

## **PROPOSED MASTER PLAN TOC**

### **1. Introduction and Executive Summary**

- a. Timeline of Master Plan (3 or 5 years)
- b. Service Goals
- c. Service Expectations
- d. LAFCO Process
- e. Summary of Outreach Process for Master Plan Development

### **2. Services and Area Overview**

- a. Fire Rescue Services
  - i. Structure Fire Protection
  - ii. Wildland Fire Protection
    - 1. Summary of County Fire Purview
    - 2. See Section 3
- b. Emergency Medical Services

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- a. Summary
  - i. WHO does WHAT (County Fire vs. Fire Safe Council)
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- b. State Level Involvement
- c. Community Wildfire Prevention Plan – County Wide
- d. Community Risk Assessment & Community Risk Reduction Plan
  - i. Community Level
- e. Advisory Inspections (Individual Property Owner)
  - i. LE100 - Fire Marshall
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- g. Role of Santa Cruz County Fire Safe Council
- h. Compliance with State Fire Code & BOF Regulations
  - i. HIZ – compliance with State Regulations

### **4. County Fire Operational System**

- a. Financial
- b. Management
- c. Volunteers
- d. Facilities
- e. Equipment
  - i. Types and Reasoning

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- a. Deployment and Performance
- b. ISO Rating
- c. Community Engagement Process
  - i. Survey – Needs Assessment/Service Goals
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- d. Other

### **6. Strategic Improvement Goals**

- a. SMART Objectives (Specific, Measurable, Attainable, Relevant, Time-based)
  - i. They should fit within specific categories and structure

ii. Integrated into County Operational Plan

**DRAFT**



**SANTA CRUZ  
COUNTY FIRE  
DEPARTMENT**

**2022**

**MASTER PLAN**



**NATE ARMSTRONG  
FIRE CHIEF**

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## Message from the Chief

The mission of the Santa Cruz County Fire Department is to protect the life, property, and natural resources of its citizens and visitors through effective emergency response, preparedness, education, and prevention. In order to carry out this mission, we must firmly establish our vision by embracing our core values. To that end, I am pleased to present the Strategic Plan for the Santa Cruz County Fire Department. The focus of this plan is to communicate our strategic goals and objectives for achieving mission success. This plan will be the foundation for us to build upon in the future. We can then ensure, along with our successors, a roadmap for continued success through proper planning.



For over 50 years, Santa Cruz County and the California Department of Forestry & Fire Protection (CAL FIRE) have maintained a cooperative agreement for fire protection. This agreement, along with continued support from the Board of Supervisors, has allowed County Fire to scale and evolve through challenging economic and budgetary times. The Strategic Plan will recognize and continue to adapt to economic conditions, as it guides us towards improving operational efficiency and effectiveness, despite the ever-changing face of the fire service and our government.

I look forward to working side by side with members of the county, our cooperators, and County Fire staff, to implement this plan. We now have a map to our future. It's up to all of us to drive there together as a team.

Nate Armstrong  
Fire Chief

## Our History

In 1948, the Santa Cruz County Board of Supervisors entered into a cooperative agreement with the California Department of Forestry and Fire Protection (CAL FIRE/ CDF prior to 2007) to provide structural fire protection in the rural areas of Santa Cruz County. The County agreed to provide funding for 5.5 months of winter coverage at CDF facilities. This "Amador" agreement established the Santa Cruz County Fire Department (County Fire). As a result, a unified CDF/County Fire Administration was formed to address wildland and structural fire protection in a coordinated manner.

The Civil Defense Director in cooperation with CDF established the first Civil Defense Fire Team at Corralitos in 1959. Three additional Civil Defense Fire Teams were established in other areas of the County to supplement CDF forces with a trained cadre of volunteer firefighters. The Civil Defense Director of Santa Cruz County, Colonel Gates, obtained surplus military equipment for use by these fire teams.

The County Fire Department and CDF continued to make improvements in fire protection through the years as budgetary constraints allowed. In 1973, a fire protection report was submitted to the Santa Cruz County Board of Supervisors recommending proposals to upgrade fire protection and made management recommendations for County Fire which lead to the establishment of the Office of the County Fire Marshal and the Civil Defense Fire Teams were integrated as volunteer fire companies and their members as volunteer firefighters. The County Fire Marshal then became Administrator of the County contractual agreement with CDF, and in 1976 was appointed the County Fire Warden.

Between 1976 and 1978, the County Fire Chief did have the county protection area rated by the Insurance Services Office (ISO). Prior to this rating, all areas protected by County Fire were Class 10 (the equivalent of no fire protection). After the grading was completed, the worst class for the department was a Class 9, with many areas assigned a Rural Class 8. This improved the benefit to the taxpayers by reducing fire insurance premiums accordingly.

