

6. CLOVERDALE FIRE PROTECTION DISTRICT

6.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 6-1.

Table 6-1. Local Mitigation Planning Team Members

Name	Title
Jason Jenkins	Fire Chief
Rick Blackmon	Battalion Chief
Carol Pigoni	Board President
Michelle Black	Fire Admin

6.2 JURISDICTION PROFILE

6.2.1 Overview

The Cloverdale Fire Department was a city fire department and became a Fire Protection District was in 1996, and is governed by a five member Board of Directors, elected by the voters of the District. The Cloverdale Fire Protection District is currently operating under a Joint Powers Agreement with the Northern Sonoma County Fire Protection District. The JPA and department is known as Northern Sonoma County Fire. The Cloverdale Fire Protection District is funded by taxes and a special assessment passed by voters at the creation of the district.

The District covers approximately 76 square miles. The City of Cloverdale population is 9800 and the area served is 2.0 square miles. The remaining 74 square miles of the district are urban/rural areas. The Cloverdale District also has primary response coverage for approximately an additional 273 square miles throughout northern Sonoma County for a total of 349 Square miles. The district also covers auto aid 5 miles into Mendocino County for all emergency incidents.

The Cloverdale Fire District assumes responsibility for the adoption of this plan; The fire chief and district board will oversee its implementation.

The District participates in the Public Protection Class Rating System and currently has a rating of 3 within 5 miles of the fire station and 10 beyond that.

6.2.2 Service Area

The District service area covers 76 square miles of northern Sonoma County from north of Lake Sonoma to the Sonoma/Mendocino County line, south of Asti to Zanzi Lane in the community of Chianti. And east to Mendocino/Lake county line. The service area has an estimated population of 15,000 with high tourism due to the Russian River and wineries. The District also responds to The Geysers which are home to the largest geothermal area in North America. Incidents per year range between 1300-1400 calls which includes mutual and automatic aid responses.

6.2.3 Assets

Table 6-2 summarizes the critical assets of the district and their value.

Asset	Value
Property	
Cloverdale Fire Station, 451. S. Cloverdale Blvd.	\$20,000,000
Property	\$875,000
Total Value	\$20,875,000
Equipment	
UTV Trailer Versatile Enclosed 2017	\$10,000
UTV Honda 2021	\$25,000
Facility Generator	\$150,000
6100 Chevrolet Silverado 2020	\$60,000
6501 Chevrolet Silverado 2020	\$60,000
6590 Water Tender 2000 Gal Water	\$300,000
6540 Chevrolet Silverado 2021	\$65,000
6541 Chevrolet Silverado 2008	\$20,000
6555 Ford F550 Type 6 engine	\$300,000
6560 International 4x4 engine 2003	\$450,000
6570 International engine 1997	\$350,000
6580 KME fire engine 1998	\$450,000
6581 Pierce Fire engine 1999	\$15,000
6580 Toyne fire engine 2021	\$675,000
6530 Heavy Rescue 2005	\$550,000
Covered Parking Structures	\$30,000
Personal Protective Equipment	\$120,000
Communications Equipment	\$160,000
Fire Hose And Firefighting Equipment	\$220,000
Total:	\$22,385,000
Critical Facilities	
See Property assets value above	
Total:	\$20,000,000

6.3 CURRENT TRENDS

The District has experienced approximately 100 call increase over the past two years. The Cloverdale Fire District has seen an overall service area increase call total of 1400 calls annually. Development in the Fire District is ongoing with several large low income residential units in plan review and expected to be built in the coming years. There are currently no plans to build new/additional fire stations.

6.4 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 6-3.
- An assessment of fiscal capabilities is presented in Table 6-4.
- An assessment of administrative and technical capabilities is presented in Table 6-5.
- An assessment of education and outreach capabilities is presented in Table 6-6.
- Classifications under various community mitigation programs are presented in Table 6-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 6-8.

Table 6-3. Planning and Regulatory Capability*

Plan, Study or Program	Date of Most Recent Update	Comment
Locally adopted fire code	2019	
California Fire Code	2016	
California Building Code	2016	
American Disabilities Act		
Fire Safe Sonoma	Annual	
Sonoma County Emergency Operations Plan		

* The Cloverdale Fire Protection District uses the County of Sonoma for planning and regulatory capabilities, including review of building plans for compliance with building and fire codes as well as Firesafe Standards for county areas within the district and fire chief/fire marshal for areas within the city.

Table 6-4. 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	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Federal Grant Programs	Yes
Other	The Fire District has a fee schedule to enable collection of fees for service ranging from mandated state inspections, plan checks and firefighter stand by services.

