675 Wildwood Avenue
Rio Dell, CA 95562
(707) 764-3532

**For Meeting of: February 21, 2023**

To: City Council

From: Kevin Caldwell, Community Development Director

Through: Kyle Knopp, City Manager

Date: February 13, 2023

Subject: Safety Element Amendment

**Recommendation:**

That the City Council:

1. Receive a brief staff presentation regarding amending the Safety Element to include a brief discussion on the December 20, 2022 and January 1, 2023 earthquakes and to incorporate the County Local Hazard Mitigation Plan (LHMP) by reference and to include the Rio Dell element of the LHMP in the Safety Element; and

2. Open the public hearing, receive public input, close the public hearing; and

3. Adopt Resolution No. 1573-2023 amending the Safety Element.

## Background and Discussion

**Safety Element** - The current Safety Element was approved in 2016. The Safety Element is one of seven mandated elements of the General Plan. The purpose of the Safety Element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. The safety element overlaps topics also mandated in the land use, conservation, and open-space elements.

The Safety Element must identify hazards and hazard abatement (mitigation) provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. The element contains general hazard and risk reduction strategies and policies supporting hazard mitigation measures. Policies address the identification of hazards and emergency response, as well as mitigation through avoidance of hazards by new projects and reduction of risk in developed areas.
The Safety Element is being amended to reflect the recent earthquakes that caused more than 30 million dollars' in damage and to incorporate the County Local Hazard Mitigation Plan (LHMP) by reference and to include the Rio Dell element of the LHMP.

On December 20, 2022, a magnitude 6.4 earthquake occurred approximately 8 miles west of Ferndale and at a depth of approximately 10 miles. The initial earthquake was followed by multiple aftershocks, with the largest being a magnitude 5.4 that occurred about nine (9) miles southeast of Rio Dell on January 1, 2023. These two earthquakes resulted in over 250 structures "yellow tagged" (requiring repairs), over 90 structures "red tagged" (unsafe to enter), and over 90 households displaced.

For the initial 6.4 magnitude earthquake on December 20, 2022, more than 5,900 people have responded on the United States Geological Survey's (USGS) "Did You Feel It?" report. More than half of those reports came in within an hour of the earthquake. Respondents in Eureka, the

closest city to the epicenter, reported very strong shaking, but people hundreds of miles away in San Jose, CA, Reno, NV, and Klamath Falls, OR also reported weak shaking.


This region has a history of abundant seismic activity; a sequence of overlapping earthquakes of magnitude 6.2 and 5.7 occurred nearby almost exactly a year ago on December 20, 2021. Earthquakes are common in this area because it's close to where the Pacific, North America, and Juan de Fuca plates meet; a spot known as the Mendocino Triple Junction. In the past century, there have been at least 40 other earthquakes of magnitude 6 or larger, including six earthquakes magnitude 7 or larger, that have occurred within roughly 150 miles of the Ferndale earthquake

**Local Hazard Mitigation Plan -** The City of Rio Dell is one of 23 local jurisdictions that participated in the development in the 2020 Local Hazard Mitigation Plan (LHMP) for Humboldt County. The City, the Humboldt County Office of Emergency Services and our planning partners worked with bay area consultant Tetra Tech in developing the LHMP.

Hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters. It begins with state, tribal and local governments identifying natural disaster risks and vulnerabilities that are common in their area. After identifying these risks, they develop long-term strategies for protecting people and property from similar events. Mitigation plans are key to breaking the cycle of disaster damage and reconstruction. The City's Safety Element of the General Plan is a key local tool in reducing risks associated with disasters, including flooding, earthquakes and fire.

It is impossible to predict exactly when and where all disasters will occur or the extent to which they will impact an area, but with careful planning and collaboration among public agencies, stakeholders and citizens, it is possible to minimize losses.

Jurisdictions with FEMA-approved and formally adopted mitigation plans are eligible to apply for funding under FEMA's hazard mitigation assistance programs, including Hazard Mitigation Grant Program, Pre-Disaster Mitigation and Flood Mitigation Assistance grant programs. The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. All participating jurisdictions must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR):

*"Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan." (Section 201.6(a)(4)).*

For the Humboldt County Hazard Mitigation Plan, a planning partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act for as many eligible local governments as possible. The Disaster Mitigation Act defines a local government as follows:

*"Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity."*

Two types of planning partners participated in this process for the Humboldt County Hazard Mitigation Plan, with distinct needs and capabilities:

- Incorporated municipalities
- Special districts

Each participating planning partner prepared a jurisdiction-specific annex to the LHMP. The City of Rio Dell's annex is included in Chapter 7 of Volume 2 of the Humboldt County Operational Area Hazard Mitigation Plan and is incorporated into the City Safety Element and is included as Appendix A.

The Humboldt County Operational Area Hazard Mitigation Plan was approved by the California Governor's Office of Emergency Services (Cal OES) on 10/24/2019 and submitted to the Federal Emergency Management Agency (FEMA) for approval. On 1/2/2020, FEMA determined the Hazard Mitigation Plan is eligible for approval pending adoption by participating jurisdictions. A copy of the approved Hazard Mitigation Plan can be found here: https://humboldtgov.org/3011/County-Emergency-Plans.

The Planning Commission considered and approved the minor amendments to the Safety element at their meeting of February 8, 2023.

**Procedures for Plan Amendments**

California Government Code § 65350-65362 contains the following procedural requirements to amend a general plan:

- The Planning Commission shall hold at least one public hearing before approving a recommendation on the amendment;
- The Planning Commission shall make a written recommendation on the amendment;
- Prior to amending the general plan, the City Council shall hold at least one public hearing;
- The City Council shall amend the general plan by resolution, which shall be adopted by not less than a majority of the legislative body;
- City Council may approve, modify, or disapprove the Planning Commission recommendations, however any substantial modifications not previously considered by the Planning Commission shall first be referred to the Planning Commission for its recommendation;
- Copies of the adopted general plan amendment shall be made available for inspection by the public one working day following adoption;
- Within two working days after a request, copies shall be furnished to those so requesting;

- Any specific plan or other plan of the City that is applicable to the same areas or matters affected by a general plan amendment shall be reviewed and amended as necessary to make the specific or other plan consistent with the General Plan.

**Plan Amendment Required Findings:**

**1. The proposed amendment(s) are deemed to be in the public interest.**

The State has determined that the preparation and adoption of a Safety Element is in the public interest in that it identifies hazards and hazard abatement (mitigation) provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. The element contains general hazard and risk reduction strategies and policies supporting hazard mitigation measures. Policies address the identification of hazards and emergency response, as well as mitigation through avoidance of hazards by new projects and reduction of risk in developed areas.

**2. The proposed amendments are consistent and compatible with the rest of the General Plan and any implementation programs that may be affected.**

Section 1.4 of the Land Use Element of the General Plan includes a policy, P1.4-2 that requires the preparation of "...additional General Plan Elements to refine and improve the Plan." In addition, Section 1.5 of the Land Use Element of the General Plan calls for the preparation and adoption of the Safety Element. Therefore, the proposed minor amendments of the Safety Element are consistent with the General Plan.

**3. The proposed amendments have been processed in accordance with the applicable provisions of the California Government Code and the California Environmental Quality Act (CEQA).**

State law requires that any amendment of a general plan comply with the California Environmental Quality Act (CEQA). The primary purpose of CEQA is to inform the decision makers and the public of potential environmental effects of a proposed project. The amendment of Safety Element does not include any new mitigation measures. The amendments only incorporate a brief discussion of the recent earthquakes and a brief discussion of the 2020 Local

Hazard Mitigation Plan (LHMP), including the inclusion of the Rio Dell Annex into the Safety Element.

Based on the nature of the proposed amendments, staff has determined that the project is Statutorily Exempt pursuant to Section 15061(b) (3) of the CEQA Guidelines, Title 14, Chapter 3 of the California Code of Regulations. Pursuant to Section 15061(b) (3) of the CEQA Guidelines this exemption is covered by the general rule that CEQA applies only to projects which have the potential for causing a ***significant*** effect on the environment. Where it can be seen with certainty that there is no possibility that the project in question may have a significant effect on the environment, the project is not subject to CEQA. Based on the nature of the proposed minor amendments and the discussion above, staff believes there is no evidence to suggest that the amendments will have a significant effect on the environment.

**Attachments**

Attachment 1: Resolution No. 1573-2023 recommending that the City Council approve the Circulation Element.

Attachment 2: Safety Element as amended.

# RESOLUTION NO. 1573-2023

## RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RIO DELL AMENDING THE SAFETY ELEMENT TO INCLUDE A BRIEF DISCUSSION ON THE DECEMBER 20, 2022 AND JANUARY 1, 2023 EARTHQUAKES AND TO INCORPORATE THE COUNTY LOCAL HAZARD MITIGATION PLAN (LHMP) BY REFERENCE AND TO INCLUDE THE RIO DELL ELEMENT OF THE LHMP IN THE SAFETY ELEMENT

**WHEREAS,** in 2016 the City approved the current Safety Element; and

**WHEREAS**, the purpose of the Safety Element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards; and

**WHEREAS** on December 20, 2022 a 6.4 magnitude earthquake struck the region just off the coast of Ferndale; and

**WHEREAS**, a combination of factors, including how the rupture traveled inland on an east-north-east trajectory, placed the quake's bullseye on Rio Dell; and

**WHEREAS**, felt as far away as Redding and the Bay Area, the magnitude 6.4 quake plunged the entire region into darkness and is estimated to have caused some $30 million in damage countywide, most of which was centered in Rio Dell; and

**WHEREAS**, the earthquake resulted in almost 100 structures, almost all residences, being deemed unsafe and "Red Tagged"; and

**WHEREAS**, the earthquake also resulted in almost 300 additional structures, again being almost all residential structures, being "Yellow Tagged" restricting or limiting the use of the buildings; and

**WHEREAS**, the City of Rio Dell is one of 23 local jurisdictions that participated in the development in the 2020 Local Hazard Mitigation Plan (LHMP) for Humboldt County; and

**WHEREAS,** hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters; and

**WHEREAS**, each participating planning partner prepared a jurisdiction-specific annex to the LHMP; and

**WHEREAS**, the City of Rio Dell's annex is included in Chapter 7 of Volume 2 of the Humboldt County Operational Area Hazard Mitigation Plan and is incorporated into the City Safety Element and is included as Appendix A; and

**WHEREAS** the proposed Safety Element amendments have been processed pursuant to California Government Code § 65350-65362.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Rio Dell finds:

**1. The proposed amendment(s) are deemed to be in the public interest.**

The State has determined that the preparation and adoption of a Safety Element is in the public interest in that it identifies hazards and hazard abatement (mitigation) provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. The element contains general hazard and risk reduction strategies and policies supporting hazard mitigation measures. Policies address the identification of hazards and emergency response, as well as mitigation through avoidance of hazards by new projects and reduction of risk in developed areas.

**2. The proposed amendments are consistent and compatible with the rest of the General Plan and any implementation programs that may be affected.**

Section 1.4 of the Land Use Element of the General Plan includes a policy, P1.4-2 that requires the preparation of "...additional General Plan Elements to refine and improve the Plan." In addition, Section 1.5 of the Land Use Element of the General Plan calls for the preparation and adoption of the Safety Element. Therefore, the proposed minor amendments of the Safety Element are consistent with the General Plan.