The Fire Marshal's office was placed in charge of the Mechanical Services/Service Center in 1977 and, in cooperation with CDF, drafted and presented the fire safety element which was subsequently adopted as part of the General Plan. The Fire Marshal also presented to the Board of Supervisors the 1976 Uniform Fire Code which was adopted. In September 1977, the county wide Fire Investigation Unit was formed through the efforts of the Fire Marshal and CDF. The Fire Marshal entered into the first contractual agreement with a Fire Protection District to provide Fire Prevention Services.

The number of paid personnel staffing engine companies was reduced, and the savings were directed towards upgrading the newly initiated volunteer organizations within the CDF/County Fire organization. Workers' Compensation insurance, safety equipment, mobile radios, alert monitors, and many fixed asset items were purchased to improve the volunteers' firefighting capability

County Service Area #48 was formed in 1985 and encompassed those areas protected by the County Fire Department. The implementation of a fee schedule to support fire protection services was established based upon the fire protection demands of structures (fire-flow units).

The County reorganized the General Services Department in 1986 and the Office of Emergency Services (OES) to create the Emergency Services Department. This new department included those functions related to the following emergency services: OES, the County Fire Marshal, and the emergency communications center (ECC). The Fire Protection Advisory Committee was also formed to advise the Fire Marshal on implementation of the Master Plan and other fire protection matters.

California Proposition 218 required that an election be held in 1997 to allow property owners to decide on continuance of the County Service Areas #4 and #48 fee assessments. Continuance of the fees was approved in each County Service Area.

2007 brought significant changes as CDF changed its moniker to CAL FIRE and Bargaining Unit 8 MOU changes limited the number of permanent personnel allowed per engine on an "Amador" agreement, which resulted in a necessary increase to the number of seasonal firefighting personnel. Additionally, firefighter salaries increased significantly due to a reduction from a 4-day work week to a 3-day work week. Both of these factors resulted in increased contract costs for the four paid County stations and rotating "brown-outs" were implemented. In order to offset these costs a CSA fee increase was proposed for FY 08/09, but was not approved in a mail in ballot procedure. Due to increased contract costs to maintain the level of staffing at three paid staff per engine (3-0 staffing), staffing was reduced to two paid staff on each fire engine (2-0 staffing) at the four paid County stations and the vehicle replacement plan was suspended.

A public opinion survey was conducted in 2011 and again in 2013 to determine voter support for a special election to levy a qualified special tax upon each parcel of property within CSA #48. While the polls suggested that voter sentiment reflected a better awareness of County Fire and appreciation for its service, economic conditions reduced voter support for any kind of tax increase.

County Fire's ongoing structural deficit resulted in reduced staffing, increased facility maintenance, aging equipment, and a shrinking fund balance. Drought conditions over the past decade, however, have ironically contributed to County Fire's short term longevity. The period between late 2011 and 2014 was the driest in California history since record-keeping began. During these years, the Amador period was reduced, reducing CAL FIRE contract costs, and resulting in significant savings for County Fire. As a result, some much needed fire apparatus was purchased and critical deferred facility maintenance was completed. However, this weather dependent fix was not viable as a long term budgetary solution.

A grass roots effort began in 2019 and with the support of the Fire Department Advisory

Commission (FDAC) and the County Board of Supervisors, another Prop 218 ballot measure effort was initiated. Polling results were somewhat favorable, but the community still demonstrated a low level understanding of the County Fire Department. A series of community public education meetings was conducted in every area of County Fire to help residents understand fire delivery options within their communities. CSA 48 residents approved the long-awaited ballot measure. Funds from the new CSA 48 2020 assessment restored County Fire to 3-person staffing and has allowed for much needed equipment replacement to the benefit of the residents of Santa Cruz County.

## The Department

The Santa Cruz County Fire Department (County Fire) provides service in the unincorporated areas of the county, not protected by other local government fire agencies. County Fire is a full-service fire agency that provides fire protection, emergency medical service (Basic Life Support-Advanced Scope), fire prevention, fire marshal, and public education. On average, the department responds to over 2000 emergency incidents a year.

County Fire protects the following communities and areas: South Skyline/Las Cumbres, Loma Prieta/Burrell, Bonny Doon, Davenport, Corralitos, and Pajaro Dunes.

The County of Santa Cruz contracts with CAL FIRE for administration, support services, and line personnel. All paid personnel of County Fire are CAL FIRE employees, funded by the county under contractual agreement with the state. This arrangement delivers effective services through the best use of available resources.

