



City of Glendora

Local Hazard Mitigation Plan

Public Review Draft
March 2025



PUBLIC REVIEW DRAFT

CITY OF GLENDORA
LOCAL HAZARD MITIGATION PLAN



CITY OF GLENDORA
150 S Glendora Avenue
Glendora, CA 91741
Contact: Julie Linger, Business Services Manager
Glendora Police Department

Prepared by:

DE NOVO PLANNING GROUP
180 E. Main Street, Suite 108
Tustin, California 92870
Contact: Starla Barker, AICP
(949) 396-8193

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Section 1.0 | Introduction

Natural disasters can cause death and injuries, as well as significant damage to communities, businesses, public infrastructure, and the environment. Each year, natural disasters take the lives of hundreds of people and injure thousands more, and taxpayers pay billions of dollars annually to help recovery efforts. After disasters, repairs and reconstruction are often completed to simply restore the affected areas to their pre-disaster conditions. Such efforts expedite a return to normalcy; however, the replication of pre-disaster conditions results in a cycle of damage, reconstruction, and repeated damage. As the cost of damage from natural disasters continues to increase, communities realize the importance of identifying effective ways to reduce vulnerability to disasters. While it is not possible to prevent disasters from happening, their effects can be reduced or eliminated through well-organized public education and awareness efforts, preparedness, and mitigation. For those hazards that cannot be fully mitigated, the community must be prepared to provide efficient and effective response and recovery.

It is impossible to predict exactly when and where disasters will occur or the extent to which they will impact a community. However, with careful planning and collaboration among public agencies, stakeholders, and citizens, it is possible to minimize losses that may occur from disasters. Proactive mitigation planning helps reduce the cost of disaster response and, by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruption. For hazards that can be mitigated, the City should be prepared to implement efficient and effective short- or long-term actions where needed.

The City of Glendora developed their Local Hazard Mitigation Plan (“LHMP” or “Plan”) to reduce future loss of life and property resulting from disasters, and to provide increased resiliency, allowing the City to return to normal sooner, with fewer impacts to people, facilities, and infrastructure. This LHMP is an update to the City of Glendora 2015 Natural Hazard Mitigation Plan.

1.1 PLAN PURPOSE

The purpose of the LHMP is to provide the City with clear direction for hazard mitigation action planning. This LHMP identifies natural and human-induced hazards that threaten the community and provides resources, information, and strategies to reduce these threats, resulting in overall risk reduction.

This plan focuses on the mitigation component of the cycle shown in [Figure 1.1, *Disaster Response Cycle*](#). Hazard mitigation plays an important role in reducing the impacts of disasters by identifying effective and feasible actions to reduce the risks posed by potential hazards. The City is updating this plan to be consistent with current standards and regulations, ensuring that



the understanding of hazards facing its community reflects best available information and current conditions.

The LHMP does not supersede current City plans or strategies (such as the General Plan); rather it enhances the ability to identify, inform and mitigate hazard risks unique to the City. Information in this plan will be used to help guide and coordinate mitigation activities and serve as a tool for decision-makers to direct mitigation activities and resources.



Figure 1-1 Disaster Response Cycle

1.2 PLAN AUTHORITY

FEDERAL REQUIREMENTS

The Robert T. Stafford Disaster Relief and Emergency Act (Stafford Act), as amended by the Disaster Mitigation Act of 2000 (DMA 2000), governs hazard mitigation planning activities like this one. While cities are not mandated to prepare a LHMP, the Stafford Act requires state, local, and tribal governments seeking federal hazard mitigation grant funds to submit a plan that outlines processes for identifying hazards, risks, and vulnerabilities (United States Code [USC] Title 42, Section 5156[a]). To implement the hazard mitigation planning requirements of the Stafford Act, the Federal Emergency Management Agency (FEMA) has issued regulations under Code of Federal Regulations (CFR) Title 44, Part 201. These regulations guide the planning process, content, and approval for hazard mitigation plans. This LHMP complies with the Stafford Act, DMA 2000, and the relevant sections of Title 44 CFR, including Parts 201, 206, and 322.

STATE REQUIREMENTS

California Government Code Section 8685.9 (Assembly Bill [AB] 2140) limits the State's share of disaster relief funds to 75 percent of the amount not covered by federal disaster relief, unless the jurisdiction has adopted a valid hazard mitigation plan that meets DMA 2000 standards. This plan must be incorporated into the jurisdiction's general plan, which can be done through a resolution adopting the LHMP.

The City of Glendora is concurrently updating its General Plan Safety Element, which covers a range of hazards, including geological (seismic and soils), flooding, dam inundation, hazardous materials, fire risks, crime, medical emergencies, aircraft overflight, and climate change resilience. It also addresses disaster preparedness and community safety, ensuring coordination during disaster response situations.



This LHMP is consistent with current federal and State standards, as outlined by the Governor's Office of Emergency Services (CAL OES) and FEMA. It uses the best available information, reflects best practices, and aligns with community values. To comply with AB 2140, the City aims to meet all relevant federal and State requirements, ensuring Glendora is eligible for the appropriate benefits.

Once FEMA issues an Approvable Pending Adoption (APA) notification, the City will formally adopt the LHMP and incorporate it into the Safety Element of the General Plan via resolution. The General Plan Safety Element will reference the LHMP and provide information on how the public can access the current, approved version. Compliance with AB 2140 will be determined by CAL OES.

1.3 PLAN ADOPTION

The previous iteration of the LHMP was approved by Cal OES and FEMA in 2015, and this document serves as a comprehensive update in accordance with recent State and federal regulations. Following FEMA approval, the City Council of Glendora formally adopts the 2025 LHMP as an update to the 2015 LHMP. A copy of the resolution will be provided in Appendix A.

1.4 PLAN ORGANIZATION

The LHMP is organized into the following sections to reflect the logical progression of activities undertaken to develop the plan and includes all relevant documentation required to meet the necessary criteria for FEMA approval. Each section is briefly described below:

Section 1.0: Introduction describes the background and purpose of the plan, as well as the authority established for its development.

Section 2.0: Planning Process describes the LHMP update planning process, as well as the meetings and outreach activities undertaken to engage partner agencies, stakeholders, and the public.

Section 3.0: Community Profile provides the history, geography, and demographics of Glendora, including land use and development trends.

Section 4.0: Risk and Vulnerability Assessment identifies and profiles the natural hazards affecting the City, including their history, risk of future occurrence, and any effects climate change has on their frequency and intensity, where applicable. The selection and confirmation of hazards are also discussed. This section also identifies the vulnerability and risk to the community, including vulnerable populations, and critical facilities associated with each hazard.



Section 5.0: Hazard Mitigation Strategy identifies the specific hazard mitigation actions to reduce potential risks to the City's critical facilities, residents, and business owners to improve resiliency, and assesses the City's capabilities to implement and achieve the mitigation actions.

Section 6.0: Plan Maintenance discusses implementation of the plan, including the process to monitor, evaluate, update, and maintain the LHMP, and identifies opportunities for continued public involvement.

Section 7.0: References identifies the various resources utilized throughout development of the LHMP.

1.5 MITIGATION GOALS

The following goals from the 2015 Natural Hazard Mitigation Plan have been reconfirmed, with minor modifications, as part of the update to the Glendora LHMP:

- **Protect Life and Property.** Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural hazards.
- **Enhance Public Awareness.** Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards. Provide information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities that reduces vulnerabilities.
- **Preserve Natural Systems.** Support management and land use planning practices with hazard mitigation to protect life. Preserve, rehabilitate, and enhance natural systems to serve hazard mitigation functions.
- **Encourage Partnerships and Implementation.** Strengthen communication and coordinate participation with public agencies, citizens, non-profit organizations, and businesses to support implementation. Encourage leadership within the City and public organizations to prioritize and implement local and regional hazard mitigation activities.
- **Strengthen Emergency Services.** Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure are prioritized. Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, and businesses. Coordinate and integrate hazard mitigation activities where appropriate, with emergency operations plans and procedures.



