

19. CONTRA COSTA COUNTY FIRE PROTECTION DISTRICT

19.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

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19.2 JURISDICTION PROFILE

19.2.1 Overview

Contra Costa County Fire Protection District (CCCFPD) provides fire prevention, suppression, and emergency medical response for advanced and basic life support to nine cities and much of the unincorporated area in the central and western portions of Contra Costa County. CCCFPD was formed on December 29, 1964 as a county-dependent district governed by the Contra Costa County Board of Supervisors. The principal act that governs the District is the Fire Protection District Law of 1987 (California). Since its inception, CCCFPD has consolidated with several other fire districts with the most recent significant consolidation occurring in 1994. There were some subsequent detachments of portions of CCCFPD between 1997 and 2001, but since 2001 CCCFPD's service area has remained the same.

The District currently serves a population of approximately 600,000 covering a land area of approximately 300 square miles. The Fire District boundaries encompass the western, central and northern portions of Contra Costa County, extending from the City of Antioch in the east to the eastern boundary of the City of Richmond in the west, and as far south as the northern boundary of the City of Moraga and the City of Danville.

As of 2016, the fire district experienced a 14 percent increase in call volume since 2010, and this trend is expected to continue. Approximately 66 percent of the calls are for Emergency Medical Services (EMS). According to the Association of Bay Area Governments (ABAG) the projected growth rate from 2008 to 2030 is 16 percent. The largest area (approximately 5,000 acres) of future growth will be in the central portion of the county that was once part of the Concord Naval Weapons Station (CNWS). The planned development of the CNWS site will result in a significant increase in population density that will require an expansion of fire and emergency medical service resources to accommodate the increase in call volume. Other planned developments in the eastern portion of the fire district will necessitate additional fire and emergency medical resources to handle population growth, as well as mitigate emergency response times.

The District participates in the Public Protection Class Rating System and currently has a rating of 3 in the urbanized areas, and an 8 in the more rural portions of the district.

The Fire District Board of Directors assumes responsibility for the adoption of this plan; Deputy Fire Chief will oversee its implementation.

19.2.2 Assets

Table 19-1 summarizes the critical assets of the district and their value.

Table 19-1. Special Purpose District Assets	
Asset	Value
Property	
Vacant Land- 48 acres	\$6,500,000
Critical Infrastructure and Equipment	
Fire Apparatus	\$43,936,592
Response Equipment	\$8,594,400
Total:	\$52,530,992
Critical Facilities	
Fire Stations	\$44,127,655
Dispatch Center	\$2,288,667
Administration offices	\$3,261,553
Total:	\$49,677,875

19.3 CAPABILITY ASSESSMENT

19.3.1 Planning and Regulatory Capabilities

Jurisdictions develop plans and programs and implement rules and regulations to protect and serve residents. When effectively prepared and administered, these plans, programs and regulations can support the implementation of mitigation actions. The following existing codes, ordinances, policies, programs or plans are applicable to this hazard mitigation plan:

- **California and US Environmental Protection Agencies**—Develops regulations relative to pollution, and hazardous waste
- **California Code of Regulations**—Contains the regulations giving authority for the enforcement of State Fire Marshal (SFM) Regulations to the Fire District. The District enforces regulations from Title 19, division 1, and all parts of Title 24 as adopted by the SFM.
- **California Environmental Quality Act (CEQA)**—The District participates in the CEQA process as a reviewer of all development projects
- **California Building Code, Chapter 7a**—The regulation governing the building of structures in the Wildland-Urban Interface. Adopted as part of the State adoption of Title 24 CCR by the SFM and the California Building Standards Commission
- **Contra Costa County Ordinance 2016-23 (adopting of Fire Code)**—Adopted in October 2016 for the enforcement starting January 1, 2017.