### **PERSONNEL (FY 2021/22)**

	<b>County Fire, CSA #48</b>	<b>Pajaro Dunes, CSA#4</b>
Line Personnel	27.5	6
Command & Control	1	.1
Support Services	5.4	0
<b>Total</b>	<b>33.9</b>	<b>6.1</b>

**CHANGES TO COUNTY FIRE CONTRACT STAFFING SINCE 2000/01**

	FAE	FFI	Stations	BC	Prev. FC	Prev. FPS	Trn. FC	Disp.	HEM	Staff
2000/01	11	0	4	0	1	2	1	1.5	1	3
2001/02	11	0	4	0	1	2	1	1.5	1	3
2002/03	6	10	4	0	1	2	1	1.5	1	3
2003/04	6	10	4	0	1	2	1	1.5	1	3
2004/05	0	9	4	0	1	2	1	1.5	1	3
2005/06	0	8	4	0	2	1	1	1.5	1	2
2006/07	0	12	4	0	2	1	1	1.5	1	2
2007/08	0	17	3	0	2	1	1	1.5	1	2
2008/09	0	20	5	0	1.5	1	1	1.5	1	2.75
2009/10	0	19	5	0	1.5	1	1	1.5	1	2.75
2010/11	0	20	5	0	1.5	1	1	1.5	1	2.75
2011/12	0	20	5	0	1.5	1	1	1.5	1	3
2012/13	0	18	5	0	0.83	1	1	1.5	1	3
2013/14	0	18	5	0	0.5	1	1	1.5	1	3
2014/15	0	18	5	0	0.5	1	1	1.5	1	3
2015/16	0	18	5	0	0.5	1	1	1.5	1	3
2016/17	0	18	5	0	0.5	1	1	1.5	0	3
2017/18	0	18	5	0	0.5	1	1	1.5	0	3
2018/19	0	18	5	0	0.5	1	1	1.5	0	3
2019/20	0	18	5	0	0.5	1	1.5	1	0	3
2020/21	0	24	5	0	1.5	1	2	1	0	3.4
2021/22	0	24	5	1	1.5	1	2	1	0	3.4

**MANAGEMENT**

*Unit Chief:* County Fire operates under the direction of the CAL FIRE Unit Chief, who is also the Santa Cruz County Fire Chief. The chief is accountable to the Board of Supervisors through the County Administrative Office.

*Deputy Chief:* (Santa Cruz County Operations) also reports to the Director of General Services, under the supervision of the Fire Chief and oversees all County Fire operations.

*Administrative Officer II:* Under the direction of the CAL FIRE Administrative Division Chief, the Administrative Officer II provides technical expertise, supervision, and leadership over the County Fire Staff Services Analyst. The primary County Fire responsibilities of this position is to manage financial portion of the CAL FIRE contract development, approve preparation of budget, data, and documents for the CAO and Board of Supervisors, and serve as staff support as needed.

## OPERATIONS

County Fire is a “Combination Type” department having both paid and volunteer personnel. In total, County Fire operates five volunteer four paid and stations.

<b>State/CAL FIRE Stations</b>	<b>Volunteer Stations</b>
<b>Year-Round Amador</b> <ul style="list-style-type: none"><li>• Burrell</li><li>• Saratoga Summit</li><li>• Big Creek</li><li>• Corralitos</li><li>• Fall Creek</li></ul>	<ul style="list-style-type: none"><li>• Bonny Doon<ul style="list-style-type: none"><li>○ Station 34 (McDermott)</li><li>○ Station 32 (Martin Road)</li></ul></li><li>• Las Cumbres</li><li>• Loma Prieta</li><li>• Davenport</li></ul>

Line personnel are supervised by the on-duty Battalion Chief that reports to the Deputy Chief. They are responsible for day to day operations, including emergency incident management and daily liaison to county and fire agencies.

## VOLUNTEER FIRE COMPANIES

County Fire operationally and financially supports five volunteer fire companies which assist in providing an effective level of fire protection and emergency response. The volunteer companies allow for a level of staffing and distribution of fire stations and equipment that could not otherwise be accomplished. County Fire continues to explore and implement ways to increase benefit methods to enhance the recruitment and retention of volunteers.

## FIRE PREVENTION / LAW ENFORCEMENT

County Fire, in cooperation with CAL FIRE, has a Fire Prevention Bureau. It is managed out of the Unit Head Quarters in Felton. Its staff consists of four law enforcement personnel that are responsible for fire investigations and public education. All four positions are state funded.

## **FIRE MARSHAL'S OFFICE**

The Fire Marshal's office is crossed staffed between County Fire and the Pajaro Valley Fire Protection District<sup>1</sup>. The county funds 1.5 Fire Captains in the Deputy Fire Marshal's office and 1 Fire Prevention Specialist II who works in conjunction with the county Planning Department in order to enforce the fire code and related ordinances. These personnel conduct plans checking, site inspections, and play a key role in life protection responsibilities.

