

# 7. NORTH SONOMA COAST FIRE PROTECTION DISTRICT

## 7.1 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 7-1.

**Table 7-1. Local Mitigation Planning Team Members**

Name	Title
Malay Thaker	Firefighter/EMT NSCFPD
Chris Aitchison	Assistant Chief, NSCFPD
Chuck Breier	Captain, NSCFPD
Susie Gilley	Emergency Manager, TSRA
Dean Kackley	Administrator, Sea Ranch Fire Safe Council.
Bonnie Plakos	Chief, NSCFPD

## 7.2 JURISDICTION PROFILE

### 7.2.1 Overview

The North Sonoma Coast Fire Protection District (NSCFPD) was formed on April 1, 2016. Previously, fire protection in the Sea Ranch / Annapolis / Stewart’s Point area was provided by the Sea Ranch Volunteer Fire Department, the Annapolis Volunteer Fire Department, and CAL FIRE. All funds supporting these operations were from property taxes, which were transferred to Sonoma County Service Area #40 (CSA40). CSA40 in turn contracted with The Sea Ranch Volunteer Fire Department, the Annapolis Volunteer Fire Department, and CAL FIRE to provide fire protection. The new district covers the areas previously served by The Sea Ranch and Annapolis Volunteer Fire Companies, with the continued support of CAL FIRE.

The highest density of population and structures within the district falls within the boundaries of The Sea Ranch Association (TSRA). TSRA and associated TSR Water Company provide facilities that are essential to the operations of NSCFPD. These include water service and hydrants throughout The Sea Ranch (TSR) as well as broadband communications for district facilities located in TSR.

TSRA provides various support for the Fire District including but not limited to administrative services, maintenance, and emergency management services.

The climate in the Fire District ranges from 41 °F to 80 °F to 100 °F inland—east of Annapolis. is 41 – 80 degrees at the coast to 100 degrees to the east in Annapolis.

NSCFPD assumes responsibility for the adoption of this plan and will oversee its implementation. NSCFPD is a Fire Protection District, as defined and governed by California’s Fire District Law of 1987. The NSCFPD has a five-member Board of Directors.

### 7.2.2 Service Area

North Sonoma Coast Fire Protection District is in the northwestern corner of Sonoma County. The boundaries extend from the Mendocino/Sonoma county line south to include The Sea Ranch with lots and homes from the ocean bluff, meadows, and forest to Stewart’s Point to Timber Cove. East from The Sea Ranch to Annapolis and beyond to the border of the Northern Sonoma County Fire Protection District, a total of 172.4 square miles.

### 7.2.3 Assets

Table 7-2 summarizes the critical assets of the district and their value.

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
0 acres	\$0
<b>Equipment</b>	
Firefighting	\$57,500
Personal Protective Gear	\$105,360
Apparatus	\$2,844,000
Generators	\$3,000
SCBAs & Air compressor	\$119,300
Rescue and Extrication Equipment	\$12,000
Equipment : Medical	\$18,500
Equipment: Office	\$2,050
Equipment: Monitors	\$8,500
Equipment: Communication Equipment	\$100,120
<b>Total:</b>	<b>\$1,703,350</b>
<b>Critical Facilities and Infrastructure</b>	
The Sea Ranch North Fire Station	\$1,695,200
Apparatus building at Annapolis Station No. 1	\$250,000
Apparatus building at Annapolis Station No. 2	\$15,000
<b>Total:</b>	<b>\$1,743,600</b>

## 7.3 CURRENT TRENDS

According to the 2010 Census, as noted in Wikipedia, the population of the Fire District was reported as 1,305 and for The Sea Ranch and Annapolis as 401. Records from our Design department reflect that there are currently 1,776 single-family homes with an additional 45 units under the Burbank (HUD). The population varies seasonally seeing more people relocating here full time as opposed to vacationing here from all over the country and Europe.