1.6 UPDATED COMMUNITY PRIORITIES

The priorities of the City relative to hazard mitigation remain similar to those in the 2015 LHMP. The mitigation goals were reviewed by the Planning Team and determined to be relevant with minor revisions to provide clarity and communicate priorities relative to hazard mitigation that reduces vulnerabilities.

The Community Profile was updated to reflect current demographic data and recent updates to the Glendora General Plan Housing Element. Major development projects have been identified, demonstrating continued growth and development/redevelopment within the City. Potential development to reflect the City's 2021-2029 Housing Element, which was required to include an inventory of land suitable and available for residential development to meet the City's regional housing need allocation (RHNA) of 2,276 units is identified. As part of the identification of sites, environmental constraints, including natural hazards were considered. The sites identified to accommodate the RHNA are primarily comprised of underutilized and vacant sites located within existing Specific Plans in proximity to transportation, and other urbanized areas. These sites are located within an area of the City considered to have reduced vulnerabilities specific to natural hazards.

The planning process for the update included a Project Management Team, led by the Business Services Manager of the Glendora Police Department who coordinated with the Principal Planner in the City's Planning Division relative to the LHMP and Safety Element Update. A Planning Team, comprised of City departments, neighboring cities, emergency responders, healthcare providers, school districts, utility providers, and other partner agencies, provided oversight and information specific to the LHMP update.

A comprehensive approach to community outreach was a primary focus of the Project Management Team. The outreach included a community survey, community outreach event, and six focus group meetings to provide expanded outreach to vulnerable populations. Discussions with the Planning Team and the results of the community survey and outreach indicate the community continues to be concerned with the hazards addressed within the LHMP. The hazards were expanded to include severe weather, consisting of Santa Ana winds and heavy rainstorms, and drought. The remaining hazards were updated to reflect changes since preparation of the 2015 LHMP.

The LHMP update includes a reorganization from the previous plan with a modernized template, structure, and framework for clarity and to streamline the plan. An expanded vulnerability assessment is included in the LHMP update to address vulnerable populations. Similarly, the mitigation strategy was updated to consider specific populations and areas of the City determined to experience higher vulnerability in the event of a hazard event. The mitigation actions were also revised to reflect mitigation actions that have been completed and identify priorities.



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Section 2.0 | Planning Process

This section describes each stage of the planning process used to develop the LHMP. The LHMP planning process provides a framework to document the plan’s development and follows FEMA-recommended steps. The LHMP follows a prescribed series of planning steps which includes organizing resources, assessing risk, developing the mitigation plan, drafting the plan, reviewing and revising the plan, and adopting and submitting the plan for approval. Each step is described in this section.

Hazard mitigation planning in the United States is guided by statutory regulations described in the DMA 2000 and implemented through Title 44 CFR Parts 201 and 206. FEMA’s hazard mitigation plan guidelines outline a four-step planning process for the development and approval of hazard mitigation plans. Table 2-1, DMA 2000 CFR Crosswalk, lists the specific CFR excerpts that contain the requirements for approval, and identifies the applicable section of this LHMP.

TABLE 2-1: DMA 2000 CFR CROSSWALK

DMA 2000 (44 CCFR 201.6)	Glendora LHMP Section
(1) Organize Resources	Section 2
201.6(c)(1)	Organize to prepare the plan
201.6(b)(1)	Involve the public
201.6(c)(2) and (3)	Coordinate with other agencies
(2) Assess Risks	Section 4
201.6(c)(2)(i)	Assess the hazard
201.6(c)(2)(ii) and (iii)	Assess the problem
(3) Develop the Mitigation Plan	Section 5
201.6(c)(3)(i)	Set goals (Section 1)
201.6(c)(3)(ii)	Review possible activities (actions)
201.6(c)(3)(iii)	Draft an action plan
(4) Plan Maintenance	Section 6
201.6(c)(5)	Adopt the plan
201.6(c)(4)	Implement, evaluate, and revise

2.1 FORMING THE PLANNING TEAM

PROJECT MANAGEMENT TEAM

The City of Glendora engaged De Novo Planning Group to assist in developing the Local Hazard Mitigation Plan (LHMP). A core Project Management Team, composed of City staff and the Consultant Team, was formed to oversee the organization, facilitation, and execution of the LHMP development process. This team was responsible for the day-to-day coordination of the LHMP work program. Key tasks included forming and assembling the Planning Team, scheduling and organizing Planning Team meetings, preparing and distributing meeting materials, coordinating community engagement activities and meetings, and managing document reviews.



LHMP PLANNING TEAM

The Project Management Team identified a list of participants, which included City staff, adjacent jurisdictions, partner agencies, service providers, and organizations, as potential LHMP Planning Team members. City Staff Planning Team members represented the following City Departments:

- Community Development
- Public Works
- Police Department
- Risk Management
- Human Resources

An invitation was sent via email to individuals advising them of the City's efforts to prepare an LHMP and requesting their participation in preparation of the plan, including an invitation for participation in the Planning Team meetings. The invitation included a request to identify a potential alternate if the specific contact was unable to participate, a copy of the correspondence is included in Appendix B. An invitation was sent to the following agencies and organizations:

- City of Azusa
- City of Covina
- City of San Dimas
- Los Angeles County Fire
- Los Angeles County Area D Disaster Management
- U.S. Forest Service
- Foothill Gold Line
- Los Angeles County Public Works (Flood)
- Southern California Edison
- Southern California Gas Company
- Emanate Health
- Pomona Valley Hospital
- Red Cross
- Glendora Unified School District
- Charter Oak Unified School District
- St. Lucy's Priory High School



- Citrus College
- Azusa Pacific University

The City received responses from some agencies and organizations expressing interest in participating directly on the Planning Team, and others indicating their inability to participate but willingness to provide information.

Together, the Planning Team worked to ensure the success of the planning process. The team's key roles and responsibilities included:

- Participation in Planning Team meetings
- Collection of local information and other requested data
- Providing agency-specific knowledge and input
- Assistance with the public engagement process
- Decision on plan process and content
- Development and prioritization of mitigation actions
- Review and comment on the draft LHMP

Table 2-2, *LHMP Planning Team*, identifies the Planning Team members that directly participated in the Planning Team meetings and their roles in the LHMP development process.



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TABLE 2-2: LHMP PLANNING TEAM

Organization	Name, Title
City of Glendora Project Management Team	
City of Glendora Police Department	Julie Linger, Public Safety Management Analyst LHMP Lead
City of Glendora Planning Division	Hans Friedel, AICP, Principal Planner General Plan Safety Element Lead
City of Glendora	
City of Glendora Public Works	Jessica Clark, Business Services Manager
City of Glendora Risk Management	Marie Ricci, Administrative Services Director
City of Glendora Human Resources	Rita Wendling, Interim Assistant Director
City of Glendora Police Department	Matt Egan, Police Chief
City of Glendora Police Department	Mike Randazzo, Police Captain
City of Glendora Police Department	Chris Stabio, Police Captain
Neighboring Cities	
City of Azusa	Jennifer Wu, Emergency Manager
City of San Dimas	Anissa Livas, Senior Administrative Analyst
Emergency Service Providers	
Los Angeles County Fire	Noble Robinson, Battalion Chief
Los Angeles County Fire	Mike Inman, Assistant Fire Chief
Utility/Infrastructure Service Providers	
Southern California Gas Company	Ms. O'Shields, Public Affairs Manager
Hospitals/Health Care Agencies	
Pomona Valley Hospital	Steven Storbakken
Emanate Health	Angela Sharma
School Districts	
Glendora Unified School District	Tamra Fry, Safety/Risk Compliance Officer
Charter Oak Unified School District	Bob Lind, Director of Maintenance and Operations
Charter Oak Unified School District	Nate Cabibil, Maintenance Supervisor
Community Partners	
Red Cross	Nahomi Rodriguez
Red Cross	Ryan Chan, Disaster Program Manager

The LHMP Planning Team held three meetings, as summarized in [Table 2-3, *Planning Team Meeting Summary*](#). The first two meetings included invitations to the entire Planning Team distribution list. Meeting 3 consisted of a focused group to focus on the existing plan's mitigation actions and progress toward the actions. Meeting materials, including PowerPoint presentations, sign-in sheets, agendas, meeting summaries, and other relevant handouts are provided in Appendix B.



