

**PART 4—  
ANNEXES FOR FIRE PROTECTION  
DISTRICTS**



# CHAPTER 19.

## ARCATA FIRE PROTECTION DISTRICT UPDATE ANNEX

### 19.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

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### 19.2 JURISDICTION PROFILE

The Arcata Fire Protection District was established in 1949 and operates as an all-risk agency. We are a combination (50 % volunteer) fire department protecting the 37,000 residents of the City of Arcata, the communities of McKinleyville, Bayside, Manila and other rural areas for a total service area of 63 square miles on the remote coast of Northern California. The District is governed by an elected Board of Directors and employs 19 career personnel. Our local response area consists of industrial, commercial, residential, agricultural, beaches and wild land areas. Our district and local auto/mutual aid areas contain a significant urban/wild land interface threat. Located just off the coast is the Cascadia Subduction Zone, a seismically active area, which makes our communities vulnerable to significant earthquakes and tsunamis resulting in possible fires and natural disasters.

The Arcata Fire Protection District is a Special District, which under California law cannot charge or receive supplementary tax revenue such as Sales Tax, Utility Tax, Bed Tax or Vehicle License Fees. The District depends upon property taxes for the majority of our funding. In 1977, California's Proposition 13 shifted a large portion of property tax revenues away from local government agencies causing the loss of nearly 50% of our property tax funding. It also fixed future tax rates, limiting future income. In 1986, and again in 2001, our citizens voted to assess themselves an annual Special Fire Tax in an effort to preserve the level of service we have historically provided.

In 2006, we were successful in establishing a new special tax to hire additional firefighters and increase our staffing to two firefighters per station. We re-staffed a fire station that had been temporarily unstaffed and in November of 2012 we added a career-staffed engine at the Arcata Fire Station. We continue to augment our emergency response with volunteer staffing. This special tax currently accounts for 42% of our annual budget. Our 2012-2013 revenue (including property tax and special tax revenue is approximately \$3,935,000.00. The expenses are dedicated to personnel (78%) and operating costs (22%). Personnel costs continue to remain relatively low as volunteer firefighters supplement the needed staff. A Chief Officer position remains unfilled keeping our career staff personnel at a bare minimum to cover operational costs. Our reserve funds are allocated for operating and personnel expenses prior to receiving our yearly tax allocation along with designations for Capital Improvements, Contingency, and PERS. The following is a summary of key information about the jurisdiction:

The following is a summary of key information about the jurisdiction:

- **Population Served**—37,000 as of 2012

- **Land Area Served**—63 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$2,913,000,000
- **Land Area Owned**—approximately 1.5 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - 5 Type 1 Engines
  - 1 Type 3 Engine
  - 1 100' Aerial
  - 1 3000 gallon water tender
  - 1 Rescue Truck
  - 4 Ford F350 Utility pickups & 1 Sedan (Chevy Impala)
  - All tools, equipment, appliances associated with
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$5,500,000.
- **List of Critical Facilities Owned by the Jurisdiction:**
  - McKinleyville Fire Station
  - Mad River Fire Station
  - Arcata Fire Station (leased from Volunteer Association)
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$3,500,000.
- **Current and Anticipated Service Trends**—Areas within the District continue to be developed for housing and commercial uses. Infill is planned in the Arcata area and the McKinleyville area continues to see housing developments constructed. Increased population will create an increased demand for service and call volume. Fire District revenues will need to increase to allow us to maintain and improve service levels. Additional personnel will be needed to staff stations and respond to calls. Upgrades to stations will need to be considered. Long-range plans should include the construction of a station to serve the north end of McKinleyville along with staffing at the County Airport, increased career staffing, and the possible purchase of another aerial device to serve the McKinleyville area. The Fire District should also begin looking for a site to develop as a training facility.

Based on the data tracked by the California Department of Finance, Arcata and its surrounding areas has experienced a relatively flat rate of growth. Based on data available from the State of California Department of Finance, the population of Arcata grew by 7 percent between 2000 and 2013. Population growth was 0.4 percent from 2012 to 2013, and this slow growth is expected to continue through the end of the decade. Overall, the County in the last year had growth reported at 0.5%. With this rate of growth, the anticipated development trends for Arcata and its surrounding areas are considered low to moderate, consisting of primarily residential development Areas within the District continue to be developed for housing and commercial uses. Infill is planned in the Arcata area and the McKinleyville area continues to see housing developments constructed. Increased population will create an increased demand for service and call volume. Fire District revenues will need to increase to allow us to maintain and improve service levels. Since 2008, the Arcata Fire

District has experienced a 20.8% increase in requests for service. This trend is likely to continue as the population ages, additional housing and residential complexes are constructed, and with the anticipated increase in FTE students at Humboldt State University.

### 19.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather (Wind)	DR-1628	12/31/2005	\$18,000
Earthquake	DR-943	4/25/1992	\$50 million (countywide)

Table 19-1 lists all past occurrences of natural hazards within the jurisdiction.

### 19.4 HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Severe Weather	45
3	Tsunami	24
4	Drought	18
5	Flood	12
6	Landslide	12
7	Wildfire	12
8	Dam Failure	6

Table 19-2 presents the ranking of the hazards of concern.

### 19.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- CA Environmental Quality Act (CEQA)
- Americans with Disabilities Act (ADA)
- CA Fire Code
- CA Building Code
- Health and Safety Code (Title 19)

## 19.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

	Participating?	Classification	Date Classified
Public Protection	Yes	4/8B	2005
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	No	--	--

Classifications under various community mitigation programs are presented in Table 19-3.

## 19.7 HAZARD MITIGATION ACTION PLAN

Table 19-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>AFD #1—Continue support of countywide disaster planning/hazard mitigation initiatives</b>							
New and Existing	All Hazards	All Objectives	AFD	Low	AFD	Ongoing	Yes
<b>AFD-2 #—Conduct seismic retrofit of headquarters fire station</b>							
Existing	Earthquake	1,2,5	AFD	Medium	AFD, Hazard Mitigation Grants	Short Term	No
<b>AFD #3—Relocate Administrative Offices to McKinleyville to create redundancy and ensure business continuity</b>							
Existing	All Hazards	1,2,5	AFD	High	AFD, Hazard Mitigation Grants	Long term, Depends on financing	No
<b>AFD #4—Install PV and Solar energy systems at all 3 fire stations to enable “off grid” operations</b>							
Existing	All Hazards	1,2,4,5	AFD	Medium	AFD, Hazard Mitigation Grants	Short term	No
<b>AFD #5—Install automatic fire sprinklers and alarm system at headquarters fire station</b>							
Existing	Fire	1,2,4,5	AFD	Medium	AFD, Hazard Mitigation Grants	Short Term	No

**TABLE 19-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>AFD #6</b> —Replace above-ground fuel tank at McKinleyville fire station with above-ground concrete vault							
Existing	Earthquake, Flood, Tsunami	1,2,3,4,5	AFD	Low	District Funds, Hazard Mitigation Grants	Short term	No
<b>AFD #7</b> —Ensure a reliable and effective distribution of fire hydrants throughout district in cooperation with water purveyors							
New and Existing	All Hazards	1,2,4,5,8	AFD	Low	District budget/purveyors	Ongoing	No
<b>AFD #8</b> —Description Elevate/relocate Mad River fire station to protect against flooding							
Existing	Flood, Earthquake	1,2,4,5	AFD	High	AFD, Hazard Mitigation Grants	Long Term	No
<b>AFD #9</b> —Utilize social media to support Hazard Mitigation Plan and provide education/information to the public							
New and Existing	All Hazards	6,7,8,9,10, 11	AFD	Low	District Funds	Ongoing	Yes
<b>AFD #10</b> —Continue support of amateur emergency radio (HAM) system operators by providing fire station site/antennae, etc.							
New and Existing	All Hazards	6,7,8,9,10, 11	AFD	Medium	District Funds	Ongoing	No
<b>AFD #11</b> —Actively support HSU CERT program for housing/campus safety							
New and Existing	All Hazards	6,7,8,9,10, 11	AFD	Low	District Funds	Ongoing	No
<b>AFD #12</b> —Initiate NIMS compliant training/event planning in cooperation with HSUPD/APD							
New and existing	All Hazards	6,7,8,9,10, 11	AFD	Low	District Funds	Ongoing	No

## 19.8 PRIORITY OF RECOMMENDED INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
AFD-1	12	Medium	Low	Yes	No	Yes	High
AFD-2	3	High	Medium	Yes	Yes	No	Medium
AFD-3	3	High	High	Yes	Yes	No	Medium
AFD-4	4	High	Medium	Yes	Yes	Yes	High
AFD-5	4	High	Medium	Yes	Yes	No	High
AFD-6	5	Medium	Low	Yes	No	Yes	Medium
AFD-7	5	High	Low	Yes	No	Yes	High
AFD-8	4	High	High	Yes	Yes	No	High
AFD-9	6	High	Low	Yes	No	Yes	High
AFD-10	6	High	Low	Yes	No	Yes	High
AFD-11	6	High	Low	Yes	No	Yes	High
AFD-12	6	High	Low	Yes	No	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 19-5 identifies the priority for each initiative.



## 19.9 ANALYSIS OF RECOMMENDED INITIATIVES

<b>TABLE 19-6. ANALYSIS OF MITIGATION INITIATIVES</b>						
Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	8	3, 8	9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Drought			9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Earthquake	1	1, 3, 5, 6, 7	9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Flood	8	3, 8	9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Landslide			9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Severe Weather	8	3, 8	9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Tsunami	8	3, 8	9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8
Wildfire			9, 10, 11, 12		1, 3, 5, 6, 7	2, 3, 4, 5, 6, 8

a. See Chapter 1 for description of mitigation types.

Table 19-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### 19.10 STATUS OF PREVIOUS PLAN INITIATIVES

Arcata Fire has enjoyed a great deal of success in implementing our previous initiatives. We have updated our webpage to include links to other agencies and to provide disaster planning information. In addition, we are utilizing Facebook to reach out to our constituents and provide them with additional information. Our stations are all equipped with new, limited-combustible roof materials. We have adopted the countywide apparatus numbering system and provided all of our responding with new radios. Four of our engines have been equipped with the Type 3 US&R required tool and equipment complements.

