

COLTON  
*General Plan*



City of Colton  
General Plan

**2018 Safety  
Element**

Adopted (December 18, 2018)  
City Council Resolution No. (R-20-18)



# Table of Contents

**Executive Summary.....S-1**

**Introduction .....S-3**

- Purpose.....S-3
- Scope .....S-3
- Consistency with Other Elements .....S-3
  - Land Use.....S-4
  - Mobility.....S-4
  - Housing .....S-4
  - Open Space and Conservation.....S-4
- Consistency with Local Hazard Mitigation Plan.....S-4
- Regulatory Environment.....S-5
  - California Government Code .....S-5
  - National Flood Insurance Program .....S-5
  - Alquist-Priolo Earthquake Fault Zoning Act.....S-5
  - Seismic Hazards Mapping Act.....S-5

**Issues/Trends .....S-6**

- Seismic and Geologic Hazards .....S-6
  - Seismic Hazards .....S-6
  - Geologic Hazards .....S-7
- Flood Hazards .....S-13
  - Flooding .....S-13
- Fire Hazards .....S-17
  - Wildfires.....S-17
  - Urban Fires.....S-17
- Climate Adaptation & Resiliency .....S-22
  - Climate Change Considerations.....S-22
- Emergency Preparedness .....S-23
  - Emergency Operations Plan.....S-23
- Hazardous Materials and Wastes.....S-28
  - In the Home .....S-28
  - In the Community .....S-28
- Aircraft Hazards.....S-29
  - San Bernardino International Airport .....S-29
  - Program 1: Text.....S-32
  - Program 2: Text..... S-Error! Bookmark not defined.

## List of Figures

Figure S-1: Regional Fault Lines .....	S-9
Figure S-2: Faults and Alquist-Priolo Zones .....	S-10
Figure S-3: Liquefaction Hazard Zones.....	S-11
Figure S-4: Landslide Hazard Zones .....	S-12
Figure S-6: Dam Inundation Zone .....	S-16
Figure S-7: Historic Wildfires.....	S-20
Figure S-8: Wildfire Hazard Zone .....	S-21

# Executive Summary

## Conditions in Colton and Focus of the Safety Element

Colton has a number of factors that could detrimentally impact overall community safety. Numerous earthquake faults either bisect the City or pass through areas nearby. The City is located within identified fire hazard zones that increase the risk of fire for homes, businesses, and city operations. The Santa Ana River divides the City and has caused flooding in the past that has damaged bridges and roadways. To compound matters, the impact of a changing climate is likely to intensify many of these risks. Drier and hotter weather will likely increase fire risk and potentially impact water supplies. Wetter and more intense winter storms could inundate parts of Colton that have never before experienced flooding, or could exacerbate slope instability causing landslides within the City's hillsides.

The focus of this Safety Element centers upon identifying these safety risks and identifying policies, goals, and implementation programs to address and prepare for them. The Safety Element also strives to be in alignment with other general plan elements, as required by State law, including: (1) Housing, (2) Land Use, (3) Mobility, and (4) Open Space and Conservation. The City of Colton has also developed and adopted a Local Hazard Mitigation Plan (LHMP) which allows Colton to be eligible for federal grant funding to mitigate many of the natural hazards identified in the City.

## Purpose of the Safety Element

The Safety Element is one of seven mandatory elements of the General Plan. Its primary purpose is to identify potential risks within the City that could potentially endanger the public health, safety and welfare of the community. Periodic updates of the Safety Element ensure that goals and policies are relevant and responsive to community needs. California Government Code Section 65302 (g) 1 identifies the following list of which safety risks must, at a minimum, be examined in each Safety Element a city may adopt:

- seismically induced surface rupture
- ground shaking
- ground failure
- tsunami
- seiche
- dam failure

- slope instability leading to mudslides and landslides
- subsidence
- liquefaction
- other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code
- other geologic hazards known to the legislative body
- flooding
- wildland and urban fires
- climate change

Each Safety Element must also geographically identify the location and potential extent of each safety risk using maps, primarily those risks pertaining to seismicity, flooding, and fires. The Safety Element also functions as an intermediary between the General Plan and the Local Hazard Mitigation Plan (LHMP), which was recently incorporated into the update requirements under Government Code Section 65302 (g) 4.

## Moving Forward

The City of Colton reaffirms the importance of protecting the community from potential natural hazard risks. The City's location and history with hazards make it likely that Colton will experience risks from seismic, flooding, and fire events in the future. Colton can also expect that some of these risks will worsen as climate change accelerates. With this in mind, the Safety Element in conjunction with the LHMP, is the best avenue to understand and address natural hazard risks within the community.

# Introduction

## Purpose

The City of Colton takes pride in its responsibility to safeguard the well-being of its community members. Among other things, this includes adequately anticipating potential emergency situations caused by natural and man-made hazards, and planning response strategies in the event an emergency situation occurs. This element provides the necessary context to understand the hazards that threaten the community and outlines policies and practices that take tangible steps toward ensuring the community's continued prosperity.

## Scope

The Colton Safety Element addresses the relevant planning hazards mandated by California Government Code Section 65302(g). In accordance with state planning law, this element identifies and discusses the following hazards as they relate to the city:

- Seismic and geologic hazards such as surface rupture, seismic shaking, liquefaction, landslides and mudslides caused by slope instability, subsidence, and seismically induced dam failure
- Flood hazards
- Fire hazards in urban areas and State Responsibility Areas
- Climate adaptation and resiliency strategies

The element also identifies and addresses the following safety issues, as permitted by law:

- Disaster and emergency preparedness
- Hazardous materials and waste
- Aircraft hazards

## Consistency with Other Elements

Integrating safety considerations throughout the General Plan creates a consistent framework that prioritizes the well-being of the community. The Colton Safety Element is an essential component of the General Plan and works in tandem with other elements to guide these efforts. Coordination between the elements early on can be an advantage as development occurs within the city.

## Land Use

The Land Use Element is particularly responsive to natural hazards. Understanding the natural and man-made hazards that threaten a community can help reduce the possibility of disaster by avoiding the designation of sensitive land uses in hazard-prone areas.

## Mobility

Coordination between the Mobility Element and the Safety Element is an important component of comprehensive planning. The Mobility Element can influence public health and safety by addressing traffic congestion on roads designated as escape routes during emergencies and by redefining truck routes to avoid residential and other heavily populated areas.

## Housing

The Housing Element is more closely associated with land use but also incorporates many safety considerations into its goals and objectives. Building practices and codes addressed in the Housing Element contribute to community safety by improving the built environment's resiliency to natural and man-made hazards. In addition, the Housing Element can help identify vulnerable populations and can inform the Safety Element to ensure that proper protections are in place.

## Open Space and Conservation

The Open Space and Conservation Element focuses on open space protection and provision of ecosystem services for flood risk reduction and habitat preservation. Progressive open space management techniques can help mitigate against wildfire and landslide hazards, reducing the need for additional city services.

# Consistency with Local Hazard Mitigation Plan

The City of Colton updated the 2018 Local Hazard Mitigation Plan (LHMP) in conjunction with the update to the Safety Element. The LHMP serves three primary purposes: it provides a comprehensive analysis of the natural and man-made hazards that threaten the city, with a focus on mitigation; it keeps the City of Colton eligible to receive additional federal and state funding to assist with emergency response and recovery, as permitted by the federal Disaster Mitigation Act of 2000 and California Government Code Sections 8685.9 and 65302.6; and it complements the efforts undertaken by the Safety Element.

The Local Hazard Mitigation Plan complies with all requirements set forth under the federal Disaster Mitigation Act of 2000 and received approval from the Federal Emergency

Management Agency (FEMA) in 2018. Sections of the Safety Element are supplemented by the LHMP, as allowed by California Government Code Section 65302(g).

## Regulatory Environment

### California Government Code

California Government Code Section 65302(g) establishes the legislative framework for all safety elements in the state of California. This framework consolidates the requirements from relevant federal and state agencies, ensuring that all cities are compliant with the numerous statutory mandates. These mandates include:

- Protecting against significant risks related to earthquakes, tsunamis, seiches, dam failure, landslides, subsidence, flooding, and fires as applicable.
- Including maps of known seismic and other geologic hazards.
- Addressing evacuation routes, military installations, peak-load water supply requirements, and minimum road widths and clearances around structures as related to fire and geologic hazards, if applicable to the community.
- Identifying areas subject to flooding and wildfires.
- Avoiding locating critical facilities within areas of high risk.
- Assessing the community's vulnerability to climate change.
- Including adaptation and resilience goals, policies, objectives, and implementation measures.

### National Flood Insurance Program

The National Flood Insurance Program (NFIP) was created in 1968 to help communities adopt more effective floodplain management programs and regulations. The Federal Emergency Management Agency is responsible for implementing the NFIP and approves the floodplain management plans for participating cities and counties. The City of Colton participates in the NFIP and uses Chapter 15.22 of the Colton Municipal Code to administer flood management regulations throughout the city.

### Alquist-Priolo Earthquake Fault Zoning Act

Adopted in 1972, the Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code, Chapter 7.5, Section 2621-2699.6) was intended to reduce the risks associated with surface faults and requires that the designated State Geologist identify and map "Earthquake Fault Zones" around known active faults.

### Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (California Public Resources Code, Chapter 7.8, Section 2690-2699.6) created a statewide seismic hazard mapping and technical advisory

program in 1990 to help cities and counties more effectively address the effects of geologic and seismic hazards caused by earthquakes.