## **SUPPORT SERVICES**

*Staff Services Analyst:* Under the direction of the County Fire Deputy Chief, the Staff Services Analyst is utilized as a field representative to the offices of Santa Cruz County and her affiliated fire stations. This position regularly performs a variety of difficult tasks and has detailed and sensitive contact with the public, governmental representatives, as well as access to secure information. The primary responsibilities of this position is to develop and monitor the County Fire budget, prepare data and documents for the CAO and Board of Supervisors, and serve as staff support to the Fire Department Advisory Commission and Volunteer Company Officers Group. This position is split funded (.8) with CSA 4 Pajaro Dunes.

*Dispatch Services:* County Fire resources are dispatched by the CAL FIRE Emergency Command Center (ECC) located in Felton, CA. This arrangement has benefits that relate to command and control of resources unique to CAL FIRE ECC capabilities. County Fire continues to explore new technologies that will enhance dispatching and communications.

*Training:* The County Fire Training Battalion consists of one state funded Battalion Chief and 2 county funded Fire Captain and one split funded Staff Services Analyst (.5). The Battalion Chief manages the fire training and the emergency medical services (EMS) programs. The training captain provides training to both the paid and volunteer personnel. The Office Technician is the liaison to the volunteers for personnel matters, benefits, maintains the County Fire Training website and assists with the administration of Target Solutions (online training platform).

*Automotive:* The County Fire automotive program is contracted to the Central Fire Protection District located in Santa Cruz County, CA. CAL FIRE staff in conjunction with volunteer company officers will work collectively to provide consistency with apparatus design and deployment.

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<sup>1</sup> Under contract with CAL FIRE

## Mission, Vision, and Values

### MISSION

*The mission of the Santa Cruz County Fire Department is to protect the life, property, and natural resources of its citizens and visitors through effective emergency response, preparedness, education, and prevention.*

### VISION

The vision of the Santa Cruz County Fire Department is to provide quality service to all communities in the county and to be a leader in fire protection, fire prevention, and emergency response.



## VALUES

### Service

- *We are committed to the safety and well-being of the public and our personnel.*
- *We strive for excellence and professionalism.*
- *We maintain a “can-do” attitude and humility in the execution of our duties.*

### Cooperation

- *We care about each other and our service to others, including cooperators, governing bodies, and the public.*
- *We build and maintain cooperative relationships across the county and state to benefit the public we serve.*
- *We allow every member of the Department a voice within a chain-of-command structure.*

### Protection

- *We integrate county and state personnel to meet the mission of the department.*
- *We strive to ensure a high level of environmental protection in all our programs and operations.*

### Organizational Excellence

- *We value the diversity among our personnel and the vital functions they perform to enhance our mission.*
- *We exhibit calm resilience, professionalism, and the highest level of performance in the face of emergencies and disasters.*
- *We recognize the importance of clear and consistent communication.*
- *We embrace and support innovation.*



Vague objectives/goals – need relevant measurement criteria, quantifiable goals, and tracking

## Strategic Goals

**GOAL: SEEK TO IMPROVE OPERATIONAL EFFICIENCY AND EFFECTIVENESS BY SHAPING, ENHANCING, AND ADAPTING TO VALUES AT RISK.**

**OBJECTIVE: Improve the recruitment and retention of volunteers.** Currently the volunteers have an attrition rate of approximately 50% due to the high cost of living, increased training mandates, aging population, and the transition to a commuter society. County Fire is exploring enhanced methods of public outreach including updating the County Fire website, utilizing social media, other printed advertisements, and recruitment events. **Loss of vols. To Cal Fire**

**OBJECTIVE: Implement use of mobile data devices on all front-line engines.** Tablets equipped with cellular data connections enable County Fire personnel to access current maps, pre-plans, and other incident-based references.

**OBJECTIVE: Develop and implement Active 9-1-1 for CAD based incident dispatch, tracking, personnel accountability.** To maximize County Fire's limited workforce, this program will allow for appropriate allocation of responding personnel by providing real-time incident response information, incident management functionality, and personnel response tracking.

**OBJECTIVE: Implement, maintain and update digitized Structure Protection/Evacuation plans.** County Fire staff will train personnel in the use of the structure protection plans. This ongoing county-wide program will be utilized by all county public safety agencies and updated annually.

**OBJECTIVE: Fire Marshal Staff will assist in implementation of engine based business inspections.** Due to staffing levels, the Fire Marshal's office is unable to maintain compliance with annual business inspections. The Fire Marshal's office will train engine companies to conduct the annual business inspections. All business inspections will be recorded via the Fulcrum application for permanent documentation and historical data reference.

**Use SMART goals to be consistent w/County objectives.**

- **Specific** (simple, sensible, significant).
- **Measurable** (meaningful, motivating).
- **Achievable** (agreed, attainable).
- **Relevant** (reasonable, realistic and resourced, results-based).
- **Time bound** (time-based, time limited, time/cost limited, timely, time-sensitive).

