

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	Estimated Timeline	New and/or Existing Asset	Vulnerable Population Benefit?	Community Lifelines Benefit?
FGCSD10	Improve alternative communication capabilities throughout the district, including the acquisition of and licensing for ham radios, satellite telephones, mobile backup dispatch devices and other communication devices.	High	FGCSD General Manager and Fire Chief	Dam failure, drought, earthquake, extreme temperatures, flooding, landslide, wildfire, wind, winter weather	HMGP, PDM, CDBG	Under \$100,000	Medium-term	New	Yes	Communications

9. City of Fortuna Annex

This section presents the jurisdictional annex for the City of Fortuna. The jurisdiction's governing body passed a formal resolution to participate in this multi-jurisdictional hazard mitigation plan update. The City identified no changes in priorities for this plan update.

9.1. Planning Process

9.1.1. Contact Information

A key part of hazard mitigation planning is engaging the whole community. This plan was developed by planning consultant IEM, with input from the participating jurisdictions, including the City of Fortuna, the stakeholders and the public. The City of Fortuna was represented during the planning process by the following individual listed in Table 158.

Table 158: City of Fortuna Point of Contact

Name	Job Title	Jurisdiction/Agency	Preferred Contact Info (Email and/or Phone)
Shari Meads	Community Developer Director	Fortuna	smeads@ci.fortuna.ca.us

9.1.2. Stakeholder Engagement

Stakeholders, including local and regional agencies, neighboring communities, representatives of businesses and academia, private organizations, nonprofit organizations and community-based organizations that work directly with and/or provide support to underserved communities and vulnerable populations, were invited to be involved in the planning process and are recognized in Table 159. Stakeholders were invited to the stakeholder meetings through emails, calendar invites and phone calls. Additionally, they were encouraged to complete and share a public survey to gather more information. Lastly, all stakeholders were provided the opportunity to review the draft plan and provide feedback.

Table 159: Stakeholders Invited to Participate

Name	Job Title	Agency or Organization	Preferred Contact Info (Email and/or Phone)	Stakeholder Type
Brendan Byrd	Public Works Director	City of Fortuna	bbyrd@ci.fortuna.ca.us	2. Agencies that have the authority

Name	Job Title	Agency or Organization	Preferred Contact Info (Email and/or Phone)	Stakeholder Type
				to regulate development
Kyle Kertscher	Division Chief	Fortuna Fire Protection District	kkertscher@fortunafire.com	1. Local and regional agencies involved in hazard mitigation activities
Steven Baker	Fire Chief	Orick VFD	orickchief@gmail.com	3. Neighboring communities, including special districts
		Cal Poly Humboldt Emergency Management	EOC@humboldt.edu	4. Representatives of businesses, academia and other private organizations
Simon Knopf	Disaster Program Manager	American Red Cross – Northern CA Coastal Region	simon.knopf@redcross.org	5. Representatives of nonprofit organizations, including community-based organizations

9.1.3. Public Outreach

Continued public involvement was imperative to the overall success of the plan's implementation. The update process provided an opportunity to solicit participation from new and existing stakeholders, publicize success stories of mitigation efforts and seek additional public comments. The plan's maintenance and update will include continued public and stakeholder involvement and input through attendance at designated committee meetings, web postings, press releases to local media and public hearings. Figure 16 illustrates how the public was encouraged to participate in the survey. The City of Fortuna utilized a variety of free and easily accessible communication channels, including the city webpage, Facebook and X.



Figure 16: Public Outreach Methods

The public survey received 44 responses from residents of the City of Fortuna. When asked, “What types of projects do you believe the County and other local jurisdictions (cities and community service districts) should be doing to reduce damage and disruption from natural hazard events?” most indicated that they wanted to see mitigation projects focused on upgrades to bridges, power, roads, water supply and wastewater, improvements to public infrastructure against potential impacts from climate change, restoration of the natural environment to absorb impacts from natural hazards and opportunities for training for the public to better respond to natural disasters. One example of City of Fortuna’s efforts to incorporate public feedback into mitigation actions: FOR5 – Identify and pursue strategies to increase adaptive capacity to climate change, including but not limited to the following:

- Assess storm drain infrastructure, natural waterways and associated floodplains for condition and capacity, then implement projects that provide adaptive capacity for increased rainfall and runoff.
- Mitigate fire-related risk by participating in fire mitigation measures, defensible space, education and outreach and supporting Firewise communities’ programs.

Public feedback was incorporated, as appropriate, into the City of Fortuna’s risk assessment and the list of ideas which the City reviewed during the Mitigation Action Workshop to determine which should be included in the updated list of mitigation actions for this plan update. This process is reflected in the area-wide actions that Fortuna selected for inclusion in the update.

9.1.3.1.VULNERABLE POPULATION OUTREACH

Some Fortuna residents may be disproportionately affected by natural hazard events for reasons other than proximity to high-risk areas. Vulnerable and underserved residents in Fortuna may have less access to information and resources to help mitigate risk and increase preparedness for emergencies. To better understand the risks and vulnerabilities city residents face, this planning update developed a bilingual public survey that collectively identified ways to support, enhance and broaden capacity and resilience at the individual and social network levels. The city used a multi-tiered approach with multiple stakeholders’ social media accounts and the city website, which residents often use.

9.1.4. Plan Integration

9.1.4.1.INTEGRATION INTO LOCAL PLANNING MECHANISMS

This section identifies where such integration is already in place and where there are opportunities for further integration in the future. The successful implementation of this plan will require constant and vigilant review of existing plans and programs to ensure coordination and identify multi-objective opportunities that promote a safe, sustainable community. Existing planning mechanisms into which this plan has been integrated are listed in Table 160.

Table 160: Previous Plan Integration for the City of Fortuna

Plan Name	Description
Capital Improvement Plan (CIP)	The CIP is updated annually, and LHMP action items inform CIP projects.

The plan must also identify the local planning mechanisms where the updated hazard mitigation information and actions may be integrated in the future. The plan must describe each participant's process for integrating information from the mitigation strategy into their identified planning mechanisms. Table 161 displays how each community will integrate the hazard mitigation plan into other planning mechanisms in the future.

Table 161: Future Types of Plan Integration for the City of Fortuna

Type of Plan	Integration Method
General Plan, Safety Element	The city plans to update the General Plan in the next few years. The city will adopt an ordinance to incorporate the HMP in the Safety Element of the General Plan.

