

8. NORTHERN SONOMA COUNTY FIRE PROTECTION DISTRICT

8.1 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 8-1.

Table 8-1. Local Mitigation Planning Team Members

Name	Title
Marshall Turbeville	Fire Chief
Rob Stewart	Board Member
Scott Newman	Board Member
Anneke Turbeville	Administrative Manager

8.2 JURISDICTION PROFILE

8.2.1 Overview

The Northern Sonoma County Fire Protection District was formed in 2020 after the Geyserville Fire Protection District annexed the Knights Valley Volunteer Fire Company service area. The Geyserville Fire Protection District was formed in 1996 and was previously the Geyserville Volunteer Fire Company which dates back to 1910 which serves the community of Geyserville and surrounding area.

The Northern Sonoma County Fire Protection District is located in a Mediterranean climate with a rainy, cool season lasting from November through April and dry, warm conditions the remainder of the year. The District receives less amount of coastal influence (cool weather and occasional fog) than other portions of the county in elevations less than 1,000 feet. The average monthly high temperature is between 90 and 58 degrees with the average monthly low temperature between 52 and 36 degrees. Rainfall averages between 25 and 30 inches. Flooding and fire are becoming more common.

The Northern Sonoma County Fire Protection District is an independent special district with a five member Board of Directors. The Board position include a president, vice president, and treasurer.

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

8.2.2 Service Area

The Northern Sonoma County Fire Protection District is a rural jurisdiction located between Healdsburg and Cloverdale in northern Sonoma County encompassing 273 square miles. In the east the District stretches from Mt. St. Helena where the Sonoma County line meets the Lake and Napa County Lines to West of Lake Sonoma where it meets the Mendocino County Line. The District encompasses the Dry Creek Valley, Alexander Valley, Knights Valley, and Franz Valley. The District provides services to Lake Sonoma, which provides water to 600,000 residents in Sonoma and Marin County, and covers a majority of the upper portion of the Russian River that is located in Sonoma County.

8.2.3 Assets

Table 8-2 summarizes the assets of the District and their value.

Asset	Value
Property	
Geyserville Fire Station (Headquarters), 20975 Geyserville Ave, Geyserville Land—1.02 acres	\$510,000
Alexander Valley Fire Station, 6571 Highway 128, Healdsburg Land—0.569 acres on easement	\$170,700
Dry Creek Valley Fire Station, 3697 Highway 128, Healdsburg Land—0.25 acres (estimated) on easement	\$75,000
Total Property Value	\$755,700
Equipment	
UTV Trailer 14' Versatile Flatbed 2021	\$10,000
UTV Honda 2021	\$25,000
Yellow Chipper Vermeer BC 1000XL 2021	\$50,000
6144 Chevrolet Silverado 2020	\$50,000
6100 Chevrolet Silverado 2020	\$60,000
6159 Multiquip 525 Gal Water Trailer 2020	\$10,000
6140 Ford F-250 2019	\$70,000
6156 Ford F-550 2019	\$200,000
6181 Spartan Metro Star 2019	\$900,000
Red Chipper Vermeer BC1000XL 2018	\$50,000
6141 Ford X5G9 2016	\$350,000
6143 Ford F-150 2013	\$40,000
6131 Ford Chassis 2009	\$225,000
6182 Westates Type I 2004	\$800,000
6275 Ford F-550 2003	\$150,000

Asset	Value
Support H-H Trailer 2002	\$30,000
6171 International 4900 Type II/III Pumper 1998	\$600,000
6142 Ford F-450	\$60,000
6172 International 4900 Type II/III Pumper 1996	\$600,000
6173 International 4900 Type II/III Pumper 1996	\$600,000
6265 International 4000 Series	\$600,000
6192 Volvo Tanker 1984	\$500,000
6295 Ford 1750 Gallon Water Tender 1978	\$400,000
Kitchen Trailer 1960	\$20,000
<i>Total:</i>	\$6,400,000
Critical Facilities and Infrastructure	
Geyserville Fire Station (Headquarters), 20975 Geyserville Ave, Geyserville Building 12,500 sq. ft.	\$15,000,000
Geyserville Fire Station Training Tower, 20975 Geyserville Ave, Geyserville Building 1,280 sq. ft.	\$500,000
Geyserville Fire Station Shop, 20975 Geyserville Ave, Geyserville Building 640 sq. ft.	\$20,000
Alexander Valley Fire Station, 6571 Highway 128, Healdsburg Building 2,400 sq. ft.	\$2,000,000
Dry Creek Valley Fire Station, 3697 Highway 128, Healdsburg Building 630 sq. ft.	\$750,000
<i>Total:</i>	\$ 18,270,000

8.3 CURRENT TRENDS

Population has remained consistently due to lack of significant increase in housing. Population is estimated around 6,000 residents. The population can fluctuate due to recreation, tourism, seasonal agriculture, and occupancy of vacation rentals and second homes.

