



LOMA LINDA GENERAL PLAN SAFETY ELEMENT

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CITY OF LOMA LINDA

SAFETY ELEMENT

UPDATED 2021

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I. INTRODUCTION

A. CONDITIONS IN LOMA LINDA AND FOCUS OF THE SAFETY ELEMENT

The City of Loma Linda takes pride in its duty to safeguard the well-being of its community members, which includes effectively anticipating potential emergencies caused by both natural and human-caused hazards. Anticipating these potential hazards, the City can begin planning mitigation strategies to minimize these impacts. As an inland community located in southern San Bernardino Valley, Loma Linda experiences a variety of hazard conditions given its proximity to active fault zones, flood-prone waterways, and hillside topography prone to instability and wildfires. The steeper portions of the community are prone to instability from both geologic and fire hazards, while the lower-lying areas can become inundated from both stormwater runoff and flooding from the San Timoteo Creek, which runs through the city on its way to empty into the Santa Ana River. To compound matters, the impact of a changing climate is likely to intensify many of these risks. Increasing temperatures will drive hotter and drier weather, increasing fire risk and potentially impacting water supplies. Wetter and more intense winter storms could inundate parts of Loma Linda that do not typically experience flooding, which could exacerbate slope instability, causing landslides in the City's hillsides.



A view of Anderson Street from downtown Loma Linda.
Photo Courtesy of: [redlandsdailyfacts](https://www.redlandsdailyfacts.com)

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.

B. PURPOSE OF 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 endanger the community's public health, safety, and welfare. 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 safety risks that, at a minimum, be examined in each Safety Element:



- seismically induced surface rupture*
- ground shaking*
- ground failure*
- flooding*
- tsunami
- seiche
- dam failure
- slope instability leading to mudslides and landslides*
- subsidence
- liquefaction (areas with shallow groundwater [<50 feet])*
- other seismic hazards identified under Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code
- other geologic hazards known to the legislative body
- wildland and urban fires*
- climate change*
- evacuation*

Items denoted by an * are potential hazards relevant to the City of Loma Linda

C. ELEMENT ORGANIZATION

This element is organized to be consistent with the other General Plan Elements. The goals, policies, and implementation programs provide declarative statements setting forth the City's approach to safety-related issues. A definition of these key terms is provided below:

Goal: A general statement of the desired community outcome. It is denoted as Goal 10-X in this element.

Policy: Policies are actions that a community will undertake to meet the goals. They are denoted as Policy 10-X.X in this element.

Implementation Action/Programs: A list of recommended programs and future actions necessary to achieve element goals and policies; implementing actions are discussed in Section IV.

D. CONSISTENCY WITH OTHER ELEMENTS

Integrating safety considerations throughout the General Plan creates a consistent framework that prioritizes the well-being of the community. The Loma Linda Safety Element is an essential component of the General Plan and works in tandem with other elements to guide these efforts.

Land Use/Growth Management

The Land Use Element defines acceptable locations and the appropriate intensity for new development and sets forth policies regarding development design and land use compatibility. By defining acceptable locations and appropriate intensities for new development, the Land Use Element establishes the maximum allowable development intensity for the City at "build out" of the Loma Linda Planning Area. The Growth Management Element works alongside the Land Use Element to manage and preserve open space preservation, natural area protection, congestion management, and enhancement of residents' quality of life.

Housing

The Housing Element delineates the specific programs that the City of Loma Linda will implement to ensure housing opportunities for all economic segments of the economy. Unlike the balance of the General Plan, the Housing Element is intended by state law to be short-term, setting forth an eight-year program. As a result, the



Housing Element is required to be updated every eight years. This element sets forth specific policies and programs designed to ensure housing development opportunities and for housing for service workers who could not otherwise afford for-sale housing within Loma Linda. State law requires that the California Department of Housing and Community Development review local Housing Elements to determine whether they meet the applicable legal requirements.

Transportation and Circulation

The Transportation and Circulation Element directly addresses the provision of the new and expanded transportation facilities needed to support the development of the land uses delineated in the Land Use Element, consistent with the level of service standards outlined in the Growth Management Element. This element defines the specific improvements that will be made over time to the City's roadway and highway systems to maintain adequate service levels and meet vehicle miles travel standards.

Public Services and Facilities

The Public Services and Facilities Element directly addresses the provision of the new and expanded public services and facilities needed to maintain the performance standards outlined in the Growth Management Element. This element defines the responsibilities of new development projects to provide expanded services and facilities and provides policy direction for the manner in which expansion of public services and facilities will be financed. This element also addresses avoidance of interim facilities and the financing of large-scale facilities needed to maintain the performance standards outlined in the Growth Management Element.

Specific to Fire Services within the City, this element indicates the following identified fire protection issues: The southern portion of the City, including the Hillside Initiative and adjacent hillside areas, has been identified by the Public Safety Department as an area that may need a second station for several reasons. First, these hills lie within the City's identified Hazardous Fire Area. Second, there is an extended drive time into the southern hill area from the headquarters station. Third, future development is likely to occur in this area. The need to expand services is being addressed in the budgetary process due to a rapidly increasing rate of calls for service. Along with a new station, the City will need the equipment and personnel to service the area.

To address these concerns Loma Linda Fire & Rescue Division (now Loma Linda Fire Department) developed **Guiding Policy 8.1.2**, which requires the provision of an adequate number of fire stations, along with firefighting personnel and equipment to protect the residents and businesses of Loma Linda. Also see *Implementing Policies 8.1.2.1(a)(b)(c)*.

Specific to water resources, Section 8.7.1 of this Element identifies water opportunities and issues. Based on this information, the City's current water resources should be sufficient to meet build out demand based on existing resources and anticipated increases from new development. However, new development will require the installation of additional transmission and distribution lines and possibly new wells. If the City chooses to purchase water from the San Bernardino Valley Municipal Water District, rather than drill and equip additional groundwater wells, an evaluation of the size and location of pipelines would be necessary. New development in the hillside areas will also require booster stations and additional storage reservoirs to meet demand and fire flow requirements.

To address these concerns Loma Linda Water Utilities relies on **Guiding Policy 8.7.2**, which ensures the City will provide a water system that supplies high quality water to serve existing and future needs of the City during



peak use conditions, with sufficient water in storage reservoirs for emergency and fire protection. Also see *Implementing Policies 8.7.2.1(a)(c)(d)*

Conservation and Open Space

The Conservation and Open Space Element provides policy direction for the management of open space, hillside development, biological resources, water resources and quality, cultural and historical resources, and energy resources in relation to new growth and development.

Implementation Programs

The Implementation Programs Chapter of the General Plan describes the specific actions that the City will take and/or require new developments to implement the City's vision. These future actions are intended to ensure compliance and implementation of the goals and policies within each element, creating the bridge between policy and action that often occurs through the implementation of the development review process.

E. CONSISTENCY WITH LOCAL HAZARD MITIGATION PLAN

The Local Hazard Mitigation Plan (LHMP) serves three primary purposes: it provides a comprehensive analysis of the natural and human-caused hazards that threaten the City, with a focus on mitigation; it keeps the City of Loma Linda 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 LHMP 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 2021. Sections of the Safety Element are supplemented by the LHMP, which has been incorporated by reference, as allowed by California Government Code Section 65302(g).

F. REGULATORY ENVIRONMENT

In addition to the provisions within California Government Code Section 65302 (g), the following federal and state requirements apply to the City of Loma Linda:

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. Loma Linda participates in the NFIP and uses Title 19, Chapter 19.12 of the Loma Linda Municipal Code to administer flood management regulations throughout the City.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code [PRC], 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. Per PRC Section 2623, cities and counties shall require a geologic report defining and delineating any hazard of surface fault rupture



before the approval of a project. If the jurisdiction finds no undue hazard of that kind exists, the geologic report on the hazard may be waived, with the State Geologist's approval. An Alquist-Priolo Earthquake Fault Zone is delineated along the San Jacinto Fault within the City, requiring compliance with this act.