TABLE 2-3: PLANNING TEAM MEETING SUMMARY

Meeting	Date	Discussion Items
1	June 28, 2023	<ul style="list-style-type: none">• Introductions• Roles & Responsibilities• Project and LHMP Goals• Purpose and Requirements of the LHMP• Confirm Hazard and Identify Community Assets
2	July 26, 2023	<ul style="list-style-type: none">• Hazards to be Profiled• Critical Facilities• Problem/Issue Statements• Capabilities Assessment• Review Mitigation Actions• Public Involvement Update
3	August 23, 2023	Mitigation Strategy – Review of existing mitigation actions and progress, discussion of ongoing mitigation actions and potential new mitigation actions to consider

As part of the Planning Team meetings, components of the plan and updates were reviewed and discussed. Clarifications and additional information were obtained from Planning Team participants. Separate from the Planning Team meetings, discussions occurred with individuals and organizations on the Planning Team, as well as outside of the Planning Team to obtain additional information to further inform the LHMP.

Upon preparation of the draft LHMP, each of the planning team participants were provided with a link to access the plan and provide comments and/or respond to request for additional information and clarification. Comments and additional information received on the draft LHMP were incorporated into the document.

PUBLIC OUTREACH AND ENGAGEMENT

A public outreach and engagement strategy was developed to solicit public involvement and input in the LHMP planning process. Components of the public outreach program are described below, refer to Appendix B for outreach materials.

Webpage and Social Media

A dedicated webpage on the City’s website provided information on the LHMP, including a description of a hazard mitigation plan, its importance, and how the public could be involved in the planning process. A link to complete the community survey was provided along with a contact at the City for any comments or questions. Information on the City’s website was available for the entirety of the LHMP development process. The website was updated throughout the planning process and provided notifications and access to LHMP materials. The draft LHMP was also made available for review.



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By conducting virtual outreach through the City's website, the City was able to reach a wide audience, including underserved and vulnerable populations who may have been unable to attend in-person events. Individuals were able to access all information at their own convenience and had the ability to communicate directly with City staff regarding questions or comments. Published content was also advertised via the City of Glendora's RSS Feed (subscription distribution lists) and social media channels.

Community Survey

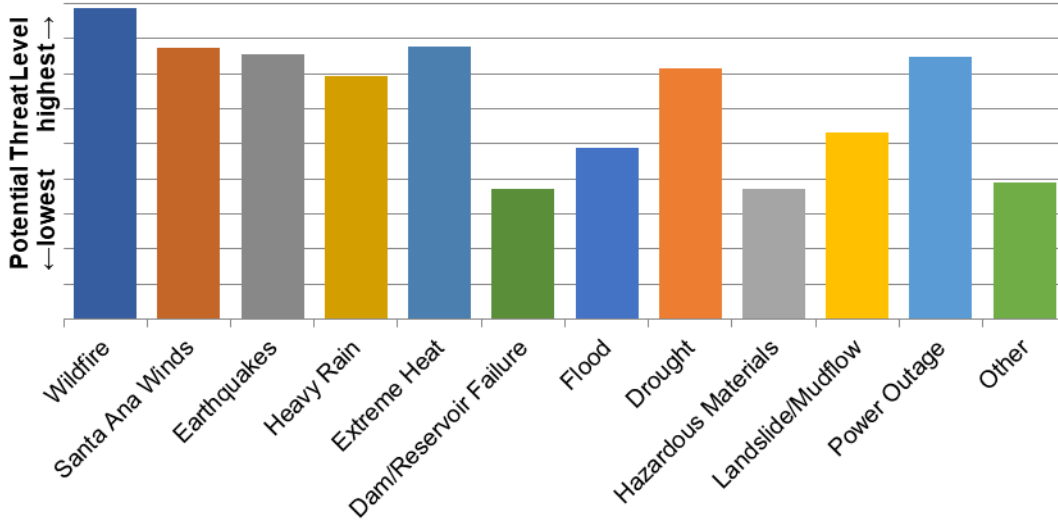
A community survey was developed to obtain input from the public about various hazard mitigation topics. In addition to basic demographic information, the survey asked residents to identify specific safety concerns, including what hazards they felt were most likely to impact their neighborhood or property. Residents were also asked what actions they had taken to be more resistant to hazards. Information gained from the survey was used by the Planning Team to identify potential mitigation actions that would reduce damage and disruption from disaster or emergency events and how best to improve communication and dissemination of information.

The survey was made available for completion on the LHMP webpage from August 16, 2023 to September 22, 2023, and the survey link was distributed via email by the City and Planning Team members. The survey link was also advertised and distributed at all Community Events, described below. The survey received 164 responses. Of the responses received, 59 respondents provided contact information. Input received was generally consistent with feedback received during one-on-one conversations at the community events and during the focus groups. Respondents were most concerned about wildfire, seismic hazards, drought, and high winds/Santa Ana wind events. Power outages that could occur because of hazard events were also identified as a significant concern. Respondents identified email, social media, city/agency website, and city/agency newsletters as the communication preference to receive information about reducing vulnerabilities to homes and neighborhoods. Nearly half (44.8 percent) of respondents felt that the City, County, and/or other agencies could help residents become better prepared for a disaster by increasing awareness of special needs and vulnerable populations.

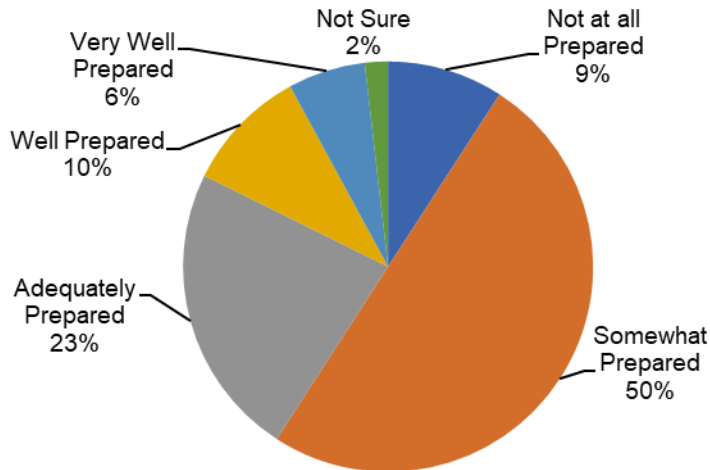
Input received from the survey validated the hazards identified in the 2015 Natural Hazard Mitigation Plan, which have been retained and expanded upon in this LHMP update. The input was also considered when reviewing and developing mitigation actions specifically related to vulnerabilities, how the community can become better prepared, and the importance of preparedness, coordination, and response actions.



Question 6: Rank the hazards based on the likelihood of potential threat to Glendora.



Question 8: How prepared is your household to deal with a hazard event likely to occur in Glendora?

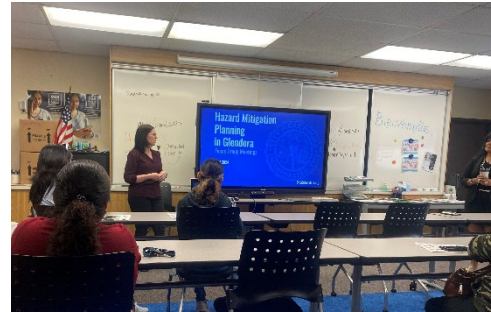




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Focus Groups

Six focus group meetings were conducted to provide an opportunity for outreach to specific groups and organizations to ensure diversity in the public participation process, and to obtain input directly from and relative to populations deemed more vulnerable to natural hazards within the community. As part of the meetings, an overview of hazard mitigation and the LHMP update process was provided. The participants were asked to provide input on issues or concerns related to the specific hazards and potential mitigation actions. Attendees engaged in an open discussion guided by questions specific to the group. The Project Management team met with the following groups and organizations:



