

5.0

SAFETY ELEMENT

5.1 Introduction

The safety of a community is a key component of its quality of life. Protection of its citizens, visitors, structures, infrastructure, and public facilities from natural and human-made hazards is an important function of local government. The purpose of the Safety Element of the General Plan is to identify natural and human-made hazards in or near the City that pose potential danger to the safety and welfare of the community, and to establish goals, objectives, and policies to reduce risk to life and property from these hazards.

The Safety Element addresses seismic and other geologic hazards, flooding and other hydrologic hazards, fires and fire-related hazards, hazardous material and sites, crime, emergency preparedness and climate change. Hazardous incidents most likely to occur in La Cañada Flintridge include earthquakes, landslides, wildfire, hazardous material spills on the Interstate (I) 210 Freeway, and storm-related incidents such as debris and mud flows. Summaries of pertinent technical information regarding each of these topics are provided in the Safety Element for general information and to provide a context for the goals, objectives, and policies.

One of the City's primary tools for preparing and responding to hazards is the City of La Cañada Flintridge Local Hazard Mitigation Plan (LHMP). The LHMP is intended to serve as a mechanism for the community to promote sound public policy to reduce the risk and impact of disaster events. It also identifies natural and human-made hazards to the community; determines likely impacts from those hazards; assesses risk and vulnerability; sets mitigation goals; and provides action items, including ideas for implementation, identification of the coordinating organization, and a proposed time line. The LHMP will assist the community in allocating appropriate resources and setting priorities and standards to ensure the safety of people, property, infrastructure, the environment, and to minimize economic losses.

The LHMP addresses the hazards discussed in the Safety Element, and incorporates additional specific activities to mitigate issues related to drought, extreme heat, and windstorm.

The 2021 update of the Safety Element was conducted concurrently with the City’s 6th Cycle Housing Element Update, and incorporates recently adopted State laws requiring the following to be performed, updated and included in the Safety Element:

Safety Element Update Requirements	2021 Update Status
1. Identify and update information related to:	
a. Seismic and Geological Hazards	No change.
b. Evacuation Routes	Existing evacuation routes will be refined by the City in coordination with the Los Angeles County Sheriff’s Department (LASD) and County of Los Angeles Fire Department and prioritized for implementation to occur within the first two years following adoption of the Safety Element, to include capacity, safety, and viability under a range of emergency scenarios.
c. Military Installations	Not applicable.
d. Peak load water supply requirements	Ongoing coordination required with water agencies.
e. Minimum road widths and clearances around structures	Ongoing review and implementation required.
f. Flood hazards	No change.
g. Fire hazards	New policies included in this update, and new map showing the location of the Very High Fire Hazard Severity Zones (VHFHSZs) in the City.
2. Prepare a climate change vulnerability assessment and develop climate adaptation and resilience strategies	City adopted a Climate Action Plan (CAP) in 2016 which fulfills this requirement in part. It is incorporated in the Safety Element by reference. An update to the CAP was authorized by the City Council in 2021. Climate change vulnerability and adaptation are also addressed in the LHMP.
3. Identify residential developments in hazard areas that do not have at least two emergency evacuation routes.	Maps were prepared and added to the Safety Element in this update, showing the location of 12 neighborhoods in the City, representing 838 residences, approximately 10% of the City’s housing stock, that have a single point of access and egress. A new policy is proposed to prohibit the addition of ADU’s and JADU’s in these areas.

5.2 Setting

La Cañada Flintridge occupies the east end of the Crescenta Valley (Valley) and adjacent highlands on the Valley's south margin. The Valley is the westernmost portion of the larger San Gabriel Valley, and is set between the San Gabriel Mountains to the north and the Verdugo Mountains and San Rafael Hills to the south. Topography in the City is dominated by dramatic alluvial fans along the San Gabriel range front. Consistent with this setting, slopes are steeper adjacent to the range front, decreasing southward toward the valley floor. The valley floor itself is fairly flat and slopes eastward toward the main San Gabriel Valley. The highest point in the City is on its northern boundary on the San Gabriel Valley range front, at an elevation of 3,200 feet above mean sea level (AMSL). The lowest point in the City, near Devil's Gate Dam, has an elevation of 1,100 AMSL.

A significant portion of vacant land within the La Cañada Flintridge is on steep slopes with gradients greater than 30 percent. Much of this vacant land abuts the Angeles National Forest along the City's northern boundary. The combination of southern California's Mediterranean climate, with its winter and spring rainfall and hot dry summers, a preponderance of highly flammable vegetation within and adjacent to La Cañada Flintridge, the steep topography within the City, and the frequency of high wind velocity from the Santa Ana winds creates optimum conditions for wildfires and debris flows.

Land uses within the City are predominantly single-family residential, with local-serving commercial development located primarily along Foothill Boulevard. The City does not have manufacturing or industrial development, although NASA's Jet Propulsion Laboratory (JPL) is located within the City limits. The I-210 Freeway bisects the City.

5.3 Existing Conditions

5.3.1 Geologic and Soils Related Hazards

5.3.1.1 Soils and Erosion

The City is situated on soils assigned to the Hanford and Vista-Amargosa soil associations. Lowland areas are underlain by Hanford soils; uplands are underlain by Vista-Amargosa soils (U.S. Soil Conservation Service 1969). The Hanford association consists of loam and sandy loam soils that are well drained, with slow runoff, slight erosion hazard (except where dry soils are subject to wind erosion), and moderately rapid subsoil permeability. Shrink-

swell hazard (i.e., expansion potential) is typically low (U.S. Soil Conservation Service 1969).

The Vista-Amargosa association consists of thinner sandy loam soils are well drained and exhibit moderately rapid subsoil permeability. Amargosa soils are excessively drained, with rapid runoff and moderately rapid subsoil permeability. Erosion hazard is high; Amargosa soils are prone to sheet and rill erosion and gullyng. Shrink-swell hazard is low (U.S. Soil Conservation Service 1969) (see Figure SE-1 for soils of the City).

As noted above, soils upon which the City is situated pose potential hazards, including erosion and topsoil loss due to wind and rainfall, and slope instability resulting from development.

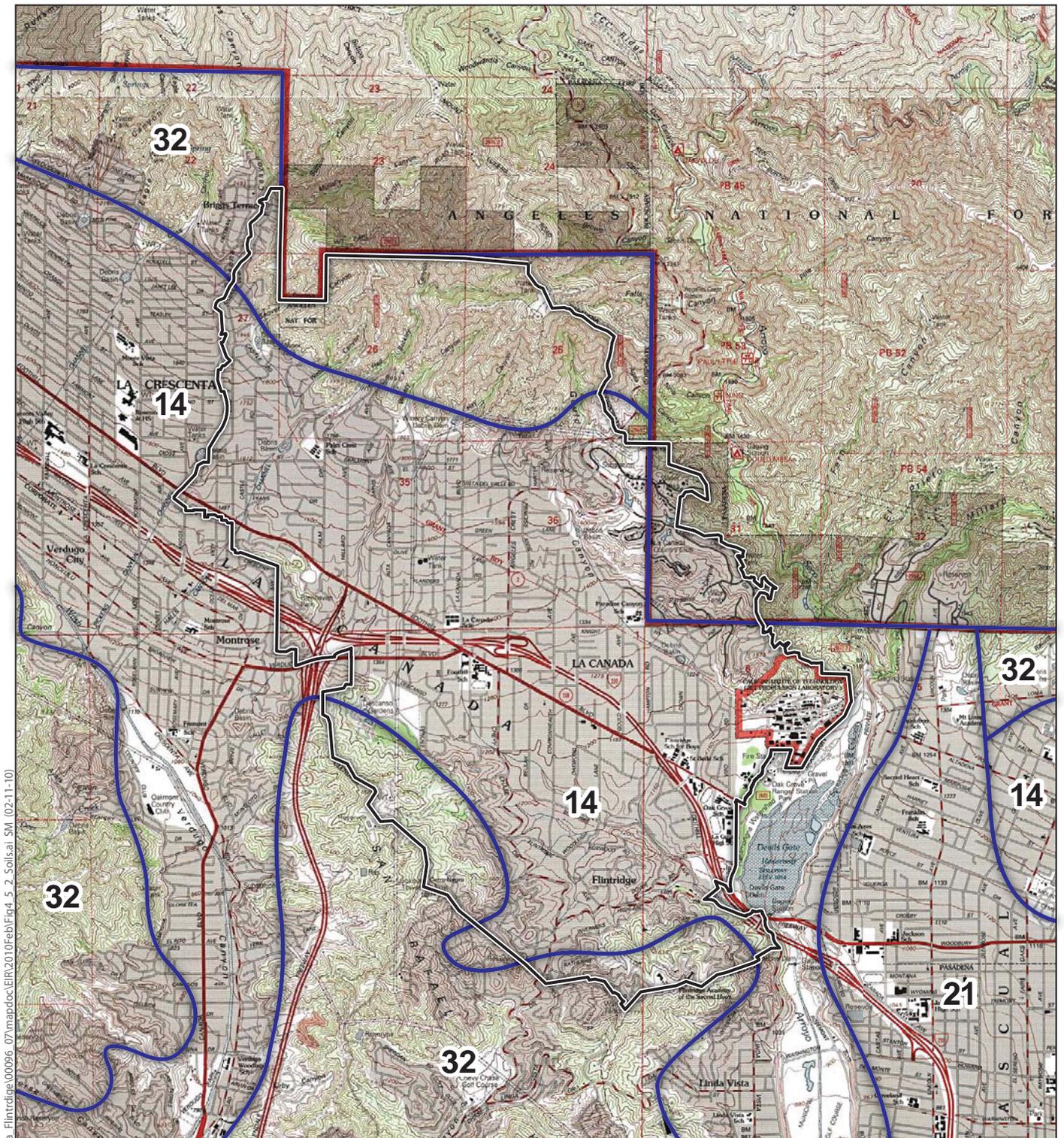
Construction of new development and some retrofits or remodels require excavation and/or fill placement to create appropriate building pads. If improperly designed or constructed, cut slopes and fills can become unstable, potentially leading to settlement or failure that could damage structures and create a safety hazard. Improper grading and fill activities also have the potential to destabilize existing slopes, potentially increasing landslide risks.

Loss of topsoil can occur due to grading and other ground disturbance, and also as a result of land that has been denuded due to wildfires, as in the case of property on the City's northern rangefront that was burned in the Station Fire of 2009. Topsoil is essential to support vegetation to reduce erosion and to provide natural habitats. Hazards regarding erosion and debris flows are discussed in greater detail in Section 5.3.2, *Flooding and Other Hydrologic Hazards*.

5.3.1.2 Seismic Hazards

La Cañada Flintridge is located in a seismically active region. Large earthquakes have occurred in the vicinity and will occur again in the future. Estimates by the Southern California Earthquake Center indicate a 35 percent probability of a magnitude 7 event in the next 30 years (Southern California Earthquake Data Center 2007a); smaller but still potentially damaging earthquakes can be expected to occur more frequently.