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. Under PRC 2697, cities and counties shall require a geotechnical report defining and delineating any seismic hazard before approving a project located in a seismic hazard zone. If the jurisdiction finds that no undue hazard of this kind exists based on information resulting from studies conducted on sites near the project and of similar soil composition to the project site, the geotechnical report may be waived. After a report has been approved or a waiver granted, subsequent geotechnical reports shall not be required, provided that new geologic data warranting further investigation is not recorded. Each jurisdiction shall submit one copy of each approved geotechnical report, including the mitigation measures to be taken, if any, to the State Geologist within 30 days of its approval of the report.

Cortese List

Government Code Section 65962.5 (typically referred to as the "Cortese List") identifies sites that require additional oversight during the local permitting process as well as compliance with the California Environmental Quality Act (CEQA). The list is generally a compilation of properties and businesses that generate, store, and/or have been impacted by the presence of hazardous materials/wastes. Many properties identified on this list may be undergoing corrective action, cleanup, or abandoned and in need of these activities. The DTSC Hazardous Waste and Substances Site List does not identify any locations within the City. Sites within the City identified by the State Water Resources Control Board include Leaking Underground Storage Tank and Permitted Underground Storage Tank sites.

II. POTENTIAL HAZARDS / TRENDS

A. 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 independently, the primary catalyst for their occurrence is often a seismic event, commonly referred to as an earthquake. This section identifies four common seismic and geologic hazards that threaten Loma Linda and establishes policies and procedures intended to protect the community when an event occurs.

Seismic Hazards

Southern California is prone to earthquakes and their frequent occurrence is widely accepted as a fact of life. Loma Linda is located within the San Bernardino Valley, which is a sediment-filled basin surrounded by fault zones. The San Andreas Fault to the northeast, the San Jacinto Fault to the southwest, and a group of faults to the southeast. The southeast portion of the City's planning area is characterized by uplifted hills, divided by active



drainages that create badlands style topography (steep slopes, minimal vegetation, lack of substantial regolith, and high drainage density) which gives the terrain its name.

Soils in the flatter portions of the City range from gravelly loam to sandy loam, are very deep, and are well drained. This area is considered part of the Santa Ana River watershed fed by San Timoteo Creek, which runs through Loma Linda from the foothills down to the river.

Earthquakes in Southern California occur because of movement between the Pacific and North American plates. The boundary between these two plates is located along the San Andreas Fault system. Due to the significant stresses exerted at this plate boundary, significant deformation, faulting, and associated earthquakes occur in a broadly distributed zone that stretches from offshore California to Nevada. The faults which present the greatest potential for a large-scale seismic event within the region that could affect the City are identified in **Table 10-1**. Other faults located throughout the region can generate large earthquakes; however, the distance from the City and lower probability of producing a significant seismic event make them less of a risk to the City.

The four faults are located within the Planning Area include the San Jacinto Fault, the Loma Linda Fault, the Banning Fault, and the Reche Canyon Fault. The San Jacinto Fault zone crosses the southwest portion of the City and has been the most historically active fault zone in Southern California. Numerous offset gullies, linear ridges, and other fault-related features indicate active faulting along this fault within the City. The Loma Linda Fault is generally located through the northern portion of the Planning Area. This fault was originally identified from groundwater data, since the fault lacks topographic evidence, and no evidence of active faulting has been identified. The Live Oak Canyon Fault is a trace of the San Andreas Fault, extending westward from the San Geronio Pass. This fault is not generally thought to be active within the Planning Area. The Banning Fault extends through the northeastern quadrant of the City and is generally thought to be inactive. The Reche Canyon fault traverses the southwest corner of the City and is considered a potentially active fault.

Table 10-1

Fault	Distance (Miles)	Direction from City	Maximum Credible Earthquake (Richter)	Maximum Probable Magnitude (Richter)
San Jacinto	0	---	7.5	6.5 – 7.5
San Andreas	5	NE	8.25	6.8 – 8.0
Cucamonga	13	NW	6.5	6.0 – 7.0
Elsinore	22	SW	7.5	6.5 – 7.5
Newport-Inglewood	48	SW	7.0	6.0 – 7.4

(Source: Southern California Earthquake Data Center.)

Fault Rupture

The rapid movement and release of energy associated with an earthquake can cause the earth to fracture and displace the land around it, resulting in an earthquake fault. Some faults are buried beneath the surface, while others are located at the earth's surface. When located at the surface, the risk of fault rupture is especially dangerous if structures are built on top of the fault or infrastructure crosses the fault. If movement along the fault



is significant, these facilities could be damaged (structural damage, pipeline breaks, roadway/ bridge failure), rendering them useless after the event.

Areas of known surface rupture hazard in California are identified in Alquist-Priolo Special Study Zones (AP Zone). As identified by the State Geologist, these study zones are used to identify and map seismically active fault traces. No habitable structure is permitted across the known trace of any active fault. Setback zones are established for habitable structures, the size of which is determined by the geology of a particular site, the characteristics of the fault, and the degree of certainty on the fault's location. An AP Zone is located within the southern portion of the City's planning area, running the entirety of the San Jacinto Fault trace (**Figure 10.1**). Setback requirements shall be determined along this fault trace as part of the development process.

Seismic Shaking

Seismic shaking is the recognizable movement caused by the energy released from an earthquake. The same mechanism that creates a 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, seismic shaking consequences are not restricted to the area immediately surrounding the fault. Energy resonating through the ground can travel hundreds of miles and cause damage in many locations simultaneously. The closer to the earthquake's source (epicenter), the stronger the shaking will be. Seismic shaking is of particular concern for the City of Loma Linda due to the proximity to active faults that can generate significant earthquakes. The fault with the highest probability of generating a large earthquake is the San Andreas fault. Located approximately five miles northeast of the City, this fault has a 19.5% probability of generating a 6.7M or greater earthquake in the next 20 to 25 years. For the same time period, the San Jacinto Fault, which runs through the planning area, has a 5% probability of generating a 6.7M or greater earthquake in the next 20 to 25 years.



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 vulnerable to liquefaction. Within the San Bernardino Basin Area, three groundwater subbasins underlie portions of the Planning Area. These include Bunker Hill (northern portion of the City), Reche Canyon Basin (the southwest portion of the City), and San Timoteo Basin (the eastern portion of the City). Given the presence of shallow groundwater in these subbasins, there is a moderate to moderately high susceptibility for liquefaction hazards in the northwest portion of the Planning Area and the southern reaches of Reche Canyon. Other areas of liquefaction susceptibility include the north-central portion of the Planning Area and a canyon extending into the western portion of the Planning Area from Reche Canyon.



Geologic Hazards

In addition to seismic hazards, the potential for geologic hazards within the City could impact residents and businesses.

Landslides and Mudflows

A landslide is the movement of earth materials down slopes and areas of steep topography. Although earthquakes often cause them, landslides can occur when any sloped surface can no longer 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 a significant danger to buildings and other structures. In some circumstances, these events may cause bodily harm if bystanders cannot move out of its path in time. Anticipating the risk of landslides in the areas identified by **Figure 10.2** will be essential for protecting the community members who reside there. The parts of Loma Linda at risk of landslides are the areas within the southern portions of the City within the badland areas and adjacent to the San Jacinto Fault Zone at the bottom of canyons and along the canyon slopes.



GOAL 10-1: A COMMUNITY RESILIENT TO THE EFFECTS OF SEISMIC AND GEOLOGIC HAZARDS

Policies / Implementation Actions

10-1.1	Restrict or regulate the construction of new development sites on or near known seismic or geologic hazards.
10-1.1(a)	Limit development in areas near geologic hazards (San Jacinto Fault Zone) that would create adverse conditions for those inhabiting the area and to the overall community.
10-1.1(b)	Prohibit locating habitable structures on top of active or potentially active faults by enforcing the Alquist-Priolo Earthquake Fault Zoning Act.
10-1.1(c)	Require geologic and soil reports to be prepared for proposed development sites and incorporate the findings and recommendations of these studies into project development requirements. For areas of specialized hazards (liquefaction, etc.) require analyses that may include a description of bearing strength, expansion potential, settlement, or subsidence, including implementing these reports' recommendations into the project development.
10-1.1(d)	Establish incentives such as free inspections or reduced fees for property owners to rehabilitate existing high occupancy buildings to protect against seismic and geologic hazards.
10-1.2	Identify and publicize the geologic and seismic hazards within Loma Linda for existing residents and prospective applicants.
10-1.2(a)	Advise residents and property owners of appropriate protection measures to reduce or eliminate structural damage.