TABLE 19-7. PREVIOUS ACTION PLAN IMPLEMENTATION STATUS				
Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
AFD-1		✓		Included in new plan under Initiative 9.
AFD-2		✓		Incorporated in new plan, Initiative 9.
AFD-3	✓			
AFD-4	✓			New radios purchased as part of grant
AFD-5	✓			US&R equipment/tools/supplies placed in service on engines
AFD-6			✓	Interface of thermal imager cameras no longer technologically sound
AFD-7	✓			All vehicles/apparatus identified per countywide numbering program
AFD-8		✓		Incorporated in new plan as Initiative 1

Table 19-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

### 19.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Ongoing assessment of vulnerability and pre-disaster mitigation should be undertaken in order to establish a framework for grant funding requests, station/facility upgrades, and business continuity. Continued support of community initiatives is needed to better gauge public support for initiatives to mitigate or perform pre-disaster hazard mitigation.

## **CHAPTER 20. BRICELAND FIRE PROTECTION DISTRICT ANNEX**

### **20.1 HAZARD MITIGATION PLAN POINT OF CONTACT**

#### **Primary Point of Contact**

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#### **Alternate Point of Contact**

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### **20.2 JURISDICTION PROFILE**

On August 28, 2012, The Briceland Fire Protection District (BFPD); with a 5 member governing board of directors, was approved by the registered voters living within the Briceland Volunteer Fire Departments jurisdictional boundaries. Initiated by the Briceland Volunteer Fire Department (BVFD) [a 501 (c)(3) Org., operating under California, H&S Code, Division 12, Part 4, Chap. 1,2, &3], with the intention of a district with a special tax, would ensure that the fiscal needs of the BVFD are met, also opening the opportunity to make ordinances aimed at public safety. Presently the BVFD is under an agreement with the BFPD to provide fire protection, prevention, and emergency medical services for the district. Jurisdictional boundaries follow the same boundaries of BVFD that have been in place for 35 years along with the infrastructure and equipment. All of which began with the original fire department Beginnings Volunteer Fire Department in 1978, in 2005 it became Briceland VFD. Administrative duties are maintained by the BVFD—(Agency Agreements, Mutual Aid agreements, Contracts, and Grants.) The BFPD and the BVFD believe that this arrangement with its agreement (MOU) would prevent duplication of many administrative activities and services provided, thus making these resources to the community more fiscally responsible.

The Briceland Fire Protection District jurisdictional area covers 44 square miles of forested land and grasslands with residents inter-dispersed throughout the area on private roads. The roads are broken up into various road groups for maintaining egress and ingress to many of its residents throughout the area, forming small “communities.” The 2010 Census shows that there are 602 residents. The BFPD in their survey (2013) show that with some adjustment over the past 3 years that the residential may be as high as 1200 to 1300 persons residing in our jurisdictional area. The town of Briceland rests in the middle of jurisdictional area of the fire district, where the Briceland Community Services District (BCSD) provides water to 26 of its residential properties within the township. The BCSD also provides 9000-gallon tank of stored water for fire suppression. Within the community of Briceland is the community center of Beginnings Inc. a non-profit (501(c)(3)) organization providing a preschool, elementary school and an assembly building. The Beginnings Octagon, a 3000 sq. ft., building with assembly hall with a fully operational “commercial” kitchen, the “Octagon” also serves as a Red Cross Disaster Center. Within the infrastructure of the community center is an Alternate Care Site (ACS Cache) acquired from the State of California Department of Health and Human Services by the BVFD for the disaster center. This can turn the community centers Octagon into a 52 bed alternative hospital with its extensive medical supplies.

Beginnings Inc. with its “Octagon” being the center for many fire department and fire district activities, with no charges for public meetings are in support one another.

The following is a summary of key information about the jurisdiction:

- **Population Served**—602 as of the 2010 Census, 324 households
- **Land Area Served**—38,000 acres—44 sq. mi.
- **Value of Area Served**—The estimated value of the area \$190,000,000
- **Land Area Owned**—.99 acres, undeveloped, future fire station site
- **Critical Infrastructure and Equipment Owned:**
  - E5411, Type 1, 1989 Ford F250: \$28,000
  - E5436, Type 3, 1993 Int'l M-60: \$31,000
  - A5446, Type 4, 1992 Ford F250: \$21,000
  - WT5462, W-Tend, 1988 Int'l Navistar: \$26,000
  - R5471, Ambulance, 1998 Ford AM: \$35,000
  - 11,000 water storage tank: \$11,000
  - 3,000 water storage tank (suppression): \$3,000
- **Total Value of Critical Infrastructure and Equipment—\$155,000**
- **Critical Facilities Owned:**
  - 3 Engine bay W/office 1500 sq. ft. Fire Station: \$90,000
  - .99 Acres raw land for new Fire Station facilities: \$140,000
  - 10' x 20' storage facility (ACS Cache): \$3,500
- **Total Value of Critical Facilities—\$233,500**
- **Current and Anticipated Service Trends**—With an annual growth rate of 4-6% the BFPD will need to address increased structure fire protection as well as Wildland Urban Interface protection thus making water resources, water storage facilities, water tenders and apparatus for fire suppression support, a much needed aspect. This would also include stations and necessary staffing in the areas of greater population concentrations. The BFPD as new entity will need to address these issues in the very near future.

## 20.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wildland Fire	N/A	07/21/2011	7 acre fire directly across from the BVFD fire station along Briceland Thorn Rd. posing a threat to 3 several residents and the fire station. Fire cause: vehicle being towed with a faulty tire exposing the rim causing sparks, igniting the dry grasses at the edge of the road for a 200-yard section. Fortunately the station was staffed at the time of incident, offering a quick response. Cal Fire was in the area and responded quickly. This may have caused a major event with great residential property loss.
Wildland Fire	N/A	09/14/2008	
Severe Weather	DR-1203	02/06/1998	\$7.5 million in countywide damages, road closers, power lines down, slides, etc.
Earthquake	DR-943	04/25/1992	7.1 magnitude followed by a series of strong aftershocks into the following day. Slight damages to private property in our area, value unknown. Landslides blocking many rural roads.

Table 20-1 lists all past occurrences of natural hazards within the jurisdiction.

## 20.4 HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	48
2	Wildfire	42
3	Severe Storm	30
4	Landslide	20
5	Drought	10
6	Dam Failure	1
7	Flood	1
8	Volcano	0
9	Tsunami	0

Table 20-2 presents the ranking of the hazards of concern.

## 20.5 APPLICABLE REGULATIONS AND PLANS

The BFPD jurisdictional area lays within the California Department of Forestry and Fire Protection (Cal Fire) State Responsibility Area where there are regulations regarding wildfire exposure clearances around residential buildings and structures. Humboldt County has, through the Humboldt County Fire Safe Council, set standards for fire safety throughout the unincorporated areas of Humboldt and adapted and enforced through the Humboldt Planning Department. The State of California Uniform Building Code (UBC) sets strict standards regarding building codes intended for the safety of its residents during events as wildfire, flooding, severe weather, and earthquakes.

## 20.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 20-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	9/8	--
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	N/A	--	--

Classifications under various community mitigation programs are presented in Table 20-3.

## 20.7 HAZARD MITIGATION ACTION PLAN

TABLE 20-4. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>BCL-1</b> Repairing water storage: 11,000-gallon tank repair + install new 2½ inch distribution line to station site (hydrant 2½ inch)						
Existing	WF/SW	1,2,3,5,8,9	BVFD/BFPD	\$15,000	Grants, Cap Ex.	Short Term, Ongoing
<b>BCL-2</b> Build 100,000-gallon water storage tank(s) with new connection lines, 2½ inch.						
New	WF/SW	1,2,3,5,8,9	BVFD/BFPD	\$86,000	Grants, Loans	Short Term
<b>BCL-3</b> Earth Quake Retrofit existing Fire Station Apparatus Bay Doors						
Existing	WF/EQ/ SW	1,2,3,4,5	BVFD/BFPD	\$4,000	Grants, Loans, Cap Ex.	Short Term
<b>BCL-4</b> New Station 4 Bay with Offices and Quarters						
New	WF/EQ/ SW	1,2,3,4,5,9	BVFD/BFPD	\$1.1 million	Grant, Cap Ex.	Long Term, Ongoing
<b>BCL-5</b> Fuel Reduction for Road Clearances - Increase Access-for Fire Apparatus ingress-egress +Fuel Break						
New and Existing	WF/EQ/SW	1,2,3,4,5,8,9, 10	BVFD/BFPD	\$250,000	Grant,	Long Term, Ongoing
<b>BCL-6</b> Support countywide initiatives—Volume 1 Chapter. 18 in this plan.						
New and Existing	All Hazards	All	County	Low	Budget	Ongoing

Table 20-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan.

## 20.8 PRIORITY OF RECOMMENDED INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
BCL-1	6	High	Med	Yes	Yes	Yes	High
BCL-2	6	High	Med	Yes	Yes	No	High
BCL-3	5	High		Yes	Yes	Yes	High
BCL-4	6	High	High	Yes	Yes	No	High
BCL-5	8	High		Yes	Yes	No	Medium
BCL-6	12	High	Low	Yes	No	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 20-5 identifies the priority for each initiative.

## 20.9 ANALYSIS OF RECOMMENDED INITIATIVES

Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	BCL-6		BCL-6			
Drought	BCL-6		BCL-6		BCL-1 BCL-2, BCL-4 BCL-6	
Earthquake	BCL-6	BCL-3 BCL-5	BCL-6		BCL-1, BCL-3, BCL-6	
Fish Losses						
Flood	BCL-6		BCL-6			
Landslide	BCL-6		BCL-6			
Severe Weather	BCL-6	BCL-4	BCL-6		BCL-4 BCL-6	
Tsunami	BCL-6		BCL-6			
Wildfire	BCL-6	BCL-1 BCL-2, BCL-3 BCL-4, BCL-5	BCL-6	BCL-5	BCL-1 BCL-4 BCL-5	

a. See Chapter 1 for description of mitigation types.