**Results=desired outcomes vs. a list of disconnected things**

## **GOAL: PROMOTE A HIGHLY MOTIVATED AND WELL-TRAINED WORKFORCE.**

**OBJECTIVE: Implement an annual training plan.** Under the direction of the county fire chief, the county fire training officer, in collaboration with the volunteer company officers, develop and implement the annual training plan. This consists of elements of basic training, including the multi-agency Basic Firefighter Academy held at the Santa Cruz County Regional Training Facility. This training plan also ensures a path for advancement within the promotional structure of County Fire as outlined in the Santa Cruz County Volunteer Handbook.

**OBJECTIVE: Maintain and enhance joint training programs with local fire agencies within Santa Cruz County.** County Fire maintains membership in the Santa Cruz County Fire Chiefs' Training Officers Group in an effort to provide consistent and collaborative training. This ensures compliance and standardization with federal and state mandates. This membership affords County Fire personnel the opportunity to participate in annual county-wide training exercises.

**OBJECTIVE: Maintain accurate training records in accordance with state and federal mandates.** County Fire utilized the Target Solutions online training platform for record storage and training delivery.

**OBJECTIVE: Continued development of the Santa Cruz County Regional Training Facility.** This facility is currently utilized for the Basic Firefighter Academy, regional law enforcement continued professional training, local fire agency drills, Ham radio operator training/annual field day, and multiple local community events. We are actively developing technical training infrastructure which will allow for advanced technical rescue training in the future. Long-term plans include a classroom upgrade approved and sponsored by the Santa Cruz County Fire Chiefs Association.

**GOAL: RECOGNIZE AND SCALE TO CHANGING BUDGETARY, FISCAL AND REGULATORY CONDITIONS.**

**OBJECTIVE: Evaluate potential grant programs and apply for funding where appropriate.** Federal and state grants, such as the SAFER, UASI, and VFA grants have had significant positive impacts to the County Fire budget. Staff will continue to seek out all available grant funding.

**OBJECTIVE: Participate in the CALOES mutual aid system and continue providing rent-back of county vehicles for the CAL FIRE mission.** This funding resource is weather dependent, but can be significant during extended fire seasons. Purchasing Type III engines could allow for increased revenues.

**OBJECTIVE: Maintain a dedicated fund reserve for emergency funding requirements.** Annual CAL FIRE contract savings in recent drought years has allowed for critical vehicle purchases and greatly contributed to the preservation of the County Fire fund balance. This funding source is heavily weather dependent and highly unpredictable. It is incumbent upon County Fire to develop a more consistent and dependable funding source for maintenance of this fund.

**GOAL: FOSTER A CULTURE THAT EMPHASIZES AND ENHANCES HEALTH AND SAFETY.**

**OBJECTIVE: To increase staffing levels ...**

**GOAL: CULTIVATE AND STRENGTHEN RELATIONSHIP WITH STAKEHOLDERS, GOVERNING BODIES, COOPERATORS, AND THE PUBLIC.**

**OBJECTIVE: Enhance current an operational plans with ...**

**OBJECTIVE: Enhance relationships with ...**

**OBJECTIVE: Strengthen the relationship with ...**

**GOAL: ENHANCE PUBLIC EDUCATION AND FIRE PREVENTION**

**OBJECTIVE: Improve the public awareness of our website.** The County Fire Website<sup>2</sup> serves as a communications portal to the public. Here we send public safety messages, prevention tips, incident information, FAQ's, and how to contact us. Enhancing and updating this website to achieve maximum effectiveness is an ongoing goal.

**OBJECTIVE: Increase the display of Fire Prevention / Education Signs.** The use of fire prevention and education signs along highly traveled roadways is a very simple and effective tool to get a message out to the public. Messages such as fire danger; change your smoke detector batteries; and others can be displayed and changed when needed.

**OBJECTIVE: Establish a community Child Car Seat program.** Each year children suffer serious injury or death in car accidents. Children need special protection when traveling in motor vehicles and many of these injuries can be prevented by the correct use of child safety seats. It is estimated that 80-90% of child safety seats are improperly installed. It is estimated that 71%<sup>3</sup> of child fatalities can be prevented by the proper use of a car seat. By establishing a program where parents can validate the correct installation of their car seat, we can prevent these unnecessary deaths and injuries. We will also seek out grants to purchase and distribute seats to underprivileged families.

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<sup>2</sup> <http://www.santacruzcountyfire.com>

<sup>3</sup> <http://www.safekids.org/car-seat>

## **GOAL: ENHANCE AND IMPROVE OUR DISASTER PREPAREDNESS**

**OBJECTIVE: Establish a Department Operations Center (DOC).** Convert and utilize the training room as a dual purpose room and incorporate the DOC. This will require the installation of minor equipment such as radios and furniture. This will improve communications with the county EOC and our resources to facilitate coordination.

**OBJECTIVE: Complete community evacuation plans.** These plans are tri-fold hands out that include vital information to the public on what to do when there is an emergency such as a wildland fire or flood in their community. The information consists of evacuation routes, maps, and safety tips. These plans are specific to the community.