The Northern Sonoma County Fire Protection District encompasses a large area of rural undeveloped lands. Residential, commercial, mixed use and agriculture land exist throughout the District with most structures being along US Highway 101, CA Highway 128, and in the Dry Creek Valley. Development in Geyserville is limited by water and sewer connections.

8.4 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 8-3.
- An assessment of fiscal capabilities is presented in Table 8-4.
- An assessment of administrative and technical capabilities is presented in Table 8-5.
- An assessment of education and outreach capabilities is presented in Table 8-6.
- Classifications under various community mitigation programs are presented in Table 8-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 8-8.

Table 8-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Chapter 13A—Duty to Maintain Defensible Space and Abate Hazardous Vegetation and Combustible Material	12/02/2019	County Ordinance to provide for increased requirements for property owners to maintain vegetation and defensible space with the intention of reducing the risk of wildfire.
Northern Sonoma County Citizens Organized to Prepare for Emergencies (COPE)		The Northern Sonoma County Fire Protection District has worked with residents to form community groups based upon neighbor helping neighbor to prepare for emergencies with the primary focus on wildfires.
Sonoma County Community Wildfire Protection Plan (CWPP)	In process	The 2016 CWPP is being updated with scheduled completion in 2022. The goal of the CWPP is to enhance efforts to protect communities and other at-risk lands from catastrophic wildfire. A CWPP is not a regulatory document, but provides wildfire hazard and risk assessments, community descriptions, options for addressing issues of structural vulnerability to wildfire, and provides a prioritized list of projects which, if implemented, can serve to reduce wildfire hazards.
DRAFT Northeast Geyserville Community Wildfire Protection Plan (CWPP)	In process	

Table 8-4. 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
Assorted non State and Federal Grants	Yes
Non Profit Fundraising	Yes
Fee for Provided Services	Yes

Table 8-5. Administrative and Technical Capability

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

Table 8-6. Education and Outreach

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	Yes but we also contract for services
Do you have hazard mitigation information available on your website?	Yes
Do you use social media for hazard mitigation education and outreach?	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> COPE	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Via the Sonoma County Department of Emergency Management	Yes

Table 8-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No		
DUNS#	Yes	364457812	
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		
Tsunami Ready	No		

Table 8-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	High
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
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>	Medium
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.

8.5 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.

8.5.1 Existing Integration

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

- Wildland Vegetation Management Program including a “fuels crew” which is performing vegetation management and modification to reduce the intensity of future fires.
- Implementation of prescribed burning with a focus on burning near structures.
- Defensible Space Inspections and Assessments to increase awareness, educate, and abate regarding vegetation management around structures and along roads.
- Wildland pre-attack maps to assist with effective evacuations, structure defense, and wildfire perimeter control.
- Community meetings and educational videos to increase awareness for prevention and preparedness.

8.5.2 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:

- Building life safety inspections to reduce structure fires and prevent the loss of life.
- Increase coordination with US Army Corps for potential dam failure and associated response plan for the Warm Springs Dam.
- Expand the Lower Russian River Flood plan to the remaining portions of the Russian River in Sonoma County.
- Develop and implement FIREWISE USA (and/or CWPP) projects including vegetation management fuel reduction projects.
- Fire impact fees

8.6 RISK ASSESSMENT

8.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 8-9 lists past occurrences of natural hazards for which specific damage was recorded in the Northern Sonoma County Fire Protection District.

Table 8-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfires	DR-4558-CA	8/14-9/26, 2020	Not available
Covid-19 Pandemic	DR-4442-CA	1/20, 2020 – Present	Not available
Kincade Fire	FM-5295-CA	10/23-11/07, 2019	Not available
PG&E Power Shutoff	N/A	October 2019	Not available
Severe Winter Storms Flooding	DR-4434-CA	2/24-3/01, 2019	Not available
PG&E Power Shutoff	N/A	October 2018	Not available
Wildfires	DR-4344-CA	10/08-31, 2017	Not available
Severe Winter Storms Flooding	DR-4308-CA	2/01-23, 2017	Not available
Severe Winter Storms Flooding	DRE-4301-CA	1/03-12, 2017	Not available
Valley Fire	DR-4240-CA	9/12-25, 2017	Not available
Drought	N/A	2014-2016	Not available
H1N1 Influenza	N/A	April/May 2009	Not available
New Year's Floods	DR-1628-CA	12/31, 2005 – 1/03, 2006	Not available
Geysers Fire	FM-2554-CA	9/03-08, 2004	Not available
New Year's Flood	DR-1155-CA	12/28, 1996 – 1/04, 1997	Not available
Freeze of 1991	N/A	Dec 1990 – Feb. 1991	Not available

8.6.2 Hazard Risk Ranking

Table 8-10 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 8-10. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	38	High
2	Wildfire	32	High
3	Landslide	30	Medium
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	6	Low
9	Tsunami	0	Low

8.6.3 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.