10-1.3	Require that engineered slopes be designed to resist seismically induced failure.
10-1.4	Require that cut and fill areas within a grading operation be over excavated to mitigate differential settlement in conformance with best geotechnical engineering practices.
10-1.5	Work with utility operators within the City like Southern California Edison, Southern California Gas Company, pipeline companies, and industrial companies to implement measures to safeguard the public from seismic hazards associated with their infrastructure.
10-1.6	Ensure slope conditions within the City are effectively addressed to reduce property damage and personal injury from slope failure and erosion hazards.
10-1.6(a)	Limit cut and fill slopes to 3:1 (33% slope) throughout the City to maintain slope stability. Steeper slopes can be used if they do not pose an undue risk to people and property as determined by an engineering geologist to the City's satisfaction.
10-1.6(b)	Blend cut-and-fill slopes with existing contours to avoid high-cut slopes and steep embankments, which could lead to soil erosion.
10-1.7	Require erosion-control measures in areas of steep slopes or erosion-prone areas on all grading plans to reduce impacts to downstream environments.

B. FLOODING

Flooding is caused by the accumulation of water on the ground surface. This typically occurs after heavy rainfall but can also result from water delivery, transportation, or storage infrastructure failures, such as pipes, levees,



reservoirs, and water tanks. Worsening drought conditions caused by climate change may exacerbate the effects of flooding, as surfaces that typically 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.

Within the City the primary types of flooding include stream flooding, earthquake-induced flooding (seiches), infrastructure failure, bridge scour, and dam inundation. The City is vulnerable to stream flooding from San Timoteo Creek, Mission Channel, and the Santa Ana River. On a smaller scale, the hillsides in the southern portion of the City are also prone to flooding. Major roadways vulnerable to flooding include Anderson Street, Barton Road, and Beaumont Avenue, which all cross San Timoteo Creek, while Redlands Boulevard crosses Mission Channel. To help reduce the risk of flooding, the City has made improvements to San Timoteo Creek, reducing flood vulnerability to people and property adjacent to the creek. The City's southern portions have been designated as very low density to reduce or avoid flood hazards within the hillsides.

Canals, levees, and flood control channels can be affected by earthquake-induced fault rupture, liquefaction, or lateral spreading. During a seismic event, seiche (a standing wave in an enclosed or partially enclosed body of water) can damage water storage facilities, reservoirs, or detention basins, especially in the southern foothills.



Though not likely to occur in the City, bridge foundations can be vulnerable to scouring (removal of sediment like sand and gravel from bridge abutments, resulting in loss of structural integrity) during a flood.

Dam inundation may also be a potential cause of flooding within Loma Linda. The northern portion of the City lies within the inundation zone of Seven Oaks Dam, a dry dam designed to decrease peak water flows during spring runoff and rainstorm events. When full, the dam releases by "metering out" water to control downstream flooding and maximize groundwater recharge. Flooding in the City due to the failure of the Seven Oaks Dam is considered a low probability event; however, if it were to occur, the City would be impacted.

The most widely distributed flood map product is the Flood Insurance Rate Map (FIRM). The Federal Emergency Management Agency (FEMA) is mandated by the Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 to evaluate flood hazards and provide FIRMs for local and regional planners to promote sound land use and floodplain development further. Flood risk data presented on FIRMs are based on historical, meteorological, hydrologic, and hydraulic data, as well as open space conditions, flood control works, and development. To prepare a FIRM that illustrates the extent of flood hazards in a flood-prone community, FEMA conducts an engineering study referred to as Flood Insurance Study (FIS). Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas (SFHAs) on FIRMs. SFHAs are those areas subject to inundation by a flood that has a one percent or greater chance of being equaled or exceeded during any given year.

The City of Loma Linda participates in the National Flood Insurance Program (NFIP). Consequently, FIRM maps prepared by FEMA to show potential flood zones are available for areas within the City limits. Flood hazard areas in Loma Linda are shown in **Figure 10.3**.

Flood Control Features

The San Bernardino County Flood Control District covers the entire County (including the incorporated cities) and provides planning, design, construction, operation, and maintenance on the regional storm drain facilities. Storm drain systems have been constructed throughout the City to accommodate the increased runoff resulting from development and protect developed areas within the City from potential localized flooding. Because County drainage facilities receive upstream drainage from the City's drainage system, the City's storm drain system must be consistent with the County's Master Plan. The City of Loma Linda (along with the City of Redlands) is located within the area addressed in San Bernardino County Comprehensive Storm Drain Master Plan No. 4. Future improvements to the City's storm drain system will follow the improvements outlined in Master Plan No. 4.

Identified Flooding Hazard Issues

Many storm drains and open channels drain into the San Timoteo Creek channel, which is a County facility. Until the federally-funded flood control projects are completed along this channel, the areas north of this channel within the City will remain within the interim flood zone. In addition, the Mission Channel, which flows in an open channel from California Street to the I-10 freeway, is susceptible to flooding in a 100-500 year storm. Improvements to this channel system are necessary to reduce flood hazards in the area. Isolated areas along the foothills can flood and generate mud/debris flows, which have impacted the City in the past. To address these issues, debris basins may be required to capture these materials and reduce impacts to downstream environments.



GOAL 10-2: A COMMUNITY PROTECTED FROM THE RISKS OF FLOODING AND STORMWATER RUNOFF

Policies / Implementation Actions

10-2.1	Reduce flood potential within the 100-year and 500-year floodplains.
10-2.1(a)	Coordinate with the San Bernardino County Flood Control District on recommendations to the County Board of Supervisors for improvements to the flood control facilities in the City of Loma Linda.
10-2.2	Require new development to prepare hydrologic studies to assess storm runoff on the local and subregional storm drainage systems and incorporate appropriate mitigation in project development.
10-2.3	Require new development to provide for the perpetual maintenance of detention basins, if necessary, to support the new development.
10-2.4	Require new development to incorporate features into drainage plans that would reduce impermeable surface area, increase surface water infiltration, and minimize surface water runoff during storms
10-2.5	Promote the preservation of natural streams and creeks in the south hills area of the City
10-2.5(a)	Coordinate with State and Federal agencies to encourage that streams and creeks in the south hills area be left in their natural state to preserve their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors, if technically and financially feasible. If not, then the loss or modification of a watercourse should be appropriately mitigated.
10-2.6	Promote coordination with local, state, and federal agencies on drainage improvements and flood control projects.
10-2.6(a)	Coordinate with San Bernardino County Flood Control District to reduce hazards caused by local flooding through maintenance and improvements to the area's storm drain system.
10-2.6(b)	Maintain current flood hazard data, and coordinate with the Federal Emergency Management Agency, San Bernardino Flood Control District, U.S. Army Corps of Engineers, and other responsible agencies to coordinate flood hazard analysis and management activities.
10-2.7	Require new development/ redevelopment to reduce on-site drainage through groundwater recharge and water retention improvements.



C. FIRE HAZARDS

Wildfires

The most common type of natural hazards in California are wildfires, which can burn large swathes 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 a wildfire occurring. Typically, wildfires pose minimal threat to people and buildings in urban areas, but increasing human encroachment into natural areas increases the probability that bodily harm or structural damage will occur. This encroachment occurs in areas called the wildland-urban interface (WUI), which is considered an area within the high and very high fire hazard severity zones, as defined by Cal FIRE.



Wildfires are a potential hazard to development located in forest and brush areas. Due to a combination of topography, weather, fuel and exacerbated by possible high winds and limited access, portions of the City are highly susceptible to wildland fire hazards. The City has specified a boundary, signifying the areas at risk of wildland fires called the Wildland Urban Interface area. **Figure 10.4** identifies the Cal Fire Very High Fire Hazard Severity Zones (VHFHSZ) within the City. These zones indicate that the greatest fire hazard is located in the South Hills portion of the City, which in recent years, has experienced several wildfire events. **Table 10-2** identifies the number of recent incidents and when they occurred in this part of the City.