9.2. Risk Assessment

This plan must develop a comprehensive risk assessment to systematically identify the specific hazards and vulnerabilities of the most concern for each jurisdiction, as displayed in Table 162 and Table 163. For further information about these hazards, including extent, please refer to Volume 1 of this HMP.

Table 162: City of Fortuna Hazards

Type of Hazard Event	Jurisdiction Impact? (Yes/No)	If Not, What Is the Rationale for Omitting Hazard?
Dam Failure	No	There are no dams of sizable risk in the vicinity.
Drought	Yes	
Earthquake	Yes	
Extreme Heat	Yes	
Extreme Cold	Yes	
Flooding	Yes	
Landslide	Yes	

Type of Hazard Event	Jurisdiction Impact? (Yes/No)	If Not, What Is the Rationale for Omitting Hazard?
Tsunami	Yes	
Wildfire	Yes	
Wind	Yes	
Winter Weather	Yes	

Table 163: City of Fortuna Risk Assessment

Type of Hazard Event	Probability of Future Occurrence	People Impact	Property Impact	Economy Impact	Category
Drought	Medium	High	Low	Low	Medium
Earthquake	High	High	High	High	High
Extreme Heat	Medium	Medium	Low	Low	Low
Extreme Cold	Medium	Medium	Low	Low	Low
Flooding	High	Medium	High	High	High
Landslide	High	Low	Medium	Low	Medium
Tsunami	None	Low	None	Low	Low
Wildfire	Medium	High	High	High	High
Wind	High	Medium	Medium	Medium	High
Winter Weather	Low	Low	Low	Low	Low

Note: The process for assigning risk rankings is described in Volume 1.

9.2.1. Historical Events and Impacts

The following section lists past occurrences of natural hazards for which specific impacts and damages were recorded in the City of Fortuna. Other hazard events that broadly affected the entire planning area, including the City of Fortuna, are listed in the risk assessments in Volume 1.

9.2.1.1. HISTORICAL EVENTS

Fortuna has experienced a relatively calm weather pattern in recent times, with no recorded storm events directly affecting it. However, the broader northern Humboldt coastal region has

faced several storm events, as documented by the National Storm Events Database, which can be reviewed in the Humboldt County Annex.

While Fortuna itself may have avoided the brunt of these storms, neighboring areas have seen varying impacts, ranging from high winds to heavy rainfall. Fortuna's proximity to the coast means it can still feel the effects of these weather systems, even when it does not experience severe weather directly. The National Centers for Environmental Information database does not always capture localized hazard data. The City of Fortuna has documented additional significant events to address this gap, and their impacts are detailed below.

DROUGHT

- **April 12, May 10 and July 8, 2021:** Proclamation of State of Emergency issued. The city's water shortage contingency plan measures were put into place.
- **Oct. 19, 2021:** Executive Order declaring a statewide drought emergency.

EARTHQUAKE

- **Nov. 3, 2024:** Earthquake with a magnitude of 3.4. There was damage to buildings, property, roadways, water and gas distribution lines.
- **Jan. 27, 2023:** Earthquake with a magnitude of 3.2. There was damage to buildings, property, roadways, water and gas distribution lines.

EXTREME HEAT AND COLD

- **February, 2023:** This event brought significant cold temperatures to much of California, including Fortuna. The cold wave was notable for its intensity and the impact on residents and infrastructure.
- **August, 2022:** State of emergency due to a heatwave.
- **July, 2021:** Extreme heat due to the heat dome phenomenon.
- **January, 2019:** During this period, parts of Northern California, including Fortuna, experienced a cold snap with temperatures dropping significantly. The cold weather was part of a broader pattern affecting the West Coast at the time.

FLOODING

- **April 14, 2023:** Flooding due to severe winter storms.
- **March 10, 2023:** Flooding due to severe winter storms.
- **Jan. 9, 2023:** Flooding due to severe winter storms. Heavy rainstorms and subsequent flood warnings led to significant flooding in Fortuna. The city worked to manage the overflow from the Eel River, and emergency services responded to assist with impacted areas.

- **Winter, 2021–2022:** Multiple storms brought heavy rainfall to the area, contributing to river flooding and saturated ground conditions. There were reports of flooding in the low-lying regions of Fortuna.
- **January, 2021:** Continued heavy rainfall led to further flooding problems. Emergency services were active in monitoring conditions and responding to flood-related incidents.
- **December, 2020:** Another significant event occurred in December, 2020 when storms brought excessive rain and flooding to various parts of Humboldt County. Fortuna experienced similar issues as rivers swelled, causing street flooding with at least 5 inches of rain and impacting homes.
- **May 17, 2019:** Flooding due to severe winter storms.
- **February, 2019:** Heavy rains caused significant flooding across Humboldt County, including Fortuna. The Eel River rose rapidly, resulting in localized flooding and the closure of roads.

LANDSLIDE

- **2025:** A landslide occurred at 2300 Hillside Drive, in the driveway to the house near the gate. The property owner covered it up and had Mercer Fraser inspect it.
- **December, 2025:** There were two affected areas. The first location is around the 3900 block of South Loop Road. Bank erosion on Jameson Creek affected the roads. The second location is also around the 3900 block of South Loop Road. A group of redwood trees fell from the bank into Jameson Creek, requiring an emergency repair. The trees were removed, and the bank and road were restored.

TSUNAMI

- **Dec. 5, 2024:** Tsunami warning issued.

WILDFIRE

- **Sept. 22, 2024:** Wildfire near Palmer Blvd. and U.S. Highway 101, north of Fortuna. Residents in the Hansen Dr. area were asked to evacuate. The fire was estimated to be 1/4 acre in size.
- **Aug. 25, 2024:** The East Fire broke out 2.3 miles south-southwest of Fortuna. The fire was estimated to be 115 acres in size.
- **August Complex Fire, 2020:** This large wildfire impacted parts of Northern California, including areas near Fortuna. Dry conditions and high winds exacerbated the fire.

WIND

- No events have occurred for this hazard.

WINTER WEATHER

- No events have occurred for this hazard.

9.2.2. Jurisdiction-Specific Vulnerabilities and Impacts

Table 164 provides information on a few key vulnerabilities and impacts on the City of Fortuna.

