.2%
Fire Co's (c)	100,359	6.4%	302,790	13.1%
Other	17,834	1.1%	16,391	0.7%
Reserves/Contingency	12,500	0.8%	459,448	19.9%
Total Expenditures	1,574,377	100.0%	2,313,923	100.0%
NET COUNTY COST	<215,818>		<599,289>	

NOTES:

(a) According to Auditor's Report, CSA #1 will receive \$77,232 in FY 89-90 from SDAF and not \$167,500 as shown here.

(b) Other revenues include a CDF-reimbursed overpayment of \$35,000 for both years shown, plus revenues from Services.

(c) In FY 88-89, allocations by Fire Co. included liability insurance and state compensation funds. Contract amounts were essentially the same in both years. See Table 10.4 for SCR study area VFC allocations.

SOURCE:

County Service Area #1 Budget for FY 1989-90 & 1988-89

The seven study area fire companies and their allocations for the past two fiscal years are shown in Table 10.4. Prior year allocations to the fire companies were three times the current year's because state compensation and liability insurance costs were included in the 1988-89 budget.

It is very difficult to discuss budget differences because the CSA #1 budget is actually the vehicle for funding the Shasta County Fire Department and the Department's budget is prepared by CDF which uses virtually different categories.

The CDF Annual Report shows only budget expenditures and no revenues, and these are allocated in three parts as shown in Table 10.5. Because of lag time when money is received by CSA #1 and spent by the CDF, it is very difficult to track revenues and expenditures between the two budgets.

For example, the CSA's budget for 1988-89 shows revenues of \$1.7 million and expenditures of \$1.85 million, plus reserves of \$459,448. The CDF budget for the same fiscal year shows total expenditures of \$1.6 million, a considerable increase over the previous year (1987-88) when total expenditures were less than a million dollars (See Table 10.5). In 1987-88 CSA revenues were essentially the same as its 1988-89 budget (\$1.7 million) but expenditures were just over \$1 million.

10.3 Special District Augmentation Fund

Before discussing more traditional revenue sources, a word about SDAF is in order because next to property taxes and parcel charges, it is a significant source of revenue for the fire districts and other special districts as well.

The Special District Augmentation Fund (SDAF) is part of the local one percent property tax levy and is a vehicle for the distribution of property tax revenue. Most, but not all, districts which participate in the process have a portion of their property tax revenues channeled into the SDAF according to rules established in state law. There is no local control over the size of these "contributions" or withholdings. Allocations from the Fund are made annually by the Shasta County Board of Supervisors. Although there is no local control over what goes into the fund, the board has total discretion over how the fund is allocated among the participating districts.

In 1978-79, the first post-Proposition 13 year, there was no Augmentation Fund. Instead, the State made bailout money (state assistance) available to districts through the counties. The bailout offer contained certain requirements; among these were drawing down of fund balances and liquidation of reserves. Some districts received no bailout.

TABLE 10.4
 COUNTY SERVICE AREA #1 BUDGET ALLOCATIONS TO SCR FIRE COS.
 FY 1989-90 & 1988-89

Expenditures by Fire Co.	RECOMMENDED	ACTUAL
	FY 89-90	FY 88-89
	\$	\$
Bella Vista	3,600	3,600
Centerville	3,300	3,600
Jones Valley	3,600	3,600
Keswick	3,300	3,300
Millville	3,709	3,000
Palo Cedro	3,600	3,600
West Valley	3,300	3,000
TOTALS	24,409	23,700

NOTES:

Includes contracts only. In FY 88-89, budget allocations also included liability insurance and state compensation funds by district.

SOURCE:

County Service Area #1 Budget for FY 1989-90 & 1988-89

TABLE 10.5
SHASTA COUNTY (CDF) BUDGET EXPENDITURES
FY 1988-89 & 1987-88

CATEGORY	FY 1988-89		FY 1987-88	
	\$	% DISTRIB	\$	% DISTRIB
Schedule "A" Operations (City of Anderson)				
Personnel	209,679	52.1%	254,143	59.3%
Maintenance/Utilities	0	0.0%	0	0.0%
Mobile Equipment	14,518	3.6%	20,582	4.8%
Overhead & Support Staff	163,728	40.7%	139,148	32.5%
Other Operating Expense	14,321	3.6%	14,892	3.5%
Subtotal "A"	402,246	100.0%	428,765	100.0%
Amador" Operations (Redding Airport)				
Personnel	40,894	33.4%	59,940	49.5%
Maintenance/Utilities	6,377	5.2%	8,947	7.4%
Mobile Equipment	8,246	6.7%	11,212	9.3%
Overhead & Support Staff	66,896	54.6%	40,883	33.8%
Other Operating Expense	0	0.0%	0	0.0%
Subtotal "Amador"	122,413	100.0%	120,982	100.0%
Schedule "C" Operations (Volunteers)				
Personnel	0	0.0%	0	0.0%
Maintenance/Utilities	52,500	4.9%	12,500	2.9%
Mobile Equipment	645,647	59.8%	61,845	14.2%
Overhead & Support Staff	0	0.0%	0	0.0%
Other Operating Expense				
SCFD Operation	37,617	3.5%	25,756	5.9%
VFC Insurance	189,787	17.6%	143,045	32.9%
VFC Operating	64,200	5.9%	70,220	16.1%
Aid Contracts	65,650	6.1%	73,350	16.9%
Training Facility	10,000	0.9%	32,000	7.4%
EMT Recertification	1,000	0.1%	5,000	1.1%
Reserve/Contingency	13,000	1.2%	11,563	2.7%
Subtotal "C"	1,079,401	100.0%	435,279	100.0%
Grand Total	1,604,060		985,026	

SOURCE:
Shasta County Fire Department, Annual Report--1988.

For the following year (1979-80), the Legislature decided to no longer make state assistance (bailout) available to all categories of districts. A decision was made by the Legislature to shift some property taxes, which formerly went to school districts, to special districts. The State, in turn, would pick up the portion of school costs associated with the property taxes shifted to the special districts. This legislation became known as AB 8, and the Augmentation Fund became the vehicle for this shift. The amount of property tax shifted was proportional to the amount of bailout each district received in 1978-79, divided by its past three-year average tax collection. The shifted tax monies were placed in the Augmentation Fund to be allocated by the Board of Supervisors in each county at its discretion.

It is important to bear in mind that each district which receives an allocation from the fund receives more in property taxes than would have been the case had school district taxes not been shifted to special districts. It is also true that no one involved with the original distribution of bailout in 1978-1979 knew that the SDAF would be based on that distribution or that the SDAF would even be created. The original bailout distribution was thought to be a one-year problem and was approached from a short-term perspective.

Most, if not all, counties try to use SDAF to eliminate public service funding inequities which occurred after passage of Proposition 13. But of course, some districts have long maintained they are treated unfairly by the allocation process because they "contribute" more to the fund than they receive back in their annual allocations.

Table 10.6 shows the latest distribution of SDAF monies as reported by the County Office of Auditor-Controller. The six Fire Protection Districts, CSA #1, and the two CSD's in the South Central Region study area have not fared badly in distributions when considered as a whole and measured against the original bailout funding in 1978-79 or monies contributed or withheld.

As a whole, the nine SCR districts received almost 60 percent of all funds allocated in Fiscal Year 1989-90, even though their original bailout proportion was only 48 percent and monies withheld in these districts in Fiscal Year 1989-90 amounted to less than 47 percent. The allocations in 1990-91, however, reveal a decline over the previous three years to a level more in line with the original bailout and withholding levels. Whether this trend will continue is not certain.