Development of residential structures on steep slopes, brush-covered hillsides, or along ridges in the southern portion of the City is an additional source of hazard. The risk of fire damage to structures can be minimized with

the appropriate spacing of structures, brush clearance, fuel modification zones, building materials, built-in fire protection systems, water availability, access, and adherence to State and local fire codes.

Year	Number of Wildfires
2017	1
2010	1
2001	1
2000	1
1999	2
1998	7

For areas within the High and Very High Fire Hazard Severity Zones (WUI Area) within the City, new developments will be required to prepare a Fire Protection Plan that meets the following requirements:

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 consider location, topography, geology, flammable vegetation, sensitive habitats/species, and the 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 and the City of Loma Linda 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, cooking accidents, or industrial malfunction but can spread to other buildings if conditions permit. Many factors contribute to an urban fire's severity and extent, 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. No matter its size, any fire can cause severe harm and damage buildings and other structures.

Identified Fire Hazard Issues

The presence of human activities in or near wildland areas dramatically increases the risk of a major. Causes could be from careless smokers, illegal campfires, off-road vehicles, or intentional means (arson). Present wildfire-fighting techniques are designed to control wildland fire where the optimum place, response time, and equipment/resources for control can be chosen. Residential development intrusion into the South Hills creates additional problems in controlling wildland fires due to limited firefighting facilities and lack of direct access to these areas, which lengthens response times and reduces tactical options.

GOAL 10-3: A COMMUNITY WHERE PEOPLE, PROPERTY, AND NATURAL RESOURCES ARE ADAPTED TO WILDFIRE VULNERABILITIES

Policies / Implementation Actions

10-3.1	Require fire protection agency review of all new development and major remodels located in high fire risk areas (High and Very High Fire Hazard Severity Zones) to maintain adequate levels of service (standard of cover).
10-3.1(a)	Prohibit new development construction or expansion in the City's Very High Fire Hazard Severity Zones.
10-3.2	Require new development and major remodels in areas of high wildfire hazard risk to incorporate fuel modification, fire-resistive construction and/or defensible space management strategies consistent with State and local fire code requirements. As appropriate, require on-site fire suppression systems, including automatic sprinklers, buffers and fuel breaks, and fire-retardant landscaping.
10-3.3	Require Fire Protection Plans for new developments, redevelopments, and major remodels within or adjacent to the City's High and Very High Fire Hazard Severity Zones. <i>A fire protection plan (FPP) approved by the fire code official is required for all new development within the High and Very High Fire Hazard Severity Zones. FPPs are required to include mitigation strategies that consider location, topography, geology, flammable vegetation, sensitive habitats/species, and the 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 and the City of Loma Linda Municipal Code.</i>
10-3.3(a)	Develop a retrofit program to mitigate existing non-conforming developments to contemporary fire safe standards.
10-3.3(b)	Require fire sprinklers in all structures greater than 200 square feet.



10-3.3(c)	Require all developed areas in the VHFHSZ to conduct vegetation management activities to reduce fire hazard threats.
10-3.3(d)	Require vegetation clearance along public and private roads, community firebreaks, and other community-based fire mitigation strategies and determine who will conduct long-term maintenance and operations of these strategies.
10-3.3(e)	Ensure existing and new developments have adequate amounts of signage and addressing to ensure effective emergency response.
10-3.4	Ensure that existing and new developments have adequate water supplies and conveyance capacity to meet daily demands and firefighting requirements.
10-3.5	Prohibit single-access neighborhoods in fire hazard areas. Provide adequate access for fire and other emergency response personnel and vegetation management programs.
10-3.6	Coordinate with Southern California Edison on electrical infrastructure that may be impacted by wildfires and/or Public Safety Power Shutoff events.
10-3.7	Promote fire safe design and practices throughout the city.
10-3.7(a)	Develop a public awareness program promoting fire safe home improvements and design, fire-resistant landscaping and education on defensible space setbacks.

D. HAZARDOUS MATERIALS

Natural hazards are not the only threat to a community's safety. Human-caused hazards, such as the various hazardous materials and wastes stored, transported, or manufactured in a community, can pose significant risks. Hazardous materials are identified as being toxic, flammable, explosive, corrosive, infectious, radioactive, or any combination of these characteristics. Hazardous wastes are categorized similarly but are identified separately from materials because they no longer serve a meaningful use. The City of Loma Linda has adopted the County of San Bernardino's Area Plan for its Hazardous Materials Emergency Response Plan. Individuals within the City's Fire and Rescue Division are trained to administer the County of San Bernardino Area Plan for a hazardous material emergency response.

In the Home

Exposure to hazardous materials is not uncommon, as many household cleaning products contain chemicals that can 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 the 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

Hazardous materials are commonly used by all segments of our society, including manufacturing and service industries, commercial enterprises, agriculture, military bases, hospitals, schools, and households. If improperly handled, stored, or disposed of, these materials can have substantial health and environmental consequences. Although common household chemicals pose little threat to the community at large, hazardous materials and wastes used by businesses and industry present a greater risk. Mechanical dealerships, repair shops, gasoline, diesel fuel stations, and dry cleaners are examples of businesses that extensively use and store chemicals or other hazardous materials. Pipelines, trucks, and tanks within the City also transport and store chemicals that



could pose a risk if a failure occurs. If an event such as an earthquake or fire occurs, these materials may be subject to uncontrolled release, which is anticipated to be isolated to the location where they are stored. Releases also tend to involve transporting raw materials and their byproducts either by pipeline or truck. 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. As industrial development occurs in the future, the potential for new sources of hazardous materials will change.

Identified Hazardous Waste and Materials Issues

Hazardous materials include a wide range of potentially injurious substances, including pesticides, herbicides, toxic metals and chemicals, gases and liquefied gases, explosives and volatile chemicals, biological compounds and organisms, and radioactive substances. Most incidents within the City involve gasoline and oil spills resulting from traffic collisions. The potential for uncontrolled releases from vehicular accidents increases near Interstate 10, adjacent to the City's northern border. Vehicles using this major transportation artery carry a wide variety of hazardous materials. Other common hazardous materials/waste concerns within the City include medical waste, transportation accidents, illegal dumping, underground storage tank (UST) leaks, natural gas pipeline leaks, commercial/industrial wastes, agricultural pesticides, and illegal drug laboratories. Proper identification of potential problems associated with the handling, storage, and disposal of hazardous materials will play an increasingly important role in the growth and development of the City in the coming years.

Illegal dumping of hazardous waste is a region-wide problem that is anticipated to reduce based on reducing unimproved properties within the City. However, the overall number of hazardous waste sites requiring cleanup because of illegal dumping is expected to increase as the costs of legal material/waste disposal increase and the phased closure of many existing hazardous waste landfills continues. In addition, the rise in homelessness throughout the region has increased the demand for cleanup services for encampment locations. Materials and wastes within these locations may be hazardous, increasing the cost and demand for City services.

GOAL 10-4: A COMMUNITY THAT REDUCES OR AVOIDS IMPACTS ASSOCIATED WITH HAZARDOUS MATERIALS

Policies / Implementation Actions

10-4.1	Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and collection programs.
10-4.1(a)	Continue regular inspections and monitoring the use and handling of hazardous materials and wastes to ensure compliance with local, State, and Federal regulations.
10-4.1(b)	Provide educational and technical assistance to all hazardous materials users and waste generators to aid in their source reduction efforts.
10-4.2	Require appropriate design features and mitigation strategies for hazardous materials conveyance facilities within the City.
10-4.2(a)	Identify and regulate appropriate regional and local routes for transportation of hazardous materials and wastes.
10-4.2(b)	Ensure designated hazardous materials and waste routes are located away from populated areas and other sensitive uses.