**3. The proposed amendments have been processed in accordance with the applicable provisions of the California Government Code and the California Environmental Quality Act (CEQA).**

State law requires that any amendment of a general plan comply with the California Environmental Quality Act (CEQA). The primary purpose of CEQA is to inform the decision makers and the public of potential environmental effects of a proposed project. The amendment of Safety Element does not include any new mitigation measures. The amendments only incorporate a brief discussion of the recent earthquakes and a brief discussion of the 2020 Local Hazard Mitigation Plan (LHMP), including the inclusion of the Rio Dell Annex into the Safety Element.

Based on the nature of the proposed amendments, staff has determined that the project is Statutorily Exempt pursuant to Section 15061(b) (3) of the CEQA Guidelines, Title 14, Chapter 3 of the California Code of Regulations. Pursuant to Section 15061(b) (3) of the CEQA Guidelines this exemption is covered by the general rule that CEQA applies only to projects which have the potential for causing a ***significant*** effect on the environment. Where it can be seen with certainty that there is no possibility that the project in question may have a significant effect on the environment, the project is not subject to CEQA. Based on the nature of the proposed minor amendments and the discussion above, staff believes there is no evidence to suggest that the amendments will have a significant effect on the environment.

**NOW, THEREFORE, BE IT FURTHER RESOLVED** that the City Council of the City of Rio Dell approves the proposed amendments.

**PASSED and ADOPTED** at a regular meeting of the City Council of the City of Rio Dell on February 21, 2023 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

Mayor Debra Garnes

STATE OF CALIFORNIA
City of Rio Dell

ATTEST:

I, Karen Dunham, City Clerk for the City of Rio Dell, State of California, hereby certify the above and foregoing to be a full, true and correct copy of Resolution No. 1573-2023 adopted by the City Council of the City of Rio Dell on February 21, 2023.

Karen Dunham, City Clerk, City of Rio Dell

# Chapter 6
# SAFETY ELEMENT

# Chapter 6
# Safety Element

## 6.1 Introduction

The purpose of the safety element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. The safety element overlaps topics also mandated in the land use, conservation, and open-space elements. The components of this Element include:

- Geologic/Seismic Hazards
- Flood Hazards
- Fire Hazards
- Airport Safety
- Industrial Hazards
- Hazardous Materials
- Emergency Management

The safety element must identify hazards and hazard abatement provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. The element contains general hazard and risk reduction strategies and policies supporting hazard mitigation measures. Policies address the identification of hazards and emergency response, as well as mitigation through avoidance of hazards by new projects and reduction of risk in developed areas.

## 6.2 Hazard and Risk Reduction

Land development is subject to a number of hazards to life and property, including seismic and non-seismic land instability, flooding, fire, and dangers from airport operations.

The degree of risk associated with these hazards can only be measured in relative terms. What

constitutes 'acceptable risk' varies with the type of development involved. For instance, a hospital should meet very strict earthquake standards in order to ensure that it is able to function in the event of a serious earthquake. A warehouse, on the other hand, would not need to be designed to the same rigorous standards because its functions during an earthquake would not be critical to the community's response to the emergency, nor would it pose serious risk to large numbers of people should it fail.

The General Plan manages risk through the use of land use designations to limit exposure to hazardous areas and through policies tailored to specific hazardous conditions. The goals, policies and implementation measures of this Element are many of the same existing policies found in Chapter 5, the Open Space and Conservation Element. All of the goals, policies and implementation measures are designed to proactively improve overall safety conditions within the City.

### 6.3 Local Hazard Mitigation Plan

The City of Rio Dell is one of 23 local jurisdictions that participated in the development in the 2020 Local Hazard Mitigation Plan (LHMP) for Humboldt County. The City, the Humboldt County Office of Emergency Services and our planning partners worked with bay area consultant Tetra Tech in developing the LHMP.

Hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters. It begins with state, tribal and local governments identifying natural disaster risks and vulnerabilities that are common in their area. After identifying these risks, they develop long-term strategies for protecting people and property from similar events. Mitigation plans are key to breaking the cycle of disaster damage and reconstruction. The City's Safety Element of the General Plan is a key local tool in reducing risks associated with disasters, including flooding, earthquakes and fire.

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funding under FEMA's hazard mitigation assistance programs, including Hazard Mitigation Grant Program, Pre-Disaster Mitigation and Flood Mitigation Assistance grant programs.

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## 6.4 ~~6.3~~ Seismic and Geologic Hazards

**Seismicity:** Humboldt County is located within the two highest of five seismic risk zones specified by the California Building Code, and offshore Cape Mendocino has the highest concentration of earthquake events anywhere in the continental United States. The area near Cape Mendocino is a complex, seismically active region, where three crustal plates, the Pacific Plate, the Gorda Plate, and North American Plate intersect to form the Mendocino Triple Junction.

The subducting Gorda and Juan de Fuca Plates form the "Cascadia Subduction Zone," which runs north offshore of Humboldt, Del Norte, Oregon, and Washington. Recent investigations have shown that this system has moved in unison in a series of great earthquakes (magnitude 8 to 9) over the last 20,000 years, most recently about 300 years ago, with events occurring at 300–500 year intervals.

Seismic shaking poses a potentially significant hazard to Rio Dell and vicinity. An array of strong motion sensors (part of the California Strong Motion Instrumentations Program) are mounted on the Painter Street overpass. These sensors recorded seismic shaking during the 1992 Petrolia earthquakes that occurred on April 25th and 26th. These earthquakes had magnitudes of 7.1, 6.6 and 6.7. Acceleration rates were measured from 0.55 g (acceleration of gravity) up to 1.23 g. However, acceleration rates near the epicenter were close to 2 g, indicating the potential for very strong ground shaking throughout the northcoast region.

On December 20, 2022, a magnitude 6.4 earthquake occurred approximately 8 miles west of Ferndale and at a depth of approximately 10 miles. The initial earthquake was followed by multiple aftershocks, with the largest being a magnitude 5.4 that occurred about nine (9) miles southeast of Rio Dell on January 1, 2023. These two earthquakes resulted in over 250 structures "yellow tagged" (requiring repairs), over 90 structures "red tagged" (unsafe to enter), and over 90 households displaced.

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Surface fault rupture is a particular type of seismic hazard that is specifically addressed by state legislation, the Alquist-Priolo Earthquake Fault Zoning Act. This act generally requires disclosure and avoidance. Humboldt County has a number of fault zones mapped under this law. The Little Salmon fault zone is the closest mapped Alquist-Priolo fault hazard zone to Rio Dell, approximately six (6) miles northeast. The Little Salmon fault hazard zone extends from Hydesville northwesterly towards Humboldt Hill near Eureka.

Ground-shaking gives rise to two secondary natural hazards, liquefaction and landsliding. Liquefaction involves a sudden loss in strength of a water-saturated soil, and results in temporary transformation of the soil into a fluid mass. Recent alluvial flood plain soils and coastal sand deposits exhibit the highest liquefaction hazard. To mitigate this hazard, soils engineering investigations can assess the potential for liquefaction and specify appropriate foundation and building design. Based on the County's Hazard mapping, Rio Dell is not within a high area of potential liquefaction. Ground-shaking can induce landslides, especially under saturated conditions. Again, soils engineering investigations can evaluate the seismic stability of slopes and prescribe appropriate setbacks. Figure 6-1 identifies slope stability and historic landslides.

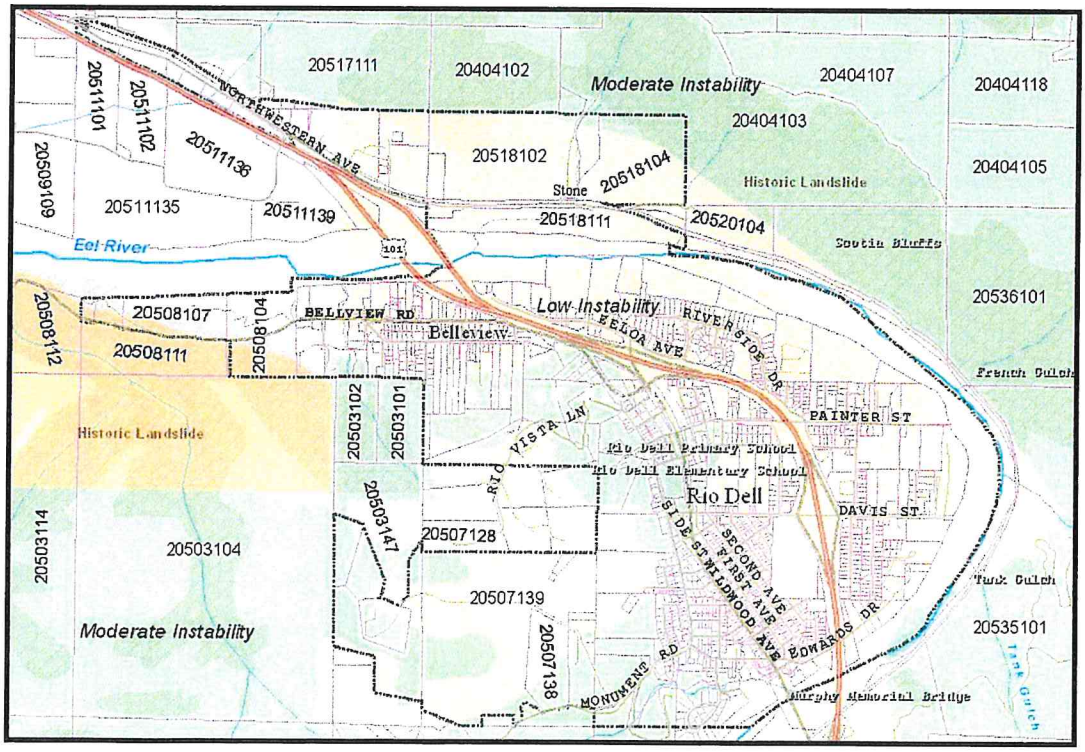
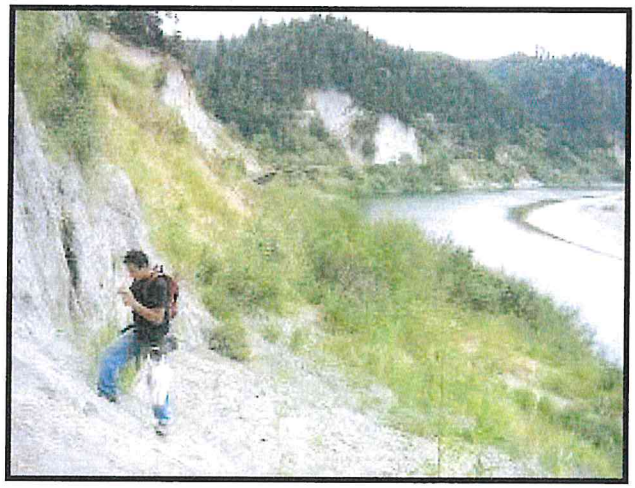



**Figure 6-1 Slope Stability and Historic landslides**
Source: Humboldt County GIS August 2016

**Bedrock Geology:** The bedrock geology of the county is divided generally into two provinces: the Klamath Mountains province in the northeast, and the Coast Ranges province in the central and southwest portion of the county. The dividing line between the two provinces is the South Fork Mountain Ridge, which separates the Trinity River basin from the Mad River and Redwood Creek drainages.