Trends in construction are generally low for the Sea Ranch area until this year where we have seen an uptick of building with 20 open builds in progress or newly completed. Less than 10 of newly developed properties in the Annapolis area and no significant development planned anywhere in the District. Table 7-3 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 7-3. Recent and Expected Future Development Trends**

Criterion	Response					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Yes This would be development of single-family residences on existing land parcels within The Sea Ranch Community. Wildfire is our major concern here as well as earthquake and the possible ensuing of a Tsunami if the quake is large enough.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		2015	2016	2017	2018	2019
	Single Family	1	5	8	4	7
	Multi-Family	0	0	0	0	0
	Other (commercial, mixed-use, etc.)	0	0	0	0	0
	Total	1	5	8	4	7
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: none</li> <li>• Landslide: unknown</li> <li>• High Liquefaction Areas: unknown</li> <li>• Tsunami Inundation Area: Approx. 302 properties at a &lt;50' elevation</li> <li>• Wildfire Risk Areas: 1,721</li> </ul> Several private residences or commercial agricultural properties have been developed in the last few years in the Annapolis area of the District. These are all in high wildfire risk areas.					
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	There are an additional 435 lots left to build upon on The Sea Ranch.					

## 7.4 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 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 7-4.
- An assessment of fiscal capabilities is presented in Table 7-5.
- An assessment of administrative and technical capabilities is presented in Table 7-6.
- An assessment of education and outreach capabilities is presented in Table 7-7.
- Classifications under various community mitigation programs are presented in Table 7-8.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 7-9.

**Table 7-4. Planning and Regulatory Capability**

Plan, Study or Program	Date of Most Recent Update	Comment
California Building Code	N/A	Reviewed the State’s 2020 code
California Fire Code	2019	
Sonoma County Fire Code	2019	District adopted by reference, and without change, the county fire code in March of 2020
Sonoma County Community Fire Protection Plan	N/A	Ongoing effort with Sonoma Co. Fire Safe Council (education purposes only)
The Sea Ranch Community Wildfire Protection Plan	2019	

**Table 7-5. Fiscal Capability**

Financial Resource	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes—by cooperating agency (NSCVFA*) funding
Authority to Levy Taxes for Specific Purposes	Yes—the district has the power to levy fees
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
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	No
Federal Grant Programs	Yes
Other	Yes—by cooperating agency (NSCVFA*) funding

\* North Sonoma Coast Volunteer Firefighter Association (NSCVFA) is a non-profit organization dedicated to the benefit of the district by raising funds for new apparatus, owning and maintaining the TSR North Fire Station, and making it available for the district’s sole use.

**Table 7-6. Administrative and Technical Capability**

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	By arrangement with TSRA Design Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	By arrangement with TSRA Design Department
Planners or engineers with an understanding of natural hazards	Yes	By arrangement with TSRA Design and Facility & Resources Departments
Staff with training in benefit/cost analysis	No	
Surveyors	No	

Staff/Personnel Resource	Available?	Department/Agency/Position
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	By arrangement with TSRA Security
Grant writers	Yes	Fire Chief and Captains and by arrangement with Sea Ranch Fire Safe Council Administrator

**Table 7-7. Education and Outreach**

Criterion	Response
Do you have a public information officer or communications office?	Yes, by arrangement with TSRA
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 Both District and TSRA websites have dedicated emergency info web pages
Do you use social media for hazard mitigation education and outreach? • If yes, please briefly describe	Yes Opt-in notification via text and email from TSRA
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify	Yes Sea Ranch Fire Safe Council, TSRA Design Committee, TSRA planning Committee
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe	Yes TSRA InfoAlerts, PRC 4291 code inspections, coastal fire and safety fair, educational materials at annual public events in Annapolis and TSR
Do you have any established warning systems for hazard events? • If yes, please briefly describe	Yes • SoCo Alert • TSRA Emergency Messaging (for the TSR area) • One Call Now (for the Annapolis area)

**Table 7-8. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	No		
DUNS#	Yes	080541123	
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		
Tsunami Ready	No		

**Table 7-9. Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Understanding of the impact of increased fire risk to local community and forested areas</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Ongoing monitoring of the Commons and forested lands at TSR, ongoing Fuels Management Program—dead and dying tree removal</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Medium
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: By arrangement with TSRA Design Dept</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Active participation in County Fire Safe Council, Fire Chiefs Association</i>	High
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: By arrangement with TSRA Design Dept</i>	High
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: Active participation by community members in the Fire District Board of Directors decisions</i>	High
Political support for implementing climate change adaptation strategies <i>Comment:</i>	High
Financial resources devoted to climate change adaptation <i>Comment: New projects are in planning stages. Funding is not secured.</i>	Medium
Local authority over sectors likely to be negatively impacted <i>Comment:</i>	Medium
<b>Public Capacity</b>	
Local residents knowledge of and understanding of climate risk <i>Comment:</i>	High
Local residents support of adaptation efforts <i>Comment:</i>	Medium
Local residents’ capacity to adapt to climate impacts <i>Comment:</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment: Ongoing efforts by community groups to preserve and restore Coho Salmon habitat along the Gualala River.</i>	Medium

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.