Table 164: City of Fortuna Vulnerabilities and Impacts

Hazard	Vulnerabilities and Impacts
Drought	<p><i>Vulnerabilities:</i> Residents may face vulnerabilities from drought due to limited access to clean drinking water, which may result in health issues. Agricultural communities are at risk as crop yields decline, directly impacting local farmers and food supply in areas with limited irrigation infrastructure or reliance on surface water. Critical infrastructure is also affected, with water treatment facilities experiencing reduced capacity. Fire suppression systems may become less effective, heightening the risk of wildfires.</p> <p><i>Impacts:</i> The impacts on people include increased health risks, especially to the homeless population and individuals who work outdoors, and economic strain on local businesses reliant on agriculture and tourism. For critical infrastructure, drought can cause shortages in water delivery systems and impair wastewater management, creating public health risks and long-term community challenges.</p>

Hazard	Vulnerabilities and Impacts
<p>Extreme Cold</p>	<p><i>Vulnerabilities:</i> The primary vulnerability related to extreme cold is inadequate insulation in residential structures, which can lead to higher heating demands and increased energy costs. Many homes, particularly older ones in areas such as the downtown, and neighborhoods with historical character might not be equipped to handle severe temperature drops. Additionally, certain populations, including the elderly and individuals with preexisting health conditions, are especially vulnerable to the health effects of extreme cold, such as hypothermia and frostbite.</p> <p><i>Impacts:</i> The impacts of extreme cold on people can manifest as increased health-related issues, including respiratory problems and elevated rates of hospitalization among vulnerable groups such as the elderly, children and those with preexisting health issues. Infrastructure also can suffer, with pipes freezing and bursting, leading to water damage and costly repairs. Transport may be disrupted by icy roads, particularly in hilly areas that are less frequently maintained during winter weather, affecting both emergency response times and daily commuting.</p>
<p>Extreme Heat</p>	<p><i>Vulnerabilities:</i> Vulnerabilities to extreme heat are heightened in areas with less tree cover and vegetation, such as some residential neighborhoods on the outskirts of town. Homes without adequate cooling systems or those that are poorly ventilated are particularly at risk. The increased presence of concrete and asphalt in urbanized areas can lead to urban heat island effects, further contributing to localized warming. Additionally, certain community members, including low-income families and those without access to air-conditioning, face greater risks during heat waves.</p> <p><i>Impacts:</i> The impacts of extreme heat on residents can include heat exhaustion, heat stroke and exacerbated chronic health conditions. The strain on local healthcare systems can increase, particularly during prolonged heat events. Infrastructure can also be negatively affected; for example, power outages may occur as demand for cooling peaks and road surfaces may degrade more rapidly under extreme temperatures. Water sources can become stressed due to increased evaporation and higher consumption rates, leading to potential shortages, especially in drought-prone areas surrounding Fortuna.</p>

Hazard	Vulnerabilities and Impacts
Earthquake	<p><i>Vulnerabilities:</i> The entire population of the City of Fortuna is vulnerable to seismic activity from the Big Lagoon Bald Mountain Fault, from very strong peak ground acceleration (18-34%g). Emergency response systems may become overwhelmed, limiting support during crises. Critical infrastructure has its own vulnerabilities; roads and bridges may not withstand significant shaking, potentially collapsing and obstructing emergency services. Additionally, utility lines for electricity, gas and water could be damaged, disrupting essential services.</p> <p><i>Impacts:</i> For critical infrastructure, service disruptions could occur, with damaged roads hindering emergency responses and compromised utilities depriving residents of essential services. Communities might face reduced access to shelters, food and medical care, resulting in economic strain.</p>
Flooding	<p><i>Vulnerabilities:</i> Flooding creates vulnerabilities for residents, especially those in low-lying areas near the Eel River who are at a greater risk of displacement. This situation can threaten their safety and well-being. Critical infrastructure is also at risk, with roads and bridges potentially compromised, limiting access to emergency services and disrupting public transportation.</p> <p><i>Impacts:</i> The impacts can include loss of property and displacement, leading to economic hardships and emotional strain, especially for vulnerable populations. For critical infrastructure, flooding can overwhelm water treatment facilities, creating unsafe drinking water. Damaged roads may impede emergency services and slow recovery efforts, affecting the entire community.</p>
Landslide	<p><i>Vulnerabilities:</i> Residents of Fortuna face risks from landslides, particularly in unstable areas such as the east side near Humboldt Redwoods State Park. This can lead to displacement and safety concerns. Critical infrastructure, like roads and utility lines, is also at risk, as landslides can block access and damage essential services.</p> <p><i>Impacts:</i> The impacts on people include loss of life, potential injuries, loss of homes, and economic hardship due to displacement. For critical infrastructure, landslides can disrupt transportation and utility services, complicating access to healthcare and increasing public health risks.</p>

Hazard	Vulnerabilities and Impacts
Tsunami	<p><i>Vulnerabilities:</i> Fortuna, California, is somewhat sheltered from tsunami impacts due to its location along the Eel River, but it remains vulnerable to flooding if river levels rise significantly.</p> <p><i>Impacts:</i> A tsunami-triggered flood of the Eel River could impact Fortuna, such as through the inundation of residential areas, leading to property damage and the displacement of residents. Key infrastructure, such as roads and utilities, would be at risk, complicating emergency response efforts and transportation. Additionally, local businesses could face economic losses, while public health risks may arise from contaminated water supplies.</p>
Wildfire	<p><i>Vulnerabilities:</i> Residents of Fortuna are vulnerable to wildfires, especially those near forested areas, facing evacuation threats and potential property loss. Hilly and mountainous regions, particularly near the Van Duzan River and zones adjacent to the Eel River, are more susceptible due to dense forest cover, steep slopes and riparian vegetation. Many homes lack fire-resistant materials, increasing risk. Critical infrastructure, like water supply systems, may struggle to support firefighting efforts, and access roads can become blocked, hindering emergency response.</p> <p><i>Impacts:</i> Wildfires can lead to loss of homes and possessions for residents, causing emotional distress and financial instability. Health risks from smoke inhalation can also affect vulnerable populations. For critical infrastructure, damage to utility lines and communication networks disrupts essential services, delays recovery and harms the local economy, particularly businesses reliant on tourism.</p>
Wind	<p><i>Vulnerabilities:</i> Residents of Fortuna are at risk from falling trees and branches due to strong winds, which can threaten safety and property. Critical infrastructure, such as power lines and communications systems, is vulnerable to outages and disruptions.</p> <p><i>Impacts:</i> The impacts on people may include property damage, leading to financial strain and emotional distress. Injuries from debris are also a concern. For critical infrastructure, wind disruptions can cause power outages and hinder communication, impacting emergency response and community safety.</p>

