



CONTRA COSTA COUNTY

Fire Protection District



RODEO-HERCULES

Fire Protection District



EAST CONTRA COSTA

Fire Protection District

California

Phase Two

Volume 1

Fire District Annexation Feasibility Study

July 2021



AP TRITON
VISION • INNOVATION • SOLUTIONS

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AP Triton wishes to extend its sincere appreciation to each of those who contributed to this project—elected officials, fire chiefs, officers, and representatives of the fire districts included in this study, along with many other individuals who lent their time and assistance to this project.

Our sincere appreciation is extended to each of you...

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Battalion Chief

Gilbert Guerrero
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Rodeo-Hercules FPD

Bryan Craig
Fire Chief

Getachew Demeku-Ousman
Finance Officer

*...and to each of the firefighters and prevention
and support staff who daily serve the citizens
and visitors of Contra Costa County*

INTRODUCTION

AP Triton, LLC (Triton) was retained to conduct a two-phase study. Phase One, which was completed in November of 2020, included Triton's review and comparison of the conceptual annexation of East Contra Costa Fire Protection District (ECCFPD) by Contra Costa County Fire Protection District (CCCYPD, utilizing projected operational costs provided by CCCYPD and historical and projected revenue data from ECCFPD to include:

- Sources of recurring and non-recurring revenue, including property taxes
- Existing revenue and projections for the next 3–6 years
- Costs of existing levels of service and projections for the next 3–6 years
- Contractual services provided to the district by CAL FIRE
- Indirect costs, cost allocations, and contractual obligations

The analysis conducted during Phase One concluded with a preliminary determination that the annexation of East Contra Costa Fire Protection District into Contra Costa County Fire Protection District was feasible and viable.

In December of 2020, and due to the positive results from the Phase One study, Triton was engaged to move forward with Phase Two of the study. Phase Two added the Rodeo Hercules Fire Protection District (RHFPD) and includes a comprehensive analysis of each district's financial, staffing, support programs, and operational capabilities related to the feasibility of annexation of ECCFPD & RHFPD into CCCYPD. The study also includes Contra Costa County's Local Agency Formation Commission (LAFCO) Service and Sphere Review Requirements found in CGC sections 56430 and 56425.

The following report represents hundreds of hours of work by Triton's subject matter experts, who approached this project from an unbiased perspective without any pre-conceptions. This study complies with the agreed-upon project scope of work.

The study represents a snap-shot in time and is an in-depth review of all aspects of each district and concludes with findings and a recommendation that, should the policymakers agree, the annexation of CCCYPD and RHFPD into CCCYPD is feasible. In addition, the study provides the policymakers with the necessary findings and conclusions that comply with CGC sections 56430 and 56425 as necessary to move forward with LAFCO.

Section I-A: BASELINE AGENCY EVALUATIONS

OVERVIEW OF THE COMMUNITIES

Contra Costa County is located in the East Bay region of the Bay Area in California. The County comprises 720 square miles with six different terrains. The San Andreas, Calaveras, and Hayward faults run under the Bay Area.

Contra Costa County is home to 19 incorporated cities and many unincorporated communities.¹ The City of Concord is the most populated, followed by Antioch, Richmond, San Ramon, and Pittsburg. Martinez serves as the County seat. The least populated city is Clayton. Another 32 communities are census-designated places (e.g., Discovery Bay, Byron, Bay Point).

Population & Demographics

Current and accurate population statistics specific to each of the fire districts are minimal. Therefore, Triton has reviewed the available Contra Costa County statistics. The U.S. Census Bureau estimates the County's 2019 population at 1,153,256 persons—which was an increase of about 10% from 2010.²

More than 18% of the population is age 60 years and over, while over 27% of the population is age 19 years or younger.³ The majority of the population (64.2%) is comprised of Caucasians, followed by Hispanic or Latinos (24.4%), Asians (14.7%), and Black or African American (9.3%).⁴

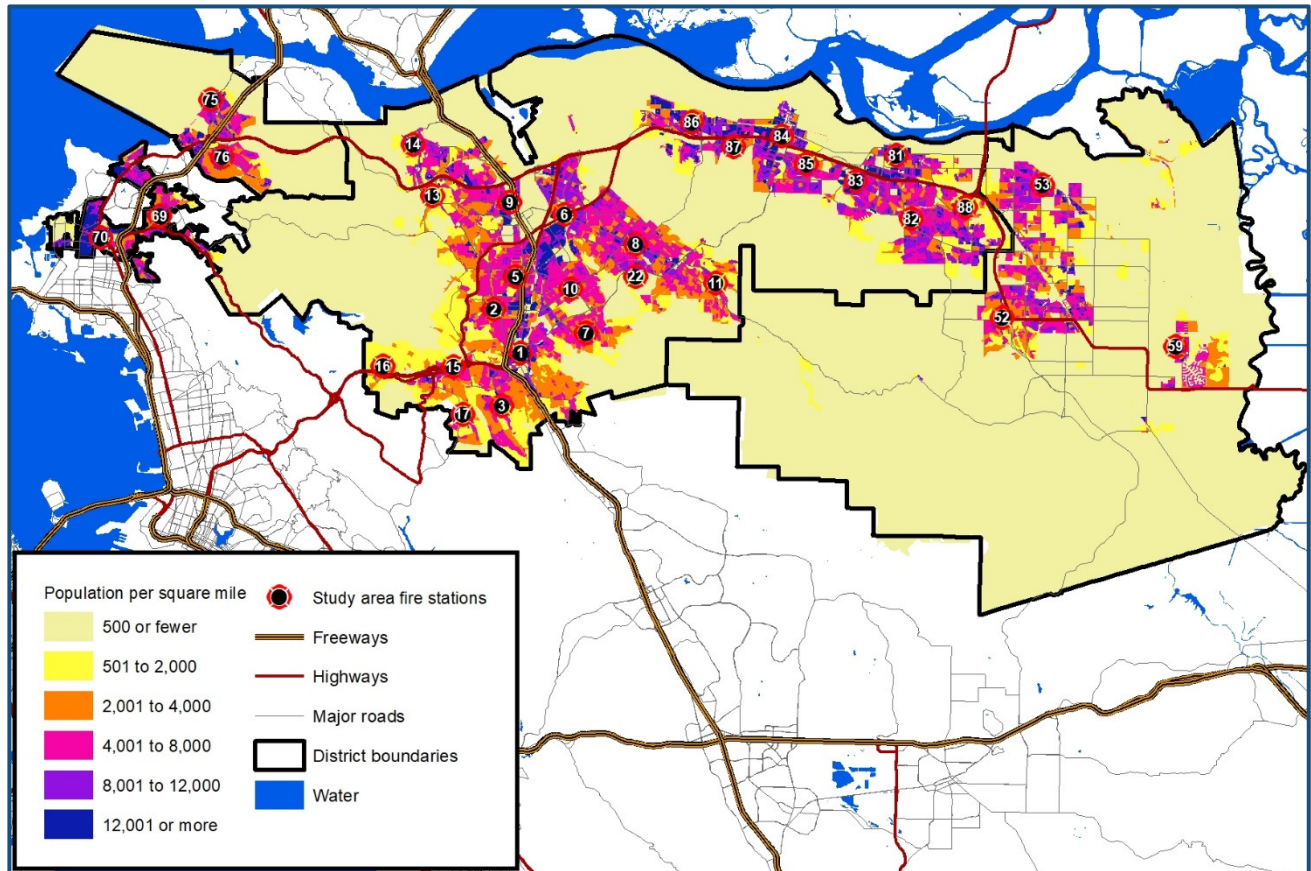
The Census Bureau estimates 367,883 individual households in the County have a median household income in the last 12 months of \$73,721, with just over 9% of the population below the poverty level. Of the County's total housing units, over 66% are owner-occupied, and nearly 34% are renter-occupied.⁵

Figure 1: Contra Costa County, California



The following figure shows the latest (2010) available population density data from the U.S. Census Bureau of Contra Costa County and each of the fire districts.

Figure 2: Population Density per Square Mile of the Fire Districts (2010)



The preceding figure represents population density from the 2010 census; however, it is likely that the resident populations have grown substantially in each fire district over the last 10 years.

Demographics of the Fire Districts Combined

The following figure lists the combined population and service areas of each of the fire protection districts.

Figure 3: Combined Populations & Service Areas of the Fire Districts

Fire District	Population ^A	Service Area
Contra Costa County Fire Protection District	600,000	306 sq. miles ^B
East Contra Costa Fire Protection District	129,000	249 sq. miles
Rodeo-Hercules Fire Protection District	34,280	32 sq. miles
Totals:	763,280	587 sq. miles

^ABased on estimates provided the districts.

^BDoes not include the additional approximately 300 square miles of the ambulance service area.

Although CCCFPD's basic service area is more than 306 square miles, the District provides ambulance service to more than 300 additional square miles.

DESCRIPTIONS OF THE FIRE DISTRICTS

The following section provides a general description of each of the three fire protection districts participating in this annexation study.

Contra Costa County Fire Protection District

The Contra Costa County Fire Protection District (CCCYPD) was originally formed in 1964 due to the Central Fire Protection District and Mt. Diablo Fire Protection District merger. Since then, ten other fire protection districts in the region have merged with CCCYPD.

The Contra Costa County Fire Protection District's primary service area comprises approximately 306 square miles. More than 300 additional square miles comprises the response area for ambulance service and transport.⁶ Data from the U.S. Census Bureau indicates a 2010 resident population of 574,946 persons, however, the District estimates a population of approximately 600,000 persons.⁷ About half the District is considered "urban," 25% "suburban," and the remaining 25% "rural" or "remote."⁸

Governance

The five-member elected Contra Costa County Board of Supervisors serve as CCCYPD's Board of Directors. The Board oversees the Fire Chief, sets general policies, and approves the budget. The Fire Chief is responsible for the administrative functions and daily operations of CCCYPD.

District Services

CCCYPD is an all-hazards fire district providing traditional fire protection, wildland firefighting, medical first-response (MFR), Advanced Life Support (ALS) ambulance transport, various special operations (e.g., water rescue, hazardous materials response, marine firefighting, technical rescue, etc.), and a comprehensive life-safety and prevention program that includes inspections, a dedicated fire investigation unit, code enforcement, plan reviews, and public education. In 2005, the District was given an Insurance Services Office (ISO) Public Protection Classification (PPC®) score of 3/8b). CCCYPD is accredited through the Commission on Accreditation of Ambulance Services (CAAS).

CCCYPD deploys its apparatus from 26 staffed fire stations located throughout the District. Two other stations are currently closed due to a lack of funding and are projected to be reopened in the near future; an additional station is utilized for the District's reserve firefighters and staffed on a rotational basis. The District operates a wide variety of fire apparatus and ambulances (more detail provided under "Capital Facilities & Apparatus").

Ambulance Transport

In 2016, CCCYPD developed a unique arrangement with American Medical Response, Inc. (AMR) that they refer to as the "Alliance." The program utilizes AMR EMS personnel to staff CCCYPD's 30 ALS ambulances, assisted by District firefighters certified as EMTs or Paramedics and functioning in an MFR capacity.

Regional Fire Communications

CCCYPD operates the Contra Costa Regional Fire Communications Center (CCRFCC), which serves as a secondary Public Safety Answering Point (PSAP) for most fire and EMS 911 calls in the County. CCRFCC provides dispatch to its district, plus ECCYPD, RHYPD, and four other fire agencies. The Center dispatches more than 140,000 emergency and non-emergency fire and EMS incidents annually.⁹

In 2018, the Center made substantial improvements to the system by adding more staff and upgrading radio, telephone, and information technology services.

CCRFCC's 911 Call-Takers are all certified in Emergency Medical Dispatch through the *International Academies of Emergency Dispatch* (IAED) and provide pre-arrival instructions to callers reporting medical emergencies.

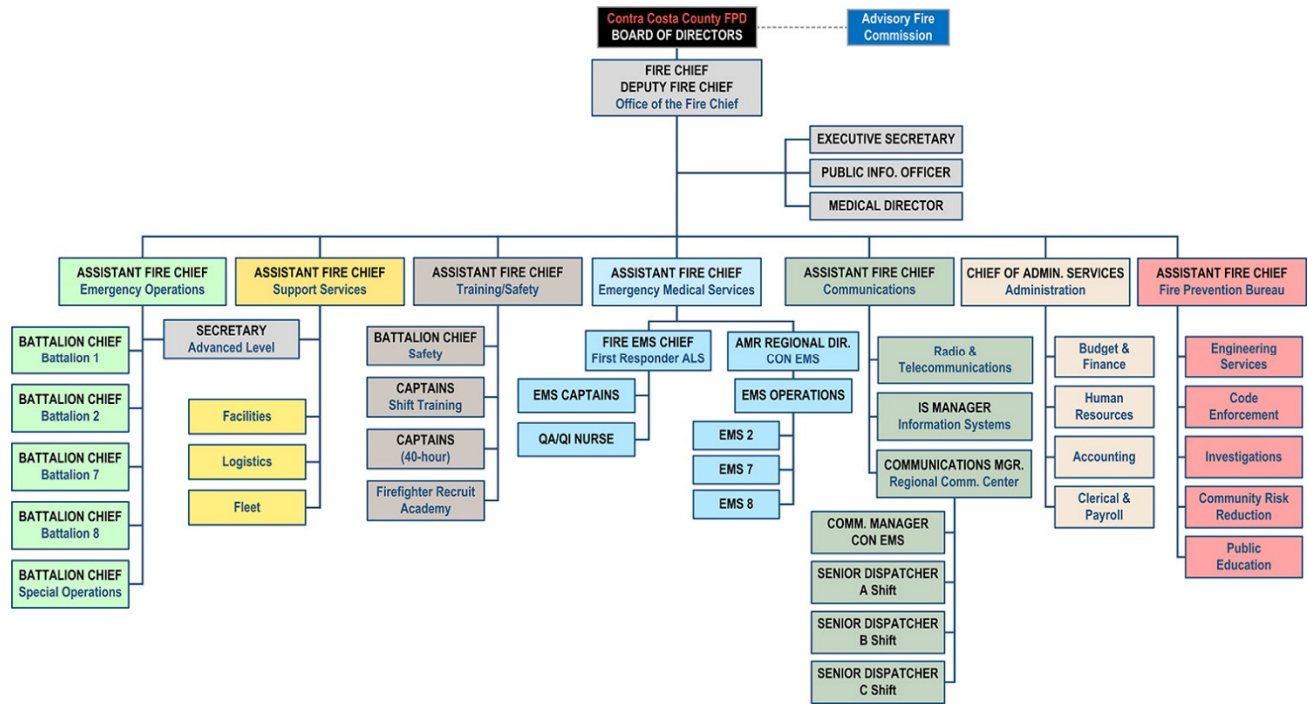
Along with its staff, CCRFC houses 13 System Status Management Dispatchers employed by American Medical Response.

CCCYPD Organizational Structure

CCCYPD currently maintains about 435 funded positions, including staff in the dispatch center. Thirteen of these positions are financed via the District's EMS Transport Fund. The following figure shows the 2021 organizational structure of CCCYPD.

As shown in the following figure, the Fire Chief and Deputy Fire Chief supervise seven divisions, six of which are managed by an Assistant Fire Chief and one by the Chief of Administrative Services.

Figure 4: CCCFPD Organizational Structure (2021)



East Contra Costa Fire Protection District

East Contra Costa Fire Protection District (ECCFPD) is a relatively new fire district, having been formed in 2002 by the consolidation of the East Diablo Fire District (EDFD), Oakley Fire District (OFD), and Bethel Island Fire District (BIFD). EDFD was originally formed through the merger of four much older fire districts. After a fire in 1924, the community formed the OFD. BIFD was created in 1947, was dissolved in 1994, and became part of CCCFPD. In 1999, BIFD was re-created and became part of East Contra Costa FPD.

The District encompasses an area of approximately 249 square miles. Data from U.S. Census Bureau data indicates a 2010 resident population of 109,684 persons; however, ECCFPD estimates a population of approximately 129,000 persons, of which 15% are considered suburban and 85% rural or remote.

Governance

The East Contra Costa Fire Protection District is governed by a five-member elected Board of Directors responsible for budget approval and general policies. The Fire Chief manages the administration and daily operations of the District and answers directly to the Board.

District Services

ECCFPD is an all-hazards fire district providing traditional structural fire suppression, wildland firefighting, Basic Life Support (BLS) level medical first response (EMS), rescue, and hazardous materials response. The District deploys its apparatus and personnel from three fire stations and has an ISO PPC® rating of 4/9.

ECCFPD's Fire Prevention Bureau provides inspections, code enforcement, plan reviews, fire investigations, and various public education programs. In addition, the Bureau conducts inspections of public and private properties for compliance with its weed abatement ordinance.

ECCFPD Organizational Structure

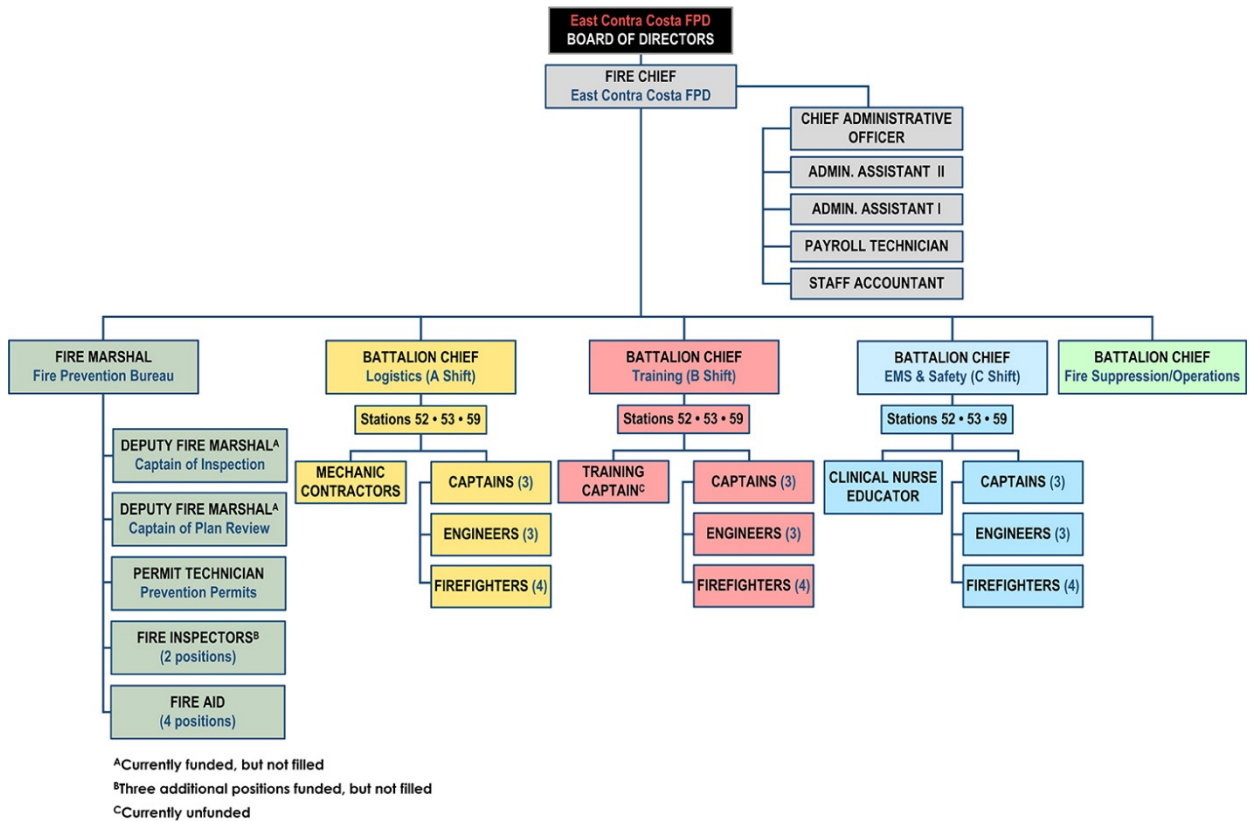
The East Contra Costa Fire Protection District employs 37 uniformed and non-uniformed personnel, which includes 10 firefighters, nine Engineers, nine Captains, four Battalion Chiefs. The Fire Chief supervises several administrative and support staff positions, the Fire Marshal, and four Battalion Chiefs (BCs).

Three Battalion Chiefs are responsible for their respective shifts (A, B, and C) in addition to managing one of three programs—Logistics, Training, or EMS & Safety. A fourth BC supervises Fire Suppression/Operations.

The Fire Marshal supervises a Deputy Fire Marshal, two Fire Inspectors, and other positions within the Bureau. The Fire Chief has direct supervision of the Chief Administrative Officer and several other administrative positions.

The following figure illustrates the current 2021 organizational structure of the East Contra Costa Fire Protection District.

Figure 5: ECCFPD Organizational Structure (2021)



Several positions within ECCFPD are funded but not yet filled. ECCFPD has elected not to fill these positions in anticipation of the potential annexation and completion of Triton's study.

Rodeo-Hercules Fire Protection District

In 1937, the Rodeo Fire District (RFD) was established to provide fire protection for Rodeo's unincorporated community. The City of Hercules was annexed into RFD in 1978 and the name of the District was changed to the Rodeo-Hercules Fire Protection District (RHFPD).

The District encompasses an area of approximately 32 square miles. Data from the U.S. Census Bureau indicates a 2010 resident population of 32,823 persons; however, the District estimates a population of approximately 34,280 persons.¹⁰

Governance

The Rodeo-Hercules Fire Protection District is governed by a five-member elected Board of Directors responsible for budget approval and general policies. The Fire Chief manages the administration and daily operations of the District and answers directly to the Board.

District Services

RHFPD is an all-hazards fire district providing traditional structural fire protection, wildland firefighting, ALS-level medical first-response (MFR), technical rescue (auto extrication, high-angle and low-angle rescue, water rescue, and hazardous materials response). The District deploys its apparatus and personnel from two fire stations and has an ISO PPC® rating of 2/2.

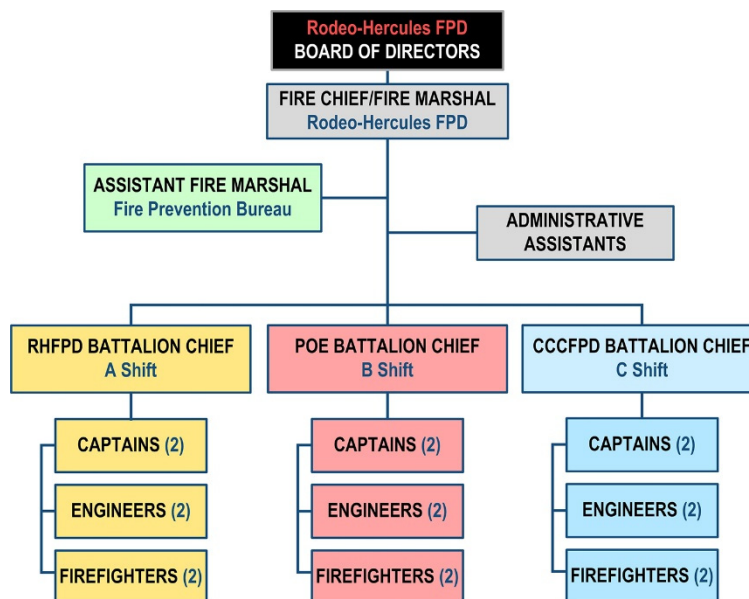
The District also provides code enforcement, fire inspections, plan reviews, fire cause investigations, and public education and prevention programs.

RHFPD Organizational Structure

Rodeo-Hercules FPD employs 21 full-time and two part-time uniformed and non-uniformed personnel. The Fire Chief also serves as the District's Fire Marshal and supervises an Assistant Fire Marshal. Operations are divided into three shifts (A, B, and C) with two Captains, two Engineers, and two Firefighters assigned to each. Each shift and station have at least one Paramedic assigned. An RHFPD Battalion Chief supervises the operations personnel assigned to A Shift. The Pinole Fire Department provides a BC for B Shift through a unique arrangement, and CCCFPD provides a BC for C Shift.

The next figure is an illustration of the current 2021 organizational structure of RHFPD.

Figure 6: RHFPD Organizational Chart (2021)

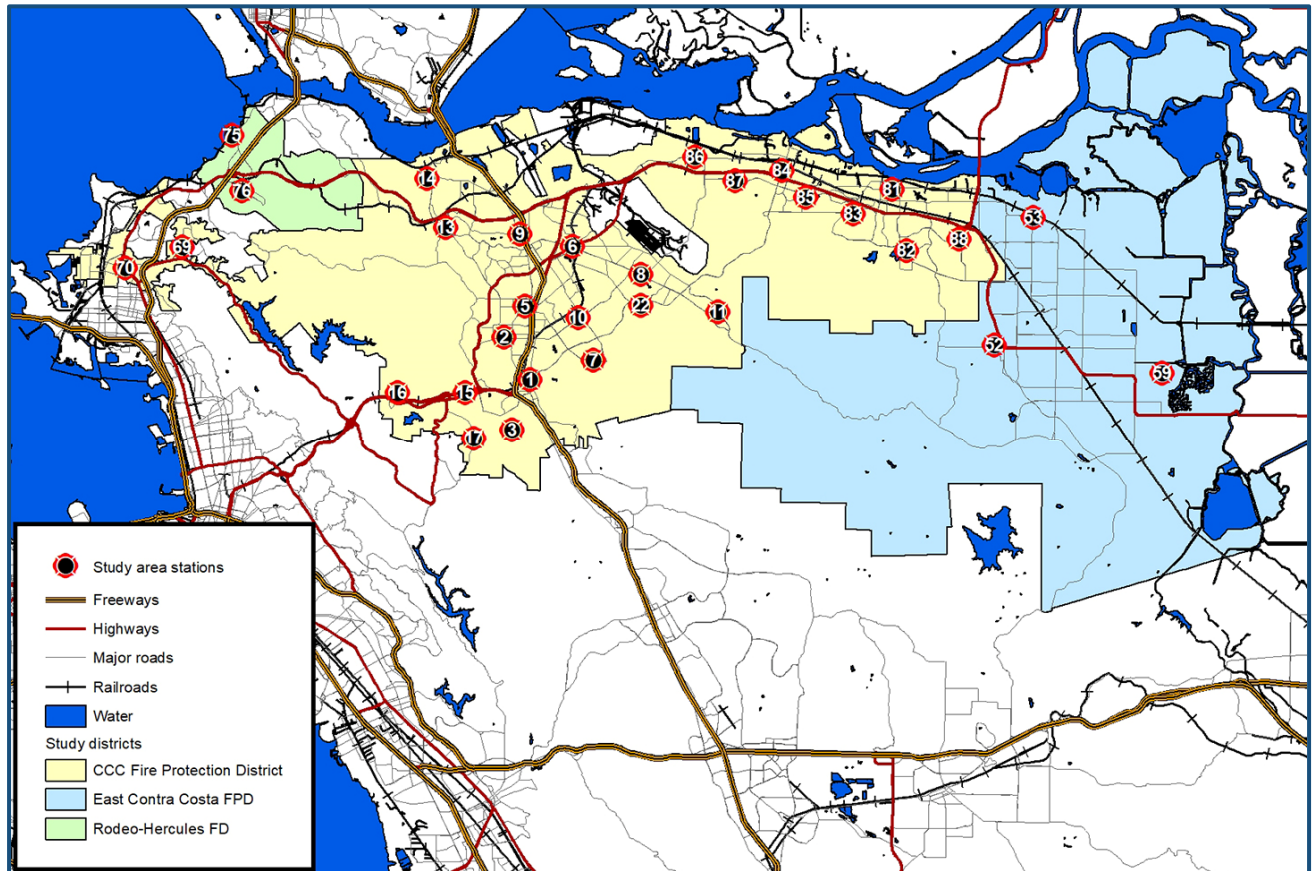


Note: Each shift and fire station has at least one Paramedic assigned to it.

Study Area

The following image shows the study area, which includes the service-area boundaries of each of the fire districts.

Figure 7: Annexation Study Area



The preceding figure illustrates the overall study area with the fire districts shown. The study area comprises a combined area of approximately 587 square miles and a total resident population of over 763,280 persons.

FINANCIAL ANALYSIS OF THE DISTRICTS

Contra Costa County Fire Protection District

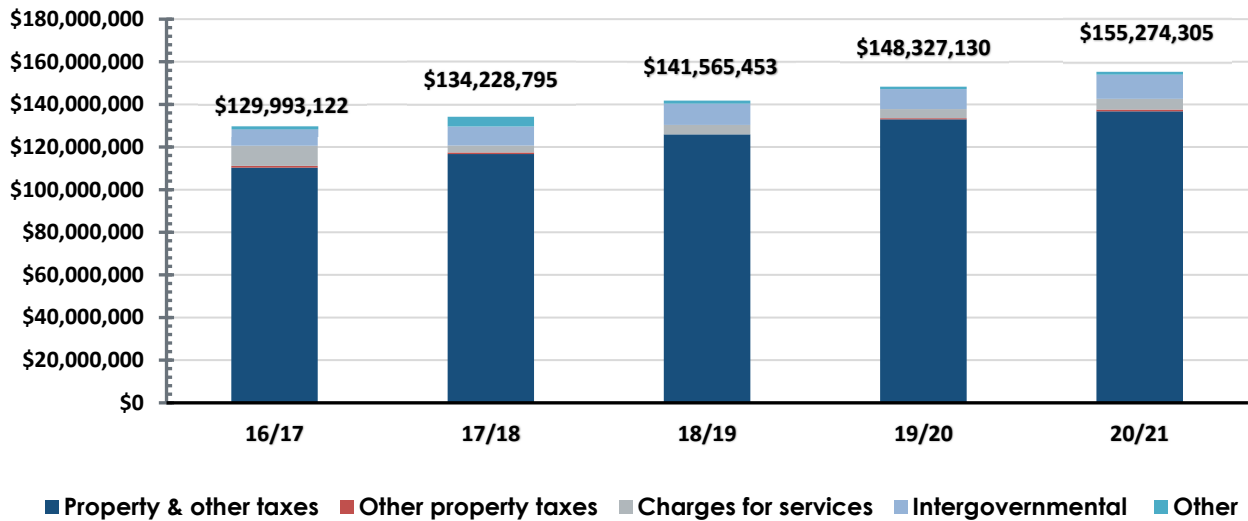
The area of California in which the jurisdiction is located has seen significant growth during the past several years. Property tax revenue is the most significant contributor of revenue to CCCYPD each year. This source has grown from \$110,339,000 in fiscal 16/17 to an estimated \$132,993,000 in fiscal 19/20, an increase of 20% or almost 7% annually. Total recurring revenues have increased 14.5% during the same period or almost 5% on an annual basis. Charges for services include fees for dispatch services to other agencies, plan reviews and inspections, false alarm charges, and charges to other government agencies. The following figure provides a historical view of recurring, non-recurring, and total revenues for CCCYPD from FY 16/17 through budgeted FY 20/21.

Figure 8: CCCYPD Historic & Budgeted Revenues

Revenue	FY 16/17 Actual	FY 17/18 Actual	FY 18/19 Actual	FY 19/20 Estimate	FY 20/21 Budget
Property taxes	110,338,530	116,741,014	125,782,571	132,992,783	136,783,250
Other property taxes	806,037	707,002	802,048	513,629	812,000
Charges for services	7,928,777	8,896,459	9,713,007	9,369,694	11,312,850
Intergov. revenues	9,463,654	3,254,195	3,614,903	4,304,856	5,026,205
Recurring Revenue:	128,536,998	129,598,670	139,912,529	147,180,962	153,934,305
Other receipts	1,456,124	4,630,125	1,376,074	1,146,168	1,340,000
Non-Recurring:	1,456,124	4,630,125	1,376,074	1,146,168	1,340,000
TOTAL REVENUES:	129,993,122	134,228,795	141,288,603	148,327,130	155,274,305

The following figure visually indicates the trends identified from the analysis in the preceding figure.

Figure 9: CCCYPD Historic & Budgeted Revenues Indicating Trends



The area served by the Contra Costa County Fire Protection District is experiencing significant growth in both residential as well as commercial developments. Revenue projections for property tax growth have been conservatively estimated at 4% annually. Charges for services are expected to grow at approximately 4.5% annually as services expand to meet the increased demand from the development growth. The following figure uses the above growth factors to indicate projected revenues from FY 21/22 through FY 26/27.

Figure 10: CCCYPD Revenue Projections (FY 21/22–FY 26/27)

Revenue	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Property taxes	144,055,800	149,818,032	155,810,753	162,043,183	168,524,911	175,265,907
Other tax revenue	812,000	812,000	812,000	812,000	812,000	812,000
Intergov. revenue	4,481,500	3,709,500	3,443,500	3,443,500	3,443,500	3,443,500
Services charge	11,468,800	11,887,080	12,347,188	12,853,307	13,410,037	14,022,441
Recurring Revenue:	160,818,100	166,226,612	172,413,441	179,151,990	186,190,448	193,543,848
Other revenues	1,105,000	1,105,000	1,105,000	1,105,000	1,105,000	1,105,000
Non-Recurring:	1,105,000	1,105,000	1,105,000	1,105,000	1,105,000	1,105,000
Total Revenues:	161,923,100	167,331,612	173,518,441	180,256,990	187,295,448	194,648,848

East Contra Costa Fire Protection District

Over the past several years, revenues from property taxes have increased substantially, from \$10,353,000 in FY 14/15 to \$14,372,000 in FY 18/19, an approximate 40% total increase or 8% annually. Contra Costa County distributes property tax revenue to ECCYPD under the Teeter Plan, which provides an option for the District to receive 100% of the property tax assessments annually. In return, the District allows the County to retain interest and penalties on the collection of late property tax payments. RDA pass-through revenues have fluctuated between \$390,000 in FY 14/15 (low) and \$638,000 in FY 16/17 (high). Intergovernmental revenues have been received during the prior years from FY 14/15 through FY 17/18 but are not projected into the future periods. In 2016, the Contra Costa County Board of Supervisors approved a reallocation of property tax funding from the Byron Bethany Irrigation District to ECCYPD. These funds, beginning in FY 17/18, have provided more than \$800,000 annually to the District. The funding is continuous and will benefit the entity providing fire and EMS services to the area.

The District assesses a First Responder Fee to recipients of EMS services. Contra Costa County provides Measure H funding to offset a portion of providing EMS services. Other recurring revenues include homeowner property tax relief and other “in-lieu” taxes. The overall reduction in anticipated revenues in FY 19/20 results from decreases in pass-through income, homeowner property tax relief, charges for services, and intergovernmental revenues.

It is critical for an agency to have a stable and reliable source of revenue each year. The definition of recurring revenues are those items that are anticipated and reasonably quantifiable to be received from year to year. Non-recurring revenues, conversely, are receipts that may or may not be received annually or that are not reasonably quantifiable each year. Examples of these receipts may be grant funds, loan proceeds, insurance proceeds, reimbursements of extraordinary expenses, and any other miscellaneous receipts.

ECCFPD has entered into agreements with several new developments to collect impact fees for funding under Government Code Section 66000. These fees are designated to mitigate the impacts of providing fire services to areas outside of current fire station response areas and can only be used to provide facilities and equipment.

ECCFPD receives parcel tax revenue from several Community Facilities Districts (CFD) formed according to the Mello-Roos Act (Gov. Code Section 53311 et seq.). These revenues primarily fund operating costs to increase service levels for properties participating in the CFDs. The District also receives revenues from fire facility impact fees imposed under the Mitigation Fee Act (Gov. Code 66000 et seq.) by the City of Brentwood, City of Oakley, and Contra Costa County. These are one-time fees paid by new development to mitigate the capital costs of providing service to this development.

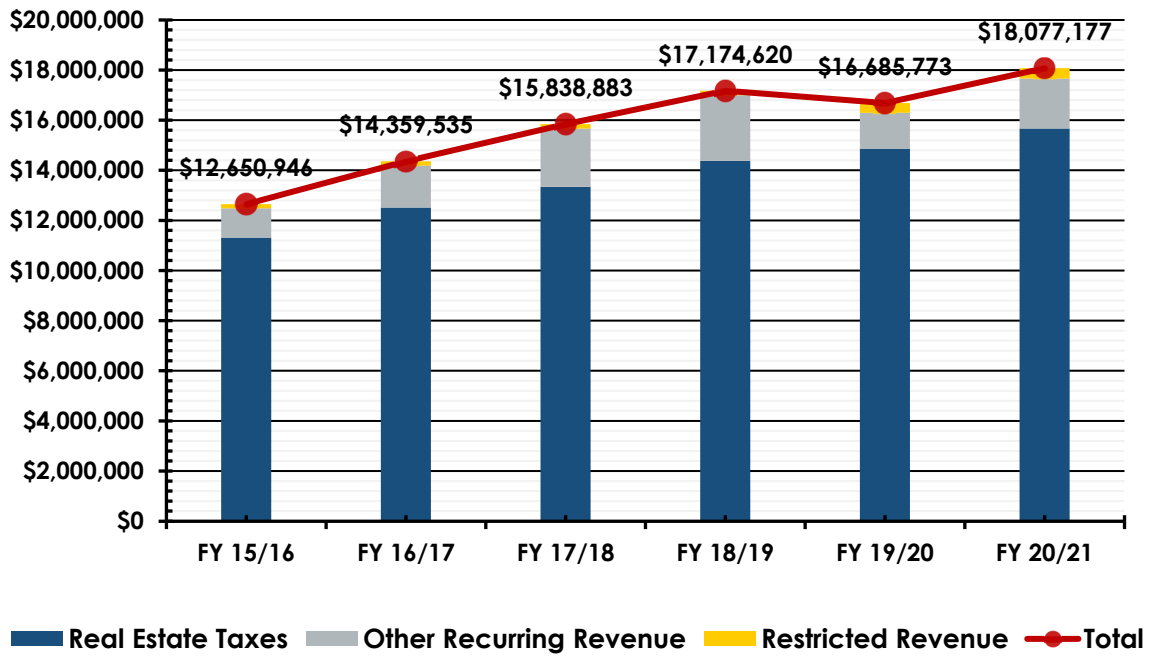
The following figure provides a historical perspective on these revenue sources.

Figure 11: ECCFPD Historic & Budgeted Revenue Sources (FY 15/16–FY 20/21)¹¹

Revenue Description	FY 15/16 Actual	FY 16/17 Actual	FY 17/18 Actual	FY 18/19 Actual	FY 19/20 Estimate	FY 20/21 Budget
Property taxes	11,316,855	12,515,243	13,343,148	14,379,074	14,866,399	15,671,269
Pass-throughs from others	559,464	638,057	477,057	606,234	297,730	477,056
Homeowner tax relief	90,264	90,404	91,324	90,451	44,898	93,150
Other in-lieu taxes	14,950	14,967	14,981	14,426	15,005	15,281
Other revenues	1,993	15,785	—	—	—	—
Use of money & property	—	—	15,600	15,600	15,000	7,500
Investment earnings	—	—	—	—	—	—
Intergovernmental revenues	498,896	915,918	218,391	534,247	—	—
B-B Irrigation District	—	—	802,280	839,358	892,938	946,514
First Responder Fee	—	—	—	95,000	156,808	160,000
Fire recovery Fee	—	—	—	16,000	—	51,000
Fire Prevention	—	—	—	—	—	237,000
Recurring Revenue:	12,482,422	14,190,374	14,962,781	16,590,390	16,288,778	17,658,770
Charges for services	—	—	80,186	379,697	—	—
Shea Homes Settlement	—	—	623,000	—	—	—
JAC PV Ed Reimbursements	—	—	—	28,652	4,408	4,500
Non-Recurring Revenue:	—	—	703,186	408,349	4,408	4,500
Measure H	—	—	—	—	218,087	218,087
BI Development Fee	6,154	3,143	989	—	—	1,000
ED Development Fee	—	—	1,380	—	—	1,380
Cypress CFD Fund Revenue	162,370	166,018	170,547	175,881	174,500	181,800
Oakley Development Fee	—	—	—	—	—	—
Delta Coves CFD	—	—	—	—	—	11,640
Total Special Revenue (Net):	168,524	169,161	172,916	175,881	392,587	413,907
Total Revenues:	12,650,946	14,359,535	15,838,883	17,174,620	16,685,773	18,077,177

The following figure provides a visual format of information from the preceding figure. It indicates the trend in the growth of property tax and total revenues from Fiscal Years 14/15 to budgeted FY 20/21.¹²

Figure 12: ECCFPD Historic & Budgeted Revenues Indicating Trends



Revenue Projections

The initial revenue projections for ECCFPD were provided to AP Triton by the District. Following a review of these projections, Triton determined that the property tax revenue growth estimates were extremely conservative, based on the trends of the prior five years. To better estimate future revenue, adjustments have been made to the figures provided by the District. Triton used revenue information provided by ECCFPD for FY 21/22 and increased that by 4% annually. Revenue from Byron-Bethany Irrigation District and the First Responder Fee revenue, using the CCCFPD First Responder Fee structure and experience, is projected to increase by 2% annually. The Fire Recovery Fee was eliminated in the revenue projections. Other revenues are not projected to increase during the period.

The following figure is the revenue portion of the ECCFPD adopted budget for FY 20/21 and formed the basis for the revenue projections.

Figure 13: ECCFPD Projected Revenues (FY 21/22–FY 26/27)

Revenue	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Property taxes	16,875,770	17,550,801	18,252,833	18,982,946	19,742,264	20,531,955
Pass-throughs–other agencies	477,056	477,056	477,056	477,056	477,056	477,056
Homeowner property tax relief	93,150	93,150	93,150	93,150	93,150	93,150
Other in-lieu taxes	15,281	15,281	15,281	15,281	15,281	15,281
Other revenues	—	—	—	—	—	—
Use of money & property	15,000	15,000	15,000	15,000	15,000	15,000
Investment earnings	—	—	—	—	—	—
Fire Prevention	248,852	256,316	264,005	271,925	280,083	288,485
Byron-Bethany Irrigation District	956,515	994,431	1,019,292	1,044,774	1,070,894	1,097,666
First Responder Fee	175,000	178,500	182,070	185,711	189,426	193,214
Fire recovery Fee	52,000	53,060	54,122	55,209	56,308	57,434
Recurring Revenue:	18,908,622	19,633,594	20,372,809	21,141,053	21,939,461	22,769,241
JAC PV Ed Reimbursements	4,682	4,776	4,871	4,969	5,068	5,169
Non-Recurring Revenue:	4,682	4,776	4,871	4,969	5,068	5,169
Measure H	218,087	218,087	218,087	218,087	218,087	218,087
Bethel Island Development Fee Fund Revenue	1,000	1,000	1,000	1,000	1,000	1,000
East Diablo Development Fee Fund Revenue	1,380	1,380	1,380	1,380	1,380	1,380
Cypress Lakes CFD Fund Revenue	189,198	195,820	202,674	209,767	217,109	224,708
Oakley CFD	65,000	65,000	65,000	65,000	65,000	65,000
Delta Coves CFD	36,000	48,000	52,000	64,000	76,000	88,000
Total Special Revenue:	510,665	529,287	540,141	559,234	578,576	598,175
Total Revenue:	19,423,969	20,167,657	20,917,821	21,705,255	21,523,105	23,372,585

Rodeo-Hercules Fire District

Over the past several years, RHFD has experienced an average annual increase in property tax revenue of approximately 13%. Property taxes are the most significant revenue source to the District, increasing from \$2,988,000 in FY 15/16 to an estimated \$4,378,000 in FY 19/20.