10-4.2(c)	All processors and new large generators of hazardous waste shall only access established hazardous material carrier routes.
10-4.3	Effectively regulate hazardous materials storage, manufacture, and disposal facilities within the City.
10-4.3(a)	Ensure adequate provisions for emergency responses to hazardous material incidents by requiring submittal of emergency response plans for all hazardous material/waste processors and large generators as part of use permit application processes.
10-4.3(b)	Define siting criteria, application submittal requirements, and findings of approval for various types of hazardous materials/waste facilities.
10-4.3(c)	Locate hazardous materials facilities at a sufficient distance from populated areas to reduce potential health and safety impacts.
10-4.3(d)	Require risk assessment studies to determine potential health impacts for all proposed hazardous waste processors and large generators as part of use permit application submittals.
10-4.4	Require new developments and major remodels to retain on-site storm flows at or below existing conditions to reduce potential releases of hazardous materials.

E. EMERGENCY PREPAREDNESS AND EVACUATION

The ability to anticipate and evaluate potential risks posed by natural and human-caused hazards is paramount to a city's longevity. Although this element specifically addresses natural and human-caused hazards, emergency preparedness involves many more considerations beyond identifying the hazards themselves. The Emergency Preparedness and Evacuation section consolidates and briefly describes the City of Loma Linda's hazard prevention and response strategies.

Recognizing the importance of emergency preparedness by designing and implementing the City's Emergency Operations Plan (EOP). This plan is based on the functions and principles of the Standard Emergency Management System (SEMS) and Incident Command System (ICS).

The California Emergency Services Act requires the City to manage and coordinate overall emergency and recovery activities within its jurisdictional boundaries. Under SEMS, the City is responsible at two levels, the field response and local government levels. At the field response level, the City and all other agencies use ICS to aid in a standardized emergency response. At the local government level, a designated Emergency Operations Center (EOC) is used as the central location for gathering and disseminating information and coordinating all jurisdictional emergency operations within the area.

Emergency Operations Plan

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

Mitigation

The EOP, in conjunction with the LHMP, identifies and assesses the natural and human-caused 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 mitigation and 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 a disaster. These activities typically involve preparing 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 Loma Linda Police (San Bernardino Sheriff's Department) and Fire Departments standard emergency response procedures. To guide response activities, the City will rely on implementing the Emergency Operations Plan and work closely with volunteer organizations such as the Community Emergency Response Team (CERT), which helps 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 assisting residents and businesses with permitting and approvals of building plans. Depending on the scale and type of incident, recovery could occur in specific community locations and/or require specialized expertise to address the issues created.



Evacuation

As part of the City's preparedness initiatives, evacuation planning has occurred, identifying the roadways used for these purposes. **Figure 10.5** depicts the evacuation routes within the City. These roadways are intended to provide adequate capacity for evacuation needs; however, the City recognizes that bridges over waterways and railroads may be vulnerable locations if failure or blockage were to occur. Figure 10.5 also depicts locations in the City with limited ingress/egress issues as required by Government Code Section 65302 (g) 5.



GOAL 10-5: A COMMUNITY THAT MAINTAINS A LEVEL OF PREPAREDNESS TO ADEQUATELY RESPOND TO EMERGENCY SITUATIONS AND DISASTERS.

Policies / Implementation Actions

10-5.1	Periodically update and implement emergency management plans and programs.
10-5.1(a)	Maintain and update the City's Emergency Operations Plan and Local Hazard Mitigation Plan, consistent with local, state, and federal requirements.
10-5.1(b)	Maintain ongoing emergency response coordination with surrounding jurisdictions in the Operational Area.
10-5.1(c)	Maintain and expand Mutual Aid agreements with surrounding jurisdictions within the Operational Area.
10-5.1(d)	Develop a public awareness program on the nature and extent of natural and human-caused hazards and ways of minimizing disasters.
10-5.1(e)	Require all City staff to be adequately trained to respond to emergency situations and conduct regular training and exercises within the Operational Area.
10-5.1(f)	Expand community programs (i.e., CERT) that train volunteers to assist police, fire, and other city personnel during and after disasters.
10-5.1(g)	Relocate critical facilities outside of recognized hazard zones. If alternate locations are not available or feasible, retrofit these facilities to reduce vulnerability to potential hazards.
10-5.1(h)	Develop a Recovery Planning Framework to assist the City in future redevelopment activities after a major disaster event.
10-5.2	Ensure adequate evacuation routes are available for existing and future developments, taking into account and ensuring adequate emergency vehicle access during the planning process.
10-5.2(a)	Identify neighborhoods with more than 30 building sites with single ingress/egress conditions.
10-5.2(b)	Test evacuation routes under different hazard scenarios to ensure adequate capacity within one-year from Safety Element adoption.
10-5.2(c)	Ensure future updates to the circulation network and new developments do not diminish evacuation routes capacity and efficacy.
10-5.2(d)	Develop evacuation standards for residential neighborhoods in the VHFHSZ, including public outreach and education on evacuation routes/plans especially in areas where at-risk populations have been identified.
10-5.3	Require all new development and major redevelopment to provide at least two publicly accessible points of ingress/egress as part of the design and development process.
10-5.3(a)	Increase circulation connectivity and accessibility for neighborhoods that do not provide at least two ingress/egress roadway connections.



F. TRANSPORTATION HAZARDS

Transportation in the City of Loma Linda is accomplished through various modes: personal automobiles, motorcycles, public bus transportation service provided by Omnitrans, bicycles, or one can simply walk to reach their destination. Potential hazards can include accidents resulting in loss of life, personal injury or property damage, and potential hazardous material spills in the form of petroleum products and/or other vehicle fluids. These are typical hazards all jurisdictions typically deal with regularly.

Commercial transportation of goods within and through the City is accomplished through the mixed use of airplanes, trains, and large trucks as a means of cargo conveyance. Loma Linda is located where all these transportation modes can become a hazard of concern to the City. As discussed in earlier sections, Loma Linda is located adjacent to Interstate 10, a major arterial highway used by thousands of large trucks and vehicles on a twenty-four basis. Accidents occur at irregular intervals and will continue to occur; human error and mechanical failure are nearly impossible to predict. Like most other cities, Loma Linda is equipped to deal with these accidents and emergencies as they occur. The City has identified the San Bernardino International Airport and the numerous railroad crossings running through the City as hazards of concern to be addressed in the Safety Element.

Airport Safety

The San Bernardino International Airport, a commercial airport with an instrument landing system and a 10,000-foot runway, is located 1.5 miles from the City's northern boundary. Portions of the City fall within the 2-mile radius considered within the airport influence area, as shown in **Figure 10.6**. According to Government Code, Section 65302.3, general plans must be consistent with the Airport Land Use Commission's plan for the area included within their jurisdiction.

Identified Airport Safety Issues

The Airport Land Use Plan for the San Bernardino International Airport has not been adopted; therefore, compliance with airport land use compatibility policies cannot be determined at this time.

Railroad Crossing Hazards

The City of Loma Linda is bisected by several sets of railroad tracks that serve both passenger and freight trains. The use of these tracks continuously generates approximately 60 trains passing through Loma Linda daily.

Identified Railroad Safety Issues

The highway-rail grade crossings present a safety hazard when drivers or pedestrians neglect or refuse to obey warning signs and signals. Bridges crossing these rail rights of way become circulation constraints and can affect mobility and evacuation activities throughout the City.



GOAL 10-6 FUTURE DEVELOPMENT PATTERNS THAT ARE COMPATIBLE AND SAFE FROM TRANSPORTATION MODES OPERATING IN AND AROUND THE CITY.

Policies / Implementation Actions

10-6.1	Support the planning and management of airport land use plans by the San Bernardino Airport Land Use Commission.
10-6.1(a)	Adopt an overlay zone for the area which specifies the criteria included in the Plan for the airport influence area
10-6.2	Minimize the threats to drivers and pedestrians along at-grade railroad crossings
10-6.2(a)	Work with railroad right-of-way owners to maintain grade crossing tracks and road surfaces
10-6.2(b)	Assist railroad companies with community education and awareness programs related to railroad safety
10-6.2(c)	Encourage and assist, where applicable, the maintenance of warning signs and devices for railroad at-grade crossings.

