

9. RANCHO ADOBE FIRE PROTECTION DISTRICT

9.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Andy Taylor, Battalion Chief
11000 Main St.
Penngrove, CA 94951
Telephone: 707 795-6011
e-mail Address: ataylor@rafd.org

Alternate Point of Contact

Tim Caldwell, Fire Captain
11000 Main St.
Penngrove, CA 94951
Telephone: 707 795-6011
e-mail Address: tcaldwell@rafd.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 9-1.

Table 9-1. Local Mitigation Planning Team Members

Name	Title
Andy Taylor	Battalion Chief / Fire Marshal
Tim Caldwell	Fire Captain

9.2 JURISDICTION PROFILE

9.2.1 Overview

The District was formed in 1993 through the consolidation of the Cotati and the Penngrove Fire Protection Districts.

The climate of Rancho Adobe Fire Protection District is similar to the County of Sonoma. Petaluma has a mild Mediterranean climate. Its dry summer is characterized by typically warm days and cool nights with a large degree of diurnal temperature variation. Summer mornings often start out foggy and chilly, but the fog usually clears by midday or so, giving way to clear skies and warmth for the remainder of the day. August is usually the warmest month, with average daily temperatures ranging from 82 °F (28 °C) to 53 °F (12 °C). December is usually the coldest month, with average daily temperatures ranging from 57 °F (14 °C) to 39 °F (4 °C). Winter is cool and rainy, with frost occasionally occurring on clear nights.

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

9.2.2 Service Area

The Rancho Adobe Fire Protection District encompasses approximately 86 square miles located just east of the cities of Rohnert Park and Petaluma. Its service area includes the City of Cotati, Sonoma State University, and the unincorporated communities of Penngrove and Canon Manor.

9.2.3 Assets

Table 9-2 summarizes the assets of the District and their value.

Asset	Value
Property	
5 acres of land	\$1,750,000
Equipment	
Three Type I Fire Engines_	\$2,000,000
Three Type III Fire Engines_	\$1,750,000
Type II Fire Engine	\$300,000
Two 2200 Gallon Water Tenders	\$400,000
Type VI	\$150,000
Two Command Vehicles	\$120,000
Utility Vehicle	\$20,000
Total:	\$4,813,000
Critical Facilities and Infrastructure	
Fire Station #1 1 E. Cotati Ave, Cotati	\$2,000,000
Fire Station #2 11000 Main St., Penngrove	\$1,500,000
Fire Station #3 99 Liberty Rd, Petaluma	\$2,000,000
Total:	\$5,500,000

9.3 CURRENT TRENDS

According to U.S. Census Bureau, the population of City of Cotati as of October 2020 was 7,619. Since 2010, the population has grown at an average annual rate of 0.13 percent. Penngrove is a census-designated place in Sonoma County, California, United States, situated between the cities of Petaluma and Cotati, at the foot of the western flank of Sonoma Mountain. It is part of the North Bay sub region of the San Francisco Bay Area. The population was 2,522 at the 2010. Petaluma is a city in Sonoma County, part of the North Bay sub-region of the San Francisco Bay Area, located 37 mi north of San Francisco. Its population was 61,917 according to the 2018 Census. The Rancho Petaluma Adobe, located in Petaluma, is a National Historic Landmark.

Development in the District is residential with light commercial.

9.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 9-3.
- An assessment of fiscal capabilities is presented in Table 9-4.
- An assessment of administrative and technical capabilities is presented in Table 9-5.
- An assessment of education and outreach capabilities is presented in Table 9-6.
- Classifications under various community mitigation programs are presented in Table 9-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 9-8.

Table 9-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
California Fire Code	2019	
California Building Code	2019	
Fire Safe Sonoma Plan	2019	
American Disabilities ACT	2019	
Sonoma County Emergency Operations Plan	2018	

Table 9-4. Fiscal Capability

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	No
Incur Debt through Special Tax Bonds	Yes
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	N/A

Table 9-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	City of Cotati County of Sonoma
Engineers or professionals trained in building or infrastructure construction practices	Yes	City of Cotati County of Sonoma
Planners or engineers with an understanding of natural hazards	Yes	City of Cotati County of Sonoma
Staff with training in benefit/cost analysis	Yes	City of Cotati County of Sonoma
Surveyors	Yes	County of Sonoma
Personnel skilled or trained in GIS applications	Yes	Rancho Adobe Fire Protection District/ Command Staff
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	Insert appropriate information
Grant writers	Yes	Rancho Adobe FPD personnel assigned as collateral duty
Other Fire Prevention/ hazard mitigation	Yes	Rancho Adobe FPD Fire Marshall