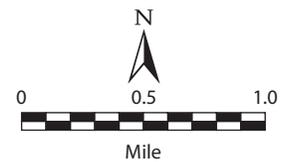
The State of California recognizes two broad categories of hazards associated with earthquake events: 1) *primary seismic hazards*, which include surface fault rupture and groundshaking; and 2) *secondary seismic hazards*, which include corollary results of groundshaking, such as seismically induced landslides and various types of ground failure, including liquefaction and ridge-top shattering. (Ridgetop shattering refers to earthquake-related shattering of bedrock materials along a ridgeline or other topographic high point.) Based on current knowledge of the City's geology, earthquake groundshaking, liquefaction, and seismically induced landslides are the most significant



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Legend

- La Cañada Flintridge city limits
- Soil mapping unit boundary
- 14** Hanford association, 2–5% slopes
- 21** Agoura-Placentia association, 2–5% slopes
- 32** Vista-Amargosa association, 30–50% slopes, eroded



Source: U.S. Soil Conservation Service 1969.

Figure SE-1
Soils of the City and Vicinity
City of La Cañada Flintridge

geologic hazards in the City. The Sierra Madre fault may also pose a localized risk of surface fault rupture.

Primary Seismic Hazards

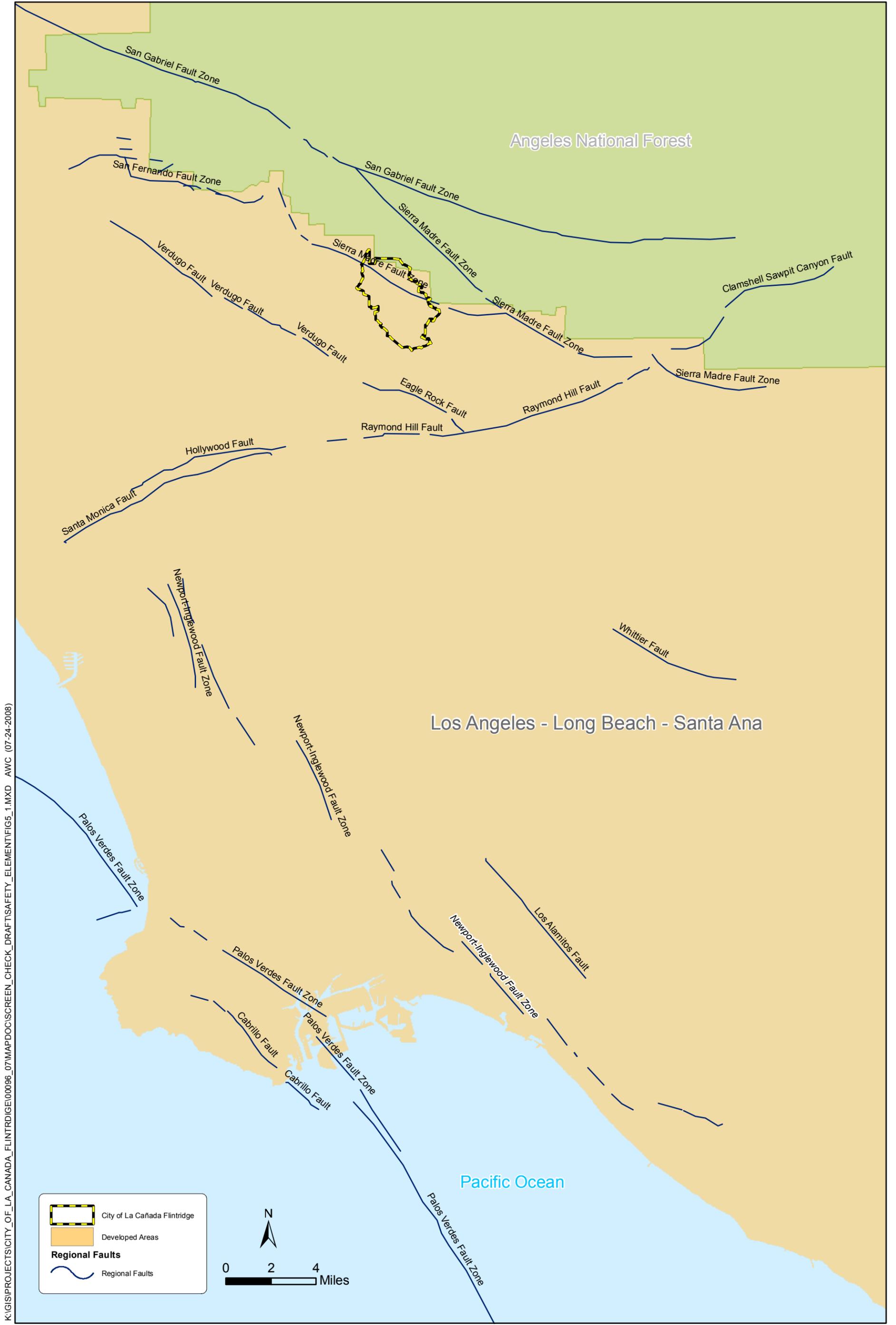
As of the date of preparation of this Plan, the City does not contain any faults recognized as active by the State of California and zoned under the Alquist-Priolo Earthquake Fault Zoning Act. Nonetheless, the level of hazard associated with the Sierra Madre fault zone, which traces the south flank of the San Gabriel Mountains across the City's northern edge, may be substantial. The California Geological Survey is currently evaluating whether this segment of the Sierra Madre system warrants zoning under the Alquist-Priolo Earthquake Fault Zoning Act.

Recent studies suggest that a large earthquake on the San Andreas fault to the north – like that responsible for the 1857 Fort Tejon earthquake – could trigger corollary ruptures on reverse faults along the southern margin of the San Gabriel Mountains (Southern California Earthquake Data Center 2007b). Whether all segments of the Sierra Madre fault zone would or could rupture in such an event is unknown. However, this and other reverse faults of the Transverse Ranges continue to be the subject of intense scrutiny, and estimates of the potential for surface rupture along the Sierra Madre fault may need to be revised as understanding of this important feature increases.

A number of other faults, recognized as active by the State of California and/or the California Building Code, are present in the surrounding region, and a moderate to major event on any of these faults could result in potentially damaging groundshaking in the City. Figure SE-2 delineates the location of principal active faults in the City and surrounding area. Table SE-1 summarizes their characteristics.

Table SE-1. Maximum Credible Earthquake and Recurrence Interval for Key Southern California Faults

Fault	Zoned by State?¹	Magnitude of Maximum Credible Earthquake	Approximate Recurrence Interval³
Cucamonga	Yes	M _w 6.0–7.0 ³	Estimated at 600–700 years ³
Hollywood	No	M _w 5.8–6.5 ³	Uncertain; believed to be approximately 1,600 years ³
Newport-Inglewood	Yes	M _w 6.0–7.4 ³	Unknown ³ ; 1,200–3000 ⁴
Raymond, Raymond Hill	Yes	M _w 6.0–7.0 ³	Roughly 4,500 years ³
San Andreas	Yes	M _w 6.8–8.0 ³	Ranges from less than 20 years at Parkfield in the north to more than 300 years; averages about 140 years on Mojave segment of fault ³
San Fernando	Yes	M _w 6.0–6.8 ³	100–300 years ³



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Source: California Geological Survey 2001; ESRI Streetmap (2006)

Figure SE-2
Principal Faults in the City and Surrounding Area
City of La Cañada Flintridge

Fault	Zoned by State?¹	Magnitude of Maximum Credible Earthquake	Approximate Recurrence Interval³
San Gabriel	Portions are zoned	Unknown ³	Unknown ³
Santa Monica	No	M _w 6.0–7.0 ³	Unknown ³ ; 7,000–8,000 years ⁴
Sierra Madre	No	M _w 6.0–7.0 ³ , possibly >7.0 ⁴	Uncertain; believed to be several thousand years. ³ May be as much as 7,000–8,000 years for events ≥M 7). ⁴
Verdugo	No	M _w 6.0–6.8 ³	Unknown ³
Whittier	Yes	M _w 6.0–7.2 ³	Unknown ³

M_w = moment magnitude.

Sources: ¹Hart and Bryant 1997, ²ICBO 1997, ³Southern California Earthquake Data Center 2007b, ⁴U.S. Geological Survey 2009.

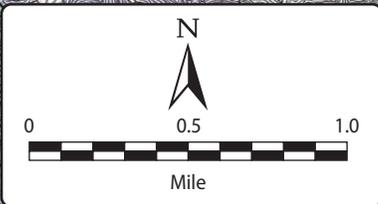
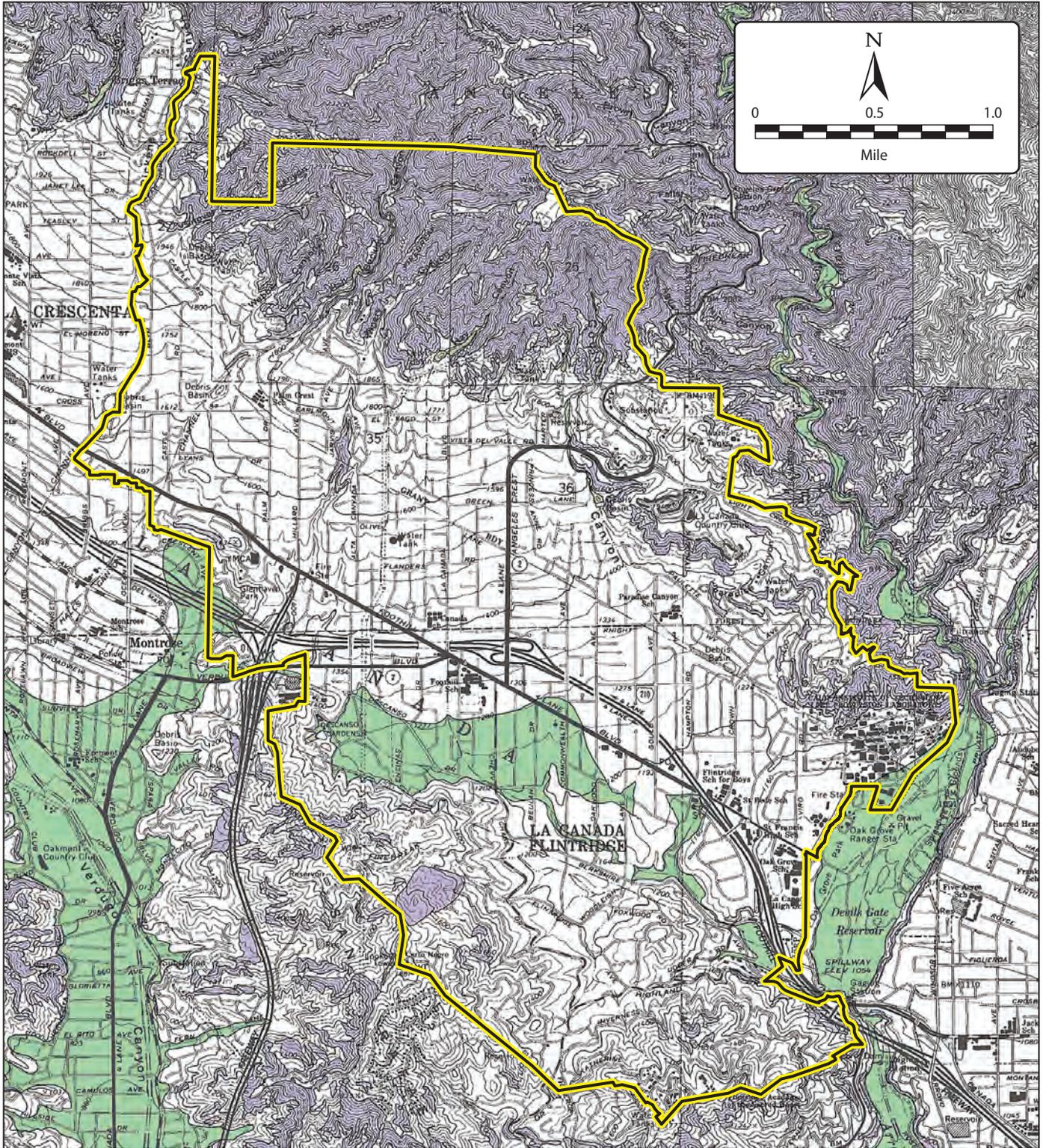
Secondary Seismic Hazards