G. CLIMATE ADAPTATION

Although climate change is not itself a hazard, variations in environmental conditions can impact some of the natural hazards affecting Loma Linda. Projections of future conditions include increased temperatures, increased extreme heat days, changes in precipitation, more prolonged droughts, and changes in the size and frequency of wildfire incidents. **Table 10-3** identifies the current/historical conditions and projected conditions within Loma Linda projected from climate change.

Table 10-3 – Potential Climate Change Effects for Loma Linda	
Historic Annual Mean (1961-1990)	78.6° F
Future Annual Mean (2070-2099)	85.3 to 87.9° F
Current Extreme Heat Days (104.6° F)	5 days per year
Future Extreme Heat Days (2070-2099)	31 to 48 days per year
Current Annual Mean Precipitation	12.2 inches
Future Annual Mean Precipitation (2070-2099)	12.0 to 13.1 inches
Current Annual Average Area Burned	140.1 acres
Future Annual Average Area Burned (2070-2099)	32.4 to 39.1 acres
Source: https://cal-adapt.org/	

Increasing temperatures associated with climate change can act as a hazard multiplier. By the end of the century, annual mean temperatures are projected to increase between seven and nine degrees, impacting city residents and businesses. These increases are also anticipated to increase the number of extreme heat days (104.6°F), increasing from 5 days per year to between 31 and 48 days per year. These potential temperature increases may impact residents living in poorly insulated structures or structures that do not meet current code requirements. This could lead to an increase in demand for power and water, taxing the power grid and water resources, leading to shortages of both.

While temperatures are anticipated to increase in the coming decades, climate change projections also suggest that annual mean precipitation may decrease slightly. While an annual decrease is projected, it is anticipated that



future rain events may be more intense than what is currently experienced within the City, which could increase flooding within the City. With changes in future precipitation, it is expected that changes to local vegetation may occur, which could impact drainages and increase the need for wildfire management activities.

Increased rainfall could increase the amount of flooding within the community or introduce flooding into areas that typically have not experienced flooding before. With greater and more intense precipitation events, the City could also experience an increase in landslides/mudslides. Extreme precipitation events could de-stabilize hillsides and drainages, especially if vegetation growth has been reduced, resulting in more landslides/mudslides and/or erosion along natural stream courses, flood channels, and levees, impacting neighboring properties/structures and City drainage infrastructure.

With future temperature increases coupled with relatively similar precipitation amounts experienced today, future wildfire impacts are projected to decrease by the end of the century. This projection is based on the overall reduction in small and moderate precipitation events in place of large or extreme events, suggests that vegetation growth will experience an overall reduction. A reduction in vegetation could reduce future wildfire vulnerability due to reduced fuel quantities and an overall reduction in vegetation density. The City currently experiences an annual average of 140.1 acres burned; this value is projected to decrease to between 32.4 and 39.1 acres by the end of the century.

GOAL 10-7: A COMMUNITY ADAPTED TO CHANGING HAZARDS AND CONDITIONS RESULTING FROM FUTURE CLIMATIC CONDITIONS.

Policies / Implementation Actions

10-7.1	Coordinate with regional, state, and federal agencies to monitor the indicators and impacts of climate change.
10-7.2	Periodically review and update the City's Local Hazard Mitigation Plan to incorporate new information related to climate change, as necessary
10-7.3	Monitor flooding conditions that occur outside of the 100-year floodplain to identify new areas of risk as future conditions change.
10-7.4	Monitor wildfire mapping and hazard conditions for changing future conditions as a result of climate change.
10-7.5	Improve city staff understanding of how climate change may disproportionately affect vulnerable community members, including senior citizens, low-income persons, and persons with disabilities.
10-7.6	Develop incentive programs to encourage property owners to retrofit their homes/businesses against climate-related hazards such as extreme weather, flooding, wildfire, etc.
10-7.7	Prepare and periodically update a Climate Action Plan that integrates climate adaptation and hazard mitigation information and analysis.



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Figure 10.1 USGS Quaternary Faults

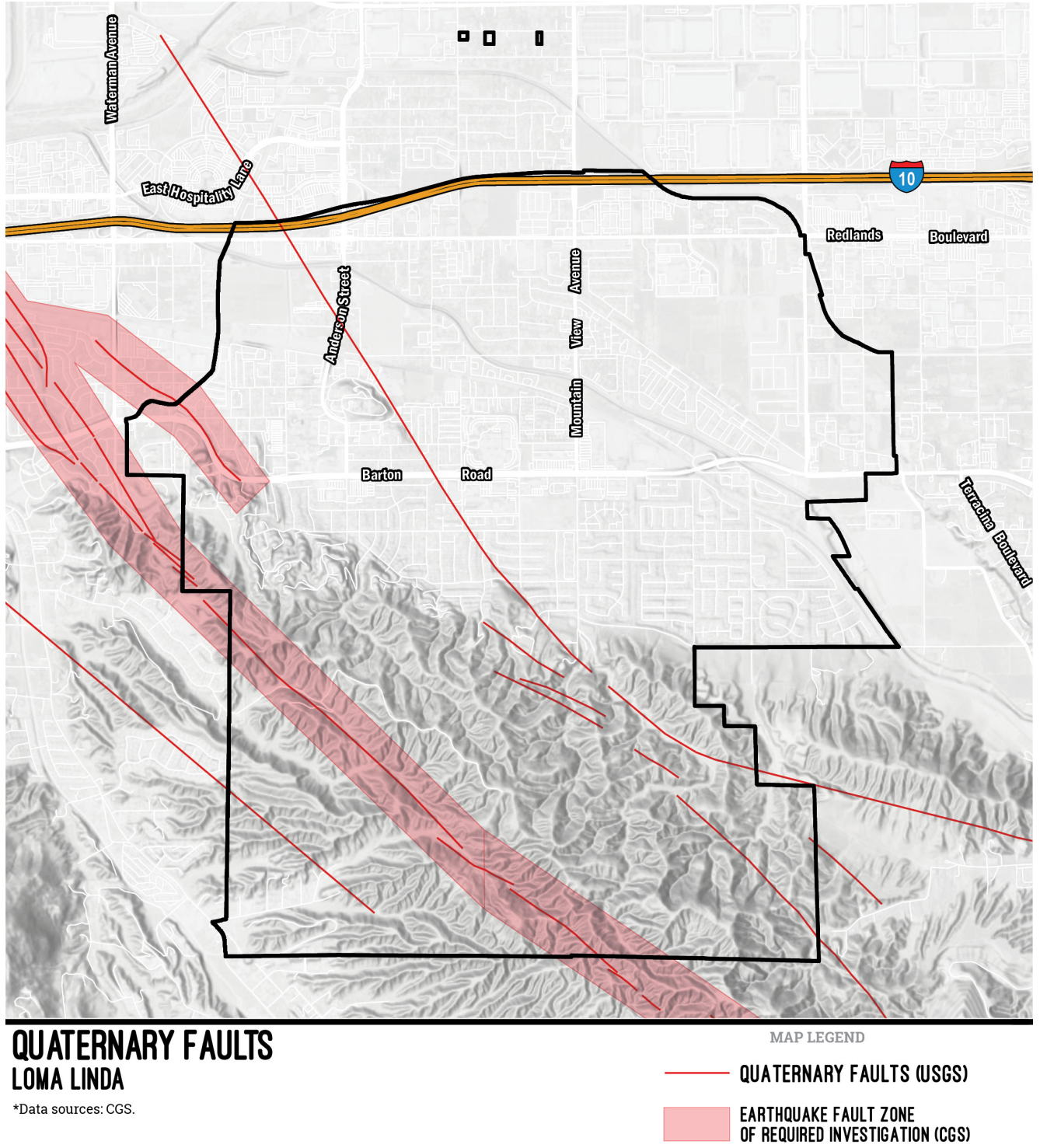
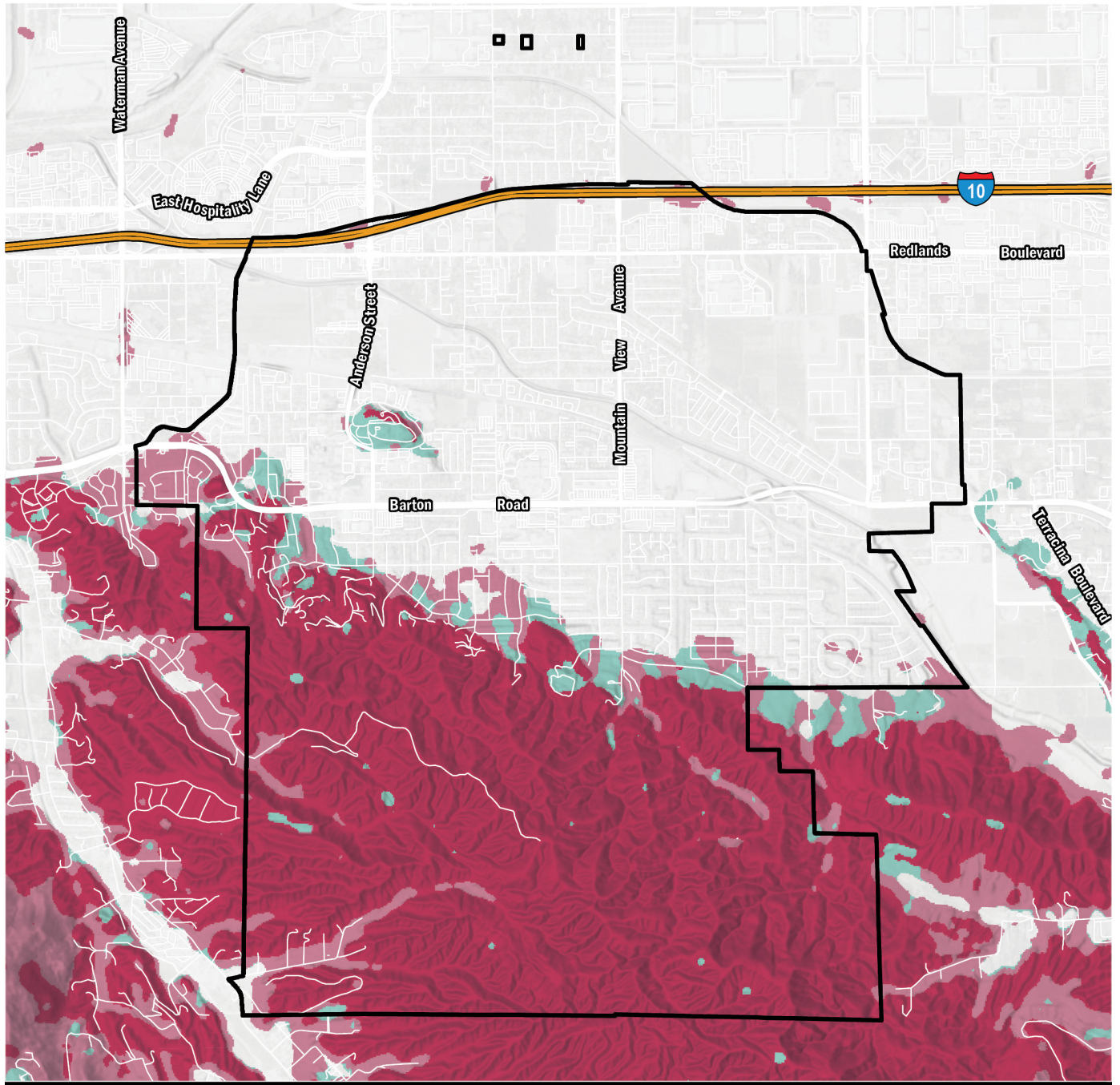