Property taxes are collected by the County and distributed to the District under the Teeter Plan, which allows the District to receive all property taxes in the year in which they are levied. In return, the County retains any collections of interest and penalties as well as delinquent property taxes.¹³ The District also receives pass-throughs from a successor to a redevelopment agency. In 2014, voters in the District approved a special benefit assessment that currently produces approximately \$1,347,000 annually.

Measure O was approved by the voters within the District in 2016 through Ordinance No. 2016-1 and provides funding for “enhancing the current level of fire prevention, emergency fire protection, and paramedic response services through increasing staffing levels.”¹⁴ The District also receives Development Impact fees from newly developed properties in certain areas of the RHFD. The following figure provides the historic and budgeted revenues for the District from FY 15/16–FY 20/21.

Figure 14: RHFD Historic & Budgeted Revenue Sources¹⁵

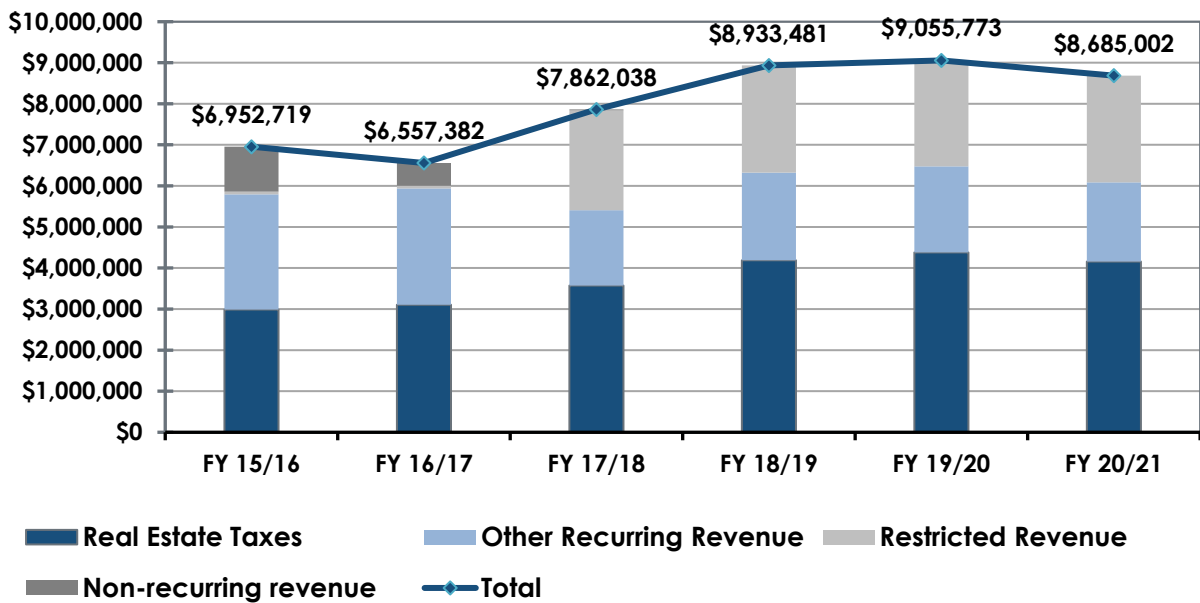
Revenue	FY 15/16 Actual	FY 16/17 Actual	FY 17/18 Actual	FY 18/19 Actual	FY 19/20 Estimate	FY 20/21 Budget
Property taxes	2,987,549	3,105,453	3,571,996	4,188,533	4,377,612	4,156,304
Pass-throughs others	305,354	316,063	311,664	466,141	525,570	375,000
Homeowner tax relief	31,031	31,031	30,500	29,956	29,956	29,956
Other in-lieu taxes	—	—	—	—	192	—
Other revenues	64,996	16,725	14,645	43,109	23,109	23,109
Charges for services	119,135	118,952	—	—	—	—
Investment earnings	—	—	—	—	12,296	12,296
Intergov. revenues	—	—	—	59,812	—	—
Benefit District	2,286,099	2,348,954	1,339,548	1,352,535	1,347,040	1,347,040
Fire prevention	—	—	52,447	98,825	72,448	55,000
Measure H EMS	—	—	87,565	85,593	85,593	85,593
Recurring Revenue:	5,794,164	5,937,178	5,408,365	6,324,504	6,473,816	6,084,298
AFG Grant	1,093,555	555,204	23,917	—	—	—
Non-Recurring:	1,093,555	555,204	23,917	—	—	—
Measure O	—	—	2,429,756	2,405,916	2,475,105	2,500,704
Develop. Impact Fee	—	—	—	203,061	106,852	100,000
Phillips 66	65,000	65,000	—	—	—	—
Special Revenue (Net):	65,000	65,000	2,429,756	2,608,977	2,581,957	2,600,704
Total Revenue:	6,952,719	6,557,382	7,862,038	8,933,481	9,055,773	8,685,002

As indicated, property tax revenues and pass-through receipts have seen consistent growth over the past five-year period. However, the economic effects of the continued dissolution of redevelopment agencies have resulted in a projected decline, as identified in the FY 20/21 budget in real estate tax and related revenues in FY 20/21.

Revenues from the Benefit District decreased dramatically in FY 17/18 but stabilized thereafter. Measure O revenues have remained consistent during the three-year period of the program's existence.

The following figure is a graphic representation that shows the revenue growth and trends for the District from FY 15/16 through FY 20/21.

Figure 15: RHFD Historic Revenues Indicating Trends (FY 15/16–FY 20/21)



Revenue Projections

Property tax revenues are projected to increase at 4% annually, with other recurring revenues remaining constant during the projection period. This is a conservative projection based on the trend analysis of the past five years. The Measure O revenues are projected to increase by approximately 3% annually. Both Measure O and the special benefit assessment revenues must be spent only to enhance services within the RHFD.

The following figure uses previously mentioned trends to project revenues through FY 26/27.

Figure 16: RHFD Revenue Projections (FY 21/22–FY 26/27)

Revenue	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Property taxes	4,552,080	4,734,163	4,923,530	5,120,471	5,325,290	5,538,301
Pass-throughs	375,000	375,000	375,000	375,000	375,000	375,000
Tax relief	29,956	29,956	29,956	29,956	29,956	29,956
Other revenues	23,109	23,109	23,109	23,109	23,109	23,109
Benefit District	1,347,000	1,347,000	1,347,000	1,347,000	1,347,000	1,347,000
Fire prevention	55,000	55,000	55,000	55,000	55,000	55,000
Measure H EMS	85,593	85,593	85,593	85,593	85,593	85,593
Recurring:	6,467,738	6,649,821	6,839,188	7,036,129	7,240,948	7,453,959
Measure O	2,500,000	2,540,000	2,616,200	2,694,686	2,775,527	2,858,792
Develop. Impact	100,000	100,000	100,000	100,000	100,000	100,000
Special Revenue:	2,600,000	2,640,000	2,716,200	2,794,686	2,875,527	2,958,792
TOTAL REVENUES:	9,067,738	9,289,821	9,555,388	9,830,815	10,116,474	10,412,752

MANAGEMENT COMPONENTS

Effectively managing a fire district is a complex task, often impacted by financial constraints, political pressures, and demanding community expectations. Today's fire districts must address these complexities by ensuring an efficient and flexible organizational structure, adequacy of response, maintenance of competencies, a qualified workforce, and financial sustainability.

The development of baseline management components in fire service organizations enables them to move forward in an organized and efficient manner. In the absence of foundational management elements, organizations can flounder—lost in ineffective leadership and divergent views of purpose and vision. The need for baseline management elements is especially true when organizations are attempting to consolidate more formally.

A well-organized and efficiently administered organization has appropriate documentation, policies, and procedures, as well as ways to effectively address internal and external issues. Organizational processes need to manage information and communication flow within each fire agency and their respective constituents. To identify potential opportunities and barriers in consolidating districts, Triton examined each of the Fire Districts' current efforts in organizational planning and management.

Mission, Vision, & Values

The management of a fire district needs to be grounded in the acceptance and adoption of a strong mission statement and an organizational vision and values. These fundamental foundation blocks are necessary to ensure everyone in the organization and community understands why the organization exists, the level of services provided, the district's vision over the next three to five years, and the goals and objectives to get there. A successful strategic planning process enables organizational improvements related to the creation and maintenance of policies and procedures; enhancement of internal and external communications practices; improved operational deployment; recordkeeping; and sustainable financial practices.

For an organization to be effective, mission, vision, and value statements must be part of a "living" process, consciously evolving as the district changes and grows. The strategic planning process guides the organization through the change and growth processes. The following figure compares the status of strategic planning among the three agencies.

Figure 17: Mission, Vision, & Strategic Planning Efforts of the Study Districts

District Mission & Goals	CCCYPD	ECCFPD	RHFPD
Mission Statement adopted	Yes	Yes	Yes
Vision established/communicated	Yes	Yes	Yes
Strategic Plan adopted	No	Yes	Old

Contra Costa County Fire Protection District

Mission Statement

"The Contra Costa County Fire Protection District exists to provide you, your family, and our communities with professional services dedicated to the preservation of life, property, and the environment."

Vision Statement

"Contra Costa County Fire Protection District is a recognized fire service leader that strives to become the premier fire organization that honors the past, recognizes the challenges of the present, and will continue to raise the bar of excellence into the future."

Strategic Plan

The District does not have a strategic plan; instead, the District has a one-year Operational Plan that sets strategic goals and objectives for each division annually. The purpose is to provide agility in decision-making. The district was in the process of developing a longer-term plan when COVID-19 struck. The annual plan is currently on-track to get back into the longer-term process once the COVID-19 restrictions are lifted.

East Contra Costa Fire Protection District

Mission Statement:

"To preserve and protect life, property, and the environment with service above all else."

Vision Statement

"Our vision is to be recognized as:

- A district that is a model of excellence in both fire protection and life safety.
- Responsive to the needs of the communities we serve.
- Committed to continuous organizational development.
- Committed to an environment of trust, involvement, innovation, creativity, and accountability."

Strategic Plan

The District has a current 2019–2023 strategic plan that the Fire Board has adopted.

Rodeo-Hercules Fire Protection District**Mission Statement**

"It is the mission of this organization to provide the highest level of service to the community; to mitigate the devastating effects of fires and other disasters, to deliver emergency medical services, and to educate the public, and maintain a constant state of readiness."

Vision Statement

"The Rodeo-Hercules Fire Protection District is dedicated to providing fire and life safety with PRIDE, EXCELLENCE, and PROFESSIONALISM."

Strategic Plan

The District has a 2012 Strategic Plan that is currently on hold during the annexation process. The resources required to update the plan are now working on the annexation project.

Critical Issues

As a part of this study, each district provides a list of the top four critical issues facing their organization. Triton evaluated the responses, looking for commonalities that could lead to more cohesive planning in the future. The following figure summarizes the issues facing each organization.

Figure 18: Critical Issues Identified by the Fire Chiefs

Issue No.	CCCYPD	ECCYPD	RHYPD
1	Lack of adequate resources in Battalion 8 to meet internal demand and dependence on CCCYPD for automatic aid to ECCYPD	Lack of sustainable revenue to increase service levels	Lack of overhead support for the organization
2	Recruitment of qualified FF/Paramedic candidates	Lack of personnel to manage and mitigate ECCYPD's daily operations	Growth impacts not being met with existing funding streams
3	Lack of diversity in recruit candidates/organization	Historical lack of local support from District citizens and businesses to increase revenues	Workforce numbers are not sufficient to support the current services
4	Need for increased participation and engagement on issues of wildland fire prevention/mitigation and increased wildland response/resource needs from June–November	Three stations with limited personnel, the District is not able to cover sick leave due to catastrophic situations such as COVID-19 and worker's compensation injuries	Unable to meet the increased call load in the communities served with existing personnel and equipment levels

Contra Costa County Fire Protection District

During an interview, the CCCYPD Fire Chief stated that the ECCYPD is a very busy area and draws increasing resources from CCCYPD from an equally busy Antioch, Pittsburg, and Bay Point area. This is unsustainable."

There is a need to recruit a qualified and diverse workforce to fill vacancies and address potential growth. One of the challenges is having sufficient paramedics at the firefighter rank as many have promoted. Recruitment of new paramedics is also a challenge."

East Contra Costa Fire Protection District

During an interview with ECCFPD Chief Helmick, the Chief shared that the District has struggled for several years to develop revenue streams to meet the increasing demands for fire and emergency medical services. This struggle for revenue and the growing demands for services, coupled with the rising costs to provide services, have led ECCCFD to close fire stations and direct staffing to station locations that are further apart, increasing response times and lowering service levels. The critical issues identified by ECCCFD align with the continuing struggle to create a sustainable funding system that will provide adequate services and response times based on studies to serve the communities properly. Property tax revenues have been increasing due to new development occurring within the District and a Measure H initiative has produced additional revenue stabilizing the revenue streams.

Rodeo-Hercules Fire Protection District

Interviews with Chief Craig identified several challenges relevant to a potential annexation. Currently, RHFPD needs overhead staffing to support training, fire prevention, and management of the organization. Growth impacts projected in the District within the next five years are not currently funded or planned to support a third fire station's construction and staffing. Additionally, workforce numbers are insufficient to sustain staffing levels when increased injury, illness, and vacation time impact coverage. Overall, the District cannot meet the increased call load in the communities served with existing personnel and equipment levels without relying on mutual aid and automatic aid agencies.

Internal & External Communications

In today's "hyper-speed" world of organizational communications, the public expects strategic, frequent, responsive, and transparent communication from government agencies. Likewise, employees expect the same when disseminating internal messages. Poor or a lack of practical organizational communication impact the confidence of both the public and the employees. The lack of confidence in an organization can spread false and misleading information throughout the community and the employees. Each fire district uses the essential tools to communicate internally and externally. The following figure compares the various internal and external communication tools used by each organization.

Figure 19: Communications Methods Used by the Fire Districts

Communication Method	CCCYPD	ECCYPD	RHFPD
Regularly scheduled staff meetings	Yes	Yes	Yes
Agency Intranet	Yes	Yes	No
Written memos	Yes	Yes	Yes
Internal newsletters	Yes	Yes	Yes
All-hands meetings	Yes	Yes	Yes
Community newsletter	Yes	No	Yes
District website	Yes	Yes	Yes
Social media accounts	Yes	Yes	No
Community surveys	No	Not recently	Not recently

Contra Costa County Fire Protection District

- There is a senior staff meeting every week and an Operations staff meeting is held once a month. The local bargaining unit has representatives present at each of the meetings. Each Battalion has Captain meetings once a month.
- All-hands meetings are held via remote conferencing software regularly.
- The Fire Chief visits fire stations monthly with the Operations Chief for tabletop station meetings, which are currently held virtually.
- The District Intranet system is old and the District is moving everything to the Google Suite cloud system.
- CCCFD sends out what is known as "CON Fire Bulletins" and an "Admin Bulletin" to deliver organizational information and directives. The District stores the documents in the Target Solutions cloud-based document management system.
- An internal web portal called "The Tailboard" is a new internal newsletter for the organization and is published each Friday. The CCCYPD PIO and the CCCYPD Training Division produce the newsletter.
- The District uses the NEXTDOOR application as the community newsletter. The CCCYPD has over 190,000 followers.
- The District has not performed a community survey.

East Contra Costa Fire Protection District

The District uses Target Solutions to manage the internal document storage.

- Written memos are sent to the members of the organization to communicate official District business needs.
- Internal newsletters are published monthly. The newsletters are distributed internally to the membership and extended support groups. The Fire Chief and the leadership have sections to provide updates.
- All-hands meetings are conducted twice a year for all three shifts and stations. Leadership conducts quarterly meetings with Captains before the all-hands meetings.
- The District does not publish a community newsletter; however, the Fire Chief hosts a virtual Townhall Meeting for the community on a quarterly schedule. FaceTime live is the primary platform to deliver information. There are also additional platforms that provide a wide broadcast of the information.
- The District website is available for community and member use. The site is updated monthly and continuously improved. The website design provides transparency, and the District has received special recognition from the California Special Districts Association. The District website provides public access to fire district records, fire district information, and a vast array of topics for the community and members to view.
- The District uses community surveys when highly charged issues need community insights to understand how best to plan strategically for the future. The Fire Chief now utilizes community focus groups and the monthly community influence group. The website also provides for community comments and questions.

Rodeo-Hercules Fire Protection District

- The COVID-19 situation has negatively impacted the District's regularly scheduled staff meetings. There are meetings with line personnel and the shift Battalion Chiefs assigned to the area.
- The District's internet is hosted by a third-party that provides 24-hour support.
- Memorandums provide administrative, policy, and general information to the membership. The memos are kept in storage indefinitely.
- Newsletters are generated annually at mid-year to the membership via email.

- The Chief does all-hands meetings with the fire personnel regularly to meet with personnel during visits to the stations.
- The District uses the agency website to post community newsletters for the general public.
- The Fire District does not have a social media presence. The Rodeo-Hercules Professional Firefighters organization has a Facebook account that publishes the District's news.
- Community surveys have been used in the past to educate citizens about funding initiatives and measure community sentiment.

Regulatory Documents & Recordkeeping

Government agencies depend on written policies, standard operating guidelines (SOGs), and reports as effective management and legal compliance components. Each of the fire districts in this study uses these methods in different ways toward achieving its mission. The following figure summarizes the various policies:

Figure 20: Regulatory Documents

Regulatory Documents	CCCYPD	ECCYPD	RHFPD
SOGs available for review	Yes	Yes	Yes
SOGs regularly updated	Yes	Yes	No
SOGs used in training evolutions	Yes	Yes	Yes
District policies available for review	Yes	Yes	Yes
Internally reviewed for consistency	Yes	Yes	Yes
Internally reviewed for legal mandates	Yes	Yes	Yes
Training on policies provided	Yes	Yes	Yes

Contra Costa County Fire Protection District

- Target Solutions is the central document storage system for Standard Operational Policies (SOPs), policies, SOGs, and related documents.
- 2018 was a benchmark year for the CCCYPD to review all of the SOP and policy documents. The goal is to perform an annual review process for the documents.
- The District does perform annual training for the state and federally mandated human resource policies. Multiple media resources deliver the information to the employees. New policies are sent via Target Solutions for each member to review.

East Contra Costa Fire Protection District

- SOGs are reviewed quarterly by committees assigned to handle specific topics. The District has an Operations Committee that utilizes sub-committees to manage SOGs and operational items.
- Training SOGs undergo regular updates during the same process noted above. The Training Standards comprised "job sheets" depict each rank's required tasks and functions.
- District policies are reviewed quarterly by the District's Labor/Management review group. All District policies are on the Target Solutions website for the membership to review. The policies undergo regular review for consistency and legal mandate changes. In addition, District personnel train on randomly selected Administrative Bulletins every month, including those that are statutorily required.

Rodeo-Hercules Fire Protection District

- SOGs are available for review to the membership.
- SOG updates are on schedule on an as-needed basis due solely to the lack of support personnel to perform the tasks. The process currently used integrates a Labor/Management approach for review.
- SOG Training evolutions are used and signed monthly by the Battalion Chief.
- District policies are available to the membership and located on the District website's members-only section, intranet, and hard copy.
- The policies undergo review for consistency on an as-needed basis.
- Contract legal counsel review the policies.
- The monthly Training Calendar guides the employees for an annual review of policies.

Documentation & Compliance Testing

Proper recordkeeping and secure record archiving are essential to meet government agencies' legal, regulatory, and business best practices. Secure document archiving can also help address legal and other administrative actions confronting a fire district. Each district's recordkeeping systems are listed below:

Figure 21: Reporting & Recordkeeping by the Fire Districts

Report Type	CCCYPD	ECCYPD	RHFPD
Electronic reports	Yes	Yes	Yes
Software used–Fire	Fire RMS®	Fire RMS®	Fire RMS®
Software used–EMS	MEDS4	ESO® ePCR	Tablet PCR
Periodic Reports to Elected Officials			
Financial reports	Yes	Yes	Yes
Management reports	Yes	Yes	Yes
Operational reports	Yes	Yes	Yes
Annual report produced	Yes	Video	Yes
Required Records Maintained & By Whom			
Incident reports	Yes	Yes	Yes
Patient care reports	Yes	Yes	Yes
Exposure records	Yes	Yes	Yes
SCBA testing	Internal	Internal	Contracted
Hose testing	Internal	Internal	Internal
Ladder testing	Internal	Internal	Contracted
Pump testing	Internal	Internal	Contracted
Atmospheric monitors	Internal	Internal	Internal
Vehicle maintenance	Internal	Internal	Contracted

Contra Costa County Fire Protection District

- The EMS Division utilizes the AMR Ambulance MDS4 electronic reporting system.
- Monthly and semi-monthly reports submitted to the Board of Directors and Fire Advisory Commission significant incident reports. The district financial information resides in the countywide financial reporting documents. The contract cities receive periodic reports from the District.
- The District publishes annual reports in the first quarter of the calendar year, and plans to generate a 2020 Annual Report in the next few months and get back on schedule with annual reporting.

- Fire reports are maintained in a primary server by the District IT Division. The AMR Ambulance MEDS4 cloud-based system manages EMS documents.
- Contra Costa County Risk Management manages the exposure reporting and documents. The District also maintains the records locally.
- The District performs the SCBA testing internally.
- Third-party vendors perform hose, vehicle, and ladder testing.

East Contra Costa Fire Protection District

Electronic Reports to the Fire Board

- Finance Committee meetings are held the third week of each month. The Committee consists of two Board Members, the Fire Chief, Chief Administrative Officer, and other chief officers. The Fire Board receives a monthly committee report and the District publishes the report on the agency website.
- The fire board receives monthly management and operational reports. The District does not create a formal annual report but instead does quarterly and annual video reports for the community and members to view on the website.
- Operational Records Management is the Operations Chief's responsibility and is also updated daily by the duty Battalion Chiefs.
 - Exposure report management is the responsibility of the Infectious Control Nurse (contracted). The Safety Chief of the District manages this work.
 - SCBA records management is the Logistics and Support Services Chief's responsibility with assistance from the assigned Fire Captain.
 - Hose testing, ladder testing, and pump testing records are the responsibility of the Logistics and Support Services Chief. A third party performs the actual testing.
 - Atmospheric monitor records management is the responsibility of the Logistics and Support Services Chief; testing is performed internally.
 - Vehicle maintenance records is also the responsibility of the Logistics and Support Services Chief. A third party performs the actual repair work.

Rodeo-Hercules Fire Protection District

- Reports to the Fire Board:
 - Monthly submittals are available for review with complete quarterly and annual reports. The reports are also attached to the Board Minutes, which the District publishes on the agency website.
 - Management reports are provided monthly to the fire board with as-needed reports for special projects.
 - The District publishes annual reports in October of each year.
- Incident Reports management is the responsibility of the Administrative Services Officer. The records are on the server with the Contra Costa County Department of Information and Technology (DOIT).
- Patient Care Reports management is the responsibility of the Administrative Services Officer. The records are on the server with DOIT.
- Exposure records management is in Fire RMS software and with the medical provider should an employee seek medical attention.
- SCBA maintenance records are maintained by a third party with hard copies held by the District program manager, who is a Fire Captain.
- Alameda County Fire maintains aerial ladder maintenance records with hard copies held by the District program manager. Ground ladders maintenance records management is by a third-party vendor with hard copies maintained by the District program manager.
- Pump Testing records are maintained by a third-party vendor, with hard copies held by the District program manager.
- The District program manager maintains the atmospheric maintenance records.
- Vehicle maintenance records are maintained by Alameda County Fire, with hard copies held by the District program manager.

Information Technology Systems

Technology support services, systems, and processes are critical management components for today's fire services. Triton reviewed the infrastructure, support personnel, services, systems, and processes that each fire district currently operates and supports.

Figure 22: Information Technology Systems by the Fire Districts

Report Type	CCCYPD	ECCYPD	RHFPD
IT Division	Yes	No	No
Contracted IT Services	N/A	Yes*	Precision IT
IT Infrastructure			
Hardened Infrastructure	Yes	Yes	Yes
Back-up Power Supply	Yes	Yes	Yes
Automated Trouble Alert	Yes	Yes	Yes
24-hour support system	Yes	Yes	Yes
Continuity of Operations Plan	Yes	Yes	No
Infrastructure Sustainability			
Budgetary replacement plan	Yes	Yes	Yes
System parts & equipment supply	Yes	Yes	Yes

*Provided by CCCYPD & the City of Brentwood

Contra Costa County Fire Protection District

The District has its own IT Division with support from Contra Costa County's IT Division. It utilizes the County data backbone to move data. The District is working with County IT to update, further harden, and create additional redundancy in the IT network.

East Contra Costa Fire Protection District

ECCYPD has internal staff who manages their IT system through agreements with Contra Costa County FPD and the City of Brentwood. Each of the providers offers the infrastructure and support for the IT systems.

Infrastructure sustainability management is through the District's fiscal planning process and the providers' funding through the annual budgetary process.

Rodeo-Hercules Fire Protection District

The District contracts with a third-party to manage the IT network for the District's IT Infrastructure.

- The District in-house server network is in a hardened setting. The system is on a back-up power supply with an automated trouble alert. The system is supported 24 hours a day by the third-party provider.
- The District does not have a Continuity of Operations Plan.

Infrastructure Sustainability funding management is through a scheduled replacement and funding plan generated by the third-party provider and funded by the District through the annual budgetary process.

STAFFING & PERSONNEL MANAGEMENT

The most valuable asset of any organization is its people. The effective management of human resources requires a balance between the maximum utilization of the overall workforce and the experience of a high level of job satisfaction by individual workers. To achieve this goal consistently, management must combine reliability with a safe working environment, fair treatment, the opportunity to provide input, and recognition of the individual's commitment and sacrifice. Job satisfaction depends upon this combination of factors.

During our review, Triton found that the fire districts have highly skilled and motivated individuals committed to providing the best possible emergency response to their constituents. The key to success will be to combine disparate cultures into one organization and ensure the right people are placed in the right positions.

One essential component of a healthy organization is balancing administration, support staff, and operational resources. This analysis will review the current ratio for each organization and provide recommendations for a combined staffing model. Annexation could *potentially* result in improved efficiency through shared resources. This process will evaluate various organizational charts and provide a framework for the development of a unified fire district.

Administrative & Support Staffing

Each of the districts has varying levels of uniformed administrative support positions—due primarily to their size. A challenge often faced by smaller districts is the necessity of individuals to serve in multiple capacities. An advantage to the potential annexation will be increased services available to ECCFPD and RHFPD in administrative support services (e.g., information technology, human resources, finance, etc.). The following figure illustrates the various positions in non-uniformed administrative positions.

Figure 23: Comparison of Uniformed Administrative & Support Staff

Position	CCCFPD	ECCFPD	RHFPD
Fire Chief	1	1	1
Deputy Chief	1	—	—
Assistant Chiefs	5	—	1
Medical Director	1	—	—
Administrative Battalion Chiefs	3	1	—
Administrative Captains*	3	—	—
Fire Marshal	—	1	—
Deputy Fire Marshal	—	1	—
Fire Inspectors	20	2	—
Public Educators	2	—	—
Public Information Officer	1	FM	—
Fire Investigation Supervisor	1 ^A	1	—
Shift Fire Investigators (56-hour)	3	—	—
Fire Investigators (40 hours)	1	—	—
Fire Prevention Captains	4	—	—
Code Enforcement Supervisor	1 ^A	—	—
Plan Review Supervisor	1	—	—
Building Plan Checker I	2	—	—
Fire Prevention Technician	1	—	—
Community Risk Reduction	1	—	—

^ACCCFPD has one Plan review Supervisor, one Code enforcement Supervisor, one Community Risk Reduction Supervisor, one Investigative Supervisor, but all are also Prevention Captains.

An effective fire organization requires non-uniformed staff to support daily administrative activities. The following graphic shows the number of non-uniformed staff for each district.

Figure 24: Non-Uniformed Staff

Position	CCCFPD No. of Staff	ECCFPD No. of Staff	RHFPD No. of Staff
Chief of Administrative Services	1	0	0
HR Analyst II	2	0	0
Executive Secretary	1	1	1
Administrative Assistant	0	2	1
Secretary Advanced Level	3	0	0
Account Clerk Advanced	3	0	0
District Aides	20	0	0
Fiscal Specialist	1	1	0
Fiscal Officer	1	0	0
Payroll Technician	0	1	0
Senior Level Clerk	5	0	0
Clerical Supervisor	1	0	0
Permit Technician	—	1	—
Totals:	38	5	2

Discussion

A combined organization would have a 13% administrative/support staffing to line staffing based on current staffing levels. This is consistent with similarly sized organizations and, except for the Fire Chief position, there does not appear to be duplication of support staff. The following graphic shows a comparison of administrative support staffing to operational staffing.

Figure 25: Administrative/Support Staff Compared to Operational Staff

Staffing Category	CCCFPD Staff	ECCFPD Staff	RHFPD Staff	Combined No. of Staff
Administrative/Support Staff	38	10	2	45
Operations Staff	317	37	14	343
Percent of Admin. to Operations:	12%	41%	14%	13%

Staff Allocation to Functions & Divisions

The following section will focus on staffing as it relates to the span of control and the fireground and incident command.

Divisions

A future consideration relates to the span of control for routine management and fireground operations. Management engagement is best when a manager has 8–9 direct reports.¹⁶ National Fire Protection Association (NFPA) 1561 recommends an operational span of control of up to seven. Exceeding the recommended limitations on the span of control can result in ineffective leadership and fireground incidents.

Currently, the CCCYPD has an Emergency Operations Assistant Chief. During routine operations, 12 Battalion Chiefs and the Special Operations Battalion Chief report to the Emergency Operations Assistant Chief. With the addition of two more Battalion Chiefs, the span of control would exceed recommended limits.

One possible option would be the addition of three Shift District Chief positions. These individuals would each be responsible for 5–6 Battalion Chiefs (A, B, C shifts), thus decreasing the Emergency Operations Assistant Chief's span of control to four direct reports.

This option would also support major incidents and help reduce the span of control required by the existing Battalion Chiefs. The incident complexity would dictate whether the incident commander (IC) would be the District Chief, Emergency Operations Chief, or Fire Chief.

Shift Scheduling Methodology

CCCYPD, ECCYPD, and RHFPD all utilize the 48/96-line staffing schedule. The total number of positions required per jurisdiction becomes a policy decision based on the jurisdiction's needs. According to policy, the jurisdiction also establishes the number of employees needed above the minimum to allow for vacancies due to vacation, sick, and other types of leave, yielding an overall number of full-time employees required to ensure that necessary staffing, according to policy, is available daily. This staffing methodology is very common across the Western United States for firefighters to work a 24- or 48-hour shift cycle.

Studies have been undertaken and remain ongoing in an attempt to better understand the impact of this work cycle on the physiological process. The science indicates that sleep is important and that going without sleep for too long or interrupting the sleep rhythm leads to physical and cognitive problems including hypertension, cancer, ulcers, heart attack, and stroke.

One comparative analysis of the 24-hour and 48-hour schedules indicated that the work/rest ratio was the same between the two schedules.¹⁷ However, with the unique circumstance of necessary overtime staffing, the employee may be at risk for excessive fatigue in the second half of the shift. The situation would be worse if their sleep were disrupted during the first 24 hours. There would be less time for recovery, both mentally and physically.

Firefighter/EMS Staff Distribution

CCCYPD currently holds the EMS contract for ambulance transport in all three districts. American Medical Response is the subcontractor for the system and, under the administrative control of CCCYPD, provides ambulance transport. The CCCYPD/RHYPD provides paramedic first response to the system, and ECCYPD provides BLS support. Following the consolidation, the organization could begin developing a paramedic-level first response system in the previous ECCYPD response area.

Training & Safety Staffing

Annexation of ECCYPD and RHYPD into CCCYPD will not bring additional dedicated training staff to the overall system. CCCYPD currently has three (effective July 1, 2021) 40-hour Training Captains to maintain adequate training and fireground safety.

Operational Staffing Levels

An adequate number of properly trained staff of emergency responders is required for placing the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at an operational scene decreases the effectiveness of the response.

The first 15 minutes is the most crucial period in the suppression of a fire. How effectively and efficiently firefighters perform during this period has a significant impact on the overall outcome of the event. This general concept is applicable to fire, rescue, and medical situations.

Critical tasks must be performed in a timely manner to control a fire or to treat a patient. The fire district is responsible for ensuring that responding companies are capable of performing all of the described tasks in a prompt, efficient, and safe manner. The following figure lists the minimum staffing of each apparatus and station by individual fire agency.

Figure 26: Fire Districts Staffing by Station & Apparatus (Part 1)

District/Station	Assigned Apparatus	Minimum On-Duty Staffing
Contra Costa County FPD		
Station 1	Truck 1	4
	Engine 1	3
Station 2	Engine 2	3
Station 3	Engine 3	3
Station 4	<i>Unstaffed</i>	0
Station 5	Engine 5	3
Station 6	Engine 6	3
	Truck 6	4
Station 7	Engine 7	3
Station 8	Engine 8	8
Station 9	Engine 9	3
Station 10	Engine 10	3
Station 11	Engine 11	3
Station 12	<i>Unstaffed</i>	0
Station 13	Engine 13	3
Station 14	Truck 14	4
Station 15	Engine 15	3
Station 16	Engine 16	3
Station 17	Engine 17	3
Station 19	<i>Reserve Station</i>	0
Station 22	Engine 22	3
Station 69	Engine 69	3
Station 70	Engine 70	3
	Squad 70	2
	Truck 70	4

Figure 27: CCCYPD Staffing by Station & Apparatus (Part 2)

District/Station	Assigned Apparatus	Minimum On-Duty Staffing
Contra Costa County FPD <i>continued...</i>		
Station 81	Engine 81	3
Station 82	Engine 82	3
Station 83	Truck 83	4
Station 84	Truck 84	4
Station 85	Engine 85	3
Station 86	Engine 86	3
Station 87	Hazmat 87	3
Station 88	Engine 88	3
East Contra Costa FPD		
Station 52	Engine 52	3
Station 53	Engine 53	3
Station 59	Engine 59	3
Rodeo-Hercules FPD		
Station 75	Engine 75	3
Station 76	Engine 76	3

The next figure shows the assorted positions assigned to emergency operations among the three fire agencies.

Figure 28: Emergency Response Staffing by Position

Position	CCCYPD	ECCYPD	RHFPD	Combined Staff
Assistant Chiefs (operations only)	1	—	—	1
Battalion Chiefs	10	3	1	14
Captain	52	9	2	68
Captain Paramedic	39	—	4	39
Engineer	37	9	2	53
Firefighter/Paramedics	37	—	1	41
Firefighters/EMTs	85	10	5	98
Engineer Paramedic	40	—	—	40
Shift Training Captain	3	—	—	3
Training & Staff Development Specialist	1	—	—	1
Fire Control Worker (seasonal)	24	—	—	24
Totals:	329	31	22	382

Current Standards of Coverage & Staffing for Incidents

The service area of the three districts is a highly populated urban environment and, as such, contains an elevated number, density, and distribution of risk. As the actual or potential risk increases, the need for higher numbers of personnel and apparatus also increases. With each type of incident and corresponding risk, specific critical tasks need to be accomplished, and certain numbers and types of apparatus should be dispatched.

Tasks that must be performed at a fire can be broken down into two key components: life safety and fire flow. Life safety tasks are based on the number of building occupants, and their location, status, and ability to take self-preservation action. Life safety-related tasks involve the search, rescue, and evacuation of victims. The fire flow component involves delivering sufficient water to extinguish the fire and create an environment within the building that allows entry by firefighters.

The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat different types of fires. In the absence of adequate personnel to perform concurrent action, the commanding officer must prioritize the tasks and complete some in chronological order rather than concurrently. These tasks include the following:

- Command
- Scene safety
- Search and rescue
- Fire attack
- Water supply
- Pump operation
- Ventilation
- Backup/rapid intervention

Critical task analyses also apply to non-fire-type emergencies, including medical, technical rescue, and hazardous materials emergencies. Numerous simultaneous tasks must be completed to effectively control an emergency. The ability of the fire districts to muster needed numbers of trained personnel quickly enough to make a difference is critical to successful incident outcomes.

The following figure illustrates the minimum emergency incident staffing recommendations from the Commission on Fire Accreditation, International (CFAI). The following definitions apply to the figure:

- *Low Risk*: Minor incidents involving small fires (fire flow less than 250 gallons per minute), single patient non-life-threatening medical incidents, minor rescues, small fuel spills, and small wildland fires without unusual weather or fire behavior.
- *Moderate Risk*: Moderate-risk incidents involving fires in single-family dwellings and equivalently sized commercial office properties (fire flow between 250 gallons per minute to 1,000 gallons per minute), life-threatening medical emergencies, hazardous materials emergencies requiring specialized skills and equipment, rescues involving specialized skills and equipment, and larger wildland fires.
- *High Risk*: High-risk incidents involving fires in larger commercial properties with sustained attack (fire flows more than 1,000 gallons per minute), multiple patient medical incidents, major releases of hazardous materials, high-risk rescues, and wildland fires with extreme weather or fire behavior.

Figure 29: Staffing Recommendations Based on Risk

Incident Type	High Risk	Moderate Risk	Low Risk
Structure Fire	29	15	6
Emergency Medical Services	12	4	2
Rescue	15	8	3
Hazardous Materials	39	20	3

Critical Tasking

The following section lists the Critical Task activities and Alarm Assignments as provided by each district. Critical tasks are those activities that must be conducted early and promptly by firefighters at emergency incidents to control the situation, to stop loss, and to perform necessary tasks required for a medical emergency. CCCYPD, ECCYPD, and RHFPD are responsible for assuring the responding companies are capable of performing all of the described tasks in a prompt, efficient, and safe manner. These are the minimum number of personnel needed by incident type. More personnel will be required for incidents of increased complexity or size.

The following figures list the critical tasking numbers as identified by staff from each of the fire districts by type of incident. Each figure shows a comparison of CCCYPD, ECCYPD, and RHFPD. It should be noted that only CCCYPD can achieve the critical staffing identified without utilizing aid from other agencies.

Figure 30: Low-Risk Structure Fire

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHFPD No. of Staff
Command	2	1	1
Safety	1	1	1
Pump Operations	2	1	1
Attack Line	2	2	2
Backup Line	2	1	1
Search and Rescue	6	2	2
Ventilation	4	2	2
Rapid Intervention Crew	3	3	3
Incident Support / Other	6	2	2
Totals:	28	15	15

Figure 31: High-Risk Structure Fire (≥ 5,000 square feet)

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHFPD No. of Staff
Command/Safety	3	3	3
Accountability	—	—	—
Pump Operations	2	2	3
Aerial Operator (if truck requested)	—	1	2
Attack Line	3	3	3
Backup Line/Support	2	2	3
Search and Rescue	7	7	6
Ventilation/Ground Ladders	4	4	6
Rapid Intervention Crew	3	4	3
Incident Support	6	6	9
Totals:	30	32	38

Figure 32: Wildland Fire (High Risk)

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHFPD No. of Staff
Command	1	1	4
Safety	1	1	1
Pump Operations/Lookout	1	1	5
Attack Line	5	5	10
Exposure Lines	—	—	4
Structure Protection	6	6	4
Water Supply	3	3	2
Other (Mop-Up, Overhaul)	15	15	2
Totals:	32	32	32

Figure 33: Aircraft Emergency

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command/Safety	2	2	2
Aircraft Fire Suppression	3	3	6
Pump Operations	1	1	2
Attack Line	2	2	6
Backup Line	—	—	3
Rescue	7	7	6
Emergency Medical Care	10	10	8
Water Supply	—	—	4
Totals:	25	25	37

Figure 34: Hazardous Materials—Low Risk

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command	1	1	2
Investigation	2	1	—
Decontamination	—	6	3
Research/Support	3	3	1
Entry Team & Backup Team	—	6	6
Totals:	6	17	12

Figure 35: Hazardous Materials—High Risk

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command/Safety	4	4	2
Site Control	3	3	—
Air Monitoring	2	2	—
Decontamination	9	9	3
Research Support	2	2	1
Team Leader, Entry Team, & Backup Team	5	5	6
Medical Monitoring	3	3	—
Incident Support	5	5	—
Totals:	33	33	12

Figure 36: Emergency Medical Aid

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Patient Management	1	1	1
Patient Care	1	1	1
Documentation	1	1	1
Totals:	3	3	3

Figure 37: Major Medical Response (10+ patients)

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Incident Command	2	1	2
Safety	1	1	1
Triage	6	6	3
Treatment Manager	1	1	1
Patient Care	12	12	12
Transportation Manager	1	1	1
Documentation	—	—	3
Transportation	10	10	—
Totals:	33	32	23

Figure 38: Motor Vehicle Accident (Non-Trapped)

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Scene Management/Documentation	1	1	1
Patient Care/Extrication	2	2	6
Incident Blocking	3	3	—
Totals:	6	6	7

Figure 39: Motor Vehicle Accident (Trapped)

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command/Safety	1	1	2
Scene Management	1	1	1
Patient Care	2	2	3
Extrication	3	4	3
Pump Operator/Suppression Line	2	1	3
Vehicle Stabilization	2	2	3
Totals:	11	11	15

Figure 40: Technical Rescue—Water

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command/Safety	2	2	1
Rescue Team	3	3	3
Backup Team	3	3	3
Patient Care	2	2	3
Rope Tender	—	—	1
Upstream Spotter	2	2	3
Downstream Safety	2	2	1
Shore Support	11	11	—
Totals:	25	25	15

Figure 41: Technical Rescue—Rope

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command/Safety	2	2	2
Rescue Supervisor	1	1	—
Rescue Team	2	2	3
Backup Team	2	2	3
Rigger/Anchor	3	3	—
Haul Team	3	3	—
Patient Care	6	6	3
Rope Tender	—	—	1
Ground Support	3	3	—
Totals:	22	22	12

Figure 42: Technical Rescue—Confined Space

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHYPD No. of Staff
Command	2	2	2
Safety	1	1	1
Rescue Team	2	2	3
Backup Team	2	2	3
Overhead Positions	3	3	—
Air Monitoring	3	3	—
Communications	3	3	—
Attendant	1	1	—
Rigging Team	3	3	—
Ground Support	6	3	—
Patient Care	5	6	3
Rope Tender	—	—	1
Totals:	31	29	13

Figure 43: Technical Rescue—Trench

Task	CCCYPD No. of Staff	ECCYPD No. of Staff	RHFPD No. of Staff
Command/Safety	3	3	2
Rescue Team	2	2	2
Back up Team	2	2	2
Overhead	3	3	—
Air Monitoring	2	2	—
Shoring	8	8	12
Systems	3	3	—
Ground Support	3	3	2
Incident Support	5	5	—
Patient Care	—	—	2
Totals:	31	31	22

Alarm Assignments

To ensure sufficient personnel and apparatus are dispatched to an emergency event, the following first alarm response assignments have been established. "Total Staffing Needed" is the number identified in the previous Critical Tasking Analysis. The number of personnel and apparatus required to mitigate an active and complex working incident will require additional resources above and beyond the numbers listed next. With currently available resources, including automatic and mutual aid, the districts can staff a number of incident types in accordance with its Critical Tasking Analysis.

The following figures show the alarm assignments for each fire district by type of incident. Each figure shows a comparison of CCCYPD, ECCYPD, and RHFPD.