Table 20-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.



## **20.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY**

The BFPD is located in an area of heavy forested hills to steep mountainous terrain, covered with dense Tan Oak and Madrone, and stands of Douglas Fir with inter-disbursed grasslands. This is sustained with heavy rainfall in the winter months creating a web of small streams and rivers. Within this matrix are many rural residences, which are accessed by a network of private roads. The private roads serving the area have many bridge crossings, some engineered and many installed many years ago that weren't engineered. This presents a hazard in time of an earthquake disaster: if during an earthquake bridges are compromised ingress and egress to effected residents will curtail any timely response, this would also be complicated if this were to happen in the middle of fire season with the possibility of a wildland event were to start due to downed power lines or a residential fire spreading to the wildland. An event of this nature will affect response of fire and rescue, and evacuations of residents. Mitigating the possibility of such an event is questionable.

Presently, the risk of drought is now at hand with water supplies low and tapped. Limited water storage resources for fire suppression brings serious concerns to the fire departments ability to mitigate a threatening fire event. The BCSD provides 9,000 of suppression water from a tank that has a dubious lifetime. The BVFD has an 11,000-gallon water tank that is in need of repairs to its roof. The tank has been out of service for several years due to the lack of sufficient water supply and a compromised distribution line. Just recently the fire department acquired a water source that will facilitate an adequate water supply for the departments present needs. Future needs would require additional or larger storage facilities and an adequate distribution system. We are presently looking for a grant process to assist in mitigating the problem and fulfilling our needs.

## **20.11 ADDITIONAL COMMENTS**

Briceland-Thorn Rd. a two land county road is only the main thoroughfare serving the "Lost Coast" and the communities of Whale Gulch, Whitethorn, Ettisburg, and Shelter Cove, passing through the middle of BFPD jurisdiction. A 2007 survey, conducted by county public works, showed a traffic flow of 3,000 vehicles a day, along the Briceland-Thorn Rd. corridor. Within this corridor are a series of bridges, 6 in all with 4 in the BFPD jurisdiction. With this is a steep mountain slope close to the road that has the potential to close the road from a landslide, as it has done in the past. These hazards can, in time of a large earthquake, cause closure of the Briceland-Thorn Rd. thus affecting any emergency response and stranding drivers along its corridor. This was not addressed in this document, it will take time in the near future for research and assessment, but nonetheless that of great concern.

The Briceland Fire Protection District is going through growing pains and organizational structuring with many challenges, this document being one of the newer challenges. We have a short history as a district, 1 year old, so many of the fields in this document have been left blank due to our short history. Filling out this document is certainly adding to our lessons and new gained wisdom.



# CHAPTER 21.

## FORTUNA FIRE PROTECTION DISTRICT ANNEX

### 21.1 HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

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e-mail Address: [LWinburn@fortunafire.com](mailto:LWinburn@fortunafire.com)

### 21.2 JURISDICTION PROFILE

The Fortuna Fire Protection District was approved by taxpayers and organized as a County Fire Protection District in June of 1937. In 1957 the district expanded to include the already existing Hydesville Fire Company which then became part of the Fortuna Volunteer Fire Department as Company #4. The Campton Heights fire Station was opened in 1967 which included the formation of Company #5. The district includes the city of Fortuna, Hydesville, Alton, and the Metropolitan and Palmer Creek areas. The fire department provides services for approximately 13,800 citizens within the District. The fire department responds to structural fires, motor vehicle accidents, hazardous conditions and wildfires throughout the district. In addition the department responds to medical emergencies occurring in the district but outside city limits. A five member Board of Commissioners appointed by the Humboldt County Second District County Supervisor governs the department and appoints the fire chief. The first and second assistant chiefs and the safety officer are elected by the volunteer firefighters with the consent of the chief. There are five fire companies in the department, companies #1 #2 and #3 are located down town at the Main Station while company #4 is in Hydesville and company #5 is in Campton Heights. The Board assumes responsibility for the adoption of this plan; the Fire Chief will oversee its implementation.

The following is a summary of key information about the jurisdiction:

- **Population Served**—15,000 as of 2012
- **Land Area Served**—26 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is 1,166,990,000
- **Land Area Owned**—3.5 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - 15 apparatus and equipment \$4,520,000
  - SCBA filling station \$125,000
  - personal protective equipment for 60 fire fighters \$120,000
  - Generators \$24,000
  - Communications equipment \$12,000

- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$4,801,000.
- **List of Critical Facilities Owned by the Jurisdiction:**
  - Main Station                    \$1,200,000
  - Hydesville Station            \$600,000
  - Campton Heights              \$210,000
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$ 2,010,000
- **Current and Anticipated Service Trends**—The population of Fortuna has increased from 10,400 in 1999 to 11,939 in 2010. Requests for service increased from 257 to 309 between 2006 and 2012, a 20% increase.

### 21.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

<b>TABLE 21-1. NATURAL HAZARD EVENTS</b>			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wind event		3/4/2006	There were numerous roofs damaged and metal buildings impacted when high winds surfaced. Power lines were damaged in a number of locations. Numerous tree limbs were broken off. Estimated damage not available.
Flood		12/24/2003	Floodwaters entered a number of residences with estimated damages two to three hundred thousand dollars.
Severe Weather/ Flood	DR-1046	1/9/1995	Streets flooded-minor damage. \$1.3 million countywide
Windstorm/ flood	N/A	12/13/1995	1,000 homes without power.
Earthquake (Cape Mendocino earthquake)	DR-943	4/25/1992	89-106 homes damages @ \$1.2 million estimate 41 commercial buildings @ 1.6 million estimate Public facilities @ \$1.0 million estimate \$3.8 to \$4.0 million total damage in Fortuna
Severe Weather/Flood	DR-677	1/25//1983	Localized flooding on Fortuna Blvd.
Wind event		1979-80	There were numerous roofs damaged when high winds were experienced. Estimated damage not available.

Table 21-1 lists all past occurrences of natural hazards within the jurisdiction.

## 21.4 HAZARD RISK RANKING

TABLE 21-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	51
2	Severe Weather	48
3	Flood	15
4	Wildfire	14
5	Landslide	5
6	Drought	0
7	Dam Failure	0
8	Tsunami	0
9		

Table 21-2 presents the ranking of the hazards of concern.

## 21.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- City of Fortuna Emergency Operations Plan
- Fortuna Fire Department Hazard Response Plan

## 21.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 21-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	9/8	--
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	No	--	--

Classifications under various community mitigation programs are presented in Table 21-3.

## 21.7 HAZARD MITIGATION ACTION PLAN

TABLE 21-4. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>FFD 1</b> —Conduct an evaluation of each fire station in the district to determine its ability to survive an earthquake and/or wind event and steps needed to make it resilient.						
Existing	Earthquake, Severe Weather	O-1, O-2, O-4	Fortuna	\$15,000	PDM, District	Short term
<b>FFD 2</b> —Perform necessary retro-construction to assure facility resilience to survive an earthquake and/or wind event.						
Existing	Earthquake, Severe Weather	O-1, O-2, O-4	Fortuna	High	PDM, District	Short term
<b>FFD 3</b> —Support countywide initiatives identified in Volume 1 of this plan.						
New and Existing	All Hazards	All Objectives	FFD	Low	District Funds	Ongoing

Table 21-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan.

## 21.8 PRIORITY OF RECOMMENDED INITIATIVES

TABLE 21-5. MITIGATION STRATEGY PRIORITY SCHEDULE							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant- Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
FFD-1	3	High	Medium	Yes	Yes	No	High
FFD-2	3	High	High	Yes	Yes	No	Medium
FFD-3	12	Medium	Low	Yes	No	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 21-5 identifies the priority for each initiative.

## 21.9 ANALYSIS OF RECOMMENDED INITIATIVES

<b>TABLE 21-6. ANALYSIS OF MITIGATION INITIATIVES</b>						
Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	FFD-3		FFD-3		FFD-3	
Drought	FFD-3		FFD-3		FFD-3	
Earthquake	FFD-3	FFD-1	FFD-3		FFD-3	FFD-2
Flood	FFD-3		FFD-3		FFD-3	
Landslide	FFD-3		FFD-3		FFD-3	
Severe Weather	FFD-3	FFD-1	FFD-3		FFD-3	FFD-2
Tsunami	FFD-3		FFD-3		FFD-3	
Wildfire	FFD-3		FFD-3		FFD-3	

a. See Chapter 1 for description of mitigation types.

Table 21-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.





# CHAPTER 22. HUMBOLDT FIRE PROTECTION DISTRICT NO. 1 UPDATE ANNEX

## 22.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

William M. Reynolds, Battalion Chief  
3455 Harris St.  
Eureka, CA 95503  
Telephone: (707) 445-4900  
e-mail Address: wreynolds@hbfire.org

### Alternate Point of Contact

Kathi Hendricks, Executive Secretary  
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Eureka, CA 95503  
Telephone: (707) 445-4900  
e-mail Address: khendricks@hbfire.org

## 22.2 JURISDICTION PROFILE

Humboldt No. 1 Fire Protection District was formed in 1929, and has been reorganized two times, most recently under The Fire Protection District Law of 1987, which is the source of statutory authority. A five member Board of Directors, elected by the voters of the District, governs the District. The District currently employs 2 Chief Officers, 19 career Firefighters and an administrative assistant. The District also utilizes 15 Volunteer Firefighters. Our operations are funded by property taxes and fire benefit assessments passed in 1985 and 2004. The District covers approximately 40 square miles surrounding the City of Eureka in a wildland urban interface, and serves about 26,000 residents. We are in the process of consolidating with the City of Eureka Fire Department into the Humboldt Bay Fire Joint Powers Authority. The City of Eureka's population is 27,021 and the area served is 14.4 square miles.