- La Fetra Center. The La Fetra Center, in coordination with the City Recreation & Human Services Department, provides programs, services, and activities to older residents. Members of the Project Management Team attended a regularly scheduled lunch program providing meals to residents 60 years of age and older on April 16, 2024. The conversation focused on concerns about evacuation, especially for older people who are not able to drive or have other special needs, and how emergency information is communicated and received. This also provided an opportunity to inform the attendees of the emergency alert system.
- The Los Angeles Centers for Alcohol and Drug Abuse (LACADA). LACADA is the leading provider of alcohol and drug abuse services in Los Angeles. The Project Management Team met with LACADA-associated partners including representatives from Homeless Outreach, Housing Navigator, and the Glendora Police Department on April 16, 2024. The discussion focused on topics related to the unsheltered population and provided the Planning Team with additional knowledge to supplement statistical data on vulnerable populations.
- Youth Advisory Board. The Glendora Youth Advisory Board is a volunteer advisory and social group consisting of students aged between 12 and 17. The Project Management Team met with members of the Youth Advisory Board on April 16, 2024. The discussion focused on awareness of hazards and concerns of school-age youth. This information was used to supplement statistical data on vulnerable populations.
- Glendora Chamber of Commerce. The Glendora Chamber of Commerce is a voluntary organization of businesses who band together to encourage and promote a positive, balanced, and vital economy. The Project Management Team met with the Chamber on April 17, 2024. The meeting focused on topics related to businesses and their employees, including channels of communication during and after a hazard event and emergency preparedness, particularly for smaller businesses.
- Charter Oak Unified School District (USD) Parent Workshop. The Charter Oak USD provides several resources to parents of students. The Project Management Team met with eight



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parents during a workshop event on April 17, 2024. Due to the presence of non-English speakers, the presentation and discussion were translated into Spanish. The discussion focused on non-English speaking parents with school-age children. Information obtained from the focus group was used to supplement statistical data on vulnerable populations.

- Glendora USD Safety Committee Meeting. The Glendora USD Safety Committee is a committee of parents dedicated to student safety. The Project Management Team met with the Safety Committee during a regularly scheduled meeting on April 17, 2024. The discussion focused on parents with school-age children and existing hazard mitigation activities conducted at schools. This information was used to supplement statistical data on vulnerable populations.

Similar to the community survey, discussions and input received from the focus groups further validated the hazards identified in the 2015 Natural Hazard Mitigation Plan, which have been retained and expanded upon in this LHMP update. The input also helped identify and reconfirm what worries people the most when they consider the potential impacts of a hazard event. This information was considered when reviewing and developing mitigation actions specifically related to vulnerable populations.

Community Events

The Project Management Team hosted a booth at community events to inform the public about the LHMP update process, obtain feedback on hazards, and encourage completion of the survey. A raffle was held to engage and encourage participation. The community events included the Glendora Emergency Preparedness Day (Prepare Fair) on September 14, 2023, and an Earth Day event on April 20, 2024.



Public Review Draft LHMP

A public review draft LHMP was originally made available to the public for review and comment, beginning March 6, 2025 and ending April 4, 2025. The draft LHMP was made available on the City's LHMP webpage and at the City's Planning counter. The Planning Team assisted in advertising availability of the draft LHMP through their email distribution lists and social media. Information was provided on how to submit comments or ask questions regarding the draft LHMP.

REVIEW AND INCORPORATE EXISTING INFORMATION

The LHMP Planning Team referenced a variety of plans, studies, data, and technical reports available from local, State, and federal sources to prepare the LHMP. Primary resources reviewed and incorporated as part of the LHMP planning process are listed in [Table 2-4, Primary Plan Resources](#). A complete list of resources is included in Section 7.0, References.



TABLE 2-4: PRIMARY PLAN RESOURCES

Plans, Studies, Reports and Other Technical Data/Information	Planning Process/Area of Document Inclusion
Agency for Toxic Substances and Disease Registry /Center for Disease Control’s (CDC) Social Vulnerability Index (SVI)	Vulnerability Assessment
Cal Fire	Hazard Profiles, Vulnerability Assessment, Mitigation Strategy
Cal-Adapt	Hazard Profiles, Vulnerability Assessment, Mitigation Strategy
California Department of Water Resources	Hazard Profiles, Vulnerability Assessment
California Geological Survey	Hazard Profiles, Vulnerability Assessment
California State Hazard Mitigation Plan	Hazard Profiles
City of Glendora General Plan	Community Profile, Hazard Profiles, Mitigation Strategy
County of Los Angeles All-Hazards Mitigation Plan	Hazard Profiles, Vulnerability Assessment
FEMA Local Mitigation Planning Handbook, May 2023	Multiple plan sections
FEMA Local Mitigation Planning Policy Guide, Effective April 19, 2023	Multiple plan sections
FEMA Community Lifelines Implementation Toolkit	Stakeholder identification and outreach
FEMA Guide to Expanding Mitigation	Stakeholder identification and outreach, Vulnerability Assessment, Mitigation Strategy
FEMA National Risk Index	Hazard Profiles, Vulnerability Assessment
FEMA Map Service Center	Hazard Profiles, Vulnerability Assessment
National Drought Mitigation Center	Hazard Profiles, Vulnerability Assessment
U.S. Census American Community Survey	Community Profile, Vulnerability Assessment
U.S. Drought Monitor	Hazard Profiles, Vulnerability Assessment

2.2 ASSESS RISKS

In accordance with FEMA requirements, the LHMP Planning Team identified and confirmed the natural hazards affecting Glendora and assessed the community’s associated vulnerability from those hazards. Results from this phase of the LHMP planning process aided subsequent identification of appropriate mitigation actions to reduce risk from these hazards, refer to Section 5.0, Mitigation Strategy.

IDENTIFY/PROFILE HAZARDS

Based on a review of past hazards in the existing plan, as well as a review of existing plans, reports, and other technical studies, data, and information, the LHMP Planning Team determined if specific hazards were valid and identified other hazards that could affect the City. Content for each hazard profile is provided in Section 4.0, Hazards Assessment.



ASSESS VULNERABILITIES

Hazard profiling exposes the unique characteristics of individual hazards and begins the process of determining which areas within the City are vulnerable to specific hazard events. The vulnerability assessment included input from the LHMP Planning Team and a GIS overlaying method for hazard risk assessments. Using these methodologies, populations and critical facilities impacted by hazards were identified and potential loss estimates were determined where available. The vulnerability assessments for each hazard are provided in Section 4.0.

2.3 DEVELOP MITIGATION PLAN

IDENTIFY GOALS

The City's previously adopted 2015 Natural Hazard Mitigation Plan provided relevant information in preparation of this LHMP, including the identification of mitigation goals. The Planning Team reviewed the previously developed goals and upon discussion, the mitigation goals were reconfirmed, with minor modifications, to guide the specific mitigation actions aimed at reducing risk and preventing loss associated with natural hazards. The Mitigation goals are presented in Section 1.5, Mitigation Goals.

DEVELOP CAPABILITIES ASSESSMENT

A capabilities assessment is a comprehensive review of all the various mitigation capabilities and tools currently available to the City to implement the mitigation actions prescribed in the LHMP. The LHMP Planning Team identified the planning and regulatory, administrative and technical, financial, and education and outreach capabilities to implement mitigation actions, as detailed in Section 5.0.

IDENTIFY MITIGATION ACTIONS

As part of the LHMP planning process, existing mitigation actions were reviewed to assess whether they had been completed, were in progress or on-going, or continued to be relevant. New mitigation actions were also identified and developed. The mitigation actions were prioritized as high, medium, or low. The process was informed by the identification of the hazards, problems/issues statements identified by the Planning Team, input received as part of the community outreach, and vulnerability assessment. During this process, the capabilities assessment was also referenced to better understand if the capability already existed and needed to be expanded, or if the capability was not currently available. A detailed discussion of the identification and prioritization of mitigation actions is provided in Section 5.0.



PLAN REVIEW AND REVISION

As previously noted, once the draft LHMP was completed, a public review period was provided from March 6, 2025 to April 4, 2025, to allow public review and comments. Comments received on the draft LHMP were reviewed and the LHMP was revised, as appropriate.

PLAN ADOPTION AND SUBMITTAL

This plan will be submitted to Cal OES and FEMA for review. Upon receiving “approvable pending adoption” notification from FEMA, this plan will be presented to the City Council for their consideration. If approved, a copy of the resolution will be provided in Appendix A.