19.3.2 Fiscal, Administrative and Technical Capabilities

Fiscal capability is an indicator of a jurisdiction's ability to fulfill the financial needs associated with hazard mitigation projects. An assessment of fiscal capabilities is presented in Table 19-2. Administrative and technical capabilities represent a jurisdiction's staffing resources for carrying out the mitigation strategy. An assessment of administrative and technical capabilities is presented in Table 19-3.

Financial Resource	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Federal Grant Programs	Yes
Other	Yes (Community Facilities Districts, Mitigation Fees)

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Fire Prevention, Engineering Division
Engineers or professionals trained in building or infrastructure construction practices	Yes	Fire Prevention, Engineering Division
Planners or engineers with an understanding of natural hazards	Yes	Fire Prevention, Engineering and Code Enforcement Divisions
Staff with training in benefit/cost analysis	Yes	Fire Administration
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	IT
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Operations
Grant writers	Yes	Fire Operations
Other	No	

19.3.3 Education and Outreach Capabilities

Outreach and education capability identifies the connection between government and community members, which opens a dialogue needed for a more resilient community. An assessment of education and outreach capabilities is presented in Table 19-4.

Table 19-4. Education and Outreach

Criterion	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe	Yes Wildfire Mitigation, Fire Prevention
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe	Yes Posting information about risk reduction to several social media platforms
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify	No N/A
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe	Yes CCCYPD participates in the Diablo Fire Safe Council planning and outreach efforts primarily in the central and western portions of the fire district.
Do you have any established warning systems for hazard events? • If yes, please briefly describe	Yes Contra Costa County Community Warning System, Social Media, and Website

19.3.4 Adaptive Capacity for Climate Change

Given the uncertainties associated with how hazard risk may change with a changing climate, a jurisdiction’s ability to track such changes and adapt as needed is an important component of the mitigation strategy. Table 19-5 summarizes the District’s adaptive capacity for climate change.

19.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The information on hazards, risk, vulnerability and mitigation contained in this hazard mitigation plan is based on the best available data. Plan integration is the incorporation of this information into other relevant planning mechanisms, such as general planning and capital facilities planning. It includes the integration of natural hazard information and mitigation policies, principles and actions into local planning mechanisms and vice versa. Additionally, plan integration is achieved through the involvement of key staff and community officials in collaboratively planning for hazard mitigation.

19.4.1 Existing Integration

In the performance period since adoption of the previous hazard mitigation plan, the District made progress on integrating hazard mitigation goals, objectives and actions into other planning initiatives. The following plans and programs currently integrate components of the hazard mitigation strategy:

- **California Building Code, Chapter 7a**—Standards intended to prevent ignition of structures from wildland fire exposure. These building standards relate to roof assemblies and materials, windows, siding, decks and eave vents all of which are prone to ignition from burning embers.
- **Contra Costa County Ordinance 2016-23**—Under Chapter 3 (General Precautions Against Fires), it provides for landscaping/vegetation management requirements to reduce and/or prevent the spread of wildland fires.
- **CCCYPD Capital Improvement Plan**—Provides the plan for improvement and construction of stations and other district facilities.

Resources listed in Section 19.10 were used to provide information on hazards and the jurisdiction’s capabilities.

Table 19-5. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comments/Additional Information: Specifically related to drought impacts, and resulting wildfire hazards</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comments/Additional Information: By utilization of National, State and Local resources for drought and wildfire hazards</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comments/Additional Information: Wildfire Prevention is a well-established program within the district</i>	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comments/Additional Information: No regulatory ability to affect carbon emissions.</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comments/Additional Information: Generally handled by cities, not the district</i>	Low
Participation in regional groups addressing climate risks <i>Comments/Additional Information: Indirectly through groups dealing with drought and wildfire issues</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comments/Additional Information: No authority</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comments/Additional Information: No authority</i>	Low
Identified strategies for adaptation to impacts <i>Comments/Additional Information: Response changes based on potential impacts for specific hazard increases</i>	Medium
Champions for climate action in local government departments <i>Comments/Additional Information: Little ability exists for response agencies</i>	Low
Political support for implementing climate change adaptation strategies <i>Comments/Additional Information: None provided</i>	Medium
Financial resources devoted to climate change adaptation <i>Comments/Additional Information: Impacts are to response and fire prevention, no funding is specifically allocated for climate change adaptation as those are already existing programs</i>	Low
Local authority over sectors likely to be negative impacted <i>Comments/Additional Information: Authority over building in areas subject to climate impacts</i>	Medium
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comments/Additional Information: None provided</i>	Low
Local residents support of adaptation efforts <i>Comments/Additional Information: None provided</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comments/Additional Information: None provided</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comments/Additional Information: None provided</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comments/Additional Information: None provided</i>	Low