Most, if not all, of the differences in prior years, however, are because CSA #1 and Happy Valley were not in existence in 1978-79. If CSA #1 is excluded from the numbers above, then the allocations are less skewed. In fact, the study area without CSA #1 received less than its 1978-79 bailout ratio and less than the proportion

TABLE 10.6
SHASTA COUNTY SPECIAL DISTRICT AUGMENTATION FUND

SPECIAL DISTRICT	ORIGINAL BAILOUT (1978-79)	SOAF FUND FY 89-90 WITHHOLD	FY 90-91 ALLOCATION	FY 89-90 ALLOCATION	FY 88-89 ALLOCATION	FY 87-88 ALLOCATION
Community Service						
Mountain Gate CSD	11,377	26,177	15,648	11,314	24,461	22,627
Shasta CSD	6,623	11,388	11,388	4,397	4,753	4,397
Other CSD's (5)	16,849	35,803	13,238	8,612	18,224	17,356
Fire Protection						
Anderson	84,960	125,424	125,424	108,709	141,706	108,709
Buckeye	1,521	3,371	---	1,551	1,677	1,551
Central Valley	24,652	45,806	63,275	57,875	69,188	57,875
Cottonwood	1,804	2,535	---	7,628	8,246	7,628
Summit Fire	1,802	2,547	5,462	5,462	5,905	---
Other FPD's (5)	43,840	62,464	3,774	3,774	4,080	3,774
CSA #1-Fire	---	---	---	77,232	114,492	77,232
Lighting (3)	824	1,480	---	---	291	291
Mosquito Abatement (3)	53,304	88,175	104,757	100,975	112,232	104,975
Public Utility (1)	14,817	26,294	44,572	19,424	45,497	19,424
Resource Conservation (2)	---	---	1,000	---	203	2,543
Water (1)	13,374	28,863	---	4,975	9,950	9,950
Administration Fee Reserve	---	---	---	2,500	2,000	1,000
	---	6,221	---	3,074	6,221	1,553
TOTALS	275,747	466,548	460,326	466,548	622,148	495,393
Study Area Districts	132,739	217,248	224,971	277,942	374,508	289,255
As % of Totals	48.1%	46.6%	48.9%	59.6%	60.2%	58.4%
Study Area Less CSA #1	132,739	217,248	224,971	200,710	260,016	212,023
As % of Totals	48.1%	46.6%	48.9%	43.0%	41.8%	42.8%

SOURCE:
Shasta County Office of Auditor-Controller

withheld in 1989-90. However, no funds were allocated to CSA #1 in the current fiscal year (FY 1990-91), so the issue of equity or balance appears to be changing. Most of the proportional "losses" accrue to the Anderson FPD, which is also the largest recipient of SDAF money in absolute terms.

Since allocations vary from year to year, a true representation would have to look at the entire history of the fund. Whether the allocations are "fair" or not would require much more consideration of other factors. See also Table 10.7 for percentage distributions among SDAF recipients.

In summary, it is not at all clear whether any additional monies would be available to fire districts from SDAF whether they remain the same in number as they are now or are consolidated into fewer districts. It could be argued either way. Anderson, a large district has "suffered" in recent years according to Table 10.7, whereas Central Valley, a medium to large-sized district has done well, and CSA #1 even better until this fiscal year. The smaller districts also show varying degrees of "equity."

Reform of the SDAF process is possible in the future. Sacramento County is negotiating an agreement among recipient districts to reform its allocation process as a result of a prior law suit and judgment "which would essentially have decimated the fund." (See letter from Brian H. Richter, County Executive to participating districts, December 18, 1989 in the Appendix.) The proposed agreement contains 15 points, but in summary it asks the districts to support state legislation abolishing the fund and then make new allocations which become part of the permanent tax base of each district.

A key part of the proposed Sacramento agreement is the establishment of a \$900,000 incentive fund for consolidation of fire districts. Newly reorganized urban districts would receive up to \$150,000 from the fund while reorganized rural fire districts would receive up to \$50,000. This approach would be worth investigating for Shasta County, but would require the cooperation and agreement of all districts listed in Table 10.6 and not just the fire districts.

If the fund was abolished and the allocations become a permanent part of each district's revenues, then they would increase as a result of economic growth in each area instead of being tied to an outdated percentage formula.

TABLE 10.7
SHASTA COUNTY SPECIAL DISTRICT AUGMENTATION FUND
PERCENT DISTRIBUTIONS

SPECIAL DISTRICT	ORIGINAL BAILOUT (1978-79)	SDAF FUND FY 89-90 WITHHOLD	FY 90-91 ALLOCATION	FY 89-90 ALLOCATION	FY 88-89 ALLOCATION	FY 87-88 ALLOCATION
Community Service						
Mountain Gate CSD	4.1%	5.6%	3.4%	2.4%	3.9%	4.6%
Shasta CSD	2.4%	2.4%	2.5%	0.9%	0.8%	0.9%
Other CSD's (5)	6.1%	7.7%	2.9%	1.8%	2.9%	3.5%
Fire Protection						
Anderson	30.8%	26.9%	27.2%	23.3%	22.8%	21.9%
Buckeye	0.6%	0.7%	0.0%	0.3%	0.3%	0.3%
Central Valley	8.9%	9.8%	13.7%	12.4%	11.1%	11.7%
Cottonwood	0.7%	0.5%	0.0%	1.6%	1.3%	1.5%
Happy Valley	0.0%	0.0%	1.2%	1.2%	0.9%	1.1%
Summit City	0.7%	0.5%	0.8%	0.8%	0.7%	0.8%
Other (5)	15.9%	13.4%	15.6%	10.5%	8.5%	9.9%
CSA #1-Fire	0.0%	0.0%	0.0%	16.6%	18.4%	15.6%
Lighting (3)	0.3%	0.3%	0.0%	0.0%	.0%	0.1%
Mosquito Abatement (3)	19.3%	18.9%	22.8%	21.6%	18.0%	21.2%
Public Utility (1)	5.4%	5.6%	9.7%	4.2%	7.3%	3.9%
Resource Conservation (2)	0.0%	0.0%	0.2%	0.0%	.0%	0.5%
Water (1)	4.9%	6.2%	0.0%	1.1%	1.6%	2.0%
Administration Fee	0.0%	0.0%	0.0%	0.5%	0.3%	0.2%
Reserve	0.0%	1.3%	0.0%	0.7%	1.0%	0.3%
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SOURCE:
Shasta County Office of Auditor-Controller and Table 10.6

10.4 Consolidation

Other chapters discuss district consolidation in more depth. This section combines district budgets to assist in reviewing the recommended consolidations. Consolidation could also occur if a movement to reform SDAF takes place as discussed above.

Consolidation of certain districts in the South Central Region is a viable alternative provided the new entities will be more efficient, less expensive to operate and more responsive to service needs now and in the future. Measuring the potential effects of a proposed consolidation to meet these goals would be a major undertaking. This section addresses only those consolidations which on the surface could be promising, but would certainly require more in-depth analysis and discussion before implementation.

A first pass at consolidating districts would address geographic location. Contiguous districts are more likely to benefit from consolidation provided stations, equipment and personnel can also be integrated. In many cases, individual districts and their boards may not wish to relinquish their present powers or vote themselves out of existence. Their reasons may be good and logical in the absence of sufficient data, past experiences or uncertainty about the future.

Table 10.8 shows the results of combining the budgets for three fire protection districts (Buckeye, Central Valley, and Summit City) and the fire operations portion of the Mountain Gate CSD. Central Valley FPD will be the dominant partner in that hypothetical consolidation with about 2/3 of the new district's revenues and expenditures.

The Mountain Gate fire operations, however, are shown to be operating at a significant deficit because the revenue and expenditure portions of the CSD to fire protection are not accurately allocated. We have not tried to reassign the CSD's allocations, and it is not certain what the full effects of consolidating the Mountain Gate CSD would be because the action alone would not eliminate its obligation to carry on water operations.

Table 10.9 shows the results of combining Anderson and Cottonwood FPD's. Anderson obviously dominates the merger with 80 percent of current revenues and a large contingency or reserve of \$233,526. Cottonwood, however, would contribute a not inconsiderable amount of property tax revenue and the combined district might be in a stronger position to get more SDAF money if that mechanism continues into the future. However, combined salaries and benefits would increase from that shown in Table 10.9 if Cottonwood salaries and, especially, benefits are changed to conform to Anderson's schedules.