PLAN MAINTENANCE

Plan maintenance procedures, found in Section 6.0, Plan Maintenance, include the measures the City will take to ensure the LHMP’s continuous long-term implementation. The procedures also include the way the LHMP will be regularly monitored, reported upon, evaluated, and updated to remain a current and meaningful planning document.



Section 3.0 | Community Profile

3.1 GEOGRAPHY AND ENVIRONMENT

The City of Glendora covers approximately 19.6 square miles (about 12,540 acres) in eastern Los Angeles County. It is located at the intersection of the 57 and 210 freeways, in the foothills of the San Gabriel Mountains. Glendora is bordered by the Angeles National Forest to the north, the City of Azusa to the west, the City of Covina to the south, and the City of San Dimas to the east (see [Figure 3-1, *Regional Vicinity*](#), and [Figure 3-2, *City and Sphere of Influence*](#)). Additionally, the City's Planning Area includes about 260.5 acres of unincorporated Los Angeles County within its sphere of influence (SOI).

Two predominant terrain types are located within Glendora: alluvial fan and foothill. The alluvial fan portion of the City is characterized by gently to moderately sloping areas within the City where a vast majority of urban development has already occurred. The foothill portion of the City is characterized by moderate to very steep hillsides predominantly located along the northern boundary adjacent to the Angeles National Forest. In addition, a small area known as "South Hills" located in the southern portion of the City is also characterized by foothill terrain. Elevations in the City range from 776 feet to 3,600 feet.

The nearest major river is the San Gabriel River, which traverses northwest section of the Planning Area. According to the State Water Resources Control Board, the San Gabriel River receives drainage from 689 square miles of eastern Los Angeles County; its headwaters originate in the San Gabriel Mountains. The river itself does not pose any significant impact on the City; its channel is typically dry and only carries substantial water flow during major rainstorms.

3.2 CLIMATE

Temperatures in the City of Glendora typically range from 45 degrees Fahrenheit in the winter months to over 92 degrees Fahrenheit in the summer months. However, the temperatures can vary over a wide range, particularly when the Santa Ana winds blow, bringing higher temperatures and very low humidity. Temperatures occasionally exceed 100 degrees Fahrenheit in the summer months (June-September), and rarely drop below 30 degrees Fahrenheit in the winter months (November-March). Rainfall in the City averages less than three inches of rain per month. Actual rainfall in the southern California region tends to fall in large amounts during sporadic and often heavy storms rather than consistently over storms at somewhat regular intervals.



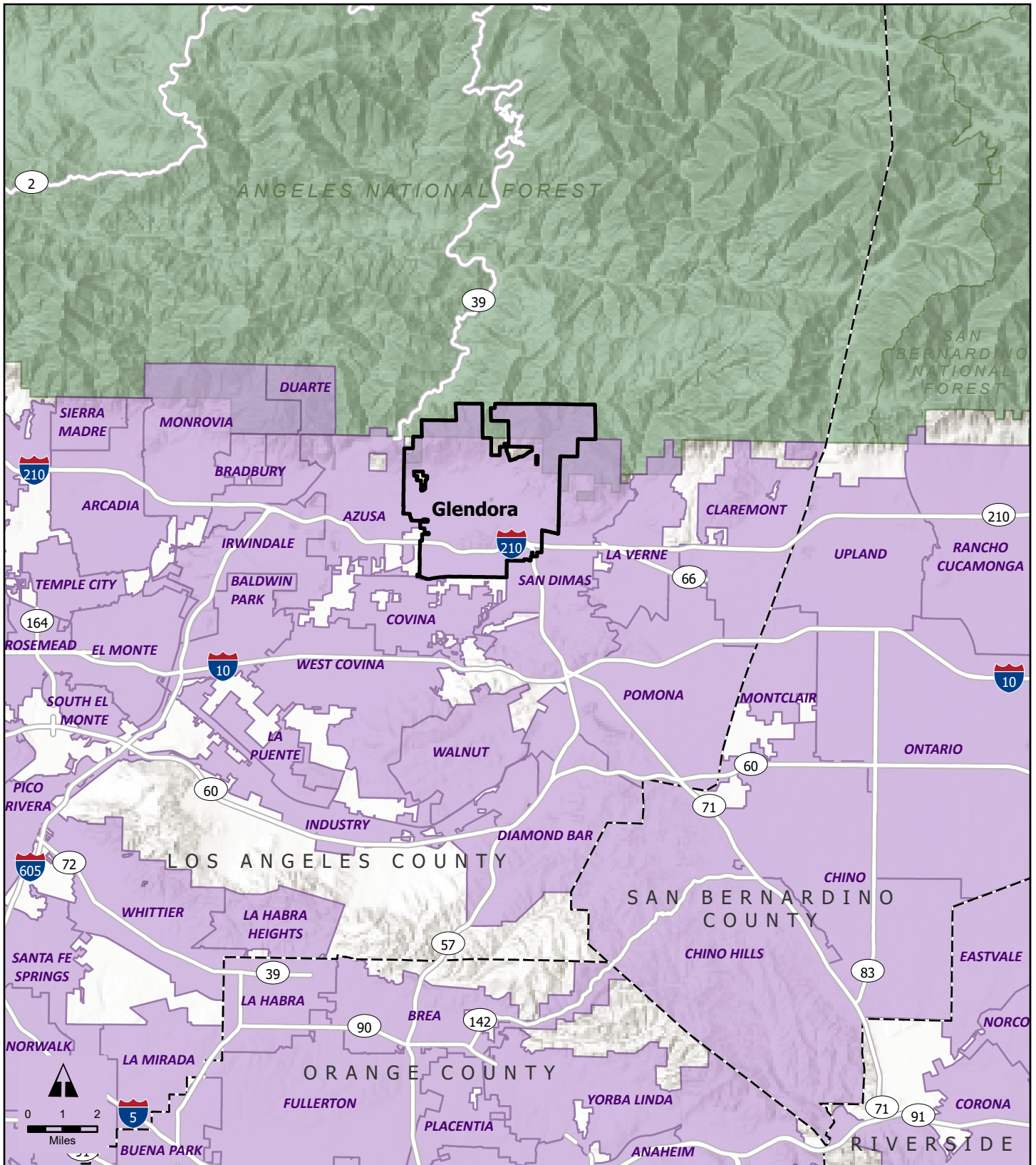
3.3 HISTORY





The City of Glendora was founded in 1887 and incorporated in 1911. According to the City's General Plan Historic Preservation Element, Glendora's rich history traces back to the presence of the Gabrielino Indians, dating as far back as 6000 B.C. During the era of Mexican governance, the area now known as Glendora was part of a Mexican land grant, which was acquired by British merchant Henry Dalton in 1844. Following the Mexican-American War, the Treaty of Guadalupe Hidalgo was signed in 1848, ceding California's lands to the United States.

The town's development began in the late 1880s under the leadership of George Dexter Whitcomb, who named it "Glendora" by combining the word "glen" with his wife Leadora's name. Glendora grew rapidly in the late 19th and early 20th centuries, fueled in part by the arrival of the Pacific Electric Railway in 1907, which connected the town to neighboring cities and spurred further expansion.

Agriculture, particularly citrus farming, was the cornerstone of Glendora's early economy. The region's mild climate and fertile soil made it an ideal location for citrus cultivation, and cooperatives were established to support this thriving industry. In addition to agriculture, social, educational, and religious institutions flourished, with organizations such as the Glendora Women's Club, the Masonic Lodge, and various churches playing vital roles in the town's growth. Glendora officially became a city in 1911, marking a significant milestone in its development.

As time passed, Glendora saw substantial economic growth, including key infrastructure projects, residential expansion, and the development of industrial and commercial sectors. Today, more than 50,000 residents call Glendora home, enjoying excellent public and private schools, parks, and community services. The City is also known for its safety, boasting one of the lowest crime rates in Los Angeles County.