Figure 10.2 Loma Linda – Snapshot Layout-Landslide Risk Exposure



LANDSLIDE RISK EXPOSURE LOMA LINDA

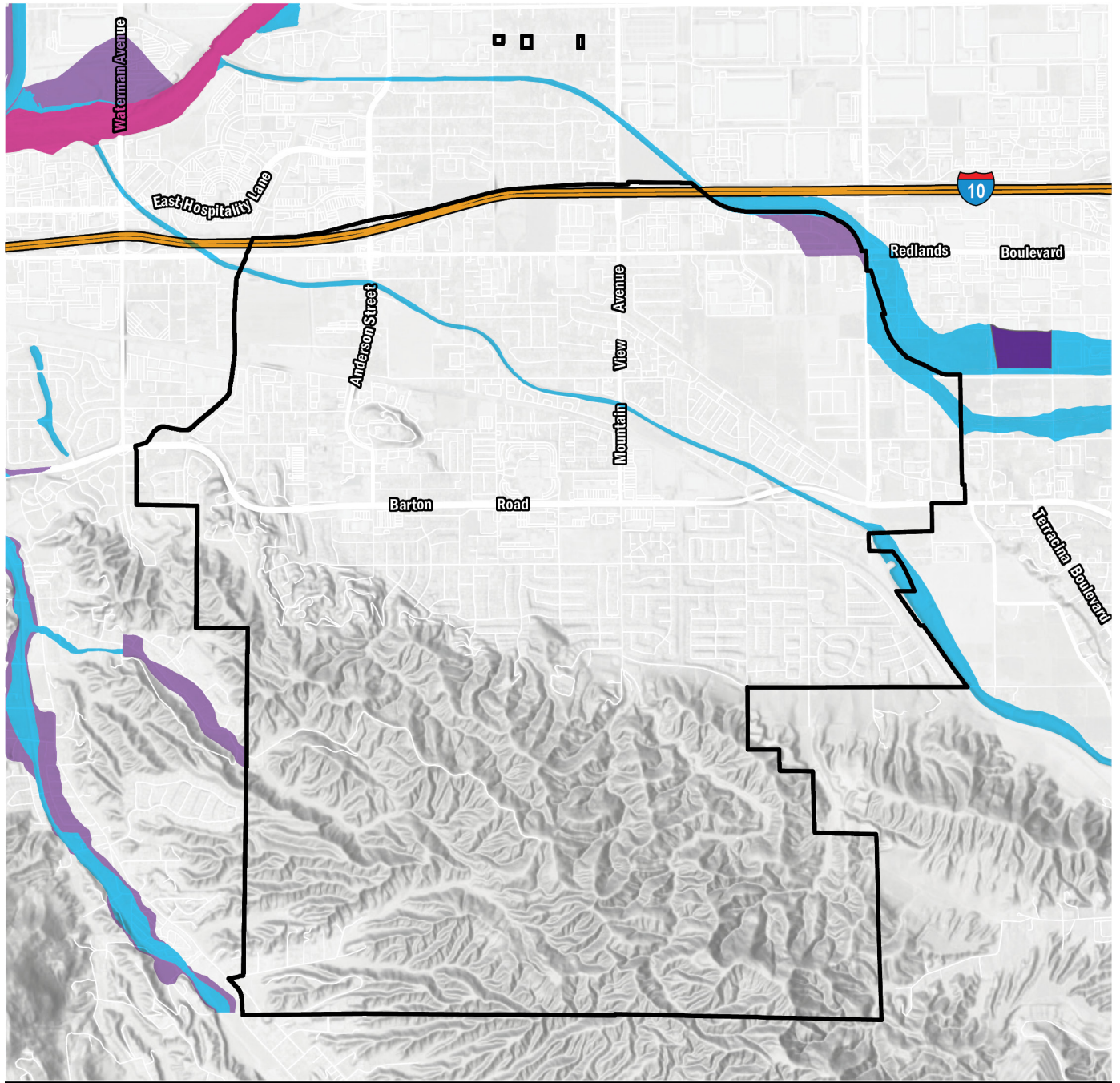
*Data sources: CGS.