Table 6-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Fire Marshall Consultant
Engineers or professionals trained in building or infrastructure construction practices	Yes	Fire Chief/Fire Marshall Consultant
Planners or engineers with an understanding of natural hazards	Yes	Fire Marshall Consultant
Staff with training in benefit/cost analysis	Yes	Fire Department Command Staff
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Fire Chief
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	
Grant writers	Yes	COPE Manager, District Staff
Other	No	

Table 6-6. 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?	No
Do you have hazard mitigation information available on your website? <i>If yes, please briefly describe</i>	No
Do you use social media for hazard mitigation education and outreach? <i>If yes, please briefly describe</i>	Yes Information shared about fires, prevention, and safety tips
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, please briefly specify</i>	Yes COPE leadership group
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 Citizens Organized to Prepare for Emergencies, Cert Team, Community Social Media Page
Do you have any established warning systems for hazard events? <i>If yes, please briefly describe</i>	Yes Utilize County of Sonoma and local PD for warning and notification of hazard events.

Table 6-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No		
DUNS#	Yes	967416566	
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	Yes	3 within 5 miles of the fire station and 10 beyond that	
Storm Ready	No		
Firewise	No		
Tsunami Ready	No		

Table 6-8. 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
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment:</i>	Medium
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.

6.5 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.

6.5.1 Existing Integration

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

- Integration will occur with local CWPP plans in the development process once completed.
- **Implementation of Advanced Life Support Services**—Cloverdale Health Care Ambulance District provides ALS personnel and fire district help staff ambulances EMT positions.
- **Disaster Operations Policies and Procedures**—Cloverdale Fire District, has standing policies and procedures dictating emergency operations preparing for, during, and after natural disasters. These policies include not only emergency operations but also assessment of District owned capital assets after such events.
- **Department Social Media**—Posts continuous message throughout the Fire District to educate and inform our populace on a wide variety of topics that include fire safety and disaster preparation.
- **Continuance of Community Risk Reduction Program**—Cloverdale Fire District, maintains a prevention/community risk reduction program ranging from building inspections, construction plan review, community education.
- **Continue to participate in general mutual aid agreements with adjoining jurisdictions and statewide**—Cloverdale Fire 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.
- **North County Citizens Organized to Prepare for Emergencies (COPE)**—Training and organization of community members and groups designed to facilitate emergency preparation and response.
- **North County Citizens Emergency Response Team (CERT)** Training and organization of specifically trained community members to facilitate emergency preparation and response.
- **Staffing for Adequate Fire and Emergency Response Grants**—Provide funding directly to fire departments and volunteer firefighter interest organizations to help them increase or maintain the number of trained, "front line" firefighters available in their communities. The goal of this grant program is to enhance the local fire departments' abilities to comply with staffing, response and operational standards established by the NFPA (NFPA 1710 and/or NFPA 1720).
- **Community Risk Reduction Messaging Program**—In collaboration with the Northern California Fire Prevention Officers Association and the National Fire Protection Agency our agency actively engages the community in Community Risk Reduction Messaging via in person training, social media outreach and engagement, website publications

- **Hazardous Vegetation Inspection & Abatement Program**—In cooperation with the Sonoma County PRMD Fire Prevention Office the Cloverdale Fire District inspects properties for compliance. Selected properties that are not within city limits (improved and unimproved) may be part of the inspection program. Critical to protect homes from wildfire, defensible space includes a "lean, clean and green" zone 30 feet (or to the property line) from buildings, and a "reduced fuels zone," which can have more natural vegetation, from 30 feet to 100 feet (or to the property line) from structures.
- **Creation of a newly formed Joint Powers Agreement**—The creation of the newly formed North County Fire is a partnership with former Geyserville Fire District, Now North County Fire Protection District to provide coordinated services throughout the north county. This allows the fire department to standardize and provide shared resources.

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
- Help form, train, and participate in a county-wide incident management team, overhead incident requests.
- Help further develop, train, and build relationships with both county and city EOCs.
- Conduct on going risk assessments for the Cloverdale Fire District and the ability to focus on key risk factors identified therein.
- Collaborate with area fire agencies on preparedness, response, planning, recovery, and mitigation plans, strategies, and protocols.
- Integrate the Sonoma County Wildfire Mitigation Plan with this plan
- Integrate any city or specific community CWPP plan with the plan.