TABLE 10.8
SELECTED COMBINED DISTRICT BUDGETS
SHASTA COUNTY

FISCAL YEAR REVENUES BY DISTRICT	PROPOSED	ADOPTED	ADOPTED	PROPOSED	COMBINED TOTAL % DISTRIB. ALL DISTS	% DISTRIB. ALL DISTS
	FY 89-90 BUCKEYE	FY 89-90 CENTRAL VALLEY	FY 88-89 SUMMIT CITY	FY 89-90 MOUNTAIN GATE (a)		
Property Tax	52,138	195,700	20,445	---	268,283	68.2%
Augmentation Fund	1,551	57,875	3,775	11,313	74,514	18.9%
Automatic Aid Agreements	---	---	---	5,000	5,000	1.3%
Interest	2,400	8,000	500	1,200	12,100	3.1%
HOE	2,000	7,000	400	---	9,400	2.4%
Services, Fees	---	1,050	7,800	2,000	10,850	2.8%
Other	12	2,700	5,763	5,000	13,475	3.4%
Total Revenues	58,101	272,325	38,683	24,513	393,622	100.0%
As % of Combined Dists	14.8%	69.2%	9.8%	6.2%	100.0%	
Fund Balance, Prior Yr	26,247	137,037	---	---	163,284	
New Fund Balance	84,348	409,362	38,683	---	532,393	
EXPENDITURES	BUCKEYE	CENTRAL VALLEY	SUMMIT CITY	MOUNTAIN GATE	TOTAL % DISTRIB. ALL DISTS	% DISTRIB. ALL DISTS
Salaries & Benefits	---	186,215	17,036	47,935	251,186	41.1%
Services & Supplies	9,931	64,310	12,297	(b)	86,538	14.2%
Fixed Assets	10,000	38,787	5,350	34,750	88,887	14.5%
Other	50,000	50	---	---	50,050	8.2%
Reserves/Contingency	14,417	120,000	---	---	134,417	22.0%
Total Expenditures	84,348	409,362	34,683	82,685	611,078	100.0%
As % of Combined Dists	13.8%	67.0%	5.7%	13.5%	100.0%	

NOTES:

(a) Fire Operations Only. Property tax revenues are assigned to Water Operations.
(b) Included in Salaries & Benefits.

SOURCE:

District Budgets for Years Shown.

TABLE 10.9
 SELECTED DISTRICT BUDGETS
 SHASTA COUNTY

FISCAL YEAR REVENUES BY DISTRICT	FINAL	REQUESTED	TOTAL % DISTRIB.	
	FY 89-90 ANDERSON	FY 89-90 COTTONWOOD	BOTH FPD's	BOTH FPD's
Property Tax	267,584	116,700	384,284	53.5%
Augmentation Fund	108,709	8,000	116,709	16.2%
Interest	17,000	(1,000)	16,000	2.2%
HOE	9,887	4,300	14,187	2.0%
Services	8,120	8,000	16,120	2.2%
Other	10,264	11,000	21,264	3.0%
CIP	150,000	—	150,000	20.9%
Total Revenues	571,564	147,000	718,564	100.0%
As % of Combined Dists	79.5%	20.5%	100.0%	
Fund Balance, Prior Yr	351,777	—	351,777	
New Fund Balance	923,341	147,000	1,070,341	
EXPENDITURES				
Salaries & Benefits	402,286	82,600	484,886	45.3%
Services & Supplies	112,503	24,200	136,703	12.8%
Fixed Assets	174,950	40,200	215,150	20.1%
Other	75	—	75	.0%
Reserves/Contingency	233,526	—	233,526	21.8%
Total Expenditures	923,340	147,000	1,070,340	100.0%
As % of Combined Dists	86.3%	13.7%	100.0%	

SOURCE:
 District Budgets for Years Shown.

10.5 Automatic Aid Response Fees

We were asked to review these fees in terms of how well they relate to the services they pay for. Such fees are fairly unusual in the state.

The fees were defined prior to 1980, when the current agreement was negotiated with CDF. They were a matter between the county, the eight districts, and the city. So far as is known, they have not been reviewed since, except in individual cases. All the fire responses are from the local entities to the county district territory.

Response payment is broken into two parts, a flat annual fee to assure capability, and a fee per response. The latter takes into account the length of response and the personnel and apparatus used. There could be a temptation to overdo a response. However, it is not a large budget item. The annual contracts for 1989-90 in the study area are:

Cottonwood	\$ 5,000	
Happy Valley	-----	(new district)
Mountain Gate	2,000	(budget says \$5,000)
City of Redding	15,000	
Shasta	2,000	
Shasta College	4,000	
Summit City	2,000	

County-wide, these contracts total about \$50,000. Thus, the county is getting substantial standby supplemental response for relatively low fees. A review of the fees may nevertheless be advisable to assure they are still equitable, and that the balance between response fees and annual flat amounts is appropriate.

10.6 Potential Revenue Sources

A preliminary list of potential revenue sources for fire protection would not be very extensive. Property taxes will continue to be a major source. Distributions from the SDAF will also continue, although they could change in the future. New or increased parcel charges seem to be the most likely source of increased revenues both in Shasta County and in other counties, especially for existing developed areas. In new developing areas, the county should use increased development fees or expand use of Mello-Roos financing where appropriate. Each of these sources is described briefly below.

10.6.1 General Obligation Bonds

General Obligation Bonds could be used to finance capital improvements, i.e., new fire stations in some areas. GO bonds

however require 2/3 passage by voters in the affected community, and this is usually difficult to obtain. If districts are combined, perhaps new fire stations may be kept to a limit.

10.6.2 Development Charges

For larger, new developments, one-time development fees could be used to defray costs of some capital outlays. Developers in many communities are now assessed on a per square foot, per acre or per dwelling unit basis to cover capital construction costs for infrastructure, parks and schools. Connection fees for utility development are, of course, common, and are also assessed on an acreage basis. The county could designate certain areas and require developers to contribute on a per acre basis for all sorts of improvements, including fire protection in those areas. Development fees such as these, however, are not completely reliable, because they rise and fall with development activity. According to one source (Kiplinger California Letter, December 21, 1989) the City of Redding set a record for value of building permits in the first 11 months of last year--\$124.7 million exceeding a previous high of \$116.3 million in 1987. Additional development fees amounting to one percent of these values would generate more than \$1 million a year within the City of Redding, if construction trends continue.

The State's school funding bill (AB2926) permits one-time assessments of up to \$1.50 per square foot on new residential projects and up to \$0.25 per square foot on nonresidential construction for school construction impacts. These fees represent about one percent of construction costs so the estimate above is not out of line. Unfortunately, the study area is outside the Redding City limits, and new development will not be as extensive in the unincorporated areas, nor perhaps even desirable, so revenues from a similar impact fee may not be as significant.

10.6.3 Community Facilities District (Mello-Roos)

The Mello-Roos Community Facilities District Act of 1982 (Section 53311 et seq. California Government Code) permits the establishment of special districts to fund a wide range of public improvements.

A Community Facilities District (which may include areas that are not contiguous) may provide for the planning, design, purchase, construction, expansion or rehabilitation of any real or other tangible property with an estimated useful life of at least five years. Examples of facilities include, but are not limited to local parks, recreation, parkway and open space facilities, schools, libraries, utilities, and any other governmental facilities which the legislative body is authorized by law to contribute revenue to, construct, own or operate with few exceptions.

A Mello-Roos Community Facilities District may also provide the following services:

- * Fire protection and suppression services, and ambulance and paramedic services;
- * Police protection services, including criminal justice services limited to service for jails, detention and juvenile halls;
- * Recreation program services, library services and the operation and maintenance of parks, parkways, and open space (provided that a special tax to provide these services may only be levied if at least twelve persons are registered to vote within the territory, plus other requirements); and
- * Flood and storm protection services, including the operation and maintenance of storm drainage systems.

Mello-Roos bonds are similar to assessment bonds in that both are secured by the value of the land. Typically, both are issued so that the land value is at least three times the amount of the bond. The proceedings to issue bonds and to form a Community Facilities District are similar because each requires action by the legislative body, a public hearing and an election. The proceedings to form the district and to issue bonds may be undertaken concurrently.

A Community Facilities District can be initiated in three ways: The legislative body may institute proceedings on its own initiative, a written request may be filed and signed by two of its members, or a petition may be filed with the clerk signed by not less than ten percent of the registered voters residing in the district, or by owners of a least ten percent of the land within the proposed district. Once a written request or petition is filed, the legislative body must adopt a resolution of intention to establish a district within 90 days. Formation of a Community Facilities District is not subject to review by the Local Agency Formation Commission (LAFCO).

A resolution of intention to establish the district can be filed at the same time as a resolution of intention to incur bonded indebtedness (for which no procedures exist for requiring its passage). In the resolution of intention to establish the district, the rate must be specified and the method of apportionment of the special tax, so that each landowner within the proposed district can estimate the probable and maximum amount that he or she would have to pay.