Liquefaction: Liquefaction hazard is generally low in the City's northern portion, which is largely underlain by alluvial fan deposits dominated by coarse material (boulders, gravel, and sand), with the exception of sand-dominated strata along major drainages, which are believed to be liquefiable (Tinsley et al. 1985, California Division of Mines and Geology 1999). Portions of the City's central Valley floor area south of I-210 and Foothill Boulevard are subject to liquefaction, as is the area around Devil's Gate Reservoir, which is adjacent to the City's eastern boundary (see Figure SE-3).

Seismically Induced Landslides: Any earthquake with a magnitude of 4 or above may result in seismically induced landslides; a magnitude 8 event may result in thousands or tens of thousands of slope failures at distances as far as 250 miles from the fault responsible for the earthquake (Wilson and Keefer 1985). Consequently, the northern edge of the City could experience seismically induced landslides triggered by a local event, or as a result of a major earthquake event at a substantial distance from the City center. Areas of seismically induced landslide hazard are also present in hillside areas in the southern portion of the City. Figure SE-3 shows State Seismic Hazards Zones in the City and vicinity. Steep bedrock exposures in the City's hillside areas may be at some risk of bedrock landslides, particularly where they have been steepened and/or loaded as a result of development.

5.3.2 Flooding and Other Hydrologic Hazards

The City is susceptible to flooding due to its proximity to the Los Angeles River and the fact that it is a hillside community. The City is also subject to debris and mud flows and landslides due to the steep topography. Figure SE-4 presents the



MAP EXPLANATION

Zones of Required Investigation:

Liquefaction

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



Earthquake-Induced Landslides

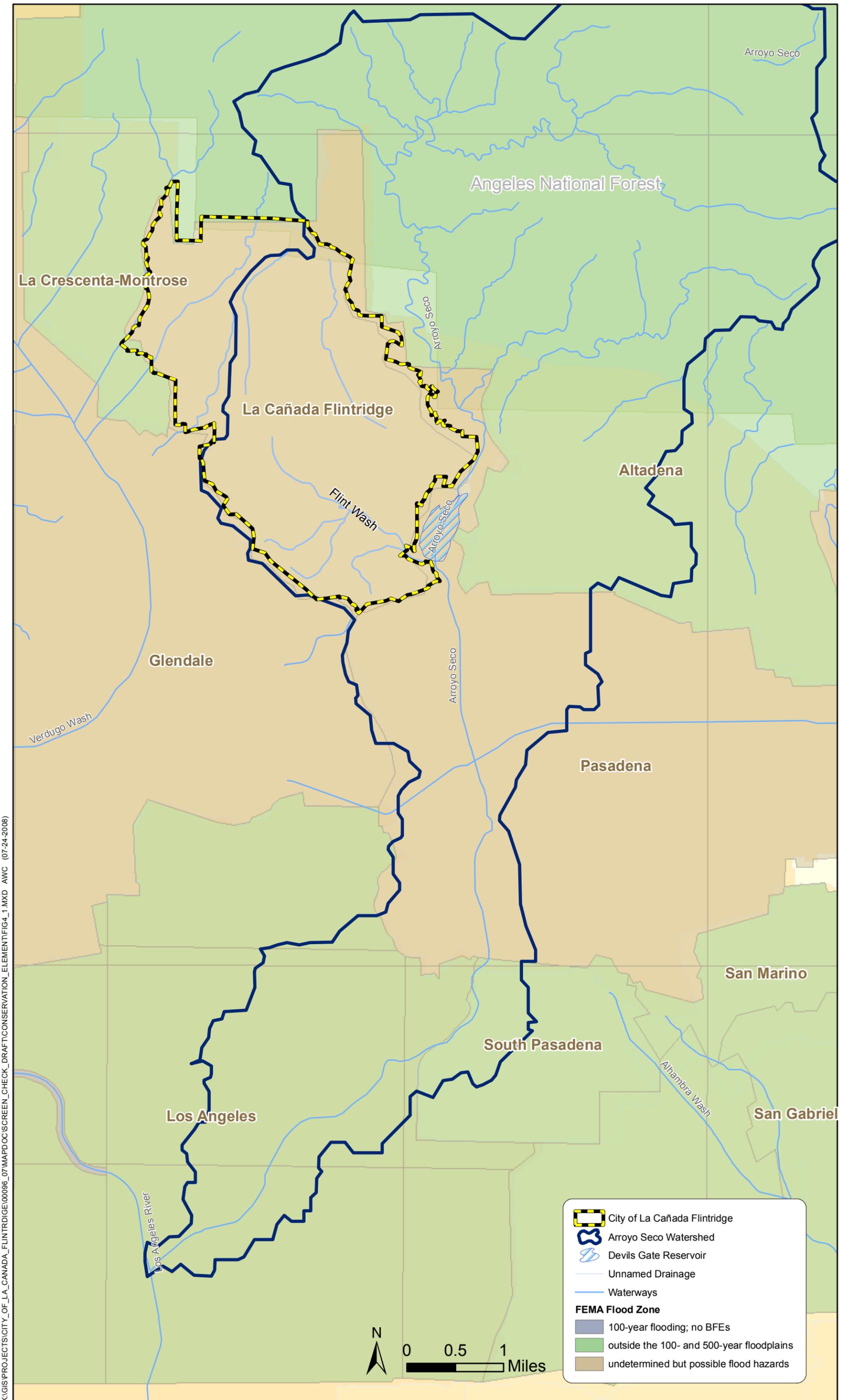
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



La Cañada Flintridge City Limits

Source: California Division of Mines and Geology 1999

Figure SE-3
State of California Seismic Hazard Zones in the City and Vicinity
City of La Cañada Flintridge



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Source: ESRI Hydro (2003)

Figure SE-4
Hydrology Map
City of La Cañada Flintridge

hydrology of the City and vicinity. Figure SE-5 shows the location of surface water, drainage, and debris and desilting basins within and adjacent to the City.

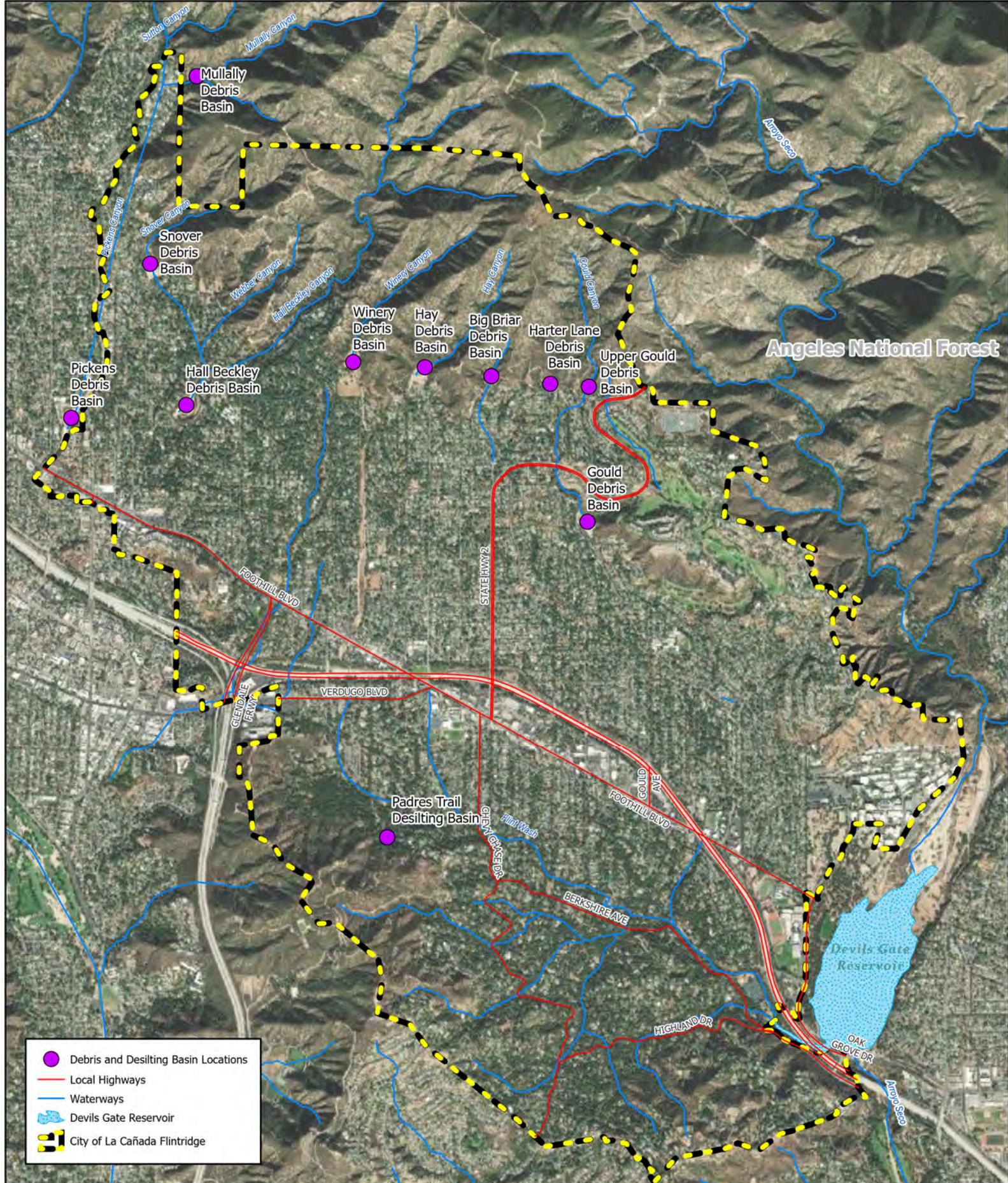
5.3.2.1 Flooding

Per the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map, portions of the City that are located in the Valley are classified by FEMA as being located in Zone X. Zone X is defined as being an area outside the 0.2 percent annual chance floodplain. Other portions of the City located in or at the base of the foothills are defined as being in Zone D. Flood Zone D is assigned to "areas in which flood hazards are undetermined, but possible." Areas assigned this flood zone designation have not been reviewed through a detailed hydraulic study process and are assumed to have the potential to flood based upon typical rainfall patterns, watershed characteristics, and land use in the area. No 100-year or 500-year floodplains have been identified in the City.