Hazard	Vulnerabilities and Impacts
Winter Weather	<p><i>Vulnerabilities:</i> During winter weather, residents face risks from snow and ice, leading to hazardous travel conditions and difficulty accessing essential services. Poor insulation in many homes increases the risk of heat loss, putting vulnerable populations, like the elderly, in danger of hypothermia. Critical infrastructure is also vulnerable; public transportation can be disrupted, and roads may be damaged by heavy snowfall and ice, hindering emergency response and the delivery of essential services like water and electricity.</p> <p><i>Impacts:</i> The impacts on people include increased risks of accidents and health issues related to cold exposure, alongside isolation from family and services due to impassable roads. For critical infrastructure, winter weather can disrupt services and increase repair costs. Damaged roads and power outages can impair transportation, leave residents without heating and strain local businesses, affecting overall public health and community well-being.</p>

9.2.2.1. DEVELOPMENT CHANGES

Table 165 summarizes development trends in the City of Fortuna since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 165: Recent and Expected Future Development Trends

Type of Development	Recent Development	Future Development	Overall Vulnerability (Increased, Decreased, No Change)
Residential	Annually, 20–50 new residential dwelling units.	Potential residential development of 250 dwelling units or more over the next 5 years.	Increased, development = increased risks.
Commercial	Approximately one to two per year for the last 5 years.	Potential new commercial development in the Fortuna Mill Commerce Center and citywide, exceeding 300,000 square feet. This development is considered long-term.	There has been minimal change in recent years, but it could be significantly higher if the former mill site is developed.

Type of Development	Recent Development	Future Development	Overall Vulnerability (Increased, Decreased, No Change)
Industrial	None	Potential significant industrial development (400,000 sq. ft.) at the Fortuna Mill Commerce Center and citywide. This development is considered long-term.	There has been no change in recent years; however, increased vulnerabilities may occur if the former mill site is developed.

9.3. Capability Assessment

Local mitigation capabilities are essential for reducing the impact of hazards on communities. Local authorities can effectively mitigate hazards by leveraging existing authorities, policies, programs and resources. The City of Fortuna performed an assessment of its existing capabilities for implementing hazard mitigation actions. The capability assessment is evaluated upon a multifaceted approach, including the following:

- Planning and Regulatory Capabilities
- Administrative and Technical Capabilities
- Financial Capabilities
- Education and Outreach Capabilities

9.3.1. Planning and Regulatory Capabilities

Table 166 and Table 167 summarize the City of Fortuna’s planning and regulatory capabilities, including plans, policies, codes and ordinances that prevent and reduce the impacts of hazards.

Table 166: Plans

Plans	Does the Plan Address Hazards? (Y/N)	How Can the Plan Be Used to Implement Mitigation Actions?	When Was It Last Updated? When Will It Next Be Updated?
General Plan	Yes Assembly Plan: No	The General Plan does not include all identified hazard risks. Additionally, the Safety Element should be updated sooner than the General Plan update timeline to incorporate the LHMP, the newly adopted CAL FIRE Fire Hazard Severity Zone maps and evacuation routes.	Last Update: 10/2010 Next Update: 01/2030
Recovery Plan	N/A	N/A	N/A
Capital Improvement Plan	Yes	The City of Fortuna's Capital Improvement Program routinely has projects that address flooding and earthquake resilience. While the city does incorporate LHMP mitigations this could probably increase.	Last Update: 06/2024 Next Update: 06/2025
Climate Change Adaptation Plan	N/A	N/A	N/A
Community Wildfire Protection Plan	N/A	N/A	N/A
Economic Development Plan	N/A	N/A	N/A
Land Use Plan	Yes	Add potential new requirements related to additional identified risk hazards.	Last Update: 03/2011 Next Update: 01/2030
Local Emergency Operations Plan	N/A	N/A	N/A

Plans	Does the Plan Address Hazards? (Y/N)	How Can the Plan Be Used to Implement Mitigation Actions?	When Was It Last Updated? When Will It Next Be Updated?
Stormwater Management Plan	Yes	The City's Stormwater Management Plan currently addresses flooding but could be expanded to look at other hazards.	Last Update: 04/2024 Next Update: 04/2034
Transportation Plan	N/A	N/A	N/A
Substantial Damage Plan	N/A	N/A	N/A
Debris Management Plan	N/A	N/A	N/A
Forest Management Plan	N/A	N/A	N/A

Table 167: Regulations and Ordinances

Regulation or Ordinance	Does This Effectively Reduce Hazard Impacts?	Is It Adequately Administered and Enforced?	When Was It Last Updated? When Will It Next Be Updated?
Building Code	Yes	Yes. California Building Standards Code (CBSC), which is based on the International Code Council (ICC) codes. The CBSC includes various model codes, such as the California Building Code, Residential Code, Plumbing Code, Mechanical Code and Electrical Code. These codes are updated every three years, with the current edition being the 2022 version, effective January 1, 2023.	Last Update: 01/2023 Next Update: 01/2026
Flood Insurance Rate Maps	Yes	Yes	Last Update: 11/2016 Next Update: 11/2030
Floodplain Ordinance	Yes	Yes	Last Update: 11/2008 Next Update: 11/2030
Subdivision Ordinance	Yes	Yes	Last Update: 01/2008 Next Update: 01/2030
Zoning Ordinance	Yes	Yes	Last Update: 03/2011 Next Update: 01/2030
Natural Hazard Specific Ordinance	Yes	Yes	Last Update: 11/1999 Next Update: 01/2030

Regulation or Ordinance	Does This Effectively Reduce Hazard Impacts?	Is It Adequately Administered and Enforced?	When Was It Last Updated? When Will It Next Be Updated?
Acquisition of Land for Open Space and Public Recreation Use	N/A	N/A	N/A
Prohibition of Building in At-Risk Areas	N/A	N/A	N/A

9.3.2. Administrative and Technical Capabilities

Table 168 and Table 169 summarize the City of Fortuna’s administrative and technical capabilities, including the staff and their respective skills and the available tools to support mitigation actions.