- a. High = The capacity exists and is in use; Medium = The capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

19.4.2 Opportunities for Future Integration

As this hazard mitigation plan is implemented, the Contra Costa County Fire Protection District will use information from the plan as the best available science and data on natural hazards. The capability assessment presented in this annex identifies codes, plans and programs that provide opportunities for integration. The area-wide and local action plans developed for this hazard mitigation plan include actions related to plan integration, and progress on these actions will be reported through the progress reporting process described in Volume 1. New opportunities for integration also will be identified as part of the annual progress report. The capability assessment identified the following plans and programs that do not currently integrate goals or recommendations of the hazard mitigation plan but provide opportunities to do so in the future:

- **Hazardous Materials Response Team**—The district has received a grant to fund equipment and response capability/education to staff a hazardous materials response team. This will address needs related to hazardous materials releases, as well as terrorism response.

19.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 19-6 lists past occurrences of natural hazards for which specific damage was recorded in the Contra Costa County Fire Protection District. Other hazard events that broadly affected the entire planning area, including the Contra Costa County Fire Protection District, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

19.6 JURISDICTION-SPECIFIC VULNERABILITIES

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. Noted vulnerabilities within the district include the following:

- All fire stations and urbanized areas are within an active seismic zone. Because of the size of the district, a severe earthquake may prolong response times from other areas within the district due to transportation infrastructure disruptions.
- The hills throughout the district are subject to severe wildfire risk, particularly on the west side of the central part of the district. Drought has exacerbated the problem, and will continue to do so with the effects of climate change.
- Several hilly areas within the district are subject to landslides.

19.7 HAZARD RISK RANKING

Table 19-7 presents a local ranking for the Contra Costa County Fire Protection District of all hazards of concern for which Volume 1 of this hazard mitigation plan provides complete risk assessments. This ranking summarizes how hazards vary for this jurisdiction. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy.

19.8 STATUS OF PREVIOUS PLAN ACTIONS

Table 19-8 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 19-6. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Damage Assessment
Wildfire	NA	6/9/16	\$300,000
Wildfire	NA	3/20/14	200,000
Wildfire	NA	7/7/15	100,000
Wildfire	NA	6/24/15	\$400,000
Wildfire	NA	7/1/13	\$350,000
Wildfire	NA	7/12/16	\$200,000
Wildfire	NA	6/25/16	600,000
Wildfire	NA	6/11/2010	\$100,000
Wildfire	NA	9/14/2011	\$15,000
Wildfire	NA	6/27/2012	\$40,000
Wildfire	NA	8/16/12	\$60,000
Wildfire	NA	8/5/2009	\$10,000
Wind	NA	12/25/2008	\$13,500
Wind	NA	12/15/2008	\$3,000
Flood	NA	1/1/2006	\$22,000,000
Flood	FEMA-1628	12/31/2005	\$22,000,000
Wildfire	NA	6/20/2004	\$500,000
Wind	NA	11/7/2002	\$200,000
Wind	NA	12/18/2000	\$550,000
Wind	NA	11/24/2000	\$700,000
Flood	NA	2/14/2000	\$100,000
Wind	NA	12/22/1999	\$62,500
Wind	NA	2/9/1999	\$200,000
Severe Weather	NA	12/12/1995	\$6,000,000
Wind	NA	11/14/1993	\$62,500
Wind	NA	2/19/1993	\$50,000
Severe Weather	NA	12/25/1990	\$86,206
Flood	NA	5/28/1990	\$500,000
Severe Weather	NA	12/3/1983	\$312,500
Wind	NA	12/22/1982	\$1,041,666
Flood, Severe Weather	NA	1/3/1982	\$7,142,857