# Issues/Trends

There are a number of issues of concern in Colton that could cause harm to community members and result in property damage. This section summarizes these issues and contains policies intended to improve community resilience to these items.

## Seismic and Geologic Hazards

Seismic and geologic hazards are traditionally addressed together because they both involve the movement of the earth's surface. Although some geologic events (landslide, subsidence, erosion, etc...) can and do happen on their own, the primary catalyst for their occurrence is often a seismic event, commonly referred to as an earthquake. This section identifies five common seismic and geologic hazards that threaten the City of Colton and establishes policies and procedures meant to protect the community when an event occurs.

### Seismic Hazards

Southern California is no stranger to earthquakes, and their frequent occurrence is widely accepted as a fact of life. Colton is prone to seismic hazards, due to its location in a seismically active region (**Figure S-1**). These hazards can be divided into three categories, each with unique characteristics and implications for planning.

#### Surface Rupture

The earth is covered in tectonic plates, which are large sections of the earth's crust that are constantly shifting and moving closer together, further apart, or past one another. The movement of two plates past one another frequently causes friction resulting in plates that "stick." When this occurs, the same forces that push the plates past each other are now concentrated in certain areas. In time, friction can no longer hold the plates together, and the plates suddenly shift, releasing the massive build-up of energy (i.e., earthquake). This rapid movement and release of energy can cause the earth to fracture and displace the land around it, resulting in the creation of an earthquake fault. Some faults are buried beneath the surface, and others are at the surface of the earth. Surface rupture of a fault is especially dangerous, because if structures are built on top of the fault or infrastructure crosses the fault, these facilities could be damaged by fault movement. If surface rupture occurs, the movement could break pipelines and damage roads and bridges, rendering them useless after the event. Areas of known surface rupture hazard in California are identified in Alquist-Priolo Special Study Zones and can be seen in **Figure S-2**. Fortunately, many seismic events do not cause surface ruptures and instead disperse the energy exclusively in the form of seismic shaking.

## Seismic Shaking

Seismic shaking is the recognizable movement caused by the energy released from an earthquake. The same mechanism that creates surface rupture is also responsible for seismic shaking and can produce an equally devastating effect. Buildings and other structures may be destroyed because of violent shaking. Infrastructure such as roads, pipelines, and power lines are also susceptible to damage and pose additional safety concerns. Unlike surface rupture, the consequences of seismic shaking are not restricted to the area immediately surrounding the fault. Energy resonating through the ground has the potential to travel hundreds of miles and cause damage in many locations simultaneously. The closer you are to the earthquake's source (epicenter), the stronger the shaking will be. Seismic shaking is of particular concern for the City of Colton because numerous active faults—such as the San Jacinto fault zone, Crafton Hills fault zone, and San Andreas fault zone—run through the city (San Jacinto fault) and the surrounding San Bernardino region (Crafton Hills and San Andreas faults).

## Liquefaction

Liquefaction is a phenomenon that occurs when intense vibrations from an earthquake cause saturated soil to lose stability and act more like a liquid than a solid. This poses significant problems for buildings and other structures in areas where liquefaction can occur, as the ground may give way under the weight of the structure and its foundation. In addition, underground structures are also vulnerable to liquefaction. **Figure S-3** depicts areas prone to liquefaction along the north and south banks of the Santa Ana River as well as in the Reche Canyon areas.

## Geologic Hazards

Although geologic hazards are often triggered by seismic events, such as earthquakes, this is not always the case. Therefore, understanding and preparing for these hazards as stand-alone events is equally important.

## Landslide

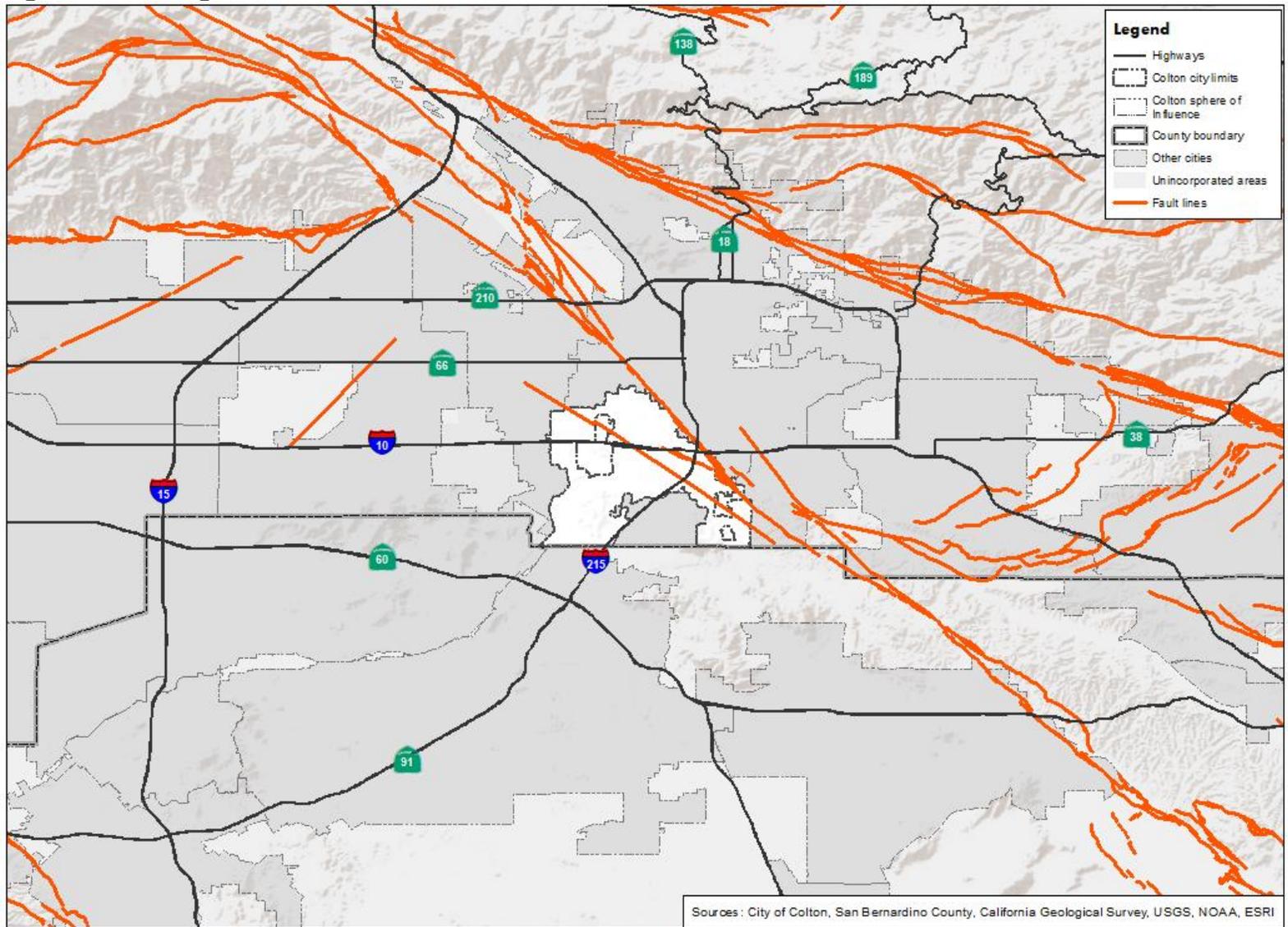
A landslide is the movement of earth materials down slopes and areas of steep topography. Although they are often caused by earthquakes, landslides can occur when any sloped surface is no longer able to support the material contained within or sitting above it. This instability can be caused by the sheer weight of the loose material or can be aided by other events such as heavy rain. When rain causes a slope to fail, the movement of earth materials is typically referred to as a mudslide. Both landslides and mudslides move with great force and pose significant danger to buildings and other structures. In some circumstances, these events may cause bodily harm if bystanders are unable to move out of its path in time. Landslides present some risk to the City of Colton, specifically in Reche Canyon, La Loma Hills, and areas around the base of Slover Mountain. Anticipating the risk of landslides in the areas identified by **Figure S-4** will be important for protecting the community members who reside there.

## Subsidence

Much like landslides, subsidence occurs when the ground is no longer able to support the material above it. Subsidence is caused by gradual compaction of loose, water-saturated sediments or the rapid collapse into caves. Most subsidence in California is generally a more drawn-out process that takes place over a longer period. This is particularly hazardous for buildings and municipal infrastructure, as shifting may cause structures to crack or may compromise their integrity. Colton’s location in the Upper Santa Ana Valley groundwater basin makes it susceptible to subsidence. Between 1933 and 1960, North Colton experienced approximately 2.5 inches of subsidence while South Colton experienced approximately one inch over the same period. Although recent reports indicate that subsidence has slowed substantially, it still poses a risk to the city.