Table 168: Administrative Capabilities

Administrative Capability	Status (Non-Vacant, Vacant)	Is Staffing Adequate?	Is Staff Trained on Hazards?	Is Coordination Effective?
Chief Building Official	Non-Vacant	No	Yes	No
Grant Writer	Vacant	N/A	N/A	N/A
Civil Engineer	Non-Vacant	Yes	Yes	Yes
Community Planner	Non-Vacant	No	Yes	Yes
Emergency Manager	Vacant	No	N/A	N/A
Floodplain Administrator	Non-Vacant	Yes	Yes	Yes
Geographic Information System (GIS) Coordinator	Vacant	N/A	N/A	N/A
Planning Commission	Non-Vacant	Yes	No	No
Fire Safe Council	Vacant	N/A	N/A	N/A
Community Emergency Response Team (CERT)	Vacant	N/A	N/A	N/A

Administrative Capability	Status (Non-Vacant, Vacant)	Is Staffing Adequate?	Is Staff Trained on Hazards?	Is Coordination Effective?
Active Organizations Active in Disaster	Non-Vacant	No	Yes	Yes

Table 169: Technical Capabilities

Technical Capability	Utilized? (Y/N)	How Has the Capability Been Used to Assess or Mitigate Risk in the Past?	How Can the Capability Be Used to Assess or Mitigate Risk in the Future?
Hazard Data and Information	Yes	Through the entitlement process, we require geotechnical and soil reports on soil stability and landslides. We utilize data from engineering studies and design to manage stormwater effectively and prevent flooding.	The General Plan and Zoning Ordinance could include more data to develop wildfire zones or other data-driven regulations.
GIS	Yes	We haven't used it for risk mitigation purposes, except when examining floodplain extents.	Develop and utilize layers for wetlands, seismic zones, wildfire areas, stream setbacks and topography.
Mutual Aid Agreements	Yes	The police and volunteer fire departments work with other local agencies to increase responsiveness. We also provide this to participating jurisdictions and allied agencies.	Mutual aid agreements enhance Fortuna's ability to assess and mitigate risks from disasters, such as flooding, by enabling resource sharing, streamlining emergency response coordination and providing collaborative training. They also support community preparedness and recovery efforts, ultimately strengthening the area's resilience to future emergencies.

Technical Capability	Utilized? (Y/N)	How Has the Capability Been Used to Assess or Mitigate Risk in the Past?	How Can the Capability Be Used to Assess or Mitigate Risk in the Future?
On-call consulting contracts for GIS specialists and developing a Regional Climate Action Plan.	Yes	Consultants have been used as technical resources to help move projects forward.	The Regional Climate Action Plan could help inform necessary amendments to the General Plan and Zoning Regulations.

9.3.3. Financial Capabilities

Table 170 summarizes the City of Fortuna’s financial capabilities, which refer to the resources to fund mitigation actions. Discussing the funding and financial capabilities of the city is important to determine the kinds of projects that are feasible given their cost.

Table 170: Financial Capabilities

Funding Resource	Used? (Y/N)	What Types of Activities?	Can Be Used to Fund Future Mitigation Actions?	Can Be Used as a Local Match for a Federal Grant
Capital Improvement Project Funding	Yes	Infrastructure resilience projects	Yes	Yes
General Funds	Yes	Staff time and infrastructure resilience projects	Yes	Yes
Hazard Mitigation Grant Program (HMGP/404)	Yes	The first project we undertook was the installation of standby emergency generators at two water pumping stations. This project was completed in 2023. The next project was completion of an updated Stormwater Vulnerability Assessment, which reviewed our storm drain network and prioritized projects to be completed.	Yes, we have more mitigation actions that could be funded.	No

Funding Resource	Used? (Y/N)	What Types of Activities?	Can Be Used to Fund Future Mitigation Actions?	Can Be Used as a Local Match for a Federal Grant
Building Resilient Infrastructure and Communities (BRIC)	No	N/A	No	No
Flood Mitigation Assistance (FMA)	No	N/A	N/A	No
Community Development Block Grant (CDBG)	No	N/A	N/A	Yes
Natural Resources Conservation Services (NRCS) Programs	No	N/A	N/A	N/A
U.S. Army Corps of Engineers (USACE) Programs	No	N/A	N/A	N/A
Property, Sales, Income or Special Purpose Taxes	Yes	Assessment benefit district for flood control (property taxes utilized)	Yes	Yes
Stormwater Utility Fee	Yes	No	No	No
Fees for Water, Sewer, Gas or Electric Services	Yes	Water and sewer infrastructure resilience projects.	Yes	Yes
Impact Fees from New Development and Redevelopment	Yes	No	No	No
General Obligation or Special Purpose Bonds	Yes	No	No	No

Funding Resource	Used? (Y/N)	What Types of Activities?	Can Be Used to Fund Future Mitigation Actions?	Can Be Used as a Local Match for a Federal Grant
Federal-Funded Programs	No	N/A	N/A	No
State-Funded Programs	Yes	Programs: Emergency response programs through CAL OES and Caltrans. Activities: Roadway hazard mitigation or emergency openings to establish connectivity.	Yes	Yes
Private Sector or Nonprofit Programs	No	N/A	N/A	Yes, a private sector or nonprofit program can often be used as a local match for a federal grant, but it largely depends on the specific grant program and its requirements.

9.3.4. Education and Outreach Capabilities

Table 171 summarizes the City of Fortuna’s education and outreach capabilities, which refer to programs and actions that can communicate information about and encourage risk reduction.

Table 171: Education and Outreach

Education and Outreach Capability	Used? (Y/N)	Does It Incorporate Hazard Mitigation?	Notes
Community Newsletter(s)	No	N/A	N/A

Education and Outreach Capability	Used? (Y/N)	Does It Incorporate Hazard Mitigation?	Notes
Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, School Programs)	No	N/A	N/A
Public Meetings/Events	Yes	No	The city holds public meetings of the Planning Commission and City Council as well as other boards and commissions.
Emergency Management Listserv	Yes	No	N/A
Local News	Yes	Yes	N/A
Distributing Hard Copies of Notices (e.g., Public Libraries, Door-to-Door Outreach)	No	No	N/A
Insurance Disclosures/ Outreach	No	N/A	N/A
Organizations that Represent, advocate for or Interact with Underserved and Vulnerable Communities	Yes	No	American Red Cross
Social media	Yes	No	Facebook and X (Twitter)
Weekly Press Releases	No	N/A	N/A

9.3.5. Opportunities to Expand and/or Improve Capabilities

The capability assessment findings were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. These opportunities are included in Table 172. Where such opportunities were identified and determined to be feasible, they are included in the action plan.