Minor flooding problems occur during intense storm periods at several locations, including Foothill Boulevard, on the north side east of Ocean View Boulevard; Foothill Boulevard, on the north side at Lasheart Drive; and Georgian Road, south of Flintridge Oaks Drive.

5.3.2.2 Debris and Mud Flow Hazards

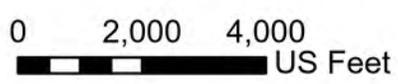
In the City's upland areas, the steepness of the terrain and the potential for periods of intense rainfall combine to create a substantial erosion hazard. Large amounts of debris and soil are washed down from higher elevations within and adjacent to the City during and after large storms. This creates the potential for significant erosion on vacant land with steep slopes.



- Debris and Desilting Basin Locations
- Local Highways
- Waterways
- Devils Gate Reservoir
- City of La Cañada Flintridge

Data Sources: California Department of Water Resources (2021); City of La Cañada Flintridge; ESRI

Figure SE-5
Surface Water and Drainage
City of La Cañada Flintridge



With its steep topography and semi-arid Mediterranean-type climate typified by heavy seasonal rainfall, the San Gabriel Mountains rangefront is a known area of substantial debris flow (i.e., mudslide) hazard; similar hazards apply in the Verdugo and San Rafael Hills. The greatest risks associated with debris flows are concentrated in and adjacent to rangefront and hill-area drainages, and in and adjacent to upper alluvial fan channels, where drainages exit the range onto the valley floor. Some soils in the City are also highly erodible; the potential for rapid erosion contributes to debris flow hazards by providing sediment input to rain-swollen drainages. These risks are exacerbated when the land has been denuded due to wildfires.

The City has several flood-control facilities in place, including stormwater systems, drainage channels, and debris basins. Although these facilities have historically controlled the vast majority of flooding and debris flows within developed portions of the City, many debris basins were unable to hold back the torrents of mud, rocks, trees, and ash that flowed from the San Gabriel rangefront onto property, into homes, and down streets after the Station Fire (described below) during the winter storms of 2009–2010. The Los Angeles County Flood Control District reported that approximately 407,000 cubic yards of debris was removed from debris basins in the City during the 2009–2010 winter storm season.



Debris Basin (above) and Storm Drain Channel (below)



5.3.3 Wildfires

Potential fire hazards for a community exist due to natural and human-made conditions. The most significant fire hazard in the City is the potential for wildfires. Data from the wildfirerisk.org website published by the USDA Forest Service indicates that populated areas in La Canada Flintridge have, on average, greater wildfire likelihood than 85% of all the communities in Los Angeles County. There are several factors that contribute to the susceptibility of wildfire danger in the City, including climate, winds, steep terrain, vegetation (e.g., chaparral), subdivision design, and water supply. Much of the hillsides and mountainous terrain on the northern and southern slopes within the City are largely covered in chaparral grasses. Chaparral poses unique problems for fire prevention because its components are extremely combustible and genetically predisposed to burn.

These hillside areas directly abut developed properties within the City. The area where human development meets and intermingles with undeveloped wildland and/or vegetative fuels is a wildfire-hazard area that poses significant risks to life, property, and infrastructure. In addition, areas surrounding the City, such as the Angeles National Forest, are subject to wildfire hazard due to their native vegetation and steep topography.

Such a wildfire, known as the Station Fire, broke out on August 26, 2009, north of the City in the Angeles National Forest near the U.S. Forest Service Angeles Crest Station off Angeles Crest Highway. The Station Fire is the largest fire in Los Angeles County recorded history. It burned over 160,500 acres, caused the death of two fire fighters, destroyed 209 structures, including 89 homes, and caused mandatory evacuations in adjacent communities, including La Cañada Flintridge. Although no structures were destroyed within the City, the fire burned vegetation on the steep northern foothills of the San Gabriel Mountains adjacent to and within the City. More recently, another fire in the Angeles National Forest northeast of the City, the Bobcat Fire, broke out on September 6, 2020 and burned approximately 115,800 acres, and destroyed 170 structures, including 87 homes.



Wildfire charred hillside near homes



As a result of deforestation, ongoing potential impacts resulting from the fire include mudslides, debris flows, and flooding, as well as impacts on watersheds.

One of the human-made conditions that contributes to potential fire hazards is the original city design. Portions of the City were developed into the steep terrain, resulting in long, winding roads that terminate on the sides and tops of ridges leading to single-family residences.



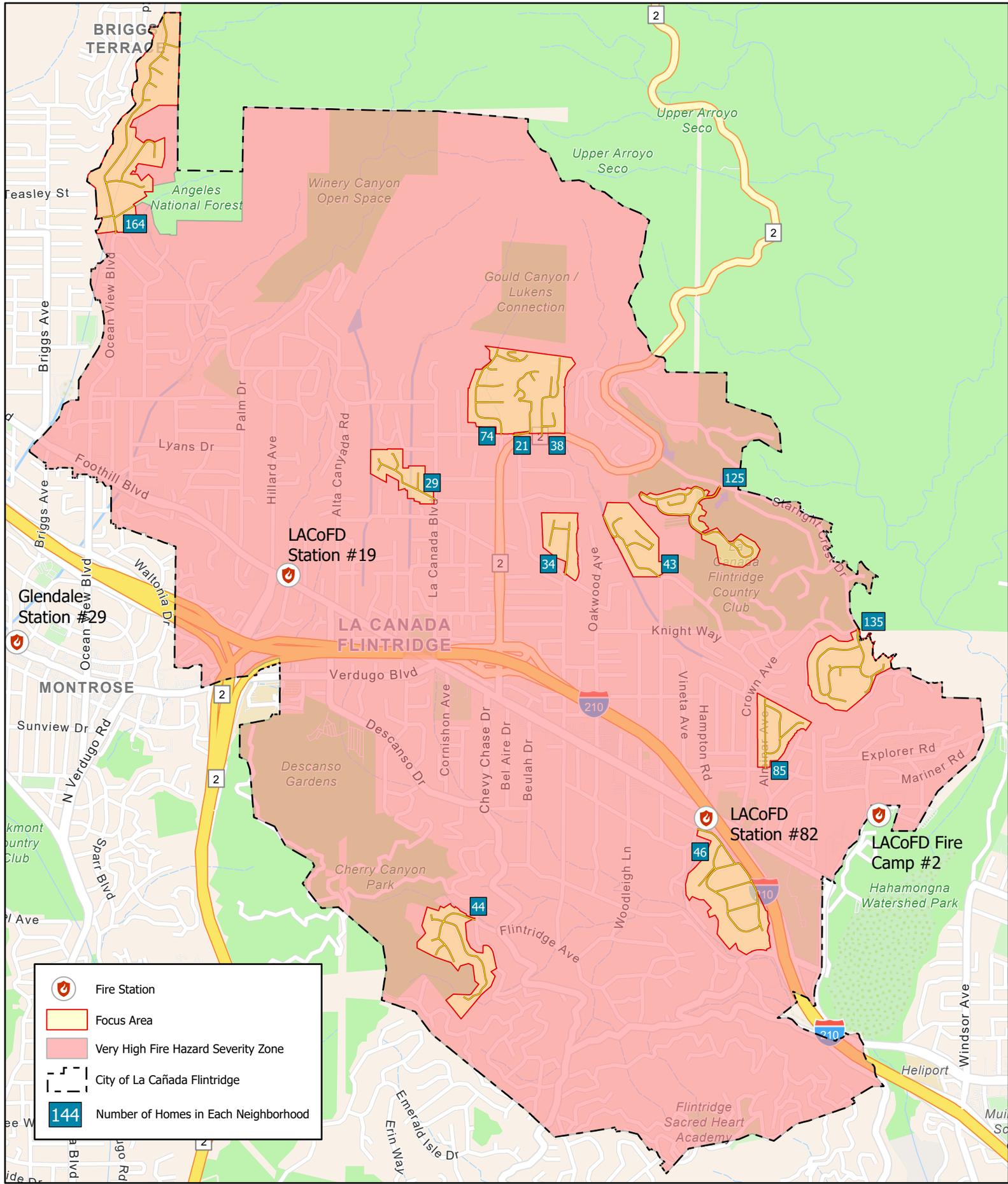
Station Fire (2009) as seen from Foothill Boulevard

This creates a challenge for emergency vehicles

which may, at times, have difficulty accessing homes due to inadequate roadway widths, and vehicles parked on-street within the right-of-way further narrowing the drive lanes. In many areas there is not adequate space for emergency vehicle turnarounds in single-family neighborhoods. Because La Cañada Flintridge is a Tree City, there are approximately 15,000 trees that are located in the public right-of-way, which can narrow available drive lanes for emergency vehicles to navigate, and also creates a potentially hazardous situation in the event of evacuation, especially if thick smoke is present. Dense foliage intended to provide privacy for homeowners can prevent firefighting equipment from having adequate visibility and access to structures. Some locations in the City lack visible street signs, while others have a street numbering system that does not follow the County addressing standard and needs to be corrected to improve public safety.

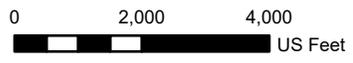
The City has twelve neighborhoods with a single point of access and egress potentially affecting up to 838 homes, over 10% of the housing stock. Figure SE-6 shows the VHFHSZ, the location of the twelve neighborhoods in the City, and the location of the existing emergency service facilities. Due to the age of many of these areas, water infrastructure and supply may not meet current standards. In many areas of the City, fire hydrants do not meet current Fire Code standards for spacing and the reliability of the water distribution infrastructure for firefighting is unknown. In addition, some of the older structures in the City may be susceptible to fires due to construction and materials that have not been updated to meet current codes, such as combustible roofing and siding, open eaves and vegetation that does not meet current Fuel Modification guidelines.

La Canada Flintridge's tree canopy is diverse, and includes both native and non-native species. Native species provide many positive benefits, including



Data Sources: LA County Fire Department, City of La Cañada Flintridge, CAL FIRE, ESRI

Figure SE-6
Nighborhoods with a Single Point of Access
City of La Cañada Flintridge



aesthetics, shade, privacy, water efficiency and carbon sequestration, provided they are manicured and maintained properly. Highly flammable trees must be discouraged. The City maintains the trees in the public right-of-way at a minimum of every 5 years, to industry standards.

Figure SE-7 shows the location of the critical facilities in the City. These include the location of utilities, water reservoirs, and essential public facilities.