Table 9-6. 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? <i>If yes, please briefly describe</i>	Yes Social Media utilized to notify public of ongoing or anticipated incidents, hazards, etc. Also used for public outreach and education
Do you use social media for hazard mitigation education and outreach? <i>If yes, please briefly describe</i>	Yes Social Media utilized to notify public of ongoing or anticipated incidents, hazards, etc. Also used for public outreach and education
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, please briefly specify</i>	Yes Rancho Adobe Fire Protection District Board of Directors is an elected body of citizens chosen to oversee the management of the district.
Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, please briefly describe</i>	Yes Rancho Adobe FPD maintains an active community education program, teaching citizens of all ages, topics ranging from fire safety to the community disaster preparedness.
Do you have any established warning systems for hazard events? <i>If yes, please briefly describe</i>	Yes Through our county dispatch center (REDCOM) Cotati P.D. and Sonoma State University P.D. we have the ability to use reverse 9-1-1 system to send broadcast emergency messages/warnings to the public and traditional media for the same.

Table 9-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	N/A	N/A	N/A
DUNS#	Yes	837792522	N/A
Community Rating System	N/A	N/A	N/A
Building Code Effectiveness Grading Schedule	N/A	N/A	N/A
Public Protection	N/A	N/A	N/A
Storm Ready	N/A	N/A	N/A
Firewise	N/A	N/A	N/A
Tsunami Ready	N/A	N/A	N/A

Table 9-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	low
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents support of adaptation efforts <i>Comment:</i>	Low
Local residents’ capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

a. High = Capacity exists and is in use; Medium = 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.

9.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

9.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- Implementation of Basic Life Support Services—Rancho Adobe Fire Protection District through a JPA with Petaluma Fire Dept., provides part time BLS support and transport throughout the district. The district is looking into Advanced Life Support services in the future through the JPA.
- Citizens Organized to Prepare For Emergencies (COPE) Rancho Adobe Fire Protection District, through the JPA with Petaluma Fire Dept. and the Red Cross train and maintains a citizen volunteer COPE team.
- Continuance of Community Risk Reduction Program—Rancho Adobe Fire Protection District, maintains a fire prevention/community risk reduction programs ranging from building inspections, construction plan review, community education, and other activities.
- Departmental Social Media (Next Door, Twitter, Facebook, Instagram, District Website) Publishes information to educate and inform the public on a wide variety of topics that include fire safety and disaster preparation.
- Continue to participate in general mutual aid agreements with adjoining jurisdictions and statewide—Rancho Adobe Fire Protection District participates in various mutual and automatic aid agreements with neighboring fire districts as well as is an active participant in the statewide mutual system, especially during wildfire season.

9.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Continue to pursue grant funding opportunities for updating facilities and equipment.
- Expand our Community Risk Reduction division in personnel and capability.
- Help further develop, train, and build relationships with both county and city EOCs
- Conduct on going risk assessments for the Rancho Adobe Fire Protection District and the ability to focus on key risk factors identified therein.

9.6 RISK ASSESSMENT

9.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 9-9 lists past occurrences of natural hazards for which specific damage was recorded in Sonoma County, Ca. Other hazard events that broadly affected the entire planning area, including the Rancho Adobe Fire Protection District are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 9-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfires		September 4 – November 17, 2020	Unknown
Wildfires		August 14 – September 26, 2020	Unknown
Covid-19 Pandemic		January 2020 – Present	Unknown
PG&E power shut off (PSPS)		October 2019	Unknown
Kincaid Fire		October 23 – November 7, 2019	Unknown
Severe Winter Storms, Flooding		February 24 – March 2019	Unknown
PG&E power shut off		October 2018	Unknown
LNU Complex		October 2017	Unknown
Severe Winter Storms, Flooding		February 1 – 23, 2017	Unknown
Severe Winter Storms, Flooding		January 3 – 12, 2017	Unknown
Drought		2014 – 2016	Unknown
Valley Fire		September 12-25, 2015	Unknown
Dec. winter storms		December 11-12, 2014	Unknown
Geysers Fire		September 3 – 8, 2004	Unknown
Rainesville Fire		2003	Unknown

9.6.2 Hazard Risk Ranking

Table 9-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. 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. Mitigation actions target hazards with high and medium rankings.