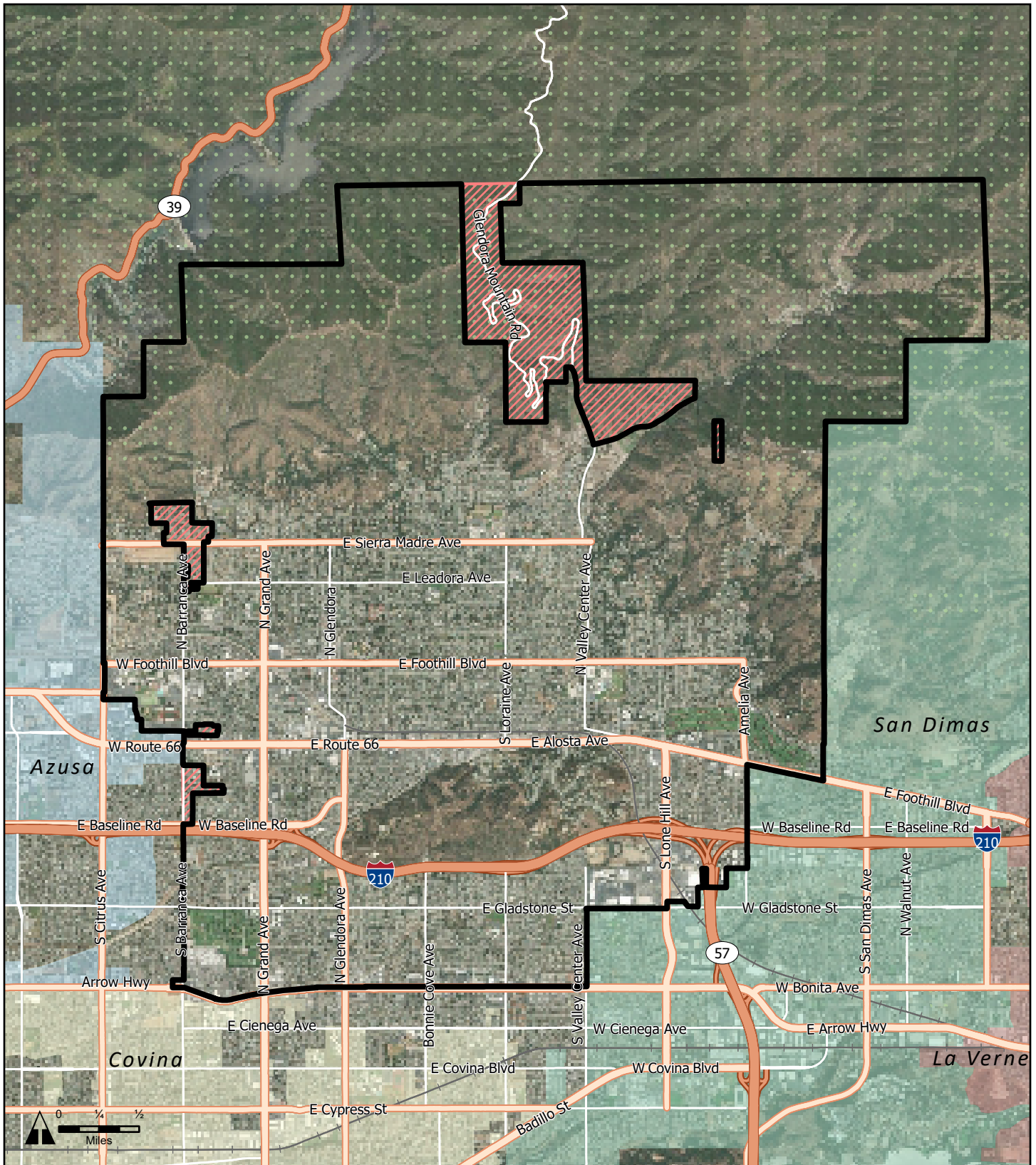


- LEGEND**
-  Glendora City Limits
 -  Incorporated Area
 -  County Boundary
 -  National Forest Lands









CITY OF GLENDORA, CALIFORNIA

Figure 3-1. Regional Vicinity

Sources: Los Angeles County GIS; Southern California Association of Governments; USFS; MAXAR Imagery 4/4/2021. Map date: November 13, 2024.



LEGEND

- | | |
|---|--|
|  Glendora City Limits |  Other Incorporated Areas |
|  Angeles National Forest |  Azusa |
|  Glendora Sphere of Influence (SOI) |  Covina |
| |  La Verne |
| |  San Dimas |

CITY OF GLENDORA, CALIFORNIA

Figure 3-2. City and Sphere of Influence

Sources: Los Angeles County GIS; Southern California Association of Governments; USFS; MAXAR Imagery 4/4/2021. Map date: November 13, 2024.



3.4 DEMOGRAPHICS

Basic demographic data for Glendora (population, education, employment, and housing) obtained from the US Census 2018-2022 American Community Survey (ACS) is summarized below.¹

POPULATION

Table 3-1, *Glendora and Los Angeles County Population and Housing Data (2022)*, provides an overview of the City’s and County’s demographics.

TABLE 3-1: GLENDORA AND LOS ANGELES COUNTY POPULATION AND HOUSING DATA (2022)

Category	Glendora	Los Angeles County
Total Population	52,095	9,936,690
Percent of Residents that are children (under 18 years)	22.4%	21.1%
Percent of Residents that are senior citizens (65 and over)	16.8%	14.2%
Median Age (years)	40.4	37.4
Median Household Income	\$106,718	\$83,411
Median House Value	\$749,400	\$732,200
Occupied Housing Units	16,751	3,363,093
Percent of Renter Occupied	32.1%	53.8%

Source: US Census American Community Survey 5-Year Estimates 2018-2022.

Glendora’s 2022 estimated population is 52,095 residents. When compared to Los Angeles County, the City has a higher household income, home ownership rate, and median house value. The median age of City residents is 40.4, higher than the median age of County residents at 37.4. The City has a higher percentage for both residents under 18 and residents over 65 when compared to the County. Approximately 22.4 percent of the City’s population is below the age of 18 and approximately 16.8 percent is above the age of 65.

A greater percentage of Glendora residents identify as white when compared to Los Angeles County; refer to *Table 3-2, Glendora and Los Angeles County Racial and Ethnic Composition (2022)*. Hispanic or Latino persons of any race constitute 40.0 percent of the City’s residents compared to 48.7 percent of County residents. Persons identifying as Asian make up 11.2 percent of the population. Persons identifying as “some other race” account for 12.4 percent of the population, while those reporting two or more races make up 16.1 percent of the City’s population.

¹ The 2018-2022 American Community Survey (ACS) 5-year estimates is the most current 5-year data profile available. It represents 60 months of collected data and provides the most reliable and largest data set.



Glendora Local Hazard Mitigation Plan

TABLE 3-2: GLENDORA AND LOS ANGELES COUNTY RACIAL AND ETHNIC COMPOSITION (2022)

Category	Glendora		Los Angeles County	
	Population	Percentage of Population	Population	Percentage of Population
White	29,386	56.4%	3,937,901	39.6%
Black or African American	1,286	2.5%	780,993	7.9%
American Indian and Alaskan Native	660	1.3%	111,096	1.1%
Asian	5,859	11.2%	1,473,634	14.8%
Native Hawaiian and Other Pacific Islander	54	0.1%	23,400	0.2%
Some Other Race	6,464	12.4%	2,253,956	22.7%
Two or More Races	8,386	16.1%	1,355,710	13.6%
Hispanic or Latino (of any race) ¹	20,863	40.0%	4,837,594	48.7%
Total	52,095	100%	9,936,690	100%

Source: US Census American Community Survey 5-Year Estimates 2018-2022.

Notes:

1. Hispanic or Latino persons are not counted as a separate racial or ethnic category; persons who identify as Hispanic or Latino are also included in other racial or ethnic categories.

EDUCATIONAL ATTAINMENT

When compared to Los Angeles County, residents of Glendora exhibit higher levels of educational attainment (see [Table 3-3, *Glendora and Los Angeles County Educational Attainment \(2022\)*](#)). Among Glendora residents aged 25 and older, 14.1 percent hold a graduate or professional degree, 23.2 percent have earned a bachelor's degree, and 11.1 percent possess an associate degree. Additionally, only 3.9 percent of adults in Glendora have not completed high school, in contrast to 8.0 percent of adults across the broader Los Angeles County.