<b>GOAL S-1</b>	<b>Improve the community’s resilience to seismic and geologic hazards by ensuring the integrity of the built environment.</b>
<b>Policy S-1.1</b>	Maintain up-to-date records and information on seismic and geologic event activity within the city and surrounding areas.
<b>Policy S-1.2</b>	Identify if existing and new structures are located within Earthquake Fault Hazard Zones and in areas at risk from liquefaction, landslides, and subsidence, and take corrective action to minimize the risk of injury or damage from seismic or geologic events.
<b>Policy S-1.3</b>	Encourage the retrofitting of buildings and other structures to minimize the damage caused by earthquakes and other seismic events.
<b>Policy S-1.4</b>	Require new development to observe 100-foot setbacks from all faults, active or inactive.
<b>Policy S-1.5</b>	Require new development to observe 30-foot setbacks from all hillsides and other sloped surfaces that show medium to high landslide susceptibility.
<b>Policy S-1.6</b>	Monitor signs of subsidence in conjunction with rates of groundwater extraction from the Upper Santa Ana Valley basin.
<b>Policy S-1.7</b>	Restrict development in areas prone to liquefaction or subsidence unless an independent geotechnical investigation determines the site is safe for development.

Figure S-1: Regional Fault Lines

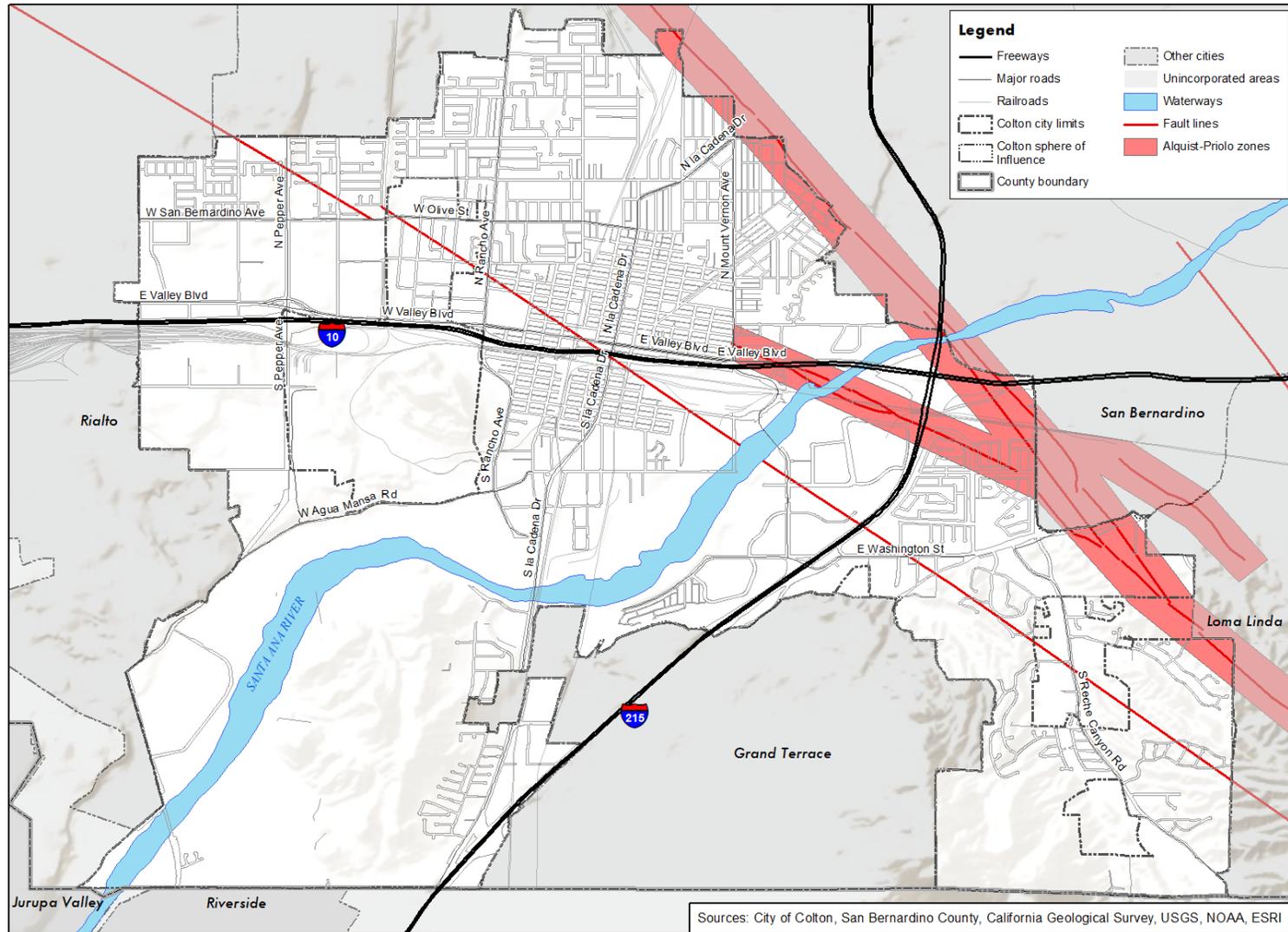


## City of Colton - Regional Fault Lines

0 2.5 5 Miles



Figure S-2: Faults and Alquist-Priolo Zones

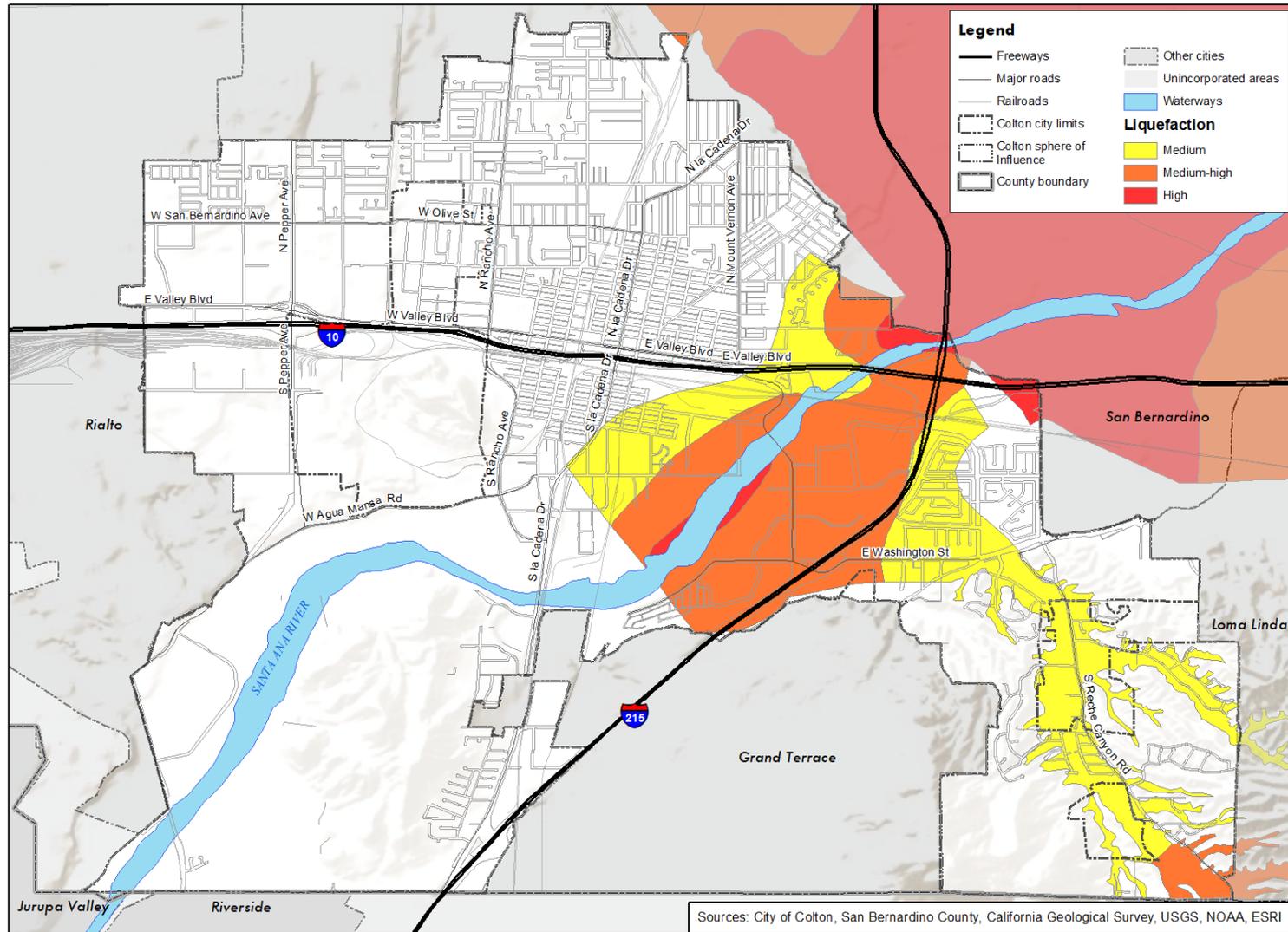


City of Colton - Faults and Alquist-Priolo Zones

0 0.5 1 Miles



Figure S-3: Liquefaction Hazard Zones



# City of Colton - Liquefaction Hazard Zones

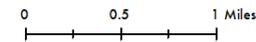
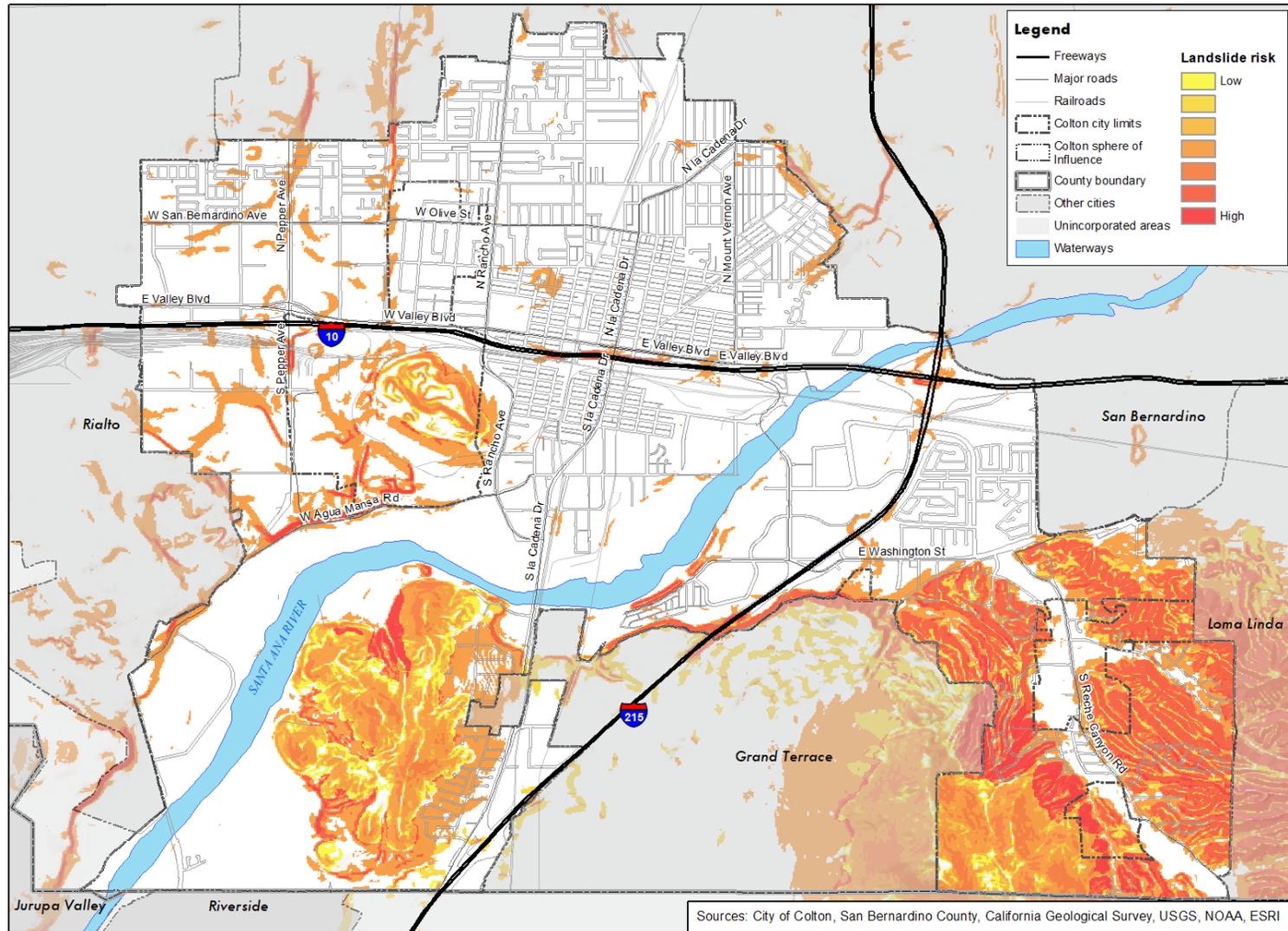


Figure S-4: Landslide Hazard Zones



# City of Colton - Landslide Hazard Zones

0 0.5 1 Miles



# Flood Hazards

Like many Southern California cities, Colton is located in a semi-arid environment. While this means that water is not typically abundant throughout the year, flood hazards still pose a threat. The Santa Ana River runs through Colton and is both the primary flood risk and the primary means for flood control in the city. The river can divert large volumes of water away from populated areas, but a catastrophic event such as a large rain event or upstream dam failure may cause the river to overflow, impacting surrounding properties. Additionally, some sections along the river are not protected by certified levees, increasing the risk that an overflow could affect properties adjacent to the river. Understanding the most common events will help prepare the city to address the risks posed by flood hazards.