**OBJECTIVE: Increase and collaborate participation in the Community Emergency Response Team Program (CERT)...**

**OBJECTIVE: Work with communities to make them more FireSafe...**

## **GOAL: IMPROVE THE RECRUITMENT OF THE VOLUNTEERS**

**OBJECTIVE: Assist existing volunteer departments to recruit and retain members.** County Fire volunteer companies have members willing to give of themselves to the safety of their communities. However, due to the time commitment and increased demands made on volunteers, it is difficult for those agencies to retain a competent workforce. Our goal will be to provide support for the companies, both financially and with personnel, to assist in their recruitment drives. In addition, the Training Battalion provides all required training to maintain certifications at convenient times and locations. In addition, financial support in the form of pay-per-call, training stipends, and boot allowance provides.

## **GOAL: REPLACE AND MAINTAIN FACILITIES AND EQUIPMENT**

**OBJECTIVE: Replace...**

**OBJECTIVE: Paint and repair ...**

**OBJECTIVE: Expand ...**

**OBJECTIVE: Upgrade the radio infrastructure ...**

**OBJECTIVE: Begin the planning process to renovate the Davenport Station**

**OBJECTIVE: Replace apparatus and equipment as outlined in the Mobile Equipment Replacement Plan. (See appendix A)**

**DRAFT**

**VEHICLE REPLACEMENT PLAN**

Currently, County Fire operates...

**DRAFT**

## I. SERVICE AREA TYPES

The types of fire apparatus provided for emergency response is based on the needs of the area served and the type of service provided from each of the County Fire Department stations. For this purpose the areas served by County Fire stations basically fall into three categories: Urban, Rural, and remote, each having unique service needs.

### Urban Stations


### Urban Areas

These stations serve areas having population densities similar to other urban areas of the county. In addition to the unincorporated areas, the crews are regularly called to provide mutual aid to local cities and must be equipped to address these needs. Protection in these areas is provided to structures requiring fire flows in excess of 1000 GPM (warehouses, factories, hospitals, etc.) The water systems in these areas provide in excess of 500 GPM to the hydrants. Their equipment must be capable of providing a sustained pumping platform at these flow volumes and carrying a minimum of 3, and preferably 4, personnel. These areas will typically be assigned a Type 1 engines and ladder trucks.

### Rural Stations


### Rural Areas

A significant distance usually separates stations serving rural areas from each other. The areas they serve have a sizeable resident population, but at densities much less than the more urbanized areas of the county. These stations may provide automatic or mutual aid to other fire agencies, but less frequently than urban stations.

Responding resources must be capable of providing a sufficient first alarm response anticipating that additional equipment will have an extended response time. Water systems in these areas may supply 500 GPM or more to the hydrants, however there are locations in these rural areas where no public water system exists. Narrow, winding roads place limitations on the size and design of the primary response engines. Where station space is adequate these stations should be equipped with a Type 2 engine, water tender, and possibly a rescue unit to respond to non-fire calls.

### **Remote Areas**

These stations provide response to areas where resident populations are very sparse and yet the County has a responsibility to provide fire protection and emergency medical services. The nature of these areas and the volunteer companies at these responding stations requires specialized equipment to meet their needs. CAL FIRE, in addition to County Fire provides initial response to the area of the county south of Alpine Road and west of Skyline Blvd., including Portola State Park and areas just outside of the Big Basin State Park. The roads and terrain in this region requires a maneuverable vehicle, which is lightweight, but has pumping capacity for initial attack on fires. The vehicle must also be able to carry basic medical and rescue equipment.

A volunteer fire company supplements the CAL FIRE staffing at the Saratoga Summit Fire Station (South Skyline Volunteers). These volunteers are supported primarily by Santa Cruz County Fire.

### **Remote Stations**

Saratoga Summit	CAL FIRE
Big Creek	CAL FIRE
Las Cumbres	CAL FIRE

## II. APPARATUS DESCRIPTIONS

### Apparatus Kind/Types

Emergency equipment has been classified within the Incident Command System developed by the statewide Firescope Committee. This same system has been adopted as the Standardized Emergency Management System (SEMS) for all governments within the state and the National Incident Management System (NIMS) This typing system will be used within Santa Cruz County Fire for equipment description.

### Fire Engines

#### **Type I Engines**

Type I fire engines are municipal style engines. The primary purpose for this type engine is structural fire control. They must have a fire pump capacity of 1000 gallons per minute or greater and a hose bed capacity to carry at least 1200 feet of 2 ½ inch (or larger) diameter fire hose. (The standard for fire agencies in Santa Cruz County is 5-inch diameter hose.) These engines must also have at least a 300 gallon water tank. Type 1 engines are required to be equipped with a "deck gun" or master stream appliance.