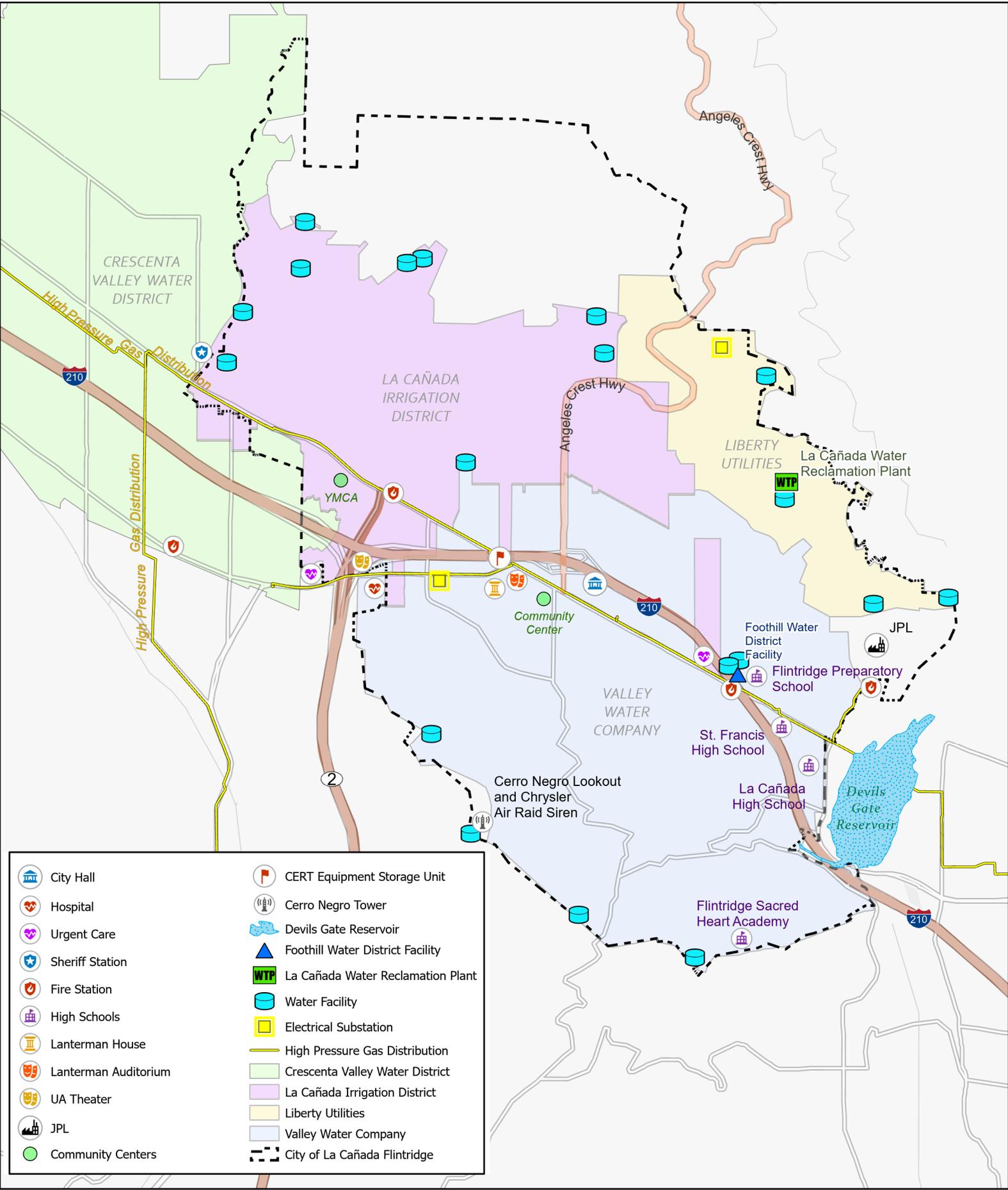
Potentially vulnerable populations may experience difficulty in preparing for and responding to wildfire. In La Cañada Flintridge, this primarily includes people over 65 and people with disabilities, see Table SE-2.

Table SE-2: Vulnerable Populations in La Cañada Flintridge ¹

Vulnerable Populations ²	Number		Percent	
Families in poverty	116	± 78	2.1%	± 1.4%
People with disabilities	1355	± 196	6.7%	± 1%
People over 65 years	3738	± 325	18.3%	± 1.6%
Difficulty with English	629	± 176	3.3%	± 0.9%
Households with no car	115	± 63	1.7%	± 1%
Mobile homes	0	± 33	0	± 0.5%
¹ Based on a population of 20,374 ² Data are from the most recent 5-year rolling survey period of the U.S. Census Bureau American Community Survey, 2019 Source: Wildfirerisk.org, USDA Forest Service, 2021				

5.3.4 Hazardous Materials and Sites

Hazardous materials are used, stored, produced, and transported throughout Los Angeles County, including within the City. Hazardous materials are defined as those that pose a potential threat to human health, having the capacity to cause serious illness or death. These materials include chemicals, radioactive waste and explosives, natural gas and petroleum, pesticides, agricultural chemicals, and household cleaning products.



- | | | | |
|--|----------------------|--|-----------------------------------|
| | City Hall | | CERT Equipment Storage Unit |
| | Hospital | | Cerro Negro Tower |
| | Urgent Care | | Devils Gate Reservoir |
| | Sheriff Station | | Foothill Water District Facility |
| | Fire Station | | La Cañada Water Reclamation Plant |
| | High Schools | | Water Facility |
| | Lanterman House | | Electrical Substation |
| | Lanterman Auditorium | | High Pressure Gas Distribution |
| | UA Theater | | Crescenta Valley Water District |
| | JPL | | La Cañada Irrigation District |
| | Community Centers | | Liberty Utilities |
| | | | Valley Water Company |
| | | | City of La Cañada Flintridge |

Data Sources: LA County Fire Department, Southern California Gas Company, City of La Cañada Flintridge, CAL FIRE, ESRI

Figure SE-7
Critical Facilities
City of La Cañada Flintridge



5.3.4.1 Transportation of Hazardous Materials

Many miles of natural gas and petroleum pipelines traverse Los Angeles County. Hazardous materials are also carried on railcars throughout the region, as well as within tanker trucks on the region's freeways, including I-210, which transects the City. There is a potential for accidental releases into the environment in the event of a pipeline break or accident on the freeway or rail line.

5.3.4.2 Sites Associated with Hazardous Materials

Various entities and businesses in the City generate, transport, store, treat, or dispose of hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA). Since most fuels, lubricants, solvents, and paints are considered hazardous materials under RCRA, businesses and institutions that use substantial quantities of such materials are required to adhere to very strict regulations regarding the handling, transport, and storage of hazardous materials. Facilities that are required to adhere to such regulations include, but are not limited to, the following:

- automobile repair facilities;
- gas stations;
- automobile service facilities;
- construction firms;
- research and development and manufacturing firms;
- painting contractors and paint suppliers;
- dry cleaning firms;
- schools;
- hospital and medical facilities; and
- trucking firms.

Businesses other than those listed above, as well as residences, also pose risks associated with hazardous materials. Improper storage and disposal of household hazardous waste pose risks to people and the environment. Many people are unaware that common household products, such as batteries, paint, and pesticides, are not allowed to be disposed of in landfills.

JPL, which is located at the eastern edge of the City, was placed on the EPA National Priorities List (NPL) of sites governed by the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as the Superfund law. In the 1940s and 1950s, chemicals were disposed of in seepage pits on the JPL site. More than 50 chemicals have been detected in the groundwater beneath JPL, including volatile organic compounds (VOCs)–

carbon tetrachloride, trichloroethene, dichloroethane, and tetrachloroethene – and perchlorate (a component of solid rocket fuel). Over the years, these chemicals moved down through the soils and into the deep groundwater aquifer of the Raymond Basin watershed in a south/southeasterly direction from JPL (NASA 2008). NASA has or is in the process of constructing groundwater treatment plants in Altadena, Pasadena, and on the JPL site (Environmental Protection Agency 2008).

5.3.5 Crime and Criminal Activity

The City has a very low crime rate relative to the greater metropolitan region. The most common crimes are residential burglaries and malicious mischief, including youth-related offenses.

The City contracts with the Los Angeles County Sheriff's Department (LASD) for law enforcement services. The Crescenta Valley Station, at 4554 Briggs Avenue in La Crescenta, serves the La Cañada Flintridge community, as well as the unincorporated areas of Montrose, La Crescenta, Lopez Canyon, and the mountainous areas north of these communities. At this time, the Sheriff's Department plans no major upgrades and the City does not anticipate any change to current contract levels with the Sheriff's Department.

5.3.6 Emergency Preparedness and Response

Emergencies and disasters can result from natural or human-made causes, such as earthquakes, wildfires, landslides, civil disturbance, national security emergencies, technological incidents, and health-related epidemics and pandemics. Although communities put policies, plans, and programs in place to minimize the potential for such events, they must be prepared for the possibility. Even emergencies and disasters that do not occur physically within a community can have significant impacts on the community. Proper preparation and coordination for such events can minimize the extent of adverse consequences, such as identifying emergency evacuation routes, potentially vulnerable populations in the City, and locations in nearby communities for residents to take shelter if needed. Preventative measures taken before an emergency occurs can also expedite recovery from such incidents. The City's LHMP is described in Section 5.1, and is one of the City's primary tools for preparing and responding to hazards.

5.3.6.1 National and State Level

The National Incident Management System (NIMS) was established by the federal Department of Homeland Security as a unified approach to incident

management. The intent is to improve the efficiency and effectiveness of responders from different jurisdictions and disciplines when jointly responding to natural disasters and emergencies. In California, NIMS is implemented at the State level through the Standardized Emergency Management System (SEMS). All agencies that participate in any emergency are required to have and maintain appropriate training and certification and operate under NIMS and SEMS. The City is compliant with NIMS and SEMS.

5.3.6.2 Local and Regional Level

La Cañada Flintridge has a Public Safety Commission that evaluates the community's safety needs, provides direction for emergency preparedness, and makes recommendations to the City Council. The City also has an Emergency Services Coordinator whose responsibility is to oversee the City's disaster and emergency operations. These responsibilities include response to public health emergencies such as the pandemic caused by the coronavirus disease 2019, commonly referred to as COVID-19.

The City invested in a mass notification system called Alert LCF. Alert LCF is used to deliver emergency alerts to residents when there is a threat to the health and safety of residents in the City and provides critical information such as evacuation orders and shelter locations. It is critical for residents to sign up and provide secondary, even tertiary phone numbers to be included in the system. The City conducts quarterly testing of the Alert LCF system to ensure that reverse 911 messages are being pushed out and appropriately received.

An Emergency Operations Center (EOC) is staffed by the City's emergency coordinator and trained City staff. As part of the City's ongoing training requirements, all City staff were required to complete a FEMA training course, Introduction to Incident Command System (ICS-100) in 2020. The Incident Command System is a standardized approach to the command, control and coordination of emergency response for temporary incidents that allows personnel from a wide variety of agencies to quickly work within a common management structure with common terminology. The City is requiring ongoing training of all City staff for this emergency response program.