## Flooding

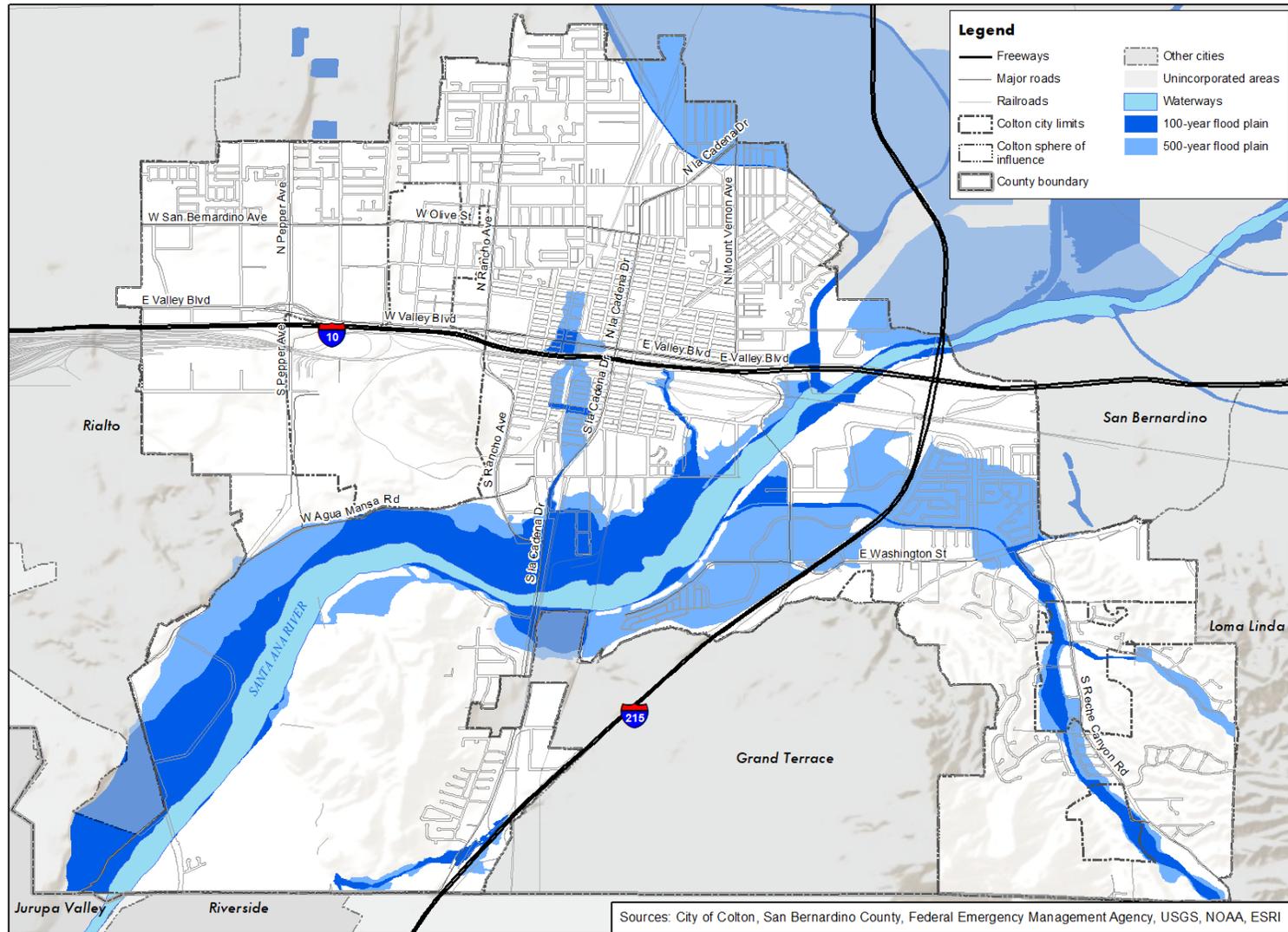
Flooding is caused by the accumulation of water on the ground surface. This typically occurs after heavy rainfall but can also result from the failure of water delivery infrastructure such as pipes and storage containers. Worsening drought conditions caused by climate change may exacerbate the effects of flooding, as surfaces that normally absorb water can quickly dry out and become less permeable. Flooding presents multiple dangers to people and structures alike. Standing water may be deep enough to cause drowning, and even shallow water can easily damage buildings and property. Fast-moving water is more hazardous, as it may sweep people downstream or cause extensive damage to structures. The risk of rain-induced flooding in Colton is largely isolated to the areas immediately adjacent to the Santa Ana River and Reche Canyon (**Figure S-5**), but a more substantial rain event could threaten a larger portion of the city.

## Dam Failure

Dam failure can be influenced by several factors. Aging infrastructure, overcapacity, and seismic and geologic hazards all have the potential to compromise a dam's integrity, potentially leading to failure. When a dam does fail, the water retained by the structure rushes out and can flood a large geographic area. Dam failure poses a flooding risk to the City of Colton due to its proximity to the Seven Oaks Dam and reservoir. Located approximately 12-miles upstream along the Santa Ana River, the Seven Oaks Dam and reservoir can hold more than 47-billion gallons of water when full. The dam's main function is to retain water for flood control purposes, meaning that most of the time, there is little or no water held behind Seven Oaks Dam, reducing the potential for flooding associated with dam failure. However, in the event of failure when there is a large amount of water stored in the reservoir, substantial flooding could occur in Colton on both sides of the Santa Ana River, affecting areas displayed in **Figure S-6**.