Note: CCCFPD responds to an average of approximately 285 wildland fires per year and many of those threaten residential structures

Table 19-7. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe weather	18	Medium
3	Wildfire	6	Low
3	Flood	6	Low
3	Drought	6	Low
4	Landslide	2	Low
5	Dam and levee failure	1	Low
6	Sea level rise	0	None
6	Tsunami	0	None

Table 19-8. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Enter Action #
<p>CCCYPD-1—Continue with installation of emergency generators at fire stations</p> <p><i>Comment: Most stations have been outfitted. There are new stations that will be constructed in the next 5 years that will likely be outfitted with generators</i></p>			X	CCCYPD-8
<p>CCCYPD-2—Structural seismic retrofit of fire facilities</p> <p><i>Comment: Retrofit will occur as stations are remodeled as per Title 24 CCR. All new facilities will meet current standards.</i></p>			X	CCCYPD-9
<p>CCCYPD—Adoption of Fire Hazard Maps – “Very High Fire Hazard Severity Zone” (VHFHSZ) maps currently under development</p> <p><i>Comment: Maps adopted for Lafayette. The State maps have not been updated since the original plan. If those maps are updated, we may pursue adoption of those maps for areas served by CCCYPD.</i></p>	X			
<p>CCCYPD-4—Enhance/Improve County Code language and enforcement including: County Building Codes to increase compliance with SB 1369 Defensible Space and Other Fire Safe Requirements in the unincorporated county areas</p> <p><i>Comment: Adopted by reference in ordinance 2016-23, and are contained in Title 24 parts 2, 2.5, and 9.</i></p>	X			
<p>CCCYPD-5—Improve, expand and develop new programs that increase awareness of and reduce risk to wildfires including: Support of Diablo Fire Safe Council vegetation management workshops and chipper program</p> <p><i>Comment: Ongoing support of DFSC and their initiatives</i></p>	X		X	CCCYPD-3
<p>CCCYPD-6—Implementation of projects listed in the Community Wildfire Protection Plan (CWFP)</p> <p><i>Comment: As projects come up within the jurisdictional boundaries, or in adjacent jurisdictions with an impact to CCCYPD jurisdiction, CCCYPD supports them.</i></p>			X	CCCYPD-4
<p>CCCYPD-7—Participate in annual multi-agency Wildland Fire Training</p> <p><i>Comment: Training held annually in June. The current location is being developed, and attempts are being made to find a new location</i></p>	X		X	CCCYPD-5
<p>CCCYPD-8—Pursue implementation of projects listed in CCCYPD Capital Improvement Plan</p> <p><i>Comment: The plan is in the process of being revised.</i></p>			X	CCCYPD-6
<p>CCCYPD-9—Educate the public on the risks associated with natural hazards and methods to prepare for and mitigate those risks</p> <p><i>Comment: CCCYPD has maintained an all risk public educator position, and continues to support prevention of all risks faced in the county through these programs.</i></p>	X		X	CCCYPD-7
<p>CCCYPD-10—Support County-wide initiatives identified in the 2011 Hazard Mitigation Plan.</p> <p><i>Comment: We will continue to support the initiatives in the new plan</i></p>	X		X	CCCYPD-1
<p>CCCYPD-11—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in the 2011 Hazard Mitigation Plan.</p> <p><i>Comment: Ongoing support</i></p>	X		X	CCCYPD-2