Type I engines must be capable of carrying at least four firefighters. The National Fire Protection Association's (NFPA 1901) standards require that all firefighters be carried in an enclosed cab. Designs of these engines have a crew cab capable of carrying 4 to 6 firefighters.

#### **Type II Engines**

Type II fire engines are multi-use and typically smaller than Type I engines. By ICS standards, a Type I engine must have a fire pump with a minimum of 500 gallon per minute (GPM) capability. The engine must have at least a 300-gallon water tank and be capable of safely carrying three firefighters. The required fire hose carrying capacity is slightly less than that of a Type I engine, at 1000 feet instead of 1200 feet. Master

stream appliances (deck guns) are not required, but have been added in some cases, again to meet local needs.

The smaller size makes Type II fire engines more adaptable to narrow, windy roads and some operate well off-road, even without all wheel drive. This makes them effective for fighting wildland type fires, as well as structural fires. The pump capacity makes them somewhat effective on most structural fires. The main disadvantage to these engines is that they usually can only carry two or three firefighters.



### **Type III Engines**

Type III fire engines are designed for fighting wildland fires. They are designed with good ground clearance for off road operations and many are four wheel drive. The minimum capacity of a Type 3 engine's fire pump is 150 GPM, but most have a larger capacity (300 to 500 gallons per minute). A water tank of at least 500 gallons is required. The hose complement is primarily forestry type hose. The engine must have pump and roll capabilities and must be able to go off road.



All CAL FIRE owned Engines are Type III. In addition to the standards above, they also carry a minimum of 500' of 3" hose used for supply and master stream operations. All engines are complimented with Basic Life Support medical equipment.

## Water Tenders

Water tenders are designed to bring large amounts of water to a fire. There are two kinds: Tactical and Support. They are generally used for rural fire operations where there are no fire hydrants or limited water supplies of other types. They are utilized for wildland and structure operations.

They are also extremely valuable for urban operations when municipal water systems fail (e.g. earthquakes and other system failures). County Fire utilizes Support Water Tenders. They are required to have a minimum pump capacity of 200 GPM and must carry 2500 GAL of water for a Support Type II.



## Rescues

### **Type I and Type II Rescues**

Type I and Type II rescue units can utilize the same design configurations. The standard of patient care delivered from the vehicle and the associated equipment carried is what differentiates one type from the other.



Type I: Advanced Life Support (ALS)  
Type II: Basic Life Support (BLS)

Type I and Type II rescue units are not designed for routinely transporting injured persons to medical facilities. The rescue units operated by County Fire, however, do have a limited transport capacity due to the rural nature of the service area and the

reliance on helicopter rather than ground transport for major trauma cases. The County Fire rescue units are designed to allow a short distance transfer of an injured party to a nearby helispot, but could be utilized to transport a patient to a hospital in the event that a regular transport ambulance was not available.

## **Chief Officer Vehicle**

Chief Officers are required to respond to emergency incidents, attend meeting, and be able to travel between fire stations. Positions include the Division Chief, Field Battalion Chiefs (2), Fire Marshal, and the EMS Battalion Chief.

These are command vehicles for emergency response that require four-wheel drive and a configuration that can carry a conglomerate of required equipment. This vehicle must have two mobile radios, emergency lighting, and a command box system. This can be accommodated by a large SUV or Pick-Up style vehicle.

## **Staff Vehicles**

County Fire provides certain staff positions with a vehicle to allow them to efficiently perform their day to day duties. These vehicles are also for emergency response that requires four-wheel drive, and a configuration that can carry a conglomerate of required equipment. This vehicle must have two mobile radios, emergency lighting. Positions include: Deputy Fire Marshal's & Training Captain.

## **Utility Vehicles**

County Fire operates several utility vehicles. These are designed and/or ordered to meet general needs. The vehicle use used to transport materials and or personnel for emergency and non-emergency situations. Generally, these vehicles are  $\frac{3}{4}$  ton in size and capable of carrying two- four personnel.

## **Reserve Apparatus**

County Fire must maintain several pieces of reserve apparatus to assure our emergency response capability when front line equipment is receiving routine maintenance and/or being repaired. Reserve apparatus are typically those which have been replaced as front line engines but are still serviceable. At least two Type I engines and one Type II engine should be kept in reserve status. It is also recommended that one rescue unit be kept as a reserve.

At this time, there is no need for a reserve water tender. Water tenders serve a regional area beyond their primary station response area. If one water tender is out of service, its area can be covered by another water tender. However, this may require relocating

a water tender to a more central location on a temporary basis to assure adequate coverage.

There does not currently appear to be a need to maintain reserve utility or staff vehicles. In the event a county utility or staff vehicle is out of service for repairs, one of these may be used temporarily to fill the need. Maintenance of staff vehicles, which requires them to be out of service, should be conducted when the vehicle assignee will not need the vehicle.