Table 172: Opportunities to Expand and/or Improve

Capability Type	Opportunity to Expand and/or Improve
Planning and Regulations	The city would like to develop a Community Wildfire Plan and an Economic Development Plan.
Administrative and Technical	Add GIS functionality with more hazard layers. Increase Community Development staff.
Financial	Adding a grant writing specialist would improve the city's ability to apply for, secure and implement grant funding. Additionally, if the city could increase revenue through sales tax or special taxes earmarked for mitigation or matching funding use(s), additional work could be performed in this area.
Education and Outreach	As a small community, we are staffed only well enough to meet minimums. With additional staff and resources, we could be more proactive in mitigation, public outreach and education, among other areas. Additionally, we do not have a Public Information Officer, so information tends to be disseminated on a project-by-project basis.

9.4. National Flood Insurance Program

The City of Fortuna has been a participant in the NFIP since 1982. Details of NFIP policies in the City of Fortuna are in Table 173. Additional NFIP information is in Table 174 through Table 176. Continued compliance with NFIP standards is expected for the City of Fortuna.

Table 173: City of Fortuna NFIP Details

Community Name	Community Number	Total Premium + FPF ¹⁵	Total Policy Count	Total Coverage	Total Losses
Fortuna, City of	060063B	\$30,285	30	\$9,976,000.00	4

Table 174: Floodplain Management

Question	Response
Who is the floodplain manager? Is this their primary or secondary role?	City Engineer

¹⁵ FPF: Federal Policy Fee

Question	Response
Does the floodplain manager have adequate training and capacity for their role? If not, what else is needed?	Yes
How does the community enforce its floodplain rules? Does enforcement include monitoring compliance and acting to correct violations?	The city ensures the enforcement of floodplain rules through participation in the NFIP, the building permit review process and inspections to ensure compliance.
When was the community's most recent Community Assistance Visit (CAV)?	04/2024
Were any violations noted on the community's most recent CAV?	No.
Is there an upcoming CAV? If no, is one needed?	Upcoming CAV: No. Is one needed? No
When was the most recent floodplain management ordinance adopted?	11/1987
Does your community participate in the Community Rating System (CRS)? If so, describe the steps the community has taken to achieve the CRS goals.	No
Does the community's floodplain management ordinance include any higher standards? If so, please list.	No
Who is responsible for permitting?	Engineering and Community Development staff
How does the community issue development permits in the special flood hazard area?	Development permits in special flood hazard areas are evaluated for NFIP conformance through the building permit and inspection process.
Does the community maintain elevation certificates?	Yes
Does the community track the number of buildings in the special flood hazard area? If yes, are there any trends?	Yes. In the prior six years, two building permits have been approved in the flood hazard area.
How many repetitive loss (RL) structures does the community have? (List number and type of structure)	0

Question	Response
How many severe repetitive loss (SRL) structures does the community have? (List number and type of structure)	0
Have any RL/SRL properties been mitigated since the last plan update?	No
Who is responsible for making substantial damage/substantial improvement determinations?	City Engineer, Community Development Director and Building Official
How does the substantial damage/substantial improvement process work in your community?	City staff evaluates and assesses each situation on a case-by-case basis, then follows the NFIP and any other applicable regulations.
Is there sufficient staff and training to make substantial damage/substantial improvement determinations?	Yes
How are substantial damage/substantial improvement requirements messaged to the public before and after an event?	We have not been faced with this issue.
Have any substantially damaged/substantially improved structures been mitigated since the last plan update?	No
How will the community remain in compliance with the NFIP moving forward? (Simply stating “the community will continue to comply with the NFIP” will not meet FEMA’s planning requirements)	The city will implement any recommendations identified through Community Assistance visits. We will ensure that ordinances meet NFIP minimum standards and continue to train city staff on NFIP requirements.

Table 175: Floodplain Mapping

Question	Response
How does the community support map change requests? This could be requests during the Risk MAP process or through Letters of Map Amendment or Revision.	The community provided maintenance easements that allowed for flood mitigation projects along Rohner Creek.

Question	Response
When did the latest Flood Insurance Rate Map (FIRM) become effective?	11/2016
When was the latest FIRM adopted?	11/2016
Is the FIRM and Flood Insurance Study (FIS) report in an accessible location? How would the public get access to their flood map information?	Yes. It is available on the city's website and also posted on FEMA's website.
Does the community use any Risk MAP products? If so, describe.	No
Does the community collect updated floodplain data or modeling? Is this shared with partners and with FEMA?	Yes

Table 176: Flood Insurance and Outreach

Question	Response
How does the community educate the public on floodplain management and the availability of flood insurance, in and out of the floodplain?	By providing access to FEMA's FIRM through the city's GIS Parcel Finder web application
How does the community engage with insurance agents on flood insurance?	N/A
Does the community (or state) have flood hazard disclosure laws?	Yes
How familiar is the public with their flood insurance options?	Needs further investigation
How many properties have flood insurance in the community?	30
Are there any areas where flood insurance is lacking?	Yes, land areas adjacent to creeks

9.5. Mitigation Strategy

The City of Fortuna has adopted the same goals and prioritization process as Humboldt County in Volume 1. Previous mitigation actions and their statuses are in Table 177, while new mitigation action items and those carried forward from the previous plan are in Table 178.