Rio Dell is within the Coast Range province. The Coast Ranges province is the dominant geologic province in the county, trending northwest and drained by the Mad, Eel, and Mattole River drainages. The Franciscan and Yager complexes dominate inland, with sand and other alluvial deposits dominating in the lower reaches of the river basins and the area surrounding Humboldt Bay.

The Franciscan complex can be divided into two distinct units: Franciscan sandstone and Franciscan mélange. Rio Dell is bisected by the Franciscan mélange and younger alluvial deposit formations. Franciscan mélange consists of rubble of sheared sandstone and siltstone in which occur more competent blocks of volcanic rock, chert, and schist.



Mélange terrain is generally unstable and characterized by rolling hummocky slopes that are highly susceptible to mass movement. Younger alluvial deposits are found in the lower reaches of the river basins and in the area surrounding Humboldt Bay, alluvial sediments dominate. These unconsolidated to partially consolidated sediments have been mildly folded and faulted, but when forested or gently sloped, are generally stable. Figure 6-2 identifies the location of the Franciscan mélange, Unit C and younger alluvial deposit formations, Unit D.

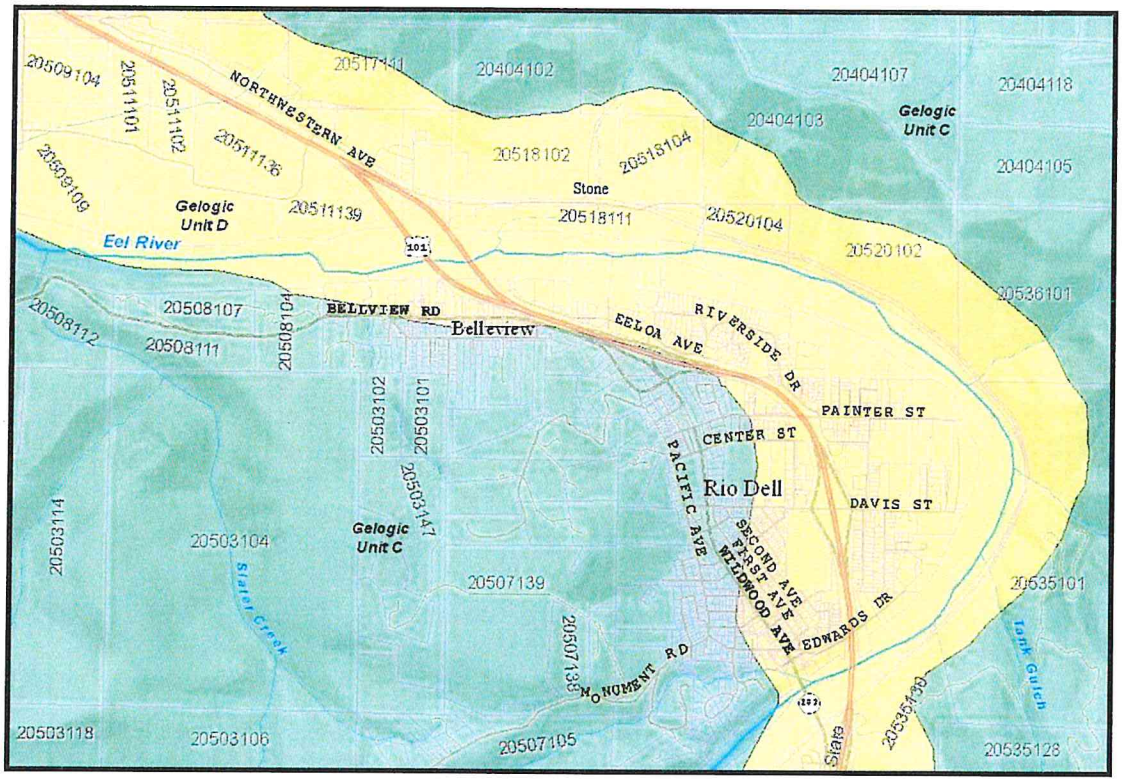



**Figure 6-2 Bedrock Geology; Unit C: Franciscan Mélange; Unit D: Alluvial**
Source: Humboldt County GIS August 2016

Below are existing General Plan polices and implementation measures regarding soils and geologic hazards:

### Soils and Geologic Resources Policies

- Update the Conservation and Safety Element to include the most current soil stability and geologic hazard mapping.
- Make soils and geologic resources information publicly available.
- Update the Conservation and Safety Element to require that minimum parcel sizes be increased in areas greater than 15 per cent slopes.
- Require that geo-technical reports be prepared by qualified professionals for developments in areas of potential slope stability to ensure that slope and soil stability measures are incorporated into project design.

### Soils and Geologic Resources Implementation Measures

- The City shall prepare and adopt a Conservation and Safety Element of the General Plan to expand soil stability and geologic hazard information and develop specific implementation measures.

- The City shall develop a Geographic Information System (GIS) that contains data on slope stability and geologic hazards and maintain large-scale hazard maps.
- The City shall prepare Development Regulations that require soil and geological investigations of proposed development on slopes of 15% or greater. Information obtained should be used to continually update the GIS database.
- The City shall prepare a Grading Ordinance.
- The City shall prepare Hillside Development Regulations to control the density and location of development on parcels that include slopes of 15% or greater

In addition, the Safety Element contains the following goals policies and implementation measures (action plan) regarding soil and geologic hazards:

**Goal S 6.43-1**

Minimize risks to life and property due to soils and/or geologic hazards.

**Policy S 6.43-1**

Continue to utilize all available data on geologic hazards and related risks from the appropriate agencies.

**Implementation S 6.43-1.a.** Utilize geologic maps to identify those areas of instability to require soils/geologic reports.

Responsibility: Community Development Department
Timeframe: Ongoing
Resources: Project Proponents.

**Goal S 6.43-2**

Maintain unstable and hillside areas exceeding 15% as open space within the City.

**Policy S 6.43-2**

Adopt a Hillside Development Regulations within the Zoning Ordinance to implement hillside development provisions. Benches or flats on hillside areas may be developed when demonstrated that access roads and building site are geologically stable.

**Implementation S 6.43-2.a.** Prior to adoption of Hillside Development Regulations, any

development on slopes exceeding 15% shall require a Geologic Report demonstrating the area is stable and suitable for the proposed development.

Responsibility: Community Development Department
Timeframe: Ongoing
Resources: Project Proponents.

**Policy S 6.43-3**

Roads serving hillside development shall follow natural contours, with minimum disruption to hills or forests.

**Implementation S 6.43-3.a.** Adopt road standards minimizing alterations to natural contours accessing hillside development.

Responsibility: Community Development Department, Public Works Department and City Engineer
Timeframe: Ongoing
Resources: General Fund

### 6.54 Flood Hazards

The 1955 and 1964 floods caused extensive damage throughout the northcoast. Damages from the 1964 flood alone totaled more than $100 million dollars. Most of the City is outside the mapped 100 year flood zones. All development within the 100 year flood zone is subject to the requirements of the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program. The County maintains a Geographic Information System (GIS) which identifies flood zones and dam failure inundation zones for the entire County.

One of the major issues in floodplain management and flood protection is how much encroachment of human development should be allowed into 100-year flood zones. The closer

to the river that development is sited, the higher a barrier to floodwaters will have to be erected, as greater limitations on the horizontal expanse of a waterway will require a vertical increase in the water level in order to maintain a similar cross-section. (Federal standards require that encroachment cannot occur within an area that will impose a vertical increase of more than one foot, or increasing water velocity will become hazardous.) Otherwise, floodwaters will spill over into developed areas.

Lands within special flood hazard zones "A" and "V" as delineated by the Federal Emergency Management Agency (FEMA) are typically required to have flood insurance. FEMA as part of the National Flood Insurance Program publishes Flood Insurance Rate Maps. These maps identify various flood hazard zones for flood insurance and land use purposes. Lands within Flood Zone "A" and "V" are located within a 100-year flood plain.

Zone A is for inland areas and Zone V is for coastal areas. A 100-year flood event has an ***average*** occurrence of once in 100 years. There are instances where lands and or structures within mapped zones "A" or "V" may actually be located outside or above the mapped flood zone. A property owner is typically required to provide a Flood Elevation Certificate in order to get a Letter of Map Revision (LOMR) or a Letter of Map Amendment (LOMA) from the National Flood Insurance Program.

**Dam Failure:** While providing some degree of flood control, dams also present a possible hazard in the event of failure. In Humboldt County the Trinity Dam (Trinity and Klamath rivers) and the Ruth Dam (Mad River) pose the most substantial risk, with their large volumes and, in the event of a failure, short downstream warning times. The Scott Dam is near the headwaters of the Eel River. The Scott dam was built in 1922 for hydroelectric power. It is 130′ high, forms Lake Pillsbury and holds 80,560 acre-feet of water.

Hazards from dam failure are those associated with the downstream inundation that would occur given a major structural failure of a nearby impoundment. Such failures would most likely be caused by geologic phenomena, including seismic events and slope stability problems. For the most part the dam failure inundation area within or adjacent to the City is limited to the channel of the river. Figure 5-5 identifies the 100-flood zone and the dam failure inundation zone.