19.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 19-9 lists the actions that make up the Contra Costa County Fire Protection District hazard mitigation action plan. Table 19-10 identifies the priority for each action. Table 19-11 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 19-9. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Responsible Agency ^a	Estimated Cost	Sources of Funding	Timeline
CCCYPD-1— Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing structures that have experienced repetitive losses.						
Existing	All Hazards	1, 4, 7, 9, 12, 14, 15, 17	CCCYPD	High	HMGP, PDM, FMA	Short-term
CCCYPD-2— Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
New and Existing	All Hazards	3, 8, 16	CCC OES*, Fire Marshall	Low	Staff Time, General Funds	Short-term
CCCYPD-3—Improve, expand and develop new programs that increase awareness of and reduce risk to wildfires including: Support of Diablo Fire Safe Council vegetation management workshops and chipper program						
New and Existing	Wildfire	2, 3, 11, 16,	DFSC*, CCCYPD	Low	Staff Time, General Funds	Short Term
CCCYPD-4—Implementation of projects listed in the Community Wildfire Protection Plan (CWFP)						
New and existing	Wildfire	2, 3, 17	DFSC-CCCYPD	Low	Staff Time, Federal Grants	Ongoing
CCCYPD-5—Participate in annual multi-agency Wildland Fire Training						
New and Existing	Wildfire	2, 16	CCCYPD	Low	Staff Time, General Funds	Short-term
CCCYPD-6—Pursue implementation of projects listed in CCCYPD Capital Improvement Plan						
New and Existing	All Hazards	1, 2	CCCYPD	Medium	Staff Time, General Funds, Mitigation Fees	Ongoing
CCCYPD-7—Educate the public on the risks associated with natural hazards and methods to prepare for and mitigate those risks through ongoing public education campaigns						
New and Existing	All Hazards	3, 5	CCCYPD	Low	Staff Time, General Funds, AFG Funds	Ongoing
CCCYPD-8—Continue with installation of emergency generators at fire stations						
New	All Hazards	1, 2, 13	CCCYPD	Medium	General Funds	Long-term
CCCYPD-9—Structural seismic retrofit of fire facilities						
New and Existing	Earthquake	1, 2	CCCYPD	Medium	General funds	Ongoing

a. Where multiple responsible agencies are listed, an asterisk (*) identifies the lead agency.

Table 19-10. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
CCCYPD-1	8	High	High	Yes	Yes	No	Medium	High
CCCYPD-2	3	Low	Low	Yes	No	Yes	High	Low
CCCYPD-3	2	High	Low	Yes	No	Yes	High	Low
CCCYPD-4	2	High	Low	Yes	No	Yes	High	Low
CCCYPD-5	2	High	Low	Yes	No	Yes	High	Low
CCCYPD-6	2	High	High	Yes	No	Yes	Medium	Medium
CCCYPD-7	8	High	Low	Yes	Yes	Yes	High	Medium
CCCYPD-8	3	High	Low	Yes	No	Yes	High	Low
CCCYPD-9	2	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 19-11. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
All hazards	CCCYPD-3, 4, 5, 7, 8, 9		CCCYPD-7		CCCYPD-1, 2, 3, 4, 5, 6, 7, 8, 9			CCCYPD-2
Dam and Levee failure			CCCYPD-7					
Drought			CCCYPD-7	CCCYPD-7				
Earthquake	CCCYPD-7, 8, 9	CCCYPD-8, 9	CCCYPD-7			CCCYPD-8, 9		
Flood			CCCYPD-7					
Landslide			CCCYPD-7					
Severe weather			CCCYPD-7					
Tsunami			CCCYPD-7					
Wildfire	CCCYPD-3, 4, 5		CCCYPD-7	CCCYPD-7				CCCYPD-3

a. See the introduction to this volume for explanation of mitigation types.

19.10 REVIEW AND INCORPORATION OF RESOURCES FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed for this annex.

- **Title 24 CCR**—Utilized in the development of all fire code and building code adoptions
- **Fire Data (FireRMS)**—Used in the determination of previous incidents
- **Hazard Mitigation Plan Annex Development Tool-kit**—The tool-kit was used to support the development of this annex including past hazard events, noted vulnerabilities, risk ranking and action development.