TABLE 3-3: GLENDORA AND LOS ANGELES COUNTY EDUCATIONAL ATTAINMENT (2022)

Educational Attainment (25 years and older)	Glendora		Los Angeles County	
	Population	Percentage of Population	Population	Percentage of Population
Less than 9 th Grade	1,178	3.3%	811,822	11.7%
9 th to 12 th Grade, no diploma	1,411	3.9%	552,831	8.0%
High School Graduate	7,800	21.6%	1,412,260	20.4%
Some College, No Degree	8,232	22.8%	1,260,211	18.2%
Associate Degree	4,000	11.1%	482,967	7.0%
Bachelor's Degree	8,381	23.2%	1,542,422	22.3%
Graduate or Professional Degree	5,101	14.1%	847,137	12.3%
Total	36,103	100	6,909,650	100

Source: US Census American Community Survey 5-Year Estimates 2018-2022.



EMPLOYMENT

Of the 41,954 residents over 16 years of age, almost two-thirds (61.9 percent or 25,964 residents) are in the labor force. Out of the 25,964 people in the labor force, 24,366 (58.1 percent) are employed and 1,589 (3.8 percent) are unemployed. The educational services and health care/social services sector employ the largest number of City residents (28.5 percent), followed by retail trade (10.8 percent), and professional scientific, management, and administrative and waste management services (9.2 percent). The median household income in the City is \$106,718. While approximately 13.2 percent of employees work from home, a majority of Glendora's residents commute outside of the City for work. The average commute travel time is 33.6 minutes.

HOUSING AND HOUSEHOLD CHARACTERISTICS

In 2022, Glendora had a total of 16,751 occupied housing units (households) (see [Table 3-4, Glendora and Los Angeles County Household Characteristics \(2022\)](#)). The predominant housing type in the city is single-family detached units, which make up approximately 70.3 percent of the housing stock. According to the U.S. Census ACS 5-Year Estimates (2018-2022), about 74.1 percent of Glendora's existing housing was built between 1940 and 1979.

TABLE 3-4: GLENDORA AND LOS ANGELES COUNTY HOUSEHOLD CHARACTERISTICS (2022)

Household Type	Glendora		Los Angeles	
	Population	Percent	Population	Percent
Families	12,834	76.6%	2,218,646	66.0%
With related children of householder under 18 years	5,951	35.5%	1,045,971	31.1%
Housholder Living Alone	3,074	18.4%	870,733	26.0%
65 Years and Older	1,556	9.3%	301,059	9.0%
Non-family	3,917	23.4%	1,144,447	34.0%
Total Households	16,751	100%	3,363,093	100%
Average Household Size	3.04		2.89	
Average Family Size	3.45		3.56	

Source: US Census American Community Survey 5-Year Estimates 2018-2022.

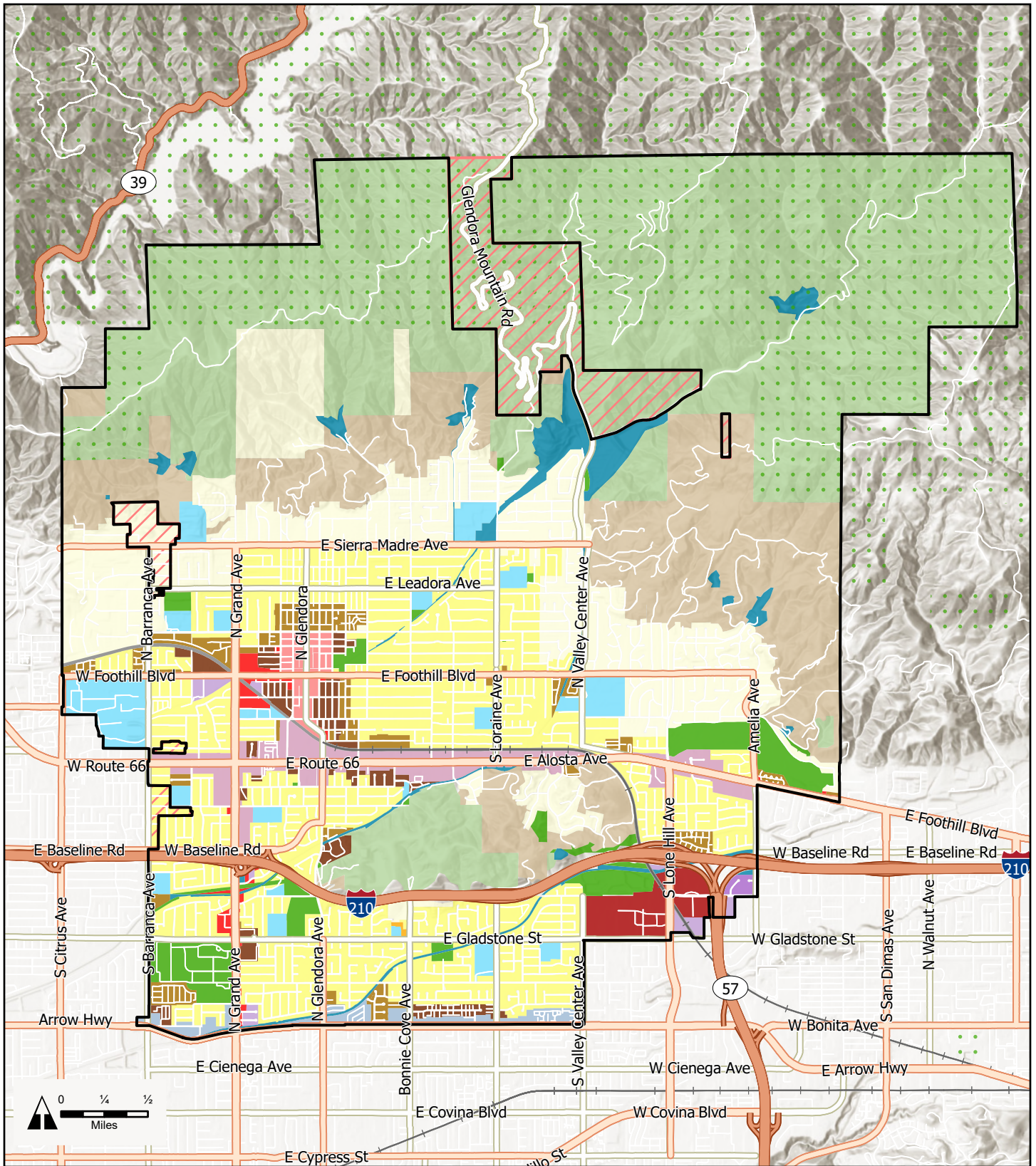
In Glendora, families constituted 76.6 percent of the 16,751 housing units in the City, which represents a relatively higher proportion than in Los Angeles County (66.0 percent). Families with children represented 35.5 percent of households in Glendora and 31.1 percent in Los Angeles County. Single-person households represented 18.4 percent of households in Glendora, which is lower than the proportion of single-person households in Los Angeles County (26.0 percent).

Household size identifies sources of population growth and household overcrowding. In general, a city's average household size will increase over time if there is a trend toward larger families. In communities where the population is aging, the average household size may decline. The average household size for Glendora in the 2018-2022 period was 3.04, which was higher than Los Angeles County, with an average household size of 2.89.



3.5 LAND USES AND EXISTING DEVELOPMENT

The development of Glendora is directed by its General Plan, which assigns land use designations to all areas within the city's planning boundary (see [Figure 3-3, *General Plan Land Use Map*](#)). [Table 3-5, *Land Use Designations*](#), outlines the current land use designations and provides descriptions of the typical uses permitted in each designation. Additionally, [Table 3-6, *Glendora Development Capacity \(2025\)*](#), details the development capacity projected for the city under the General Plan.