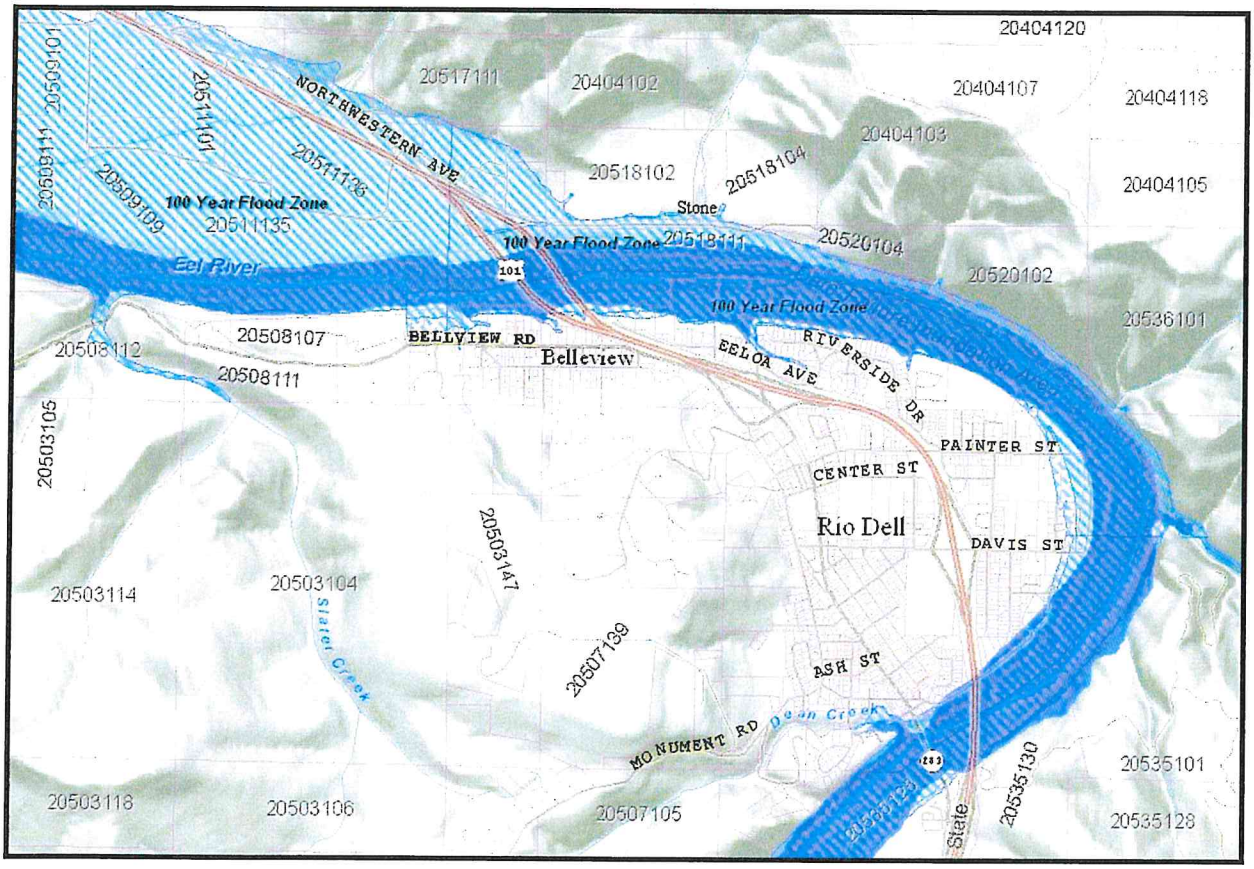



**Figure 6-3 100 Year Flood and Dam Failure Inundation Zones**
Source: Humboldt County GIS August 2013

**Local Flooding:** The City experiences local flooding during larger storm events. The Belleview/Ogle and Riverside neighborhoods have the most significant drainage problems. The City recently made application for a Community Development Block Grant (CDBG) for a drainage/hydraulics study of the Belleview/Ogle and Riverside neighborhoods.

Subdivisions and new development subject to the California Environmental Quality Act (CEQA) are required to submit drainage/hydraulics reports when deemed necessary. In addition, pursuant to Section 17.30.180(12)(a)(iii) of the Rio Dell Municipal Code (RDMC) multifamily,

commercial and industrial ministerial projects are required to incorporate Low Intensity Development (LID) techniques including on-site retention, detention of stormwater runoff.

The current General Plan contains a number of policies and implementation measures regarding flooding and drainage issues. Below is a copy of the existing policies and implementation measures. Again, many of the recommended policies and implementation measures are also addressed in the Open Space and Conservation Element and the Safety Element.

**Hydrology and Water Resources Policies**

- Update the Conservation and Safety Element to include the most current information regarding flood and drainage conditions.
- Identify improvements that can be made to municipal drainage facilities so they can better convey runoff and minimize flood impacts.
- Require new development projects to incorporate on-site drainage features such as retention and infiltration systems to reduce runoff and maximize infiltration.
- Use a combination of incentives, educational programs, and ongoing system audits to promote water conservation.

**Hydrology and Water Resources Implementation Measures**

- The City shall prepare and adopt a Conservation and Safety Element of the General Plan to expand hydrologic information and develop specific implementation measures.
- The City shall utilize the County's GIS data on stream and drainage channels and identified flood plains and make available to the public large-scale hazard maps.
- The City shall pursue funding for a detailed study of the conditions of the municipal drainage system. The study should include an assessment of drainage improvements required for build-out of this General Plan.
- The City shall require Drainage Plans for proposed development to show on-site retention or improvements to the municipal drainage system.

**Goal S 6.54-1**

Minimize risks to life and property due to flooding hazards.

**Policy S 6.54-1.a**

Continue to utilize all available data on flooding hazards and related risks from the appropriate agencies.

**Implementation S 6.54-1.a.** Utilize Flood Insurance Rate Maps to identify those areas subject to flooding.

Responsibility: Community Development Department
Timeframe: Ongoing
Resources: Flood maps.

**Policy S 6.54-1.b**

Coordinate flood hazard analysis and management activities with the Army Corps of Engineers, Federal Emergency Management Agency (FEMA) and other responsible agencies. Request changes in FEMA maps where appropriate to reflect new data or analyses.

**Implementation S 6.54-1.b.** Review flood elevation information provided by project proponents and when appropriate request changes in the FEMA maps.

Responsibility: Community Development Department, Army Corps of Engineers, City Engineer.
Timeframe: Ongoing
Resources: Project proponents and General Fund.

**Policy S 6.54-1.c**

Continue to utilize all available data on dam failure inundation and related risks from the appropriate agencies.

**Implementation S 6.54-1.c.** Utilize Dam Failure Inundation Maps to identify those areas subject to flooding as a result of the potential failure of the Scott Dam on the Eel River.

Responsibility: Community Development Department
Timeframe: Ongoing
Resources: Dam Failure Inundation maps.

**Goal S 6.54-2**

Minimize drainage impacts associated with new development.

**Policy S 6.54-2**

Require project proponents to incorporate Low Intensity Development (LID) techniques including on-site retention and detention of stormwater runoff.

**Implementation S 6.54-2.a.** Review projects and require hydraulics/drainage studies where deemed appropriate.

Responsibility: Community Development Department, Public Works Department and City Engineer.

Timeframe: Ongoing

Resources: Project proponents.

**6.65 Fire Hazards**

The safety element must identify urban and rural-residential areas that are prone to wildland fire hazards. Fire hazards fall into two general categories: wildland fires, which emanate from forest, grassland, or coastal scrub; and structural fires, which damage homes and workplaces. Both bring risk of spreading to other areas. In general, structural fire protection is the responsibility of local agencies, such as fire protection districts and volunteer fire companies; wildland fire protection is the responsibility of federal and state agencies.

The Rio Dell Fire Protection District was originally formed on January 12th, 1941 under the name of "Wildwood" Fire Protection District. The name was officially changed to the Rio Dell Fire Protection District on December 19th, 1961. The district operates with a five member commission of elected officials.

The Rio Dell Fire Protection District, in conjunction with the Rio Dell Volunteer Fire Department (RDVFD), serves the City of Rio Dell and surrounding areas of Monument Rd, and Blueslide Rd. Under the direction of the Fire Chief, they consist of two assistant chiefs and three fire companies. Rio Dell Fire responds to an average of 350 calls per year, including fires, vehicle accidents, and medical aid calls. The RDVFD is known to be the most active all volunteer fire department in Humboldt County.

The Sawmill Annexation area north of the Eel River is within the Fortuna Fire Protection District. Fortuna's Fire Department is operated totally by volunteers with the exception of the Fire Chief.

The Fire Protection District provides the Department with six fire engines, a 100' aerial, a 55' ladder truck, 2 water tenders, 1 light duty rescue truck, 1 medium duty rescue truck and three command vehicles.

A Board of Commissioners governs the Fire District. A Fire Chief and two Assistant Chiefs direct Department operations. The Department works closely with the Rio Dell Volunteer Fire Department.

The active powers of the RDVFD include structural fire protection and suppression, rescue, and emergency medical services. The RDVFD states that it can respond to all calls within the City limits within three minutes. The maximum response time to incident calls within the Rio Dell Plan Area is between five and seven minutes. On average, 7 firefighters are available to respond to calls during the day time. Most of the houses within the City limits are located within 1,000 feet of a fire hydrant.

While the RDVFD is responsible for structural fire protection and emergency medical responses, CDF retains responsibility for grass and forest fires. The RDVFD has joint responsibility for grass and forest fires within the District through a mutual aid agreement with the California Department of Forestry and Fire Protection (CAL FIRE). The RDVFD also has mutual aid agreement with the Fortuna Fire Protection District. Mutual aid agreements allow the districts to enter into agreements for services, including emergencies which have the potential to overwhelm the resource capabilities within a single district. This enables the RDVFD to maintain preparedness for a disaster beyond their capacity, without the need to expand and create an additional facility.

The State Board of Forestry has adopted the *California Fire Plan,* which describes the environment at risk for fire and the state's activities to reduce that risk. It has also adopted fire safe regulations for counties with State Responsibility Areas (SRAs) as a means of reducing pre-fire fuel loads (Title 14, § 1270, et seq., California Code of Regulations). Although most of these regulations are too specific and regulatory in nature to include in a general plan, they offer useful ideas for local policies and can be adapted into local fire safe ordinances and regulations outside of SRAs. The statewide fire safe regulations include:

- Road standards, including width, surface, and grade, for emergency access and evacuation.
- Standards for signs identifying streets, roads, and buildings.
- Minimum water supply reserves for emergency fire use.
- Fuel breaks (i.e., defensible space) around structures and greenbelts around new subdivisions.

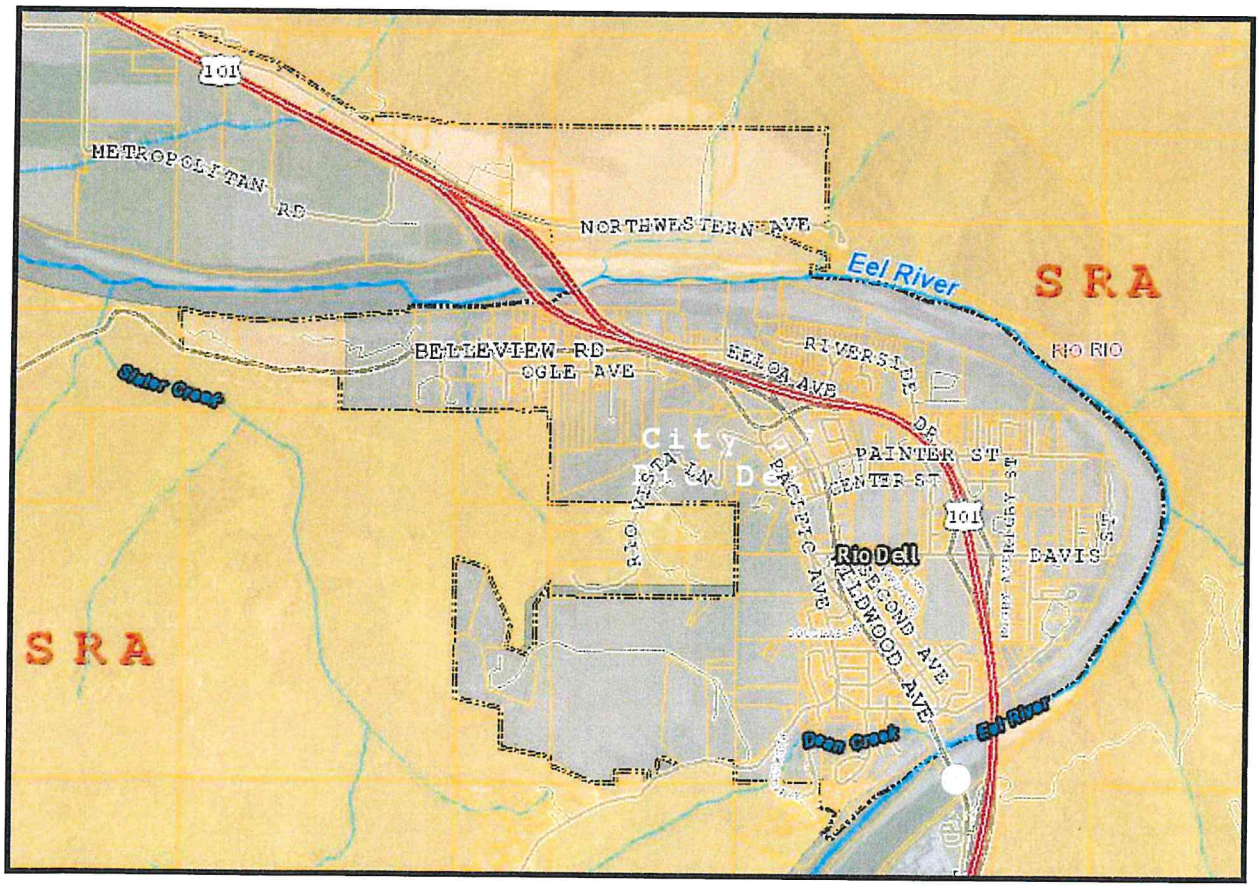



**Figure 6-4 100 State Responsibility Areas**
Source: Humboldt County GIS September 2016

**Goal S 6.65-1**

Minimize risks to life and property due to fire hazards.