The following is a summary of key information about the jurisdiction:

### Population Served—of key information about the jurisdiction:

- **Population Served**—The District's population is approximately 26,000 and the City of Eureka's is 27,021 totaling approximately 53,021 as of January 2013. Our District holds 18 care homes, seven elementary schools, three veterinary clinics, and the state fairgrounds. The only hospital is in our first-in response area, as is the Surgicenter and many doctors' offices.
- **Land Area Served**—The District consists of 40 square miles and works under an automatic aid agreement with the City of Eureka Fire Department that is 14.4 square miles. Both Agencies are combining into Humboldt Bay Fire Authority making the total land area served 54.4 square miles.
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$1,616,171,687. This includes a net value of \$1,548,535,195 with \$67,636,492 in exemptions.
- **Land Area Owned**—Humboldt No. 1 Fire Protection District owns one (1) total acre of property including .67 acres for Fire Station 11 and .33 acres for Fire Station 12.
- **Critical Infrastructure and Equipment Owned:**
  - Three Type 1 Fire Engines - \$1,500,000 replacement cost

- One Type III Fire Engine - \$300,000 replacement cost
- One 2000 gallon Water Tender - \$300,000 replacement cost
- Two Command vehicles - \$90,000 replacement cost (\$45,000 apiece)
- Two Utility Pick Ups - \$55,000 replacement cost
- **Total Value of Critical Infrastructure and Equipment—\$2,245,000**
- **Critical Facilities Owned:**
  - Station 11 (Headquarters) - \$ 1,746,627
  - Station 12 (Bayview) - \$ 1,009,397
  - Donna Drive Radio Repeater Site - \$ 114,572
- **Total Value of Critical Facilities—\$ 2,870,596**
- **Current and Anticipated Service Trends—**The District has experienced a 26% increase in call volume in the last five years. There is a current planning application for a large housing development within the District (900-1422 units). The funding for infrastructure would currently be based solely upon the increased property taxes and benefit assessments. The development does include space for a fire station, but no funding. There are also plans to convert land within the District owned by local timber companies to a “community forest” recreational area which could significantly increase the amount of wildland fires and medical response within said community forest. Several other significant development areas exist in the Cutten area that could add up several thousand parcels. In 2011 Humboldt Fire District adopted a development impact fee that, with the continued development of properties within the District, monies from projects are paid to the Fire District to fund infrastructure and capital costs in order to maintain our level of service provided.

## 22.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 22-1 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Earthquake 7.4	n/a	11/8/80	None Available
Coastal Storm	n/a	1/18/81	None Available
Storm	n/a	11/13—16/81	None Available
Storm/Flood	n/a	12/19/81	None Available
Storm/Flood	n/a	3/31/82	None Available
Coastal Storm, Floods, Slides	DR-677	1/25/93	\$3.82 million countywide
Storm/Flood	n/a	12/25/83	None Available
Flood	DR-758	2/21/1986	\$5.0 million countywide
Storm	n/a	1/29/87	None Available
Storm	n/a	1/3/88	None Available
Storm	n/a	11/22/88	None Available
Storm	n/a	1/6—11/89	None Available
Storm	n/a	2/15/89	None Available
Storm	n/a	3/9/89	None Available
Storm	n/a	1/8/90	None Available
Storm	n/a	3/5-14/91	None Available
Flood	DR-935	2/25/92	None Available
Earthquake	DR-943	2/25/92	356 injured, \$48.3 million damage countywide
Storm/Flood	n/a	12/31/92	None Available
Storm	n/a	1 /4-6/93	None Available
Storm/Flood	n/a	1/20/93	None Available
Storm	n/a	1/24-26/94	None Available
Storm	n/a	2/15/94	None Available
Earthquake	n/a	12/26/94	None Available
Winter Storms, Flooding, Landslides, Mudflows	DR-1044	2/25/92	\$15 million countywide
Severe Winter Storms, Flooding	DR-1046	3/12/1995	\$1.3 million countywide
Windstorm/Flood	n/a	12/11-13/95	None Available
Storm/Flood	n/a	12/29-31/95	None Available

**TABLE 22-1.  
NATURAL HAZARD EVENTS**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Storm/Flood	n/a	12/8-15/96	None Available
Severe Winter Storms/ Flooding	M#1155	1/4/97	\$35 million countywide
Severe Winter Storms/ Flooding	M#1203	2/9/98	\$7.75 million countywide
Flood	n/a	1/10/01	Flooding to residences in King Salmon—2'
Severe Weather	n/a	11/28/01	Trees/Power Lines down, long term power outages
Landslides on Broadway, Flooding Elk River, Evacuations	n/a	12/27/02	None Available
Storm/Flood	n/a	12/2-4/03	None Available
Severe Weather	n/a	12/23/03	None Available
Severe Weather	n/a	10/25/04	None Available
Severe Weather	n/a	12/17/05—1/3/06	None Available
Severe Storm/Wind	n/a	04/05/2006	None Available
Severe Weather	n/a	12/27/06	None Available
Severe Storm/Wind	n/a	01/30/2008	\$16,235 countywide Reported
Severe Storm/Wind	n/a	10/30/2008	None Available
Severe Storm/Wind	n/a	12/21/2008	None Available
Earthquake	n/a	01/09/2010	\$28 million in City of Eureka
Tsunami	n/a	03/10/2011	None Available
Severe Storm/Flood	n/a	03/16/2012	None Available
Severe Storm/Flood	n/a	03/30/2012	None Available
Severe Storm/Flood	n/a	11/30/2012	None Available
Severe Storm/Flood	n/a	12/21/2012	None Available

## 22.4 HAZARD RISK RANKING

TABLE 22-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Severe Weather	42
3	Flood	26
4	Wildland Fire	26
5	Tsunami	22
6	Landslide	22
7	Drought	16
8	Dam Failure	0

Table 22-2 presents the ranking of the hazards of concern.

## 22.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- California Fire Code
- California Building Code
- Health and Safety Code
- California Environmental Quality Act (CEQA)
- American Disabilities Act (ADA)
- Humboldt County Fire Safe Plan
- Humboldt County Emergency Operations Plan

## 22.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 22-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	ISO 4/9*	12/1/2007
Storm Ready	No	n/a	n/a
Firewise	No	n/a	n/a
Tsunami Ready (if applicable)	No	n/a	n/a

Classifications under various community mitigation programs are presented in Table 22-3.

## 22.7 HAZARD MITIGATION ACTION PLAN

Table 22-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan.

<b>TABLE 22-4. HAZARD MITIGATION ACTION PLAN MATRIX</b>							
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative HFD-1—Seismic Retrofit of Fire Station 12</b>							
New & Existing	Earthquake	O-1, O-2, O-3, O-4, O-5	HBF	\$1,000,000	HMGP Grant	Long Term	Y
<b>Initiative HFD-2—Upgrade to full time Advanced Life Support</b>							
New & Existing	All Hazards	O-4, O-5, O-6	HBF	\$250,000	Operational Budget	Long Term	N
<b>Initiative HFD-3—Establishment of District-Wide CERT Program</b>							
New & Existing	All Hazards	O-1, O-3, O-4, O-5, O-6	HBF	\$10,000	Operational Budget	Short Term	N
<b>Initiative HFD-4—Disaster Operations Policies and Procedures</b>							
New & Existing	All Hazards	O-1, O-4, O-5	HBF	Low	Operational Budget	Short Term	N
<b>Initiative HFD-5—Establish a comprehensive and regular training regimen with Humboldt County OES EOC</b>							
New & Existing	All Hazards	O-1, O-4, O-5, O-7	HBF	Low	Operational Budget	Mid term	N
<b>Initiative HFD-6—Enhance Department Website to include more comprehensive disaster planning resources</b>							
New & Existing	All Hazards	O-3, O-6, O-8	HBF	Low	Operational Budget	Short Term	N
<b>Initiative HFD-7—Enhance Department Newsletter to increase public awareness and education in regard to disaster planning and preparedness</b>							
New & Existing	All Hazards	O-3, O-6, O-8	HBF	\$2000- 5000	Operational Budget	Mid Term	N
<b>Initiative HFD-8—Rural Water Supply Tank Program</b>							
New & Existing	Wildland Fire	O-2, O-3, O-4, O-5, O-9	HBF	\$10-15000	PDM Grant	Long Term	N
<b>Initiative HFD-9—Support countywide initiatives in the Humboldt Operational Area Hazard Mitigation Plan.</b>							
New & Existing	All Hazards	All Objectives	HBF	Low	Operational Budget	Short Term	N

TABLE 22-4. HAZARD MITIGATION ACTION PLAN MATRIX							
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative HFD-10</b> —Adopt the International Building Code once ratified by the State of California as the State Building Code.							
New & Existing	All Hazards	O-2, O-3, O-10, O-11	HBF	Low	Operational Budget	Short Term	N
<b>Initiative HFD-11</b> —Continue to participate not only in general mutual-aid agreements, but also in agreements with adjoining jurisdictions for cooperative response to all hazards and disasters							
New & Existing	All Hazards	O-1, O-2, O-3, O-4, O-5, O-12	HBF	Low	Operational Budget	Short Term	N

## 22.8 PRIORITY OF RECOMMENDED INITIATIVES

TABLE 22-5. MITIGATION STRATEGY PRIORITY SCHEDULE							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
HFD-1	5	High	High	Yes	Yes	No	Low
HFD-2	3	High	High	Yes	No	No	Low
HFD-3	5	High	Low	Yes	Yes	Yes	High
HFD-4	3	High	Low	Yes	No	Yes	High
HFD-5	4	High	Low	Yes	No	Yes	High
HFD-6	3	Medium	Low	Yes	No	Yes	Medium
HFD-7	3	Medium	Medium	Yes	No	Yes	Medium
HFD-8	5	High	High	Yes	Yes	No	Medium
HFD-9	12	Low	Low	Yes	No	Yes	High
HFD-10	4	Medium	Low	Yes	No	Yes	High
HFD-11	6	High	Low	Yes	No	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 22-5 identifies the priority for each initiative.