A time and place for a public hearing on the establishment of the proposed district and bonded indebtedness must be set no less than 30 days and no more than 60 days after adopting the resolution of intention. If a majority protests at this hearing, no further proceeding to create the district, to levy the tax or to incur bonded indebtedness can be taken for one year. However, if the hearing is held, and the district is supported, the levy of the maximum special tax will be voted on by landowners in a district with fewer than 12 registered voters or by the registered voters in a district with 12 or more registered voters in a general or special election to be held from 90 to 180 days following the close of the protest hearing. The election time limits may be waived in writing by 100 percent of the voters. In both cases, a two-thirds majority is required.

Bonds issued by Mello-Roos community facilities districts are usually called special tax bonds. The bonds may be sold at competitive sale or at negotiated sale if it is determined that a negotiated sale will lower overall cost. Structure and rates of the bond issue are subject to market conditions and determined with the assistance of bond counseling firms.

10.6.4 Parcel Charges

This technique is rapidly becoming a significant source for meeting fire protection needs. It is, of course, already used in Shasta County--in CSA #1 and the Happy Valley FPD.

In 1986, the voters approved a benefit assessment for fire protection within the county fire department area (Measure B). It provided for a levy of up to \$20 per parcel which had at least \$1,000 in improvements on it. The funds could be used only for the acquisition and maintenance of apparatus and equipment for the volunteer companies.

While most of the study area is residential, it does include some non-residential risks. Most such benefit assessment schemes recognize the differing fire risks of differing land uses. It appears timely, therefore, to consider a refinement to Measure B that would increase the maximum charge for non-residential uses.

Parcel charges are also the most likely source for the FPD's that do not now assess them. Table 10.10 shows the number of eligible parcels within each district and other selected areas of the county. The six FPD's combined have almost the same number of parcels as does CSA #1, so a charge similar to Measure B in these districts would generate similar revenues if all districts assessed them.

Table 10.10 can also be used to develop individual district revenues from the parcel tax at varying rates.

TABLE 10.10
 NUMBER OF PARCELS BY DISTRICT
 SHASTA COUNTY

SPECIAL DISTRICT	PARCELS (3/1/89)	% DISTRIB (3/1/89)	PARCELS (3/1/88)
Community Service			
Mountain Gate CSD	960	1.2%	948
Shasta CSD	1,084	1.4%	1,080
Fire Protection			
Anderson	3,526	4.5%	3,481
Buckeye	1,800	2.3%	1,758
Central Valley	3,535	4.5%	3,535
Cottonwood	1,804	2.3%	1,672
██████████	2,508	3.2%	1,525
Summit City	590	0.8%	588
Subtotal, Six FPD's	13,763	17.5%	12,559
Happy Valley Annex	674	0.9%	0
CSA #1-Fire	14,288	18.2%	15,387
City of Redding	24,321	30.9%	22,919
Shasta County	78,643	100.0%	76,681

NOTE:

Only parcels with improvements and land value over \$1,000 are included.
 Not all jurisdictions are shown so County total is not the sum of other totals

SOURCE:

Shasta County Assessor and County Auditor-Controller

Other Fire Protection Districts in the state, such as the Tamalpais Fire Protection District in Marin County, use a more complicated formula for assessing parcel charges (see Appendix). We would recommend, however, that any new charge in Shasta County should be as simple as is now implemented.

10.7 Recommendations

1. The CSA #1 and CDF budgets should be revised to show the flows of revenues and expenditures by the Shasta County Fire Department in a more consistent and traceable manner.
2. The County should work with all the districts now receiving SDAF revenues to reform the process in a way similar to that now being done in Sacramento County. Incentives for consolidating districts should also be included.

Those districts who are not imposing parcel charges should consider doing so, preferably after some consolidation has taken place. Parcel charges should be simple just as is now being done under Measure B.

Real-time development fees should also be investigated in order to capture the immediate impacts of new development in the county.

11. Local Administration of Shasta County Fire Department

11.1 Background

The Shasta County Fire Department commenced operations in 1976 as a separate county department. The organization was headed by a county-appointed Fire Warden and included two paid fire companies of six members each and 16 volunteer fire companies. The two paid companies and six of the volunteer fire companies were located within the SCR. There were 14 paid employees. Funding was from two service areas, which raised approximately \$866,770. This was \$330,400 in excess of operating costs in that year according to the SCFD's 1977-1978 annual report.

Proposition 13 reduced the ad-valorem tax revenues. Internal problems beset the department and a change in leadership was made. Some problems did not abate and the County Board of Supervisors chose to contract with the California Department of Forestry and Fire Protection (CDF) to assume responsibility for the SCFD. CDF has operated the SCFD since 1980, and several aspects of the county fire department's operations training, fire prevention, purchasing, and emergency communications.

County officials have expressed interest in comparing the cost difference, if any, of a locally administered fire department structured to provide the present level of service.

11.2 Current Situation

The CSA #1 budget pays for the operation and administration of the CDF/SCFD contract. We estimate that an approximate total of 36 state personnel participate in SCFD operations to some degree. Some of these positions are funded as "Amador Plan" expenses and some as "Schedule A" expenses. The state is compensated for Amador costs on the basis of differences between fire season and non-season costs of personnel and station costs. Schedule A charges pay for state operation of county-owned stations and apparatus which are primarily dedicated to local response. The year-round operation of the Redding Airport CDF station the Burney forest fire stations are paid for at Amador rates. The operation of Company 47 at the Anderson FPD station is paid for at Schedule A rates. There have been many concerns expressed about the cost of the Company 47 operation; these have been addressed separately in other sections of this report.

A review of the Shasta-Trinity Ranger Unit table of organization was conducted to identify the positions that are utilized in the SCFD operations. Three classifications were established based on the funding source:

1. SCFD, where the total cost of state employees is funded by SCFD revenues.

2. Integrated, where the cost of state employees is shared between the state and Shasta County, supposedly based on the benefit to each.
3. State, where the total employee cost is borne by the state, although some of the employees' activities benefit the SCFD.

The seven SCFD positions include one Fire Captain in Communications, one clerical position, one Fire Captain-Fire Marshal, three Fire Engineers (Company 47), and one Battalion Chief for training.

The 21 integrated (shared cost) positions include one administrative State Forest Ranger II, three Fire Captains in Communications, one Steno, one other clerical, two State Forest Rangers II for Operations (East and West), three District Battalion Chiefs, four Training Captains, three Fire Prevention Captains, one Fire Prevention Officer I, four Fire Captains and four Engineers for the Amador Stations (Redding Airport and Burney).

State-funded positions that contribute to the SCFD's operations include the Ranger Unit Chief, the Communication Officer, a Supply Clerk, two Battalion Chiefs, a Fire Prevention Assistant, and two equipment maintenance personnel. Others contribute from time to time.

The state also charges an annual administrative fee (currently 11.13 percent of the total contract amount.) The total SCFD budget, including the state charges and Measure B expenditures is estimated to be \$1,574,400.

Should Shasta County choose to operate the SCFD with locally appointed personnel, several of the CDF positions would have to be filled with new personnel. Some, including the Fire Warden (Fire Chief) would duplicate positions that are now shared with the CDF. There is no cost to the county for some of these. Depending on salary levels and benefit schedules, service levels can be adjusted up or down to balance these costs with available funding.

The SCFD has been described in Section 4.3.4. The original SCFD operation was divided into County Service Area One and Fire Zone Two. Service Area One was approximately the same area as the South Central Region of Shasta County, and Fire Zone Two covered the remainder of the county. Service Area One enjoyed a higher and more costly level of service than Fire Zone Two. Full time fire personnel were maintained on duty at two stations.

11.3 Local Fire Department Alternatives

There are two alternatives for providing locally controlled fire department service to Shasta County:

1. A locally operated fire department which would provide the present level of service.
2. A locally operated fire department which would be funded at the same level as now.

It is necessary to make assumptions concerning pay, hours of service, retirement system costs, workmens' compensation insurance, uniform allowance, PERS benefits, health insurance, and the like.

Both alternatives assume communications services are furnished by a consolidated communications center. Some vehicle maintenance is assumed to be provided by County facilities. One alternative assumes the continued operation of the SCFD engine at Anderson. Also, it is assumed that County fire personnel assigned to shift work will be on duty an average of 56 hours per week (common to fire departments in the west) and that three and one half employees will be needed to staff one on-duty position 24 hours per day.