6.6 RISK ASSESSMENT

6.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 6-9 lists past occurrences of natural hazards for which specific damage was recorded in the north county. Other hazard events that broadly affected the entire planning area, including jurisdictions in Sonoma County are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

6.6.2 Hazard Risk Ranking

Table 6-10 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 6-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfires	DR-4569-CA	September 4-November 17, 2020	Unknown
Wildfires	DR-4558-CA	August 14-September 26, 2020	Unknown
Covid-19 Pandemic	DR-4442-CA	January 2020-Present	Unknown
Kincade Fire	FM-5295-CA	October 23-November 7, 2019	Unknown
PG&E Power Shutoff		October 2019	Unknown
Severe Winter Storms Flooding	DR-4434-CA	February 24-March 1, 2019	Unknown
PG&E Power Shutoff		October 2018	Unknown
Wildfires	DR-4344-CA	October 8-31, 2017	Unknown
Tubbs Fire	FM-5220-CA	October 8, 2017	Unknown
Severe Winter Storms Flooding	DR-4308-CA	February 1-23, 2017	Unknown
Severe Winter Storms Flooding	DRE-4301-CA	January 3-12, 2017	Unknown
Valley Fire	DR-4240-CA	September 12-25, 2017	Unknown
South Napa Earthquake	DR-4193-CA	August 24, 2014	Unknown
Drought		2014-2016	Unknown
H1N1 Influenza		April/May 2009	Unknown
New Year's Floods	DR-1628-CA	December 31, 2005 – January 3, 2006	Unknown
Geysers Fire	FM-2554-CA	September 3 – 8, 2004	Unknown
Rio Nido Debris Flow	DR-1203-CA	February 2, 1998	Unknown
New Year's Flood	DR-1155-CA	December 28, 1996 – January 4, 1997	Unknown
Cavedale Fire		July 31 – August 20, 1996	Unknown
Freeze of 1991		December 1990 – February 1991	Unknown

Table 6-10. Hazard Risk Ranking

Rank	Hazard	Risk Rating Score	Risk Category
1	Earthquake	38	High
2	Wildfire	32	High
3	Landslide	30	High
4	Flood 100/yr.	18	Medium
5	Flood Awareness	18	Medium
6	Flood 500/yr.	16	Medium
7	Sea Level Rise All	9	Low
8	Dam Failure	16	Medium
9	Tsunami	0	Low

6.6.3 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:

- Earthquake
- Wildfire
- Landslide

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

6.7 HAZARD MITIGATION ACTION PLAN

Table 6-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 6-12 identifies the priority for each action. Table 6-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 6-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CLD-1 —Where appropriate, work with community organizations, such as COPE, CERT, and homeowner associations, to identify and make usable safety zones and evacuation routes located in high fire hazard areas, prioritizing those that have experienced fire threat and/or are located in high fire severity zones.						
<i>Hazards Mitigated:</i>						
Existing	3, 4, 10	Cloverdale Fire Dist.	TBD	High	HMGP, PDM, FMA	Short-term
Action CLD-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> All hazards						
New & Existing	1, 5, 8	Cloverdale Fire Dist.	TBD	Low	Staff Time, General Funds	Short-term
Action CLD-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including evacuation centers.						
<i>Hazards Mitigated:</i> Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	2, 6, 9					
Action CLD-4 —Participate in hazard fuel reduction projects based on the findings of the Sonoma County CWPP and along major transportation and evacuation corridors within the district.						
<i>Hazards Mitigated:</i> Wildfire						
	1, 2, 3, 6, 7, 8	Cloverdale Fire Dist.	CalFire, Sonoma County, City of Cloverdale, Fire Safe Sonoma, Local Fire Safe Councils	Depends on complexity of projects	HMGP, PDM, Private Funding, Private Grants	Ongoing

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 6-12. 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
CLD-1	3	High	High	Yes	Yes	No	High	High
CLD-2	3	Medium	Low	Yes	No	No	Medium	Low
CLD-3	3	Medium	Medium	Yes	Yes	No	Medium	Medium
CLD-4	3	High	High	Yes	Yes	No	High	High

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

Table 6-13. 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								
Wildfire	2, 4	1, 2, 3, 4	1, 2	1, 2, 4	1, 2, 3	3	2	1, 2
Earthquake		2, 3	2		2, 3	2, 3		2
Landslide	2, 4	2, 3, 4	2	2, 4	2, 3	2, 3	2	
Medium-Risk Hazards								
Flood Dam Failure		2, 3	2	2	2, 3	2, 3	2	2
Low-Risk Hazards								
Sea Level Rise All Tsunami		2, 3	2	2	3	2, 3	2	2

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

6.8 INFORMATION SOURCES USED FOR THIS ANNEX

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

- **Cloverdale Fire District’s Fire Records Management software**—Used to analyze incident data, apparatus and equipment resource data, occupancy and fire inspection data and history.
- **Technical data and values for fire apparatus and other infrastructure obtained from department records and vendor data**—Used as reference.
- **North County Fire MSR 2020**—Used as reference

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.
- **Area population census data**– Used as reference.
- **Community Wildfire Protection Plan (Sonoma County)**—Used as reference.
- **County of Sonoma GIS Website**– Used as reference.
- **Fire Safe Sonoma**—Used as reference.