The City adopted the Community Emergency Response Team (CERT) program to replace the former Volunteer Emergency Response Team (VERT) program since the Federal Emergency Management Agency (FEMA) now uses CERT as a national model for other communities and both the City's partner public safety agencies, the LACoFD and the LASD have implemented department-wide CERT training Programs. Having a unified program with the local public safety partners increases the capacity to which participants in the City's new CERT program can offer. An added feature of CERT is the incorporation of training developed by FEMA allowing the consistent, nationwide approach to volunteer training and organization. This training increases the knowledge of the program

participants for how to help in an emergency and allows professional responders the ability to rely upon CERT members during disaster situations. CERT members also provide critical support to professional responders during an emergency situation or a disaster.

The City is also part of a Disaster Management Area through a Joint Powers Agreement with Los Angeles County. It is part of Disaster Management Area C that includes 10 cities: La Cañada Flintridge, Monterey Park, Alhambra, Burbank, Glendale, Pasadena, San Fernando, San Gabriel, San Marino, South Pasadena and the County of Los Angeles. The goal of this program is to coordinate in planning for preparedness, mitigation, and recovery from emergencies or disasters.

NASA's Jet Propulsion Laboratory (JPL), located at the far eastern end of La Cañada Flintridge, has a Memorandum of Understanding (MOU) and Annual Operating Plan (AOP) in place with LACoFD on JPL's behalf. As a facility of the federal government, they do not fall under the normal State Master Mutual Aid Agreement, so this codifies their mutual aid arrangements. The MOU is a standing document and the AOP is reviewed annually. JPL provides and maintains Helispot 82A which is located on the Mesa at JPL and the JPL Fire Department HazMat team will respond at LACoFD's request to support their operations if needed.

5.3.7 Climate Change

In accordance with the requirements of SB 379, codified at Government Code Section 65302(g)(4), climate change adaptation and resilience must be addressed in the safety element of all general plans in California. For cities with current LHMP's and other documents that address the anticipated vulnerabilities associated with climate change, these documents can be incorporated by reference. The City of La Cañada Flintridge's LHMP is incorporated by reference in this Safety Element.

Addressing climate change requires an integrated approach that targets both the sources of climate change, and the effects. Efforts to reduce the sources of climate change are termed climate change mitigation, greenhouse gas emissions (GHG) mitigation, or climate action. Efforts to reduce harm from the effects of a changing climate are referred to as climate adaptation and resilience.

The purpose of climate adaptation planning is to seek strategies to reduce vulnerability to projected climate change effects, increase the local capacity to adapt, and build resilience. A climate resilient city is one that is prepared for the effects of climate change, continues to provide essential services, protects the most vulnerable during hazardous events, and continually learns and adjusts in the face of change and disruption.

In 2016, the City adopted its first Climate Action Plan (CAP). This plan's focus is on reducing GHG's through a series of implementation measures in the categories of energy, water, transportation, solid waste, and urban greening. The CAP is incorporated by reference in this Safety Element. In 2021, the City Council authorized staff to prepare an update to the CAP.

Overall, the primary risks associated with climate change that are projected to impact the City of La Cañada Flintridge are increased risk of wildfires, precipitation pattern changes which can result in drought and/or flooding, and extreme heat events.

5.4 Planning to Address Safety Issues

Planning to address safety issues includes the consideration and integration of many elements, such as preparation, mitigation, response, recovery, and ensuring continuity of government, services, and operations. The City's plan to address safety issues is summarized below and described further under Section 5.5, *Goals, Objectives, and Policies*. In addition, policies have been incorporated into other General Plan elements to work collectively to support land use, conservation, and other actions and decisions to reduce safety risks for residents and the greater community.

5.4.1 Addressing Seismic, Soils, and Other Geologic Hazards

La Cañada Flintridge is subject to seismic hazards and other geologic hazards, as listed below.

- There is potential for structural and infrastructure damage as a result of strong seismic shaking throughout the City
- Upland and range front areas are at risk from landslides (including seismically induced landslides) and landslide runout.
- There are risks associated with landslide runout zones adjacent to steep slopes.
- Lowland areas are at risk of liquefaction.
- There is potential for accelerated erosion and loss of topsoil resources, particularly in upland areas where soils are highly erodible or have been denuded by wildfires.
- Upland areas are at risk of non-seismic landslides and the potential for hillside grading to increase the risk of slope failure.

- The corridor along the Sierra Madre fault zone may be subject to surface fault rupture hazard.

Since the City's existing geology cannot be altered and earthquakes are unavoidable, the City's plan is to mitigate these potential hazards to the extent possible through good planning, regulations, public education and outreach, and keeping current on research and new regulations.

The City's existing Hillside Development Ordinance, which applies to residential parcels that have an average slope of 15 percent or greater, includes requirements to mitigate potential geologic impacts associated with development in areas with steep slopes. In addition to grading, the ordinance requires a soils engineering report and a geology report where alteration to existing topography is proposed. The Hillside ordinance was adopted subsequent to approval of the previous Safety Element and Seismic Safety section of the Environmental Resources Management Element. Therefore, the updated Safety Element reflects policies consistent with this ordinance.

The Safety Element includes policies supportive of the City's responsibilities in enforcing the State Seismic Hazards Zonation Program, established pursuant to the Seismic Hazards Mapping Act of 1990 (SHMA), which had not been enacted at the time the Safety and Environmental Resource Management elements were last updated. Figure SE-2 delineates State-identified areas of liquefaction and earthquake-induced landslide hazards per the State's Seismic Hazards Zone Maps. The City is responsible for applying specific criteria when reviewing and approving projects that fall within a "mapped zone of required investigation," per the California Geological Society's *Special Publication 117: Guidelines for Evaluation and Mitigating Seismic Hazards in California* (Guidelines 2008). The City may apply the criteria to other areas outside the mapped zones along the Sierra Madre fault zone. Additionally, SHMA permits local jurisdictions to enforce more stringent standards within State-identified Seismic Hazards Zones. The City will continue to require approval of proper soil reports, bedrock foundation reports, and other engineering or technical documents prior to approval of hillside development proposals in order to ensure safe development. The Guidelines also note that just because "... a site lies outside a mapped zone of required investigation does not necessarily mean that the entire site is free from seismic or other geologic hazards, nor does it preclude lead agencies from adopting regulations or procedures that requires site-specific and/or geologic investigations and mitigation of seismic or other geologic hazards." For instance, a site could be at risk of debris flow inundation, surface fault rupture, etc. The City may consider establishing its own Earthquake Fault Zone along the Sierra Madre fault. There is precedent for that approach in the Los Angeles area, as Los Angeles County zones a number of faults not zoned by the State.

The City's LHMP includes goals and action items to identify potential natural hazards and develop strategies to lessen their impacts on the community. The

Safety Element includes policies to integrate goals and action items from the LHMP into regulations, policies, and programs, as appropriate.

Information is a key component of staying current regarding potential hazards and new regulations that could mitigate negative impacts on the community. The City will monitor research and changes in State, county, and other regulations related to seismic geohazards, including the Alquist-Priolo Earthquake Fault Zoning Act and SHMA, and will fulfill its responsibilities regarding their implementation.

The City will encourage the community to be aware of and better prepared for emergencies from earthquakes via outreach, education, and communication. It is also committed to continue to coordinate and cooperate with various agencies. This is discussed in more detail under Section 5.4.6, *Emergency Preparedness and Response*.

5.4.2 Addressing Flooding and Other Hydrologic Hazards

La Cañada Flintridge is subject to flooding and other hydrologic hazards that are exacerbated by existing geologic, soils, and other conditions, such as wildfires, described in the previous section. These include:

- Minor flooding on the valley floor.
- Debris and mud flow hazards in and adjacent to range front drainages.

During the planning period, the City will implement policies, programs, and regulations to prepare for and mitigate impacts from flooding and other hydrological hazards. Refer to SE Goal 1 and SE Objective 1.3 and associated policies for more detail.

Implementation of policies and development standards is one way the City can reduce risks from flooding and debris flow hazards. The City's Hillside Development Ordinance includes requirements to mitigate potential hydrologic impacts associated with development. It requires a hydrology report, including design criteria to mitigate any identified hydrologic hazards. The City may update or add new ordinances based on new information and/or to reduce further the risks associated with development. The City will continue to implement its Floodplain Management and Flood Control ordinances and may update them if additional information or need arise.

Another method to mitigate hydrologic impacts is to improve and/or maintain permanent drainage infrastructure within or adjacent to the City, such as curbs and gutters, storm drain systems, and sediment entrapment (debris) basins.

To maintain adequate citywide drainage and flood control, the City will work with LACPWD to identify infrastructure needs and deficiencies, update relevant plans, and prioritize projects. An example is the project to enlarge the Big Briar, Mullally, and Snover debris

basins during the summer and fall of 2010 in response to the flooding and debris flows that occurred during the winter storms of 2009–2010. In 2019, the Padres Trail Desilting Basin was constructed to intercept drainage from the Cherry



K-rails on Ocean View Boulevard

Canyon open space area. It is located at the south end of Encinas Drive. The City will also continue to improve and maintain infrastructure over which it has sole responsibility. Temporary measures, including k-rails and sandbags, can also be used to divert rain and debris flows.

5.4.3 Fires and Fire-Related Hazards

Although the danger cannot be completely avoided, the City can take steps to reduce the impact that a wildfire could have on the community. The City's plan is to mitigate wildfire hazards to the extent possible and feasible through policies, regulation, public education and outreach, and implementing and updating regulations regarding fire-related hazards. Refer to SE Goal 1 and SE Objective 1.4 and associated policies for more detail.

Government Code Section 51179 requires each local agency to designate, by ordinance, Very High Fire Hazard Severity Zones in its

jurisdiction. The entire City of La Cañada Flintridge is designated a Very High Fire Hazard Severity Zone. Properties located in these designated zones are subject to more stringent building code requirements than properties outside of these zones. The City will continue to implement building and fire code provisions and will enhance them as appropriate to increase the resistance of structures to damage by fire and to improve public safety.



Emergency evacuation and emergency response are additional areas where the City can take measures to mitigate risk in the event of a wildfire. As discussed in Section 5.3.3, the areas in the City with a single point of access and egress were mapped. Twelve neighborhoods with a combined total of 838 single-family homes were identified, representing 10% of the housing stock in the community, as shown on Figure SE-6. This is existing development and in these areas it is not feasible to construct additional access points for emergency evacuation. In addition, there are properties in the City with substandard driveway widths that do not comply with current standards for emergency vehicle access.

State law allows local jurisdictions to identify areas where accessory dwelling units (ADU's) are not appropriate due to safety concerns. Because of the potential challenges of evacuating neighborhoods with a single point of access in an emergency, the City will prohibit future new development in these twelve areas, including ADU's and junior accessory dwelling units (JADU's), and prohibit the conversion of existing spaces to ADU's. Properties with substandard driveway widths will also be prohibited from adding ADU's, JADU's, and

converting existing spaces to ADU's due to insufficient access for emergency vehicles, unless access is widened to current standards. Redevelopment of existing properties will continue to be permitted and will be encouraged to upgrade to meet current fire safe building and fuel modification standards.