**Policy S 6.65-1**

Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

**Implementation S 6.65-1.a.** Review projects and require appropriate access, defensible space access to emergency water supplies, including flows and locations of fire hydrants

Responsibility: Community Development Department, Public Works Department and City Engineer.

Timeframe: Ongoing

Resources: Project proponents.

**Implementation S 6.65-1.b.** The City shall plan collaboratively with the RDVFD, Fortuna's Fire Department, the County and CAL FIRE, on fire prevention and response strategies. Implementation shall be coordinated to maximize efficiency and ensure efforts are complimentary.

## 6.76 Airport Safety

The closest airport to the City is the Rohnerville Airport located in Fortuna. The County Public Works Department operates six county airports: California Redwood Coast-Humboldt County Airport in McKinleyville, Murray Field, Dinsmore Airport, Garberville Airport, Kneeland Airport and Rohnerville Airport. The Board of Supervisors has adopted Airport Master Plans for each of the County maintained airports. In addition, the Board of Supervisors adopted the Airport Land Use Compatibility Plan, which outlines policies for land uses surrounding the airports. The City of Rio Dell is not affected by the Rohnerville Airport Land Use Compatibility Plan.

# APPENDIX A

## Local Hazard Mitigation Plan

It is impossible to predict exactly when and where all disasters will occur or the extent to which they will impact an area, but with careful planning and collaboration among public agencies, stakeholders and citizens, it is possible to minimize losses.

Jurisdictions with FEMA-approved and formally adopted mitigation plans are eligible to apply for funding under FEMA's hazard mitigation assistance programs, including Hazard Mitigation Grant Program, Pre-Disaster Mitigation and Flood Mitigation Assistance grant programs.

The Humboldt County Operational Area Hazard Mitigation Plan was approved by the California Governor's Office of Emergency Services (Cal OES) on 10/24/2019 and submitted to the Federal Emergency Management Agency (FEMA) for approval. On 1/2/2020, FEMA determined the Hazard Mitigation Plan is eligible for approval pending adoption by participating jurisdictions. Contact the Humboldt County Office of Emergency Services with any questions about this plan or the adoption process, at 707-268-2500.

## Rio Dell Element
## Humboldt County Hazard Mitigation Plan

**PREPARED FOR**

**Humboldt County Office of Emergency Services**
826 Fourth Street
Eureka, CA 95501

**PREPARED BY**

**Tetra Tech**
1999 Harrison Street
Suite 500
Oakland, CA 94612

Phone: 510.302.6300
Fax: 510.433.0830
www.tetratech.com

# 7. CITY OF RIO DELL

## 7.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Kyle Knopp, City Manager
675 Wildwood Avenue
Rio Dell, CA 95562
Telephone: 707-764-3532
e-mail Address: knoppk@cityofriodell.ca.gov

Alternate Point of Contact
Karen Dunham, City Clerk
675 Wildwood Avenue
Rio Dell, CA 95562
Telephone: 707-764-3532
e-mail Address: dunhamk@cityofriodell.ca.gov

## 7.2 JURISDICTION PROFILE

### 7.2.1 Location

The City of Rio Dell is located in the heart of Humboldt County, California, approximately 25 miles south of Eureka, along Highway 101 within the Eel River Valley. The city is approximately 2.4 square miles and is nestled within the redwood forests of Northern California.

The current boundaries generally extend in the north from the Metropolitan Plain on the northeast bank of the Eel River to its southerly limit, across the river, on the southwest side of the Eel River adjacent to the unincorporated community of Scotia. US Highway 101 runs through the middle of town and there are five major bridges in the immediate vicinity of the city.

### 7.2.2 History

Rio Dell was originally the site of a Native American village thought to be named Tokemuk. The village was unique in that it was occupied by members of both the Wiyot and Nekanni tribes. On or around the March 1, 1860, the women and children of the village were murdered as part of a larger coordinated conspiracy more well known as the "Indian Island Massacre." In the 1870s, Lorenzo Painter settled in the area. He started a farming community which he named Eagle Prairie and built a hotel that he called the Rio Dell House. The name 'Rio Dell' is most likely the poetic license of Mr. Painter with a unique combination of the Spanish 'Rio' (River) and the English 'Dell' (small valley amongst trees). In 1911, the area known as Wildwood (now the downtown) developed housing mostly Italian and Portuguese immigrants. Wildwood was known as "Little Italy" and served as the lawless refuge of Scotia's millworkers and a center for bootlegging. Over the years Wildwood, Rio Dell, and Eagle Prairie formed three separate small community areas and when the City was incorporated in 1965 the three areas combined into the single City of Rio Dell.

The City was deeply intertwined with the timber industry and served as the home base for the County's largest employer at the time, Pacific Lumber. For many new immigrant families, such as the Italian and Portuguese, Rio Dell was their first home in the United States and Humboldt County. The City primarily served as the colorful bedroom community of the industry's line workers. The City did not adapt economically when in the 1970s a highway bypass was built through the community. The first few years of the new millennium saw the almost

complete collapse of the timber industry coupled with the global recession of 2008. Being economically undiversified the City was completely unprepared for the challenges of the 21st century. Since 2015, the City has been pursuing strategies to revitalize the economy and the community resulting in the largest investments and building projects in the City's history.

### 7.2.3 Climate

Rio Dell enjoys a mild climate with sunny summertime temperatures between 68 and 75 degrees. During winter months temperatures tend to be in the 50s. Annual average precipitation is about 48 inches. The wettest month of the year is typically January with an average rainfall of 8.45 inches. Rio Dell occupies a climate micro-niche between the cold foggy coast and hotter inland areas. This climate is ideal for the growth of Sequoia Sempervirens or as it is better known, the Coast Redwood Tree.

### 7.2.4 Governing Body Format

Rio Dell was incorporated as a General Law city. The City was not granted a separate charter but operates under the general laws of the State of California. Rio Dell has a City Council/City Manager form of government. The City Council sets policy while the City Manager carries out the day-to-day business of the City. The Mayor is selected from among the City Council and serves as the presiding officer at city council meetings and as the official head of the City for legislative and ceremonial purposes.

The City Council of the City of Rio Dell assumes responsibility for the adoption of this plan; the Rio Dell City Manager will oversee its implementation.

## 7.3 CURRENT TRENDS

### 7.3.1 Population

According to the California Department of Finance, the population of Rio Dell as of 2018 was 3,348.

### 7.3.2 Development

In recent years the City of Rio Dell has invested in efforts toward revitalization. The City has rezoned land in an attempt to become a major legal cannabis manufacturing center taking advantage of Rio Dell's geographic location and the region's historic role as a producer of illegal cannabis. This has resulted in the largest private investments in City history. Outside of the cannabis industry, investment in the city's commercial and industrial sectors has been extremely limited.

Approximately 109 new, single-family construction permits were applied for between 2000 and 2018, with the bulk of these housing developments occurring in the lead up to housing market crash around 2007. Additionally, the City has taken on several infrastructure improvement projects including significant upgrades to the water and wastewater utilities. The City now has an alternate water source.

Pursuant with California state law, the City of Rio Dell engages in long-range planning. Several updates to elements of the general plan have been made in recent years. The Conservation, Conservation and Circulation elements were updated in 2013, the Land Use element in 2008 and the Housing element in 2011. The Noise element was last updated in 2001 and the Safety Element was adopted in 1975.

Table 7-1 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 7-1. Recent and Expected Future Development Trends

| Criterion | Response |
|---|---|
| **Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?** | No |
| • **If yes, give the estimated area annexed and estimated number of parcels or structures.** | n/a |
| **Is your jurisdiction expected to annex any areas during the performance period of this plan?** | Yes |
| • **If yes, describe land areas and dominant uses.** | City plans to annex a parcel where the City owns and operates an irrigation field for wastewater effluent. |
| • **If yes, who currently has permitting authority over these areas?** | The County of Humboldt. |
| **Are any areas targeted for development or major redevelopment in the next five years?** | Yes |
| • **If yes, briefly describe, including whether any of the areas are in known hazard risk areas** | Humboldt-Rio Dell Business Park. Flood risk. |
| **How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?** | 2014: Single Family 1; Multi-Family --; Other (commercial, mixed use, etc.) 1; Total 2<br>2015: Single Family 7; Multi-Family --; Other (commercial, mixed use, etc.) --; Total 7<br>2016: Single Family 1; Multi-Family --; Other (commercial, mixed use, etc.) 1; Total 2<br>2017: Single Family 3; Multi-Family --; Other (commercial, mixed use, etc.) --; Total 3<br>2018: Single Family 1; Multi-Family --; Other (commercial, mixed use, etc.) --; Total 2 |
| **Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.** | • Special Flood Hazard Areas: One. Humboldt Rio Dell Business Park |
| **Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.** | Rio Dell still has numerous opportunities for buildout and infill construction. Of extreme importance is the City's need to increase the industrial and commercial buildouts in Rio Dell in order to finance services provided to the residential community. |

## 7.4 CAPABILITY ASSESSMENT

The City performed an assessment of its existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities is presented in Table 7-2.
- Development and permitting capabilities are presented in Table 7-3.
- An assessment of fiscal capabilities is presented in Table 7-4.
- An assessment of administrative and technical capabilities is presented in Table 7-5.
- An assessment of education and outreach capabilities is presented in Table 7-6.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-7.
- Classifications under various community mitigation programs are presented in Table 7-8.
- The community's adaptive capacity for the impacts of climate change is presented in Table 7-9.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in Section 7.10 identifies these as community capacity building mitigation actions.