Figure 44: Structure Fire—Low Risk

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	5	15	4	12	4	12
Truck	1	4	0	0	1	3
Air Supply	1	3	—	—	—	
Battalion Chief	2	2	1	1	1	1
Safety Officer	1	1	—	—	—	
Investigator	1	1	1	1	—	
ALS Ambulance	1	2	—	—	—	
Total Staffing Provided:		28		13		15
Total Staffing Needed:		28		13		15

Figure 45: Structure Fire—High Risk

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	5	15	3	9	1	3
Truck	2	8	—	—	1	3
Air Supply	1	3	—	—		
Battalion Chief	2	2	1	1	1	1
Safety officer	1	1	—	—		
Investigator	1	1	1	1		
ALS Ambulance	1	2	—	—		
Total Staffing Provided:		32		11		7
Total Staffing Needed:		32		31		38

Figure 46: Wildland Fire (High Risk)

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	1	3			1	3
Brush Engine	3	9	3	6	1	3
Water Tenders			3	3		
Hand Crew	1	14				
Dozer	1	1				
Battalion Chief	2	2	1	1	1	1
Total Staffing Provided:		29		10		7
Total Staffing Needed:		32		32		32

Figure 47: Aircraft Emergency

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	2	6	3	9	1	3
Truck	1	4			1	3
ARRF	2	3				
Rescue	1	3				
ALS ambulance	2	4				
AIR Ambulance	1	3				
Battalion Chief	2	2	1	1	1	1
Total Staffing Provided:		25		10		7
Total Staffing Needed:		25		25		37

Figure 48: Hazardous Materials—Low Risk

Unit Type	— CCCYPD —		— ECCFPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	1	3	3	9	2	6
Hazardous Materials Unit	1	3				
Battalion Chief			1	1	1	1
Total Staffing Provided:		6		10		7
Total Staffing Needed:		6		17		12

Figure 49: Hazardous Materials—High Risk

Unit Type	— CCCYPD —		— ECCFPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	3	9	3	9	2	6
Truck	2	8				
Air supply	1	3				
Battalion Chief	2	2	1	1	1	1
Safety officer	1	1				
Hazardous Materials Unit	1	3				
County Hazardous materials team	1	5				
Ambulance	1	2				
Total Staffing Provided:		33		10		7
Total Staffing Needed:		33		33		12

Figure 50: Emergency Medical Aid

Unit Type	— CCCYPD —		— ECCFPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine or Truck	1	3	1	3	1	3
ALS Ambulance	1	2	1	2	1	2
Total Staffing Provided:		5		5		5
Total Staffing Needed:		3		3		3

Figure 51: Major Medical Response (10+ patients)

Unit Type	— CCCYPD —		— ECCFPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine/Paramedic	5	15	3	9	2	5
Rescue	2	6				
Battalion Chief	2	2	1	1	1	1
MCI Trailer					1	1
ALS ambulance	5	10	5	10	5	10
Total Staffing Provided:		33		20		17
Total Staffing Needed:		33		20		17

Figure 52: Motor Vehicle Accident (Non—Trapped)

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine or Truck	2	6	1	3	2	6
Total Staffing Provided:		6		3		6
Total Staffing Needed:		6		6		7

Figure 53: Motor Vehicle Accident (Trapped)

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	1	3	2	6	1	3
Truck	1	4			1	3
ALS Ambulance	1	2				
Rescue	1	3				
Battalion Chief	1	1	1	1	1	1
Total Staffing Provided:		13		7		7
Total Staffing Needed:		11		11		15

Figure 54: Technical Rescue—Water

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	3	9	3	9	1	3
Truck	1	4			1	3
Water Rescue Unit—RB281	1	3				
Rescue	2	6				
Battalion Chief	2	2	1	1	1	1
Safety Officer	1	1				
Total Staffing Provided:		25		10		7
Total Staffing Needed:		25		25		15

Figure 55: Technical Rescue—Rope

Unit Type	— CCCYPD —		— ECCYPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	1	3	3	9	1	3
Truck	1	4			1	3
Rescue	2	6				
Rescue Helicopter	1	3				
ALS Ambulance	1	2				
Battalion Chief	2	2	1	1	1	1
Total Staffing Provided:		20		10		7
Total Staffing Needed:		22		22		12

Figure 56: Technical Rescue—Confined Space

Unit Type	— CCCYPD —		— ECCFPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	2	6	3	9	1	3
Truck	2	8			1	3
Rescue	3	9				
Breathing Support	1	3				
Battalion Chief	2	2	1	1	1	1
Safety Officer	1	1				
ALS Ambulance	1	2				
Total Staffing Provided:		31		10		7
Total Staffing Needed:		31		29		13

Figure 57: Technical Rescue—Trench

Unit Type	— CCCYPD —		— ECCFPD —		— RHFPD —	
	No. Units	No. Staff	No. Units	No. Staff	No. Units	No. Staff
Engine	2	6	3	9	1	3
Truck	2	8			1	3
Rescue	3	9				
Breathing Support	1	3				
Battalion Chief	2	2	1	1	1	1
Safety Officer	1	1				
ALS Ambulance	1	2				
Total Staffing Provided:		31		10		7
Total Staffing Needed:		31		31		22

CAPITAL FACILITIES & APPARATUS

Typically, three essential resources are required to successfully carry out a fire district's mission: trained personnel, firefighting equipment (including apparatus and vehicles), and fire stations. No matter how competent or numerous the firefighters, if appropriate capital equipment is not available for use by operations personnel, it would be impossible for any of the fire districts in this study to deliver services effectively. The essential capital assets for emergency operations are facilities, apparatus, and other emergency response vehicles. Of course, each district's financing ability will determine the level of capital equipment it can acquire and make available for use by emergency personnel. This section of the report assesses the respective capital facilities, vehicles, and apparatus of CCCYPD, ECCYPD, and RHFPD.

Fire Station Features

Fire stations play an integral role in the delivery of emergency services for several reasons. To a large degree, a station's location will dictate response times to emergencies. A poorly located station can mean the difference between confining a fire to a single room and losing the structure and survival from sudden cardiac arrest. Fire stations also need to be designed to adequately house equipment and apparatus and meet the organization's needs and personnel.

The fire station activities should be closely examined to ensure the structure is adequate in size and function. Examples of these functions can include the following:

- Residential living space and sleeping quarters for on-duty personnel (all genders)
- Kitchen facilities, appliances, and storage
- Bathrooms and showers (all genders)
- Training, classroom, and library areas
- Firefighter fitness area
- The housing and cleaning of apparatus and equipment, including decontamination and disposal of biohazards
- Administrative and management offices, computer stations, and office facilities for personnel
- Public meeting space

In gathering information from the three fire districts, Triton asked the organizations to rate each of their fire stations' conditions using the next figure's criteria.

Figure 58: Criteria Utilized to Determine Fire Station Condition

Excellent	Like new condition. No visible structural defects. The facility is clean and well maintained. Interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. No significant defect history. Building design and construction match the building's purposes. Age is typically less than ten years.
Good	The exterior has a good appearance with minor or no defects. Clean lines, good workflow design, and only minor wear of the building interior. Roof and apparatus apron are in good working order, absent any significant full-thickness cracks or crumbling of apron surface or visible roof patches or leaks. Building design and construction match the building's purposes. Age is typically less than 20 years.
Fair	The building appears to be structurally sound with a weathered appearance and minor to moderate non-structural defects. The interior condition shows normal wear and tear but flows effectively to the apparatus bay or offices. Mechanical systems are in working order. Building design and construction may not match the building's purposes well. Showing increasing age-related maintenance, but with no critical defects. Age is typically 30 years or more.
Poor	The building appears to be cosmetically weathered and worn with potential structural defects, although not imminently dangerous or unsafe. Large, multiple full-thickness cracks and crumbling of concrete on the apron may exist. The roof has evidence of leaking and/or multiple repairs. The interior is poorly maintained or showing signs of advanced deterioration with moderate to significant non-structural defects. Problematic age-related maintenance and/or major defects are evident. It may not be well suited to its intended purpose. Age is typically greater than 40 years.

Fire Stations & Facilities

The following section provides a general overview of the facilities and fire stations at each fire district. Appendix A lists each fire station's specific details based on each of the fire districts' information and Triton's walk-through of each station.

Contra Costa County FPD Facilities

CCCYPD currently maintains 30 fire stations throughout the District, of which Stations 4, 12, and 18 were closed as of 2021. Station 19 is a reserve station and a leased facility. The following figures describe the features of each fire station operated by the District.

Combined, CCCYPD fire stations have a staffing capacity of approximately 192 personnel, 65 apparatus bays (although some are utilized for exercise equipment), and 144,976 square feet. The years in which CCCYPD's stations were built range from 1939 to 2021, with an average age of 43 years; however, several of the older stations have since been remodeled.

Of the 27 fire stations inventoried, 7% were listed in "Excellent" condition, 67% in "Good" condition, 15% as "Fair," and 11% in "Poor" condition. The majority of the stations do not have modern seismic protection or meet Americans with Disability Act (ADA) standards. Twelve (44%) facilities have sprinkler systems installed.

East Contra Costa FPD Facilities

ECCYPD currently owns six fire stations, of which three are utilized and staffed with personnel and apparatus. Although the District owns these stations, Stations 54, 55, and 94 are unstaffed without assigned apparatus. Station 54 is a 64-year-old facility and used primarily for training and storage. Station 94 is utilized as a shop for the contract mechanic. Station 55, the newest station, functions as a facility for administrative and prevention staff.

Fire Stations 52, 53, and 59 are staffed and operational. These stations range in age 10 to 20 years. Combined, the fire stations have an average age of 16 years. They have a combined staffing capacity of 11 personnel, seven apparatus bays, and a total of 22,053 square feet.

The District rates Station 52's overall condition as "Good," Station 53 as "Excellent," and Station 55 as "Excellent." When completing its evaluation of the various features and facilities (e.g., kitchen, showers, exercise equipment, etc.) within each fire station, the District rated most of these as either "Good" or "Excellent." In two fire stations, security was rated as "Fair."

Rodeo-Hercules FPD Facilities

RHYPD currently maintains two fire stations. Fire Station 75 was originally built in 1937 but was remodeled in 1991. Station 76 was built in 1991. Combined, the two stations average 57 years of age.

The maximum fire station staffing capacity of each facility is limited to either three or four personnel. Combined, the District has eight apparatus bays.

The District rated the overall condition of both of its fire stations as "Good." Both stations have sprinkler systems installed.

Combined Fire Station Inventories

The following figure lists the inventories and features of all three fire districts combined.

Figure 59: Combined Station Inventories of the Fire Districts (2021)

Fire District	No. of Stations ¹	Maximum Staffing ²	Apparatus Bays	Average Age ³	Total Square Footage ⁴
CCCYPD	27	192	65	43 years	144,976
ECCYPD	6	23	21	29 years	29,535
RHYPD	2	7	8	57 years	18,690
Totals:	35	222	94	43 years	193,201

¹Unstaffed/unused stations excluded. ²Represents maximum staffing capacity.

³Average age of stations combined. ⁴Square footage of some stations not reported.

The three districts' combined fire station inventories comprise 32 fire stations with 80 bays (although in several of them, at least one bay is utilized for exercise equipment) and a capacity of more than 210 personnel (ECCYPD could house more staff).

Fire stations tend to be older among all three fire districts. The average age of the combined stations is 41 years. However, this may be somewhat distorted, as this was based on the original construction dates, and several stations have since had significant remodeling completed (e.g., CCCYPD Stations 69 and 81).

Apparatus & Vehicles

A thorough review of each of the three fire districts' fleet inventories is especially important if annexation is implemented. Annexation will likely result in a merger of apparatus inventories and other equipment.

Fire apparatus are unique and expensive pieces of equipment customized to operate for a specific community and defined mission. Other than its firefighters, officers, and support staff, the next most important fire protection district resources are likely the emergency apparatus and vehicles.

Apparatus must be sufficiently reliable to transport firefighters and equipment rapidly and safely to an incident scene. Such vehicles must be properly equipped and function appropriately to ensure that the delivery of emergency services is not compromised. For this reason, they are expensive and offer minimal flexibility in use and reassignment to other missions.

As a part of this study, Triton requested each fire district provide a complete inventory of their fleet (apparatus, command and support vehicles, specialty units, etc.). For each vehicle listed, the districts were asked to rate its condition utilizing the criteria described in the next figure.

Figure 60: Criteria Used to Determine Apparatus & Vehicle Condition

Evaluation Components	Points Assignment Criteria	
Age:	One point for every year of chronological age, based on the in-service date.	
Miles/Hours:	One point for every 10,000 miles or 1,000 hours	
Service:	1, 3, or 5 points are assigned based on service—type received (e.g., a pumper would be given a 5 since it is classified as severe duty service).	
Condition:	This category considers body condition, rust interior condition, accident history, anticipated repairs, etc. The better the condition, the lower the assignment of points.	
Reliability:	Points are assigned as 1, 3, or 5, depending on the frequency a vehicle is in for repair (e.g., a 5 would be assigned to a vehicle in the shop two or more times per month on average; while a 1 would be assigned to a vehicle in the shop on average of once every three months or less.	
Point Ranges	Condition Rating	Condition Description
Under 18 points	Condition I	Excellent
18–22 points	Condition II	Good
23–27 points	Condition III	Fair (consider replacement)
28 points or higher	Condition IV	Poor (immediate replacement)

Contra Costa County Fire Protection District

The following figure lists the current inventory of Contra Costa County FPD's frontline fleet.

Figure 61: CCCFPD Type 1 & 6 Engines Frontline Inventory (2021)

Unit	Type	Manufacturer	Year	Condition	Features
Type 1 Engines					
Engine 101	Type 1	Pierce	2018	Good	1500 gpm, 500 gal.
Engine 102	Type 1	Pierce	2010	Good	1500 gpm, 500 gal.
Engine 103	Type 1	Pierce	2017	Good	1500 gpm, 500 gal.
Engine 105	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 106	Type 1	Pierce	2016	Good	1500 gpm, 500 gal.
Engine 107	Type 1	KME	2008	Good	1500 gpm, 500 gal.
Engine 108	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 109	Type 1	Pierce	2018	Good	1500 gpm, 500 gal.
Engine 110	Type 1	Pierce	2016	Good	1500 gpm, 500 gal.
Engine 111	Type 1	KME	2002	Good	1500 gpm, 500 gal.
Engine 113	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 114	Type 1	KME	2008	Good	1500 gpm, 500 gal.
Engine 115	Type 1	Pierce	2016	Good	1500 gpm, 500 gal.
Engine 116	Type 1	KME	2008	Good	1500 gpm, 500 gal.
Engine 117	Type 1	KME	2008	Good	1500 gpm, 500 gal.
Engine 122	Type 1	KME	2008	Good	1500 gpm, 500 gal.
Engine 165	Type 1	Pierce	2021	Excellent	1500 gpm, 500 gal.
Engine 166	Type 1	Pierce	2021	Excellent	1500 gpm, 500 gal.
Engine 169	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 170	Type 1	Pierce	2018	Good	1500 gpm, 500 gal.
Engine 181	Type 1	Pierce	2018	Good	1500 gpm, 500 gal.
Engine 182	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 185	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 186	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 187	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Engine 188	Type 1	Pierce	2015	Good	1500 gpm, 500 gal.
Type 6 Engines					
Engine 688	Type 6	Skeeter	2019	Good	1700 gpm, 400 gal.
Engine 685	Type 6	Skeeter	2019	Good	1700 gpm, 400 gal.
Engine 619	Type 6	Fouts Brothers	2018	Good	1700 gpm, 400 gal.

Figure 62: CCCFPD Type 3 Engines & Water Tender Frontline Inventory (2021)

Unit	Type	Manufacturer	Year	Condition	Features
Type 3 Engines					
Engine 319	Type 3	International	2000	Good	500 gpm, 500 gal.
Engine 369	Type 3	International	2001	Good	500 gpm, 500 gal.
Engine 311	Type 3	International	2002	Good	500 gpm, 500 gal.
Engine 384	Type 3	International	2002	Good	500 gpm, 500 gal.
Engine 317	Type 3	International	2002	Good	500 gpm, 500 gal.
Engine 309	Type 3	International	2002	Good	500 gpm, 500 gal.
Engine 386	Type 3	International	2002	Good	500 gpm, 500 gal.
Engine 313	Type 3	International	2005	Good	1000 gpm, 500 gal.
Engine 315	Type 3	International	2005	Good	1000 gpm, 500 gal.
Engine 308	Type 3	International	2005	Good	1000 gpm, 500 gal.
Engine 322	Type 3	International	2005	Good	1000 gpm, 500 gal.
Engine 307	Type 3	International	2005	Good	1000 gpm, 500 gal.
Engine 302	Type 3	International	2015	Good	500 gpm, 500 gal.
Engine 381	Type 3	International	2015	Good	500 gpm, 500 gal.
Engine 303	Type 3	International	2019	Good	500 gpm, 500 gal.
Engine 383	Type 3	International	2019	Good	500 gpm, 500 gal.
Water Tenders					
WT 205	Tender	Pierce	2020	Good	500 gpm, 2000 gal.
WT 214	Tender	Pierce	2020	Good	500 gpm, 2000 gal.

Figure 63: CCCFPD Frontline Aerials & Rescues Inventory (2021)

Unit	Type	Manufacturer	Year	Condition	Features
Aerial Apparatus					
Truck 1	Tiller	Pierce	2016	Good	100-ft. TDA (no pump)
Truck 6	Tiller	Pierce	2016	Good	100-ft. TDA (no pump)
Truck 84	Tiller	Pierce	2016	Good	100-ft. TDA (no pump)
Truck 70	Tiller	Pierce	2021	Excellent	100-ft. TDA (no pump)
Truck 14	Truck	Pierce	2019	Good	105-foot (no pump)
Truck 83	Truck	Pierce	2017	Good	105-foot (no pump)
Rescues					
Rescue 69	Rescue	Ford	2007	Good	
Rescue 310	Rescue	Ford	2004	Good	

Ambulances & the Transport Program

It is important to note (as addressed in other sections of this report) that CCCYPD ambulances are purchased through a separate enterprise fund as a part of the District's unique ambulance transport program (ambulances staffed with AMR employees). As shown in the following figure, CCCYPD has recently purchased 20 new Type 3 ambulances. This is the first of a multi-year purchase, with 20 more being acquired next year and an additional 10 the following year.

Figure 64: CCCYPD Frontline Ambulances & Heavy Rescues Inventory (2021)

Unit	Type	Manufacturer	Year	Condition
Unit 1	Type III	Ford/AEV	2021	Excellent
Unit 2	Type III	Ford/AEV	2021	Excellent
Unit 3	Type III	Ford/AEV	2021	Excellent
Unit 4	Type III	Ford/AEV	2021	Excellent
Unit 5	Type III	Ford/AEV	2021	Excellent
Unit 6	Type III	Ford/AEV	2021	Excellent
Unit 7	Type III	Ford/AEV	2021	Excellent
Unit 8	Type III	Ford/AEV	2021	Excellent
Unit 9	Type III	Ford/AEV	2021	Excellent
Unit 10	Type III	Ford/AEV	2021	Excellent
Unit 11	Type III	Ford/AEV	2021	Excellent
Unit 12	Type III	Ford/AEV	2021	Excellent
Unit 13	Type III	Ford/AEV	2021	Excellent
Unit 14	Type III	Ford/AEV	2021	Excellent
Unit 15	Type III	Ford/AEV	2021	Excellent
Unit 16	Type III	Ford/AEV	2021	Excellent
Unit 17	Type III	Ford/AEV	2021	Excellent
Unit 18	Type III	Ford/AEV	2021	Excellent
Unit 19	Type III	Ford/AEV	2021	Excellent
Unit 20	Type III	Ford/AEV	2021	Excellent
Heavy Rescues				
HR 10	Heavy Rescue	Pierce	2015	Good
HR 82	Heavy Rescue	Pierce	2017	Good

Figure 65: CCCFPD Vehicles Assigned to Command Staff (2021)

Call Sign	Status	Manufacturer	Year	Condition	Assigned To
318	Active	Chevrolet SUV	2019	Good	Fire Chief
317	Active	Chevrolet SUV	2019	Good	Deputy Chief
206	Active	Ford SUV	2017	Good	Assistant Chief
310	Active	Ford SUV	2016	Good	Assistant Chief
311	Active	Ford SUV	2016	Good	Assistant Chief
312	Active	Ford SUV	2016	Good	Assistant Chief
313	Active	Ford SUV	2016	Good	Assistant Chief
314	Active	Ford SUV	2017	Good	Assistant Chief
316	Active	Chevrolet SUV	2018	Good	Assistant Chief
226	Active	Ford F250	2015	Good	Battalion Chief
227	Active	Ford F250	2015	Good	Battalion Chief
236	Active	Ford F250	2015	Good	Battalion Chief
315	Active	Chevrolet SUV	2019	Good	Battalion Chief
203	Active	Ford F250	2015	Good	Battalion Chief
335	Active	Ford F250	2016	Good	Battalion Chief

CCCFPD Discussion

Except for new apparatus—which were rated as “Excellent”—the Contra Costa County FPD rated all of its frontline engines, aerial apparatus, and most other vehicles as in “Good” condition. This included apparatus in reserve and those assigned to the Training Division.

Along with its substantial fleet of engines, ambulances, aerials, and other apparatus, the District maintains a range of special operations vehicles (e.g., hazmat unit, UTVs, command units, fire boat, rescue boat, etc.) and other equipment utilized for wildland and other operations (e.g., bulldozer, backhoe, dump truck, etc.).

CCCFPD owns multiple pickup trucks, SUVs, and other vehicles but has access to nearly 75 other pickup trucks, staff cars, cargo vans, and assorted miscellaneous vehicles from the “Enterprise Fleet.”

The District maintains an adequate inventory of reserve engines, aerial apparatus, rescue squads, and other vehicles. The Training Division has been assigned seven Type 1 engines along with two aerial apparatus (one being a Quint and the other a tiller), and several other apparatus.

East Contra Costa Fire Protection District

The following figure lists the current inventory of ECCFPD's frontline fleet. The District's apparatus fleet comprises Type 1 (structural) and Type 3 (wildland) engines and Water Tenders. All three of the Type 1 engines are nearly new, as they were built in 2020. Each is equipped with a 1500 gallon per minute (gpm) pump and carries 500 gallons of water.

Figure 66: ECCFPD Frontline Apparatus Inventory (2021)

Unit	Type	Manufacturer	Year	Condition	Features
Engines (Type 1)					
Engine 52	Type 1	Quantum	2020	Excellent	1500 gpm, 500 gal.
Engine 53	Type 1	Quantum	2020	Excellent	1500 gpm, 500 gal.
Engine 59	Type 1	Quantum	2020	Excellent	1500 gpm, 500 gal.
Engines (Type 3)					
Engine 352	Type 3	International	2005	Good	1250 gpm, 500 gal.
Engine 353	Type 3	International	2004	Good	1250 gpm, 500 gal.
Engine 359	Type 3	International	2004	Good	1250 gpm, 500 gal.
Water Tenders					
Tender 52	Type 1	Freightliner	2003	Fair	1250 gpm, 3000 gal.
Tender 53	Type 1	Freightliner	2002	Good	1250 gpm, 3000 gal.
Tender 59	Type 1	Freightliner	2001	Good	1250 gpm, 3000 gal.

The District's Type 3 engines average 17 years of age combined. ECCFPD maintains three frontline Water Tenders whose combined age is about 19 years. The tenders are each equipped with a 1,250-gpm pump and have a combined water-carrying capacity of 9,000 gallons. The District also has a reserve fleet of four Type 1 engines in "Poor" condition and one Water Tender in "Poor" condition.

The next figure lists the inventory of East Contra Costa FPD's frontline command and support vehicles.

Figure 67: ECCFPD Frontline Command & Staff Vehicles Fleet Inventory (2021)

Unit	Type	Manufacturer	Year	Assigned To
Chief 5100	Command/Admin	Ford Expedition	2020	Fire Chief
BC 5111	Command	Ford F-250	2020	Administration
BC 5112	Command	Ford F-250	2019	Administration
BC 5113	Command	Ford F-250	2019	Administration
BC 5114	Command	Ford F-250	2015	Administration
5120	Staff Vehicle	Ford F-150	2020	Fire Marshal
5123	Staff Vehicle	Ford F-150	2020	Inspector
5124	Staff Vehicle	Ford F-150	2020	Inspector

Nearly all of East Contra Costa FPD's command and staff vehicles are less than three years of age, and all were rated to be in "Excellent" condition. The District has another eight vehicles in reserve in varying conditions.

Other ECCFPD Capital Equipment

The District also maintains a 2008 Safe Boat and trailer (currently on loan to CCCFPD) and a utility trailer.

Rodeo-Hercules Fire Protection District

The following figure lists the current inventory of RHFPD's frontline fleet.

Figure 68: RHFPD Frontline Apparatus & Other Vehicles Inventory (2021)

Unit	Type	Manufacturer	Year	Condition	Features
Engines & Aerials					
Engine 75	Type 1	Spartan	2014	Excellent	2000 gpm
Quint 76	Quint	Smeal	2006	Fair	100 ft. 2000 gpm
Engine 375	Type 3	International	2007	Excellent	500 gpm
Engine 376	Type 3	International	2005	Good	500 gpm
Command/Staff Vehicles					
7500	SUV	Chevrolet	2017	Excellent	
7501	SUV	Chevrolet	2017	Excellent	
S2	SUV	Ford	2005	Poor	
S3	SUV	Ford	2007	Good	
PU 76	Pickup	Ford	2005	Fair	

RHFPD expects delivery of a new Smeal quint sometime in July 2021. RHFPD maintains two engines in reserve (Engine 75A and Engine 76). Both are rated as in "Poor" condition. The District uses a 10-year replacement cycle for its engines.

Collective Apparatus Inventories

The following figure lists the frontline fleet inventories of the three fire districts combined.

Figure 69: Collective Inventory of the Fire Districts Frontline Fleets (2021)

Fire District	Engines ^A	Aerials	Ambulances	Tenders	Wildland ^B	Others
CCCYPD	26	6	20	2	19	24 ^C
ECCYPD	3	—	—	3	3	—
RHFPD	1	1	—	—	2	1
Totals:	30	7	20	5	24	25

^AIncludes Type 1 only. ^BIncludes Type 3 & Type 6. ^CApproximate.

In the preceding figure, the "Wildland" category represents Type 3 apparatus. The "Others" category represents a broad range of vehicles from bulldozers to water craft.

The next figure lists the collective frontline apparatus by type and minimum staffing by fire station. It is important to note that additional specialty apparatus and other vehicles may be located at the fire stations below but may be cross-staffed or in reserve.

Figure 70: Collective Apparatus & Minimum Staffing by Fire Station—Part 1 (2021)

Fire Station	Engines	Aerials	Tenders	Wildland	Minimum Staffing
Contra Costa County FPD					
Station 1	1	1	—	—	7
Station 2	1	—	—	1	3
Station 3	1	—	—	1	3
Station 5	1	—	1	—	4 ^A
Station 6	1	1	—	—	8 ^A
Station 7	1	—	—	—	3
Station 8	1	—	—	1	3
Station 9	1	—	—	1	3
Station 10	1	—	—	—	3
Station 11	1	—	—	1	3
Station 13	1	—	—	1	3
Station 14	1	1	1	—	4
Station 15	1	—	—	1	3
Station 16	1	—	—	—	3
Station 17	1	—	—	1	3
Station 22	1	—	—	1	3
Station 69	1	—	—	1	3
Station 70	1	1 ^B	—	—	5
Station 81	1	—	—	1	3
Station 82	1	—	—	—	3
Station 83	—	1	—	1	4
Station 84	—	1	—	1	4
Station 85	1	—	—	1	3
Station 86	1	—	—	1	3
Station 87	1	—	—	—	3
Station 88	1	—	—	1	3

^AIncludes on—duty Battalion Chief. ^BTruck will be staffed in July 2021.

Figure 71: Collective Apparatus & Minimum Staffing by Fire Station—Part 2 (2021)

Fire Station	Engines	Ambulances	Tenders	Wildland	Minimum Staffing
East Contra Costa FPD					
Station 52	1	—	1	1	4 ^A
Station 53	1	—	1	1	3
Station 59	1	—	1	1	3
Rodeo—Hercules Fire Protection District					
Station 75	1	—	—	1	3
Station 76	1	—	—	1	3
Grand Totals:	29	6	5	21	109

^AIncludes on-duty Battalion Chief.

Discussion of the Fleet Inventories

When considering a potential annexation of other fire districts, it will be crucial to obtain an accurate and detailed inventory of apparatus utilized for emergency operations. As a result of consolidation, operations personnel may potentially be assigned to apparatus with which they are not familiar. Therefore, during the planning and implementation process, it will be crucial to consider orientation and training on all apparatus. It will also be important to begin to plan to standardize the features and configurations of apparatus throughout the fire district—particularly among the engines.

Apparatus & Vehicle Maintenance

Contra Costa County FPD

The majority of Contra Costa County FPD's fleet maintenance is done internally by the District's Apparatus Shop. The Fire Apparatus Manager supervises a Fire Service Coordinator, Driver/Clerk, and six Fire Equipment Mechanics (FEM). The FEMs are certified by the *National Institute for Automotive Service Excellence (ASE)* in vehicle repair and the *California Fire Mechanics Academy (CFMA)* to maintain fire apparatus.

East Contra Costa FPD

ECCFPD utilizes a non-employee mechanic on contract who provides most of the fleet maintenance for the District.

Rodeo-Hercules FPD

RHFPD outsources its vehicle maintenance to the Alameda County Fire Department and a commercial company that specializes in emergency vehicle services.

Capital Medical & Other Equipment

Since Contra Costa County FPD is the provider of ALS-level ambulance service, and Rodeo-Hercules FPD provides ALS-level medical first-response, it is important to review their inventories of capital medical equipment. Likely the costliest piece of capital medical equipment for an advanced life support provider is the cardiac monitor/defibrillator.

Contra Costa County FPD

Contra Costa County FPD utilizes the state-of-the-art Physio-Control Lifepak® 15 Monitor/Defibrillator on its ALS-equipped apparatus and ambulances. The District maintains 63 of these, with features and capabilities to conduct 12-lead electrocardiograms (ECG), and monitor end-tidal CO₂ (EtCO₂), blood pressure, and oxygen saturation (SpO₂). The monitor/defibrillators range in age from 2–8 years, with an average age of 7.6 years.

Another significant capital medical expense for ambulances is powered gurneys. CCCYPD maintains 20 Stryker Power Pro XPS ambulance cots. Powered stretchers are a valuable piece of equipment for personnel assigned to ambulances, as their use minimizes injuries to both staff and patients.

The District maintains 30 LUCAS® Chest Compression Systems, which is another costly but valuable piece of capital medical equipment. This device produces “near-perfect” automated chest compressions for patients in cardiopulmonary arrest, which frees up EMS personnel who would normally need to perform manual compressions.

East Contra Costa FPD

Since ECCYPD provides medical first-response at the BLS level, they utilize the Physio-Control Lifepak® 1000 Automated External Defibrillator. They maintain 12 units which were all purchased in 2015. The District has four LUCAS® Chest Compression Systems.

Rodeo-Hercules FPD

Consistent with CCCYPD's equipment, RHFPD maintains two Physio-Control Lifepak® 15 Monitor/Defibrillators along with four Physio-Control Lifepak® 12 Monitor/Defibrillators that are more than 20 years old. The Lifepak® 15s have the same features as CCCYPD's monitors. Rodeo-Hercules FPD also have a variety of eDRAULIC® and other hydraulic extrication tools that include spreader jaws, cutters, and rams. The District has two LUCAS® Chest Compression Systems.

Capital Medical Equipment Discussion

All three fire districts utilize Physio-Control Lifepak® products. This is important in the event of a full annexation, as these expensive products are compatible. Operations personnel should be familiar with the equipment, which will reduce the necessity of training all members in the use of different cardiac monitor/defibrillators. Additionally, CCCYPD and ECCYPD both utilize the LUCAS® Chest Compression System.

HISTORICAL SERVICE DELIVERY & PERFORMANCE

System response workload is an important factor to determine the number of resources (stations, apparatus, and personnel) that are needed to provide the desired level of service. Higher service demands can tax resources and can result in diminished response time performance. The following figures show response workload for each agency over the past 11 years.

Figure 72: Response Workload History—CCCYPD

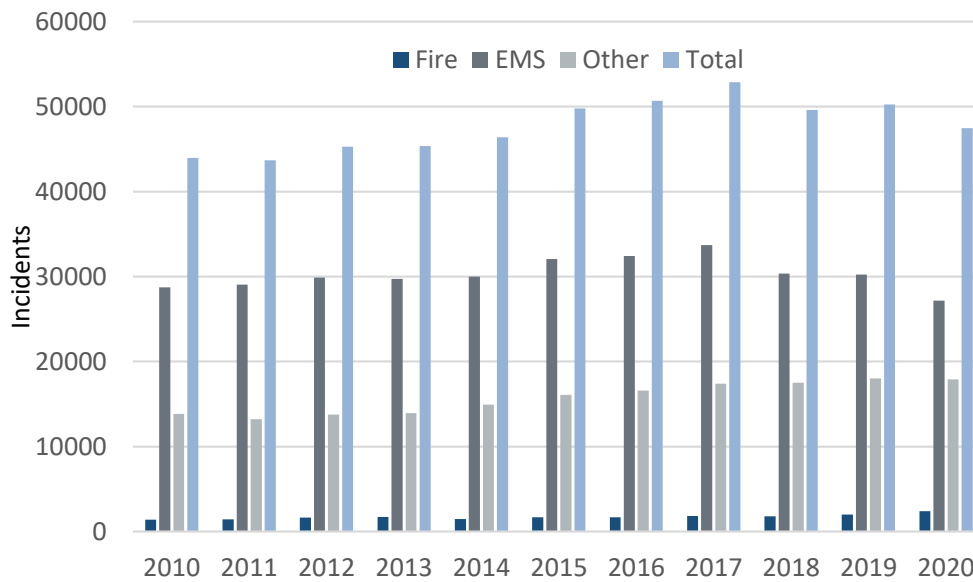


Figure 73: Response Workload History—ECCFPD

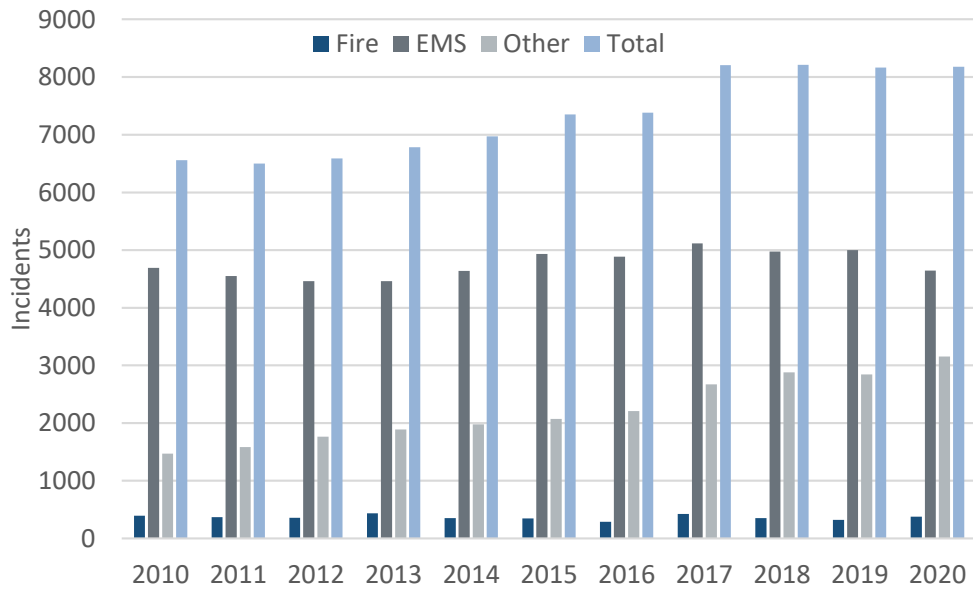
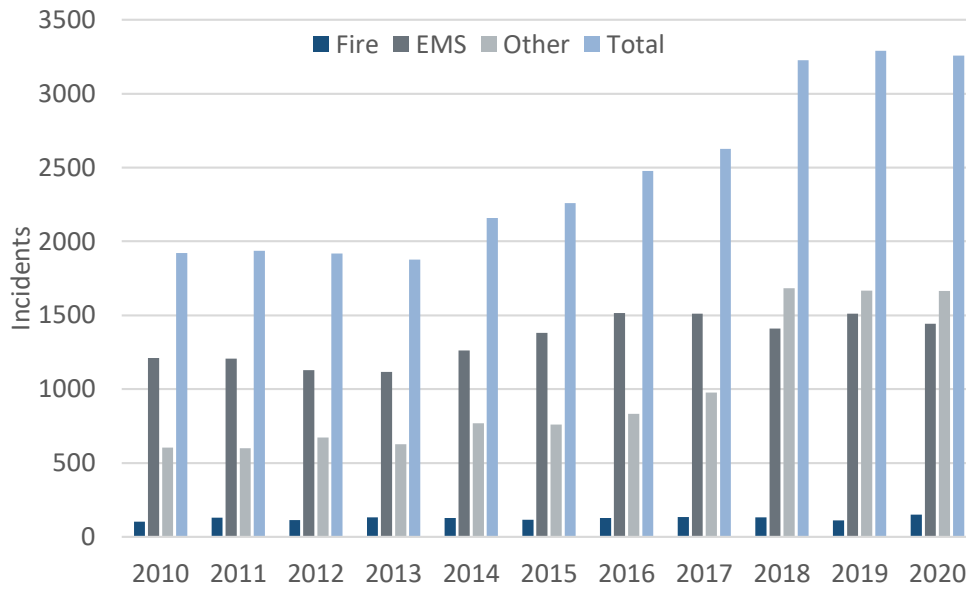


Figure 74: Response Workload History—RHFPD



Temporal Analysis

A review of incidents by time reveals when the greatest response demand occurs. The following figures show how activity and demand change for each of the agencies based on measures of time. The following figure shows response activity by month. There is some variation by month.

Figure 75: Response Workload by Month—CCCYPD

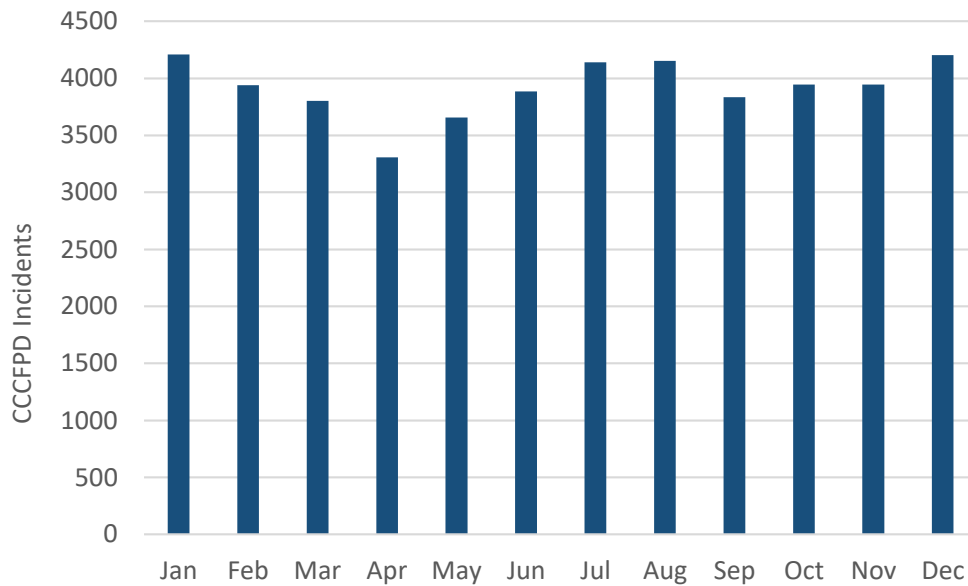


Figure 76: Response Workload by Month— ECCFPD

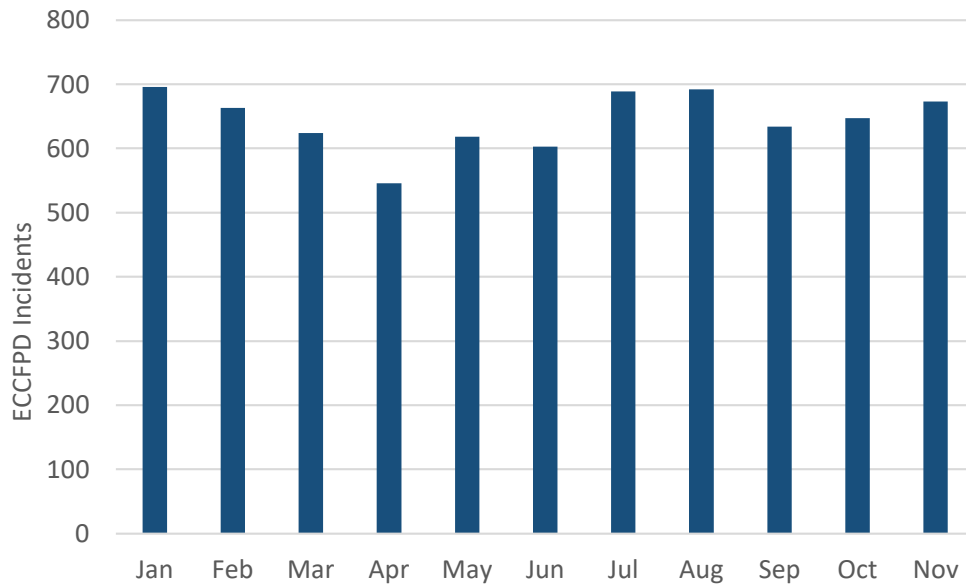
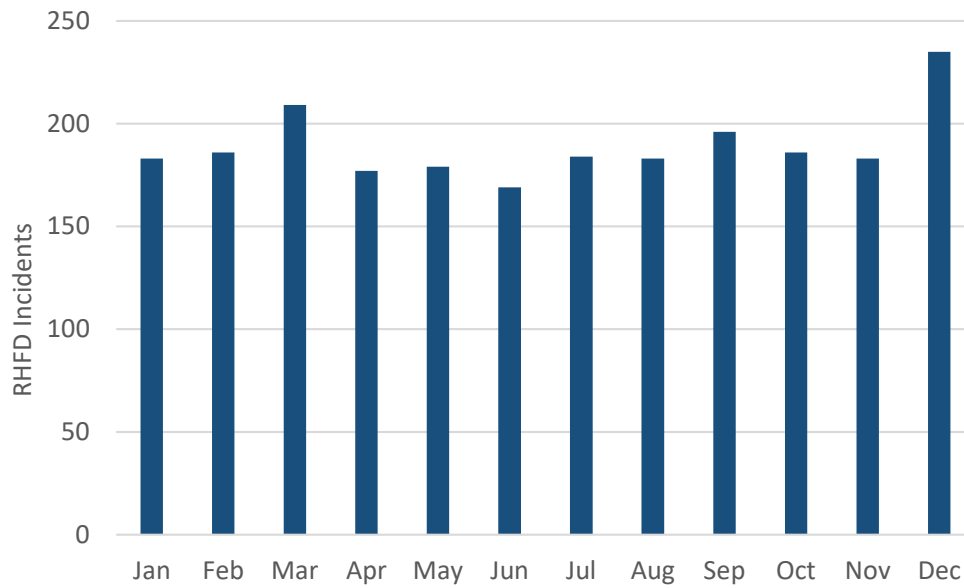


Figure 77: Response Workload by Month—RHFPD



Next, response workload is compared by day of week. Again, there is a little variation in response workload by weekday.