Therefore, a salary schedule was developed based on Shasta County's general government positions requiring similar knowledge and skills. The schedule follows:

<u>POSITION</u>	<u>PAY PER MO.</u>
Fire Chief	\$3873
Asst. Fire Chief/ Fire Marshall	3346
Fire Captain/Fire Inspector	2634
Fire Lieutenant	2413
Fire fighter/Engineer	2298
Fire fighter	2004
Administrative Secretary II	1909
Typist Clerk II	1404

In addition to straight time salary for a 53 hour duty week, and annual average of 162 hours of overtime (assuming the prevailing 56 hour actual duty week) at one and a half times straight pay is required by the Fair Labor Standards Act. Also it is assumed that a benefit package make up of workmen's compensation insurance, health plan, employer retirement contributions and the like will amount to at least 40% of the gross payroll. Thus the gross annual costs per position of these classifications are estimated to be:

Fire Chief	\$65,066
Assistant Fire Chief/Fire Marshall	56,213
Fire Captain/Fire Inspector	44,251
Fire Lieutenant	43,999 (a)
Fire fighter/Engineer	42,010 (a)
Fire fighter	36,635 (a)
Administrative Secretary II	30,936 (b)
Typist Clerk II	22,745 (b)

(a) Includes 162 hours overtime rate per FLSA.

(b) Benefit package estimated to be 35% of annual salary.

At present the CDF employees who are assigned to fire station duty are normally paid on the basis of a 72 hour duty week compared to the probable 56 hour work for County fire personnel. The annual costs per person for the CDF (using only those positions that re or conceivably could be assigned to a station) are as follows (the CDF benefit package is approximately 37% of gross payroll):

<u>RANK</u>	<u>MONTH</u>	<u>GROSS ANNUAL COST</u>
Fire Captain	\$3273	\$53,808
Fire Engineer	2843	46,739
Fire fighter I	2691	44,240

Coverage of one 24 hour position requires approximately three and one half persons in the case of the County operated fire department's 56 hour duty week. The same coverage by CDF's 72 hour week requires an average of two and one half employees per position.

A County operated fire department that would deliver about the same service as is now provided (Alternative I) is estimated to have personnel costs twice the amount charged by the state. A County operated fire department operating within the existing cost of fire personnel (Alternative II) could provide paid personnel on duty at only one station, thus eliminating paid coverage at Anderson and Burney. Both alternatives provide for an improved training effort and a basic commitment to a fire prevention program.

Money assumed to be available for the operation of the SCFD is \$1,604,063 (1988-1989). The budget total includes "Measure B" funds, the uses of which are restricted. Salaried positions needed to deliver the existing level of service include:

<u>POSITION:</u>	<u>NUMBER:</u>	<u>COST/YR. EA.:</u>	<u>TOTAL:</u>
Fire Chief	1	\$65,066	\$65,066
Asst. Fire Chief/ Fire Marshall	1	56,213	56,213
Fire Captain (Training)	2	44,251	88,502
Inspector	1	44,251	44,251
Fire Lieutenant	3	42,999	131,997
Fire fighter/Engineer	14	42,010	588,140
Admin. Secty. II	1	30,926	30,926
Typist Clerk	1	22,745	22,745
ESTIMATED TOTAL TOP STEP COSTS OF PERSONNEL			\$ 1,027,840

This alternative provides a fire chief, a fire marshal and fire inspector for fire prevention, two fire captains for training and volunteer fire company liaison (one east and one west) three fire lieutenants (one always on duty at central station) and 14 fire fighters (one each always on duty at central station, Burney and Anderson).

In addition to personnel and other operating and maintenance expenses, a separate county fire department will need to provide a headquarters station in the Redding area, pay rent for the unit located in the Anderson station or build a County fire station, and provide a station in or near Burney.

The second alternative is a local organization that would operate within existing funding levels; \$553,000 is assumed to be available to salaries. The salaries are allocated as follows:

<u>POSITION:</u>	<u>NUMBER:</u>	<u>COST/YR. EA.:</u>	<u>TOTAL</u>
Fire Chief	1	\$65,066	\$65,066
Fire Captain	2	44,251	88,502
Inspector	1	44,251	44,251
Fire Lieutenant	1	43,999	43,999
Fire fighter/Engineer	6	42,010	252,060
Admin. Secty.III	<u>1</u>	<u>30,926</u>	<u>30,926</u>
TOTALS	12	N/A	\$524,804

This alternative will provide a skeleton fire force consisting of a Fire Chief, two Fire Captains for training and VFC liaison, a Fire Inspector for basic fire prevention, a Fire Lieutenant to be in charge of a central station during business hours, and six Fire fighters to maintain two on duty at all times in the central station. In both alternatives CDF will retain responsibility for control of wildland fires and enforcement of the state's fire prevention regulations.

11.4 Discussion

The existing operation is delivering a good level for service to suburban and rural residents at reasonable cost. The recent reclassification of the department's fire insurance rating by ISO to Public Protection Class Six and Dwelling Class Eight, depending on the availability of fire hydrants, will benefit policy holders and is a good reflection of the actual service level.

Some costs are high because of the state's pricing methods. These can be reduced by changes to the Company 47 operation. Other potential savings in costs that stem from differences in cost of local and state personnel might well prove illusory if a County operation is adopted.

The present system has weaknesses; however, in most respects, it has worked better than the predecessor local organization.

A county-operated fire department would have to develop the following support services within a short time:

Communications are provided by the CDF to the SCFD as well as to other local fire departments. The SCFD now supports less than 25% of the total operation cost, and it should expect to pay more for a separate arrangement.

Repair and Maintenance, some of which is now accomplished at the CDF Ranger Unit.

Administrative Services, which includes all personnel services and bargaining with employee groups.

Advantages of the present fire CDF-county system includes:

1. The recruiting base for all positions, including promotional positions, is statewide.
2. CDF personnel are isolated from local political activities, although they are often heavily involved at the state legislative level.
3. CDF personnel serve in and are served by an experienced statewide civil service personnel system.
4. CDF standards assure a reasonably high quality and level of administrative practices.
5. The practice of unified ranger district/fire district operation of communications facilities, training programs, fire investigations, fire prevention services, and clerical support can be cost effective to the benefit for all parties.
6. Employees have the advantage of statewide promotional and transfer opportunities that they would not enjoy in a purely local and smaller organization.
7. Employees participate in state furnished and funded training programs that are not normally available to local government personnel.
8. Statewide fire suppression and law enforcement resources are available at no additional cost.

Disadvantages of the present CDF-county system include:

1. Personnel may have to transfer out of the SCFD operation to take advantage of promotional opportunities.
2. It is sometimes necessary for the SCFD's policies to be subordinate to CDF's operational procedures and policies.
3. Some personnel at the grade of Fire Captain and below have been continuously assigned to the SCFD since the CDF commenced management. They identify strongly with the county and may be reluctant to compete for promotion that could lead to transfer out of the Ranger Unit.

4. The Board of Supervisors does not enjoy complete budgetary flexibility because salaries and benefits are set by the state, and the administrative charge provides services that the county might otherwise choose not to use.
5. County fire communications, clerical and some other activities are "captive" to CDF's policies and procedures.
6. The dependance of the system on state-owned facilities can give the state an uneven negotiating advantage over the county.
7. Some career employees (in all paid fire organizations) resent the utilization of volunteer personnel whom they perceive as a threat to their job security.

The advantages of a county-operated fire department would include:

1. All facilities utilized would be county property.
2. The policy of filling new positions for the fire department would be set by the County Board of Supervisors.
3. Administrative, operational and intergovernmental relationships would be largely the prerogative of the County Board of Supervisors.
4. The locally appointed Fire Warden might be more sensitive to the prerogatives and opinions of the volunteer fire companies.
5. The Board of Supervisors would set salaries and working conditions and budgetary flexibility.

The disadvantages of a county-operated fire department will include:

1. A fire chief and other officers, now state funded, will be a major additional expense.
2. Overall administrative effort will become less efficient because of the reduction of the size of the administrative unit.
3. Early capital expenditures will be necessary for a new headquarters and support facilities.

4. The county will lose the convenience of the part time, occasional, and specialized services of a number of Ranger Unit personnel who frequently perform services to the county without reimbursement.
5. The county will have to provide a complete personnel administrative capability to include recruiting, testing, selection, hiring, promotion, classification, discipline and an affirmative action plan to full compliance with present laws and applicable court decisions.
6. The County Board of Supervisors will find it necessary to become directly involved in negotiating with vocal and politically active employee labor group representatives over salaries and other conditions of employment.