To provide for adequate emergency vehicle access to residential neighborhoods during red flag alerts, when weather conditions exist to produce an increased risk of fire, a prohibition of on-street parking shall occur. The City Traffic Engineer shall coordinate with the LASD and LACoFD to assess City streets and determine where parking on one or both sides of a street could create a hazard to life or property by interfering with emergency vehicle access and resident evacuation during a fire. The City shall post signs prohibiting on-street parking of vehicles when a "Red Flag" warning is issued.

During the development review process, the City and the Los Angeles County Fire Department (LACoFD) review water flow and distribution requirements for new development projects to ensure adequate water pressure for firefighting. Although outside the City's direct control because the City does not have a municipal water system, the City also will work with the four water agencies (Crescenta Valley Water District, La Cañada Irrigation District, Liberty Utilities, and Valley Water Company) to encourage them to evaluate the adequacy of emergency water line capacity as it relates to fire flow requirements, and both test and evaluate the reliability of the water infrastructure.

Education also plays an important role in fire safety. There is much that residents and those who work and recreate in the City can do to minimize wildfire-related threats. The City will work with LACoFD and other community partners to communicate actions that individuals can take to reduce potential wildfire hazards, with extra consideration to potentially vulnerable populations. Special attention will be paid to those who live and recreate in the areas of the City where developed properties directly abut undeveloped hillsides, and in the twelve neighborhoods with a single point of access.

5.4.4 Hazardous Materials and Sites

Hazardous materials and sites that use, produce, store, or transport hazardous materials are a potential hazard to people and the environment if they are misused, released into the ground or atmosphere, or discarded illegally in landfills. The City will implement its regulatory responsibilities and will work cooperatively with agencies to mitigate the risks associated with hazardous materials. Refer to SE Goal 1 and SE Objective 1.5 and associated policies for more detail. LACoFD's Health Hazardous Material Division provides oversight of hazardous materials and regulates permits for handling, storage, and use of any explosive or other hazardous material.

The City has and implements its own Stormwater Management and Discharge Ordinance. It also requires that development projects conform to the regulations of the National Pollution Discharge Elimination System (NPDES) and City permit.

Information and education are also key components of mitigating potential impacts associated with hazardous materials. The City will work with Los Angeles County to provide information to residents and those who work in La Cañada Flintridge to minimize environmental contamination and public health hazards from household hazardous materials.

5.4.5 Crime Prevention

Although the City currently has a low crime rate, it can take actions to maintain that low rate during the planning period. Refer to SE Goal 2 and SE Objective 2.1 and associated policies for more detail.

The City will work with the LASD to undertake programs to reduce crime and protect persons and property from criminal activity, including public awareness programs and those that are directed toward increasing the quality and quantity of communication between the City's youth and law enforcement officers.

5.4.6 Emergency Preparedness and Response

The City places a high priority on emergency preparedness and response for both natural and human-made disaster events and values interagency cooperation in that endeavor. During the planning period, the City will enhance those efforts. Refer to SE Goal 3 and SE Objective 3.1 and associated policies for more detail.

5.5 Goals, Objectives, and Policies

The goals, objectives, and policies in the Safety Element promote appropriate land use planning, development standards, building standards, emergency preparedness planning and training, education and outreach, interagency coordination, and continued monitoring of research and changes in regulations related to hazard management to address potential safety hazards.

SE Goal 1: Mitigate damage to life, property, infrastructure, and the environment, and economic and social displacement from natural and human-made hazards.

SE Objective 1.1: Develop and implement policies and programs that reduce the risk to the community caused by seismic and other geologic hazards.

SE Policy 1.1.1: Ensure proper implementation of the City's adopted building and development codes to provide safe construction (resistant to earthquake, wind, and other structural loading) and responsible building and site preparation practices.

SE Policy 1.1.2: Require development to be planned and designed to avoid flood, mudslide, and subsidence hazards to structures on or near hillside areas, as well as downhill of any project.

SE Policy 1.1.3: Require approval of preliminary soil reports and other engineering or technical documents prior to approval of hillside development proposals in order to ensure safe development.

SE Policy 1.1.4: Development will only be allowed outside of areas of known slope instability and/or high landslide risk unless fully mitigated.

SE Policy 1.1.5: Require assessment of landslide run-out risk for new development in rangefront areas.

SE Policy 1.1.6: Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas.

SE Policy 1.1.7: Implement the City's regulatory responsibilities through the permit review process for projects that fall within seismic hazard zones on the Seismic Hazards Zones Map for the City, per Los Angeles County building codes.

SE Policy 1.1.8: Implement the City's regulatory responsibilities through the permit review process under the Alquist-Priolo Earthquake Fault Zoning Act.

SE Policy 1.1.9: Support the implementation of State standards for construction of "critical facilities," such as schools and hospitals.

SE Policy 1.1.10: Encourage seismic strength evaluations of critical facilities in the City, such as schools, assembly buildings, police and fire stations, emergency operations centers, and public infrastructure, to identify vulnerabilities and develop actions to upgrade them to meet current seismic standards.

SE Policy 1.1.11: Encourage programs to assist in the seismic upgrading of buildings to meet building and safety codes; investigate funding opportunities and possibilities for cost-sharing.

SE Policy 1.1.12: Identify seismically inadequate buildings, including non-ductile concrete structures, and encourage implementation of appropriate seismic retrofit programs.

SE Policy 1.1.13: Coordinate with Los Angeles County and Caltrans to identify and correct any structural deficiencies of bridges or overpasses within the City.

SE Policy 1.1.14: Promote earthquake preparedness within the community by providing information and participating in earthquake awareness programs.

SE Policy 1.1.15: Develop a Grading and Erosion Control Ordinance to reduce sediment impacts associated with construction. The ordinance shall include the following:

- a. When construction occurs in areas not previously graded, the extent of disturbance shall be limited to the minimum needed for construction, staging, and access.
- b. Topsoil removed during grading shall be stockpiled for onsite reuse during site landscaping. Topsoil stockpiles shall be kept separate from other excavated materials to facilitate effective reuse.

SE Policy 1.1.16: Require the mandatory geotechnical reports prepared for all hillside development and other implementing ordinances to include a site- and project-specific assessment of ridge-top shattering risks. If appropriate in the professional judgment of the geotechnical engineer and/or certified engineering geologist of record, the report shall also identify geotechnical measures to mitigate the hazard to the extent feasible.

SE Policy 1.1.17: Modify the City's existing Hillside Development Ordinance or establish new ordinances to require the following.

- a. For any hillside development qualifying as a project as defined by the Seismic Hazards Mapping Act, the City shall require preparation of a site-specific geotechnical investigation that includes an evaluation of landslide hazard. Reports shall be prepared by qualified, California-licensed professional personnel – geotechnical engineer (GE) and certified engineering geologist (EG) – and shall be independently peer reviewed by personnel with commensurate licensure. The City shall enforce recommendations of the site-specific geotechnical investigation via the building permit process, and shall be responsible for proper implementation.
- b. For any new development in rangefront areas, the City shall require a site-specific assessment of risks related to landslide runout. The assessment shall be performed and reported by qualified, California-licensed professional personnel – GE and certified EG – and shall be independently peer reviewed by personnel with commensurate licensure. The City shall enforce any recommendations of the report via the building permit process, and shall be responsible for proper implementation.

SE Objective 1.2: Keep current regarding research and regulations related to geohazards and geohazards management.

SE Policy 1.2.1: Monitor the State of California's review of the Sierra Madre fault system for potential zoning under the Alquist-Priolo Earthquake Fault Zoning Act.

SE Policy 1.2.2: Monitor State zoning laws, including the Alquist-Priolo Earthquake Fault Zoning Act and SHMA.

SE Policy 1.2.3: Monitor changes in State regulations, such as those related to geohazards management and improvement in building standards, and update local regulations as appropriate.

SE Objective 1.3: Develop and implement policies and programs that reduce the risk to the community from flooding and other hydrologic hazards.

SE Policy 1.3.1: Ensure that new construction conforms to all applicable provisions of the National Flood Insurance Program in order to protect lives, buildings, and property from flooding.

SE Policy 1.3.2: Require approval of preliminary hydrology reports prior to approval of hillside development proposals where necessary in order to ensure safe development.

SE Policy 1.3.3: Continue to install curbs and gutters where appropriate to meet the long-term needs of the City.

SE Policy 1.3.4: Evaluate and make improvements to inadequate storm drain systems, including channels, drains, catch basins, pipes, and inlets, to ensure capacity for maximum runoff flows.

SE Policy 1.3.5: Continue to work with LACPWD to update its Plan for Flood Control and Water Conservation for the La Cañada Flintridge area and to prioritize projects.

SE Policy 1.3.6: Encourage LACPWD to adequately maintain the sediment entrapment (debris) basins for which it is responsible.

SE Policy 1.3.7: Identify surface water drainage obstructions for all parts of the City of La Cañada Flintridge and develop potential mitigation actions.

SE Policy 1.3.8: Identify flood hazard areas and develop appropriate land use regulations for areas subject to flooding.

SE Policy 1.3.9: Continue to implement the City's Flood Control and Floodplain Management ordinances.

SE Policy 1.3.10: Maintain natural stream gradients to ensure hydrologic drainage and bulked-flow runoff.

SE Policy 1.3.11: Work with the Federal Emergency Management Agency to prepare a detailed hydraulic study to assess the City's 100-year flood zone for future development.

SE Policy 1.3.12: Develop a Grading and Erosion Control Ordinance to reduce sediment impacts associated with construction.

SE Objective 1.4: Develop and implement policies and programs that reduce the risk to the community from fires and fire-related hazards.

SE Policy 1.4.1: Ensure that the City's building permit process requires LACoFD approval for any new construction and requires all new development, including new structures, to prepare fire protection plans, mitigate existing non-conforming development to contemporary fire standards, and provides an adequate level of fire protection to provide reasonable security of persons and property throughout the community for present and future needs. "New structure" shall generally be defined as a structure built where no analogous structure exists or the cumulative expansion, alteration or removal of more than fifty percent (50%) of the floor area of a structure located within a residential zone over the course of 5 years.

SE Policy 1.4.2: Work with CAL-FIRE regarding updates to the Very High Fire Hazard Severity Zone (VHFHSZ) in Local Responsibility Areas.

SE Policy 1.4.3: Encourage implementation of wildfire mitigation activities in a manner consistent with the goal of promoting sustainable ecological management.

SE Policy 1.4.4: Require property owners to create and maintain defensible space around their buildings and structures.

SE Policy 1.4.5: Require the use of fire-retardant roofing material for all new construction and major remodels involving roof additions. Encourage property owners with shake shingle roofs to upgrade to fire-retardant materials.

SE Policy 1.4.6: Continue to enforce the brush clearance/weed abatement program, and include both private and public roads.

SE Policy 1.4.7: To the extent of the City's authority, strongly encourage water agencies, including La Cañada Irrigation District, Liberty Utilities, Valley Water Company and Crescenta Valley Water District, to conduct an evaluation of the water infrastructure based on current code standards. Results of the evaluation should disclose deficiencies (differences between current code and existing conditions). During the planning period, a method should be developed and initiated to correct identified deficiencies.