Table 7-2. Legal and Regulatory Capability

| | Local Authority | Other Jurisdiction Authority | State Mandated | Integration Opportunity? |
|---|---|---|---|---|
| **Codes, Ordinances, & Requirements** | | | | |
| Building Code | Yes | Yes | Yes | Yes |
| *Comment:* Chapter 15 of the Rio Dell Municipal Code, California Residential Code, California Building Code, California Electrical Code, California Plumbing Code, California Mechanical Code, California Fire Code, California Green Code, California Energy Code, California Administrative Code, California Health and Safety Code. | | | | |
| Zoning Code | Yes | Yes | Yes | Yes |
| *Comment:* Chapter 17 of the Rio Dell Municipal Code | | | | |
| Subdivisions | Yes | Yes | Yes | Yes |
| *Comment:* Chapter 16 of the Rio Dell Municipal Code | | | | |
| Stormwater Management | Yes | No | No | No |
| *Comment:* Required as part of the Building Permit process, California Residential Code and California Building Code. Also required by City Subdivision Regulations, Chapter 16 of the Rio Dell Municipal Code and policies on the Open Space and Conservation Element of the General Plan. | | | | |
| Post-Disaster Recovery | No | No | No | No |
| *Comment:* | | | | |
| Real Estate Disclosure | No | Yes | Yes | No |
| *Comment:* California Civil Code Section 1102 et seq requires Natural Hazard Disclosures. | | | | |
| Growth Management | Yes | No | No | No |
| *Comment:* The City's General Plan and Zoning Regulations direct and control growth and development within the City. | | | | |
| Site Plan Review | Yes | No | No | No |
| *Comment:* The City requires Site Plans for almost all Building Permits pursuant to Section 106.2 of the California Residential Code and Section 107.2.5 of the California Building Code. | | | | |
| Environmental Protection | Yes | Yes | Yes | No |
| *Comment:* All projects are subject to the California Environmental Quality Act (CEQA) Guidelines, Title 14, Chapter 3 of the California Code of Regulations unless they qualify for Statutory Exemptions (Article 18) or Category Exemptions (Article 15). In addition the City's Zoning Regulations contain development standards for Environmentally Sensitive Habitat Area's pursuant to Section 17.30.110 of the Rio Dell Municipal Code. Furthermore, discretionary projects are also subject to the environmental polices found in the City's Open Space and Conservation Element. | | | | |
| Flood Damage Prevention | Yes | Yes | Yes | Yes |
| *Comment:* All projects are subject to the flood hazard regulations in the California Residential Code, Sections 106.1.3 and 301.2.4 and the California Building Code, Sections 101.4.8, 107.2.5.1, 110.3.3, 1603.1, 1603.1.7, 1612, 3001.2, 3102.7 and Appendix G. In addition development is also subject to the City's Building Regulations Chapter 15.15 and Section 17.30.140 of the Rio Dell Municipal Code. Furthermore, the City's Safety Element and Open Space and Conservation Element contain policies to minimize impacts due to flood hazards. | | | | |
| Emergency Management | Yes | Yes | Yes | Yes |
| *Comment:* County OES | | | | |
| Climate Change | Yes | No | No | Yes |
| *Comment:* The City is currently participating in the preparation of a regional Climate Action Plan that is expected to be completed by the end of the year. | | | | |
| **Planning Documents** | | | | |
| General Plan | Yes | No | Yes | Yes |
| Is the plan compliant with Assembly Bill 2140? No | | | | |
| *Comment:* Assembly Bill (AB) 2140 limits the amount of additional state funding for certain disaster recovery projects funded by the California Disaster Assistance Act unless the local agency has complied with the provisions set forth in the bill. Among other requirements, the local agency must provide a certified copy of a Resolution of Adoption to FEMA demonstrating that an approved local hazard mitigation plan (LHMP) has been adopted and incorporated into the Safety Element of the General Plan. The City of Rio Dell intends to adopt the final version of the LHMP once complete and approved. Once approved, the City will incorporate the LHMP into the Safety Element by reference. | | | | |

| | Local Authority | Other Jurisdiction Authority | State Mandated | Integration Opportunity? |
|---|---|---|---|---|
| Capital Improvement Plan | Yes | No | No | Yes |
| How often is the plan updated? | | | | |
| *Comment:* Updated annually | | | | |
| Disaster Debris Management Plan | No | Yes | Yes | No |
| *Comment:* Debris planning allows communities to be better prepared for a disaster by identifying debris collection and disposal sites, identifying potential debris contractors, and preparing debris removal contracts in advance of a disaster. Only a minority of states and local governments currently have such plans in place. To maximize resources while minimizing the debris loads to landfills following a disaster, local governments are encouraged to incorporate debris management in their emergency and solid waste management planning activities. Humboldt Recology is the local waste management provider and they would provide debris collection and disposal, | | | | |
| Floodplain or Watershed Plan | Yes | Yes | Yes | Yes |
| *Comment:* The City's Safety Element and Open Space and Conservation Element contain policies to minimize impacts due to flood hazards. All new projects are subject to the flood hazard regulations in the California Residential Code, and the California Building Code. In addition development is also subject to the City's Building Regulations Chapter 15.15 and Section 17.30.140 of the Rio Dell Municipal Code. | | | | |
| Stormwater Plan | Yes | Yes | No | Yes |
| *Comment:* The City had a stormwater plan prepared for the Belleview/Ogle neighborhood. | | | | |
| Urban Water Management Plan | No | Yes | No | No |
| *Comment:* Urban Water Management Plans (UWMPs) are prepared by urban water suppliers every 5 years. These plans support the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. The requirements for UWMPs are found in 2 sections of California Water Code, §10610-10656 and §10608. Every urban water supplier that either provides over 3,000 acre-feet of water annually, or serves more than 3,000 urban connections is required to submit an UWMP. The City is not required to prepare a UWMP because we do not provide 3,000 acre-feet annually, nor do we serve more than 3,000 urban water connections. | | | | |
| Habitat Conservation Plan | No | Yes | No | No |
| *Comment:* Elements of a Habitat Conservation Plan are included in the City's Open Space and Conservation Element. | | | | |
| Economic Development Plan | Yes | No | No | Yes |
| *Comment:* An Economic Development Strategy Plan was approved in 2008. | | | | |
| Shoreline Management Plan | No | Yes | No | Yes |
| *Comment:* The City is not subject to expected tsunami events or sea level rise. The Eel River shoreline is subject to the City's Safety Element and Open Space and Conservation Element which contains policies to minimize impacts due to flood hazards and protection of riparian habitat. | | | | |
| Community Wildfire Protection Plan | No | Yes | No | Yes |
| *Comment:* The City does not have its own Wildfire Protection Plan. However, the City is included in the County's Master Fire Prevention Plan. | | | | |
| Forest Management Plan | No | Yes | No | Yes |
| *Comment:* The City does not have any community forests. However, the Open Space and Conservation Element contains goals and policies regarding potential impacts to timberlands. | | | | |
| Climate Action Plan | No | Yes | No | Yes |
| *Comment:* The City is currently participating in the preparation of a regional Climate Action Plan that is expected to be completed by the end of the year. | | | | |
| Emergency Operations Plan | No | No | No | Yes |
| *Comment:* The City currently does not have an Emergency Management Plan. | | | | |
| Threat & Hazard Identification & Risk Assessment (THIRA) | No | No | No | No |
| *Comment:* The City has not conducted a Threat & Hazard Identification & Risk Assessment. | | | | |
| Post-Disaster Recovery Plan | No | Yes | No | No |
| *Comment:* The City currently does not have a Post Disaster Recovery Plan. | | | | |

| | Local Authority | Other Jurisdiction Authority | State Mandated | Integration Opportunity? |
|---|---|---|---|---|
| Continuity of Operations Plan | No | No | No | Yes |
| *Comment:* The City currently does not have a Continuity of Operations Plan. | | | | |
| Public Health Plan | No | Yes | No | No |
| *Comment:* The City does not have a Public Health Plan. However the City defers to the County Department of Health and Human Services regarding community public health efforts. | | | | |

Table 7-3. Development and Permitting Capability

| Criterion | Response |
|---|---|
| **Does your jurisdiction issue development permits?** | Yes |
| • **If no, who does? If yes, which department?** | Community Development Department |
| **Does your jurisdiction have the ability to track permits by hazard area?** | Yes |
| **Does your jurisdiction have a buildable lands inventory?** | Yes |

Table 7-4. Fiscal Capability

| Financial Resource | Accessible or Eligible to Use? |
|---|---|
| **Community Development Block Grants** | Yes |
| **Capital Improvements Project Funding** | Yes |
| **Authority to Levy Taxes for Specific Purposes** | Yes |
| **User Fees for Water, Sewer, Gas or Electric Service** | Yes, Water and Wastewater |
| **Incur Debt through General Obligation Bonds** | Yes |
| **Incur Debt through Special Tax Bonds** | Yes |
| **Incur Debt through Private Activity Bonds** | Yes |
| **Withhold Public Expenditures in Hazard-Prone Areas** | Yes |
| **State-Sponsored Grant Programs** | Yes |
| **Development Impact Fees for Homebuyers or Developers** | Yes |

Table 7-5. Administrative and Technical Capability

| Staff/Personnel Resource | Available? | Department/Agency/Position |
|---|---|---|
| **Planners or engineers with knowledge of land development and land management practices** | Yes | Community Development Department |
| **Engineers or professionals trained in building or infrastructure construction practices** | Yes | Consultant |
| **Planners or engineers with an understanding of natural hazards** | Yes | Consultant |
| **Staff with training in benefit/cost analysis** | Yes | Finance |
| **Surveyors** | Yes | Consultant |
| **Personnel skilled or trained in GIS applications** | Yes | Consultant |
| **Scientist familiar with natural hazards in local area** | Yes | Consultant |
| **Emergency manager** | Yes | City Manager |
| **Grant writers** | Yes | Consultant |

Table 7-6. Education and Outreach Capability

| Criterion | Response |
|---|---|
| Do you have a public information officer or communications office? | Yes |
| Do you have personnel skilled or trained in website development? | Consultant |
| Do you have hazard mitigation information available on your website?<br>• If yes, briefly describe. | No |
| Do you use social media for hazard mitigation education and outreach?<br>• If yes, briefly describe. | No |
| Do you have any citizen boards or commissions that address issues related to hazard mitigation?<br>• If yes, briefly describe. | No |
| Do you have any other programs already in place that could be used to communicate hazard-related information?<br>• If yes, briefly describe. | Yes<br>Nixle, Website, Newsletter |
| Do you have any established warning systems for hazard events?<br>• If yes, briefly describe. | Yes<br>Nixle |

Table 7-7. National Flood Insurance Program Compliance

| Criterion | Response |
|---|---|
| What local department is responsible for floodplain management? | Planning and Building |
| Who is your floodplain administrator? (department/position) | City Manager |
| Are any certified floodplain managers on staff in your jurisdiction? | No |
| What is the date that your flood damage prevention ordinance was last amended? | 2018 |
| Does your floodplain management program meet or exceed minimum requirements?<br>• If exceeds, in what ways? | Meets |
| When was the most recent Community Assistance Visit or Community Assistance Contact? | 2017 |
| Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?<br>• If so, state what they are. | No |
| Are any RiskMAP projects currently underway in your jurisdiction?<br>• If so, state what they are. | No |
| Do your flood hazard maps adequately address the flood risk within your jurisdiction?<br>• If no, state why. | Yes |
| Does your floodplain management staff need any assistance or training to support its floodplain management program?<br>• If so, what type of assistance/training is needed? | Yes |
| Does your jurisdiction participate in the Community Rating System (CRS)?<br>• If yes, is your jurisdiction interested in improving its CRS Classification?<br>• If no, is your jurisdiction interested in joining the CRS program? | No<br>Yes |
| How many flood insurance policies are in force in your jurisdiction? [a]<br>• What is the insurance in force?<br>• What is the premium in force? | 4<br>$554,100<br>4,713 |
| How many total loss claims have been filed in your jurisdiction? [a]<br>• How many claims are still open or were closed without payment?<br>• What were the total payments for losses? | 5<br>1<br>$30,939.89 |

a. According to FEMA statistics as of September 30, 2018

Table 7-8. Community Classifications

| | Participating? | Classification | Date Classified |
|---|---|---|---|
| **Community Rating System** | No | -- | -- |
| **Building Code Effectiveness Grading Schedule** | No | 99 | -- |
| **Public Protection** | Yes | 7/9 | -- |
| **Storm Ready** | No | -- | -- |
| **Firewise** | No | -- | -- |