Figure 78: Response Workload by Day of Week—CCCYPD

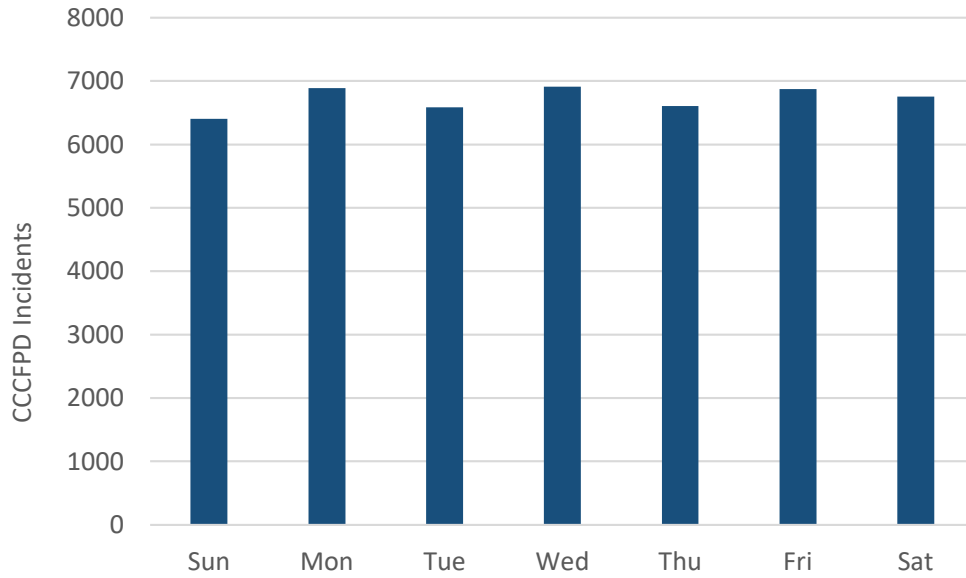


Figure 79: Response Workload by Day of Week—ECCYPD

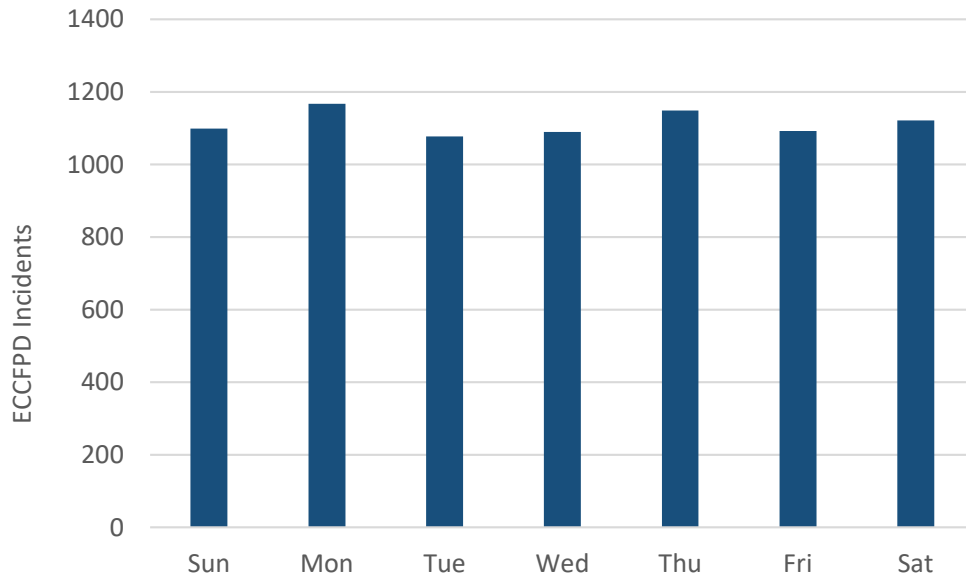
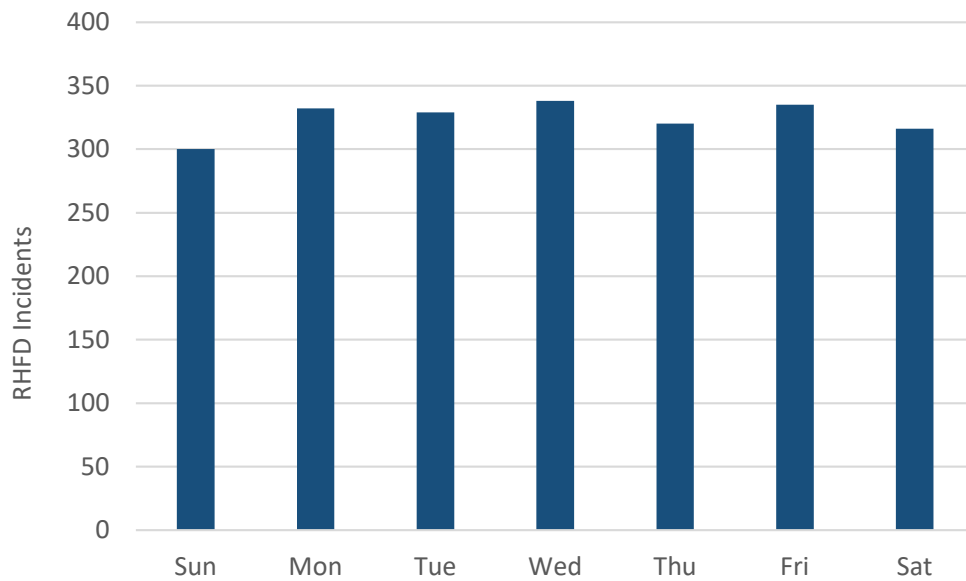


Figure 80: Response Workload by Day of Week—RHFPD



Incident activity by hour of day always shows significant variation. Response workload directly correlates with the activity of people, with workload increasing during daytime hours and decreasing during nighttime hours.

Figure 81: Response Workload by Hour of Day—CCCYPD

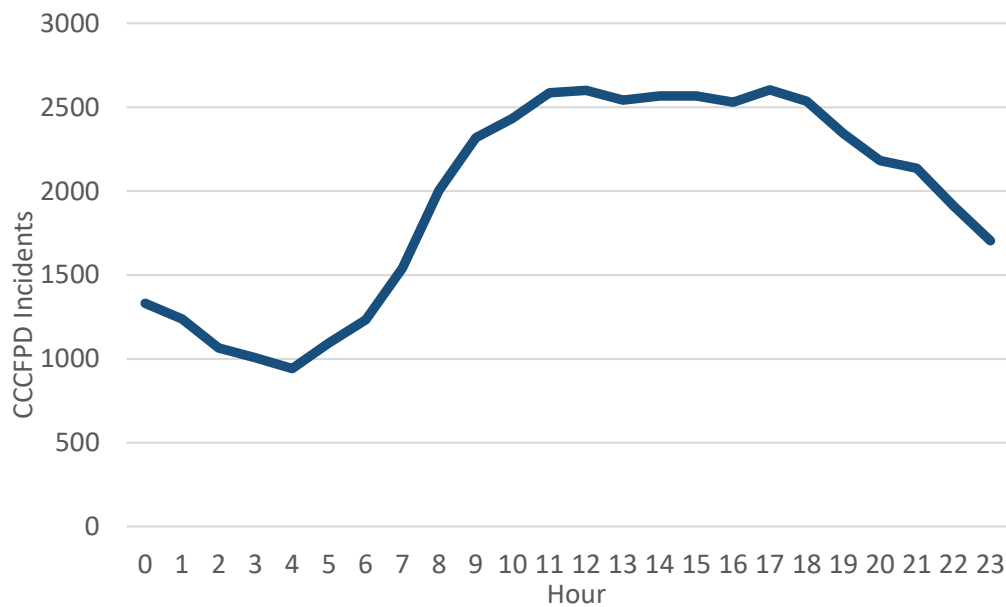


Figure 82: Response Workload by Hour of Day—ECCFPD

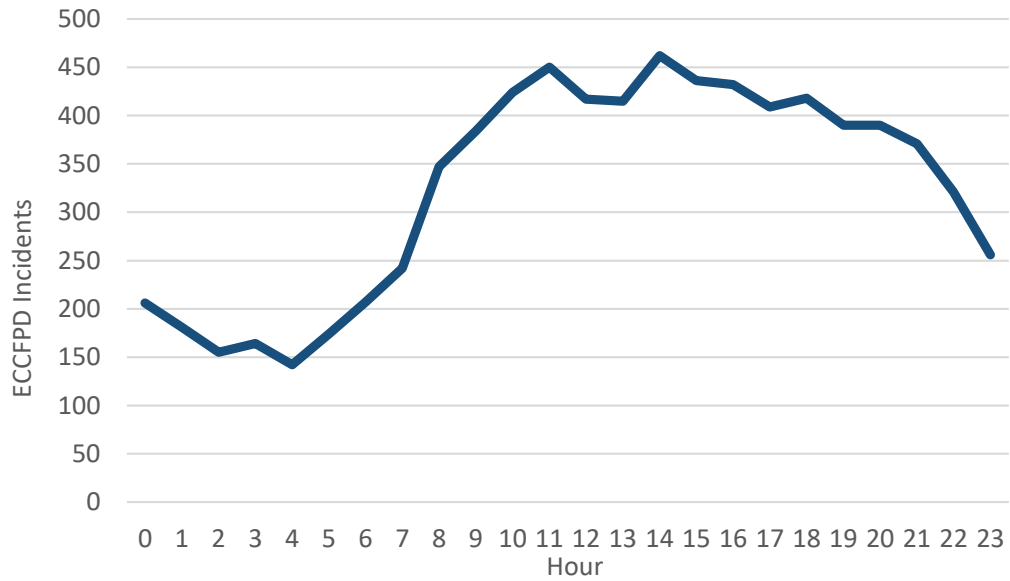
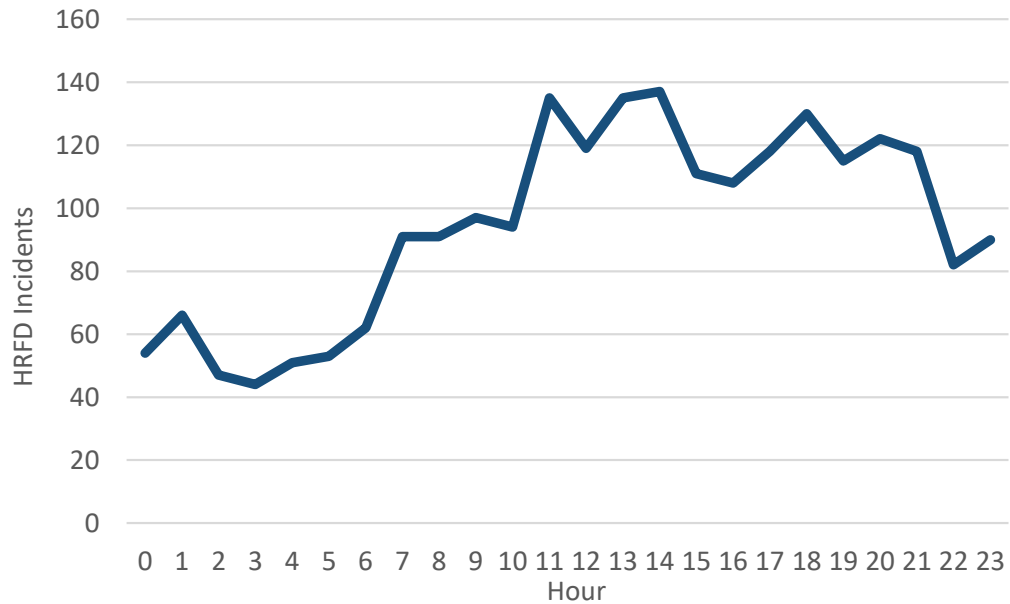


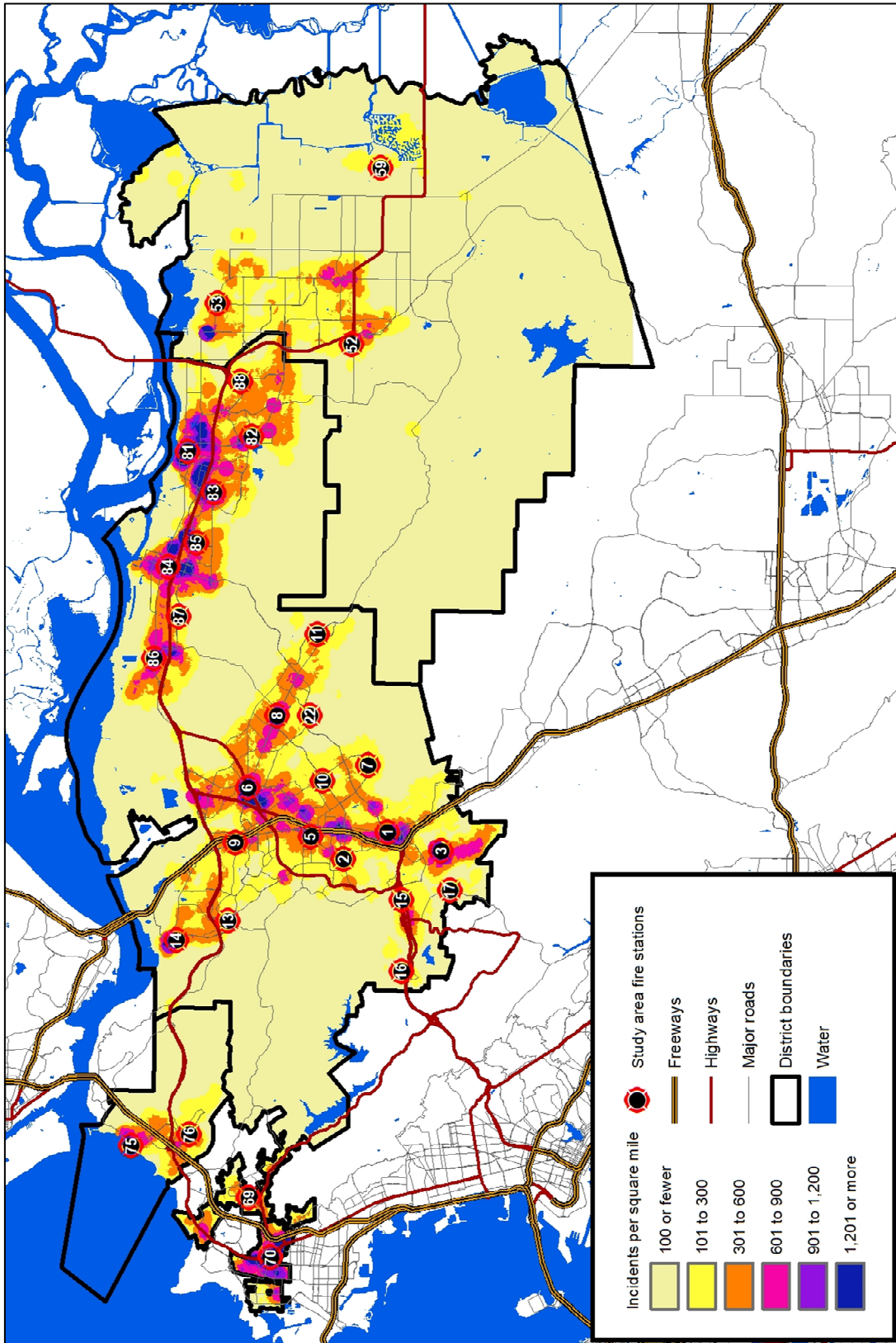
Figure 83: Response Workload by Hour of Day—RHFPD



Spatial Analysis

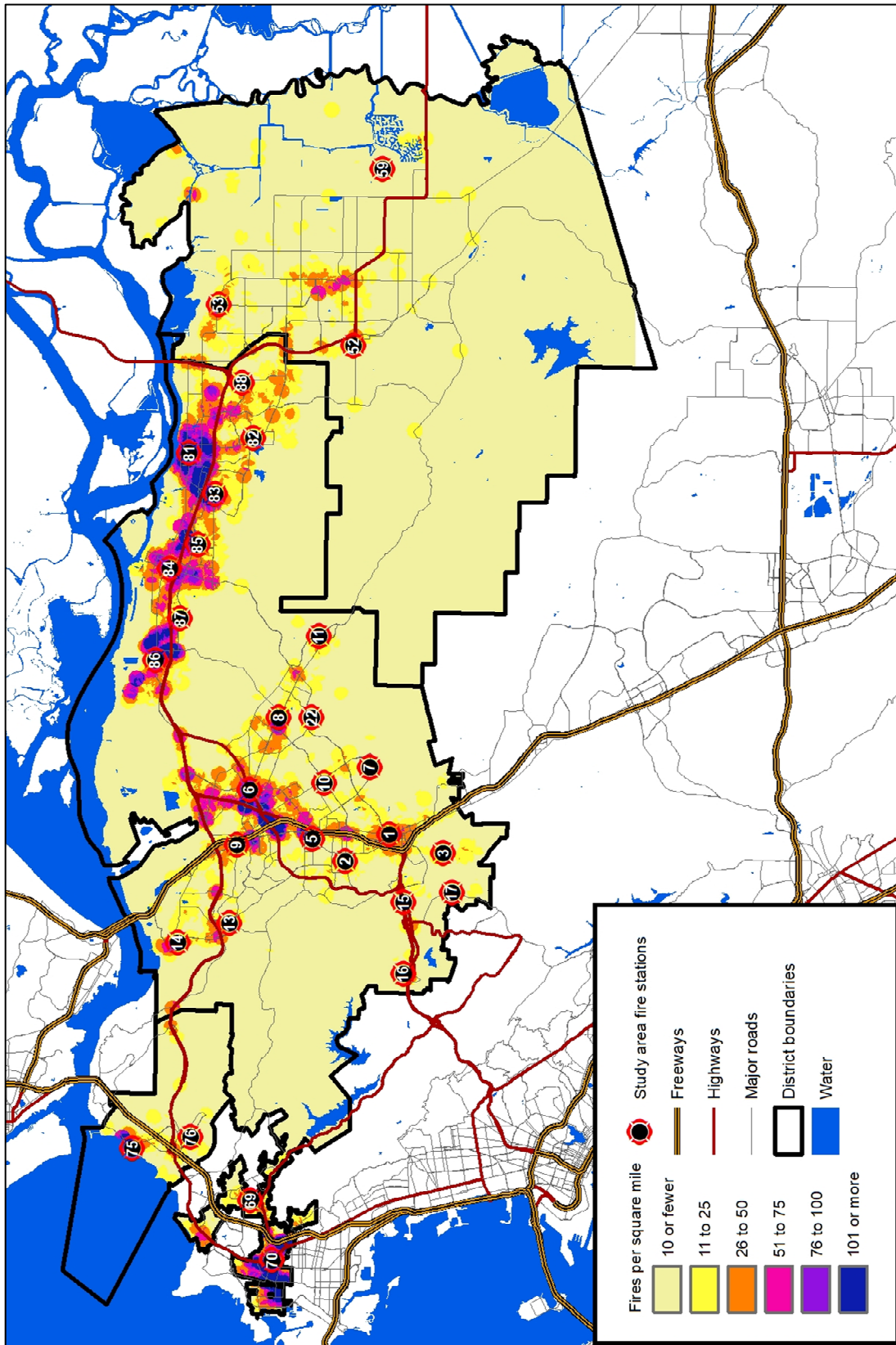
Incident activity varies greatly across each agency's service area. The greater the population, the greater the number of incidents in any given area. The following figures illustrate geographic distribution of incidents for the year 2020.

Figure 84: Incidents per Square Mile—All Incidents (2020)



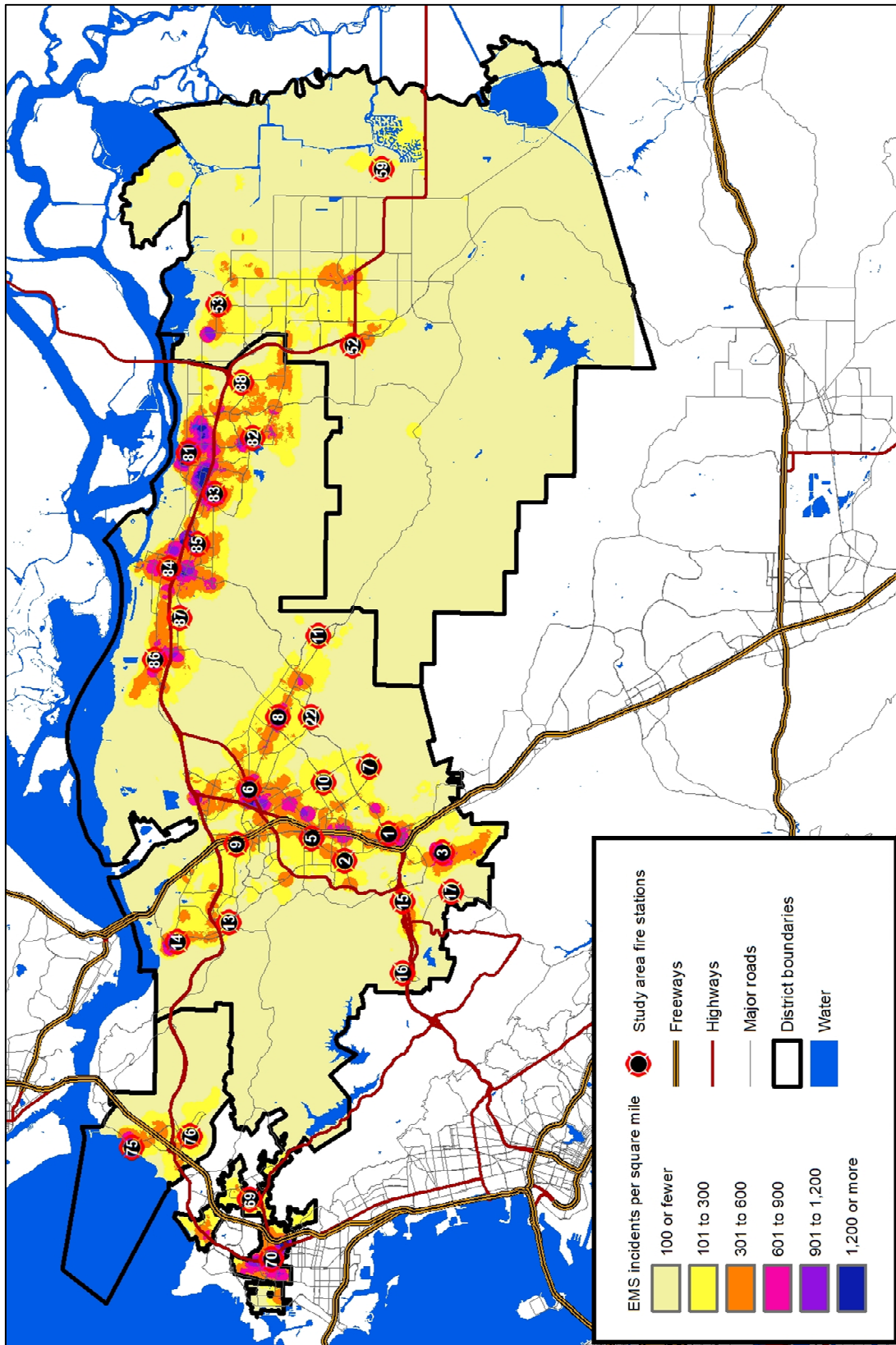
Service demand varies by area based on incident types. The following figure displays the density of fire incidents occurring within the study area in 2020. Fire incidents are also concentrated in areas of greater population.

Figure 85: Incidents per Square Mile—Fire Incidents (2020)



Emergency medical incidents also occur in greater concentration in areas of higher population density. The following figure displays emergency medical incidents per square mile during 2020.

Figure 86: Incidents per Square Mile—EMS Incidents (2020)



Unit Workload Analysis

Response unit workload impacts response performance. The greater the utilization of a response, the greater the likelihood it will be unavailable for an incident in its primary service area. Although fire stations and response units may be distributed in a manner to provide quick response, that level of performance can only be obtained when the response unit is available in its primary service area.

Response Unit Workload

The workload on individual response units for each agency during 2020 is shown in the following figures. Individual response unit workload can be greater than the workload in its home station area. Many incidents, such as structure fires, require more than one response apparatus and other vehicles.

Figure 87: Responses by Unit—CCCYPD

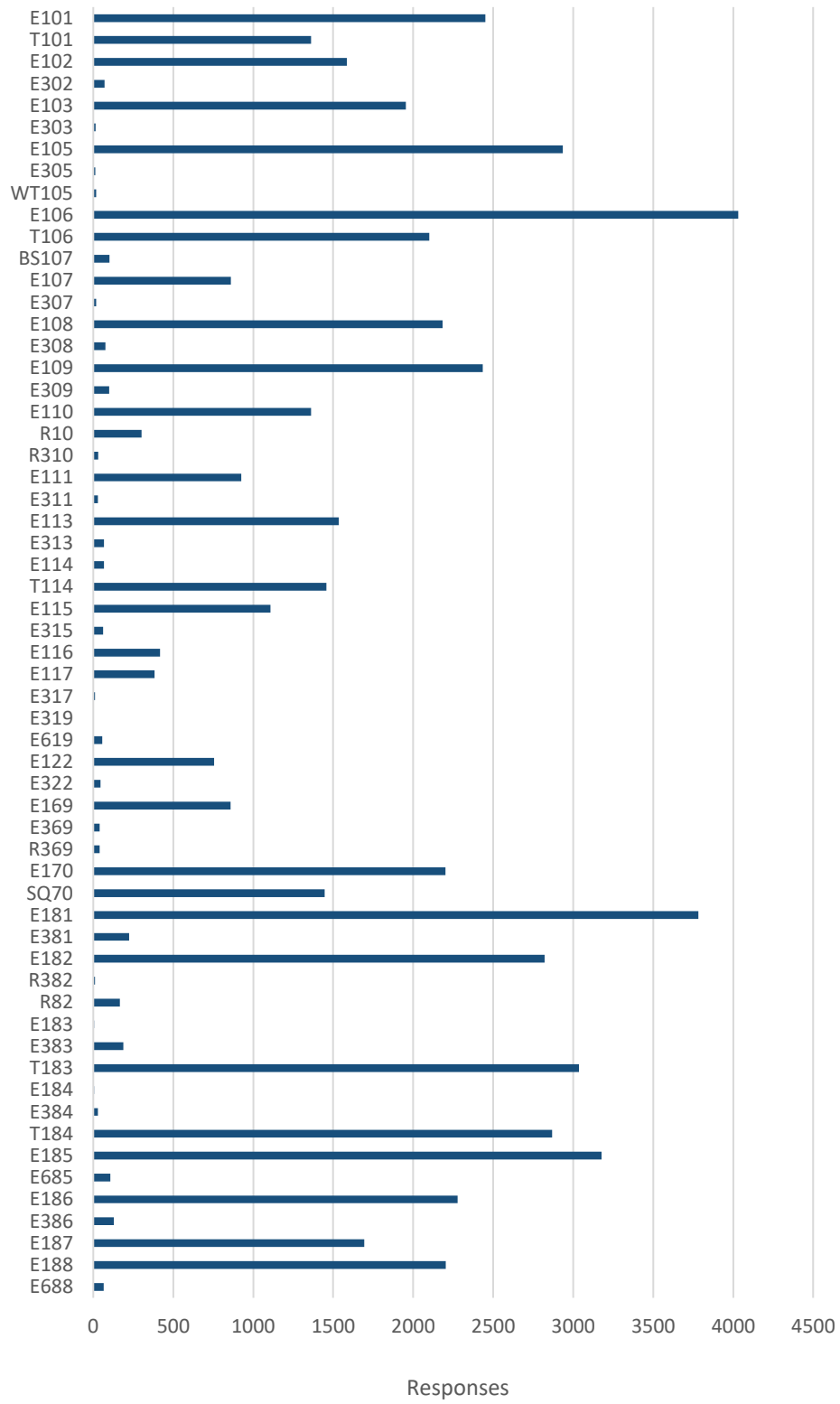


Figure 88: Responses by Unit—ECCFPD

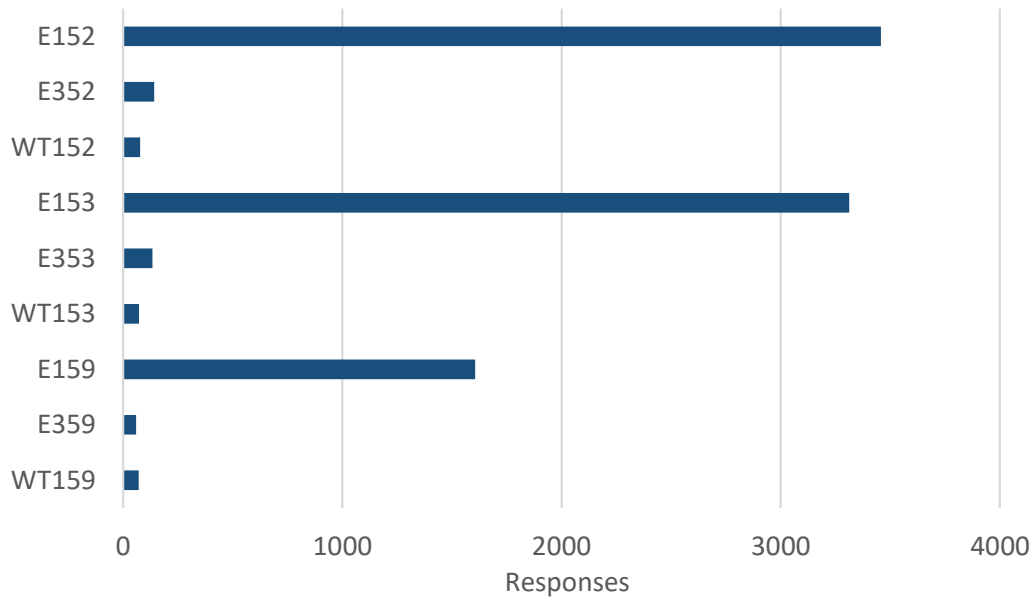
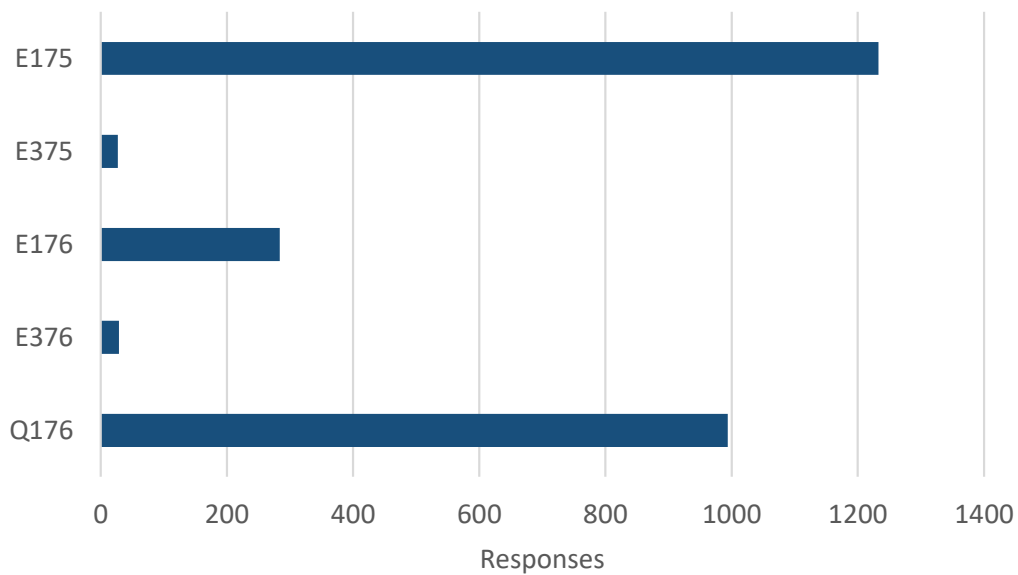


Figure 89: Responses by Unit—RHFPD



The amount of time a given unit is committed to an incident is also an important workload factor. The following figure illustrates the average time each unit was committed to an incident, from initial dispatch until it was available for another incident.

Figure 90: Average Time Committed to an Incident—CCCYPD
(minutes.seconds)

Unit	Average	Unit	Average
E101	15.19	E117	21.26
T101	18.09	E317	58.76
E102	19.65	E319	7.96
E302	31.27	E619	29.13
E103	21.95	E122	16.35
E303	30.62	E322	57.55
E105	19.13	E169	18.72
E305	21.55	E369	29.45
WT105	65.54	R369	20.45
E106	15.97	E170	16.56
T106	14.70	SQ70	17.10
BS107	81.39	E181	16.90
E107	18.63	E381	24.78
E307	41.11	E182	17.79
E108	17.84	R382	57.21
E308	34.06	R82	15.96
E109	17.87	E183	12.20
E309	28.76	E383	25.61
E110	18.82	T183	16.03
R10	15.64	E184	17.21
R310	35.33	E384	18.13
E111	18.01	T184	16.19
E311	27.92	E185	16.82
E113	20.84	E685	30.46
E313	35.54	E186	20.86
E114	18.46	E386	25.27
T114	18.14	E187	20.31
E115	21.92	E188	17.43
E315	19.59	E688	35.52
E116	21.88		

Figure 91: Average Time Committed to an Incident—ECCFPD
(minutes.seconds)

Unit	Average
E152	17.61
E352	65.87
WT152	125.41
E153	18.29
E353	63.08
WT153	79.21
E159	23.20
E359	85.79
WT159	115.40

Figure 92: Average Time Committed to an Incident—RHFPD
(minutes.seconds)

Unit	Average
E175	19.56
E375	59.66
E176	16.74
E376	51.52
Q176	19.22

Unit hour utilization is calculated by dividing the total time a unit is committed to all incidents during a year divided by the total time in a year. It describes the percentage of time a unit is not available for response since it is already committed to another incident. The larger the percentage, the greater a unit’s utilization and the less available it is for assignment to an incident.

Monitoring unit hour utilization is important for those fire agencies using percentile-based performance standards. When performance is measured at the 90th percentile, a response unit with greater than 10% utilization will not be able to provide on-time response to its 90% target even if response is its only activity.

Figure 93: Unit Hour Utilization—CCCYPD

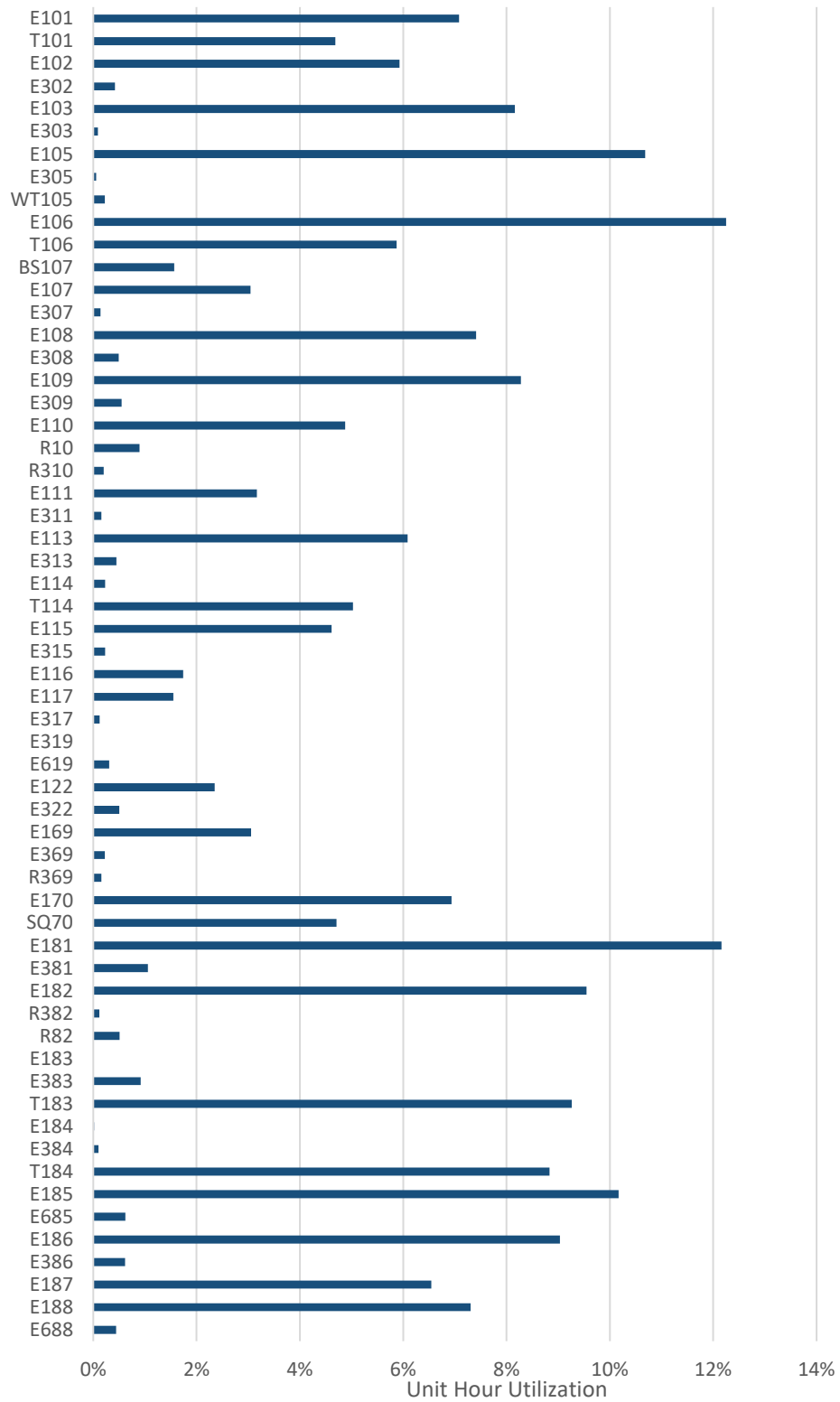


Figure 94: Unit Hour Utilization—ECCFPD

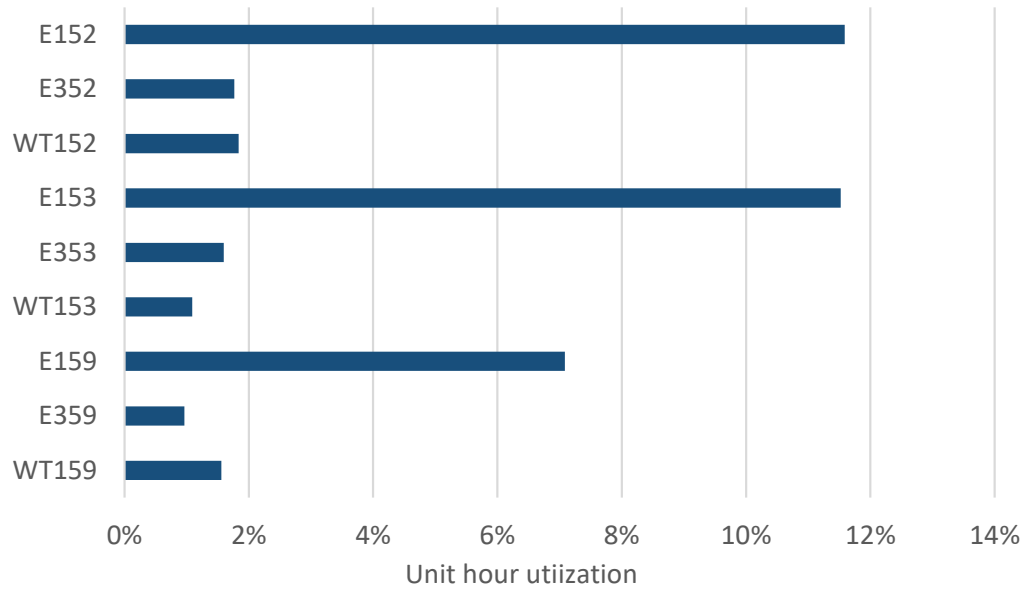
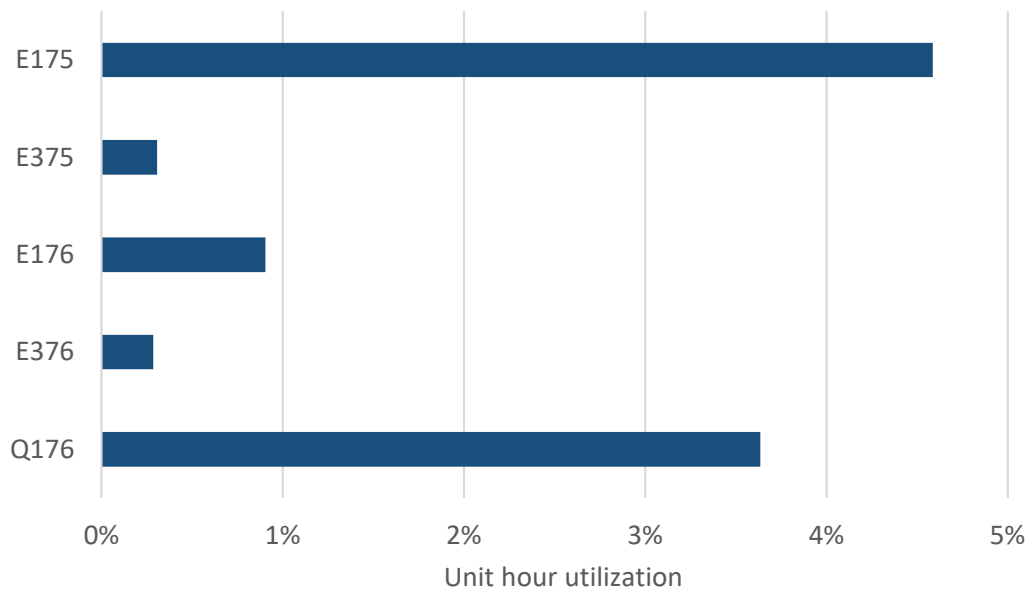


Figure 95: Unit Hour Utilization—RHFPD



Historical System Performance

Data for incidents occurring between January 1, 2020 and December 31, 2020, was evaluated in detail to determine the current response performance of each agency. Data was obtained from agency incident records and the Dispatch Center's computer-aided dispatch system.

Only priority incidents occurring within each agency's service areas are included. Priority incidents are those to which the fire district responded "Code 3" (using warning lights and sirens). Non-emergency public assistance requests were excluded. Performance is reported based on the type of incident as dispatched. Three categories are used to report performance:

- Fire—Responses to a report of a possible fire.
- Emergency medical—All emergency medical incidents.
- Other—Any other incident to which the fire district responded with lights and sirens.

Five phases of incident response are included in the evaluation:

1. Call answer time—The time from the phone ringing at the 9—1—1 center until its answered.
2. Dispatch time—The time from the phone being answered until response units are notified of the emergency.
3. Turnout time—The time from when response crews are notified until they have initiated movement towards the incident.
4. Travel time—The time from when response crews begin movement towards the incident until arrival.
5. Response time—The time from the initial notification of response personnel until arrival at the incident (turnout time plus travel time).
6. Received to arrival time—The time from when the phone is answered at the dispatch center until arrival of response personnel at the incident (dispatch time plus turnout time plus travel time).

Each phase of the incident response sequence was evaluated to determine current performance. In keeping with national guidance, all response time elements are reported at a given percentile. Percentile reporting is a methodology by which response times are sorted from least to greatest, and a “line” is drawn at a certain percentage of the calls to determine the percentile. The point at which the “line” crosses the 90th percentile, for example, is the percentile time performance. Thus, 90% of times were at or less than the result. Only 10% were longer.

Percentile differs greatly from average. Averaging calculates response times by adding all response times together and then dividing the total number of minutes by the total number of responses (mean average). Measuring and reporting average response times is not recommended. Using averages does not give a clear picture of response performance because it does not clearly identify the number and extent of events with times beyond the stated performance goal.