<b>GOAL S-2</b>	<b>Anticipate the risks and mitigate the effects that flood hazards pose to the community.</b>
<b>Policy S-2.1</b>	Continuously monitor weather conditions, especially during periods of severe drought followed by heavy precipitation.
<b>Policy S-2.2</b>	Identify if existing and new structures are located within 100- and 500-year floodplains and take corrective action to minimize the risk of injury or damage from flooding events.
<b>Policy S-2.3</b>	Identify and pursue funding opportunities to improve infrastructure located within the 500-year floodplain.
<b>Policy S-2.4</b>	Restrict new development in high-flood risk areas, such as 100- and 500-year floodplains and floodways, unless addressed through adequate flood proofing and mitigation.
<b>Policy S-2.5</b>	Design and maintain storm drainage infrastructure to accommodate, at minimum, 100-year flood events.
<b>Policy S-2.6</b>	Coordinate dam failure evacuation plans with the San Bernardino County Flood Control District and San Bernardino County Office of Emergency Services.
<b>Policy S-2.7</b>	Promote low impact development techniques and strategies as part of the development process, to reduce flooding throughout the city.
<b>Policy S-2.8</b>	Increase the use of flood insurance for properties within the 100- and 500-year floodplains.
<b>Policy S-2.9</b>	Periodically update the Floodplain Management Regulations adopted in the Colton Municipal Code.

Figure S-5: Flood Hazard Zones

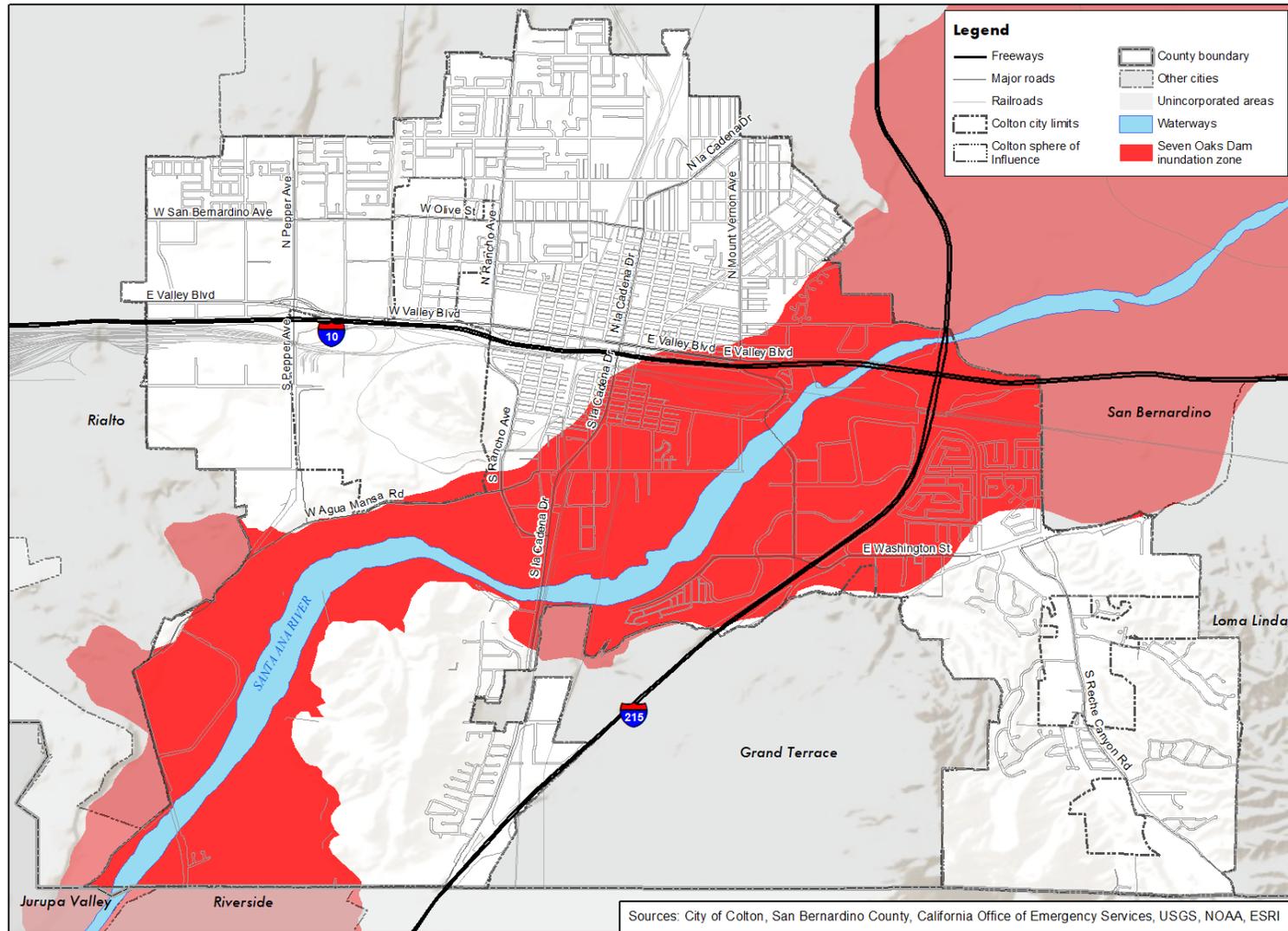


## City of Colton - Flood Hazard Zones

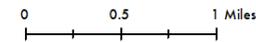
0 0.5 1 Miles



Figure S-6: Dam Inundation Zone



### City of Colton - Dam Inundation Zone



# Fire Hazards

The City of Colton, like all cities, is at risk of suffering substantial damage caused by a fire. Although Colton is primarily urban, the southeastern extent of the city includes a portion of Reche Canyon, which is located within the Box Springs Mountains. During the summer of 1981, a wildfire swept through the Box Springs Mountains and burned over 4,000 acres. The fire did not cross into the city but did affect peripheral areas in Reche Canyon. Since then, four smaller wildfires have occurred around Colton, all of which have affected parts of Reche Canyon. The city has not experienced a large urban fire, but the presence of two distinct environments, urban and wild, presents unique challenges that must be accounted for. Planning for both types of fires is essential to protecting the community.

## Wildfires

The most common type of natural hazard in California, wildfires can burn large areas of undeveloped or natural land in a short amount of time. They often begin as smaller fires caused by lightning strikes, downed power lines, or unattended campfires, but may rapidly expand in size if conditions are dry and/or windy. The recent trend toward more prolonged periods of drought increases the likelihood of wildfire occurring. Normally, wildfires pose minimal threat to people and buildings in urban areas, but increasing human encroachment into natural areas increases the likelihood that bodily harm or structural damage will occur. This encroachment occurs in areas called the wildland-urban interface (WUI), which is considered any area within the high and very high fire hazard severity zone, as defined by Cal FIRE. Development along the southern border of Colton exists in this interface area and is at risk of being affected by wildfires. Should a wildfire occur in the zones illustrated by **Figure S-8**, the fire may spread into the city and put more people and structures at risk.

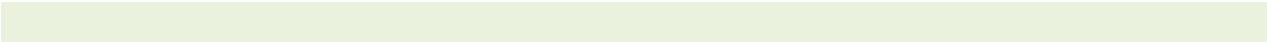
## Vegetation Management

A fire protection plan (FPP) approved by the fire code official, is required for all new development within the WUI area. FPPs are required to include mitigation strategies that take into consideration location, topography, geology, flammable vegetation, sensitive habitats/species, and climate of the proposed site. FPPs must address water supply, access, building ignition and fire resistance, fire protection systems and equipment, defensible space, vegetation management, and long term maintenance. All required FPPS must be consistent with the requirements of the California Building Code Chapter 7A, International Wildland-Urban Interface Code, and the City of Colton Municipal Code.