## 22.9 ANALYSIS OF RECOMMENDED INITIATIVES

TABLE 22-6. ANALYSIS OF MITIGATION INITIATIVES						
Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-8, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-8, HFD-9,	HFD-6, HFD-7, HFD-9,	HFD-4, HFD-5, HFD-8, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-8, HFD-9, HFD-11	HFD-1, HFD-9
Severe Weather	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-9	HFD-6, HFD-7, HFD-9	HFD-4, HFD-5, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-9, HFD-11	HFD-1, HFD-9
Flood	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-9	HFD-6, HFD-7, HFD-9	HFD-4, HFD-5, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-9, HFD-11	HFD-1, HFD-9
Wildland Fire	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-8, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-8, HFD-9	HFD-6, HFD-7, HFD-9	HFD-4, HFD-5, HFD-8, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-8, HFD-9, HFD-11	HFD-1, HFD-9
Tsunami	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-9	HFD-6, HFD-7, HFD-9	HFD-4, HFD-5, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-9, HFD-11	HFD-1, HFD-9
Landslide	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-9	HFD-6, HFD-7, HFD-9	HFD-4, HFD-5, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-9, HFD-11	HFD-1, HFD-9
Drought	HFD-1, HFD-3, HFD-4, HFD-5, HFD-6, HFD-7, HFD-9, HFD-10	HFD-1, HFD-3, HFD-6, HFD-7, HFD-9	HFD-6, HFD-7, HFD-9	HFD-4, HFD-5, HFD-9	HFD-1, HFD-2, HFD-3, HFD-4, HFD-5, HFD-9, HFD-11	HFD-1, HFD-9

a. See Chapter 1 for description of mitigation types.

Table 22-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.



## 22.10 STATUS OF PREVIOUS PLAN INITIATIVES

TABLE 22-7. PREVIOUS ACTION PLAN IMPLEMENTATION STATUS				
Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
HFD-1		✓		Seismic Retrofit of Station 12
HFD-2	✓			Private Bridge Safety Program
HFD-3	✓			Training Facilities - Multi Agency
HFD-4	✓			Support the District's CPR education program
HFD-5	✓			Employee Disaster Response Plan
HFD-6	✓			Seismic Retrofit of Station 11

Table 22-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## 22.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

Better hazard mapping and demographics of unincorporated areas with associated cumulative damages and losses.

## 22.12 ADDITIONAL COMMENTS

As previously stated, Humboldt No. 1 Fire Protection District has consolidated services with the Eureka City Fire Department to form the Humboldt Bay Fire Joint Powers Authority. While HFD still exists as a legal entity, all programs and mitigations listed in this annex will be carried out through Humboldt Bay Fire. This consolidation helps reduce redundancy and makes the entire organization more efficient and able to move disaster planning measures forward with greater efficiency and lower cost..

As previously stated in the last annex five years ago, our agency tracks property loss dollars only associated with fires. Even then, the losses are purely estimates by our personnel. We have no reliable means of estimating dollar losses associated with natural disasters within our jurisdiction other than previously established procedures from the county and state.



# CHAPTER 23. LOLETA FIRE PROTECTION DISTRICT ANNEX

## 23.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Kenneth Nielsen, Chief  
567 Park Street  
Loleta, CA 95551  
Telephone: 707-845-3090  
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### Alternate Point of Contact

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Loleta, CA 95551  
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e-mail Address: loletafire@suddenlinkmail.com

## 23.2 JURISDICTION PROFILE

Loleta Volunteer Fire Department was established in 1900 and functions today under the Loleta Fire Protection District as an all-risk agency providing emergency and non-emergency services including fire prevention, fire investigation, mutual aid response and medical aid with paramedics. We operate one station staffed on a complete volunteer basis. We serve the residents of the community of Loleta, Table Bluff Rancheria, and the Bear River Band of the Rohnerville Rancheria. The fire department is 100% volunteer and the District is run by a board of 5 elected commissioners. The Loleta Fire Protection District is a Special District, which under California law cannot charge or receive supplementary tax revenue such as sales tax, utility tax, bed tax or vehicle license fees. The District depends upon property taxes for the majority of its funding.

The following is a summary of key information about the jurisdiction:

- **Population Served**—750+ as of 2010
- **Land Area Served**—37 Square Miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is priceless.
- **Land Area Owned**—5 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**

4 Engines/Pumpers	\$1,200,000 Replacement Value
1 Water Tender	\$150,000 Replacement Value
1 Rescue Truck	\$175,000 Replacement Value
1 kw Station Generator	\$50,000 Replacement Value
20,000 of fire hose	\$100,000 Replacement Value
Miscellaneous tools/equipment/radios	\$150,000 Replacement Value
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$1,825,000.00
- **List of Critical Facilities Owned by the Jurisdiction:**

Fire Station \$600,000 Replacement Value

Fire Hall \$1,200,000 Replacement Value

- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$1,800,000.00
- **Current and Anticipated Service Trends**—The town of Loleta is experiencing some growth in town with a new apartment complex and housing sub-division. In addition, one of the Rancheria's is experiencing rapid and heavy growth. Over the past two years, and projected for the next two years, it is estimated that 40 additional single family homes, an apartment complex, community center, hotel, pool, and sewage plant have already been, or are currently being built. **This represents an almost 25% growth of service recipients.**

### 23.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

No known events have impacted District property within the last 10 years.

### 23.4 HAZARD RISK RANKING

TABLE 23-1. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	3 x (9+6+3) = 54
2	Flood	3 x (9+6+3) = 54
3	Wildfire	3 x (9+ 4+2) = 45
4	Severe Weather	3 x (9+4+2) = 45
5	Landslide	3 x (6+4+2) = 36
6	Tsunami	2 x (9+6+2) = 34
7	Dam Failure	0
8	Drought	0

Table 23-1 presents the ranking of the hazards of concern.

### 23.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- None of note

### 23.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 23-2. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	9/9	--
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	No	--	--

Classifications under various community mitigation programs are presented in Table 23-2.

### 23.7 HAZARD MITIGATION ACTION PLAN

TABLE 23-3. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>LFPD-1</b> Develop a post disaster action plan						
New and Existing	All Hazards	1,2,3,4,5,6	LFPD	High	LFPD	Short term
<b>LFPD-2</b> In conjunction with the County of Humboldt, develop a tsunami evacuation plan						
New and Existing	Tsunami	1,6,8,12	LFPD	\$10,000 Low	LFPD ,Humboldt County	Short term
<b>LFPD 3</b> —Install an early warning disaster siren and evacuation plan						
New and Existing	All Hazards	1,2,6	LFPD	\$4,500 Medium	LFPD	Short term
<b>LFPD-4</b> Support countywide initiatives identified in Volume 1 of this plan						
New and Existing	All Hazards	All Objectives	LFPD	Low	LFPD	Short term/ Ongoing
<b>LFPD-5</b> Continue to coordinate with the Humboldt County Fire Safe Council to implement wildfire mitigation actions recommended in the Community Wildfire Protection Plan that are relevant to our jurisdiction – such as educating residents about defensible space and fire safe construction materials.						
New and Existing	Wildfire	1,3,6,8,9	LFPD	Low	LFPD/grants	Short term/ Ongoing

Table 23-3 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Note: This hazard mitigation action plan does not contain a specific mitigation initiative for earthquake because the fire district’s infrastructure (fire station) is a steel building that will withstand the impacts of an earthquake without sustaining major damage.

### 23.8 PRIORITY OF RECOMMENDED INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
LFPD-1	6	High	High	Yes	Yes	No	Medium
LFPD-2	4	High	Low	Yes	Yes	Yes	High
LFPD-3	3	High	Medium	Yes	Yes	No	Medium
LFPD-4	12	Medium	Low	Yes	No	Yes	High
LFPD-5	5	Medium	Low	Yes	Yes	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 23-4 identifies the priority for each initiative.

### 23.9 ANALYSIS OF RECOMMENDED INITIATIVES

Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	
Drought	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	
Earthquake	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	
Flood	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	
Landslide	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	
Severe Weather	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	
Tsunami	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-2, LFPD-3	
Wildfire	LFPD-4		LFPD-4		LFPD-1, LFPD-4, LFPD-3	

a. See Chapter 1 for description of mitigation types.

Table 23-5 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **23.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY**

We are looking to purchase modern SCBA equipment for the department.

### **23.11 ADDITIONAL COMMENTS**

This is an exceeding complicated process for a small volunteer fire department



# CHAPTER 24. PETROLIA FIRE PROTECTION DISTRICT ANNEX

## 24.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Travis Howe-Fire Chief  
58 Sherman Street-Box 169  
Petrolia CA 95558  
707-629-3558  
Petroliafire@Frontiernet.Net

### Alternate Point of Contact

Lori Cook-Dispatch Officer  
58 Sherman St  
Petrolia CA 95558  
707-629-3558  
Petroliafire@Frontiernet.Net

## 24.2 JURISDICTION PROFILE

Petrolia Fire District was formed in 1951 and is located along the Mattole River 2 miles from the Pacific Ocean. Our area of response encompasses about 200 square miles of grass, timber, agriculture, and recreational land which includes a portion of the Kings Range National Conservation area as well as about 12 miles of coast line. We are governed by three publicly elected commissioners and have 20 volunteers that act as firefighters, medical technicians, dispatchers, secretaries and auxiliary members. The Fire District population is approximately 600 and increases to about 800 in the summer months.

In addition to fire and medical, we respond to search, rope, water and other specialized rescue operations and are involved in many community service type events.

The following is a summary of key information about the jurisdiction:

- **Population Served**—800 as of 7-1-13
- **Land Area Served**—200 sq. miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$30,090,628
- **Land Area Owned**—1/2 acre
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - Type 1 Fire Engine 300,000
  - Two Type 3 Fire Engines 500,000
  - 1 Water Tender 175,000
  - 1 Medical Rescue 75,000
  - 1 fast attack 40,000
  - 1 ATV 10,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is 2,000,000
- **List of Critical Facilities Owned by the Jurisdiction:**
  - Fire Station 300,000

- Water Storage and System 10,000
- Communications 35,000
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is 345,000.
- **Current and Anticipated Service Trends**—The demand for service has been steadily rising over time and there is a very large demand for service from areas outside our jurisdictional boundary. We are obliged to respond as the closest fire department but call it “good-will” service because we do not receive tax revenue from those areas. The cost of responding to emergency and other calls is constantly rising along with insurance and training costs. The list of mandatory requirements placed on the fire service is increasing as well. Basically the cost of running a fire department is increasing annually and is difficult to have a clear picture of equipment replacement and up keep costs very far into the future.