What follows is a detailed description and review of each phase of the response time continuum.

Detection

The detection of an emergency may occur immediately if someone happens to be present or if an automatic system is functioning. Otherwise, detection may be delayed, sometimes for a considerable period. The time for this phase begins with the inception of the emergency and ends when the emergency is detected and reported. It is largely outside the control of the fire district and not a part of the event sequence that is reliably measurable.

Call Processing

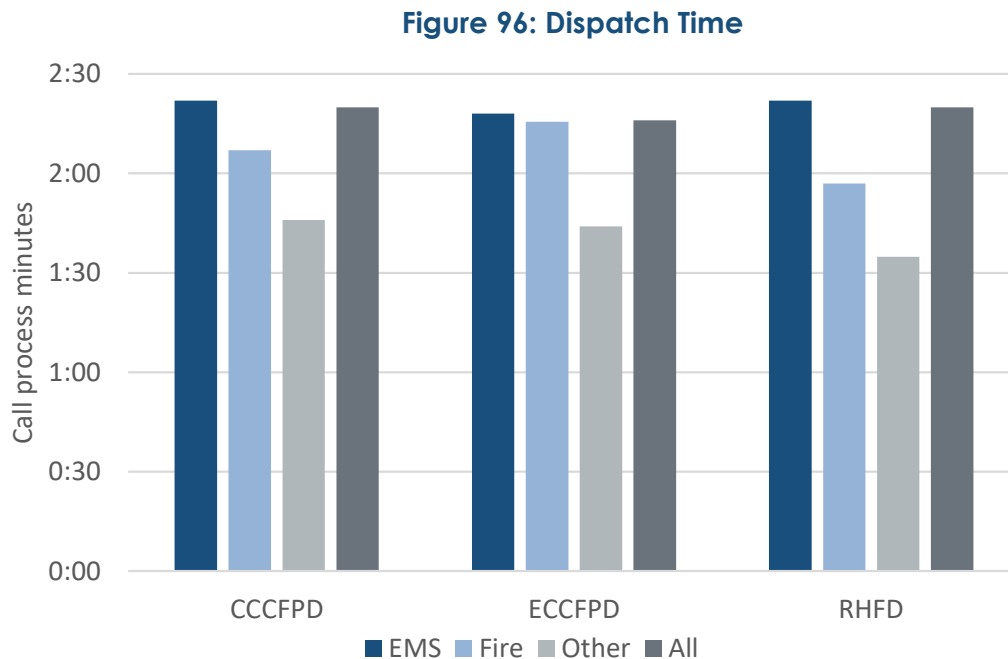
Most emergency incidents are reported by telephone to the 9-1-1 center. Dispatch center personnel must quickly elicit accurate information about the nature and location of the incident. A citizen well-trained in how to report emergencies can reduce the time required for this phase. The dispatcher must identify the correct units based on incident type and location, dispatch them to the emergency, and continue to update information about the emergency while the units respond. This phase begins when the 9-1-1 call is answered at the primary public safety answer point (PSAP) and ends when response personnel are notified of the emergency. This phase, which has two parts, is labeled “call processing time.”

Contra Costa Regional Fire Communications Center (CCRFCC) is the primary 9-1-1 call answer point for the agencies. It answers the 9-1-1 call, queries the call to determine nature and location, and then dispatches response units.

National Fire Protection Association Standard 1221 recommends that 9-1-1 calls be answered within 15 seconds, 90% of the time (within 20 seconds, 95% of the time). CCRFCC reports they answer calls within 15 seconds 99% of the time.

The second part of call processing time, dispatch time, begins when the call is answered and ends when response units are notified of the incident.

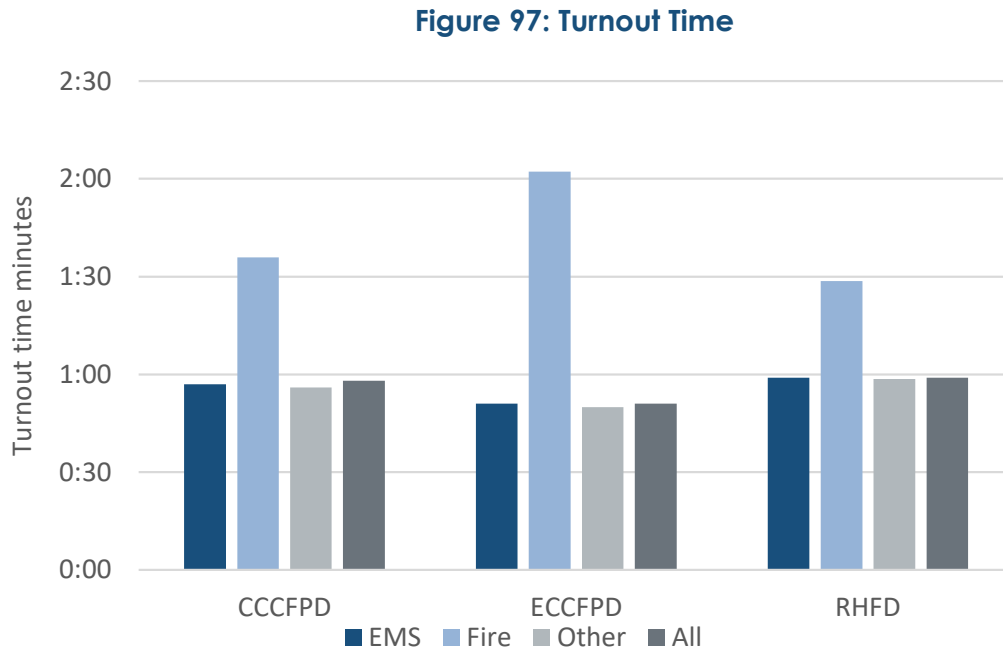
The following figure illustrates performance by the Dispatch Center from the time it answers the call until it notifies response units for each of the study agencies.



Turnout Time

Turnout time begins at notification of an emergency in progress by the Dispatch Center and ends when personnel and apparatus begin movement towards the incident location. Personnel must don appropriate equipment, assemble on the response vehicle, and begin travel to the incident. Training and fire station design can minimize the time required for this step.

The following figure illustrates turnout time by agency for specific incident types.



Distribution & Initial Arriving Unit Travel Time

Travel time is typically the longest of the response phases. The distance between the fire station and the location of the emergency influences response time the most. Other factors include the quality and connectivity of streets, traffic, topography, and environmental conditions. Only RHFPD has established a goal for travel time at within 4 minutes or less, 90% of the time.

The following figures illustrate the street segments that can be reached from all agency fire stations in six and nine minutes of travel time. It is based on posted road speeds modified to account for turning, stops, and acceleration. Much of the agencies' service areas are beyond six minutes travel time. However, the areas of greatest incident activity are all within the six-minute travel coverage area. Better coverage is noted at nine minutes.

Figure 98: Six Minute Travel Coverage

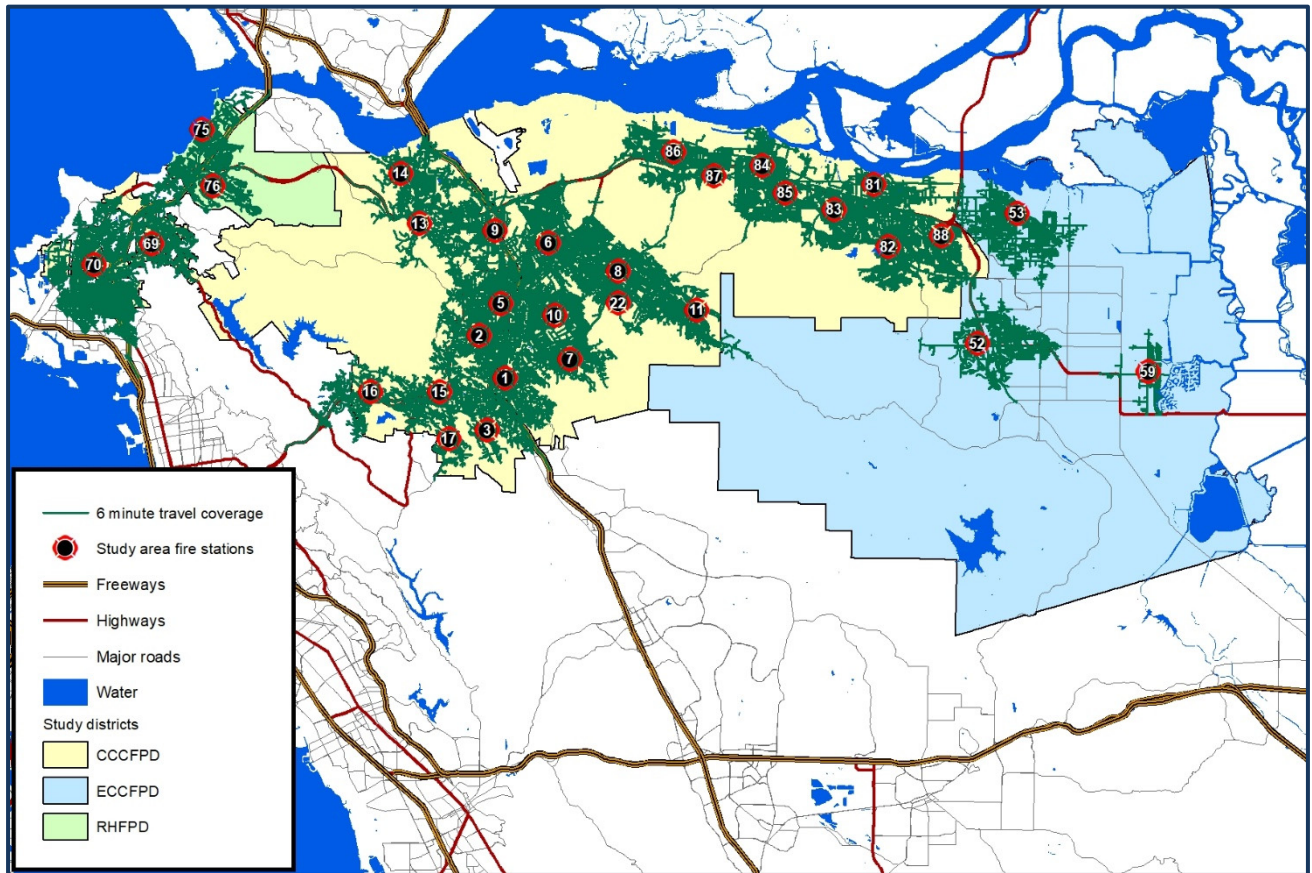
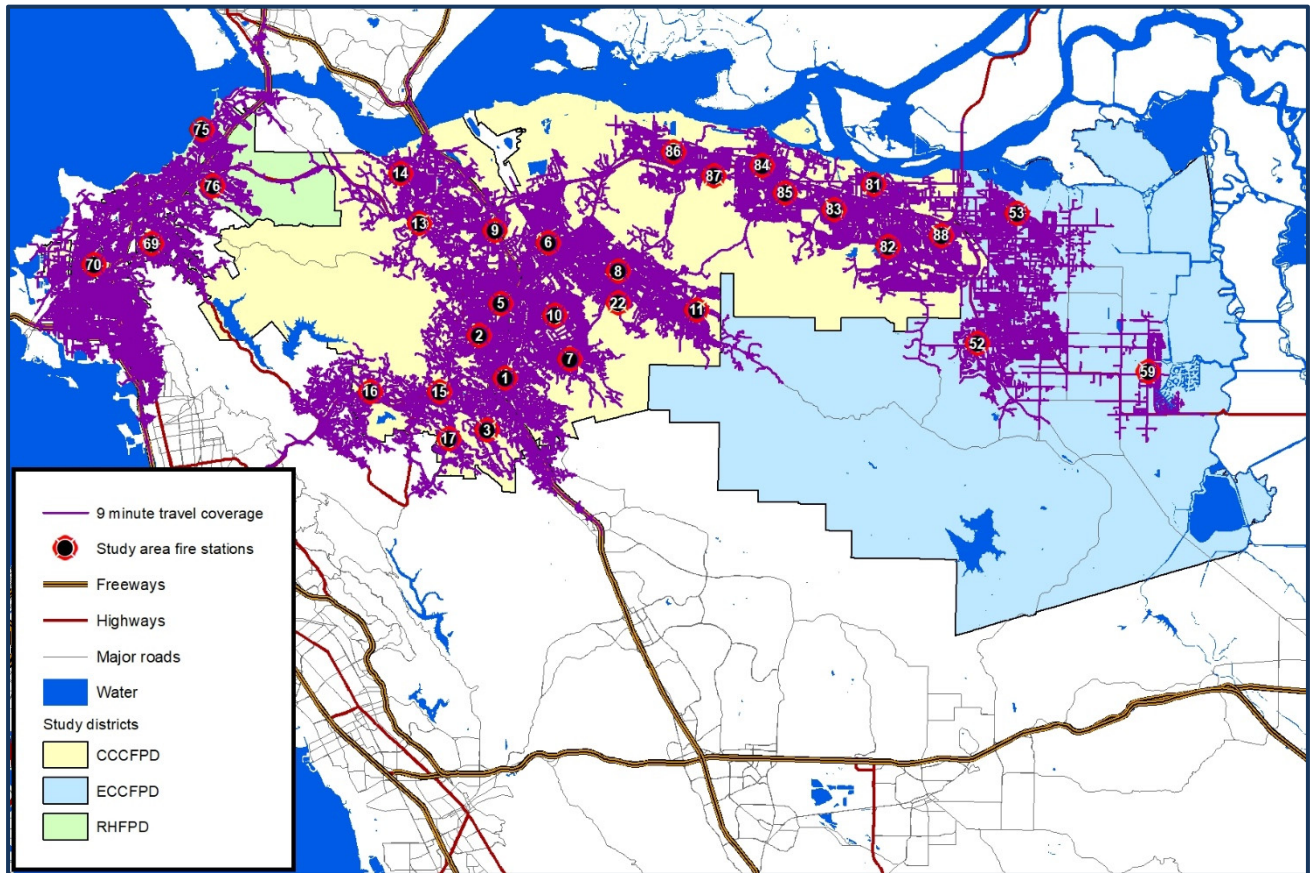
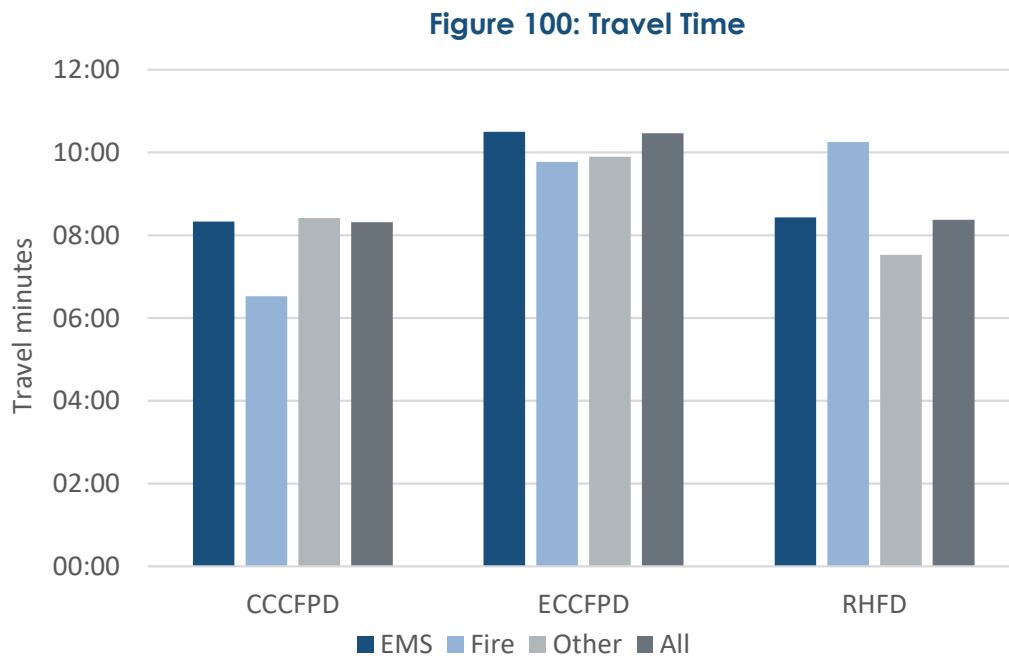


Figure 99: Nine Minute Travel Coverage



The following figure shows travel time for all priority incidents as well as specific incident types for each agency.



Incident coverage was evaluated based on the six-minute travel model. The number of priority incidents within six minutes travel of a fire station for each agency during 2020 was as follows:

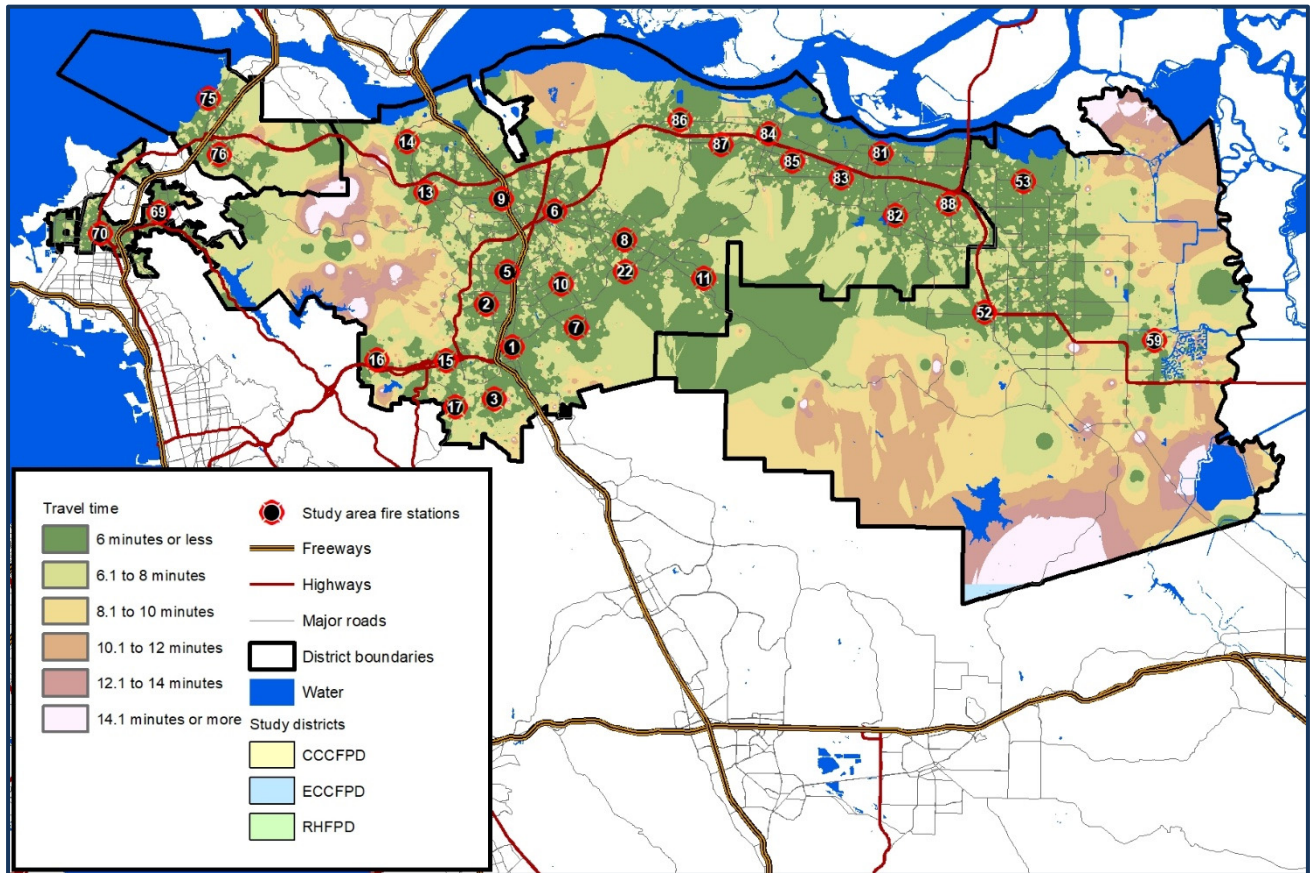
- CCCYPD: 31,074 of 32,161 total priority incidents—96.6%
- ECCYPD: 3,638 of 5,548 total priority incidents—65.6%
- RHFPD: 1,478 of 1,498 total priority incidents—98.6%

Travel Time Performance by Region

Travel time performance by region is variable and influenced by factors such as individual response unit workload, the size of the station area, and the street system serving it. Connected, grid-patterned street systems provide faster response times than do areas with meandering streets and numerous dead ends.

The following figure evaluates travel time performance by area using inverse distance weighting analysis (IDW). This process uses travel time for known points (actual incidents) to predict travel time for the area surrounding the actual incident. Better performance is generally noted near fire stations with progressively longer response times for those incidents more distant from the stations.

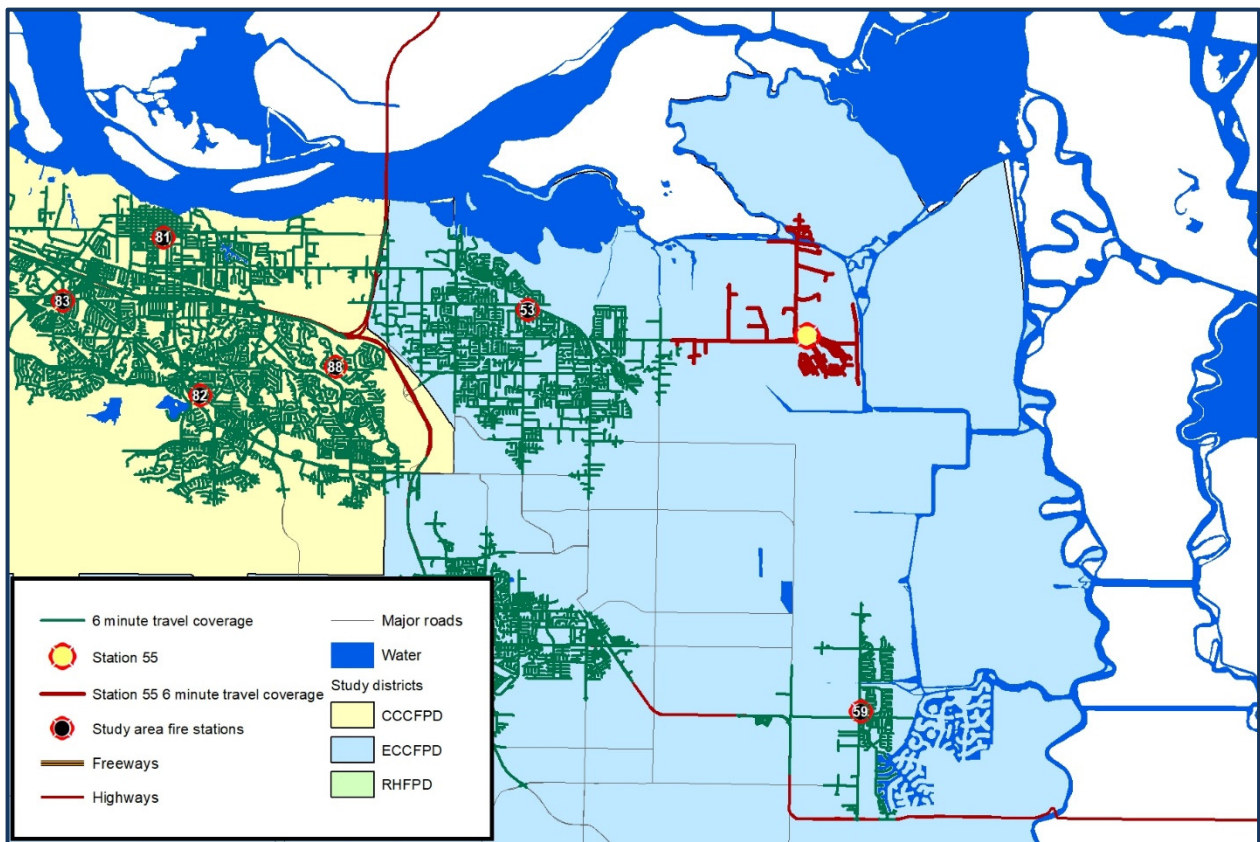
Figure 101: Travel Time by Region



The proposed annexation and ECCFPD's budget includes plans to open Station 55 with a staffed engine company. The proposed annexation will result in the addition of a staffed ladder truck to Station 52. This will improve travel times, and overall response times, to some degree.

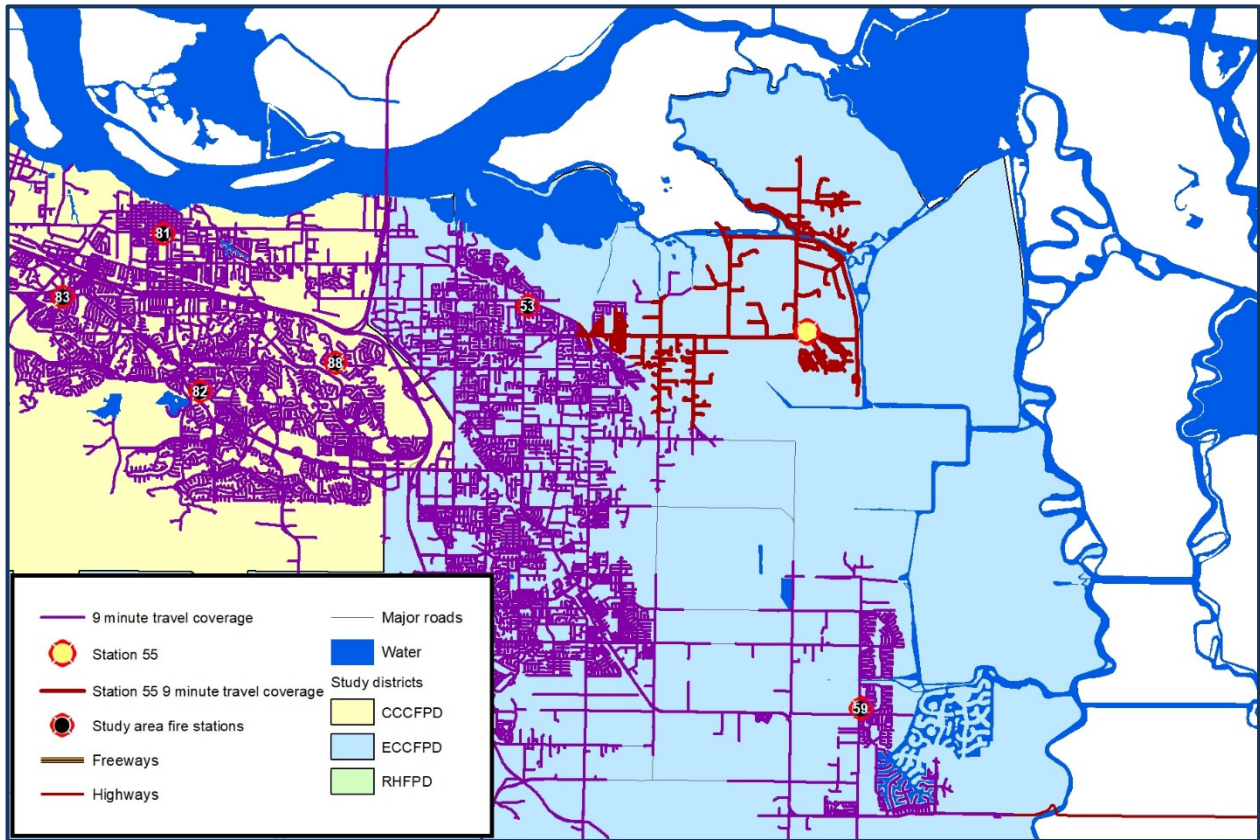
The following figure illustrates the six-minute travel coverage from Station 55 along with six-minute travel coverage from existing stations. This station would have put 228 incidents within six minutes travel from this station.

Figure 102: Six-Minute Travel Coverage from Station 55



The next figure illustrates the nine-minute travel coverage from Station 55 along with nine-minute travel coverage from existing stations. There is some overlap of coverage from Station 55 into Station 53's area.

Figure 103: Nine-Minute Travel Coverage from Station 55



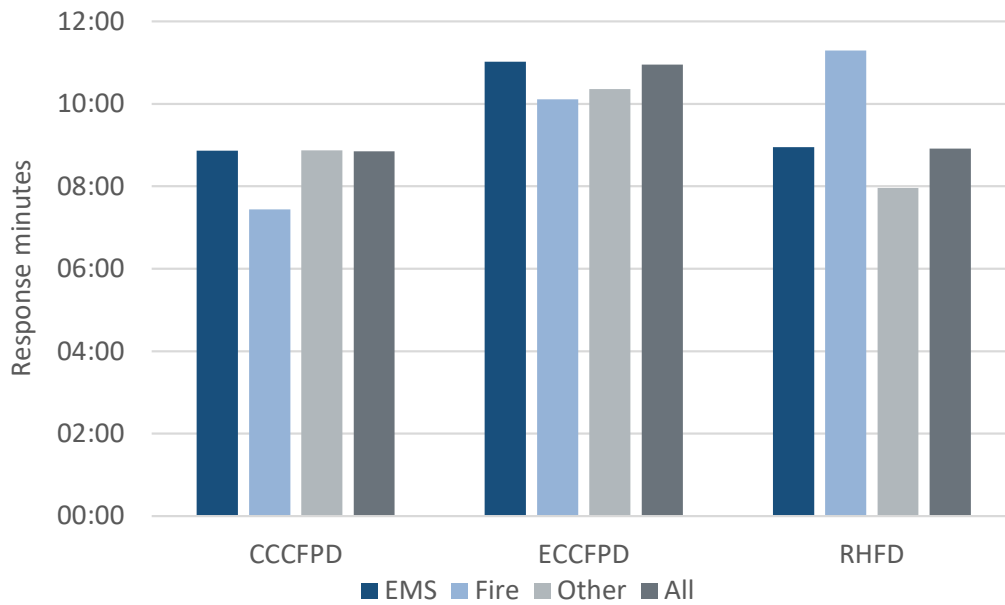
Staffing a ladder truck at Station 52 will also provide some improvement to travel times. Engine 152's current unit hour utilization is high at 12 percent. This reduces its reliability for subsequent incidents. The ladder truck will provide a second unit in that station area to cover concurrent incidents.

First Arriving Unit Response Time

Response time is the period between the notification of response personnel by the dispatch center until arrival of the first fire district response unit at the emergency.

The following figure illustrates response time for all priority incidents as well as specific incident types for each agency.

Figure 104: Response Times

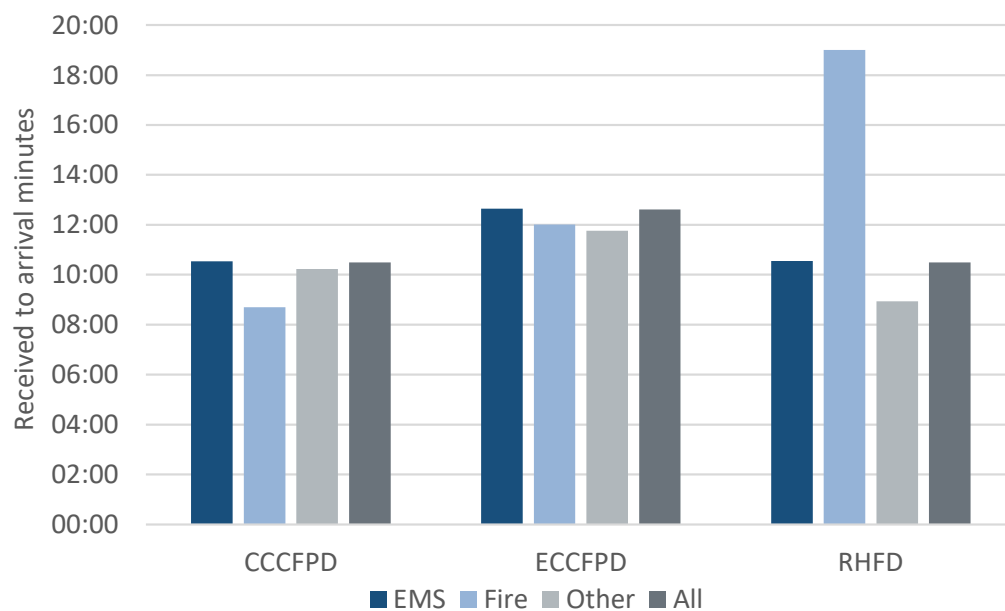


First Arriving Unit Received to Arrival Time (Total Response Time)

From the customer's standpoint, response time begins when the emergency occurs. Their first contact with emergency services is when they call for help, usually by dialing 9-1-1. Received to arrival time combines call processing, turnout, and travel time.

The next figure shows received to arrival performance for priority incidents by incident type for each agency.

Figure 105: Received to Arrival Time



Concentration & Effective Response Force Capability Analysis

Effective Response Force (ERF) is the number of personnel and apparatus to effectively mitigate an emergency incident. The number of personnel and the number and type of apparatus needed depends on the specific type of emergency. This resource need is based on the specific tasks and activities that need to be completed early in emergency event mitigation.

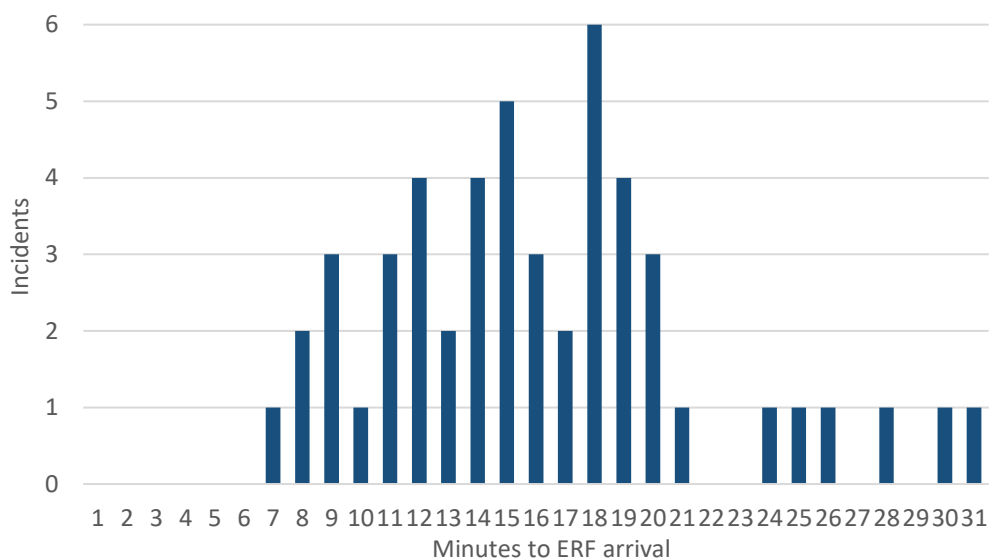
Only RHFPD has established a goal for the delivery of the ERF. For a low-rise structure fire (house, small office, small store), that goal is to provide four fire engines, one ladder truck, and one battalion chief to the incident within 10 minutes of notification of response personnel, 90% of the time. CCCFPD and ECCFPD have established similar resource requirements but have not established a time standard.

Response time data for structure fires occurring during 2020 was evaluated to identify each agency's current performance. Performance is based on resources needed as identified by each agency for a low-rise structure fire. Not all building fire incidents received the full ERF. Many were fires out on arrival or small enough that the initial alarm assignment was not needed.

CCCFPD

CCCFPD responded to 565 building fires in 2020 and delivered the full ERF 53 times. Full ERF was delivered within 26 minutes 59 seconds, 90% of the time. The following figure illustrates the frequency distribution of ERF arrival times for the 53 incidents.

Figure 106: Frequency Distribution of ERF Arrival Times—CCCFPD



ECCFPD

ECCFPD responded to 88 reported building fires. However, it did not deliver the full ERF to any of them. ECCFPD's alarm assignments call for four fire engines, one ladder truck and one battalion chief. None of the building fires included the arrival of a ladder truck.

ECCFPD did deliver four engines and a battalion chief within 24 minutes 37 seconds, 90% of the time (ranging between 9 minutes 35 seconds and 28 minutes 34 seconds). Four engines and a Battalion Chief only deliver 13 personnel rather than the 17 needed for a low-rise building fire.

RHFPD

RHFPD responded to 28 building fires during 2020 and delivered a full ERF to two of those. The time to deliver the ERF was 22 minutes 37 seconds for one and 17 minutes 4 seconds for the other.

Incident Concurrency

The frequency of concurrent incidents impact response time performance. The greater the number of concurrent incidents, the less available are response units. The following figure shows the number of times during the 2020 that one or more incidents occurred concurrently for each agency.

Figure 107: Incident Concurrency—CCCFPD

No. of Incidents	Frequency
1	683
2	1,965
3	3,533
4	4,841
5	5,577
6	5,780
7	5,138
8	4,228
9	3,252
10	2,137
11	1,328
12	710
13	284
14	84
15	16

Incident concurrency for ECCFPD is understated. 1,416 out of 7,794 incidents in the record did not have valid last unit cleared times.

Figure 108: Incident Concurrency—ECCFPD

Concurrent Incidents	Frequency
1	2,694
2	1,936
3	1,012
4	458
5	170
6	68
7	21
8	4
9	6

Incident concurrency for RHFPD is also understated. 450 out of 2,270 incidents in the record did not have valid last unit cleared times.

Figure 109: Incident Concurrency—RHFPD

Concurrent Incidents	Frequency
1	1,403
2	358
3	50
4	8
5	1

Unit Concurrency

The number of times one or more response units from an agency are committed to incidents at the same time is also an important measure. The following shows unit concurrency for each of the agencies during 2020.

Figure 110: Unit Concurrency—CCCFPD

Concurrent Incidents	Frequency
1	9,335
2	10,674
3	9,536
4	6,537
5	4,211
6	2,537
7	1,501
8	1,042
9	648
10	316
11	195
12	95
13	62
14	24
15	4

Figure 111: Unit Concurrency—ECCFPD

Concurrent Incidents	Frequency
1	5,780
2	2,194
3	637
4	144
5	107
6	51
7	11
8	3

Figure 112: Unit Concurrency—RHFPD

Concurrent Incidents	Frequency
1	2,103
2	453
3	11

STAKEHOLDER INPUT & ONLINE SURVEY RESULTS

At the beginning of this study, Triton developed a web-based survey that was distributed to the employees and personnel. The survey was designed to be confidential, and neither Triton nor anyone from the fire districts were aware of the respondents' names. The primary intent was to gauge the opinions and attitudes of those respondents affiliated with the fire districts.

A total of 211 respondents completed the survey, although each did not respond to all questions. The next figures show the results of the survey. The percentages listed in the responses were rounded to the nearest integer. Appendix B lists the comments from each of the questions.

The following figure lists the responses to the question, "I am a member or affiliated with:" One individual skipped this question.

Figure 113: Fire District Affiliations of the Respondents

Fire District	Responses	% Total ¹
Contra Costa County FPD	156	74%
East Contra Costa FPD	40	19%
Rodeo-Hercules FPD	14	7%
Other	1	0.5%
Totals:	211	

¹Rounded to the nearest integer.

The next figure lists responses to the question, "My current position with one of the fire districts is..." One individual skipped this question.

Figure 114: Positions of the Respondents at each Fire District

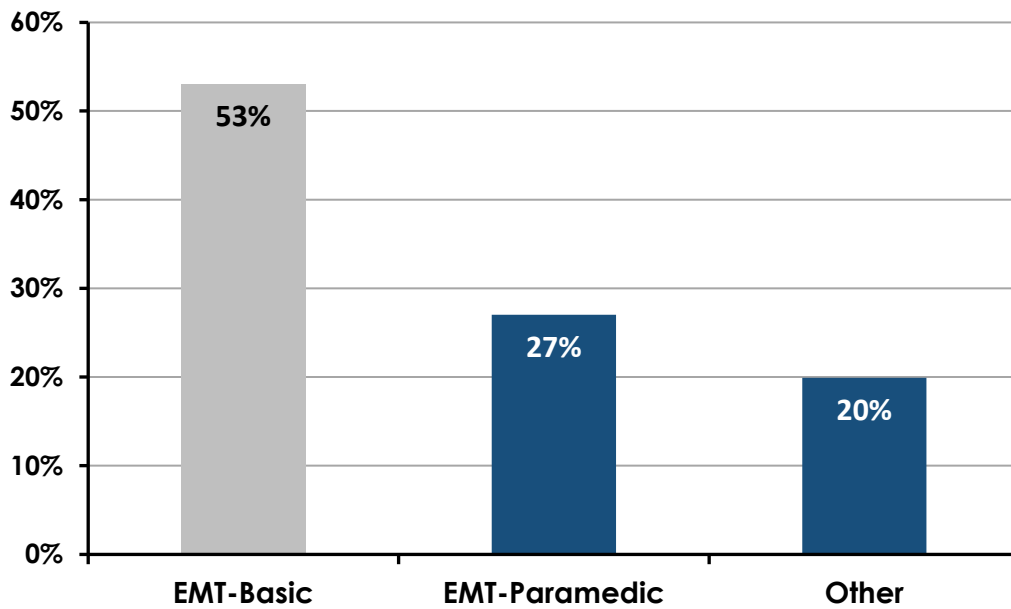
Position	Responses	% Total ¹
Firefighter/Paramedic/Engineer	94	45%
Fire Officer (Captain)	50	24%
Other Position	25	12%
Administrative Support Staff	20	10%
Command Staff (above Captain's rank)	19	9%
None of the Above	2	1%
Totals:	210	

¹Rounded to the nearest integer.

As expected, the preceding figure shows that the majority of respondents included operations staff and officers. Those listing themselves in the “Other” category were primarily individuals working in Fire Prevention or Communications. In hindsight, it would have been valuable to include some of these positions in this question.

Since the delivery of Emergency Medical Services is a major element of service provided by the each of the fire districts, the next question was included in the survey. “My EMS certification level is...”

Figure 115: Respondent’s Level of EMS Certification



Not unexpectedly, the results shown in the preceding figure show that by far the majority of respondents were certified at the EMT-Basic level.

The next figure lists responses to the question, “My opinion of a potential annexation of the East Contra Costa County and Rodeo-Hercules Fire Protection Districts in this study is...”

Figure 116: Respondent’s Opinions of a Potential Fire District Annexation

Opinion/Position	Responses	% Total ¹
I am in FAVOR so long as it results in improved services.	137	65%
I am neither in FAVOR or OPPOSED until I know more details.	60	29%
I am OPPOSED to it.	9	4%
I have another position	5	2%
Totals:	211	

¹Rounded to the nearest integer.

The results found in the preceding figure show that 65% of respondents were in favor of annexation so long as it resulted in improved services, while 29% were neither in favor nor opposed to annexation. A small number of respondents (4%) indicated they were opposed to annexation.

The following figure shows responses to the question, “In my opinion, the top priorities in both my district and a potential consolidated fire district should be rated as follows (1 being the highest priority and 6 the lowest priority).”

Figure 117: Areas of Fire Protection & EMS Warranting the Highest Priority

Area/Topic Description	Priority		
	1	2	3
Fiscal stability/sustainable funding	66%	14%	7%
Improved service delivery to the community	50%	19%	12%
Adequate staffing levels to cover existing fire stations	41%	19%	17%
Cohesive fire services for the CCCFPD service areas	34%	12%	17%
Improved staffing levels to open closed fire stations	32%	34%	11%
Special operations team coordination	31%	16%	18%

¹Rounded to the nearest integer.