SE Policy 1.4.8: Coordinate with LACoFD to operate an education program regarding fire hazards and strategies to minimize risk for residential, commercial, and institutional uses.

SE Policy 1.4.9: Increase communication, coordination, and collaboration between property owners, the City, and fire prevention crews and officials to address risks and implement mitigation measures.

SE Policy 1.4.10: Ensure that all new development and redevelopment will comply with the Board of Forestry and Fire Protection Fire Safe Regulations, and the most current version of the Building Codes and California Fire Code.

SE Policy 1.4.11: Coordinate with the LACoFD to condition all new development and redevelopment to incorporate fire safe design, including sufficient ingress/egress, evacuation routes, emergency vehicle access, defensible space, visible home addressing and signage, and fuel modification zones.

SE Policy 1.4.12: Provide training opportunities for residents for fuel modification methods, practices and materials.

SE Policy 1.4.13: Prepare and adopt a list of banned vegetation, in conjunction with the LACoFD. Identify species that should be removed.

SE Policy 1.4.14: Develop a city-wide evacuation plan, with special emphasis placed on the twelve areas of the City with inadequate access and egress identified on Figure SE-6, including an Evacuation Traffic Management Plan, and recommended improvements to ensure adequate evacuation capabilities. Evacuation plans should be evaluated and revised upon each update of the Safety Element to address changes in at-risk areas and populations to ensure effectiveness.

SE Policy 1.4.15: Connect vulnerable populations to Alert LCF, and strive to connect at least 90% of the City's residents to Alert LCF.

SE Policy 1.4.16: Establish an outdoor warning system for potential placement in highly vulnerable areas designed to alert residents and visitors about possible danger.

SE Policy 1.4.17: Prohibit the development of accessory dwelling units (ADUs) and junior accessory dwelling units (JADUs) and prohibit the conversion of existing spaces to ADUs and JADUs in the twelve neighborhoods identified in Figure SE-6.

SE Policy 1.4.18: To facilitate evacuation and fire responder access, evaluate the potential for street widening and improvement during regular Capital Improvement project maintenance, e.g. utility undergrounding, resurfacing, and ADA compliance.

SE Policy 1.4.19: Establish and maintain community fire breaks in the City to restrict the spread of wildfire.

SE Policy 1.4.20: Work with Foothill Water District (water supplier) and the four water agencies (water retailers) operating in the City, including La Cañada Irrigation District, Liberty Utilities, Valley Water Company and Crescenta Valley Water District to identify, maintain, and ensure the long-term integrity of future water supply for fire suppression needs, and ensure that water supply infrastructure adequately supports existing and future development and redevelopment, and provides adequate water flow to

combat structural and wildland fires, including during peak domestic demand periods. Water supply infrastructure is the responsibility of the four water districts, as no municipal-type water supply is available. Water systems shall equal or exceed the standards of the latest edition of National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for Suburban and Rural Fire-Fighting."

SE Policy 1.4.21: Work with Disaster Management Area C to identify alternate locations for emergency shelter in the event of a natural or human-caused disaster.

SE Policy 1.4.22: Work with Federal, State and local authorities to create 100' wide fuel modification zones/ fire breaks with appropriate plantings to slow the spread of wildfire, reduce its strength, deflect heat and help protect homes from direct flames.

SE Objective 1.5: Develop and implement policies and programs that minimize the level of risk to public health, safety, and the environment associated with the use, transport, treatment, and disposal of hazardous materials and waste.

SE Policy 1.5.1: Cooperate with Los Angeles County to implement applicable portions of the County's Hazardous Waste Management Program.

SE Policy 1.5.2: Coordinate with Los Angeles County in the implementation of NPDES regulations.

SE Policy 1.5.3: Require development projects to conform to the regulations of the NPDES permits.

SE Policy 1.5.4: Continue to enforce the City's Stormwater Management and Discharge Ordinance.

SE Policy 1.5.5: Encourage safe disposal of household hazardous waste through Los Angeles County's Household Hazardous Waste Collection Program.

SE Policy 1.5.6: Require completion of a Phase I, II, or III Environmental Site Assessment (ESA), prepared by a Registered Environmental Assessor (REA), and remediation or further analysis, such as a Phase II or Phase III ESA, for any future project that would take place on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List), or on a site that was previously occupied by a land use that use or generated hazardous materials or wastes.

SE Goal 2: Provide a safe and secure community that minimizes impact on citizens and property from criminal activity.

SE Objective 2.1: Undertake programs and policies to reduce crime and protect persons and property from criminal activity.

SE Policy 2.1.1: Ensure that the City's contractual arrangement with the LASD provides an adequate level of police services to provide reasonable security of persons and property throughout the community.

SE Policy 2.1.2: Provide education and assistance to citizens for the purpose of preventing crimes against persons and property.

SE Policy 2.1.3: Encourage and support programs that increase the quality and quantity of communications between law enforcement officers and the community's youth, improve youth recreational and leisure time opportunities, improve youth employment opportunities, and strengthen the family unit.

SE Policy 2.1.4: Support citizen efforts to organize neighborhood and business watch programs.

SE Goal 3: Ensure that the community is prepared for and able to respond to natural and human-made emergencies and disasters, such as earthquakes, wildfires, flooding, debris and mud flows, landslides, release of hazardous materials, civil disturbances, national security emergencies, technological incidents, terrorism, cybercrime, and health-related epidemics or pandemics.

SE Objective 3.1: Develop plans and programs to prepare for and provide rapid and effective response to disasters and threats of danger to life and property.

SE Policy 3.1.1: Continue to implement the City's Local Hazard Mitigation Plan (LHMP) and integrate the goals and action items into regulatory documents and programs, where appropriate.

SE Policy 3.1.2: Maintain and periodically update the City's Hazard Inventory.

SE Policy 3.1.3: Coordinate with appropriate public and private agencies and organizations, citizens, and businesses to implement the City's LHMP.

SE Policy 3.1.4: Evaluate the City's roadways regarding access, alignments, two routes for egress, etc., to facilitate fire, police, and ambulance access and resident egress in case of an emergency. Identify streets and key intersections that, due to pavement width, hairpin turns, and tight curves, if not cleared of vehicles, may interfere with emergency vehicle access and/or resident evacuation during a fire.

SE Policy 3.1.5: When red flag alerts are issued, warning that weather conditions support extreme fire danger, prohibit parking on one or both

sides of a street identified as having the potential to interfere with emergency vehicle access and/or resident evacuation during a fire.

SE Policy 3.1.6: Continue to utilize and support the City's Public Safety Commission and Public Safety Coordinator, and the La Cañada Flintridge Community Emergency Response Team.

SE Policy 3.1.7: Establish a formal role for the City's Hazards Mitigation Committee to develop a sustainable process for implementing, monitoring, and evaluating city-wide mitigation activities.

SE Policy 3.1.8: Continue to participate in Disaster Management Area C through a Joint Powers Agreement with Los Angeles County.

SE Policy 3.1.9: Maintain compliance with the federal National Incident Management System (NIMS) and the State Standardized Emergency Management System (SEMS).

SE Policy 3.1.10: Develop and implement education and outreach programs to increase public awareness of the risks associated with natural and human-made hazards, and to assist the public in being prepared for emergencies or disasters. Involve all sectors of the community, including the real estate and insurance industries, schools, public and private sector organizations, the business community, residents and especially the at-risk groups in the City.

SE Policy 3.1.11: Identify and pursue funding opportunities to develop and implement mitigation activities.

SE Policy 3.1.12: Encourage critical City facilities to purchase and/or test back-up power facilities for use during a power failure.

SE Policy 3.1.13: Continue to encourage residents to sign up for Alert LCF, the City's warning system to alert residents of potential hazards as well as provide post-disaster information.

SE Policy 3.1.14: Mobilize a core group of volunteer professionals to render prompt structural evaluation of sites potentially used for emergency mass shelters.

SE Policy 3.1.15: Ensure adequate seismic performance of facilities used to shelter residents in an emergency.

SE Policy 3.1.16: Maintain participation in local, regional, state and national mutual aid systems to ensure that appropriate resources are available for response and recovery during and following a disaster.

SE Goal 4: Increase resilience and protect residents from the anticipated effects of climate change.

Objective 4.1: Implement the climate change related programs in the City’s Local Hazard Mitigation Plan and Climate Action Plan and update these plans as conditions change and new information becomes available.

SE Policy 4.1: Continue to address global climate change by reducing our greenhouse gas emissions from both municipal operations and community activities.

SE Policy 4.2: Continue to cooperate with CAL FIRE and LACoFD, and adopt and implement fire safe policies to protect the community from wildfire risk.

SE Policy 4.3: Use design solutions and best practices to ensure future development, redevelopment, and infrastructure can adapt to climate change effects.

SE Policy 4.4: Continue to strive for community resilience to climate change and protect vulnerable populations, especially older adults and those with disabilities.

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Sources for the 2021 update:

California's Fourth Climate Change Assessment, Los Angeles Region Report, 2018. OPR, Cal Energy Commission, Cal Natural Resources Agency.

Climate Action Plan, City of La Cañada Flintridge, 2016.

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Curtis, Melissa; Barkely, Steven "Brian", CAL FIRE. Moore, Trevor, LACoFD. Virtual consultation meeting with City staff and consultant, April 14, 2021.

Draft Fire Hazard Planning TA Update, California Governor's Office of Planning and Research (OPR), 2020. https://opr.ca.gov/docs/20201109-Draft_Wildfire_TA.pdf

Espinoza, Marisol, Public Affairs Manager, SoCalGas. Virtual consultation meeting with City staff and consultant, April 30, 2021.

General Plan Guidelines, California Governor's Office of Planning and Research (OPR), Required Elements, Safety Element, 2017. https://opr.ca.gov/docs/OPR_C4_final.pdf

Jazmadarian, Nina, General Manager, Foothill Municipal Water District. Virtual consultation meeting with City staff and consultant, March 1, 2021.

KTLA news, Associated Press. "La Cañada Flintridge, Rancho Palos Verdes Among CA Cities in 'Very High Fire Hazard' Zones," April 11, 2019. <https://ktla.com/news/local-news/la-canada-flintridge-rancho-palos-verdes-among-ca-cities-in-very-high-fire-hazard-zones-analysis/>

Local Hazard Mitigation Plan, City of La Cañada Flintridge, 2018.

Redden, Shelley, CAL FIRE. Virtual consultation meeting with City staff and consultant, August 10 and August 17, 2021.

U.S. Department of Agriculture, U.S. Forest Service, Wildfire Risk to Communities, wildfirerisk.org

Agency Consultation:

As part of the 2021 update to the Safety Element, the City sent out letters to 29 Federal, State and local agencies requesting consultation, and received responses from three agencies: the Foothill Municipal Water District, SoCalGas and CAL FIRE.

The following is the consultation letter that was sent to each of the agencies on February 10, 2021, and next is a complete list of agencies who received the consultation letter.

Insert PDF of the consultation letter

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