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### III. FLEET MAINTENANCE

Managing an automotive program generally encompasses the following categories: Scheduled (Preventative) Maintenance and Unscheduled (Repair) Maintenance.

Scheduled and Unscheduled Maintenance

Santa Cruz County utilizes the CAL FIRE standards as a guideline:

Light: Chief Officer and Utility Vehicles

Heavy: Engines, Rescues, Water Tenders, and Trucks

<b>Type</b>	<b>Basic Service &amp;Lube</b>	<b>Oil Change</b>	<b>Full Service</b>
<b>Light</b>	Inspection only (Use)	6K Miles or 90 Days	Annual
<b>Heavy</b>	1K Miles or 30 Days	6K Miles or 90 Days	Annual

Fire apparatus having a rated fire pump will be given a pump test to N.F.P.A. standards as part of their annual maintenance. This annual service is performed by a county funded CAL FIRE Heavy Equipment Mechanic, assisted by two CAL FIRE Heavy Fire Equipment Operators at the shop facility at the Belmont (Tower Road). The apparatus/vehicle maintenance program is overseen by a CAL FIRE Forestry Equipment Manager.

A key element of the success of a preventative maintenance program is field participation. To this end all CAL FIRE Fire Apparatus Engineers attend preventative maintenance training as part of their Basic Fire Engine Operations course or their four-week Driver-Operator training. CAL FIRE apparatus operators are required to perform maintenance inspections and lubrications of their vehicles within the department's prescribed maintenance schedule.

County Fire apparatus operated by the volunteer fire company personnel are to receive the same servicing. Due to the less frequent use of this apparatus, inspections and lubrications take place on a slightly extended schedule. Volunteer companies are given training by the CAL FIRE staff on vehicle inspection and maintenance practices. This equipment does receive an annual service, however, the same as the apparatus operated by the paid staff.

Extensive and special repairs generally are sent out to a vendor.

Maintenance records on all vehicles will be recorded in service book in the vehicle. All repairs and annual service records will be maintained at the Tower Road Shop. This will include all pump test records.

## **IV. REPLACEMENT PLAN**

### **Equipment**

All apparatus carries suppression and or rescue equipment. The purpose of the apparatus will dictate the level and type of equipment carried. Typical Type I & II Engines carry basic hose appliances, adapters, hose, medical equipment, a conglomerate of suppression tools, and a very basic rescue tool compliment. This is based on the reliance of mission specific apparatus: Engines suppress fires and provide EMS response; Trucks conduct rescues, forcible entry, auto extrication, and ventilation; rescues provide EMS response and respond to vehicle accidents with limited staffing. Due to the verity of areas that County Fire protects, our apparatus must be able to meet the mission of both engines and trucks. This requires our engines to carry rescue, ventilation, and extrication tools.

Replacement of equipment is funding in two ways: set aside monies yearly to account for equipment replacement on a schedule or replace all of the apparatus equipment when purchased. It is recommended the a combination method be employed in order to maintain the consistency of specialized tools such as Self Contained Breathing Apparatus, radios, "Jaws of Life", and other tools. Funding would be set aside yearly in order to make a bulk purchase of these items when they are due to be replaces, while other equipment will be purchased at the time of the apparatus replacement. Some of the equipment being replaced would be utilized to equip reserve apparatus and to provide backup stock of tools.

### **Apparatus**

Average service life has been assigned for each type of equipment based on industry standards and our past experience. In order to meet our fleet performance goals, equipment must be replaced within these lifetimes. However, each piece of apparatus is to be thoroughly inspected and surveyed prior to replacement. This inspection shall determine whether a vehicle must be replaced either before or possibly later than its scheduled replacement year.

Extending the service life of a vehicle past its identified replacement year is not recommended, however. Parts availability alone will create unacceptable delays when operating older equipment. Service life, and average in-service time, can be improved by careful selection of equipment and builders and standardizing so that use can be balanced by rotating equipment through stations with higher call volume.

Due to an ever-changing industry standard (NFPA 1901 & 1904), safety requirements for apparatus are updated frequently. This is a contributing factor to the replacement schedule and standard to be met with the purchase of new apparatus.

### **Replacement Funding**

Replacement funding will be divided into three categories: Apparatus, Equipment, & Scheduled Equipment Replacement Fund (SERF).

<b><i>Apparatus</i></b>	<b><i>Replacement Schedule</i></b>
<b>Engines-Paid</b>	<b>10 Yrs</b>
<b>Engines-Volunteer</b>	<b>15 Yrs</b>
<b>Water Tenders</b>	<b>20 Yrs</b>
<b>Trucks</b>	<b>12 Yrs</b>
<b>Rescues</b>	<b>10 Yrs</b>
<b>Chief Officer</b>	<b>110K Miles</b>
<b>Utility &amp; Staff</b>	<b>110K Miles</b>