Table 9-10. Hazard Risk Ranking

Rank	Hazard	Risk Rating Score	Risk Category
1	Earthquake	39	High
2	Wildfire	32	High
3	Severe Weather	30	Medium
4	Flooding	18	Medium
5	Landslide	18	Medium
6	Dam Failure	12	Low
7	Drought	6	Low
8	Sea Level Rise	0	Low
9	Tsunami	0	Low

9.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Wildfire—A large portion of the fire district is in WUI which has had a significant increase of destructive fires that have burned into the communities in the last 5 years.
- Flooding—The communities of Penngrove, Cotati, and unincorporated have a history of localized flooding along the flood plain of the Laguna de Santa Rosa (river).

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

9.7 HAZARD MITIGATION ACTION PLAN

Table 9-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 9-12 identifies the priority for each action. Table 9-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 9-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action RAF-1 —Where appropriate, retrofit, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Earthquake, flooding, landslide, tsunami, wildfire						
New	1, 2, 3, 4, 5	RAF		High	General Fund	Short-term
Action RAF-2 —Secure funding to study localized Flood Reduction Programs						
<i>Hazards Mitigated:</i> Flood, severe weather						
New	3, 4	RAF		Medium	Grant Funding	Short-term
Action RAF-3 —Purchase stationary generators for critical facilities and infrastructure that lack adequate backup power and upgrading electrical Facility wiring.						
<i>Hazards Mitigated:</i> Earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	1, 2, 3, 4, 5, 9, 10	RAF		High	Staff Time, General Funds, Grant Funding	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action RAF-4 —Develop and implement fuel reduction and vegetation management prevention program						
<i>Hazards Mitigated:</i> Wildfire, climate change, drought						
Existing	2, 6	RAF		Medium	Staff Time, General Funds	Long Term
Action RAF-5 —Participate in county wildfire prevention and community outreach programs						
<i>Hazards Mitigated:</i> Wildfire, drought						
New	2, 6	RAF		Low	Staff Time, General Funds	Long Term
Action RAF-6 —Integrate the hazard mitigation plan into other plans, ordinances and programs						
<i>Hazards Mitigated:</i> Earthquake, flooding, landslide, severe weather, tsunami, wildfire, drought						
new		RAF		Low	Staff Time	Long Term
Action RAF-7 —Establish a fuel management program and staff augmentation to mitigate wildfire hazards						
<i>Hazards Mitigated:</i> Wildfire						
New	1, 2, 3, 4, 5, 9	RAF		Medium	Staff Time, General Funds, Grant Funding	Short Term
Action RAF-8 —Designate and improve emergency evacuation routes and fire access roads in high risk areas.						
<i>Hazards Mitigated:</i> Wildfire, earthquake, flooding						
New & Existing	2, 6	RAF		Low	Grant Funding	Long Term
Action RAF-9 —Develop water supply accessibility including pipelines and water storage tanks in outlying and rural areas						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2	RAF	Water agencies	Medium	TBD	Short term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

See the introduction to this volume for list of acronyms used here.

Table 9-12. Mitigation Action Priority

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

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

Table 9-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
High-Risk Hazards								
Earthquake	1, 3, 6, 9	1, 3, 6	5, 6, 9	1, 3, 6	3, 6, 9	1, 3	1	1, 6
Wildfire	1, 3, 4, 5, 6, 7, 8, 9	4, 5, 6, 7	5, 6, 9	4, 7, 8	1, 3, 4, 5, 6, 7, 8, 9	1, 3	1	1, 6
Medium-Risk Hazards								
Severe Weather	1, 3, 6, 9	1, 2, 3, 6, 9	5, 6	1, 3, 6	1, 3, 6, 9	1, 3	1	1, 6
Flooding	1, 3, 6, 9	1, 3, 6, 9	5, 6	1, 3, 6	1, 3, 6, 9	1, 3	1	1, 6
Landslide	1, 3, 6, 9	1, 3, 6, 9	5, 6	1, 3, 6	1, 3, 6, 9	1, 3		
Low-Risk Hazards								
Dam Failure	1, 3, 6, 9	1, 3, 6, 9	5, 6	1, 3, 6	1, 3, 6, 9	1, 3		
Drought	1, 3, 6, 9	1, 3, 6, 9	5, 6	1, 3, 6	1, 3, 6, 9	1, 3		
Sea Level Rise /Tsunami	1, 3, 6, 9	6, 9	6, 9	1, 3, 6	1, 3, 6, 9	1, 3		1, 6

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

9.8 INFORMATION SOURCES USED FOR THIS ANNEX

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

- 2016 Sonoma County Hazard Mitigation Plan
- Sonoma County Hazard Mapping Tool
- 2016 Sonoma County Community Wildfire Protection Plan
- Sonoma County Community Wildfire Protection Plan Hub Site (online maps)
- CAL FIRE—Fire Hazard Severity Zones

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- 2016 Sonoma County Hazard Mitigation Plan