Table 7-9. Adaptive Capacity for Climate Change

| Criterion | Jurisdiction Rating[a] |
|---|---|
| **Technical Capacity** | |
| **Jurisdiction-level understanding of potential climate change impacts**<br>*Comment:* | Low |
| **Jurisdiction-level monitoring of climate change impacts**<br>*Comment:* | Low |
| **Technical resources to assess proposed strategies for feasibility and externalities**<br>*Comment:* | Low |
| **Jurisdiction-level capacity for development of greenhouse gas emissions inventory**<br>*Comment:* | Low |
| **Capital planning and land use decisions informed by potential climate impacts**<br>*Comment:* | Low |
| **Participation in regional groups addressing climate risks**<br>*Comment:* | Medium |
| **Implementation Capacity** | |
| **Clear authority/mandate to consider climate change impacts during public decision-making processes**<br>*Comment:* | Medium |
| **Identified strategies for greenhouse gas mitigation efforts**<br>*Comment:* | Low |
| **Identified strategies for adaptation to impacts**<br>*Comment:* | Low |
| **Champions for climate action in local government departments**<br>*Comment:* | High |
| **Political support for implementing climate change adaptation strategies**<br>*Comment:* | Medium |
| **Financial resources devoted to climate change adaptation**<br>*Comment:* | Low |
| **Local authority over sectors likely to be negative impacted**<br>*Comment:* | Low |

| Criterion | Jurisdiction Rating[a] |
|---|---|
| **Public Capacity** | |
| **Local residents knowledge of and understanding of climate risk** | Low |
| *Comment:* | |
| **Local residents support of adaptation efforts** | Low |
| *Comment:* | |
| **Local residents' capacity to adapt to climate impacts** | High |
| *Comment:* | |
| **Local economy current capacity to adapt to climate impacts** | Low |
| *Comment:* | |
| **Local ecosystems capacity to adapt to climate impacts** | Low |
| *Comment:* | |

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 7.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed in Section 7.11 were used to provide information on integration. The progress reporting process described in Volume 1 will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 7.5.1 Existing Integration

No existing integration has been identified between local hazard mitigation planning and other local plans and programs.

### 7.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Climate Action Plan
- Open Space and Safety Elements of General Plan

## 7.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

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

## 7.7 HAZARD RISK RANKING

Table 7-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 7-10. Past Natural Hazard Events

| Type of Event | FEMA Disaster # | Date | Damage Assessment |
|---|---|---|---|
| **Earthquake** | N/A | 11/8/1980 | N/A |
| **Severe Weather / Flood** | N/A | 1/18/1981 | N/A |
| **Severe Weather / Flood** | N/A | 12/19/1981 | N/A |
| **Severe Weather / Flood** | N/A | 3/31/1982 | N/A |
| **Severe Weather / Flood** | DR-677 | 1/25/1983 | $3.82 million countywide |
| **Severe Weather / Flood** | N/A | 12/25/1983 | N/A |
| **Severe Weather / Flood** | DR-785 | 2/21/1986 | $5 million countywide |
| **Earthquake** | DR-943 | 4/4/1992 | $10 million |
| **Severe Weather / Flood** | N/A | 12/31/1992 | N/A |
| **Severe Weather / Flood** | N/A | 1/20/1993 | N/A |
| **Earthquake** | N/A | 12/26/1994 | N/A |
| **Severe Weather / Flood** | DR-1044 | 1/9/1995 | $15 million countywide_ |
| **Severe Weather / Flood** | DR-1046 | 3/12/1995 | $1.3 million countywide |
| **Severe Weather / Flood** | N/A | 12/11/1995 | N/A |
| **Severe Weather / Flood** | N/A | 12/29/1995 | N/A |
| **Severe Weather / Flood** | N/A | 12/8/1996 | N/A |
| **Severe Weather / Flood** | N/A | 12/29/1996 | N/A |
| **Severe Weather / Flood** | DR-1155 | 1/4/1997 | $35 million countywide |
| **Severe Weather / Flood** | DR-1203 | 2/9/1998 | $6 million countywide |
| **Severe Weather / Flood** | N/A | 11/21/1998 | N/A |
| **Severe Weather / Flood** | N/A | 12/27/2002 | N/A |
| **Severe Weather / Flood** | DR-1628 | 12/31/2005 | $413,000 city |
| **Earthquake** | N/A | 1/9/2010 | N/A |
| **Drought** | N/A | 6/30/2014 | N/A |
| **Severe Weather / Flood** | N/A | 2/2/2017 | N/A |

Table 7-11. Hazard Risk Ranking

| Rank | Hazard Type | Risk Rating Score (Probability x Impact) | Category |
|---|---|---|---|
| 1 | Earthquake | 54 | High |
| 2 | Severe Weather | 54 | High |
| 3 | Flood | 42 | Medium |
| 4 | Drought | 42 | Medium |
| 5 | Landslide | 21 | Medium |
| 6 | Wildland Fire | 18 | Low |
| 7 | Dam Failure | 14 | Low |
| 8 | Sea Level Rise | 0 | None |
| 9 | Tsunami | 0 | None |

NOTE: The process used to assign risk ratings and rankings for each hazard is described in Volume 1 of this hazard mitigation plan.

## 7.8 JURISDICTION-SPECIFIC VULNERABILITIES

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for the jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

### 7.8.1 Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

### 7.8.2 Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Road ingress/egress is potential problem. Eight major state highway bridges in or around Rio Dell. Rugged terrain means periods of extended isolation in catastrophic seismic event. Workforce works primarily outside of Rio Dell – family separations likely.

Mitigation actions addressing these issues were prioritized for consideration in the action plan presented in Section 7.10.

## 7.9 STATUS OF PREVIOUS PLAN ACTIONS

Table 7-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## 7.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 7-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 7-14 identifies the priority for each action. Table 7-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 7-12. Status of Previous Plan Actions

| Action Item from Previous Plan | Completed | Removed; No Longer Feasible | Carried Over to Plan Update | |
|---|---|---|---|---|
| | | | Check if Yes | Action # in Update |
| **#RD-1—Improve Wastewater Collection System Mains, Laterals, and Manholes.** | | | X | |
| *Comment:* City working on Sanitary Sewer Evaluation Study (SSES) | | | | |
| **#RD-2—Maintain and Upgrade Wastewater Lift Stations.** | | | X | |
| *Comment:* Upgraded one station in 2017. | | | | |
| **#RD-3—Painter Street to Highway 101 Drainage Ditch Repair.** | | | X | |
| *Comment:* | | | | |
| **#RD-4—Center Street to Painter Street Culvert Improvements.** | | | X | |
| *Comment:* | | | | |
| **#RD-5—City Hall Seismic Retrofit.** | X | | | |
| *Comment:* Completed after 1992 earthquake | | | | |
| **#RD-6—Fireman's Hall Seismic Retrofit.** | X | | | |
| *Comment:* Completed after 1992 earthquake | | | | |
| **#RD-7—City Standby Power Generation Capabilities.** | | | X | |
| *Comment:* Portable Water Utility Generator arrives 11/4/18 | | | | |
| **#RD-8—Fire Sprinkler Installation at City Hall and Fireman's Hall.** | | | X | |
| *Comment:* | | | | |
| **#RD-9—Construct Retaining Wall on Road to Dinsmore.** | | | X | |
| *Comment:* | | | | |
| **#RD-10—Designate, prepare and announce Emergency Assembly Points throughout the City.** | | | X | |
| *Comment:* | | | | |
| **#RD-11—Adopt a long-term capital improvement plan, which provides the City the financial capability to fund capital projects that could include hazard mitigation projects.** | | | X | |
| *Comment:* | | | | |
| **#RD-12—Improve hillside stability in landslide-prone areas.** | | X | | |
| *Comment:* Financially not feasible. Open Space and Conservation Element and the Safety Element does not allow development in landslide prove areas. | | | | |
| **#RD-13—Prepare a Post Disaster Recovery Plan.** | | | X | |
| *Comment:* | | | | |
| **#RD-14—Install Emergency water interties with Scotia.** | | X | | |
| *Comment:* Town of Scotia an unwilling partner. | | | | |
| **#RD-15—Work with the National Oceanic and Atmospheric Association to attain the certifications of Storm Ready and Tsunami Ready.** | | | X | |
| *Comment:* | | | | |
| **#RD-16—Improve alternative communication capabilities throughout the City, including acquisition of and licensing for HAM radios, satellite telephones, mobile backup dispatch devices and other communication devices.** | | | X | |
| *Comment:* City is in process to add mass notification via Nixle and to add a Sat Phone | | | | |
| **#RD-17—Adopt an updated Emergency Response Plan.** | | | X | |
| *Comment:* | | | | |

| Action Item from Previous Plan | Completed | Removed; No Longer Feasible | Carried Over to Plan Update: Check if Yes | Carried Over to Plan Update: Action # in Update |
|---|---|---|---|---|
| **#RD-18—Update City land use code for seismic setbacks/structural requirements and hillside development standards.** | | | X | |
| *Comment:* The open Space and Conservation Element requires a Geologic Report for any hillside development on slopes exceeding 15% | | | | |
| **#RD-19—Promote the formation of Community Emergency Response Teams (CERTs) and Neighborhood and Business Emergency Services Teams throughout Rio Dell.** | | | X | |
| *Comment:* | | | | |
| **#RD-20—Update floodplain mapping throughout the City and 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:**<br>• **Enforcement of the adopted flood damage prevention ordinance,**<br>• **Participating in floodplain identification and mapping updates, and**<br>• **Providing public assistance/information on floodplain requirements and impacts** | X | | X | |
| *Comment:* FEMA updated the Flood Insurance Rate Maps (FIRM) in November of 2016. The City relies on these maps to identify flood zones affecting the City. | | | | |
| **#RD-21—Maintain National Incident Management System, State Emergency Management System, and Incident Command System training for City staff.** | | | X | |
| *Comment:* | | | | |
| **#RD-22—Support and participate in the Redwood Coast Tsunami Work Group and other hazard mitigation groups in the region.** | | | X | |
| *Comment:* | | | | |
| **#RD-23—Develop Focused Storm Drainage Facility Plan.** | | | X | |
| *Comment:* | | | | |
| **#RD-24—Increase fuel storage capacity and supply within the City, including at Wastewater Treatment and Water Facilities.** | | X | | |
| *Comment:* Cannot add fuel storage at Corp Yard due to concerns about water/wastewater treatment | | | | |
| **#RD-25—Consider obtaining formal agreement with Shell to give the City and Fire District priority fueling. Coordinate with the Fire District to determine the station's operational capacity in event of an energy disruption.** | | | X | |
| *Comment:* | | | | |
| **#RD-26—Determine whether any agreements exist with Scotia for the sharing of fuel and water in the event of an emergency.** | | X | | |
| *Comment:* Town of Scotia not a willing or reliable partner. | | | | |
| **#RD-27—Maintain and update the City's Energy Assurance Plan and implement Energy Assurance Plan actions and projects, including requesting information (energy use, backup generator make/model/size, fuel storage) from key assets, determining energy assurance gaps, and evaluating Key Asset requirements to function in a longer-term (2 week) energy disruption.** | | X | | |
| *Comment:* Cannot maintain or update a plan that does not exist. | | | | |