The costs of contracts for state performance of local government activities are determined unilaterally by the State of California. They can change at any time and if charges are increased Shasta County must choose to either increase its payment or reduce the services. Obviously, this will cause local dissatisfaction, possibly sufficient to cause termination of the agreement. Should such occur, Shasta County may find it necessary to make the transition from a state to a local operation in a very short period of time.

A table of organization has been prepared (Figure 11.1) for a minimum county-operated fire department (Alternative II). Costs of each position on the table have been estimated, and job descriptions and position classifications should be prepared. The table and supporting data should be reviewed at appropriate intervals to reflect current conditions.

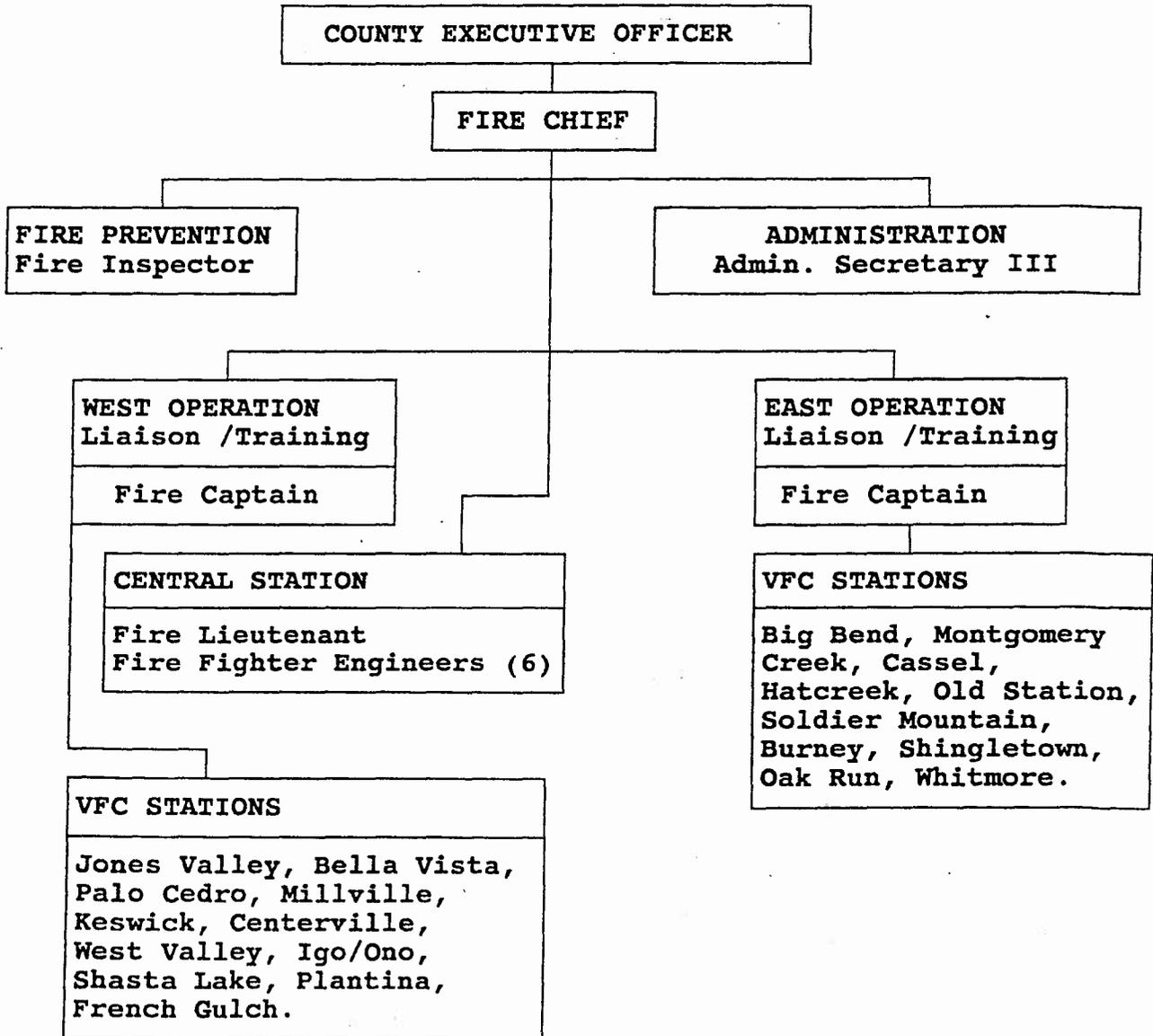
11.5 Recommendations

Based on our review of the situation, we have two recommendations. They are:

1. Shasta County should continue the existing contractual arrangement for management of the Shasta County Fire Department with the California Department of Forestry and Fire Protection for the immediate future.
2. The county should develop a contingency plan for local operation of the county fire department. The plan should be brought up to date at intervals no greater than four years.

FIGURE 11.1

TABLE OF ORGANIZATION
SHASTA COUNTY FIRE DEPARTMENT
ALTERNATIVE II
(Same Cost)



12. Other Items for Consideration

During the course of our work we gathered some information about several topics which, while not part of our scope of work, merited some comments. This section summarizes four that county officials could explore in greater detail.

12.1 Hazardous Materials

Shasta County fire personnel and others are concerned about three aspects of the hazardous materials problem: (1) shipments of large quantities passing through the county by highway or rail transport, (2) quantities and types of materials used or stored in structures in the area which are registered with the County's Environmental Health office, and (3) illegal materials dumped at various locations or housed in structures to which fire personnel might have to respond.

Although it has exempted establishments with smaller amounts of such materials from registration, the process is now underway for registering those with larger amounts. When available, this data should become part of the regular fire services data base so that responders have quick access to such information. Some initial coordination has taken place between the County's Environmental Health Office and the SCFD, but little if any contact has been made with the other fire protection organizations in the SCR area. Shasta County has one of two state-supplied hazmat response vehicles, and planning for an interagency county team is being led by the Undersheriff. There have been problems in creating a multi-county response mechanism as originally intended, but it is important that the Shasta County agencies continue with their work to strengthen their abilities to deal with hazmat problems. Intelligence is the key as far as through shipments are concerned. It might be useful and instructive to ask representatives of the railroad, CalTrans, the CHP and others to meet with the County Chiefs Association and others periodically to review the situation and the roles, responsibilities, and capabilities of everyone involved.

12.2 The Volcanic Threat: Keep an Eye on It

The relatively small eruption of Mt. Saint Helens in 1980 caused tremendous operating problems for public safety agencies, even those located several hundred miles away. Generally, these included equipment, communications and coordination, evacuation, and personnel problems. While not a focus for this study, we did examine some recently published reports on the volcanic threat from nearby volcanoes. According to the U.S. Geological Survey, the

principal ones that could affect the study area include Mt. Shasta, Medicine Lake, and Lassen Peak volcanoes, just a few of those considered potentially active in the Cascade Range. For example, data shows that Mt. Shasta erupted six times in the last 4500 years. In the broader context of the County's emergency preparedness, in which the fire services play a major role, this threat should receive some coordinated planning attention. Full use should be made of the published scientific information and the lessons learned from the Mt. Saint Helens event to guide the preparation of a multi-agency response plan.

12.3 Recent Legislation: Disclosure of Fire Risks

On January 1, 1990, the provisions of Assembly Bill 1812 of the 1989-90 Session took effect. It relates to the disclosure of fire risks and the fire prevention relationship between local fire agencies and the Department of Forestry and Fire Protection. A copy of the legislation is included in Appendix 2. In sum, the seller of real property in an area classified as a "state responsibility area" must disclose to any purchaser that the property is in a wildland fire risk area, is subject to requirements for the clearing of ground, and "that it is not the state's responsibility to provide fire protection to buildings and structures unless the Department of Forestry and Fire Protection has entered into an agreement with a local agency or the county has assumed responsibility for fire protection." The implementation of this new law should help reinforce Shasta County's already strong prevention program.

12.4 Comprehensive Emergency Planning.

While progress is being made on creating a joint dispatch center, and coordination is reasonably good within the fire protection agencies, we share with several others concerns about Shasta County's abilities to respond to a major incident or disaster requiring a multiagency and intergovernmental response. Some examples that were mentioned to us include volcanic eruptions, flooding, major spills of hazardous materials, bridge or dam collapses, earthquakes or perhaps major "campaign" type fires at the urban-wildland interface.