The results shown in the preceding figure indicated that the respondents felt that financial stability and sustainable funding was the top priority. Improved service delivery to the community and adequate staffing levels to cover existing fire stations were considered by the respondents as the next two highest priorities respectfully.

Due to their similarities, when combining the responses to the questions “adequate staffing levels to cover existing fire stations” and “improved staffing levels to open closed fire stations,” the result was that 73% of the respondents considered this the number one priority.

When reviewing the responses from this perspective, the top three most important priorities of the 211 individuals that responded to this question were as follows:

- Adequate staffing.
- Funding and financial sustainability.
- Improved services to the community.

Triton interviewed a wide variety of the three fire districts' internal and external stakeholders. The purpose of these interviews was to gain a better understanding of issues, concerns, and options regarding the emergency service delivery system, opportunities for shared services, and expectations of community members from the three districts.

It is important to note that the information solicited and provided during this process was in the form of "people inputs" (stakeholders individually responding to our questions), some of which are perceptions reported by stakeholders. All information was accepted at face value without an in-depth investigation of its origination or reliability. The project team reviewed the information for consistency and frequency of comment to identify specific patterns and trends. Multiple sources confirmed the observations, and the information provided was significant enough to be included within this report. Based on the information reviewed, the team identified a series of statements, recommendations, and needs and confirmed with multiple sources that all was significant enough to be here.

Interviews included 69 stakeholders from nine separate groups: Elected Officials, Business Community Leaders, Chief Officers, Labor Leaders, Rank & File Representatives, Administrative Staff, City and County Management, RHFDF Measure O Oversight Committee Members, and the Contra Costa Fire Advisory Commission.

Results of the interviews can be found in Appendix C.

Section I-B: SUPPORT PROGRAMS

EMERGENCY MEDICAL SERVICES

As with most fire districts and communities, EMS represents the most frequent demand for services among the three fire districts. EMS service demand is driven by the population and demographics of a community. The following section describes how each fire district provides EMS to their respective communities.

EMS in Contra Costa County

It is beyond the scope of this study to address in great detail the various components of the EMS system in Contra Costa County and among each of the fire districts. However, it must be noted that the County maintains a robust and effective EMS system.

EMS Administration

The EMS system in the County is administered by Contra Costa EMS (CCEMS). CCEMS is a division of Contra Costa Health Services and has a broad spectrum of responsibilities related to the administration of the EMS system. This ranges from ensuring adequate training and continuing medical education to the certification and accreditation of EMS providers. CCEMS has a program in place to address frequent users of the EMS system.

Hospitals & Tertiary Care Facilities

There are multiple hospitals located throughout Contra Costa County, as well as tertiary facilities—such as Children's Hospital Oakland—outside the County. Some of the larger facilities include John Muir Health, Concord Medical Center, Contra Costa Regional Medical Center, John Muir Health, Walnut Creek Medical Center, and Kaiser Medical Center in Walnut Creek, Richmond, and Antioch

Several of the hospitals in the County are designated stroke centers and also provide cardiac catheterization. The John Muir Medical Center in Walnut Creek is designated as a Level II Trauma Center. Outside of the County, the UC Medical Center in San Francisco is designated as both an adult and pediatric Level I Trauma Center.

Air Medical Service

Critical care helicopter transport is available in Contra Costa County from a merger of REACH Air Medical Services and California Shock Trauma Air Rescue (CALSTAR).

EMS at Contra Costa County FPD

Medical First Response

CCCFFPD provides medical first-response at both the BLS and ALS levels through deployment of its apparatus and Firefighter/EMTs and Firefighter/Paramedics from the District's 27 active fire stations. At least 30 or more apparatus (engines, trucks, rescues) are configured and equipped as ALS units.

ALS Patient Transport

In order to ensure the provision of advanced life support ambulance service, Contra Costa County FPD has developed a unique and effective relationship with American Medical Response (AMR)—referred to as the “Alliance.”

In the Alliance between AMR and CCCFFPD, the District provides the medic units (ambulances), capital equipment, and durable and disposable supplies, while AMR provides the EMTs and Paramedics to staff each of the medic units. Currently, CCCFFPD maintains a fleet of 20 new (2021) Type III ambulances.

The District maintains a daily schedule of 671 ambulance unit hours, and is staffed with a minimum of one AMR EMT and one AMR Paramedic working 12-hour shifts. The Alliance utilizes peak-demand medic units and a System Status Management (SSM) deployment system. Medic units are not deployed from fixed facilities, but are instead assigned “posts” at strategic locations. When necessary, CCCFFPD can utilize mutual aid from the San Ramon Valley Fire Protection District or Moraga-Orinda Fire Protection District.

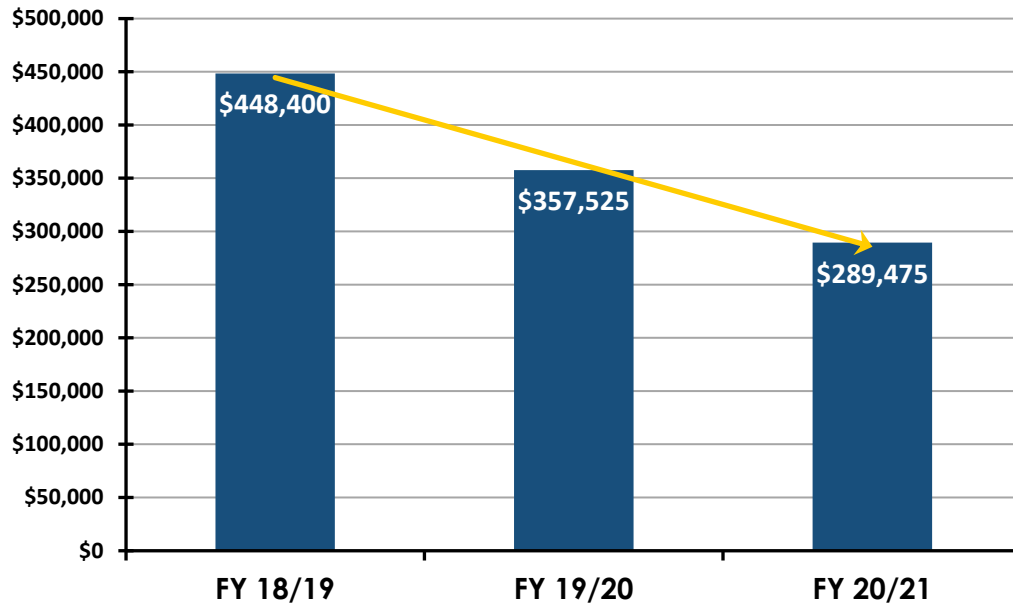
EMS Administration

The District maintains an EMS Division overseen by an Assistant Fire Chief. A Battalion Chief, Captain, and Administrative Assistant are also assigned to the Division, which also outsources for the services of a Continuous Quality Improvement (CQI) Coordinator. AMR provides an Operations Manager, six EMS Supervisors, and a Regional Director. CCCFFPD's Medical Director reports directly to the Fire Chief and is a board-certified Emergency Physician with a Master of Public Health degree.

The EMS Division is responsible for EMS training and continuing medical education, clinical and operational EMS quality management, and a number of other EMS administrative functions. The Alliance budget remains at approximately \$55 million annually.

The next figure is a simple graphic illustration showing Contra Costa County FPD's EMS Division budget within its General Operating Fund for the past three fiscal years, and does not include revenue from the Transport Fund.

Figure 118: CCCFPD EMS Division Budget (FY 18/19–FY 20/21)



EMS at East Contra Costa FPD

ECCFPD provides medical first-response at the BLS level primarily through dispatch and deployment of its engine companies. The District currently employs 35 certified EMT-Basics. East Contra Costa FPD relies on CCCFPD's AMR Alliance program to provide BLS and ALS patient transport.

The District's EMS & Safety Division is managed by a Battalion Chief. Two Registered Nurses are assigned to the EMS Division and are responsible for clinical education, CQI, and infection control. The Medical Director is a board-certified Emergency Physician and participates in CQI and ride-alongs, and has frequent interactions with operations personnel.

EMS Rodeo-Hercules FPD

RHFPD provides both BLS and ALS first response services through deployment of its engine companies staffed with nine paramedics and 13 firefighters certified as basic EMTs. As mentioned, RHFPD relies on Contra Costa County FPD for ALS patient transport services.

One RHFPD Captain oversees EMS, and an independent contractor is utilized to provide training, CME, and EMS quality management to the District. The District uses the same Medical Director as ECCFPD, who meets with operations staff on an as-needed basis and participates in the CQI program, but does not participate in ride-alongs. Personnel training and CME attendance records are documented in the Target Solutions Training & Operations Management System.

TRAINING & CONTINUING EDUCATION

Training is the foundation of all aspects of emergency services. An individual's ability to effectively utilize resources and equipment is dependent on the level of training an organization has provided. The following section provides an overview of the equipment, facilities, execution, and efficacy of the three fire districts' current training programs. In consideration of general training competencies, there are differences between the fire districts.

The following section can serve as a gap analysis to help make a potential combined organization's training plan.

General Training Competencies

The following figure summarizes the general training topics and certification levels provided in each district.

Figure 119: General Training Competencies by Fire District

Training Competencies	CCCFPD	ECCFPD	RHFPD
Incident Command System	ICS Series	ICS Series	ICS Series
Accountability Procedures	Yes	Yes	Yes
Training SOGs	Yes	Yes	Yes
Recruit Academy	Internal	Internal	Internal
Special Rescue Training	Yes	Yes	Yes
HazMat Certifications	Technician & Specialist	Operations	Operations
Vehicle Extrication Training	Basic	Basic	Basic
Driving Program	No	DO 1A and 1B	No
Wildland Certifications	S190/130	S190/130	S190/130
Communications & Dispatch	Yes	Yes	Yes
Truck Company Operations	Yes	No	No
Air Operations	Yes	No	No
Fire Boat Operations	Yes	No	Yes

Based on the above information, there appears to be an opportunity to improve emergency vehicle driving programs. Recent research shows that a significant amount of fire district liability results from emergency apparatus involved in accidents¹⁸. In addition to establishing policies that each district has in place, the organization should consider adopting a formal driving certification program.

This analysis also identified a gap in training competencies relating to special team, boat and truck operations. Additionally, the combined organization will need to evaluate the minimum qualifications for each promotional level. A common challenge during an annexation process is the unification of crews. Station and apparatus crews will need to assimilate and create a combined organization. It will be the responsibility of the Training Division to ensure that all firefighters meet minimum expectations. Individuals from ECCFPD and RHFPD will need focused training and certifications to support existing special assignments.

Another topic that will require focused evaluation is the training requirements for individual firefighters. The following images show a sample of firefighters from each district and graphs the total number of training hours each individual received in 2019. 2020 data was not an accurate representation of individual training due to the limitations of COVID-19.

Figure 120: CCCFPD Individual Training Analysis

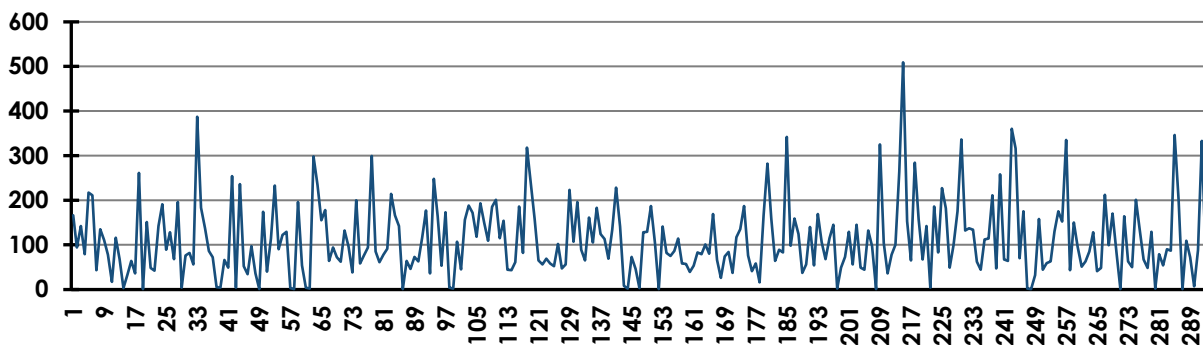


Figure 121: ECCFPD Individual Training Analysis

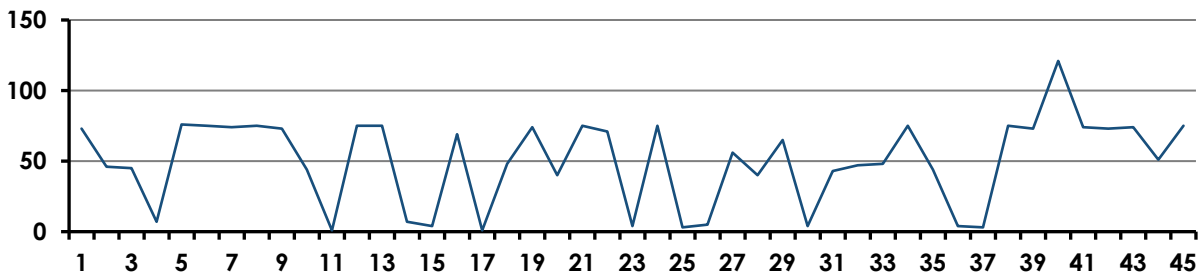
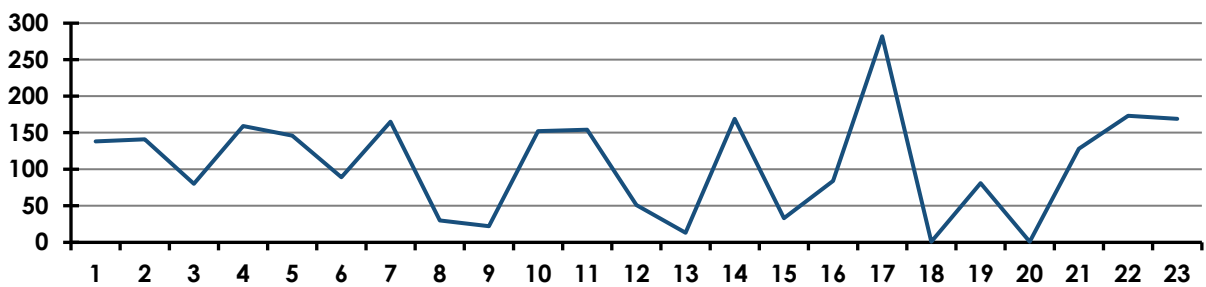


Figure 122: RHFPD Individual Training Analysis



All three fire districts demonstrated limited consistency in training hours that individuals had received in 2019. The data supports the need to develop a consolidated program with specific training topics and hours required by an individual firefighter. EMS education was not included since levels of certification would determine the particular hours. Additionally, it is understood that roles such as Engineer require specific training, but there appears to be the need to establish minimal annual training requirements for all line personnel.

Training Topics Discussion

The following figure summarizes the general training topics and the emphasis each district had for each discipline in 2019, compared to the incident percentage for each discipline.

Figure 123: Training Emphasis per Fire District

District	Incident Type	Training Topic Percentage	Incident Percentage
CCCFFPD	EMS/Rescue (300)	11%	57.3 %
	Fire (100)	79%	5.0 %
	Hazmat (400)	2%	1.7 %
	Other	8%	36.0 %
ECCFFPD	EMS/Rescue (300)	47%	56.8 %
	Fire (100)	40%	4.6 %
	Hazmat (400)	7%	2.0 %
	Other	6%	36.6 %
RHFFPD	EMS/Rescue (300)	56%	58%
	Fire (100)	30%	6%
	Hazmat (400)	4%	2%
	Other	9%	34%

While each fire district has a comprehensive and extensive training program, CCCFFPD places more emphasis on fire-related training. A contributing factor to the difference in fire-related training was the special teams, truck operations, boat operations, and CCCFFPD flight training. RHFFPD placed a higher emphasis on medical education, and ECCFFPD had a higher percentage of HazMat-related training. A combined organization will need to determine a training philosophy and develop a standardized program that meets the community's needs.

Training Methodologies & Delivery

CCCFFPD, ECCFFPD, and RHFFPD organized and dedicated training programs with a training schedule exceeding re-certification requirements. All three districts utilize traditional methodologies to bring on-duty crews into a combination of regionalized and centralized locations for most medical and fire-related training.

Most organizations face challenges balancing the need to maintain district response resources to perform multi-company training sessions. Travel time for Battalions 7, 8, and 9 to arrive at the centralized training can exceed 30 minutes.

Immersion Training

A common challenge for any training program is the development of training that translates to improved efficacy. Current research supports the effectiveness of immersion training that creates the illusion of an actual event. Individuals face evolutions with a high level of realism resulting in a metaphorical immunization to some of the event's stress and challenges. An example would be an active shooter exercise that involves volunteer victims wearing "cut suits," which allows a paramedic to perform advanced procedures while law enforcement stabilizes the scene.¹⁹ There are difficulties associated with these types of events. They tend to be labor intensive and cost-prohibitive due to the overtime required. A solution to the problem is to create immersion training on a smaller scale and design the trainings to be mobile.

Training Repetition

Another perspective relates to the success found over the past ten years in King County, Washington. Efficacy has been shown based on the use of repetitive skills training for mastery of specific skills. King County has demonstrated one of the highest advanced airway successes in-country based on redundant skills training.²⁰

Numerous organizations have pursued and purchased high-fidelity simulators for enhanced EMS training. The simulators provide excellent real-time feedback during a training scenario. The devices' limitations include a cost between \$60,000–\$110,000, extensive maintenance, and a lack of mobility. They have proven effective in a hospital setting or training facility where the end-users are in one location. A more cost-effective and proficient solution is the use of mid-fidelity mannequins. For the same amount of funding, multiple mannequins can be purchased and then deployed throughout the organization. This option can provide training without significant drive times to central training facilities and allow paramedics to have repetitive skill practice sessions. Another benefit of mid-fidelity training mannequins is the opportunity to develop proper sequencing. Identifying the order of critical interventions is critical to the success of patient outcomes.

The previous concepts also apply to fireground training and the need for repetitive evolutions. By de-centralizing fire or special team training, individuals have the opportunity to perform multiple evolutions and, again, develop proper sequencing for critical tasks and objectives.

CCCFPD currently uses a three rotational model. Training is provided in Battalion 8, 7, 1, and 2, with sessions in the morning and afternoon. With a shared Battalion Chief on B-shift, RHFPD also participates during the corresponding rotation. Following an annexation, a new cycle will need to be developed to address each district's geographic distances. As stated earlier, de-centralization of training will be essential.

Focused Training

Another component of a balanced training program includes focused training. An organization's training schedule should consist of a percentage of training reflecting retrospective statistical data from actual incidents. The districts should look for areas of improvement relating to actual emergency responses. The preceding "Balanced Training Program" figure shows that each district lacks a balance between actual incident volume and training topic percentage. This gap is often attributed to the necessity to maintain regional and State certification requirements. Also, organizations must allocate a disproportionate amount of training to high-risk/low incidence events to maintain fireground safety. AP Triton recognizes these limitations, but there should be a focus on training relating to service demand when possible.

A good example is the region's specific training relating to the current COVID-19 pandemic. Responders were required to learn enhanced body substance isolation, triage protocols, and critical interventions specific to the pandemic. Another example is based on current incident data showing an increase in mental health-related responses. Data shows that incident call volume relating to behavioral emergencies is approximately 15%. The training program should look for opportunities for additional levels of patient care or service.

Recertification Training

Regional and State requirements for certifications are generally not an option for non-compliance. When an opportunity exists, organizations should perform a cost/benefit analysis on the various optional certifications.

Training Delivery & Scheduling

The following figure summarizes the training methodologies utilized by each of the districts.

Figure 124: Methodologies Utilized in Training by District

Training Methodologies	CCCFPD	ECCFPD	RHFPD
Manipulative skills & tasks	Yes	Yes	Yes
Fire training hours requirements	Yes	20 hours/month	Yes
EMS training hours requirements	LEMSA ¹	See above	36 hours
Annual training hours tracked	Yes	Yes	Yes
Use of lesson plans	Yes	Yes	Yes
Night drills	Yes	No	Annual
Multi-agency drills	Yes	No	Quarterly
Disaster drills	Yes	No	No
Pre-fire planning included	Yes	Yes	Yes

¹Local EMS Agency

Discussion

This analysis identified several opportunities for improvement relating to training delivery and scheduling. The first relates to multi-agency multiple casualty incident (MCI) drills. It appears that it has been 10+ years since the last exercise. Each organization trains each year for MCI associated events. However, in consideration of the increase in active shooter and other violent events, multi-agency coordination is essential. The annexation will help ensure a consistent and coordinated response.

A second opportunity relates to the lack of multi-company and multi-agency training involving ECCFPD. Due to station closures and a corresponding lack of operations staff, ECCFPD has conducted very few multi-company training sessions. With the potential addition of two companies to the ECCFPD system, additional training will be available.

Training Program Administration

A training program must be closely monitored, supported, and funded to function effectively. Administrative program support is essential, along with program guidance in developing training plans and establishing goals and specific training objectives.

All three fire districts have established administrative processes specific to their training programs. This analysis identified that all three districts were inconsistent in their requirements and documentation of training hours. Training efficacy, funding, and compliance are often associated with the documented training hours. The organization should consider a focused review of the documentation process. Following is a comparison of each organization's training budget to the allocation of funding.

Figure 125: Annual Training Hours & Training Budget by District

Description	CCCFPD	ECCFPD	RHFPD
Annual training hours	21,993	2,030/hrs.	2,461
Annual training budget	Class 1: \$3 million Class 2: \$250,000	\$80,000	\$17,300

Training Facilities & Resources

In today's fire service, multiple resources are necessary to arm the trainer with the tools needed to provide realistic, practical, and verifiable training. Gordon Graham, the research consultant, described the necessity to focus on "high risk/low frequency" events.²¹ This concept is evident in the amount of training for structure fires required compared to actual call volume. An organization must have adequate training facilities to prepare for the infrequency and inherent danger of structure fires. Following is a summary of the current training resources and facilities available for each district.

Figure 126: Training Facilities & Resources by District

Facilities & Resources	CCCFPD	ECCFPD	RHFPD
Adequate training ground space	Yes	No	Yes
Training building/tower	Yes	No	Mobile
Burn room at the training building	Yes	No	Yes
Live fire props	Yes	No	Yes
Driver's course/rodeo	No	No	No
SCBA obstacle course/CFS	No	No	No
Adequate classroom facility	Yes	Yes	Yes
Computers & simulations	Yes	No	Yes
EMS props & mannequins	Yes	No	Yes

Discussion

CCCFPD has adequate facilities to support the initial training of recruits. As previously discussed, the challenge for the combined organization will be the limitations of centralized training. The drive time from RHFPD and ECCFPD will compromise the effective response force when units are out of service for a prolonged time. Emphasis should continue on regionalized training programs. Future considerations should include adding a training facility to the east side of the district.

Figure 127: CCCFPD Training Center/Mechanic Shop/Supply Warehouse

Address/Physical Location:	2945 Treat Blvd., Concord, CA 94518
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General Description:

The CCCFPD training facility includes several features that include: a ventilation prop, training tower & structure (house), high/low angle rescue, disentanglement, firefighter safety, and survival props, and a heavy equipment and apparatus driving course.

Structure

Date of Original Construction	1967			
Seismic Protection	No			
Auxiliary Power	CAT Generator			
General Condition	Fair			
Number of Apparatus Bays	Drive-through Bays	1	Back-in Bays	6
ADA Compliant	No			
Total Square Footage	12 acres			

Facilities Available

Sleeping Quarters	2	Bedrooms	2	Beds	0	Dorm Beds
Maximum Staffing Capability	2					
Exercise/Workout Facilities	Yes					
Kitchen Facilities	Yes					
Individual Lockers Assigned	Yes					
Bathroom/Shower Facilities	Yes					
Training/Meeting Rooms	Yes					
Washer/Dryer	No					

Safety & Security

Station Sprinklered	Some buildings sprinklered
Smoke Detection	Yes
Decontamination/Bio. Disposal	Yes
Security System	Yes
Apparatus Exhaust System	Yes

LIFE SAFETY PROGRAMS & PUBLIC EDUCATION

Fire prevention and life safety code enforcement is a critical component of community safety. Fiscal responsibility is manifested through the prevention of working fires and minimizing human suffering. The following section will analyze the current Life Safety Programs for CCCFPD, ECCFPD, and RHFPD, and reference national standards established by NFPA and the Commission on Fire Accreditation International (CFAI). The criteria established by CFAI are considered industry best practices and will help evaluate the organization's current state and potential areas for improvement.

The National Fire Protection Association recommends a multifaceted, coordinated risk reduction process at the community level to address local risks. This requires engaging all segments of the community, identifying the highest priority risks, and then developing and implementing strategies designed to mitigate the risks.²²

Community Risk Reduction

The Community Risk Reduction (CRR) plan begins with a Community Risk Assessment (CRA). Every community is unique, and an assessment process will help identify specific risks. The process should evaluate residential, commercial, and industrial properties. The following graphic shows a systematic approach for completing a CRR:

Figure 128: Steps of a CRR Plan



The organizations have numerous areas for risk assessment. A few examples include interface fires, environmental emergencies, active shooter incidents, hazardous materials release involving the railroad, and events associated with large bodies of water.

The organizations must perform a combined CRA collaborating with private and public entities. After a CRA has been completed and the risks prioritized, the organization should consider risk reduction strategy revisions. The following table lists the components and specific elements required to address risk reduction adequately. The remaining section will analyze each component and areas that the combined organization can consider opportunities for improvement.

Figure 129: Risk Reduction Strategy

Risk Reduction Strategy Program	Elements Needed to Address
Public Education Program	<ul style="list-style-type: none"> • Public education • Specialized education • Juvenile firesetter intervention • Prevention information dissemination
Code Enforcement Program	<ul style="list-style-type: none"> • Existing structure/occupancy inspections • Internal protection system design review • Storage and handling of hazardous materials
Emergency Response	<ul style="list-style-type: none"> • Respond effectively and quickly • Firefighter competency • Appropriately equipped
Fire Prevention & Building Code	<ul style="list-style-type: none"> • Applicable building and fire codes • Proposed construction and plans review • New construction inspections • Built-in fire protection • Emergency response techniques

Public Education Programs

CCCYPD and ECCYPD have robust public education programs. RHYPD has limited public education resources; however, during Triton's site visit, interviews with District representatives stated they have excellent interaction with the community. Both CCCYPD and ECCYPD emphasize wildland interface issues. Programs include the use of Fire Wise® weed abatement and community information sessions.

CCCYPD and ECCYPD have a unique bilingual education program for the juvenile fire starter team. This program would translate well to ECCYPD and RHYPD. All three organizations currently provide annual education at the grade school; however, COVID-19 limited school activities in 2019. A combined organization should consider additional educational outreach opportunities either in person or in a virtual setting. Workplace seminars can help property managers, fire wardens, and building engineers effectively respond to a wide variety of emergencies. Response guidelines for fires, workplace violence, medical emergencies, and natural disasters can help citizens take appropriate action when emergencies occur.

Another example specific to the region would be seminars designed to educate the community on how to respond during wildfire events. Residential evacuation routes and emergency communication are topics that are commonly covered. Most of these programs have minimal fiscal requirements and can demonstrate remarkable success. The following graphic shows a comparison of the three districts.

Figure 130: Public Education Programs

Education Programs	CCCYPD	ECCYPD	RHYPD
Annual fire prevention report distributed	Yes	Yes	No
Babysitting safety classes	No	No	No
Bilingual info available	Focused	No	No
Calling 9-1-1	Yes	Yes	Yes
Carbon Monoxide Alarm installations	Yes	No	Yes
CPR courses, BP checks	Yes	No	No
Curriculum used in schools	Yes	Yes	Yes
Exit Drills in the Home (EDITH)	Yes	Yes	Yes
Eldercare and safety	Yes	No	No
Fire brigade training	No	No	No
Fire extinguisher use	Yes	Yes	Yes
Fire safety	Yes	Yes	Yes
Injury prevention	Yes	Yes	No
Juvenile fire-starter program	Yes	Yes	No
Publications available to the public	Yes	Yes	No
Smoke alarm installations	Yes	Yes	Yes
Wildland interface education offered	Yes	Yes	No

During the site visit interviews, it was clear that the community is delighted with each organization's performance, and public education can help maintain this working relationship. This effort can translate to future fiscal and political support in the future.

Fire Code Enforcement

CCCYPD and ECCYPD have a fully staffed prevention bureau. The majority of prevention activities are accomplished in the RHYPD by the Fire Chief. Based on the site-visit interviews, the combined organization would have the capacity to meet current demand and support in the RHYPD area. All three organizations face significant growth over the next few years due to numerous single-family neighborhoods in development.

Commercial growth is also increasing. In 2020, CCCFPD performed 7,267 mandatory code enforcement inspections and 333 non-mandatory inspections. Recent economic challenges associated with COVID-19 resulted in numerous business closures. There has been a significant increase in changes of occupancy, translating to a greater need for inspections. The following graphic shows a comparison of the current code enforcement by each district.

Figure 131: Code Enforcement Among the Fire Districts

Code Enforcement Activity	CCCFPD	ECCFPD	RHFPD
Consulted on new construction	Yes	Yes	Yes
Fees for inspections or reviews	Yes	Yes	Yes
Hydrant flow records maintained	Partial	Yes	No
Key-box entry program	Yes	Yes	No
Perform occupancy inspections	Yes	Yes	Limited
Perform plan reviews	Yes	Yes	Yes
Sign-off on new construction	Yes	Yes	Yes
Special risk inspections	Yes	Yes	No
Storage tank inspections	County	Yes	No
Company Inspections (pre-plan)	No	Limited	No

There appears to be minimal differences between the three organizations relating to specific code enforcement. Following are general guidelines for fire inspection frequency.²³

Figure 132: Recommended Fire Inspection Frequencies

Hazard Classification	Example Facilities	Recommended Inspection Frequency
Low	Apartment common areas, small stores and offices, medical offices, storage of other than flammable or hazardous materials.	Triennially
Moderate	Gas stations, large (>12,000 square feet) stores and offices, restaurants, schools, hospitals, manufacturing (moderate hazardous materials use), industrial (moderate hazardous materials use), auto repair shops, storage of large quantities of combustible or flammable material.	Biennially
High	Nursing homes, large quantity users of hazardous materials, industrial facilities with high process hazards, bulk flammable liquid storage facilities, facilities classified as an "extremely hazardous substance" facility by federal regulations (SARA Title III).	Annually

One area that may warrant additional attention is on-duty engine companies' necessity to perform building familiarization and pre-plan familiarization. This function supports firefighter safety as well as improved fire ground operations. ECCFPD is currently using First Due® software to help occupancies submit critical information and development of pre-plans for the majority of commercial structures. CCCFPD has an existing system to develop and distribute electronic pre-plans to MDTs in the Tablet Command program.

The system was initiated in 2020 as a beta test with full implementation and transfer of the pre-plans to the mobile data terminals (MDT)s by 2021. The fire crews' familiarization of the businesses' internal layout is a requirement for improving ISO ratings.²⁴ The process can help prevent catastrophic fires.

Fire-Cause Determination & Investigation

CCCYPD has staff who are certified peace officers with arresting powers and the capacity to perform all functions of a fire-cause investigation. ECCYPD is in the process of getting members qualified to be certified peace officers. The fire investigation team for CCCYPD conducted almost 900 investigations in 2020. Current members of the ECCYPD fire investigation team have worked in the past with CCCYPD, which speaks well for a smooth transition to a combined organization should an annexation occur.

SPECIAL OPERATIONS

CCCYPD, ECCYPD, and REYPD provide services in a very dynamic environment, often requiring specialty response. The County has numerous bodies of water ranging from a large bay to tributaries, which are often susceptible to flooding. Large hazardous material production includes manufacturing and oil refinery facilities as well as an extensive transportation network. The region has numerous rail services, including Union Pacific, Amtrak, BART, and BNSF. Combined with extensive major roadways, the potential for hazardous materials incidents is high. Industrial production, environmental events, and an urban population all contribute to the necessity for technical rescue capabilities. Wildfire response is a significant special team requirement. A large percentage of the region are located in Fire Hazard Severity Zones, including areas designated as "High."²⁵

Special Team Response Service Demand

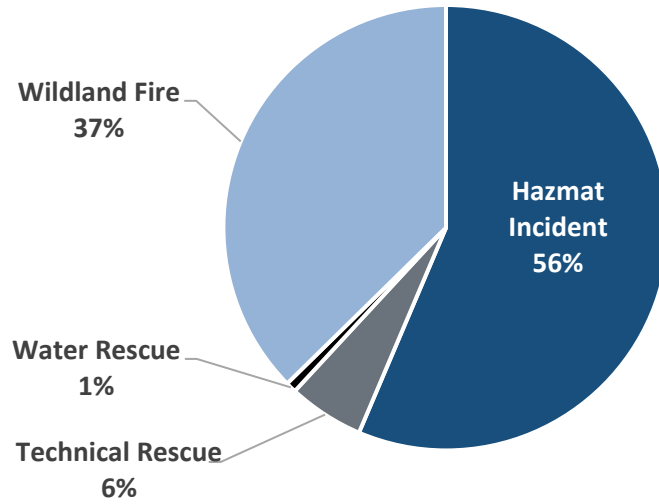
Special team responses are staffing-, apparatus-, and equipment-intensive events. Moderate to significant events generally require a coordinated regional response. The following graphic shows the breakdown of special team responses for each jurisdiction.

Figure 133: Special Team Responses by Jurisdiction (2020)

Incident Type	CCCYPD	ECCYPD	RHYPD	Total
Hazmat Incidents	657	178	69	904
Technical Rescues	64	13	3	80
Water Rescues	9	6	1	16

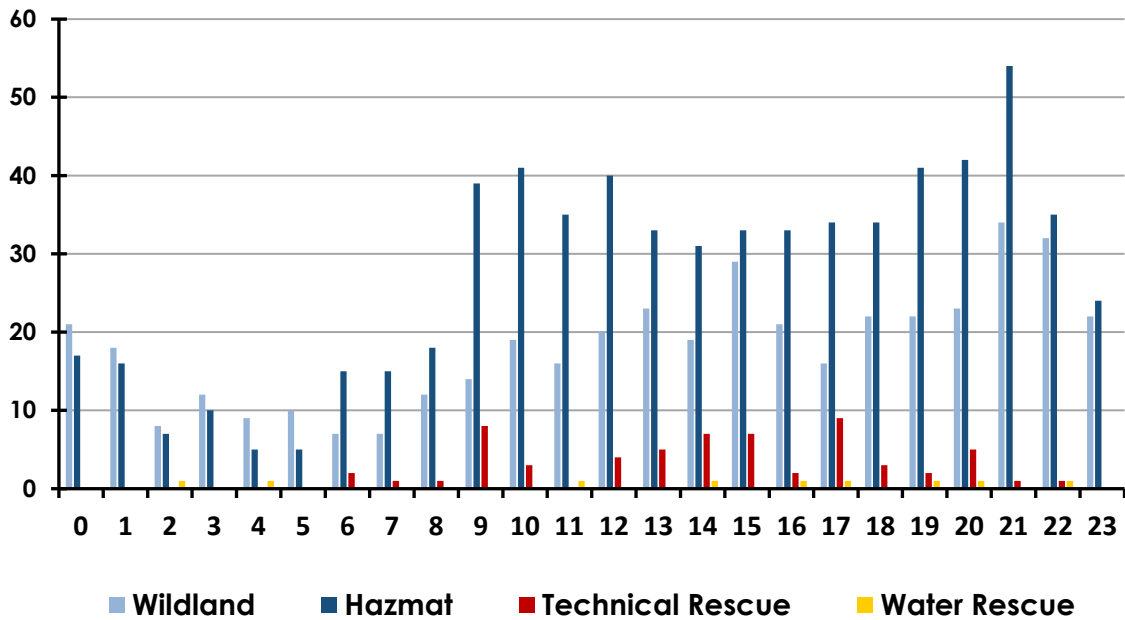
For this analysis, data from all three jurisdictions have been combined, providing a regional perspective. The majority of special team resources come from CCCYPD, and then the events are supported by trained personnel from ECCYPD and RHYPD. The following graphic shows a breakdown of special team responses by category in 2020.

Figure 134: Regional Special Team Response (2020)



The previous figure supports that the majority of regional special team response is for hazardous materials incidents. The following graphic is a temporal perspective showing the time of day when incidents requiring special teams occur.

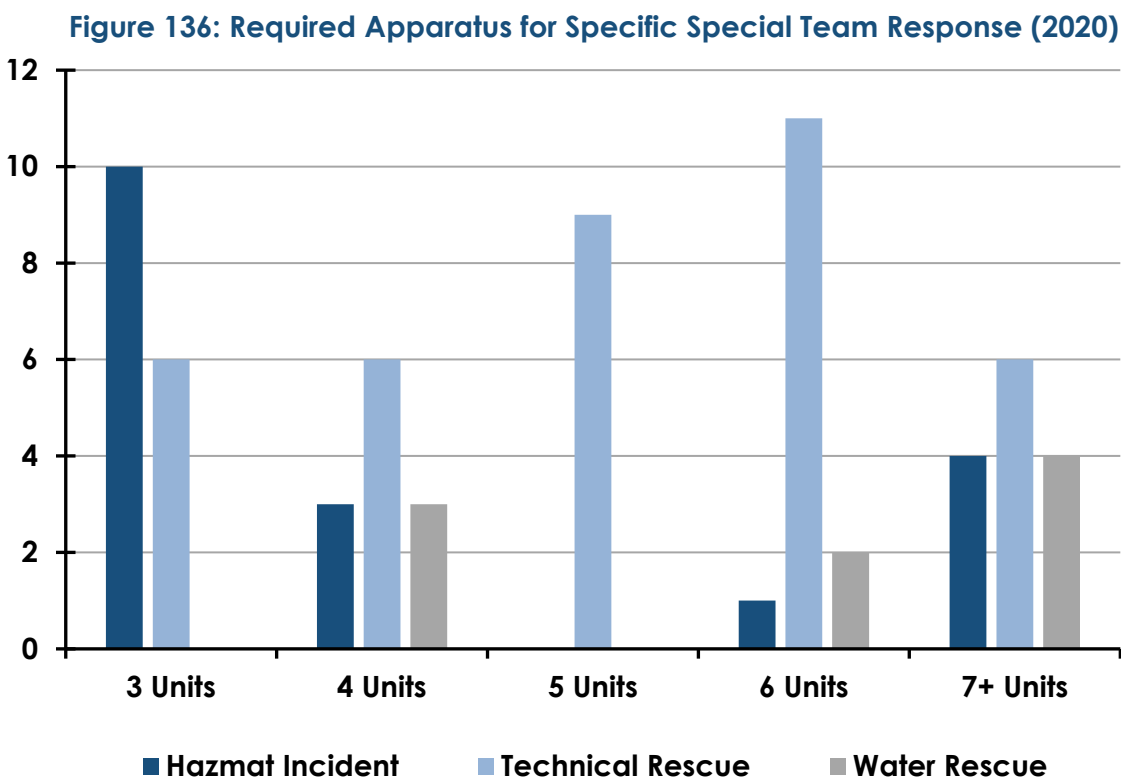
Figure 135: Regional Special Team Responses by Time of Day (2020)



Apparatus & Staffing for Special Teams

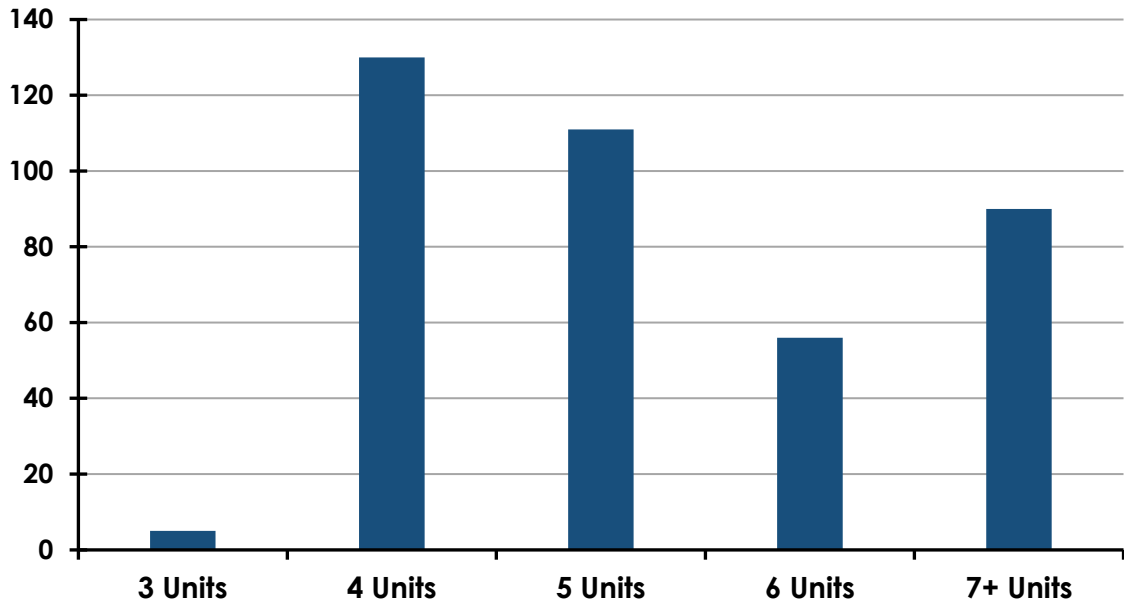
Incidents requiring special team responses primarily occur during the late afternoon and early evening. This situation can be exacerbated by the large number of commuters returning home to the surrounding areas. As previously discussed, special team responses generally require a large number of personnel and resources to mitigate the specific event.

The following graphic shows the number of regional apparatus necessary for each response category (hazmat, water rescue, technical rescue). The chart shows the number of events on the Y-axis and the number of required apparatus on the X-axis.



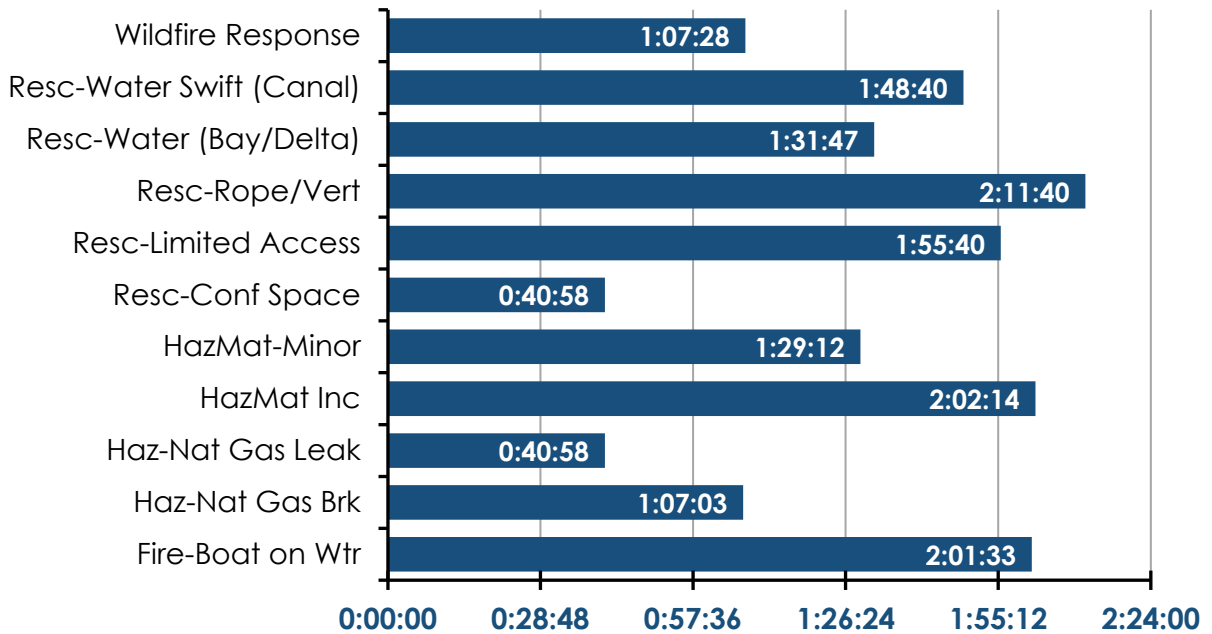
Wildfire incidents require the highest number of apparatus and staffing. The following graphic shows the apparatus required and the number of incidents for each level of response.