### 24.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

<b>TABLE 24-1. NATURAL HAZARD EVENTS</b>			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Earthquake	DR-943	4/25 and 26/1992	Magnitude 7.1, 6.6, and 6.7 within a 24 hour period. Private property damage occurred but the total value is not known. The Petrolia fire Station was Destroyed and the General Store Burned Down.

Table 24-1 lists all past occurrences of natural hazards within the jurisdiction.

## 24.4 HAZARD RISK RANKING

TABLE 24-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Severe Storm	54
3	Wildfire	24
4	Flood	6
5	Landslide	6
6	Tsunami	6
7	Drought	4
8	Dam Failure	0

Table 24-2 presents the ranking of the hazards of concern.

## 24.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- Humboldt County General Plan, particularly the Safety Element
- California Building Code implemented by the County Building Inspection Division. The WUI Code Chapter 7A is very relevant to wildfire hazards in our jurisdiction.
- Humboldt County Fire Safe Regulations for State Responsibility Areas—Authorized by Section 4290 of the Public Resources Code.

## 24.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 24-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	9	2012
Storm Ready	No	--	--
Firewise	Yes	--	2011
Tsunami Ready (if applicable)	No	--	--

Classifications under various community mitigation programs are presented in Table 24-3.

## 24.7 HAZARD MITIGATION ACTION PLAN

Table 24-4 Table 24-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan.

<b>TABLE 24-4. HAZARD MITIGATION ACTION PLAN MATRIX</b>							
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative PET-1</b> —Complete a District annexation to expand the jurisdictional boundary to more accurately reflect where services are provided on a regular basis and to generate additional and much needed revenue.							
New and Existing	Wildfire	1, 2, 4, 5, 9	PFPD, LAFCo, County of Humboldt	High	Private Foundations, County grants, Assistance to Firefighters grants, private donations	Short Term	No
<b>Initiative PET-2</b> —Repair/retrofit water tank at fire station to improve access with a hydrant, harden for hazards, and expand capacity.							
Existing	Wildfire, Earthquake, Severe Storms	1, 2, 3, 5	PFPD	High	Grants, fundraising, budgeted funds	Long Term	No
<b>Initiative PET-3</b> —Support and participate in a community water supply program of purchasing, installing, maintaining, and retrofitting as necessary water tanks reserved for firefighting and strategically located throughout our service area.							
Existing and New	Wildfire, Earthquake, Severe Storms	1, 2, 3, 5, 6, 8	PFPD, Mattole Restoration Council (MRC), Lower Mattole Fire Safe Council (LMFSC)	High	Grants, Donations	Short Term, Ongoing	No
<b>Initiative PET-4</b> —Maintain our Community Firewise certification through continued implementation of our Firewise Action Plan and by annually submitting the appropriate renewal paperwork.							
Existing and New	Wildfire	3, 5, 6, 7, 8, 9	PFPD, MRC, LMFSC, Humboldt County Fire Safe Council	Low	Volunteers, Donations, and Grants	Short Term, Ongoing	No

**TABLE 24-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative PET-5</b> —Assist with community fuels reduction projects in priority areas as identified in the Lower Mattole and Humboldt County Community Wildfire Protection Plans with an emphasis on ensuring safe access for our fire engines as well maintained defensible space from which we can protect homes from wildfire.							
Existing and New	Wildfire	3, 5, 6, 8, 9,	PFPD, MRC, LMFSC, Humboldt County Fire Safe Council	High	FEMA and State Fire Safe Council Grants, Volunteers, and donations	Short-Term, Ongoing	No
<b>Initiative PET-6</b> - Support countywide initiatives identified in Volume 1 of this plan							
New and Existing	All Hazards	All Objectives	PFPD	Low	PFPD	Ongoing	N/A

## 24.8 PRIORITY OF RECOMMENDED INITIATIVES

**TABLE 24-5.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
PET-1	5	High	High	Yes	Yes	No	High
PET-2	4	Med	Med	Yes	Yes	No	Med
PET-3	6	Med	High	No	Yes	No	Med
PET-4	6	Med	Low	Yes	Yes	Yes	High
PET-5	5	High	High	Yes	Yes	No	Med
PET-6	12	Medium	Low	Yes	No	Yes	high

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 24-5 identifies the priority for each initiative.

## 24.9 ANALYSIS OF RECOMMENDED INITIATIVES

<b>TABLE 24-6. ANALYSIS OF MITIGATION INITIATIVES</b>						
Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>						
Hazard Type	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Wildfire	PET-6	PET-4	PET-3, PET-4, PET-5, PET-6	PET-1, PET-2, PET-3, PET-5	PET-1, PET-2, PET-6	
Earthquake	PET-6		PET-6		PET-1, PRT-6	
Severe Storm	PET-6		PET-6		PET-1, PRT-6	
Flood	PET-6		PET-6		PET-1, PET-6	
Landslide	PET-6		PET-6		PET-1, PET-6	
Tsunami	PET-6		PET-6		PET-1, PET-6	
Drought	PET-6		PET-6		PET-1, PET-6	

a. See Chapter 1 for description of mitigation types.

Table 24-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### 24.10 ADDITIONAL COMMENTS

The Petrolia Fire District is located in an area subject to extreme wildfire potential in the summer months and extreme weather conditions in the winter months. The region of California where are District is located is very seismically active and prone to Earthquakes.

# CHAPTER 25. RIO DELL FIRE PROTECTION DISTRICT UPDATE ANNEX

## 25.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Shane Wilson, Fire Chief  
50 West Center St.  
Rio Dell, CA 95562  
Phone: 707-764-3329  
e-mail: shanewilson@riodellfire.com

### Alternate Point of Contact

Andrew Gonzales, Senior Prevention Officer  
50 West Center St.  
Rio Dell, CA 95562  
Phone: 707-764-3329  
e-mail: andrewgonzales@riodellfire.com

## 25.2 JURISDICTION PROFILE

Rio Dell Fire Protection District serves the City of Rio Dell and surrounding areas of Monument Rd, and Blueslide Rd. The fire department was formed in 1941 and operates with a 100% volunteer staff. The fire district is an elected board consisting of 5 commissioners. This board will assume the responsibility for the adoption and implementation of this plan. The Rio Dell Fire Protection District is a Special District, which under California law cannot charge or receive supplementary tax revenue such as Sales Tax, Utility Tax, Bed Tax or Vehicle License Fees. The District depends upon property taxes for the majority of our funding.

Under the direction of the fire chief, we consist of two assistant chiefs and three fire companies, totaling 22 volunteer firefighters. Rio Dell Fire responds to an average of 350 calls per year including fires, vehicle accidents, and medical aid calls. We respond to both incorporated areas as well as rural and wild land areas.

The following is a summary of key information about the jurisdiction:

- **Population Served**—3372 as of 2011 Census (within City Limits)
- **Land Area Served**—62 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$121,398,185 (within city limits)
- **Land Area Owned**—4.3 Acres of commercial property
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction**
  - 3—Engine/Pumpers \$425,000
  - 1—Water Tender \$50,000
  - 1—Rescue/Quick Attack \$125,000
  - 1—Command Vehicle \$70,000
  - 1 - 20 kw Station Generator \$10,000
  - 1 - 6,000 PSI SCBA Air Compressor \$40,000
  - 1 - Hose Dryer \$12,000

- 1—Hose Washer \$5,000
- 1—Base Station Communications Center \$2,000
- 4—Admin/Prevention Computers/Printers/Scanners \$8,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$747,000
- **List of Critical Facilities Owned by the Jurisdiction:**
  - Fire Station-11,000 square feet \$900,000
  - Library / Chamber of Commerce building-1,000 square feet \$150,000
  - Public Park with facilities (playground, bathrooms, etc.) 176,000 square feet \$150,000
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$1,200,000
- **Current and Anticipated Service Trends**—Based on the data tracked by the California Department of Finance, Rio Dell has experienced a relatively flat rate of growth. The overall population has increased only 2.03% since 2000 and has averaged 0.47% per year from 1990 to 2007. With this rate of growth, the anticipated development trends for Rio Dell are considered low to moderate, consisting of primarily residential development. The Fire District is currently in the process of annexing the Scotia Fire District which would double the current services and equipment. New development and construction is also anticipated to increase over the next 5 years.

### 25.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

<b>TABLE 25-1. NATURAL HAZARD EVENTS</b>			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flooding, severe winter storms, and landslides	DR-1628	02/03/2006	\$3,000 \$20,208,206 countywide
Severe Weather	N/A	11/1997	\$10,000
Earthquake	DR-943	04/04/1992	\$20,000

Table 25-1 lists all past occurrences of natural hazards within the jurisdiction.



## 25.4 HAZARD RISK RANKING

TABLE 25-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Severe Weather	48
3	Flood	24
4	Wildfire	22
5	Landslide	6
6	Drought	0
7	Dam Failure	0
8	Tsunami	0
9	Fish losses	0

Table 25-2 presents the ranking of the hazards of concern.

## 25.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- City of Rio Dell Hazard Mitigation Plan
- City of Rio Dell Emergency Response Plan
- County of Humboldt Hazard Mitigation Plan
- Rio Dell Fire Protection District Standard Operating Procedures
- Rio Dell Fire Protection District Emergency Command Center Operations Guide

## 25.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 25-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	4/9	--
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	N/A	N/A	N/A

Classifications under various community mitigation programs are presented in Table 25-3.