9.5.1. Previous Mitigation Actions

Table 177: Previous Mitigation Actions

Mitigation Action	Description	Status
FOR1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.	Deferred
FOR2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including General Plan, Storm Drain Master Plan, Emergency Operations Plan, Debris Management Plan.	Deferred
FOR3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	Deferred
FOR4	Continue to maintain good standing and compliance under the NFIP through the implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: <ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. 	Deferred

Mitigation Action	Description	Status
FOR5	<p>Identify and pursue strategies to increase adaptive capacity to climate change, including but not limited to the following:</p> <ul style="list-style-type: none"> Assess storm drain infrastructure, natural waterways and associated floodplains for condition and capacity and implement and prioritize projects that provide adaptive capacity for increased rainfall and runoff. Mitigate fire-related risk by participating in fire mitigation measures, defensible space, education and outreach and supporting Firewise communities' programs. 	Deferred
FOR6	Implement flap gate valves at various locations throughout the city.	Deferred
FOR7	Increase channel capacity in localized regions affected by repetitive flooding incidents.	Deferred
FOR8	Stabilize hillsides from mass landslide movements at or adjacent to street rights-of-way, including but not limited to P Street (12th to 14th) bank stabilization (CIP 9656).	Deferred
FOR9	Prepare the Citywide Storm Water Management Master Plan to inform future Citywide Vulnerability Assessments (CVAs) in the High-Priority Management Plans (HPMs) and implement high-priority projects that improve the capacity and resiliency of the system, including the Home Avenue Culvert Replacement (CIP 9704) and the 3rd Street culvert replacement.	Deferred. Plan completed in 2024. Follow-up action for this item will be to complete the project identified in the Vulnerability Assessment.
FOR10	Elevate control panels at the Water Supply facility above 100-year Flood Elevation and provide seismic retrofit of electrical connections.	Deferred
FOR11	Seismic Retrofit of At-Grade Water Storage Tanks. Including but not limited to Campton Heights and Hilltop Reservoirs.	Deferred
FOR12	Elevate the roadway above the flood elevation, including the Dinsmore Drive flood control (CIP 9502).	Deferred

Mitigation Action	Description	Status
FOR13	<p>Continue to maintain compliance and good standing under the National Flood Insurance Program. This will be accomplished through the implementation of floodplain management programs that, at a minimum, will meet the minimum requirements of the NFIP, which include the following:</p> <ul style="list-style-type: none"> • Enforcement of the adopted flood damage prevention ordinance, • Participating in floodplain identification and mapping updates, and • Providing public assistance/information on floodplain requirements and impacts 	Deferred
FOR14	<p>Implement generators for critical facilities and infrastructure that lack adequate backup power, including water pump stations, water disinfection and corrosion control facilities, sewer pump stations, emergency operations centers.</p>	Deferred. Two generator installations were completed in 2024 using HMGP funds; however, the city would like to plan for other possible locations.
FOR15	<p>Develop an Emergency Operation Plan, establish an Emergency Operations Center and training for staff related to hazard mitigation or post-disaster recovery.</p>	Deferred
FOR16	<p>Update FEMA FIRM special flood hazard areas to reflect current flood risk based on updated topography and rainfall frequencies to better communicate risk and identify and implement flood mitigation projects through channel and floodplain restoration.</p>	Deferred. Some of this work was completed in 2022 by remapping the floodplain for Rohner Creek. Other areas of Strongs or Mill Creek could be explored in the future.
FOR17	<p>Coordinate the upgrading or implementation of radio communications and emergency communication equipment with other area jurisdictions.</p>	Deferred
FOR18	<p>Support the development of Firewise Community programs; implement defensible space requirements including education and outreach.</p>	Deferred

9.5.2. Updated Mitigation Actions

Table 178: 2025 Mitigation Actions¹⁶

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	New and/or Existing Asset	Timeframe for Completion	Vulnerable Population Benefit?	Community Lifelines Benefit?
FOR1	Where appropriate, support the retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are situated in high- or medium-risk hazard areas.	Medium	Fortuna City Manager	Earthquake, flooding, landslide, wildfire	HMGP, PDM, FMA	\$20,000,000	Existing	5+ years	Yes	All
FOR2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the General Plan, Storm Drain Master Plan, Emergency Operations Plan and Debris Management Plan.	Medium	Fortuna City Manager	Drought, earthquake, flooding, landslide, wildfire	Staff time, general funds	\$65,000	Both	1–2 years	Yes	All
FOR3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	Medium	Fortuna City Manager	All hazards	Staff time, general funds	\$100,000	Both	1–5 years	Yes	All

¹⁶ BRIC: Building Resilience Infrastructure and Communities, FMA: Flood Mitigation Assistance, HMGP: Hazard Mitigation Grant Program, PDM: Pre-Disaster Mitigation

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	New and/or Existing Asset	Timeframe for Completion	Vulnerable Population Benefit?	Community Lifelines Benefit?
FOR4	<p>Continue to maintain good standing and compliance under the NFIP through the implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in updating floodplain identification and mapping. • Provide public assistance and information on floodplain requirements and impacts. 	Medium	Fortuna City Manager	Flooding, severe weather	Staff time, general funds	\$1,000,000	Both	1–2 years	Yes	All
FOR5	<p>Identify and pursue strategies to increase adaptive capacity to climate change, including but not limited to the following:</p> <ul style="list-style-type: none"> • Assess storm drain infrastructure, natural waterways and associated floodplains for condition and capacity, then implement projects that provide adaptive capacity for increased rainfall and runoff. • Mitigate fire-related risk by participating in fire mitigation measures, defensible space, education and outreach and supporting Firewise communities' programs. 	Medium	Fortuna City Manager	Flooding, wildfire	Staff time, general funds	\$1,000,000	Both	1–2 years	Yes	All
FOR6	Implement flap gate valves at various locations throughout the city.	Medium	Fortuna City Manager	Flooding, severe weather	Staff time, general funds	\$2,000,000	Existing	1–2 years	Yes	All
FOR7	Increase channel capacity at localized regions of repetitive flooding incidents.	Medium	Fortuna City Manager	Flooding	HMGP, PDM, FMA	\$2,000,000	Existing	1–2 years	Yes	All