Figure 137: Required Apparatus for Wildfire Responses (2020)



In addition to a large number of personnel and apparatus required for special team responses, the events had a prolonged duration due to mitigation complexity. The following graphic shows the average amount of total response time needed for each special team response category.

Figure 138: Total Response Time for Special Team Response (2020)



The prolonged total response time described above translates to increased concurrent incidents. The increased requirements for special team response support the potential consolidation of CCCFPD, ECCFPD, and RHFPD.

Special Team Resources

ECCFPD and RHFPD will not bring specialized apparatus for special team response to the potential consolidation. Both organizations have personnel with specific training/certifications to support the regional response. The following graphic shows the station location of specialty units within the CCCFPD.

Figure 139: CCCFPD Special Team Units

CCCFPD Station	Specialty Unit
Station 10	Heavy Rescue/USAR, Light Rescue Squad
Station 69	Light Rescue
Station 81	Light Rescue Boat
Station 82	Heavy Rescue
Station 85	Fire Boat
Station 87	HazMat Response (Type II Team)
Buchanan Field	Type 3 Helicopter
Station 20 (training)	D4/D5 Bulldozer
Station 12	14-person specialized hand crew during wildfire season

Special Teams Discussion

As previously discussed, hazardous material incidents (hazmat) constitute the most significant number of special team responses. Due to the large oil refineries in the response areas, a combined organization will need to continue focused training and response to potentially significant HazMat incidents. The *Federal Disaster Mitigation Act of 2000* requires Contra Costa County to have a FEMA-approved *Local Hazard Mitigation Plan* to be eligible for certain pre-and post-disaster mitigation funds.

The County adopted its first Hazard Mitigation Plan in 2006. The Plan has been updated every five years since 2006, with the most recent update currently under review. Hazardous materials response functions under a cooperative effort under the guidance of Contra Costa Health Services. The potential consolidation would increase the capacity for regional response to hazardous materials incidents.

Wildfire response is the most demanding event for staffing and resources. CCCFPD has an extensive wildland response team, including specialty equipment and increased hand crews during the wildfire season. The potential annexation brings additional staffing and Type 3 apparatus.

Section II: OPPORTUNITIES FOR ANNEXATION

GENERAL PARTNERING OPTIONS

The concept of regional cooperation and service delivery in the California fire service has significantly developed since the 1970s. While the scope and manner in which these partnerships are formed and managed has evolved and changed, the fundamental desired outcomes have stayed consistent. The recent wildland fire siege of 2020, the Loma Prieta and Northridge earthquakes, as well as California's unique and ongoing urban interface and wildland fire problem, continue to point to the need for integrated and seamless regional service delivery models.

In addition, a consistent rise in the cost of personnel, benefits, post-retirement medical benefit liabilities, and supplies and services has resulted in significant, and sometimes unmanageable, cost increases. These cost increases have been combined with post-Proposition 13 property tax reductions and significant economic downturns that have negatively impacted other government funding mechanisms. These significant cost increases and revenue reductions have created an environment under which government and public safety agencies must create greater efficiencies while finding ways to provide effective and adequate public safety services.

Having completed the evaluation of the current conditions, Triton has developed the information necessary to effectively evaluate the options that exist for shared service delivery opportunities between the participating agencies. There are many ways that fire districts can work together. These can include fundamental sharing of resources and programs or legal assimilation of multiple agencies into one, in the form of a reorganization, consolidation, or annexation. The scope of this study is to compare the status quo operations of the three Districts with a potential annexation into the existing CCCFPD. LAFCO code sections provide various options to achieve consolidation or annexation. These options will be presented with insight and guidance where appropriate.

Triton's experience is that any of these options must have general alignment and agreement between the communities, elected officials, District leadership, fire administration, and labor groups to be successful. Any recommended model that does not have basic support and reasonable alignment of expectations from the aforementioned stakeholders stands a high likelihood of not succeeding. Triton has attempted to create recommendations and system modeling around the concepts and system design that have a reasonable chance for support and success.

This report provides a clear and understandable analysis of the current fire service delivery system. This current condition analysis was utilized to develop possible models and analyze their potential for operational enhancements and financial and administrative effectiveness and efficiencies.

The general themes identified and addressed in this report center around redundancy, local identity, cost allocation, financial and operational sustainability, governance, and oversight and implementation. While no report can address every issue, question, and perspective completely, we have presented a significant amount of detail and recommendations to present a path forward for RHFPD, ECCFPD, and CCCFPD.

Options for Shared Services

The following discussion identifies and explains multiple approaches that may be accessed in the State of California for sharing services or partnering in the delivery of services with neighboring agencies. The presented approaches fall in a range from limited levels of partnering, many of which are already in place in the study area, up to complete integration of participating agencies into a single entity. While we will briefly discuss various options in accordance with the project scope, Triton has focused the report analysis and recommendations on comparing the status quo option to an annexation model.

To adequately discuss the partnering continuum, the terminology and statutory provisions that are available to decision makers must be understood. The following partner strategies, while not necessarily described by statute, differentiate between various approaches to partnering:

Status Quo (continuation of cooperative agreements and systems)

This option continues the current status of the Districts without change. All three agencies continue to do business as they are today, including service provision to their respective jurisdictions and joint response areas. There is no change to governance, staffing, or deployment of resources other than those in each agency's 20/21 budgets including ECCFPD's plan to staff Station 55 .

The three districts would continue to operate independently under this initiative, as they do at the time of this writing. Each retains its own governance structure, under the direction of its existing separate Fire District Board of Directors, and the administration of each agency continues to operate individually. While existing cooperative efforts between all the participating agencies continue, the advantages that can be gained through annexation will not be realized.

Advanced Auto Aid Systems

An Advanced Auto Aid System is when two or more agencies participate in a full boundary drop approach to dispatching the closest resource first regardless of jurisdiction. This process can be greatly enhanced with the utilization of automatic vehicle location technology.

Functional Consolidation

When two or more agencies enter a collaborative relationship, typically through a contract for service, no permanent organizational commitment is made, and all decision-making power remains with each individual organization. Interagency collaboration can take many forms and may include shared administrative and support functions, combined operational practices, participation of fire agencies in activities such as local fire management bodies (e.g., fire boards), mutual aid agreements, and interagency disaster planning exercises. It can also provide for complete service delivery as an integrated/consolidated fire agency from one local agency to another.

One form of functional consolidation is through Contract for Service or Intergovernmental Agreement (IGA), described in greater detail below.

Contract for Service-Intergovernmental Agreement (IGA)²⁶

In the State of California, authorization for an intergovernmental agreement (contract for service) for the provision of fire services between agencies as provided for by California Statute and Government Code (CGC) Section 55613-55614, and the California Public Contracting Code (CPCC) Section 20811 are commonly referred to as a "Contract for Service."

The California Government Code and Public Contracting Code is written with the intent of being liberally construed relating to contracting for public safety services by cities and fire districts, and states, in part, that:

“CPCC 20811. When a district board determines that it is in the public interest, a district may contract with any other public agency for fire protection services, rescue services, emergency medical services, hazardous material emergency response services, ambulance services, and any other emergency services for the protection of lives and property.”

This permissive statute allows for a local agency, which includes cities and districts, to enter into a written agreement with any other unit or units of a local agency for the performance of any or all fire services and activities that a party to the agreement, its officers, or agencies, have authority to perform. The agreement may provide for the performance of a function or activity:

- By a consolidated and fully integrated district.
- By jointly providing for administrative officers and services.
- By means of facilities or equipment jointly constructed, owned, leased, or operated.
- By services and/or functions provided by one of the parties for any other party.

Collaborative approaches under the CGC can include shared or contracted programmatic services, often referred to as *functional unification* or *functional consolidation*. Approaches may include shared administrative service, training programs, fire prevention outreach, or numerous other functional collaborative strategies. This approach can also include a fully integrated/consolidated fire district with services contracted to another local agency.

California law, regulations, and policy directives declare intergovernmental cooperation as a matter of statewide concern and grants special districts broad power to contract with other governmental entities for any function or activity the agencies have authority to perform.

Operational Consolidation

Operational consolidation occurs when two or more separate districts join operationally or administratively to form one organization. The entities remain largely separate; however, they deliver service as if they were one agency.

Full operational consolidation would allow re-distribution of personnel and resources across jurisdictional boundaries, putting them where they are needed.

Joint Powers Authority (CGC Section 6500, et seq.)

Joint powers are exercised when the public officials of two or more agencies agree to create another legal entity or establish a joint approach to work on a common problem, fund a project, or act as a representative body for a specific activity.

Before 2016, Local Agency Formation Commissions (LAFCO) did not have authority over contracts between government agencies such as Joint Powers Agreements/Agencies (JPAs). However, changes in the law require cities and districts to apply to LAFCO for approval of a JPA in certain circumstances.

Many of the changes in the laws governing LAFCO are in response to confusion among citizens regarding who and how their local government services are provided. Also, constituents are requesting increased transparency in government. LAFCOs are expected to provide resources to sort out government service providers, as well as assist in the coordination and long-range planning of those services. LAFCO's role has expanded from oversight of boundary changes to conducting studies that analyze the efficient and economical provision of local government services.

Annexation

Annexation Process

The initiation of a proposal through application to LAFCO can occur as follows:

1. *Resolution of Application by the districts: (CGC Section 56853)*

It is most effective if the involved districts pass substantially similar resolutions of application for annexation or reorganization (an application consisting of more than one action).

The Commission is required to approve or conditionally approve the proposal. The resolutions of application may contain the terms and conditions of the annexation. It is expected the districts would have negotiated and come to an agreement on board composition, employee MOUs, and effective date. The Commission may order any material change in the conditions; however, the districts are to receive mailed notice and no action may occur for 30 days. If either district requests, action can only occur after notice and hearing.

2. *Petition: (CGC Sections 56864.1, 56865, and 56870)*

Application can be made to LAFCO by petition. In the case of fire protection districts, registered voters within the districts would be required. The number of signatures required depends on the changes of organization requested in the application. For example, an application for consolidation of districts would require signatures from at least 5 percent of the registered voters within each of the districts.

3. *LAFCO Resolution Initiating Proposal: (CGC Section 56375)*

The Commission has the authority to initiate a proposal for consolidation but not annexation. Initiation of consolidation by the Commission must be as the result of the recommendations of a study including a Service Review and/or Sphere of Influence (SOI) study or update. The current study by Triton qualifies as the necessary study. Although the Commission has this authority, it would be most unlikely for Contra Costa LAFCO to take this action based on precedent set and response to local conditions by the Commission. Each LAFCO has the authority to adopt Policies and Procedures which reflect local conditions. Also, the Commission is composed of locally elected officials responding to the needs of their constituents.

Terms & Conditions

Many of the issues brought forward during the interview of stakeholders can be addressed in LAFCO's terms and conditions. The legislature provided the Commission with a full range of terms and conditions which can be determined as part of LAFCO approval of a proposal. The full text of the code section is provided in Appendix D. The following is a summary of this section of the enabling act (CGC Sections 56885 et seq.).

1. *Authorize continuation of another relevant legislative hearing.*
2. *The completion of another change of organization.*
3. *The approval or disapproval of a resolution ordering a change of organization.*
4. *In the case of district dissolution, prohibit increasing compensation or obligating revenue beyond the current budget.*
5. *Continue or hold relevant action for a period not to exceed six months.*
6. *Set the election date to coordinate with another change of organization.*
7. *Require a single ballot question regarding more than one change of organization considered at the same time.*
8. *Not provide conditions that directly regulate land use.*
9. *Payment for transfer or use of existing property, real or personal.*

10. *The levying of taxes or assessments for the payment for existing property.*
11. *The transfer or apportionment of bonds, contracts, or other obligations.*
12. *The incurring of new indebtedness on behalf of all or any part of any local agency and the establishment of zones of benefit in accordance with the principal act.*
13. *The acquisition, improvement, disposition, sale, transfer, or division of any property, real or personal.*
14. *The disposition, transfer, or division of any moneys or funds, including cash on hand and moneys due but uncollected, and any other obligations.*
15. *The establishment, continuation, or termination of any office, department, or board including any of their functions as authorized by the principal act.*
16. *The employment, transfer, or discharge of employees, the continuation, modification, or termination of existing employment contracts, civil service rights, seniority rights, retirement rights, and other employee benefits and rights.*
17. *Designation of a districts as the successor to any district that is extinguished as a result of a change of organization, for the purpose of succeeding to the rights, duties, and obligations of the extinguished district.*
18. *As provided in the principal act of the district, the designation of the legislative body, method of selection and number of members.*
19. *The initiation, conduct, or completion of proceedings of another proposal.*
20. *The fixing of the effective date or dates of a change of organization.*
21. *Any terms and conditions authorized or required by the principal act with respect to any change or organization.*
22. *The continuation or provision of any service provided at that time, or previously authorized by an official act of the district.*
23. *The levying of assessments, general or special taxes subject to voter approval.*
24. *The extension or continuation of any previously authorized assessment by the district or a successor district.*
25. *Any other matter necessary or incidental to any of the terms and conditions specified in Article 2. Terms and Conditions.*
26. *Any or the terms and conditions may be made applicable to all or any part of any district or any territory annexed or detached from the district.*

Protest Provisions (CGC Sections 57051, 57077.2)

The Commission may order the consolidation without confirmation by the voters if it has been initiated by district resolutions. However, the Commission is required to order the consolidation or reorganization subject to voter confirmation if one of the following occurs:

- Written protests have been submitted by at least 25% of landowners owning at least 25% of the assessed value of land within the territory.
- Written protests have been submitted by at least 25% of the registered voters residing within the territory.

If the Commission has initiated the proposal, confirmation by the voters is required if either of the following occurs:

- Protests have been signed by at least 10% of the landowners within the territory who own at least 10% of the assessed value of land within the territory.
- Protests have been signed by at least 10% of the registered voters entitled to vote within the territory.

FINANCIAL IMPACT OF ANNEXATION

Emergency response agencies require adequate staffing, facilities and equipment, and related operating costs to perform their mission. The following figures reflect the anticipated revenue streams available for the combined operation of the three agencies under Contra Costa County Fire Protection District, with CCCFPD applying its cost structure to the staffing of ECCFPD and RHFD fire stations for the projections. The projections include maintaining the existing staffing levels of three ECCFPD and two RHFPD stations with the expansion of adding two additional three-person companies to be staffed over the following 12 months.

Additionally, the projections consider the anticipated cost savings due to combining technology infrastructure, fleet maintenance, and other administrative functions. The projections also anticipate the expenditure of capital funds to construct new stations, remodel another station, and acquire fire apparatus.

The projections will be divided into two categories: operations and capital. Operations will include the recurring revenues from property taxes and fees for services, with normal recurring expenses for salaries, services, and supplies being deducted. Capital will include the special revenues from various development fees, loan and lease proceeds, sales of equipment, grants, etc., with deductions for capital improvements, equipment acquisition, and debt service.

Operations

Revenue projections have been previously described in the analysis of each of the three participants. Adjustments to these projections were made for items such as dispatch fees currently paid by ECCFPD and RHFD to CCCFPD, and this adjustment is shown in the following presentation.

Combined property tax revenue is projected to increase annually at a 4% rate. Combined property tax revenue is forecast to increase from \$165,500,000 in FY 21/22 to \$201,300,000 in FY 26/27. Other recurring revenues are projected to increase at an annual average rate of 1.6%. In view of the trends from the historical information, it is felt these escalator rates are conservative. Including the adjustment for dispatch services, Recurring Revenues increase from \$189,012,000 in FY 21/22 to \$226,794,000 in FY 26/27, a 3.8% annual rate.

Salaries and benefits, which include Medicare payroll taxes, health insurance, and pension costs for the line positions—Captains, Engineers, and Firefighters—were assumed to be entering the CCCFPD system at the Step 3 level in the CCCFPD salary schedule for this analysis. The ECCFPD Captain and Engineer classifications include nine positions each in the first year of the operation and grow to fifteen in the second year. Ten ECCFPD firefighter positions are included in the initial year of operations, but the additional six positions added in the second year will be firefighter/paramedics. The RHFD Fire Chief and administrative positions have elected to retire, but the remainder of the twenty-two operations staff will be absorbed in the annexation and enter at Step 6 level in the CCCFPD salary schedule.

Overtime is calculated at 13% of personnel costs based on CCCFPD historical overtime cost experience. As previously stated, the projections include maintaining the existing staffing levels of three stations with the expansion of adding two additional three-person companies to be staffed over the following 12–18 months. These personnel costs are projected to increase 10% annually in the first five years and 6% annually beginning in the sixth year of the projections.

Other post-employment benefits (OPEB) prepayments and retiree health costs are additional benefit costs that are projected to increase 3% annually. Fire prevention personnel are assumed to be “cost neutral” for this analysis due to fee revenue associated with fire prevention activities.

Administrative personnel (one Chief Administrative Officer, one accountant, two clerical positions, one payroll clerk and one Permit Tech position) will be absorbed into the existing CCCFPD staffing. Additional program support for grant applications and grant management, as well as cost recovery, may be able to be fully supported by these additional positions.

OPEB and retiree health insurance benefit costs for ECCFPD and RHFPD are stated separately to indicate those long-term costs are considered in the projections.

The financial projection of the combined organization contemplates adding personnel for specific expansion of services. In FY 21/22, the combined organization anticipates reopening ECCFPD Station 55 and staffing ECCFPD Truck 52, and, in FY22/23, CCCFPD will reopen Station 4. These additions, combined with the previously identified escalators, increase total salaries and benefits from \$149,303,000 in FY 21/22 to \$161,016,000 in FY 22/23. Annual compensation and benefits increase approximately \$10,000,000 for each of the following four years.

Services and supplies expenses include, but are not limited to, station and apparatus operating costs, repairs and maintenance, small tools and equipment replacement, training costs, radio and technology costs, medical and firefighting supplies, turnout gear and uniform costs, and professional services. These costs are conservatively estimated to increase 3% annually. It is anticipated that there will be a significant benefit in consolidating certain administrative costs such as technology, training, and apparatus maintenance.

The operations portion of the combined districts is anticipated to produce positive cash flow for each of the six years of the projections. This allows the combined operation to accumulate a significant reserve balance or to take advantage of other opportunities during the projection period. The following figure combines the revenues from the previous projections for each agency with expected operating expenses and anticipated modifications from increased staffing and related expenses to develop annual operating cash flows and accumulated operating fund balances through FY 26/27.

Figure 140: Recurring Revenue/Expense Projections—Combined Operations (Part 1)

Revenue/Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Operations						
Property Taxes						
CCCFPD	144,055,800	149,818,032	155,810,753	162,043,183	168,524,911	175,265,907
ECCFPD	16,875,770	17,550,801	18,252,833	18,982,946	19,742,264	20,531,955
RHFPD	4,552,080	4,734,163	4,923,530	5,120,471	5,325,290	5,538,301
Total Property Tax Revenues	165,483,650	172,102,996	178,987,116	186,146,600	193,592,465	201,336,163
Other Recurring Revenue						
CCCFPD	17,767,300	17,413,580	17,607,688	18,113,807	18,670,537	19,282,941
ECCFPD	2,037,534	2,087,569	2,124,847	2,163,075	2,202,265	2,242,456
RHFPD	4,415,658	4,455,658	4,531,858	4,610,344	4,691,185	4,774,450
Total Other Recurring Revenue:	24,220,492	23,956,807	24,264,393	24,887,226	25,563,987	26,299,847
Total Recurring Revenue:	189,704,142	196,059,803	203,251,509	211,033,826	219,156,452	227,636,010
Adjustments to Revenue						
Reduced Dispatch Revenue	(692,000)	(719,680)	(748,467)	(778,406)	(809,542)	(841,924)
Revised Recurring Revenues:	189,012,142	195,340,123	202,503,042	210,255,420	218,346,910	226,794,086
Current Salaries & Benefits (CCCFPD Rates)						
CCCFPD	127,022,889	134,180,390	141,835,095	149,946,066	158,540,531	167,647,339
ECCFPD - line positions	9,037,150	9,920,865	10,891,752	11,877,510	12,955,640	13,732,979
ECCFPD - admin positions	900,000	954,000	1,011,240	1,071,914	1,136,229	1,204,403
RHFPD	6,418,400	6,867,688	7,348,426	7,862,816	8,413,213	9,002,138
Total Salaries & Benefits:	143,378,439	151,922,943	161,086,512	170,758,307	181,045,613	191,586,858
OPEB & Retiree Health Insurance						
ECCFPD						
OPEB	275,000	283,250	291,748	300,500	309,515	318,800
Retiree Health Insurance	363,000	373,890	385,107	396,660	408,560	420,816
RHFPD						
OPEB	140,000	140,000	140,000	140,000	140,000	140,000
Retiree Health Insurance	303,170	303,170	303,170	303,170	303,170	303,170
Total Health Insurance:	1,081,170	1,100,310	1,120,025	1,140,330	1,161,245	1,182,786

Figure 141: Recurring Revenue/Expense Projections—Combined Operations (Part 2)

Revenue/Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Staffing Increases by Agency						
CCCFPD						
Reopening Station 4	—	2,664,371	2,850,877	3,050,438	3,263,969	3,492,447
ECCFPD						
Station 55	2,422,155	2,664,371	2,850,877	3,050,438	3,263,969	3,492,447
Truck 52	2,422,155	2,664,371	2,850,877	3,050,438	3,263,969	3,492,447
Total Salary & Benefits Increases:	4,844,310	7,993,113	8,552,631	9,151,314	9,791,907	10,477,341
Total Salaries & Benefits:	149,303,919	161,016,366	170,759,168	181,049,951	191,998,765	203,246,985
Services & Supplies						
CCCFPD						
Station 4 Maintenance	—	51,500	53,045	54,636	56,275	57,964
Station 4 Equip Costs	—	25,000	25,750	26,523	27,318	28,138
ECCFPD						
	1,157,903	1,194,269	1,231,792	1,325,144	1,366,730	1,416,761
RHFPD						
	254,177	260,168	267,005	274,062	281,445	288,862
Total Services & Supplies:	18,613,029	19,173,068	19,674,141	20,244,964	20,778,459	21,334,971
Total Recurring:	167,916,948	180,189,434	190,433,310	201,294,915	212,777,124	224,581,956
Increase to Operating Funds:	21,095,194	15,150,689	12,069,732	8,960,506	5,569,785	2,212,130
Beginning Op Fund Reserve:	—	21,095,194	36,245,883	48,315,615	57,276,121	62,845,906
Ending Op Fund Reserve:	21,095,194	36,245,883	48,315,615	57,276,121	62,845,906	65,058,036

Capital

The second component of the proposed annexation to be analyzed is the funding available to acquire capital resources such as fire stations and equipment. Each of the three districts receives funding from special assessments that are restricted to use only within the jurisdiction from which the revenues are received. These restricted revenues include developer fees from subdivisions that are being developed outside the response areas of existing fire stations. The funds are to be used to build and equip new stations. Certain funds are to staff and operate stations or to provide specialized services, and, again, those funds are restricted to the jurisdiction from which the funding is derived.

A fire station is projected to be constructed within the boundaries of ECCFPD's service area. Funding for a portion of the building has been identified as development fees in the amount of approximately \$7,000,000 from the City of Brentwood. It is anticipated that the remaining \$7,000,000 would be provided by financing, with the debt service payment being \$700,000 per year.

Each of the three districts will require the expenditure of funds for debt service payments, capital expenditures for apparatus and equipment, and the remodel or construction of fire stations during the next six years. CCCFPD has a debt obligation related to the issuance of bonds to extinguish a portion of its unfunded actuarial liability for employee pension costs. An additional payment for "Pension Bond Stabilization" is required in addition to the debt service; however, FY 21/22 is the final year of the debt and stabilization obligation. The extinguishment of the obligation will free up \$14,056,000 annually.

Several apparatus of various types are anticipated to be acquired during the next six years. Funding for these acquisitions is expected to be from the use of cash from the reserve funds existing at the time of the annexation, as well as the additions to the reserves from the restricted revenue streams.

The balance in the Capital Reserve Fund is anticipated to decrease five of the six years in the projection period as significant debt is extinguished and apparatus are acquired for cash. The following figure combines the non-recurring revenues, including restricted revenues from development fee assessments, loan proceeds and other receipts from the previous projections for each agency with expected debt payments and capital expenditures and anticipated modifications from increased staffing and related expenses to develop annual operating cash flows and accumulated operating fund balances through FY 26/27.

Figure 142: Non-Recurring Projections—Capital Costs (Part 1)

Revenue/Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Capital						
Non-Recurring Revenues						
CCCFPD	100,000	100,000	100,000	100,000	100,000	100,000
ECCFPD	218,087	218,087	218,087	218,087	218,087	218,087
RHFPD	—	—	—	—	—	—
Total Non-Recurring Receipts:	318,087	318,087	318,087	318,087	318,087	318,087
Loan/Lease Proceeds						
CCCFPD	—	—	—	—	—	—
ECCFPD	—	7,000,000	—	—	—	—
RHFPD	—	—	—	—	—	—
Total Loan/Lease Proceeds:	—	7,000,000	—	—	—	—
Funding from Development Fees						
CCCFPD	—	—	—	—	—	—
ECCFPD	292,578	311,200	322,054	341,147	360,489	380,088
RHFPD	100,000	100,000	100,000	100,000	100,000	100,000
City of Brentwood	—	7,000,000	—	—	—	—
Total Development Fee Funding:	392,578	7,411,200	422,054	441,147	460,489	480,088
Total Non-Recurring Receipts:	710,665	14,729,287	740,141	759,234	778,576	798,175
Lease & Debt Payments						
CCCFPD	2,944,538	2,944,538	2,944,538	2,944,538	2,944,538	2,944,538
ECCFPD	534,217	614,217	1,356,217	1,399,217	877,000	877,000
RHFPD	269,114	188,713	188,713	188,713	188,713	188,713
Total Payments:	3,747,869	3,747,468	4,489,468	4,532,468	4,010,251	4,010,251
Apparatus & Equipment Acquisition						
CCCFPD	698,390	630,000	630,000	630,000	630,000	630,000
ECCFPD	—	800,000	—	—	270,000	800,000
RHFPD	—	—	402,500	330,000	—	—
Total Acquisition:	698,390	1,430,000	1,032,500	960,000	900,000	1,430,000
Fire Station Construction						
CCCFPD	—	—	—	—	—	—
ECCFPD	500,000	7,000,000	7,000,000	—	—	—
RHFPD	—	—	—	—	—	—
Total Fire Station Construction:	500,000	7,000,000	7,000,000	—	—	—

Figure 143: Non-Recurring Projections—Capital Costs (Part 2)

Revenue/Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Additions to Replacement Reserves						
CCCFPD	—	—	—	—	—	—
ECCFPD	130,930	134,858	138,904	143,071	147,363	151,784
RHFPD	56,200	57,886	59,623	61,411	63,254	65,151
Increases to Replacement Reserves	187,130	192,744	198,526	204,482	210,616	216,935
Other Non-Recurring Payments						
CCCFPD						
Pension Bonds	11,451,540	—	—	—	—	—
Bond Stabilization	2,604,794	—	—	—	—	—
Total Other Non-Recurring:	14,046,334	—	—	—	—	—
Total Non-Recurring Expenses:	19,189,723	12,370,212	12,720,494	5,696,950	5,120,867	5,657,186
Increase (Decrease) to Operating:	(18,479,058)	2,359,075	(11,980,354)	(4,937,716)	(4,342,291)	(4,859,011)
Capital Reserves						
CCCFPD	38,000,000	—	—	—	—	—
ECCFPD	13,000,000	—	—	—	—	—
RHFPD	5,000,000	—	—	—	—	—
Beginning Capital Reserves:	56,000,000	37,520,942	39,880,017	22,899,663	22,961,948	18,619,656
Ending Capital Reserves:	37,520,942	39,880,017	27,899,663	22,961,948	18,619,656	13,760,645

Combined Reserve Balances

It is prudent to review the reserve balance in its totality to understand the impact of the annexation on the combined financial strength of the District. The combined reserve balances project a viable condition for the District and annexed areas for the foreseeable future. The following figure combines the beginning reserve balances with both the annual operating results and the annual net capital improvement expenditures through FY 26/27.

Figure 144: Projected Combined Operational & Capital Reserve Balances

Revenue/Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Beginning Reserves						
CCCFPD	38,000,000	—	—	—	—	—
ECCFPD	13,000,000	—	—	—	—	—
RHFPD	5,000,000	—	—	—	—	—
Total Beginning Reserves:	56,000,000	58,616,136	76,125,900	76,215,278	80,238,068	81,465,562
Combined Net Operations:	21,095,194	15,150,689	12,069,732	8,960,506	5,569,785	2,212,130
Combined Net Capital (Decrease)	(18,479,058)	2,359,075	(11,980,354)	(4,937,716)	(4,342,291)	(4,859,011)
Combined Ending Reserves:	58,616,136	76,125,900	76,215,278	80,238,068	81,465,562	78,818,681

**Section III:
SERVICE REVIEW &
SPHERE OF INFLUENCE UPDATE**

LAFCO REQUIREMENTS

This chapter is prepared pursuant to legislation enacted in 2000 that requires LAFCOs to conduct a comprehensive review of municipal service delivery and update the spheres of influence (SOIs) of all agencies under LAFCO's jurisdiction. This section discusses the legal requirements for preparation of the municipal service review (MSR) and SOI updates. The following sections present the required components for the service review covering the three fire protection districts and proposes SOI updates for each of the districts for the Commission's consideration.

LAFCO Overview

LAFCO regulates, through approval, denial, conditions and modification, boundary changes proposed by public agencies or individuals. It also regulates the extension of public services by cities and special districts outside their jurisdictional boundaries. LAFCO is empowered to initiate updates to the SOIs and proposals involving the dissolution or consolidation of special districts, mergers, establishment of subsidiary districts, and any reorganization including such actions. Otherwise, LAFCO actions must originate as petitions or resolutions from affected voters, landowners, cities, or districts.

Municipal Service Review Legislation

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH) requires LAFCO review and update SOIs every five years, or as necessary, and to review municipal services before updating SOIs. The requirement for service reviews arises from the identified need for a more coordinated and efficient public service structure to support California's anticipated growth. The service review provides LAFCO with a tool to study existing and future public service conditions comprehensively and to evaluate organizational options for accommodating growth, preventing urban sprawl, and ensuring that critical services are provided efficiently.

Government Code §56430 requires LAFCO to conduct a review of municipal services provided in the county by region, sub-region, or other designated geographic area, or by type of service, as appropriate, for the service or services to be reviewed, and prepare a written statement of determinations with respect to each of the following topics:

- Growth and population projections for the affected area.
- The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the SOI.

- Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies (including needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged unincorporated communities within or contiguous to the SOI).
- Financial ability of agencies to provide services.
- Status of, and opportunities for, shared facilities.
- Accountability for community service needs, including governmental structure and operational efficiencies.
- Any other matter related to effective or efficient service delivery, as required by commission policy (none identified for Contra Costa LAFCO).

Municipal Service Review Process

The MSR process does not require LAFCO to initiate changes of organization based on service review findings, only that LAFCO identify potential government structure options. However, LAFCO, other local agencies, and the public may subsequently use the determinations to analyze prospective changes of organization or reorganization or to establish or amend SOIs. Within its legal authorization, LAFCO may act with respect to a recommended change of organization or reorganization on its own initiative (e.g., certain types of consolidations), or in response to a proposal (i.e., initiated by resolution or petition by landowners or registered voters).

Contra Costa LAFCO has conducted two countywide MSRs regarding fire services—the first in 2009 and the second in 2016. The three subject fire districts were reviewed within these reports in addition to other fire providers in the County. This report consists of content to meet the legally mandated MSR requirements for CCCFPD, ECCFPD, and RHFD, which will be the third MSR for these agencies.

The 2009 Fire MSR found that while annexation of the ECCFPD area to CCCFPD was a governance structure option, there were identified barriers to potential consolidation, specifically differences in revenue per capita between the two agencies equating to a lack of adequate funds on the part of ECCFPD to support CCCFPD service levels.²⁷ Annexation of RHFD by CCCFPD was not identified as an option in the 2009 MSR.

The 2016 Fire MSR found that consolidation of ECCFPD with CCCFPD had the potential to degrade the service levels to the CCCFPD service area, and without significant additional new taxes from ECCFPD residents, a financial drain on CCCFPD is likely due to outstanding pension and OPEB liabilities, and due to differentials in pay and benefits that would need to be reconciled.²⁸ Although the report does not specifically analyze the potential of RHFPD consolidation with CCCFPD, it does consider consolidation of West County fire providers, including City of Pinole, RHFD, and CCCFPD, but identifies major historical impediments to implementing this recommendation including political, financial, operational, employee compensation, and training differences, as well as an expressed lack of interest.²⁹

This MSR and attached Annexation Feasibility Study includes analysis on the opportunity and feasibility of CCCFPD annexing the territory currently served by ECCFPD and RHFD and the subsequent dissolution of the two districts, thus forming a consolidated fire and EMS provider. As indicated in the proposed determinations, the annexation scenario has been found to be financially feasible based on multi-year projections and would promote operational efficiencies. The potential for annexation to occur is dependent on concurrence and follow through by the three subject agencies.

MUNICIPAL SERVICE REVIEW

One of the functions of this study is to update the MSRs of CCCFPD, ECCFPD, and RHFD. Required MSR determination factors are listed and addressed, or the corresponding section of the report is provided which addresses the subject.

Growth & Population Projections for the Affected Area

This topic is discussed in Section 1-A: Baseline Agency Evaluations. The 2016 MSR determined that countywide population growth from 2015 through 2020, based on the Association of Bay Area Governments (ABAG) projections, would average 0.7 percent annually, which was approximately the same rate of growth as the County realized from 2010 through 2015. East and West County growth is greater than the countywide average, and Central County exhibits slightly below-average rates. Current ABAG projections from 2020 through 2040 anticipate 22.9% in population growth countywide, with the greatest growth over the 20-year period anticipated in the eastern and western portions of the County, particularly in the cities of Antioch, Brentwood, Concord, El Cerrito, Hercules, Oakley, Pittsburg, Richmond, and Walnut Creek.³⁰

Proposed Determinations

- ABAG projects growth of 22.9% between 2020 and 2040 countywide, with the greatest growth in cities located in each of the three subject fire districts.
- ECCFPD is anticipated to have the highest growth among the three fire districts with significant projected growth of 60.1% in the City of Brentwood and 53.9% in the City of Oakley from 2020 to 2040.
- ECCFPD struggles to create a sustainable six (6) station funding system that will provide adequate services and response times to serve the community properly.
- Growth in RHFPD is anticipated to be highest in the City of Hercules equating to 14.2% over the period through 2040.
- RHFPD cannot meet the increased call load in the communities served with existing personnel and equipment levels without relying on mutual aid and automatic aid agencies.
- Population growth within CCCFPD is projected to be concentrated in the cities of Antioch (26.2%), Concord (38.1%), Pittsburg (25.4%) and Walnut Creek (17.8%) augmented by high growth in the unincorporated areas of 17.6% through 2040.

The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the SOI

LAFCO is required to evaluate disadvantaged unincorporated communities as part of this service review, including the location and characteristics of any such communities.

Senate Bill (SB) 244 (Wolk) was adopted into law in 2011 and took effect on January 1, 2012. Now codified as Government Code §56425(e)5, its purpose is to begin to address the complex legal, financial, and political barriers that contribute to regional inequity and infrastructure deficits within disadvantaged unincorporated communities (DUCs). Identifying and including these communities in the long-range planning of a city or a special district which provides water, wastewater, or fire protection services, is required by Government Codes §56425(e)5.

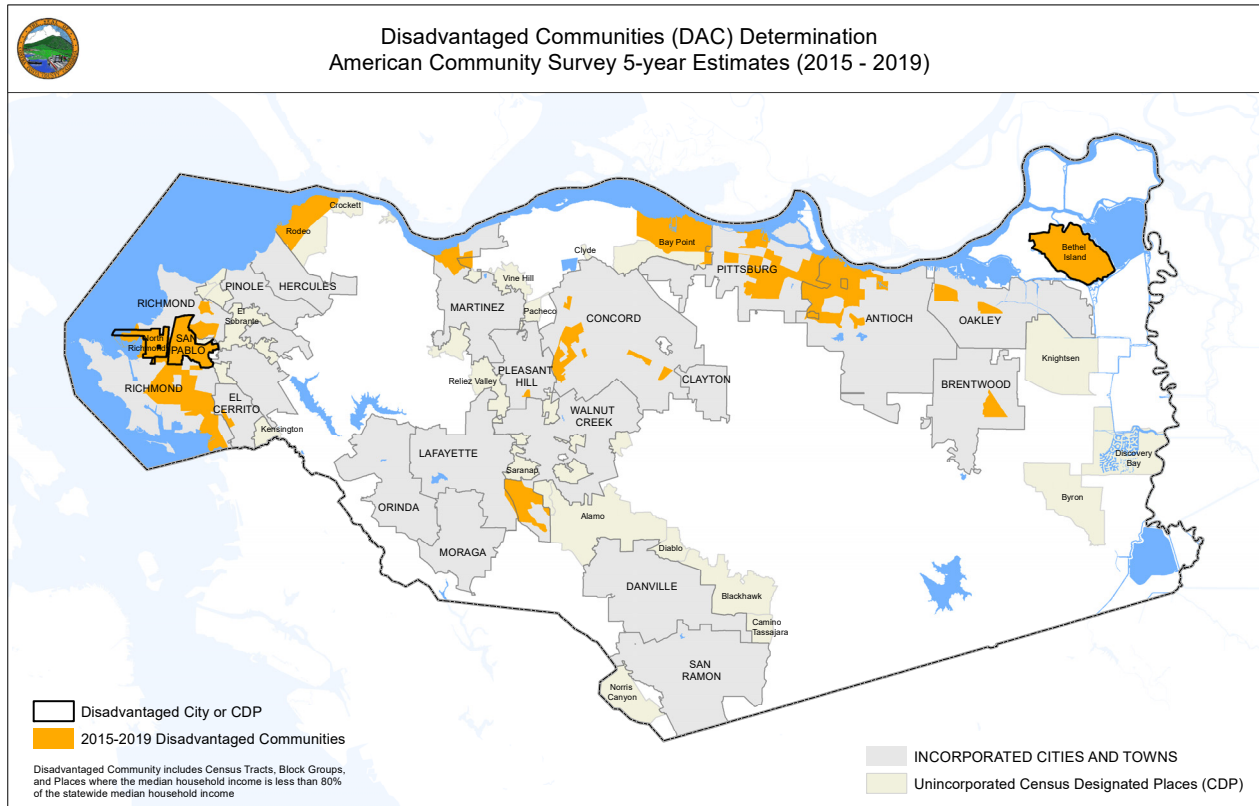
Government Code §56033.5 defines a DUC as 1) all or a portion of a “disadvantaged community” as defined by §79505.5 of the Water Code, and as 2) “inhabited territory” (12 or more registered voters), as defined by §56046, or as determined by Commission policy.

The Cortese-Knox-Hertzberg Local Government Reorganization Act (CKH) requires LAFCO to make determinations regarding DUCs when considering a change of organization, reorganization, SOI expansion, and when conducting Municipal Service Reviews. For any updates to an SOI of a local agency (city or special district) that provides public facilities or services related to sewer, municipal and industrial water, or structural fire protection, LAFCO shall consider and prepare written determinations regarding the present and planned capacity of public facilities and adequacy of public services, and infrastructure needs or deficiencies for any disadvantaged unincorporated community within or contiguous to the SOI of the subject city or special district.

Contra Costa LAFCO does not have additional policies related to DUCs.

Contra Costa LAFCO has identified DUCs throughout the County through the use of the American Community Survey 5-Year Estimates for the time frame 2015–2019. The following Figure shows the locations of the identified disadvantaged communities throughout the County, a majority of which are within the incorporated boundaries of a city and do not meet the definition of a Disadvantaged Community (DAC).

Figure 145: Contra Costa Disadvantaged Unincorporated Communities



Of the DUCs identified that meet the definition outlined above, there is one within ECCFPD's boundaries and SOI, four within CCCFPD's boundaries, and one within RHFD's boundaries as described below:

- The entirety of the Census Designated Place of Bethel Island is considered a DUC and located within ECCFPD. The 2016 MSR identified two DUCs within ECCFPD; however, the community of Knightsen no longer meets the definition of a DUC. The 2016 MSR also noted that the Bethel Island DUC experiences lengthy response times beyond average response times in other areas of ECCFPD's boundaries and well-below national standards for best practices.³¹
- Station 95 (Bethel Island Station) has been replaced by Station 55 and Station 55 will be the primary station to serve the Bethel Island area. It is unlikely that the lengthy response times have been reduced over the last five years.
- A majority of the Bay Point Census Designated Place is considered a DUC located within CCCFPD boundaries. This area is within a mile of CCCFPD's Stations 86 and 87 and thus experiences similar or shorter response times compared to neighboring areas.
- Two unincorporated islands surrounded by the City of Antioch are DUCs within CCCFPD's boundaries. The islands are located within a mile of CCCFPD's Stations 81 and 83.
- An unincorporated area to the east of Martinez is considered a DUC also within CCCFPD. This community is located within one mile of CCCFPD's Station 14.
- Portions of the unincorporated communities of Rodeo and Crockett are identified as a DUC within RHFD's boundaries. The area is within one mile of RHFPD Station 75, and therefore response times for the first-arriving engine company should meet or exceed Best Practice norms.

Proposed Determinations

- The Census Designated Place of Bethel Island continues to be identified as a DUC within ECCFPD's boundaries with extensive response times beyond "Best Practices."
- The four DUCs within CCCFPD's boundaries are within near vicinity of a fire station enabling rapid response times to these communities comparable to other surrounding areas.
- The unincorporated communities of Rodeo and Crockett are identified as a DUC within RHFD's boundaries. Given the location of a station within near vicinity of the community, response times should meet industry standards.

Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

LAFCO is required to come to this determination including needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged unincorporated communities within or contiguous to the SOI.

This subject has been analyzed in the Capital Facilities & Apparatus section of this report, as well as the Historical Service Delivery and Performance section.

Of significance from the 2016 MSR is that the number of stations had declined by 15% from 2009. Specifically, five ECCFPD stations and six CCCFPD stations were closed or used as reserve stations as of 2016, and RHFD was at risk of closing one of its stations at that time as well. Since then, two ECCFPD stations and two CCCFPD stations have reopened.