## 25.7 HAZARD MITIGATION ACTION PLAN

<b>TABLE 25-4. HAZARD MITIGATION ACTION PLAN MATRIX</b>							
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>RDFD-1—Develop a post disaster action plan</b>							
New and Existing	All Hazards	1,4,5,8	RDFPD	Medium	RDFPD City of Rio Dell	Short Term, Ongoing	Yes
<b>RDFD-2—Initiate Public outreach and education efforts, including an active Firewise program.</b>							
New and Existing	Wildfire	6,7,8	RDFPD	Medium	City of Rio Dell, Humboldt County, Cal-Fire, RDFPD	Short Term, Ongoing	Yes
<b>RDFD-3—Clear fuels on land that can trigger or maintain wildfires.</b>							
New and Existing	Wildfire	2,3,9	RDFPD	Medium	Cal-Fire, Private landowners	Short term	Yes
<b>RDFD-4—Establish and maintain mutual aid agreements between fire service agencies.</b>							
New and existing	All Hazards	1,4,5,8,12	RDFPD	Low	RDFPD	Short Term, Ongoing	Yes
<b>RDFD-5—Identify and create emergency vehicle access in high hazard areas.</b>							
New and Existing	All Hazards	1,4,5,8	RDFPD	Medium	City of Rio Dell, Humboldt County, Private landowners	Long Term, Depends on financing	Yes
<b>RDFD-6—Install fire suppression sprinkler system throughout fire station at 50 West Center St.</b>							
Existing	Wildfire	1,2,4	RDFPD	Medium	RDFPD	Long Term, Depends on financing	Yes
<b>RDFD-7—Support countywide initiatives identified in Volume 1 of this plan</b>							
New and Existing	All Hazards	All Objectives	RDFPD	Low	RDFPD	Ongoing	No

Table 25-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Note: This hazard mitigation action plan does not contain a specific mitigation initiative for earthquake because the fire district’s infrastructure (fire station) is already built to a standard intended to withstand seismic impacts.

## 25.8 PRIORITY OF RECOMMENDED INITIATIVES

<b>TABLE 25-5. MITIGATION STRATEGY PRIORITY SCHEDULE</b>							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
RDFD-1	4	High	Medium	Yes	Yes	No	Medium
RDFD-2	3	High	Medium	Yes	Yes	No	Medium
RDFD-3	3	High	Medium	Yes	Yes	No	Medium
RDFD-4	5	High	Low	Yes	Yes	Yes	High
RDFD-5	4	High	Medium	Yes	Yes	No	Medium
RDFD-6	3	High	Medium	Yes	Yes	No	Medium
RDFD-7	12	Medium	Low	Yes	No	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 25-5 identifies the priority for each initiative.

## 25.9 ANALYSIS OF RECOMMENDED INITIATIVES

TABLE 25-6. ANALYSIS OF MITIGATION INITIATIVES						
Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	RDFD-7		RDFD-2, RDFD-7		RDFD-1 RDFD-4 RDFD-5, RDFD-7	
Severe Weather	RDFD-7		RDFD-2, RDFD-7		RDFD-1 RDFD-4 RDFD-5, RDFD-7	
Flood	RDFD-7		RDFD-2, RDFD-7		RDFD-1 RDFD-4 RDFD-5, RDFD-7	
Wildfire	RDFD-3, RDFD-7	RDFD-3 RDFD-5 RDFD-6	RDFD-2, RDFD-7	RDFD-3	RDFD-1 RDFD-4 RDFD-5, RDFD-7	RDFD-6
Landslide	RDFD-7		RDFD-2, RDFD-7		RDFD-1 RDFD-4 RDFD-5, RDFD-7	
Drought	RDFD-7		RDFD-7			
Dam Failure	RDFD-7		RDFD-2, RDFD-7		RDFD-1 RDFD-4 RDFD-5, RDFD-7	
Tsunami	RDFD-7		RDFD-2, RDFD-7		RDFD-1 RDFD-4 RDFD-5, RDFD-7	

a. See Chapter 1 for description of mitigation types.

Table 25-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

**25.10 STATUS OF PREVIOUS PLAN INITIATIVES**

<b>TABLE 25-7. PREVIOUS ACTION PLAN IMPLEMENTATION STATUS</b>				
Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
RDFD-1	No	Yes	N/A	Still in process. Working with City of Rio Dell to Combine efforts.
RDFD-2	No	Yes	N/A	Public outreach program initiated through new Fire Prevention Division in 2012 as well as new website in 2008 and Facebook page in 2011. Firewise program not initiated.
RDFD-3	No	Yes	N/A	Not enough resources for actions. No plans in place at this time.
RDFD-4	Yes	Yes	N/A	New mutual aid agreements with Fortuna FPD, Loleta FPD, Carlotta FPD and Ferndale FPD for water tender auto aids in 2013. Updated existing auto aid agreements with Ferndale FPD and Fortuna FPD for auto aid in rural areas in 2013. Countywide mutual agreement signed in 2009.
RDFD-5	No	Yes	N/A	Have made identifications in key areas, i.e.: Redwood Drive bridge replacement. Working with City of Rio Dell for plans. Identified rural locations with limited egress (one road access). No actions in place at this time.
RDFD-6	No	Yes	N/A	No actions at this time. Plans are limited to funding resources.

Table 25-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.



# CHAPTER 26. SAMOA PENINSULA FIRE PROTECTION DISTRICT UPDATE ANNEX

## 26.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Troy Nicolini, Board Chair  
1982 Gass Street  
Samoa, CA 95564  
Telephone: 707-496-5959  
e-mail Address: troy.nicolini@suddenlink.net

### Alternate Point of Contact

Dale Unea, Chief  
1982 Gass Street  
Samoa, CA 95564  
Telephone: 707-599-4951  
e-mail Address: samoavfd@gmail.com

## 26.2 JURISDICTION PROFILE

The Samoa Fire District was formed in 1902. The Fairhaven Fire District was formed in 1952. The two districts merged in 1994 and formed the Samoa Peninsula Fire Protection District. The district is organized and governed by the Fire Protection District Act of 1987 (Health & Safety Code section 13800 et seq. ; the “Act”) and former Health & Safety Code section 13800 et seq. The district is governed by a five member Board of Directors, elected by the voters of the District. This board will assume responsibility for the adoption of this plan. The district is served by 22 volunteers, a chief, training officer, and a district manager. The district covers 8 square miles and serves 350 residents including a public school, US Post Office, a county campground, several industrial sites, a small municipal airport, and an off road vehicle park. We operate with the Arcata Fire District under a mutual aid agreement, which increases our response and service area by more than double of our first response area. Our district is funded by property taxes under the AB 8 process and by a voter approved special tax, which the voters passed in 1997.

The following is a summary of key information about the jurisdiction:

- **Population Served**—approximately 350 residents as of 2013. Additionally, 200 workers of the industrial areas served and the recreational venues serve hundreds of visitors during weekends and holidays.
- **Land Area Served**—8 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$53,500,00
- **Land Area Owned**—12.5 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - 4 engines and their equipment - \$ 230,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$230,000
- **List of Critical Facilities Owned by the Jurisdiction:**
  - Main fire station and annex structure that houses fire engines -

- **Total Value of Critical Facilities**—\$800,000

**Current and Anticipated Service Trends**—Service rates declined from about 2000 until 2011 due to the closure of several industrial facilities in the service area. One of these facilities was converted into a light industrial business park that now employs over 200 people. The remaining sites are currently in the planning phases of also being converted into business parks that meet the emerging needs of area commercial enterprises.

The town of Samoa is in the final planning stages of adding over 100 new homes, visitor serving facilities, and commercial infrastructure.

Visitor serving facilities have also been enhanced in other regions of the District, including beach access parking areas. These have resulted in a steady increase in tourism in the district and resultant needs for services.

The above activities are expected to result in a significant net increase in the services provided in the next five to ten years.

### 26.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Type of Event	FEMA Disaster #	Date	Preliminary Damage Assessment
Wildfire		2008	62 acres burned upwind of town of Fairhaven and Fairhaven Business Park. Total damages estimated to be \$60,000

Table 26-1 lists all past occurrences of natural hazards within the jurisdiction.

### 26.4 HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Tsunami	54
2	Earthquake	32
3	Severe weather	26
4	Flood	18
5	Wildfire	16
6	Dam Failure	0
7	Drought	0
8	Landslide	0

Table 26-2 presents the ranking of the hazards of concern.



## 26.5 APPLICABLE REGULATIONS AND PLANS

Efforts are ongoing at the County level and at the California Coastal Commission to mitigate for tsunami hazard with any future development in the tsunami hazard zones of the District.

It is the mission of the Samoa Peninsula Fire Protection District to provide the best possible protection from fire, medical and other emergencies to the citizens of the District.

- To arrive at the emergency scene within the shortest amount of time.
- To utilize relevant regulations to insure that structures and occupant practices are as safe as possible.
- To provide regular fire safety education programs in schools and other forums, to minimize fire injury and death.
- To provide the safest possible work environment for Samoa Peninsula Fire Protection District employees and volunteer firefighters.
- To provide quality equipment and training for the rapid management and control of emergency incidents.
- To regularly evaluate our performance and provide a strategic vision for public safety in the community.
- To accomplish necessary change, institute quality programs, and nurture employee relationships with a strong commitment to innovation.
- To facilitate employee and volunteer career development by sharing of responsibility and authority so that they may ultimately reach their full potential.
- To conserve Samoa Fire Protection District resources by operating in an efficient and cost effective manner.
- To cooperate with other public agencies to improve service and efficiency.
- To promote a strong relationship with local news media to support public education and to maintain a positive public image of the fire service in general, and Samoa Peninsula Fire Protection District in particular.

## 26.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

<b>TABLE 26-3. COMMUNITY CLASSIFICATIONS</b>			
	Participating?	Classification	Date Classified
Public Protection	Yes	5/9	ISO 2002
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	Yes	--	Expected 2015

Classifications under various community mitigation programs are presented in Table 26-3.