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	New and/or Existing Asset	Timeframe for Completion	Vulnerable Population Benefit?	Community Lifelines Benefit?
FOR8	Stabilize hillsides from mass landslide movements at or adjacent to street rights of way, including but not limited to P Street (12th to 14th) bank stabilization (CIP 9656).	Medium	Fortuna City Manager	Earthquake, flooding, landslide, wildfire	HMGP, PDM, FMA	\$10,000,000	Both	3–5 years	Yes	Transportation
FOR9	Prepare Citywide Storm Water Management Master Plan to inform citywide vulnerability assessment in future High Priority Management HPMs and Implement high priority projects that improve the capacity and resiliency of the system, including Home Avenue Culvert Replacement CIP 9704 and 3rd street culvert replacement.	Medium	Fortuna City Manager	Flooding	HMGP, PDM, FMA	\$100,000	Both	1–2 years	Yes	Water Systems, Hydration, Transportation
FOR10	Elevate control panels at Water Supply facility above 100-year Flood Elevation and provide seismic retrofit of electrical connections.	Medium	Fortuna City Manager	Flooding, Earthquake	Staff time, general funds	\$2,000,000	Existing	3–5 years	Yes	Safety and Security, Transportation
FOR11	Seismic Retrofit of at-grade water storage tanks, including but not limited to Campton Heights and Hilltop Reservoirs.	Medium	Fortuna City Manager	Earthquake	HMGP, PDM, FMA	\$1,000,000	Existing	1–2 years	Yes	Hydration, Water Systems
FOR12	Elevate roadway above flood elevation, including Dinsmore Drive flood control (CIP 9502).	Medium	Fortuna City Manager	Flooding	HMGP, PDM, FMA	\$10,000,000	Existing	1–2 years	Yes	Transportation, Safety and Security
FOR14	Implement generators for critical facilities and infrastructure that lack adequate backup power, including water pump stations, water disinfection and corrosion control facilities, sewer pump stations, emergency operations centers.	Medium	Fortuna City Manager	Earthquake, flooding, landslide, severe weather, wildfire	HMGP, PDM, FMA	\$1,000,000	Both	1–2 years	Yes	Power

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	New and/or Existing Asset	Timeframe for Completion	Vulnerable Population Benefit?	Community Lifelines Benefit?
FOR15	Develop an Emergency Operation Plan, establish an Emergency Operations Center and training for staff related to hazard mitigation or post-disaster recovery.	Medium	Fortuna City Manager	Earthquake, flooding, landslide, severe weather, wildfire	Staff time, general funds	\$1,000,000	Both	1–2 years	Yes	Safety and Security
FOR15	Update FEMA FIRM special flood hazard areas to reflect current flood risk based on updated topography and rainfall frequencies to better communicate risk and identify and implement flood mitigation projects through channel and floodplain restoration.	Medium	Fortuna City Manager	Flooding	HMGP, PDM, FMA	\$1,000,000	Both	1–2 years	Yes	Safety and Security
FOR16	Coordinate the upgrading or implementation of radio communications and emergency communication equipment with other area jurisdictions.	Medium	Fortuna City Manager	Earthquake, flooding, landslide, severe weather, wildfire	Staff time, general funds	\$50,000	Both	1–2 years	Yes	Safety and Security, Communication
FOR17	Support the development of Firewise Community programs; implement defensible space requirements including education and outreach.	Medium	Fortuna City Manager	Wildfire	Staff time, general funds	\$50,000	Both	1–2 years	Yes	Safety and Security
FOR18	Consider adopting a vegetation management ordinance for existing and new development in wildland-urban interface and/or areas designated as having moderate or greater fire risk.	High	Fortuna City Manager	Wildfire, landslides	Staff time, general funds	\$50,000	Both	1–2 years	Yes	Safety and Security
FOR19	Develop ordinance requiring a certain percentage of front and rear setback areas to contain only permeable development features to promote infiltration and reduce stormwater runoff.	High	Fortuna City Manager	Drought, flooding, landslide, extreme temperatures, dam failure	Staff time, general funds	\$50,000	Both	1–2 years	Yes	Safety and Security, water systems

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	New and/or Existing Asset	Timeframe for Completion	Vulnerable Population Benefit?	Community Lifelines Benefit?
FOR21	Prepare a comprehensive Hazardous Materials Area Response Plan	Medium	Fortuna City Manager	Fire	General funds, HMGP, PDM, FMA	\$100,000	Both	1–2 years	Yes	All lifelines
FOR22	Conduct microgrid feasibility study	High	Fortuna City Manager	Earthquake, wildfire, extreme temperatures, dam failure, flooding, wind	General funds, HMGP, PDM, FMA	\$100,000	Both	1–2 years	Yes	Power
FOR23	Consider prohibiting shake roofs in wildland-urban interface and/or areas designated as having moderate or greater fire risk.	Medium	Fortuna City Manager	Wildfire	Staff time, general funds	\$50,000	Both	1–3 years	Yes	Safety and Security
FOR24	Explore the feasibility of establishing community resilience hubs	Medium	Fortuna City Manager	Dam failure, drought, earthquake, extreme temperatures, flooding, landslide, tsunami, wildfire, wind, winter weather	Staff time, general funds	\$50,000	New	1–3 years	Yes	Safety and Security
FOR25	Actively participate in the area wide mitigation actions.	High	Fortuna City Manager	All hazards	Staff time, general funds	\$150,000	Both	5+ years	Yes	All
FOR26	Perform a feasibility study for potential evacuation routes for rural, single access roadways, including Home Avenue, Carson Woods Road and Mill Street.	Medium	Fortuna City Manager	Wildfire, landslide, severe weather, earthquake, wind	HMGP, PDM, FMA, BRIC	\$100,000	Existing	1–2 years	Yes	Transportation, Safety and Security

#	Action Description	Priority	Lead Agency	Hazards Mitigated	Potential Funding Source(s)	Estimated Cost	New and/or Existing Asset	Timeframe for Completion	Vulnerable Population Benefit?	Community Lifelines Benefit?
FOR27	Install creek bank revetments or other engineered system to protect structures against bank erosion or landslides, specifically along Jameson and Mill Creeks	High	Fortuna City Manager	Landslide, flooding	HMGP, PDM, FMA, BRIC	\$20,000,000	Both	3–5 years	Yes	All
FOR28	Install a new water tank in the southern Fortuna area servicing City Pressure Zone 8 to increase firefighting capacity and water supply resiliency	High	Fortuna City Manager	Wildfire, drought	City enterprise funds, HMGP, BRIC, PDM, FMA	\$50,000	New	1 year	Yes	Water Systems, Safety and Security
FOR29	Install PV systems at critical city facilities to provide energy resiliency for buildings and vehicle charging	High	Fortuna City Manager	Earthquake, extreme temperature, flooding, wind	HMGP, PDM, FMA, BRIC	\$1,000,000	New	3–5 years	Yes	Power
FOR30	Develop a Hillside Development Ordinance	High	City of Fortuna	Earthquake, flooding, landslide, wildfire, wind	Staff time, general funds	\$50,000	Both	2–5 years	No	Transportation