Currently, the county's emergency services program resides in the Sheriff's Department, where it is overseen on a part time basis by a lieutenant. According to our conversations, the county terminated its participation in the federally funded Emergency Management Assistance Program, and reorganized and reassigned the responsibilities to the Sheriff, leaving no one at the County Executive Officer's level to focus on comprehensive multiagency and intergovernmental hazard mitigation programs and response and recovery planning. Little contact appears to exist with federal

and state agencies that have responsibilities and resources in the area, and which would play major roles in responding to major incidents.

Based on this preliminary assessment, we strongly suggest that Shasta County review its approach to and organization of its comprehensive emergency management program. There is great concern at the operating levels of some response organizations about the lack of planning for responding to large scale incidents or disasters when local resources might be overwhelmed, or when a multiagency integrated response might be required.

APPENDICES

- 1. Measure B**
- 2. Chapter 380, California
Public Resources Code**
- 3. Sacramento Augmentation
Fund Agreement**
- 4. Tamalpais Fire Protection
District Parcel Assessment
Rates**

SHASTA COUNTY FIRE PROTECTION SERVICE AREA NO. 1

MEASURE B

(Full Text of Proposed Ordinance)

ORDINANCE NO. 535

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SHASTA ESTABLISHING AND LEVYING A BENEFIT ASSESSMENT FOR FIRE SUPPRESSION EQUIPMENT AND SERVICES IN FIRE PROTECTION SERVICE AREA NO. 1

The Board of Supervisors of the County of Shasta ordains as follows:

Section 1. This ordinance shall be known and may be cited as the 1986 Fire Suppression Assessment Ordinance.

Section 2. Pursuant to Article 3.6 (commencing with Section 50078) of Chapter 1 of Division 1 of Title 5 of the Government Code, an annual benefit assessment for fire suppression services and equipment (the assessment) is hereby established within Fire Protection Service Area No. 1 (the service area).

Section 3. The assessment shall be levied at a rate not to exceed \$20 per year for each parcel of real property within the service area on which improvements exist with a value of more than \$1,000, as determined annually from the latest equalized assessment roll. As used in this ordinance, "year" means the Shasta County fiscal year commencing July 1 and ending the following June 30.

Section 4. The amount of the assessment may be decreased or increased by the Board of Supervisors prior to July 1 of any year, following a public hearing for which notice has been given by publication in at least three editions of a newspaper of general circulation regularly delivered or sold within the service area's boundaries. In setting the amount of the assessment the Board of Supervisors shall consider the total amount of revenue necessary to fund for the next year the expenditure plan established pursuant to Section 5. Any increase is subject to the limitation that the maximum assessment against any parcel shall not exceed \$20 in any year. For the first year of the assessment, the rate shall be \$20, unless the Board of Supervisors sets a lower rate prior to July 1, 1987.

Section 5. Prior to or concurrently with any hearing held pursuant to Section 4, the Board of Supervisors shall consider a master plan for expenditure (the plan) during the next year of the proceeds of the assessment. The plan shall be developed cooperatively by the Fire Warden and the chiefs of the volunteer fire companies and shall be recommended to the Board of Supervisors by the Fire Warden. The plan may be adopted in whole or in part or modified by the Board of Supervisors. In developing, recommending or approving the plan, the chiefs of the volunteer fire companies, Fire Warden and Board of Supervisors shall each give primary consideration to continued funding of outstanding obligations of the service area that require ongoing periodic payments (e.g., lease-purchase agreements). The adopted plan shall serve as the budget for the next year for spending the proceeds of the assessment. If in any year the Board of Supervisors declines to modify an existing plan or adopt a new plan, the latest plan approved by the Board of Supervisors shall remain in effect, except to the extent that budgeted expenditures exceed revenue available from the proceeds of the assessment plus any other revenue available to support implementation of the plan, as may be determined by the Board of Supervisors.

Section 6. The Board of Supervisors finds and declares that the improvements to the parcels of real property subject to the assessment are primarily residential or agricultural in character and that the benefit to any such parcel from the assessment will be equivalent to the benefit to every other such parcel. Therefore, the rate of assessment, including any increases or decreases, shall be the same for all such parcels so long as the proceeds of the assessment are spent solely for fire suppression equipment or apparatus.

Section 7. The assessment shall be collected at the same time and in the same manner as County real property taxes are collected and shall be subject to the same penalties and the same procedure and sale in case of delinquency as is provided by law for such taxes.

Section 8. Except as provided in Section 9, the proceeds of the assessment may be used to obtain, furnish, operate and maintain fire suppression equipment or apparatus (e.g., rated fire engines or water

tenders or both) or to pay the salaries and benefits of firefighting personnel or for both of the purposes. However, none of these proceeds shall be used to pay these salaries or benefits until the question is first approved by a majority of the voters of the service area voting on it.

Section 9. Before any proceeds of the assessment are used to pay for the operation of suppression equipment or apparatus or to pay for salaries or benefits of firefighting personnel, a measure authorizing such payments shall first be approved by a majority of the voters of the service area or zone voting on the question.

Section 10. Pursuant to Public Resources Code Section 21080(b)(8) and 14 Cal. Admin. Code Section 15273(a) the establishment of assessments for fire suppression purposes is exempt from environmental review under the California Environmental Quality Act because the use of the proceeds of these assessments is limited by law to paying the costs of fire suppression equipment and personnel.

Section 11. If any provision of this ordinance, or the application of any such provision to any person or under any circumstances is held invalid, the remainder of the ordinance or its application to all persons or circumstances shall not be affected by the holding, and to this end the provisions of this ordinance are severable.

Section 12. This ordinance shall take effect and be in full force and effect from and after 30 days of approval by the voters of the service area of the measure submitted to them at the November 4, 1986, general election pursuant to Shasta County Resolution No. 86-170. If those voters disapprove that measure at that election, this ordinance shall be deemed to be entirely repealed without further action by the Board of Supervisors. The Clerk shall cause this ordinance to be published as required by law.

Assembly Bill No. 1812

CHAPTER 380

An act to amend Section 4125 of, and to add Section 4136 to, the Public Resources Code, relating to real property.

[Approved by Governor September 12, 1989. Filed with Secretary of State September 12, 1989.]

LEGISLATIVE COUNSEL'S DIGEST

AB 1812, Sher. Real property: state responsibility areas: disclosures: boundaries.

(1) Existing law requires a person selling or transferring real property consisting of not less than one nor more than 4 dwelling units to make specified disclosures. The State Board of Forestry is required to determine whether wildland areas are to be classified as state responsibility areas for fire protection.

This bill would, on and after July 1, 1991, require a seller of real property within an area classified as a state responsibility area by the board to disclose to any prospective purchaser that the property is in a wildland area which may contain fire risks and hazards, is subject to certain requirements for clearing around buildings and structures, and that it is not the state's responsibility to provide fire protection to buildings and structures unless the Department of Forestry and Fire Protection has entered into an agreement with a local agency or the county has assumed responsibility for fire protection. The bill would authorize the sellers to make these disclosures on a designated form, as specified.

(2) Existing law requires the board to classify all lands in the state for which the financial responsibility of fire prevention and suppression is primarily that of the state.

The bill would require the department, on or before July 1, 1991, and every 5 years thereafter, to provide copies of maps identifying the boundaries of state responsibility lands to every county assessor containing these lands and to notify county assessors of any boundary changes in these lands.

The people of the State of California do enact as follows:

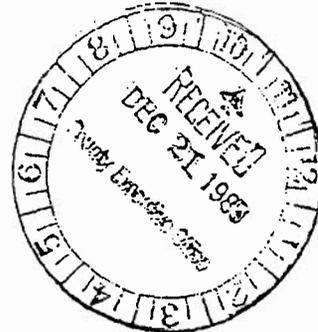
SECTION 1. Section 4125 of the Public Resources Code is amended to read:

4125. (a) The board shall classify all lands within the state, without regard to any classification of lands made by or for any federal agency or purpose, for the purpose of determining areas in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state. The prevention and suppression of fires in all areas which are not so classified is primarily

COUNTY OF SACRAMENTO
OFFICE OF THE COUNTY EXECUTIVE



BRIAN H. RICHTER
County Executive



December 18, 1989

TO: Participating Sacramento County Special Districts

FROM: Brian H. Richter
County Executive

SUBJECT: AUGMENTATION FUND AGREEMENT

Please find attached an agreement regarding the present and future of Sacramento County's Special District Augmentation Fund. This agreement has been prepared by County Counsel and is being submitted to your District for review and ratification. I request that your District place this item on your Board of Directors agenda for formal ratification as soon as possible.