## 26.7 HAZARD MITIGATION ACTION PLAN

<b>TABLE 26-4. HAZARD MITIGATION ACTION PLAN MATRIX</b>							
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>SPFD 1</b> —Addition of external stairs to existing steel reinforced concrete building to create a vertical evacuation site for residents and visitors to use in the case of a major tsunami event, and relocation of some emergency response to the vertical evacuation site to enable post disaster response							
Existing	tsunami	1,3,4,5	Samoa Fire	\$250,000 High	PDM Grant, partner agencies	Short term	Yes
<b>SPFD 2</b> —Achieve TsunamiReady status for town of Fairhaven							
Existing	Tsunami	3,6,7	Samoa Fire	\$5,000 Low	NOAA, State, operating budget	Short term	Yes
<b>SPFD 3</b> —Initiate wildland fire educational campaign for communities of Fairhaven and Samoa							
Existing	Wildland fire	3,6,9	Samoa Fire	Low	Not needed	Short term	No
<b>SPFD 4</b> —Initiate Earthquake education campaign for communities and business in Fairhaven and Samoa							
Existing and new	Earthquake	2,3,6	Samoa Fire	Low	Not needed	Long term	No
<b>SPFD 5</b> —Support countywide initiatives identified in Volume 1 of this plan.							
New and existing	All Hazards	All Objectives	Samoa Fire	Low	Samoa Fire	Ongoing	No

Table 26-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan.

## 26.8 PRIORITY OF RECOMMENDED INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
SPFD-1	4	High	High	Yes	Yes	No	High
SPFD-2	3	Medium	Low	Yes	No	Yes	High
SPFD-3	3	Medium	Low	Yes	No	Yes	High
SPFD-4	3	Medium	Low	Yes	No	Yes	High
SPFD-5	12	Medium	Low	Yes	No	Yes	high

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 26-5 identifies the priority for each initiative.

## 26.9 ANALYSIS OF RECOMMENDED INITIATIVES

Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	SPFD-5		SPFD-5		SPFD-5	
Drought	SPFD-5		SPFD-5		SPFD-5	
Earthquake	SPFD-5	SPFD - 4	SPFD-4, SPFD-5		SPFD-5	
Fish Losses	SPFD-5		SPFD-5		SPFD-5	
Flood	SPFD-5		SPFD-5		SPFD-5	
Landslide	SPFD-5		SPFD-5		SPFD-5	
Severe Weather	SPFD-5		SPFD-5		SPFD-5	
Tsunami	SPFD-5		SPFD-2, SPFD-5		SPFD-1, SPFD-5	SPFD - 1
Wildland Fire	SPFD-5	SPFD - 3	SPFD-3, SPFD-5	SPFD - 3	SPFD-5	

a. See Chapter 1 for description of mitigation types.

Table 26-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

## 26.10 STATUS OF PREVIOUS PLAN INITIATIVES

TABLE 26-7. PREVIOUS ACTION PLAN IMPLEMENTATION STATUS				
Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
SPFD-1			✓	Integrated into the SPFD—1 whereby some response capability will be located at the evacuation site so that emergency personnel can respond after a major earthquake/tsunami
SPFD-2		✓		The achievement of Tsunami Ready cannot occur as long as there does not exist an evacuation site for the residents of Fairhaven. This is to be accomplished through SPFD - 1
SPFD-3		✓		The construction of a vertical evacuation site for tsunami response was not achieved because grant funding was not obtainable. This was due the inability to calculate a benefit to cost ratio for projects to mitigate for the tsunami hazard. This obstacle has been addressed in the intervening years.
SPFD-4	✓			Completed in 2010

Table 26-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

# CHAPTER 27. WILLOW CREEK FIRE PROTECTION DISTRICT UPDATE ANNEX

## 27.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Nathan Falk  
P.O. Box 622  
Willow Creek CA, 95573  
530-722-5387  
Neen10@msn.com

### Alternate Point of Contact

Tim La Londe  
P.O. Box 723  
Willow Creek CA, 95573  
530-629-2229

## 27.2 JURISDICTION PROFILE

The Willow Creek Volunteer Fire Department was established in 1957 shortly after a major fire disaster that destroyed most of the down town business area. The Willow Creek Fire Protection District was established in 1959. Both entities occupy the original fire hall located at 51 Willow Road in Willow Creek, California. Today, the Fire District averages between 15 and 22 active firefighters including two dispatchers. A publicly elected Board of Directors consisting of a panel of five, including a board president/chairman governs the Fire District. This Board will assume the responsibility for the adoption and implementation of this plan. All members of the Fire Department and the Board of Directors are volunteers. The Board of Directors employs a Clerk of the Board.

The Willow Creek Fire Department responds to both structural and wild land fires in and outside the district. The firefighting staff is cross trained and outfitted for both types of fire response. In addition to fire response calls, the Fire Department staff is often asked to respond to medical emergencies, assist to Emergency Medical Services and called to traffic accidents. Our staff is also trained and certified in handling medical emergencies. These skills are often employed during the sometimes-lengthy wait for EMS to arrive on scene. Our rate of calls for service average between 250 and 300 per year and seems to be on the rise with the increase of higher population growth/density.

The District has grown over the years and has acquired some updated personal safety equipment for the fire fighters as well as upgrading some of our firefighting apparatus. We currently operate one rescue vehicle, a primary (first out) Urban Interface fire truck, and a primary structural fire engine with one secondary structural fire engine. The District currently has no water tender to supplement fire suppression units in the field. The District currently has direct access to an appropriate fire hydrant system that is maintained by the Willow Creek Community Services District.

The Fire District is funded through grant applications, a 1% proportional tax base and a local fire fee assessment schedule. The following is a summary of key information about the jurisdiction:

- **Population Served**—1710 as of 2010
- **Land Area Served**—2700 Acres
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$3,000,000.00

- **Land Area Owned**—Approx. 2 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**  
 Main Fire Station \$1,000,000  
 Apparatus X-5 \$1,000,000  
 Second Station Property \$100,000
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is Fire Station, Apparatus, second station property \$2,100,000.00
- **Current and Anticipated Service Trends**—The District currently responds to 250 to 300 calls for service annually. The calls for service are increasing as the population base grows and ages. Recent land development projects are bringing new construction into the area. These new development projects are for both residential and business sites. The increase in new construction projects has added further requirements on the volunteer fire administrative staff to complete fire inspections as required under the county’s building code and construction project permit process. Population growing 1% annually. WCFPD in need of a paid Chief.

### 27.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

TABLE 27-1. NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
1964 500 year flood Trinity River	N/A	12/25/64	Wide spread Tens of million dollars
Trinity River flooding	8620704	01/08/73	Roads and infrastructure in the millions.
Major Wildland fires, Megram Fire		08/21/99 10/21/99	Massive destruction to our local forest, and threatened the local communities of Willow Creek and surrounding areas

Table 27-1 lists all past occurrences of natural hazards within the jurisdiction.

## 27.4 HAZARD RISK RANKING

TABLE 27-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Wildfire	54
2	Earthquake	45
3	Flood	39
4	Severe Weather	36
5	Landslide	12
6	Dam Failure	6
7	Drought	0
8	Tsunami	0

Table 27-2 presents the ranking of the hazards of concern.

## 27.5 APPLICABLE REGULATIONS AND PLANS

No existing codes, ordinances, policies or plans were identified that are applicable to this hazard mitigation plan.

## 27.6 COMMUNITY MITIGATION PROGRAM CLASSIFICATIONS

TABLE 27-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	Yes	5-9	--
Storm Ready	No	--	--
Firewise	No	--	--
Tsunami Ready (if applicable)	N/A	--	--

Classifications under various community mitigation programs are presented in Table 27-3.

## 27.7 HAZARD MITIGATION ACTION PLAN

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>Initiative WCFD #1—Structural/ non-structural seismic retrofit of current station.</b>							
Existing	Earthquake	2,4	WCFD	High	WCFD, Grant funding	Long-term	Yes
<b>Initiative WCFD#2—Construct a 2nd fire station within the District</b>							
New	All Hazards	1,2,4,5	WCFD	High	WCFD, bonds, SAFER Grants, AFG grants	Long term	No
<b>Initiative WCFD #3—Replace Current Rescue Truck</b>							
New and Existing	All hazards	1,2,4,5	WCFD	High	WCFD, SAFER grants, AFG grants	Short-term	No
<b>Initiative WCFD#4—Replace current Fire Engine</b>							
New and Existing	All hazards	1,2,4,5,	WCFD	High	WCFD, SAFER grants, AFG grants	Long-term	No
<b>Initiative WCFD#5—Support countywide initiatives identified in Volume 1 of this plan.</b>							
New and Existing	All Hazards	All Objectives	WCFD	Low	WCFD	Ongoing	Yes

Table 27-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Note: This hazard mitigation action plan does not contain a specific flood mitigation action initiative because the district’s infrastructure is not located within the flood zone.

## 27.8 PRIORITY OF RECOMMENDED INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Priority <sup>a</sup>
WCFD-1	2	High	High	Yes	Yes	No	Medium
WCFD-2	4	High	High	Yes	Yes	No	Medium
WCFD-3	4	High	High	Yes	Yes	Yes	High
WCFD-4	4	High	High	Yes	Yes	No	Medium
WCFD-5	12	Medium	Low	Yes	No	Yes	High

a. See Chapter 1 for definitions of high, medium and low priorities.

Table 27-5 identifies the priority for each initiative.



## 27.9 ANALYSIS OF RECOMMENDED INITIATIVES

TABLE 27-6. ANALYSIS OF MITIGATION INITIATIVES						
Hazard Type	Initiative Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Drought	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Earthquake	WCFD-5	WCFD-1	WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Flood	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Landslide	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Severe Weather	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Tsunami	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	
Wildfire	WCFD-5		WCFD-5		WCFD-2, WCFD-3, WCFD-4, WCFD-5	

a. See Chapter 1 for description of mitigation types.

Table 27-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

## 27.10 STATUS OF PREVIOUS PLAN INITIATIVES

TABLE 27-7. PREVIOUS ACTION PLAN IMPLEMENTATION STATUS				
Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
WCFD-1		✓		
WCFD-2			✓	Action is considered to be no-longer feasible and has been replaced by initiative WCFD#2.
WCFD-3		✓		

Table 27-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.