## Urban Fires

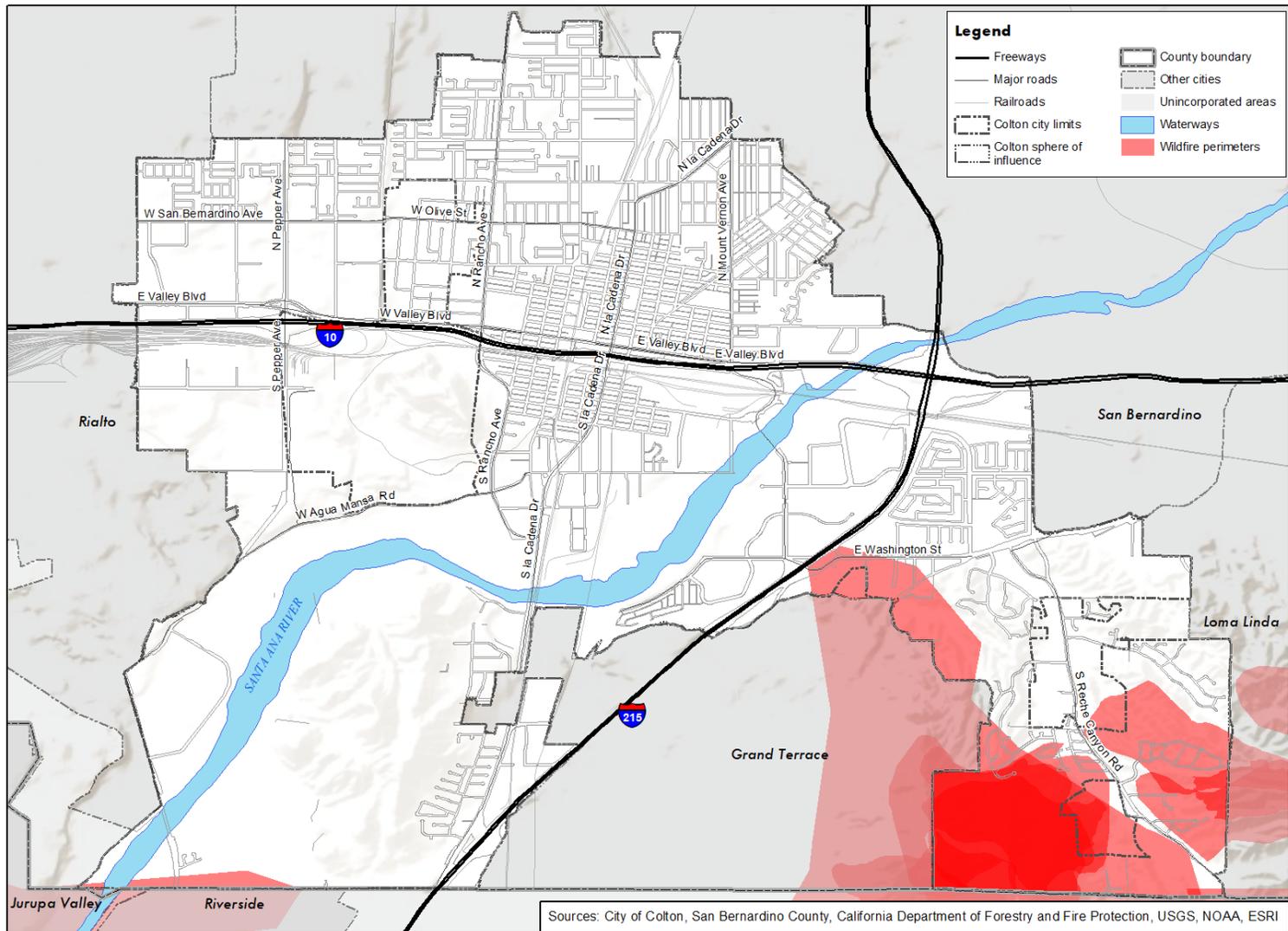
The possibility of an urban fire confronts every city. Many urban fires begin as isolated incidents caused by a faulty electrical appliance, absentminded cooking mishap, or industrial malfunction, but can spread to other buildings if conditions permit. Many factors contribute to the severity and extent of an urban fire, but modern building codes and

practices have helped reduce their effects. Despite these improvements, it is important to acknowledge the risks associated with fires in urban areas. Any fire, no matter its size, can cause people severe harm and can damage buildings and other structures.



<b>GOAL S-3</b>	<b>Safeguard the community from the threat of urban and wildfire hazards.</b>
<b>Policy S-3.1</b>	Maintain up-to-date records and information on conditions in undeveloped and natural areas, especially areas considered part of the wildland-urban interface.
<b>Policy S-3.2</b>	Promote comprehensive structural modification and fuel modification guidelines for new and existing (non-conforming) buildings and structures located within the wildland-urban interface (high and very high fire hazard severity zones), in compliance with local and State Wildland-Urban Interface code requirements of the California Building Code, and any future updates.
<b>Policy S-3.3</b>	Restrict new development in wildland-urban interface areas (high and very high fire hazard severity zones), unless designed using the most up to date wildfire mitigation techniques and code requirements, in compliance with local and State Wildland-Urban Interface code requirements.
<b>Policy S-3.4</b>	Coordinate wildfire response plans (i.e. Cal Fire Unit Fire Plan) with Local, State, Federal, and Tribal entities, as appropriate.
<b>Policy S-3.5</b>	Require all new development to comply with fire safety standards identified in Title 15 of the Colton Municipal Code.
<b>Policy S-3.6</b>	Integrate key metrics and recommendations from the Colton and Loma Linda Fire Departments Strategic Plan to ensure adequate service is provided to residents and businesses.
<b>Policy S-3.7</b>	Locate new critical facilities outside of wildfire hazard severity zones, unless no alternate location is available or feasible.
<b>Policy S-3.8</b>	Require all new development and major redevelopment/reconstruction within the WUI (high and very high wildfire hazard severity zones) to prepare a Fire Protection Plan.
<b>Policy S-3.9</b>	Consider the relationship between existing and future development on the current and future demands for Fire and Emergency Services facilities and personnel.

Figure S-7: Historic Wildfires

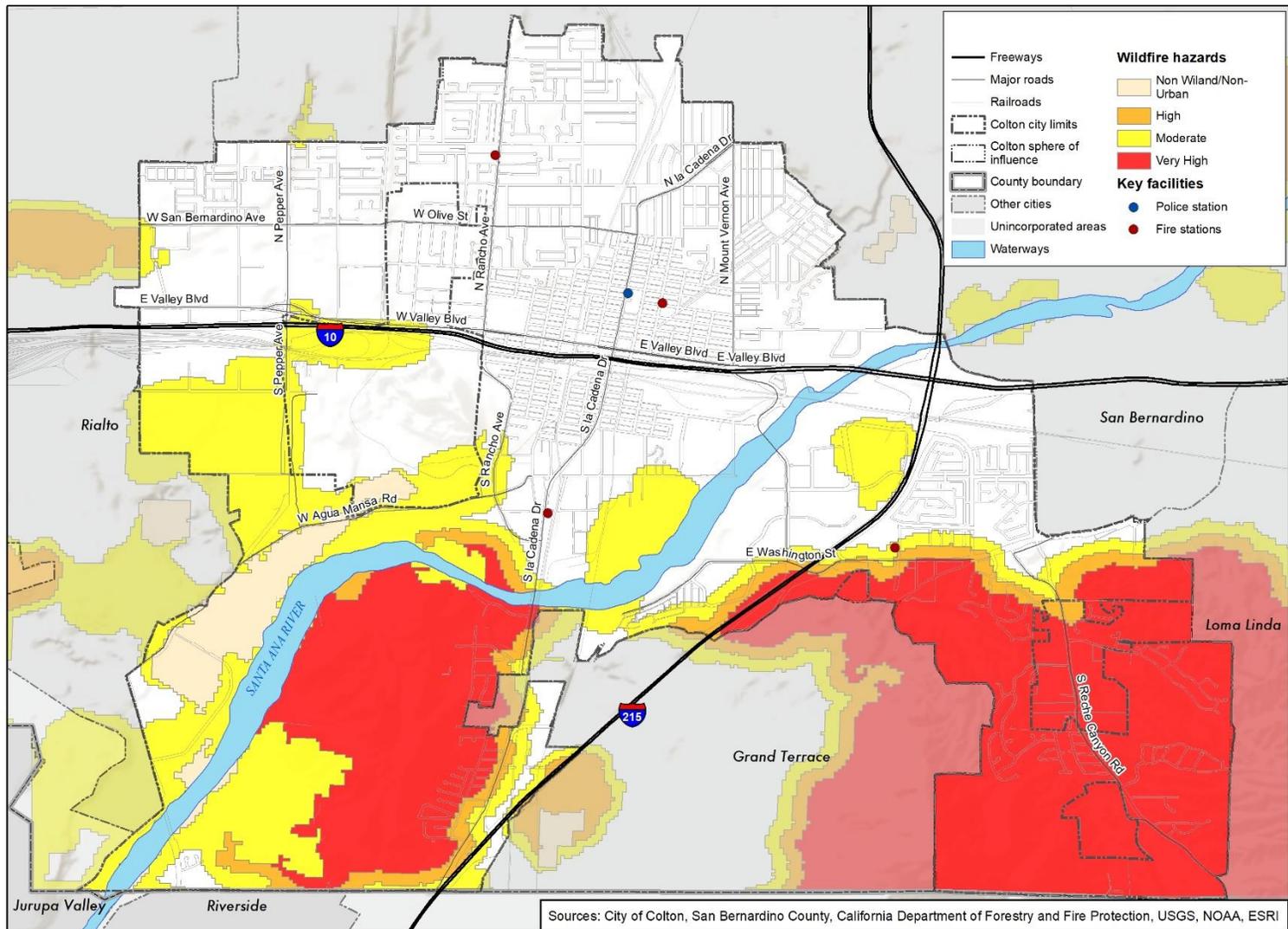


## City of Colton - Historic Wildfires

0 0.5 1 Miles



Figure S-8: Wildfire Hazard Zone



## City of Colton - Wildfire Hazard Zones

0 0.5 1 Miles



# Climate Adaptation & Resiliency

In 2015, California Governor Jerry Brown approved Senate Bill (SB) 379, requiring cities to address climate adaptation and resiliency strategies in their general plan safety element. To help cities comply with the new mandate, SB 379 also allows cities to incorporate their Local Hazard Mitigation Plan, which addresses climate adaptation and resiliency in greater detail, into the safety element. Therefore, this section addresses the impacts of climate change as they pertain to the previously discussed hazards.