## 7.5 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.

### 7.5.1 Existing Integration

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

- **North Sonoma Coast Volunteer Firefighter Association**—Support organization for district, raises funds for district’s expenditures on apparatus, equipment, and PPE, publishes district newsletter, sponsors community events.
- **Horicon School**—emergency evac zone for Annapolis area. Air medical evac landing zone. Venue for ongoing public education by the district for fire and hazard mitigation.
- **Coast Life Support District**—Local ALS ambulance service. Provides EMS education and training. Several district personnel are also part-time EMS providers with this EMS agency.
- **CalFire**—Schedule A fire captain performs fire safety inspections and participates in community events to provide fire safety education
- **General Mutual Aid**—with adjoining jurisdictions, assistance given with IT and radio programming tasks
- **Sea Ranch Community Wildfire Protection Plan**—North Sonoma Coast Fire Protection District participated in the creation of the Sea Ranch CWPP.

### 7.5.2 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:

- **NSCVFA**—Continue close cooperation for the use of the North Fire Station facilities and to raise funds for equipment and maintenance
- **Creation of a district-wide CWPP**—Current Community Wildfire Protection Plan covers TSR only. An opportunity exists to create a CWPP for the entire district, including Annapolis
- **County and state organizations**—Continue working with county emergency organizations and Fire Safe Council, as well as CalFire.

## 7.6 RISK ASSESSMENT

### 7.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 7-10 lists past occurrences of natural hazards for which specific damage was recorded in the North Sonoma Coast Fire Protection District. Other hazard events that broadly affected the entire planning area, including North Sonoma Coast Fire Protection District, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 7-10. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfires	DR-4558-CA	August 14 – September 26, 2020	Unknown
Covid-19 Pandemic	DR-4482-CA	January 2020—Present	Unknown
PG&E Power Shutoff (PSPS)	N/A	October 2019	Unknown
Severe Weather	DR-4434-CA	February 24 – March 1, 2019	Unknown
Wildfire	DR-4344-CA	October 8 – 31, 2017	Unknown
Severe Weather	DR-4308-CA	February 1 – 23, 2017	Unknown
Severe Weather	DR-4301-CA	January 3 – 12, 2017	Unknown
H1N1 Influenza	N/A	April – May 2009	Unknown
Salt Point Fire	N/A	April 1, 2009	Unknown
New Year’s Floods	DR-1628-CA	December 31, 2005 – Jan 3, 2006	Unknown
Yardarm Fire	N/A	July 11, 1997	Unknown

### 7.6.2 Hazard Risk Ranking

Table 7-11 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 7-11. Hazard Risk Ranking**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Wildfire	40	High
2	Earthquake	34	High
3	Landslide	30	Medium
4	Severe Weather	30	Medium
5	Drought	6	Low
6	Tsunami	5	Low
7	Flood	5	Low
8	Sea Level Rise	5	Low
9	Dam Failure	5	Low