| Action Item from Previous Plan | Completed | Removed; No Longer Feasible | Carried Over to Plan Update: Check if Yes | Carried Over to Plan Update: Action # in Update |
|---|---|---|---|---|
| **#RD-28—Determine City water supply in event of long-term energy disruption. Set priority list for water distribution.** | | | X | |
| *Comment:* City now has alternate water source and backup generator arriving 11/4/2018. | | | | |
| **#RD-29—Determine refrigeration capacity of local markets and evaluate requirements to maintain functionality in event of energy disruption.** | | X | | |
| *Comment:* Not remotely feasible. | | | | |
| **#RD-30—Determine fuel tank size and operational costs of new infiltration gallery backup generator.** | X | | | |
| *Comment:* Backup generator arrives 11/4/2018 – paid for by Water Board and USDA. LHMP contribution was zero. | | | | |
| **#RD-31—Coordinate with the Fire District to determine backup fuel supply adequacy and obtain increased storage if necessary.** | | | X | |
| *Comment:* | | | | |
| **#RD-32—Determine and obtain a properly sized backup power supply to power Police Department communications system.** | | | X | |
| *Comment:* | | | | |
| **#RD-33—Coordinate with the County and Ferndale to stabilize Blue Slide Road hillside and road surface from Ferndale to Rio Dell.** | | | X | |
| *Comment:* | | | | |
| **#RD-34—Coordinate with County to stabilize landslide into Eel River upstream of City's fresh water infiltration gallery.** | | X | | |
| *Comment:* Not remotely feasible. | | | | |
| **#RD-35—Incorporate this Hazard Mitigation Plan as part of the General Plan Safety Element. The safety element of the general plan provides the city the capability to regulate future land uses in areas impacted by all hazards of concern identified by this plan.** | | | X | |
| *Comment:* City plans to do this by 6/1/2019 once the LHMP has been approved. | | | | |

Table 7-13. Hazard Mitigation Action Plan Matrix

| Applies to New or Existing Assets | Objectives Met | Lead Agency | Support Agency | Estimated Cost | Sources of Funding | Timeline[a] |
|---|---|---|---|---|---|---|
| **Action RIO1**—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. | | | | | | |
| *Hazards Mitigated:* Earthquake, flooding, landslide, tsunami, wildfire | | | | | | |
| Existing | 3, 4, 10 | City of Rio Dell | TBD | High | HMGP, PDM, FMA | Short-term |
| **Action RIO2**— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the City's Safety Element. | | | | | | |
| *Hazards Mitigated:* Dam failure, drought, earthquake, flooding, landslide, tsunami, wildfire | | | | | | |
| New and Existing | 1, 3, 4, 5, 7, 8, 10 | City of Rio Dell | TBD | Medium | Staff Time, General Funds | Ongoing |
| **Action RIO3**—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan. | | | | | | |
| *Hazards Mitigated:* All hazards | | | | | | |
| New and Existing | 1, 5, 8 | City of Rio Dell | TBD | Medium | Staff Time, General Funds | Short-term |

| Applies to New or Existing Assets | Objectives Met | Lead Agency | Support Agency | Estimated Cost | Sources of Funding | Timeline[a] |
|---|---|---|---|---|---|---|
| **Action RIO4**—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:<br>• Enforce the flood damage prevention ordinance.<br>• Participate in floodplain identification and mapping updates.<br>• Provide public assistance/information on floodplain requirements and impacts.<br>*Hazards Mitigated:* Dam failure, flooding, severe weather, tsunami, sea level rise | | | | | | |
| New and Existing | 1, 3, 5, 7, 8, 10 | City of Rio Dell | TBD | Medium | Staff Time, General Funds | Ongoing |
| **Action RIO5**—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:<br>• The participation, preparation and adoption of a Regional Climate Action Plan.<br>*Hazards Mitigated:* TBD | | | | | | |
| New and Existing | 1, 3, 4, 5, 6, 7, 8 | County of Humboldt | City of Rio Dell | Low | Staff Time, General Funds | Short-term |
| **Action RIO6**— Purchase generators for critical facilities and infrastructure that lack adequate backup power, including the City's Fire and School facilities. The City hopes to install an emergency generator for City Hall, (including the Police Department) Fire District and School District in the near future pending the availability of funds through LHMP.<br>*Hazards Mitigated:* Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire | | | | | | |
| Existing | 2, 6, 9 | City of Rio Dell | Fire District, School District | High | HMGP, PDM, FMA | Ongoing |
| **Action RIO7**—Planning and Upgrade Radio equipment and towers to Interoperable Digital P25 infrastructure for City and Fire District.<br>*Hazards Mitigated:* All Hazards | | | | | | |
| | 1, 2, 3, 4, 5, 6, 7, 8, 9 | City of Rio Dell | Fire District, County of Humboldt | High | HMGP, PDM, FMA | Short-term |
| **Action RIO8**— Retrofit/installation of undersized culverts and drainages to prevent flooding and erosion/ landslide damage<br>*Hazards Mitigated:* Sever Storm, Flood | | | | | | |
| | 2,3 | City of Rio Dell | County of Humboldt | Medium | HMGP, PDM, FMA | Short-term |
| **Action RIO9**—Installation of fire sprinklers at City Hall and Fire Station.<br>*Hazards Mitigated:* Earthquake, Wildland Fire | | | | | | |
| | 1, 6 | City of Rio Dell | Fire District | Medium | HMGP, PDM, FMA | Short-term |
| **Action RIO10**—Public Education and Outreach<br>*Hazards Mitigated:* All Hazards | | | | | | |
| | 1, 2, 3, 4, 5, 6, 7, 8, 9 | City of Rio Dell | TBD | Low | HMGP, PDM, FMA | Ongoing |
| **Action RIO11**—Joint Public Safety Dispatch and EOC<br>*Hazards Mitigated:* All Hazards | | | | | | |
| | 1, 2, 3, 4, 5, 6, 7, 8, 9 | County of Humboldt | City of Rio Dell | High | HMGP, PDM, FMA | Long-term |

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

See the introduction to this volume for list of acronyms used here.

Table 7-14. Mitigation Action Priority

| Action # | # of Objectives Met | Benefits | Costs | Do Benefits Equal or Exceed Costs? | Is Project Grant-Eligible? | Can Project Be Funded Under Existing Programs/ Budgets? | Implementation Priority[a] | Grant Pursuit Priority[a] |
|---|---|---|---|---|---|---|---|---|
| RIO1 | 3 | High | High | Yes | Yes | No | Medium | High |
| RIO2 | 7 | Medium | Low | Yes | No | Yes | High | Low |
| RIO3 | 3 | Low | Low | Yes | No | Yes | High | Low |
| RIO4 | 6 | Medium | Low | Yes | No | Yes | High | Low |
| RIO5 | 7 | Medium | Low | Yes | No | Yes | High | Medium |
| RIO6 | 3 | High | Medium | Yes | Yes | No | Medium | High |
| RIO7 | 9 | High | High | Yes | Yes | No | High | High |
| RIO8 | 2 | Medium | Medium | Yes | Yes | No | High | High |
| RIO9 | 2 | High | Low | Yes | Yes | No | High | High |
| RIO10 | 9 | Low | Low | Yes | Unknown | No | High | High |
| RIO11 | 9 | High | High | Yes | Yes | No | High | High |

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

Table 7-15. Analysis of Mitigation Actions

| Hazard Type | Action Addressing Hazard, by Mitigation Type[a] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Prevention | Property Protection | Public Education and Awareness | Natural Resource Protection | Emergency Services | Structural Projects | Climate Resilient | Community Capacity Building |
| **High-Risk Hazards** | | | | | | | | |
| **Earthquake** | RIO2 | RIO6, 7, 8, 9, 11 | RIO2, 3, 10, 11 | | RIO2, 3, 6, 7, 9, 11 | RIO1, 6, 7, 8, 9, 11 | | RIO2, 3, 10, 11 |
| **Severe Storm** | RIO2, 4 | RIO1, 6, 7, 8, 11 | RIO2, 3, 10, 11 | RIO8 | RIO2, 3, 6, 7, 9, 11 | RIO1, 6, 7, 8, 9, 11 | RIO2, 3, 5, 10 | RIO2, 3, 10, 11 |
| **Flood** | RIO2, 4 | RIO1, 6, 7, 8, 11 | RIO2, 3, 10, 11 | RIO8 | RIO2, 3, 6, 7, 9, 11 | RIO1, 6, 7, 8, 9, 11 | RIO2, 3, 5, 10 | RIO2, 3, 10, 11 |
| **Medium-Risk Hazards** | | | | | | | | |
| **Drought** | RIO2 | RIO11 | RIO2, 3, 10, 11 | | RIO2, 3 | RIO1, 11 | RIO2, 3, 5, 10 | RIO2, 3, 10, 11 |
| **Landslide** | RIO2 | RIO1, 7, 8, 11 | RIO2, 3, 10, 11 | RIO8 | RIO2, 3, 6, 7, 11 | RIO1, 8, 11 | | RIO2, 3, 10, 11 |
| **Low-Risk Hazards** | | | | | | | | |
| **Wildland Fire** | RIO2 | RIO1, 6, 7, 9, 11 | RIO2, 3, 10, 11 | RIO10, 11 | RIO2, 3, 6, 7, 9, 11 | RIO1, 6, 7, 9, 11 | RIO2, 3, 5, 10 | RIO2, 3, 10, 11 |

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

# 7.11 REVIEW AND INCORPORATION OF INFORMATION FOR THIS ANNEX

## 7.11.1 Existing Reports, Plans, Regulatory Tools and Other Resources

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

- City of Rio Dell Municipal Code—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- City of Rio Dell Flood Damage Prevention Ordinance—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- City of Rio Dell General Plan - The Land Use Element, the Safety Element and the Open Space and Conservation Element.

The following outside resources and references were reviewed:

- Hazard Mitigation Plan Annex Development Toolkit—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- California Building Codes – Including but not limited to the California Residential Code and the California Building Code.
- County of Humboldt General Plan – Including the Safety Element, the Open Space Element and the Conservation Element. In addition, the County's Geographic Information System (GIS) was used to identify mapped hazards.

## 7.11.2 Staff and Local Stakeholder Involvement in Annex Development

Local planners met on March 20, 2019 to review the risk assessment for this community and to identify appropriate actions to mitigate the risks. Attendees are listed in Table 7-16.

Table 7-16. Participants in Hazard Mitigation Action Plan Development Workshop

| Name | Title, Organization |
|---|---|
| **Kyle Knopp** | City Manager, City of Rio Dell |
| **Kevin Caldwell** | Community Development Director, City of Rio Dell |
| **Randy Jensen** | Water and Roads Superintendent, City of Rio Dell |
| **Karen Dunham** | City Clerk, City of Rio Dell |