Proposed Determinations

- Of CCCFPD's 27 fire stations, 7% were listed in "Excellent" condition, 67% in "Good" condition, 15% as "Fair," and 11% in "Poor" condition. The majority of the stations do not have modern seismic protection or meet Americans with Disability Act standards and 44% have sprinkler systems installed.
- CCCFPD rated all of its frontline engines, aerial apparatus, and most other vehicles as in "Good" or "Excellent" condition. The District maintains an adequate inventory of reserve engines, aerial apparatus, squads, and other vehicles.
- ECCFPD rates Station 52's overall condition as "Good," Station 53 as "Excellent," and Station 55 as "Fair. Within each fire station, the various features and facilities were identified as in either "Good" or "Excellent" condition. Security was rated as "Fair" in two of the fire stations.
- A majority of ECCFPD's frontline apparatus were identified as being in "Good" or "Excellent" condition.
- RHFD rated the overall condition of both of its fire stations as "Good" with few infrastructure needs identified.
- RHFD's frontline apparatus generally range in condition from "Excellent" to "Fair" with one command SUV identified as being in "Poor" condition and in need of replacement.
- Fire stations tend to be older among all three fire districts. The average age of the combined stations is 39 years. However, this is based on the original construction dates, and several stations have since had significant remodeling completed.

- Three ECCFPD and two CCCFPD stations remain closed due to inability to fund costly infrastructure needs or inability to finance staffing for the stations.
- ECCFPD has budgeted for only 2 stations remain closed due to inability to finance staffing, the 3rd station (Station 55) is scheduled to open in the upcoming fiscal year FY21/22 with or without annexation.
- Based on Unit Hour Utilization, each of CCCFPD's, ECCFPD's, and RHFD's units are utilized between 0% and 12% of available time, indicating sufficient capacity for existing workload; however, all three agencies indicated that staffing levels are not sufficient to meet existing needs.
- Capacity to serve anticipated future growth and development will depend primarily on adequate financing levels.
- The agencies have fairly comparable dispatch times and turnout times. ECCFPD experiences lengthier travel times than CCCFPD and RHFD. First arriving unit response times from time of dispatch to arrival on scene varies by provider and type of service call—CCCFPD and RHFD average about 9 minutes for a majority of service call types with CCCFPD nearing 7 minutes for fire calls and RHFD averaging over 11 minutes for fire calls. ECCFPD averages between 10 and 11 minutes for all call types.
- Only RHFPD has established a goal for travel time at within 4 minutes or less, 90% of the time. Much of the agencies' service areas are beyond six minutes travel time from stations. However, the areas of greatest incident activity are generally within the six-minute travel coverage area.
- The three fire districts appear to provide adequate services based on response times; however, there are opportunities for improvements. The proposed annexation budget includes plans to staff Station 55 with an engine company and add a staffed ladder truck to Station 52. This will improve travel times and overall response times within ECCFPD's service area, to some degree.
- Of the six DUCs identified within or adjacent to the study area, Bethel Island Census Designated Place, within ECCFPD's boundaries, is the only one that experiences extensive response times beyond "Best Practices" and is in need of enhanced service levels, possibly through significant infrastructure improvements at the presently closed station.

Financial Ability of Agencies to Provide Service

This factor has been analyzed in the Financial Analysis of the Districts section of this report. As of 2016, ECCFPD was facing significant financial challenges forcing the closure of five of its stations since 2009 and resulting in significantly increased response times. The 2016 MSR found that ECCFPD faces a number of significant and some severe challenges related to financing that will require extraordinary efforts to address, including low property tax shares in a majority of the District's tax rate areas, fiscal impact of Contra Costa County Employees' Retirement Association (CCCERA's) reallocation of costs, and voter fatigue and resistance to additional ongoing charges due to impacts of benefit assessments and community facility districts.³²

Since then, circumstances have somewhat improved for ECCFPD as a result of increased property tax revenues. In particular, the reallocation of property tax funding from the Byron Bethany Irrigation District to ECCFPD, beginning in FY 17/18, has provided more than \$800,000 annually to the District.

In 2016, RHFD was also facing a decline in revenues with the end of its SAFER grant and the elimination of its 2014 benefit assessment, which would have resulted in the closure of one of its stations. RHFD's financial outlook was greatly improved when voters approved Measure O, which became effective in FY 17/18. Measure O is a parcel tax of \$222 (FY 19/20) to be used to enhance funding of operations at the District's two fire stations.

Similarly, CCCFPD faced declining revenues associated with the decline in property values and thus property tax income after 2008, combined with increased costs associated with retirement liabilities. A significant increase in property tax revenues over the last four fiscal years has strengthened CCCFPD's financial position.

Proposed Determinations

- Between FY16/17 and FY 19/20, each of the three districts have benefitted from significantly increasing property tax revenues—CCCFPD's increased by 20%, ECCFPD increased by 40%, and RHFD increased by 47%. Property tax revenues in upcoming years are somewhat unpredictable due to the unknown extent of the economic effects of the pandemic; however, enhanced demand for real estate is anticipated to drive continued growth in property values.

- ECCFPD has greatly improved its financial position since 2016, through increased property tax revenue, a reallocation of property tax funds and a Measure H initiative, enabling the scheduled reopening of fire station 55 in FY 21/22. Revenues for the District are anticipated to continue to increase by about 4% annually through FY 25/26, indicating the ability to continue to provide the existing level of service; however, the District will continue to struggle with closure of two stations and constrained staffing levels.
- RHFD's financial outlook has greatly improved over the last four fiscal years with the enhanced revenues from the Measure O parcel tax and increased property tax income. The additional revenues have enabled the District to keep both of its stations open. Property tax revenues are projected to continue to increase by 4% annually and Measure O revenues by 3% annually, indicating sustainable funding sources enabling the District to maintain at least its existing service levels.
- CCCFPD has faced financial constraints in prior years associated with declining property tax revenues and increased pension liabilities. More recently, the area within CCCFPD is experiencing significant growth in both residential as well as commercial developments, resulting in significantly increased property tax revenues and enabling the restaffing of five companies the reopening of three fire stations over the last decade. Property tax revenues are projected to continue to grow approximately 4% annually through FY 25/26.
- Projected combined finances of the three districts for operational and capital expenditures indicate that the annexation of ECCFPD and RHFD by CCCFPD is a financially feasible option. The combined finances of the consolidated agency would allow for expansion of adding two additional three-person companies to be staffed over the following 12 months, construction of new stations, remodel of another station, and acquisition of fire apparatus. This financing structure capitalizes on cost savings resulting from reduced costs of dispatch, eliminated chief positions, and by combining technology infrastructure, fleet maintenance, and other administrative functions.

Status & Opportunities for Shared Facilities

The Opportunities for Annexation section of this report identifies General Partnering Options, which range from various shared resources scenarios to full consolidation of the districts through annexation. The Financial Analysis includes analysis and projections through FY 25/26 for the annexation scenario of ECCFPD and RHFD in the Combined Financials portion.

Proposed Determinations

- While the districts do not practice facility sharing of structures, they do practice resource sharing that enhances efficiency of services offered through shared service agreements and mutual and automatic aid agreements.
- Current resource sharing practices include provision of dispatch services by CCCFPD to ECCFPD and RHFD, IT support provided by the City of Brentwood and CCCFPD, and participation in the Battalion 7 configuration by RHFD and CCCFPD for shared staffing and coordination.
- The report outlines options for shared services beyond existing practices, including advanced auto aid systems, functional consolidation in the possible form of a contract for service or intergovernmental agreement, operational consolidation such as a Joint Powers Authority, or full consolidation through annexation by a successor agency.

Accountability for community service needs, including governmental structure and operational efficiencies

Matters relating to this factor have been addressed in the following sections of this report:

- Descriptions of the Fire Districts
- Financial Analysis
- Management Components
- Staffing and Personnel Management
- Capital Facilities & Apparatus
- Historical Service Delivery & Performance
- Stakeholder Input

Proposed Determinations

- A well-organized and efficiently administered organization has appropriate documentation, policies, and procedures, and ways to effectively address internal and external issues. Based on review of the three districts' planning practices, critical issues reported by each agency, internal and external communication tools used, availability and use of SOGs and policies, recordkeeping and reporting practices, and IT systems in place, each district is considered well-organized.

Potential improvements include adoption of a strategic plan by CCCFPD, update of RHFD's strategic plan, regular updating of RHFD's SOGs, and greater use of community surveys for external communication purposes by all three districts.

- The Annexation Feasibility Study has found that the annexation of ECCFPD and RHFD by CCCFPD is financially feasible and would create cost and operational efficiencies through streamlining of dispatch services, elimination of fire chief positions, and by combining particular functions.

SPHERE OF INFLUENCE UPDATE

In addition to the MSR Update, one of the functions of this report is to update the Sphere of Influence (SOI) for each of the three districts for consistency with the recommended annexation of ECCFPD and RHFD by CCCFPD.

Sphere of Influence Updates

Pursuant to Government Code § 56425, the Commission is charged with developing and updating the Sphere of Influence (SOI) for each city and special district within the county. SOIs must be updated every five years or as necessary. In determining the SOI, LAFCO is required to complete an MSR and adopt the seven determinations previously discussed.

An SOI is a LAFCO-approved plan that designates an agency's probable future boundary and service area. SOIs are planning tools used to provide guidance for individual boundary change proposals and are intended to encourage efficient provision of organized community services and prevent duplication of service delivery. Territory cannot be annexed by LAFCO to a city or a district unless it is within that agency's SOI; consequently, the agency's SOI must be consistent with any application for reorganization to LAFCO. In the case of the three agencies reviewed here, the SOI for CCCFPD must be amended to encompass the entirety of the two districts to be annexed and Zero SOIs must be adopted for RHFD and ECCFPD in order to reflect the anticipation that RHFD and ECCFPD territories will be annexed by CCCFPD and the two agencies dissolved. Contra Costa LAFCO requires that when an SOI amendment is requested, the proponent shall submit documentation to support the determinations the Commission must make pursuant to §56425(a) as outlined in this report.

Additionally, Contra Costa LAFCO has a policy that SOIs generally will not be amended concurrently with an action on the related change of organization or reorganization, meaning the application for an SOI amendment must be processed at a meeting prior to the public hearing when the reorganization is considered. Contra Costa LAFCO's policies also note that a change of organization or reorganization will not be approved solely because an area falls within the SOI of any agency.³³

SOIs are for planning and shaping the logical and orderly development and coordination of local government agencies.

In adopting or amending an SOI, LAFCO must establish the nature, location, and extent of any functions or classes of services provided by existing districts and specify the functions or classes of services provided by those districts. Additionally, LAFCO must make determinations regarding the following:

- Present and planned land uses in the area, including agricultural and open-space lands;
- Present and probable need for public facilities and services in the area;
- Present capacity of public facilities and adequacy of public service that the agency provides or is authorized to provide;
- Existence of any social or economic communities of interest in the area if the Commission determines these are relevant to the agency; and
- Present and probable need for water, wastewater, and structural fire protection facilities and services of any disadvantaged unincorporated communities within the existing SOI.

As a precursor to boundary changes, requests for SOI amendments should address all of the relevant factors of §56668. Such requests should also specify how the policies of the CKH Act will be fostered with respect to the 1) orderly formation of local agencies [§56001] and 2) preservation of open space [§56059] and prime agricultural land [§56064], both within the existing boundaries of the agency and the proposed SOI of the agency [§56377].

Additionally, Contra Costa LAFCO requires that a request to expand an SOI should designate clearly the territory that may be sought for annexation and the anticipated timeframe. By statute, LAFCO must notify affected agencies 21 days before holding the public hearing to consider the SOI and may not update the SOI until after that hearing. The LAFCO Executive Officer must issue a report including recommendations on the SOI amendments and updates under consideration at least five days before the public hearing.

Existing Spheres of Influence

The SOIs of the districts were updated following either the 2009 or 2016 MSRs, which included recommendations for SOI Updates.

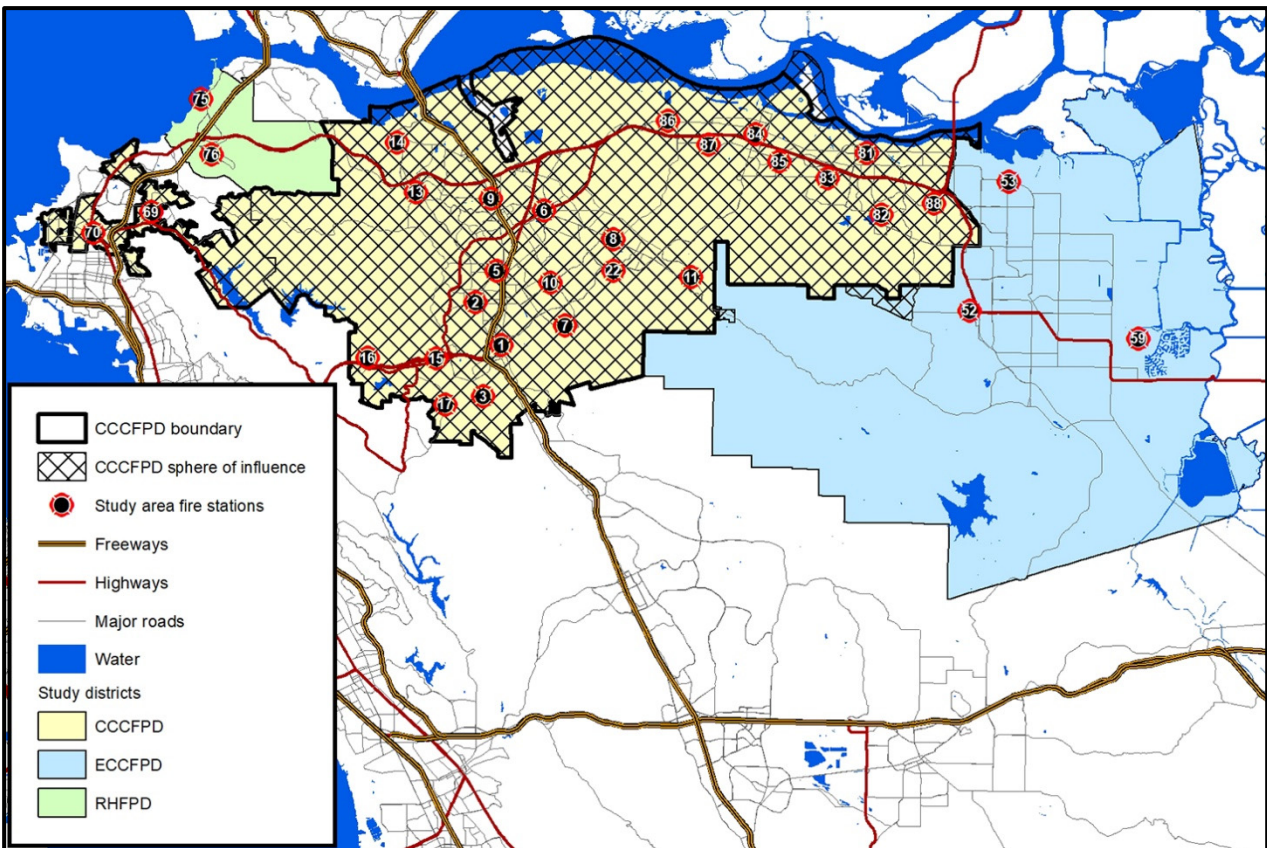
Contra Costa County Fire Protection District

The SOI for CCCFPD was last updated on October 14, 2009. The SOI changes sought to align boundaries with land use development and service responsibilities of the primary service provider; the changes were not associated with major organizational changes (consolidations, etc.).

CCCFPD's SOI extends beyond its boundaries in four areas—the Roddy Ranch area to the east of the City of Clayton, territory just south of the City of Antioch, Winter Island, and the Tesoro Golden Eagle Refinery.

In 2009, LAFCO expanded CCCFPD's SOI to include the Roddy Ranch area just south of the City of Antioch, and removed the area from ECCFPD's SOI; however, no related annexation has been proposed and the area remains in ECCFPD's boundary. Similarly, there exists a small area of overlap just outside the boundaries of the City of Clayton. CCCFPD's boundary and SOI are depicted in the following Figure.

Figure 146: CCCFPD Boundaries & Sphere of Influence

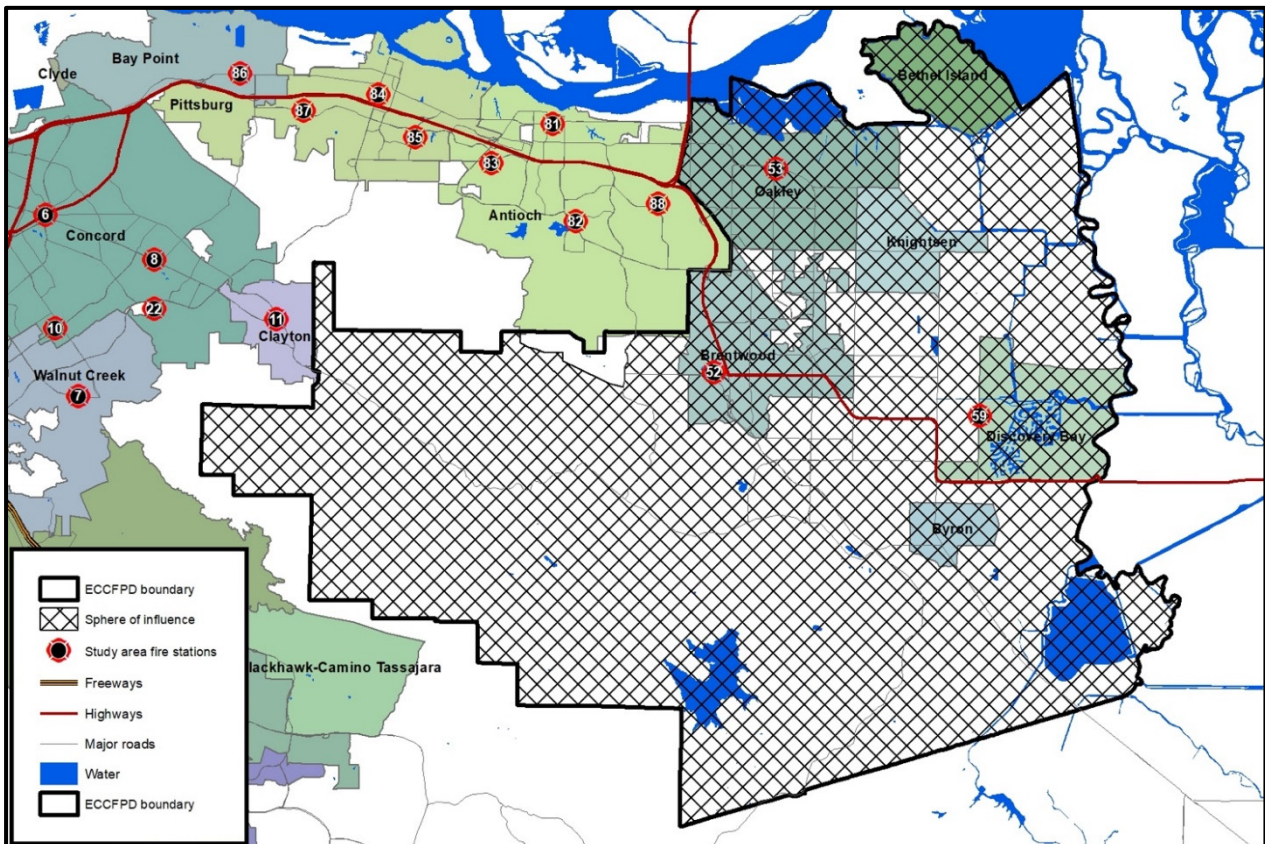


East Contra Costa Fire Protection District

ECCFPD's SOI was last updated on October 12, 2016 as a provisional SOI. The 2016 MSR recommended that the ECCFPD SOI be designated as "provisional," requiring that ECCFPD report back to LAFCO on at least an annual basis to inform LAFCO as to ECCFPD's progress in implementing the recommendations of the MSR, and in meeting the objectives of independent governance, adequacy of services, and long-term financial sustainability. The 2016 SOI Update also mentioned the potential of a Zero SOI indicating that the District would be annexed into another provider; however, there were no prospects for service by another agency at that time.

ECCFPD's SOI is generally coterminous with its boundaries with the exception of the Roddy Ranch area and a small area east of the City of Clayton. As mentioned, the Roddy Ranch area was removed from ECCFPD's SOI and added to CCCFPD's SOI in 2009; however, the area has not yet been annexed by CCCFPD and remains in ECCFPD's boundaries but outside its SOI. ECCFPD's boundary and SOI are depicted in the following figure.

Figure 147: ECCFPD Boundaries & Sphere of Influence

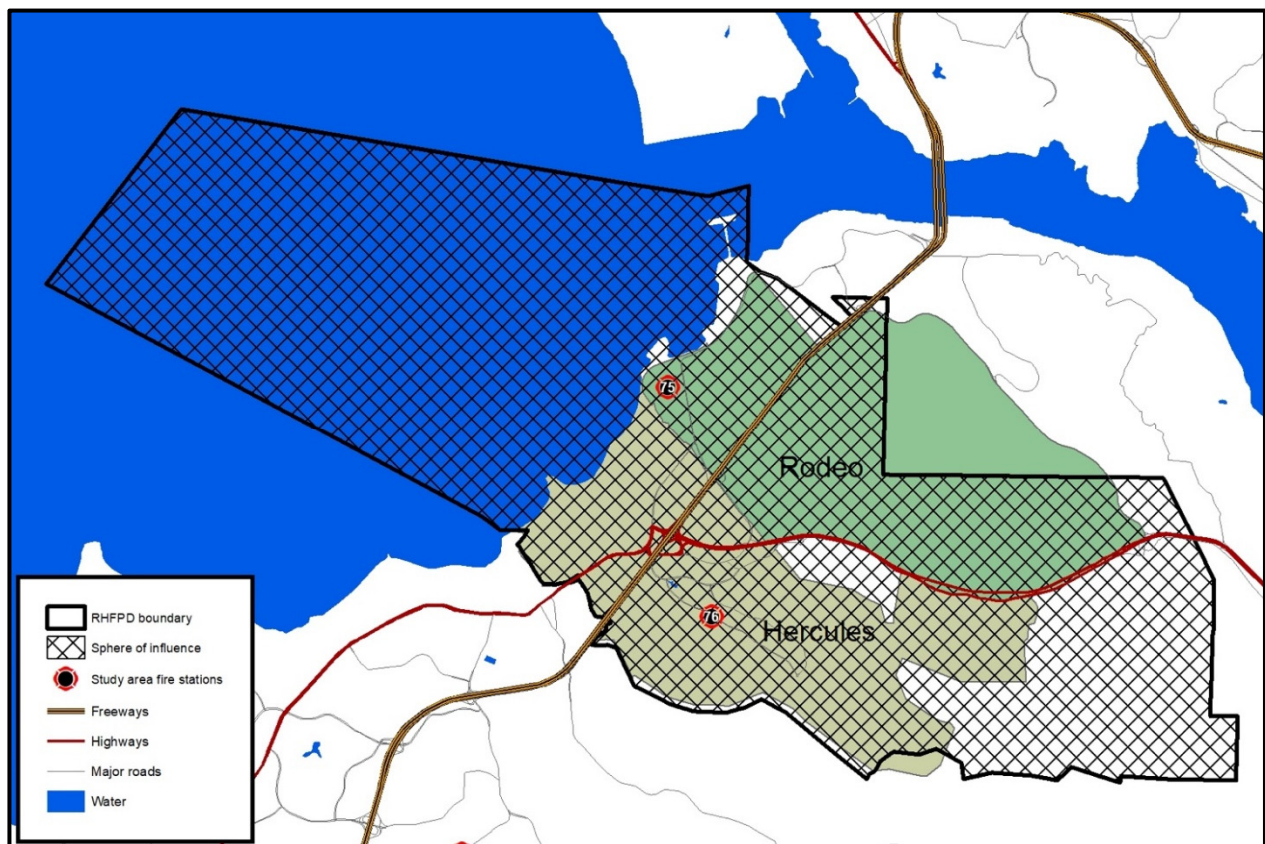


Rodeo-Hercules Fire District

RHFD's SOI was last updated on October 12, 2016 as a provisional SOI. The 2016 MSR recommended that the RHFPD SOI be designated as "provisional," requiring that RHFPD report back to LAFCO on at least an annual basis to inform LAFCO as to RHFPD's progress in implementing the recommendations of the MSR, and in meeting the objectives of adequacy of services and long-term financial sustainability. The 2016 SOI Update also mentioned the potential of a Zero SOI indicating that the district would be annexed into another provider; however, there were no prospects for service by another agency at that time.

RHFD's SOI is coterminous with its boundaries and encompasses a majority of the City of Hercules and the unincorporated community of Rodeo. RHFD's SOI and boundaries extend into the San Francisco Bay; this area in the Bay was considered for detachment as part of the options noted in the 2009 MSR. The 2009 MSR also considered detachment of the refinery area. These boundaries and SOI changes have not occurred. RHFD's boundary and SOI are depicted in the following figure.

Figure 148: RHFPD Boundaries & Sphere of Influence



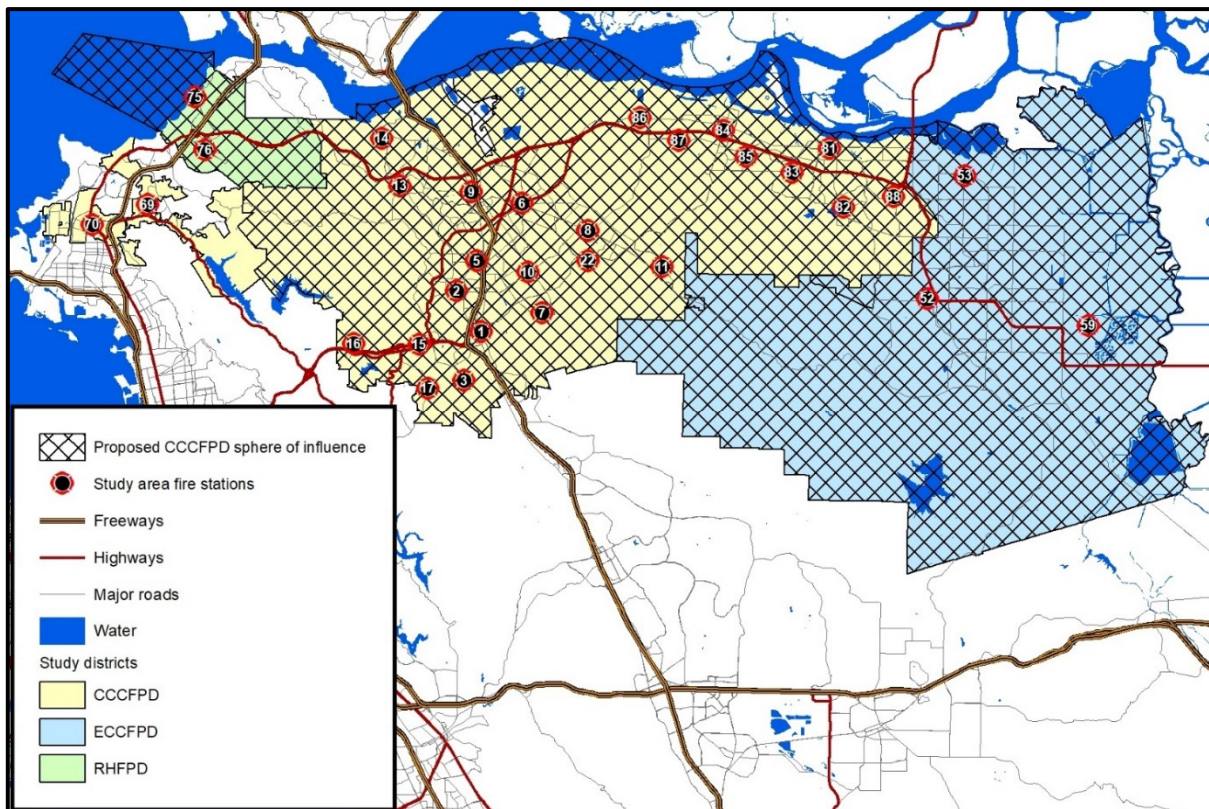
Proposed Sphere of Influence Update

The SOI is used to indicate an anticipated boundary change or change of organization by LAFCO. Every subject agency's SOI must be consistent with any application to LAFCO for consideration. Consequently, should CCCFPD, ECCFPD, and RHFD choose to pursue the annexation scenario, an SOI Update will be required indicating the anticipated reorganization.

The proposed SOI Updates consist of the following and are shown in the following figure:

- Expand CCCFPD's SOI to include the entirety of RHFD's and ECCFPD's boundaries. The portion of RHFD's boundaries that extends into the San Francisco Bay could be excluded from the SOI expansion, indicating that the annexation would not include the territory in the Bay, if desired by the subject agencies.
- Adopt a Zero SOI for RHFD, indicating the anticipation that another agency will take on services within RHFD's boundaries and the District will be dissolved.
- Adopt a Zero SOI for ECCFPD, indicating the anticipation that another agency will take on services within ECCFPD's boundaries and the District will be dissolved.

Figure 149: Proposed Spheres of Influence



Draft Sphere of Influence Determinations

The following draft determinations are proposed for adoption by LAFCO to meet the requirements for updating the SOIs of CCCFPD, ECCFPD, and RHFD.

The nature, location, and extent of any functions or classes of services

Provided (districts only)

- The nature, location, and extent of services provided by the three districts have not changed significantly since the 2016 SOI Update.

Present and planned land uses in the area, including agricultural and open-space lands

- The present and planned land uses within the boundaries of each of the three districts has not changed since the 2016 MSR. The three districts continue to encompass a wide variety of land use types given the expansive nature of three districts. While there has been significant growth and development in the three districts over the last five years, there have been no substantial General Plan changes that would affect zoning and/or land use in the County. The only city that has updated the land use portions of their respective General Plans is the City of Clayton within CCCFPD's boundaries.
- Contra Costa County is undergoing a General Plan Update, that has the potential to adjust land uses within the unincorporated portions of the County. Several cities have initiated 20-year updates of their General Plans, which could similarly alter planned land uses throughout the study area.

Present and probable need for public facilities and services in the area

- Growth within all three districts is anticipated to result in an increased demand for fire and EMS from the subject agencies, which will likely necessitate enhanced resources to maintain present service levels.

Present capacity of public facilities and adequacy of public service that the agency provides or is authorized to provide

- Three ECCFPD and two CCCFPD stations remain closed due to inability to fund costly infrastructure needs or inability to finance staffing for the stations.
- ECCFPD has budgeted for two stations to remain closed due to inability to finance staffing. The third station (Station 55) is scheduled to open in the upcoming fiscal year (FY21/22) with or without reorganization.

- Capacity to serve anticipated future growth and development will depend primarily on adequate financing levels.
- The agencies have fairly comparable dispatch times and turnout times. ECCFPD experiences lengthier travel times than CCCFPD and RHFD. First arriving unit response times from time of dispatch to arrival on scene varies by provider and type of service call-CCCFPD and RHFD average about 9 minutes for a majority of service call types with CCCFPD nearing 7 minutes for fire calls and RHFD averaging over 11 minutes for fire calls. ECCFPD averages between 10 and 11 minutes for all call types.
- Only RHFPD has established a goal for travel time at within 4 minutes or less, 90% of the time. Much of the agencies' service areas are beyond six minutes travel time from stations. However, the areas of greatest incident activity are generally within the six-minute travel coverage area.
- The three fire districts appear to provide adequate services based on response times; however, there are opportunities for improvements. The proposed annexation budget includes plans to staff Station 55 with an engine company and add a staffed ladder truck to Station 52. This will improve travel times, and overall response times within ECCFPD's service area, to some degree.

Existence of any social or economic communities of interest in the area if the Commission determines these are relevant to the agency

- Social or economic communities of interest have not changed since the 2016 report and continue to be the various cities and unincorporated communities within CCCFPD, ECCFPD, and RHFD.
- There is a present and probable need for water, wastewater, and structural fire protection facilities and services of any disadvantaged unincorporated communities within the existing SOI.
- Of the six DUCs identified within or adjacent to the study area, Bethel Island Census Designated Place, within ECCFPD's boundaries, is the only one that experiences extensive response times beyond "Best Practices" and is in need of enhanced service levels, possibly through significant infrastructure improvements at the presently closed station.

Section IV: FINDINGS & RECOMMENDATIONS

FINDINGS

Contra Costa County FPD

- CCCFPD is a large, well-funded all-risk fire district.
- CCCFPD has a stable and growing revenue stream.
- CCCFPD's processes for funding facility remodeling and new fire stations will streamline the process of improvements throughout the annexed service areas.
- CCCFPD has a unique bilingual education program for the juvenile fire starter team. This program would translate well to ECCFPD and RHFPD.
- CCCFPD has previously experienced a significant reduction in funding due to an economic downturn, resulting in a decrease in staffing and the closure of fire stations.

East Contra Costa FPD

- ECCFPD has previously experienced a significant reduction in funding due to an economic downturn, resulting in a decrease in staffing and the closure of fire stations.
- ECCFPD cannot meet the increased call load in the communities served with existing personnel and equipment levels without relying on mutual aid and automatic aid agencies.
- ECCCFD struggles to create a sustainable funding system that will provide adequate services and response times to serve the communities properly. ECCFPD is experiencing some level of revenue growth.
- ECCFPD is projected to receive over \$500,000 annually from developer fee revenues.
- All existing ECCFPD personnel will be absorbed into CCCFPD. A potential annexation would not result in layoffs.
- ECCFPD's FY 20/21 budget includes funds to staff fire station 55
- The combined organization contemplates staffing of a ladder company at an existing station.
- Annexation will result in the implementation of Advanced Life Support (Paramedic) level service on ECCFPD apparatus.

Rodeo-Hercules FPD

- RHFPD is a smaller district that has seen growth in property value but has experienced a projected (budgeted) decline in property tax revenues.
- Property tax revenues continue to be negatively impacted by the dissolution of redevelopment agencies and the continued property development within City of Hercules Redevelopment Area. This impact will continue until 2025 when the Recognized Obligation Payments of the redevelopment agency and its successor are extinguished.³⁴
- RHFPD cannot meet the increased call load in the communities served with existing personnel and equipment levels without relying on mutual aid and automatic aid agencies.
- RHFPD Measure O and the 1998 Benefit Assessment District funds will continue to be committed to funding services within the RHFPD service area.
- RHFPD and CCCFPD share battalion chief coverage as Battalion 7. RHFPD has minimal administrative support.
- All existing RHFPD personnel that desire to do so will be absorbed into CCCFPD. The potential annexations will not result in layoffs.

All Agencies

- All three districts currently participate in a Regional Communications center. An opportunity exists to reduce operating and administrative costs through the proposed annexation while increasing service levels significantly.
- There are no deployment-related impediments to annexation.
- Combined projected recurring revenues are sufficient to provide for combined currently projected recurring expenses and anticipated expansion of services in CCCFPD and ECCFPD through the fiscal projection period identified in the project scope of work.
- Funding exists through existing reserves and future development fees, and other non-recurring receipts to provide for fire station construction, apparatus acquisition, and debt service on existing obligations on a combined basis through the fiscal projection period identified in the project scope of work.
- Annexation will enhance and standardize training throughout the area.
- Annexation is projected to result in cost savings due to combining technology infrastructure, fleet maintenance, and other administrative functions.

- Command and control of multi-company incidents will be improved as a result of annexation.
- Annexation will enhance and standardize public education outreach.
- Each fire district has a comprehensive and extensive training program; however, training emphasis was inconsistent between organizations.
- There appears to be minimal differences between the three organizations relating to specific code enforcement.
- Through existing reserves and future development fees, funding and other non-recurring receipts exists, to provide for fire station construction, apparatus acquisition, and debt service on existing obligations on a combined basis through the fiscal projection period identified in the project scope of work.
- Combined projected reserve balances never fall below 35% (\$76,000,000) through the fiscal projection period identified in the project scope of work.

Other

On November 3, 2020, voters throughout the County approved Measure X authorizing an additional countywide sales tax of 0.5% for 20 years. Per the measure's language, the intent was to support essential services, including emergency response and others.

PROPOSED RECOMMENDATIONS

Recommendation 1: ECCFPD, RHFPD, and CCCFPD should move forward with annexation.

Based on the analysis, annexation will increase both the effectiveness and efficiency of the service delivery system and the efficiency of the administrative functions.

Estimated cost to implement: Legal and administrative costs related to the documentation of the annexations, costs associated with the required LAFCO study and application process, costs associated with rebranding equipment, if desired. Anticipated that a significant portion of the implementation costs would be offset by annual savings resulting from the annexation.

Figure 150: Contra Costa LAFCO Application Processing Costs (2021)

Process	Cost
Reorganization Application (two or more changes of organization if included in one application)—includes annexation of two districts and dissolution of both districts	\$7,836
SOI Update —Concurrent review of corresponding SOI amendments with a change of organization or reorganization	\$2,060
CEQA —as the applicant, the district will be the Lead Agency and will be required to prepare CEQA Categorical Exemption documentation	No fee
CEQA Filing	\$50
County Surveyor Deposit —for map review	\$1,200
Maps and Legal Descriptions —to be completed by a certified surveyor	TBD ¹
State Board of Equalization Fees —dependent on actions & acreage	\$7,000
Election Costs —if an election is required based on protest proceedings	TBD ²

¹To be determined by surveyor. ²To be determined by County Elections.

Recommendation 2: Municipal Services Review Update

It is recommended that LAFCO review and adopt the proposed determinations associated with this MSR update at a public hearing.

Estimated cost to implement: There is no additional cost associated with LAFCO processing an MSR update that has been drafted and submitted for consideration.

Recommendation 3: Adopt Resolutions for Reorganization

Should the three districts decide to pursue annexation, the districts should adopt substantially similar resolutions initiating the reorganization, including provision for Sphere of Influence amendments of all three districts as outlined in the Sphere of Influence Update to meet LAFCO requirements that SOIs be consistent for any change of organization.

Estimated cost to implement: *Costs are limited to any additional staff time associated with drafting and agendaing of the resolution and public notice requirements for the meeting where the resolution will be considered.*

Recommendation 4: ECCFPD, RHFD & CCCFPD Coordinate with LAFCO

Should the districts choose to move forward with an application for reorganization to LAFCO, then it is recommended that the agencies coordinate with LAFCO to process the necessary SOI update at a public hearing prior to consideration of the reorganization application, as required by LAFCO policy.

Estimated cost to implement: *Administrative staff time to act as liaison with LAFCO throughout application process.*

Recommendation 5: LAFCO Update Sphere of Influence

LAFCO consider and adopt the proposed SOI Update and associated determinations at a public hearing, consisting of Zero SOIs for ECCFPD and RHFD and an expansion of CCCFPD's SOI to include the territory of the districts to be annexed.

Estimated cost to implement: *Administrative staff time to complete and file an application with LAFCO and associated LAFCO filing fees.*

Recommendation 6: Standardize training programs specific to special team response.

Station and apparatus crews will need to be combined with individuals from separate organizations. It will be the responsibility of the Training Division to ensure that all firefighters meet minimum expectations. Individuals from ECCFPD and RHFD will need focused training and certifications to support existing special assignments.

Estimated Cost to Implement: With the addition of three Training/Safety Officers, the training program should be able to balance the technical rescue capabilities of all three organizations.

Recommendation 7: Develop a balanced training program.

A combined organization will need to determine a training philosophy and develop a standardized program that meets the community's needs.

Estimated Cost to Implement: *Staff time necessary to balance the training schedule.*

Recommendation 8: Increase multi-company training for the annexed areas.

With the potential addition of two new areas to the CCCFPD system, the combined system should emphasize additional multi-company training.

Estimated Cost to Implement: *Additional training will require staffing costs associated with the number of training sessions provided.*

Recommendation 9: Increase training and response capabilities for hazmat incidents.

Due to the large oil refineries in the response areas, a combined organization will need to continue focused training and response to potentially significant hazmat incidents.

Estimated Cost to Implement: Training staff time and possible overtime.

Recommendation 10: Develop a standardized public education program throughout the newly annexed areas.

The development of an outreach program that can be documented and measured for effectiveness is essential to quality public outreach. A combined organization should develop a standardized public education program.

Estimated Cost to Implement: Development of metrics for measured effectiveness would have minimal additional cost.

Recommendation 11: Develop a company inspection program for high occupancy/high-risk facilities.

AP Triton recommends on-duty engine companies perform building familiarization and pre-plan familiarization. This function supports firefighter safety as well as improved fire ground operations.

Estimated Cost to Implement: *Utilization of on-duty crews translates to minimum additional cost.*

Recommendation 12: Reopen ECCFPD Station 55 to improve service.

Funding is increasing with increased tax values and special assessments and should be sufficient to complete and staff Station 55.

Estimated cost to implement: Employee costs, station maintenance costs and equipment costs as indicated in the following figure.

Figure 151: Costs Associated with Re-Opening ECCFPD Station 55 (FY 21/22–FY 26/27)

Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Operations						
ECCFPD Station 55						
Fire Captain (3)	841,500	925,650	990,446	1,059,777	1,133,961	1,213,338
Fire Engineer (3)	759,000	834,900	893,343	955,877	1,022,788	1,094,384
Firefighter/Paramedic (3)	543,000	597,300	639,111	683,849	731,718	782,938
Overtime	278,655	306,521	327,977	350,935	375,501	401,786
Total Salaries & Benefits	2,422,155	2,664,371	2,850,877	3,050,438	3,263,968	3,492,446
Station Operations	50,000	51,500	53,045	54,636	56,275	57,964
Costs to Re-Open:	2,472,155	2,715,871	2,903,922	3,105,074	3,320,243	3,550,410

Recommendation 13: Acquire and staff a Ladder Company within ECCFPD’s service area.

Estimated cost to implement: Employee and equipment costs as indicated in the following.

Figure 152: Costs Associated with Staffing a Ladder Company (FY 21/22–FY 26/27)

Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Operations						
Staffing Ladder 52						
Fire Captain (3)	841,500	925,650	990,446	1,059,777	1,133,961	1,213,338
Fire Engineer (3)	759,000	834,900	893,343	955,877	1,022,788	1,094,384
Firefighter/Paramedic (3)	543,000	597,300	639,111	683,849	731,718	782,938
Overtime	278,655	306,521	327,977	350,935	375,501	401,786
Total Salaries & Benefits	2,422,155	2,664,371	2,850,877	3,050,438	3,263,968	3,492,446
Apparatus Operating & Maintenance Costs	50,000	51,500	53,045	54,636	56,275	57,964
Costs to Staff Ladder 52:	2,472,155	2,715,871	2,903,922	3,105,074	3,320,243	3,550,410

Recommendation 14: Reopen CCCFPD Station 4.

The deployment modeling has identified a gap in the area that would be served by Fire Station 4.

Estimated cost to implement: Employee costs, station maintenance costs and equipment costs as indicated in the following figure.

Figure 153: Costs Associated with Re-Opening CCCFPD Station 4 (FY 21/22–FY 26/27)

Expenses	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27
Operations						
CCCFPD Station 4						
Fire Captain (3)	—	925,650	990,446	1,059,777	1,133,961	1,213,338
Fire Engineer (3)	—	834,900	893,343	955,877	1,022,788	1,094,384
Firefighter/Paramedic (3)	—	597,300	639,111	683,849	731,718	782,938
Overtime	—	306,521	327,977	350,935	375,501	401,786
Total Salaries & Benefits:	—	2,664,371	2,850,877	3,050,438	3,263,968	3,492,446
Station Operations	—	51,500	53,045	54,636	56,275	57,964
Costs to Re-Open:	—	2,715,871	2,903,922	3,105,074	3,320,243	3,550,410

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