## Climate Change Considerations

Although climate change is not itself a hazard, variations in environmental conditions can have an impact on some of the natural hazards affecting Colton. For example, increasing temperatures act as a hazard multiplier. Drought-like conditions are common in Colton and can result in dry ground and vegetation. Exceedingly dry conditions in the natural areas south of the city pose dual threats: dry hillsides will not be able to absorb heavy rainfall, increasing the risk of mudslides, and dry vegetation will provide ample fuel for wildfires. These droughts are projected to intensify as a result of climate change, opening the door for more dramatic rain and fire events. Despite the lack of localized moisture, regional precipitation patterns will continue to shift toward more intense downpours. Although less frequent, these heavy rainfall events can test a city’s storm drain system and may overwhelm current infrastructure. Extreme heat also poses a problem for infrastructure, as increased electricity demand for cooling can overload the grid and cause power outages. Lack of adequate cooling can quickly lead to heat-related illness if power is not restored for a prolonged period of time. For additional information, please refer to the Colton Local Hazard Mitigation Plan.

<b>GOAL S-4</b>	<b>Identify the most probable effects of climate change on local hazards and effectively mitigate their risks.</b>
<b>Policy S-4.1</b>	Coordinate with regional, state, and federal agencies to monitor the indicators and impacts of climate change.
<b>Policy S-4.2</b>	Periodically review and update the Local Hazard Mitigation Plan to incorporate new information related to climate change, as necessary.
<b>Policy S-4.3</b>	Monitor flooding conditions that occur outside of the 100-year floodplain to identify new areas of risk as future conditions change.
<b>Policy S-4.4</b>	Increase cooling center capacity and ensure electricity supply redundancy during extreme heat events.
<b>Policy S-4.5</b>	Monitor wildfire mapping and hazard conditions for changing future conditions as a result of climate change.

<b>Policy S-4.6</b>	Improve city staff understanding of how climate change may affect disproportionately vulnerable community members, including senior citizens, low-income persons, and persons with disabilities.
<b>Policy S-4.7</b>	Develop incentive programs to encourage landlords and low-income persons to retrofit their homes against climate-related hazards such as extreme heat and flooding.

## Emergency Preparedness

The ability to anticipate and evaluate potential risks posed by natural and man-made hazards is paramount to a city's longevity. Although this element specifically addresses natural and man-made hazards, emergency preparedness involves many more considerations beyond identifying the hazards themselves. The Emergency Preparedness section consolidates and briefly describes the City of Colton's hazard prevention and response strategies. Figure S-11 identifies the typical evacuation routes within the City of Colton used for emergency situations.

## Emergency Operations Plan

The Emergency Operations Plan (EOP) is the document primarily responsible for informing the emergency management strategies for the City of Colton. These strategies are typically organized under four categories: mitigation, preparedness, response, and recovery.

### Mitigation

The LHMP identifies and assesses the natural and man-made hazards that threaten the City and recommends proactive policy and procedural actions that reduce the risks associated with these hazards. This preemptive planning is intended to decrease the probability of emergency situations and minimize the effects should one occur. Examples of hazard prevention can be found in many city policies, but they are most prominently displayed in the numerous codes regulating construction and development.

### Preparedness

Emergency preparedness focuses on activities that prepare a community for disaster. These activities typically involve preparation of plans addressing life safety, emergency response, and evacuation; purchase and storage of emergency supplies; and training and exercises to practice response activities.

### Response

Emergency response activities typically focus on actions necessary to save lives and prevent further property damage during an emergency/disaster. Many of these activities are conducted in tandem with the standard emergency response procedures in place for the Colton Police and Fire Departments. To guide response activities the City will rely on implementation of the Emergency Operations Plan and work closely with volunteer organizations such as the Community Emergency Response Team (CERT) Emergency

Communications Services (ECS), which help orchestrate internal and external communications, logistics, and assistance during large scale emergencies.

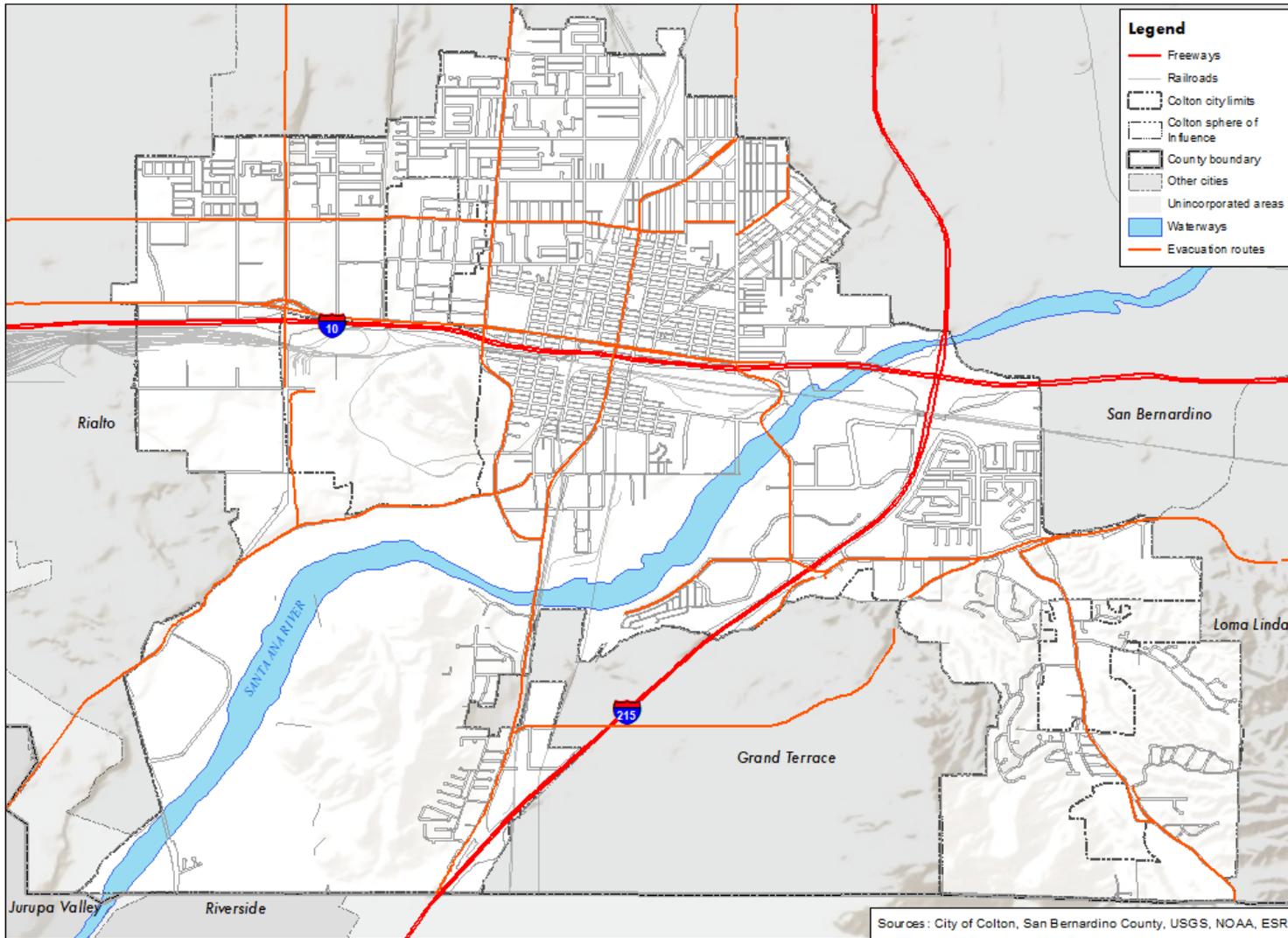
**Recovery**

Recovery activities typically occur after an emergency/disaster event. These activities focus on reestablishing services to impacted areas, repair and/or reconstruction of damaged buildings and infrastructure, and assistance to residents and businesses with permitting and approvals of building plans. Depending on the scale and type of incident, recovery could occur in specific locations of the community and/or require specialized expertise to address the issues created.

<b>GOAL S-5</b>	<b>Promote the continued well-being of all Colton community members through comprehensive emergency management.</b>
<b>Policy S-5.1</b>	Identify and maintain existing critical facilities to ensure proper functionality after an emergency.
<b>Policy S-5.2</b>	Coordinate with Colton Water and Power Departments and other local utility companies to provide or restore essential services during and after emergency situations.
<b>Policy S-5.3</b>	Periodically review and update the Emergency Operations Plan to address new or emerging issues within the community, as necessary.
<b>Policy S-5.4</b>	Establish and maintain an early warning communication system to allow for enhanced notification of emergency situations within the community.
<b>Policy S-5.5</b>	Ensure that redevelopment activities undertaken after a major disaster event, reconstruct buildings, infrastructure improvements, and other community assets to the most up to date Local, State, and Federal codes.

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Figure S-11: Evacuation Routes



## City of Colton - Evacuation Routes

0 0.5 1 Miles



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# Hazardous Materials and Wastes

Natural hazards are not the only threat to a community's safety. Human-caused dangers, such as various hazardous materials and wastes, are often found throughout a community and can pose significant risks. Generally speaking, hazardous materials are identified as being toxic, flammable, explosive, corrosive, infectious, radioactive, or a combination of these characteristics. Hazardous wastes are categorized similarly but are identified separately from materials because they no longer serve a meaningful use.

## In the Home

Exposure to hazardous materials is not uncommon, as many household cleaning products contain chemicals that have the potential to harm both humans and the environment. Through proper use, however, the health risks associated with these hazardous materials can largely be avoided. The proper storage of household cleaning products and other common hazardous materials, such as those used in automotive and home repair, is also an important component of responsible management. Following the manufacturer's instructions on packaging and keeping products out of the reach of children are two simple steps that can help reduce the risk of exposure.