### 7.6.3 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
- Earthquake
- Landslide
- Severe Storm

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

## 7.7 HAZARD MITIGATION ACTION PLAN

Table 7-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 7-13 identifies the priority for each action. Table 7-14 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 7-12. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action NSC-1—Participate in hazardous fuel reduction projects based on the findings of the Sonoma County CWPP and along evacuation and medical response corridors within the NSCFPD.</b>						
<i>Hazards Mitigated:</i> Wildfire						
Existing	1, 2, 4, 6, 11, 12	NSCFPD	CAL FIRE, Sonoma County, Fire Safe Sonoma, Local Fire Safe Councils	High	HMGP, PDM, Private Funding, Private Grants	Ongoing
<b>Action NSC-2—Participate and Create CWPP for the Annapolis area of NSCFPD.</b>						
<i>Hazards Mitigated:</i> Wildfire						
Existing	1, 4, 9	NSCFPD	Fire Safe Sonoma, Local Fire Safe Councils	Medium	Staff Time, General Funds	Short-term
<b>Action NSC-3—Retrofit, elevate, and/or relocate critical facilities located in hazard areas.</b>						
<i>Hazards Mitigated:</i> Flood, Landslide, Earthquake, Severe Weather						
Existing	3, 6, 10	NSCFPD	None	High	HMGP, PDM, FMA, BRIC	Long-term
<b>Action NSC-4—Improve drainage along Hwy 1 within the Fire District to prevent flooding during periods of severe weather and traffic incidents and soil erosion</b>						
<i>Hazards Mitigated:</i> Flood, Landslide, Earthquake, Severe Weather						
Existing	2, 4, 10	NSCFPD	CalTrans	High	CalTrans	Short-Term
<b>Action NSC-5—Improve road upgrade along South Branch Rd to allow access and egress during periods of severe weather or prolonged winter storms. Including such as elevating, grading, paving, and appropriate drainage in critical sections of road subject to becoming too muddy to drive on to facilitate year-round use for first responders.</b>						
<i>Hazards Mitigated:</i> Flood, Landslide, Earthquake, Severe Weather						
Existing	3, 6, 9, 10	NSCFPD	TBD	High	HMGP, PDM, FMA, BRIC	Short-Term
<b>Action NSC-6—Create a shaded fuel break between the east side of The Sea Ranch and Gualala Redwood Timber properties.</b>						
<i>Hazards Mitigated:</i> Wildfire						
Existing	1, 2, 4, 6, 11, 12	NSCFPD	CAL FIRE, Sonoma County, Fire Safe Sonoma, Local Fire Safe Councils	High	HMGP, PDM, Private Funding, Private Grants	Short Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action NSC-7—Perform fuel reduction and clearing to create a 300’ perimeter around the Moonraker Communications tower</b>						
<i>Hazards Mitigated:</i> Wildfire						
Existing	3, 5, 6	NSCFPD	TSRA, CAL FIRE, Local Fire Safe Council	High	Sonoma County Veg Mgmt. Grant, CAL FIRE Grant, HMGP, BRIC	Short Term
<b>Action NSC-8—Work with Sonoma County to mitigate repetitive landslides on Annapolis Rd—a primary access road for fire response</b>						
<i>Hazards Mitigated:</i> Earthquake, Flood, Landslide						
Existing	1, 2, 3, 4	NSCFPD	Sonoma County Roads	High	TBD	Long Term
<b>Action NSC-9—Removal of dead and dying trees and combustible vegetation on unstable banks of Annapolis Rd.</b>						
<i>Hazards Mitigated:</i> Severe Weather, Wildfire, Landslide						
Existing	6	NSCFPD	Sonoma County Roads, CAL FIRE, Local Fire Safe Council	High	Sonoma County Veg Mgmt. Grant, CAL FIRE Grant, HMGP, BRIC	Long 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 7-13. 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 <sup>a</sup>	Grant Pursuit Priority <sup>a</sup>
NSC-1	6	High	High	Yes	Yes	No	Medium	High
NSC-2	3	Med	Med	Yes	Yes	Yes	Medium	Med
NSC-3	3	High	High	Yes	Yes	No	Medium	High
NSC-4	3	Med	Med	Yes	Yes	No	Medium	Med
NSC-5	4	Med	High	No	Yes	No	Low	Med
NSC-6	6	High	High	Yes	Yes	No	Medium	High
NSC-7	3	High	High	Yes	Yes	No	High	High
NSC-8	4	Med	High	No	Yes	No	Low	Med
NSC-9	1	Low	High	No	Yes	No	Low	Med

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

**Table 7-14. Analysis of Mitigation Actions**

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

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

## 7.8 INFORMATION SOURCES USED FOR THIS ANNEX

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

- NSCFPD’s fire records management system (ImageTrend)
- 2016 Sonoma County Operational Area Hazard Mitigation Plan
- Association of Bay Area Governments (ABAG) Hazard Viewer

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.
- Community Wildfire Protection Plan (The Sea Ranch)—Used as reference.