Nearly all the Special Districts participating in the Augmentation Fund process and the County Board of Supervisors have given their conceptual approval to the County's proposed settlement. The negotiated agreement has been crafted to mitigate the more onerous impacts of the Third District Court of Appeals recent ruling which would essentially have decimated the Fund. The terms of this agreement are the same as those outlined in my October 3, 1989 reports to the Board of Supervisors on the Fiscal Year 1989-90 Special District Augmentation Fund. That report serves as Exhibit A of the agreement.

The terms of the agreement are as follows:

1. The reorganized districts agree to waive their entitlements to drop out of the Augmentation Fund process;
2. The reorganized districts waive any entitlements to any funds from prior years which may be due them under the Court's ruling;
3. All districts agree with their Fiscal Year 1989-90 Augmentation Fund allocations as given in the October 3rd reports;
4. The County and all districts agree to support state legislation abolishing the Augmentation Fund and making the net Augmentation Fund allocation part of the permanent tax bases of the districts;

AUGMENTATION FUND AGREEMENT

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5. If the legislation is not enacted prior to the 1990-91 Fiscal Year, the independent districts will receive from the Augmentation Fund the same amount as in Fiscal Year 1989-90, and the dependent districts will receive the same amount as in Fiscal Year 1989-90 and will share in the growth in the Fund;
6. If the Legislature modifies or amends the special legislation in a manner which is not satisfactory to the County or the participating districts, the County and the participating districts will continue the allocation process outlined in this agreement and will enter into negotiation concerning the future allocation of the Augmentation Fund;
7. If the Legislature does not enact the special legislation, the County and the participating districts agree to continue the Fiscal Year 1990-91 allocation process as outlined above and to negotiate the future allocation of the Augmentation Fund;
8. The County agrees to support future fire district (or districts providing fire protection service) organizational changes unless there are other compelling public policy concerns which would preclude such support;
9. The County agrees to establish a fire district consolidation incentive fund totaling \$900,000. Until such time as this fund is transferred to newly reorganized fire districts, the incentive fund will be allocated to County Service Area No. 1 (CSA No. 1);
10. The consolidation incentive transfers to newly reorganized fire districts will amount to \$150,000 for urban districts and \$50,000 for rural districts;
11. The County will make such permanent consolidation incentive transfers until the \$900,000 is transferred. CSA No. 1 will receive the \$900,000 or any remaining balance until such time as the entire \$900,000 is transferred;
12. The urban and rural fire districts are listed;
13. If a legal challenge to a fire district organizational change is made, the County Auditor will hold the consolidation incentive transfer in trust until the legal challenge is resolved. If the change is upheld, then the transfer, plus any interest earned, will be made;
14. The County will recommend to the Local Agency Formation Commission that the amount of the consolidation incentive transfer be included within the property tax base of the newly organized district; and

SEC. 4. Section 2 of this bill shall only become operative if Assembly Bill 584 is enacted to add Section 1102.6a to the Civil Code and becomes effective on January 1, 1990, in which case Section 3 of this bill shall not become operative.

the responsibility of local or federal agencies, as the case may be.

(b) On or before July 1, 1991, and every 5th year thereafter, the department shall provide copies of maps identifying the boundaries of lands classified as state responsibility pursuant to subdivision (a) to the county assessor for every county containing any such lands. The department shall also notify county assessors of any changes to state responsibility areas within the county resulting from periodic boundary modifications approved by the board.

SEC. 2. Section 4136 is added to the Public Resources Code, to read:

4136. (a) A seller of real property which is located within a state responsibility area determined by the board, pursuant to Section 4125, shall disclose to any prospective purchaser the fact that the property is located within a wildland area which may contain substantial forest fire risks and hazards and is subject to the requirements of Section 4291.

(b) Except for property located within a county which has assumed responsibility for prevention and suppression of all fires pursuant to Section 4129, the seller shall also disclose to any prospective buyer that it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the department has entered into a cooperative agreement with a local agency for such purposes pursuant to Section 4142.

(c) Disclosures required pursuant to this section may be set forth in, and made on a copy of, the disclosure form required by Section 1102.6 or 1102.6a of the Civil Code.

(d) This section shall become operative on July 1, 1991.

SEC. 3. Section 4136 is added to the Public Resources Code, to read:

4136. (a) A seller of real property which is located within a state responsibility area determined by the board, pursuant to Section 4125, shall disclose to any prospective purchaser the fact that the property is located within a wildland area which may contain substantial forest fire risks and hazards and is subject to the requirements of Section 4291.

(b) Except for property located within a county which has assumed responsibility for prevention and suppression of all fires pursuant to Section 4129, the seller shall also disclose to any prospective buyer that it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the department has entered into a cooperative agreement with a local agency for such purposes pursuant to Section 4142.

(c) Disclosures required pursuant to this section may be set forth in, and made on a copy of, the disclosure form required by Section 1102.6 of the Civil Code.

(d) This section shall become operative on July 1, 1991.

AUGMENTATION FUND AGREEMENT
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15. The special districts which were parties to the legal case will be reimbursed for legal costs incurred up to the date on which the California Supreme Court denied the County's Petition for Review. These allocations from the Fiscal Year 1989-90 Augmentation Fund will be separate from the regular allocation to those districts.

By ratifying this agreement, your District will agree to the Fiscal Year 1989-90 distribution of the Augmentation Fund, agree to support legislation abolishing the Augmentation Fund in Sacramento County, and agree to the future distribution of the property tax revenue making up the current Augmentation Fund.

The County plans to introduce the legislation necessary to abolish the Augmentation Fund and approve the transfers among the districts of the property tax revenue represented by the Augmentation Fund. Your district's prompt ratification of this agreement is essential in the upcoming legislative effort.

I wish to take the opportunity to thank the Board of Directors and staffs of the Special Districts for their willing cooperation with the County in resolving this problem. Should you have any questions or comments regarding this agreement, or should you desire a further briefing regarding the proposed settlement, please feel free to contact John O'Farrell (440-6458) or Russell Fehr (440-5895) of my staff.



BRIAN H. RICHTER
County Executive

RTF:mp (afa10710)

Attachment

cc: Members, Board of Supervisors
Baxter Culver

APPENDIX 4

Rate of Assessment as stated in Ordinance 89-90-1

SECTION VIII. ASSESSMENT RATE: The following units of benefit per year shall be assessed on all real property (except that of federal, state or governmental agencies or single family residential dwellings owned and occupied by persons over 65 years of age) within the boundaries of said Tamalpais Fire Protection District for fire protection and prevention services within said boundaries. Such charges shall be established by the Board of Directors of said Tamalpais Fire Protection District from time to time, subject however, to the maximum units of benefit shown below EACH UNIT OF BENEFIT SHALL NOT EXCEED \$30.00 EACH FISCAL YEAR.

The following is a partial list of the properties contained in Ordinance 89-90-1:

<u>DESCRIPTION</u>	<u>UNIT OF BENEFIT</u>	<u>ASSESSMENT</u>
Residential:		
Single Family - vacant	1	\$30
Single Family - improved	2	\$60
Multiple Family - vacant	1	\$30
Multiple Family - improved	1 per dwelling unit	
Condominiums	1 per dwelling unit	
Apartment complex with 5+ units	3+1/2 per dwelling unit	
Commercial:		
Small stores	2	\$60
Retail stores	3	\$90
Restaurants	6	\$180
Shopping Center	5 + 1 per occupancy	
Super Markets	5	\$150
Hotels/Motels	1/2 unit per rental room	
Service Stations	5	\$150
Commercial - vacant	1	\$30
Industrial		
General Industrial	2	\$60
Light Manufacturing	5	\$150

Government Code 50078.8 At any time not later than the hour set for the hearing, any holder, whether a fee owner, lessee, or otherwise, of the interest in the property which is proposed to be assessed and who will be obligated to pay any proposed assessment, may make written protest against the proposed assessment. The protest shall be in writing, shall contain a description of the property and the interest in the property which each signer thereof represents, sufficient to identify the property, and, if the signers are not shown on the last equalized assessment roll as the owners of that property, shall contain or be accompanied by written evidence that the signers are the holders of the property interest proposed to be charged and who will be obligated to pay the proposed charge. All protests shall be delivered to the clerk of the local agency and, for the purposes of Section 50078.12, no other protests or objections shall be considered.