## In the Community

Although common household chemicals pose little threat to the community at large, hazardous materials and wastes used by business and industry present a greater risk. Mechanical dealerships, repair shops, gasoline and diesel fuel stations, and dry cleaners are some examples of businesses that regularly use and store chemicals or other hazardous materials. Pipelines within the City also transport chemicals through the city that could pose a risk, if failure occurs. An existing jet fuel pipeline transects the City, which is owned by a private entity. These operations also tend to involve the transportation of raw materials and their byproducts either by pipeline, rail, or truck. The central location of two major interstate freeways and the Union Pacific rail line increases the risk of transportation hazardous material exposure because of the high volume of goods moving along these routes. The State of California identifies the Union Pacific rail line through the city as a high hazard rail line due to the amount of freight traveling along the corridor, some of which contains hazardous materials. Accidents releasing hazardous materials or wastes may occur on the freeways or rail lines but can also happen on local roads that lead to these regional connectors. Regulation of the use, storage, and transportation of hazardous materials and wastes rests on state and federal agencies; however, cities play a large role in minimizing the risks and impacts of exposure through careful planning and preparation. The Citywide 2016 Truck Route Master Plan incorporates these safety considerations by identifying roadways that serve industrial business activity. The truck routes are designed to avoid sensitive land uses, such as residential neighborhoods, while maintaining access to and from the industrial sites.

<b>GOAL S-6</b>	<b>Minimize the community's risk of exposure to hazardous materials and wastes.</b>
<b>Policy S-6.1</b>	Monitor facilities known to use, store, transport, process, or dispose of hazardous materials or wastes.
<b>Policy S-6.2</b>	Prohibit the construction and development of new facilities known to use, store, transport, process, or dispose of hazardous materials or wastes near residential areas and public-serving facilities.
<b>Policy S-6.3</b>	Coordinate hazardous materials and wastes management and disposal programs with relevant local, regional, state, and federal agencies.
<b>Policy S-6.4</b>	Promote public awareness of common household hazardous materials and wastes.
<b>Policy S-6.5</b>	Require due diligence studies for new development in sensitive areas or areas of heavy industrial use, to better understand and define potential contamination issues within these areas.

## Aircraft Hazards

Airplane and helicopter emergencies are few and far between, but their occurrence can have a substantial impact on the urban environment. Crash landings in populated areas such as Colton can harm bystanders and structures alike. Aircraft-related emergencies are most often caused by mechanical or electrical failure, but do not always result in a crash. On occasion, a plane or helicopter may be forced to make an emergency landing on a stretch of roadway or unoccupied piece of land. Colton's location near San Bernardino International Airport and Ontario International Airport means that preparing for both scenarios is important to preserving the well-being of community members and the built environment.

### San Bernardino International Airport

Located just east of the City of Colton is the San Bernardino International Airport (SBIA). Primarily serving as a cargo and logistics hub, SBIA recently expanded its services and infrastructure to include passenger and international travel capabilities. This expansion will result in an increase of arrivals and departures as more airlines and carriers add SBIA to their list of destinations. Colton's location directly in the flight path of approaching aircraft increases the risk of an emergency occurring, as 58 percent of airplane emergencies happen during final descent and landing.

<b>GOAL S-7</b>	<b>Improve the community's ability to effectively respond to aircraft hazards.</b>
<b>Policy S-7.1</b>	Coordinate emergency scenario response with San Bernardino International Airport Authority.
<b>Policy S-7.2</b>	Incorporate aircraft emergency response procedures into the Colton Emergency Operations Plan.
<b>Policy S-7.3</b>	Develop an early-warning system for aircraft emergency scenarios.
<b>Policy S-7.4</b>	Maintain communication with appropriate authorities as airport services grow and expand.

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# Implementation Programs (Under Separate Cover)

## Program 1: Preparation of a Community Wildfire Protection Plan

Develop and adopt a Community Wildfire Protection Plan (CWPP) to present a unified, community-based approach to wildfire risks.

**Objective:**

- Mapping and sourcing of all fire suppression infrastructure (i.e. fire hydrants, pipes, sprinkler systems in critical facilities, water pumps, etc.)
- Continuous surveillance of potential wildland fuels and fuel modification activities
- Designation of staff or volunteers to remove dead vegetation from roadways, in fire prone areas, and construction of fire breaks
- Public awareness of defensible space in landscape design for homes and businesses
- Development of a standardized plan of action for evacuating residents in fire hazard zones
- Creation of a fuel modification program that periodically conducts fuel reduction activities in natural areas and areas with to wildfire conditions
- Provide adequate development standards that allow for effective response from first responder agencies.

**Timeframe:** 2019

**Responsible Agency:** Colton Fire Department, Development Services Department, City Manager

**Funding Sources:** General fund, Pre-Disaster Mitigation Grants (PDM), Hazard Mitigation Grant Program (HMGP), Fire Mitigation Assistance Grants (FMAG)

## Program 2: Impaired Access Analysis and Circulation Requirements

Re-examine current roadway conditions and standards to ensure adequate ingress/egress for evacuation purposes

**Objective:**

- Identify roadways within the City that currently do not meet current City requirements
- Identify neighborhoods within the City that have limited access points or are vulnerable to isolation if access roads are impacted
- Identify vulnerable populations within Colton that may require transportation services or have limited mobility
- Identify available community services (ParaTransit, religious institutions, senior care) to support vulnerable populations
- Distribute vulnerable population information with City Departments (Fire, Police, Community Services, etc....) that may support community needs during a hazard event
- Integrate deficient roadways and services into Capital Improvement projects and programs during annual budgeting.

**Timeframe:** 2020

**Responsible Agency:** Colton Fire Department, Colton Police Department, Development Services Department, Public Works Department, City Manager

**Funding Sources:** General Fund, Pre-Disaster Mitigation Grant (PDM), Hazard Mitigation Grant Program (HMGP)

## Program 3: Prepare a Hazard Recovery Plan

To allow Colton to effectively recover from a disaster event, a Post-Disaster Recovery Plan should be prepared to expedite recovery activities and restore community functions as quickly as possible.

**Objectives:**

- Identify protocols and policies for re-development of properties damaged by a hazard event
- Identify specific actions necessary based on hazard impact type
- Integrate specific policies and actions necessary to assist vulnerable populations within the community rebuild after an event
- Establish streamlining provisions and code modifications deemed necessary and/or desirable to ensure expedited recovery.
- Integrate the Colton Hazard Recovery Plan into the Emergency Operations Plan and Local Hazard Mitigation Plan

- Identify service providers to assist with mental health counseling and financial consulting for those affected by a hazard event

**Timeframe:** 2020

**Responsible Agency:** Colton Fire Department, Colton Police Department, Development Services Department, Public Works Department, City Manager

**Funding Sources:** General Fund, Hazard Mitigation Grants (PDM, HMGP)

## Program 4: Interjurisdictional Cooperation

Continue coordination with surrounding Cities and San Bernardino County on a unified regional response to risks that affect Colton and surrounding jurisdictions

**Objectives:**

- Continue enhancing interjurisdictional communication systems between first responder entities (Fire and Police) of surrounding communities
- Continue sharing data and information on developing issues or potential risks within Colton
- Participate in Operational Area trainings and share response procedures with other first responder entities
- Collaborate with other jurisdictions to consolidate grant applications and share funding, creating economies of scale benefits.
- Coordinate with other planning departments, first responder entities, and emergency services providers on standard operating procedures and protocols to enhance regional benefits.

**Timeframe:** 2018 - ongoing

**Responsible Agency:** Colton Police Department, Colton Fire Department, Development Services Department

**Funding Sources:** General Fund, Hazard Mitigation Grants (PDM, HMGP)

## Program 5: Integrate Safety Element Issues into the Application/ Design Review Processes

Expand feedback to project applicants during development/ design review processes to ensure development activities are integrating best practices and hazard issues are identified early on during the design process.

**Objective:**

- Development hazard summary information to attach to both Application Inquiry and Pre-Application Review forms that identify hazard areas and concerns that should be considered when development is proposed.

- Require posting of up to date hazard maps within City offices where development applications are submitted. Integrate up to date hazards mapping into the City's GIS infrastructure to ensure proposed development projects are identified in relation to mapped hazard areas.
- Ensure that project applicants are well informed of the potential hazards of a potential site and the requirements to address those hazards effectively to reduce the need for additional mitigation during CEQA analysis.
- Institute mandatory landscape plan review with focus on permeable surfaces for runoff and low-fire risk plant specimens

**Timeframe:** 2019-ongoing

**Responsible Agency:** Development Services Department

**Funding Sources:** General Fund

## Program 6: Integrate Infrastructure Assessment Practices into the Development Process and Hazard Mitigation Planning

Using the hazard mitigation planning process as a model, the City should integrate design review, hazard mitigation, and infrastructure assessments to ensure that Colton's critical infrastructure is upgraded to accommodate future conditions.

**Objective:**

- Create an inter-departmental task force to identify capital improvement needs, development projects, and hazard mitigation needs that may be integrated together.
- Establish periodic task force meetings to discuss projects and initiatives to increase community resiliency.
- Periodically review and update the City's critical facilities inventory and add new infrastructure classes, as deemed necessary.
- Integrate recommendations from the task force into existing schedules for inspection

**Timeframe:** 2019-ongoing

**Responsible Agency:** Development Services Department (co-lead), Public Works Department (co-lead), All Departments

**Funding Sources:** General Fund