MAP LEGEND





Figure 10.3 Loma Linda – Flood Risk Exposure



FEMA FLOOD RISK EXPOSURE LOMA LINDA

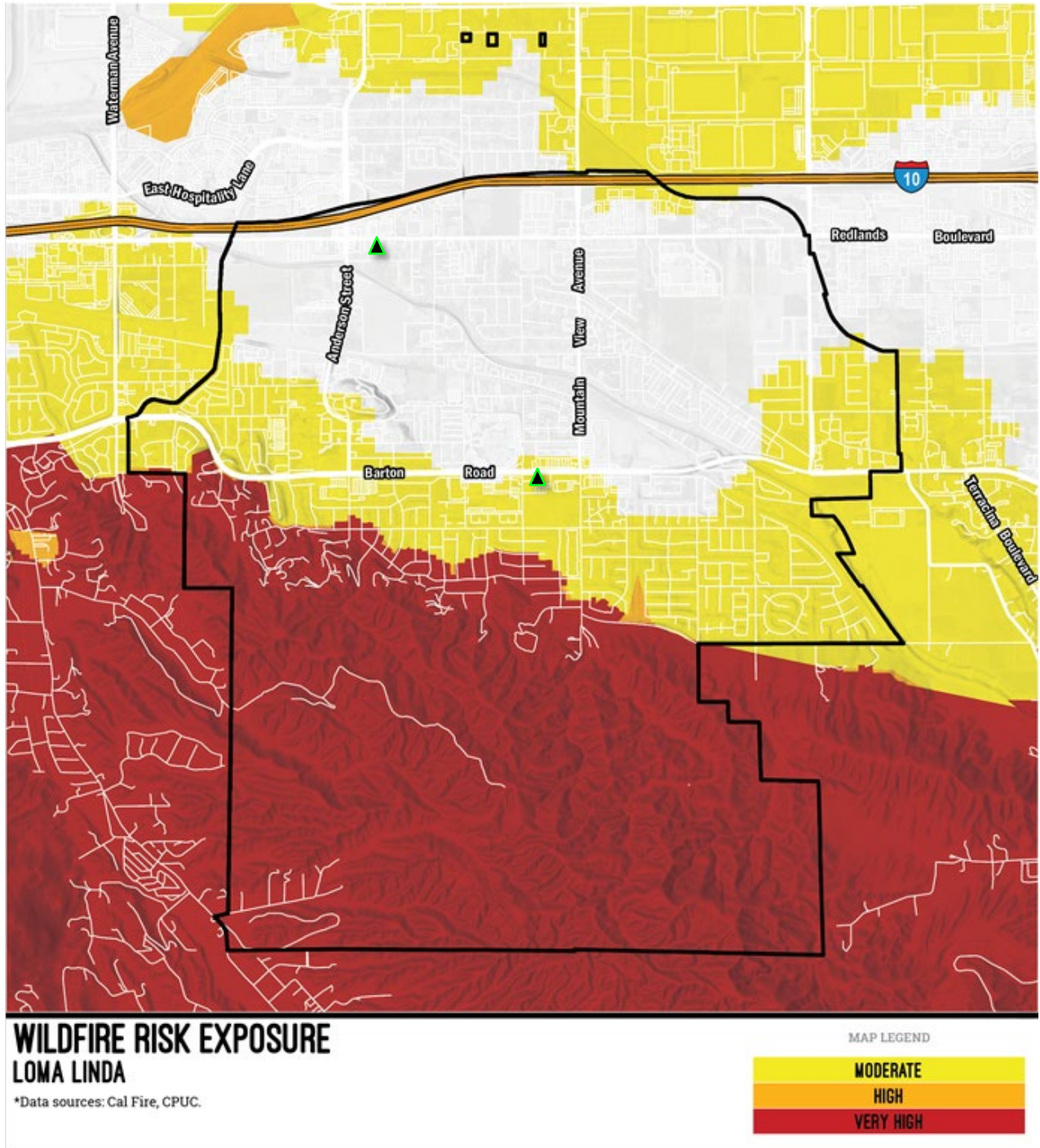
*Data sources: FEMA.

MAP LEGEND

100-YR	100-YR FLOODWAY
500-YR	PROTECTED BY LEVEE



Figure 10.4 City of Loma Linda Wildfire Risk Exposure



▲ - City of Loma Linda Fire Stations 251 & 252



Figure 10.5 Evacuation Routes

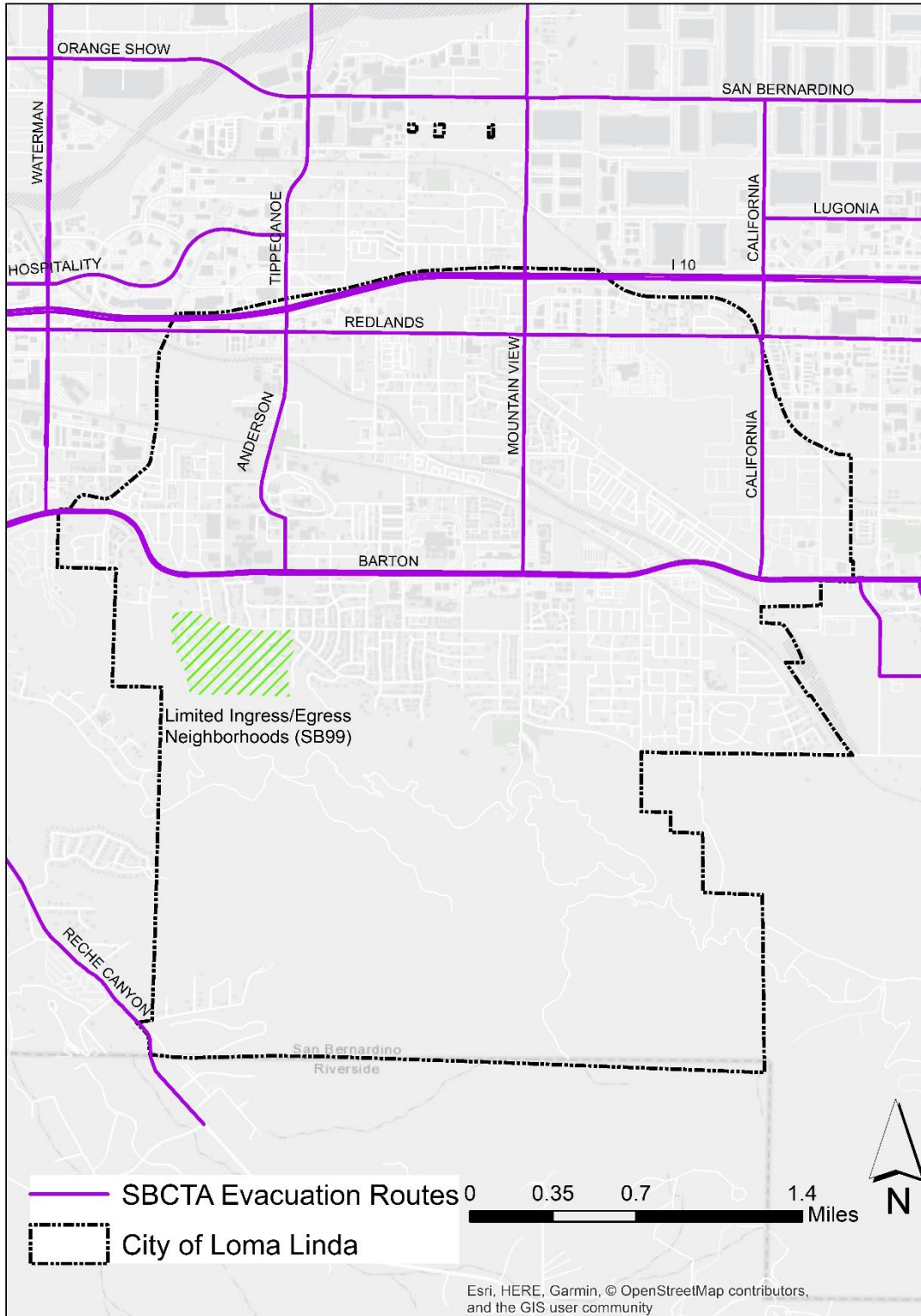




Figure 10.6 – Airport Influence Area