8.7 HAZARD MITIGATION ACTION PLAN

Table 8-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 8-12 identifies the priority for each action. Table 8-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 8-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action SCN-1 —Provide earthquake, wildfire, and flooding retrofitting for hardening and to build resilience to critical infrastructure (fire stations and District buildings).						
<i>Hazards Mitigated:</i> Earthquake, wildfire, flooding						
Existing	1, 2, 4	Fire District		Unknown	FEMA Grants, BRIC	Ongoing
Action SCN-2 —Develop water supply accessibility including pipelines and water storage tanks in outlying and rural areas						
<i>Hazards Mitigated:</i> Wildfire						
Existing	2	Fire District	CA Water	\$15,000/ea	Grants, donations	Ongoing
Action SCN-3 —Plan and implement vegetation management and fuel reduction projects.						
<i>Hazards Mitigated:</i> Wildfire						
Existing	2	Fire District	County fire agencies	Variable	Grants, donations, General funds	Ongoing
Action SCN-4 —Participation in regional groups addressing climate risks.						
<i>Hazards Mitigated:</i> All						
New & Existing	All	Co of Sonoma	Fire District	Low	None needed	Short
Action SCN-5 —Partner and support the County of Sonoma in increasing awareness and preparedness for all hazards						
<i>Hazards Mitigated:</i> All						
New & Existing	All	Co of Sonoma	Fire District	Low	None needed	Short
Action SCN-6 —Adopt building and fire code; perform comprehensive building life safety inspections						
<i>Hazards Mitigated:</i> All						
New & Existing	All	Fire District	Sonoma County	\$150,000/yr	Grant, General funds	Short
Action SCN-7 —Upgrade Emergency Medical Services from Basic Life Support to Advanced Life Support						
<i>Hazards Mitigated:</i> All						
New & Existing	All	Fire District	Various	\$1 million/yr	Grants, General funds	Long
Action SCN-8 —Develop a community based risk reduction program (Neighbors helping neighbors)						
<i>Hazards Mitigated:</i> All						
New & Existing	All	Fire District	Community Groups	Low	Grants, General funds	Ongoing
Action SCN-9 —Partner with US Army Corps of Engineers for to develop dam failure planning and response protocols and procedures and alerting procedures						
<i>Hazards Mitigated:</i> Dam failure						
New & Existing	6	US Army Corps	Co of Sonoma, Fire District	Low	Grants, US Army Corps	Long

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 8-12. 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
SCN-1	3	High	High	Yes	Yes	Partially	High	High
SCN-2	1	High	Low	Yes	Yes	Partially	High	High
SCN-3	1	High	High	Yes	Yes	Partially	High	High
SCN-4	9	Medium	Low	Yes	TBD	Yes	Medium	Low
SCN-5	9	Medium	Low	Yes	TBD	Yes	Medium	Low
SCN-6	9	Medium	Medium	Yes	Yes	Partially	Medium	Medium
SCN-7	9	Medium	Medium	Yes	Yes	No	Medium	Medium
SCN-8	9	High	Low	Yes	Yes	Yes	High	High
SCN-9	1	High	Low	Yes	TBD	Yes	Medium	Medium

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

Table 8-13. 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	5, 8	1, 5, 6, 8	5, 8	5, 8	1, 5	1	1, 8	5, 8
Wildfire	3, 5, 8	1, 2, 3, 5, 8	5, 8	2, 3, 5, 8	1, 2, 3	1, 2, 3	1, 3, 8	5, 8
Landslide	4, 5, 8	4, 5, 8	4, 5, 8				4, 5, 8	4, 5, 8
Flood	4, 5, 8	1, 4, 5, 8	4, 5, 8		1	1	1, 4, 5, 8	4, 5, 8
Sea Level Rise	4, 5, 8	4, 5, 8	4, 5, 8				4, 5, 8	4, 5, 8
Dam Failure	5, 8, 9	5, 8, 9	5, 8, 9				5, 9	5
Tsunami	5, 8	5, 8	5, 8				5	5

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

8.8 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)
- Draft Northeast Geyserville, and Franz and Knights Valley Community Wildfire Protection Plans
- CAL FIRE Fire Hazard Severity Zones