LEGEND

- | | | | |
|---------------------------|---------------------|---------------------------|-----------------------------|
| Glendora City Limits | Medium Density | General Industrial | Railroad |
| Sphere of Influence | Medium/High Density | Civic/Institutional | Arrow Highway Specific Plan |
| Angeles National Forest | High Density | Utility and Flood Control | Route 66 Specific Plan |
| Hillside Very Low Density | General Commercial | Conservation Open Space | Village Mixed Use |
| Low Density | Regional Commercial | Open Space | |
| Low/Medium Density | Light Industrial | | |

CITY OF GLENDORA, CALIFORNIA

Figure 3-3. General Plan Land Use Map

Sources: City of Glendora Public Map Viewer, accessed 3-7-2024; Los Angeles County GIS; Southern California Association of Governments; USFS. Map date: November 13, 2024.



Glendora Local Hazard Mitigation Plan

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Glendora Local Hazard Mitigation Plan

TABLE 3-5: LAND USE DESIGNATIONS

Land Use	Maximum DUs or Maximum FAR	Summary Description of Land Use Designation
Residential Land Use		
Hillside Very Low Residential	1 du/ac	The Hillside Density Residential Designation is intended for hillside areas and allows for the development of single-family residential development on lots of at least one acre in size. The preservation of natural hillside features is strongly encouraged within this land use designation.
Low Density Residential	3 du/ac	Low Density Residential Designation is intended for the transitional areas between hillside areas and higher density single-family residential areas. This designation allows for the development of single family residential on lots ranging from 10,500 to 30,000 square feet.
Low/Medium Density Residential	6 du/ac	Low/Medium Density is the most intensive designation for single-family residences and encompasses most of the non-hillside areas. This designation allows for the development of the smallest detached single-family residential lots and the typical lots range in size from 7,500 to 8,500 square feet in size.
Medium Density Residential	11 du/ac	Medium Density Residential Designation allows for multiple and single family attached housing and is a transitional between the detached single-family areas and the higher density multiple family areas. This designation allows for a variety of housing types including small-lot single family, apartments, duplexes, condominiums, and townhouses.
Medium/High Density Residential	15 du/ac	Medium/High Density allows for multiple and single family attached housing and is transitional between the lower density attached housing areas and the higher density multiple family areas. Medium/High Density allows for a variety of housing types including apartments, duplexes, townhouses, and patio homes.
High Density Residential	25 du/ac ¹	High Density is the most intensive residential land use designation. This designation is found along major and secondary arterials and is used as a transition between the other residential land uses and the more intensive non-residential land uses. Development at this density requires consideration of internal and external circulation, the relationship of buildings and units to each other, and the provision of common open space and private outdoor living areas.
Mixed Use		
Village Mixed Use	30 du/ac/ up to 1.0 FAR	The Village Mixed Use Designation is intended to preserve and enhance the unique character of the



Glendora Local Hazard Mitigation Plan

Land Use	Maximum DUs or Maximum FAR	Summary Description of Land Use Designation
		Village area and to encourage a mix of complimentary development. Encouraged development includes professional offices, public/quasi-public facilities, retail businesses, small-lot single family and multiple family residential developments.
Commercial		
General Commercial	0.5 FAR	The General Commercial designation is intended for general commercial uses. These include retail businesses, professional offices, automotive services, and other similar businesses. Development may take the form of single or multi-tenant establishments, including shopping centers.
Regional Commercial	0.5 FAR	The Regional Commercial designation is intended to encourage the development of regionally serving commercial development. The intended uses within this designation include major department stores, specialty retail outlets, restaurants, offices, automobile dealerships, hotel, and other complementary uses.
Industrial		
Light Industrial	0.35 FAR	The Light Industrial designation is intended to encourage general industrial uses which are compatible with surrounding land uses, and which would not degrade the character of adjacent neighborhoods. This designation is intended to serve business parks, research, and development, technology centers, corporate and office uses, "clean" industry and support retail uses, auto truck and equipment sales, warehousing, and distribution.
General Industrial	0.35 FAR	The General Industrial designation is intended for more intensive industrial uses, such as manufacturing, fabrication, assembly, processing, trucking, warehousing and distribution, equipment, and servicing. Uses include industrial research, assembly, and testing of electronics, instruments, and office and related machinery, wholesaling, warehousing, administrative offices, and regional or home offices of industry.
Other		
Civic/Institutional	--	The Civic/Institutional designation includes educational uses, such as primary and high schools, colleges, universities hospitals, and governmental facilities.
Utility and Flood Control	--	The Utility and Flood Control designation is intended to designate those areas in the city that are developed for utility and flood control use.



Glendora Local Hazard Mitigation Plan

Land Use	Maximum DUs or Maximum FAR	Summary Description of Land Use Designation
Route 66 Corridor Specific Plan	Various	The Route 66 Corridor Specific Plan designation allows for the implementation of a complimentary mix of land uses, consistent with the policies and regulations contained within the Specific Plan that governs land uses within a particular area. The Specific Plan land use designation provides for tailored development standards, design guidelines and other policy and regulatory elements that guide future land use and improvements.
Arrow Highway Specific Plan	Various	The Arrow Highway Specific Plan implements the City's vision for its southernmost corridor by fostering livability, housing, retail, and service options; improving and integrating open space and community spaces; encouraging catalytic projects; and improving mobility. The Specific Plan establishes development standards, parking standards, design guidelines, a mobility and infrastructure component, administration and implementation plan, and other requirements to ensure the orderly development of the Arrow Highway Specific Plan area.
Open Space		
Conservation Open Space	--	The Conservation Open Space designation includes areas that are publicly owned, undeveloped and will remain in a natural state. This designation is intended to protect areas with high scenic value, environmental and habitat sensitivity, and passive recreational facilities.
Open Space	--	The Open Space designation includes public and privately owned open space areas such as parks, golf courses, and cemeteries. The Open Space designation generally contains active and passive recreational facilities available for public use.

Source: City of Glendora, *General Plan Land Use Element*, 2006; City of Glendora, *Arrow Highway Specific Plan*, 2018.

Notes:

1. In the Grand-Foothill Multi-Family Residential Overlay Zone the residential density maximum may reach up to 30 dwelling units per acre.



Glendora Local Hazard Mitigation Plan

TABLE 3-6: GLENDORA DEVELOPMENT CAPACITY (2025)

Land Use Designation	Acres	Percentage of the City Total	Potential DU (Minimum)	Potential DU (Maximum)	Potential SF
Residential					
Hillside Very Low Residential	1,907.01	15.21	191	1,907	
Low Density Residential	1,090.56	8.70	1,200	3,272	
Low/Medium Density Residential	1,874.28	14.95	5,810	11,246	
Medium Density Residential	109.21	0.87	666	1,201	
Medium/High Density Residential	134.44	1.07	1,492	2,017	
High Density Residential	125.19	1.00	1,890	3,130	
Total Residential	5,240.69	41.79	11,249	22,772	
Mixed Use					
Village Mixed Use	38.50	0.31	72	144	209,633
Total Mixed Use	38.50	0.31	72	144	209,633
Commercial					
General Commercial	97.14	0.77			1,480,996
Regional Commercial	114.56	0.92			1,746,582
Total Commercial	211.70	1.69			3,227,578
Industrial					
Light Industrial	30.14	0.24			459,514
General Industrial	39.55	0.32			602,979
Total Industrial	69.69	0.56			1,062,493
Other					
Civic/Institutional	346.82	2.77			
Route 66 Corridor Specific Plan	286.93	2.28	1,228	1,228	4,432,309
Utility and Flood Control ROW	267.39	2.13			
Street and Freeway ROW	1,382.24	11.02			
Railroad ROW	51.59	0.41			
Total Other	2,334.97	18.61			
Open Space					
Open Space	4,304.86	34.33			
Conservation Open Space	339.38	2.71			
Total – City Limits	12,507.47	100.00	12,550	24,144	8,932,013
Unincorporated Los Angeles County (SOI)	260.47				
Total – City and SOI	12,800.26				

Source: City of Glendora, *General Plan Land Use Element*, 2006.



3.6 DEVELOPMENT TRENDS AND FUTURE DEVELOPMENT

Glendora is an urbanized community that is largely built out, with limited vacant land available for new development. Since the adoption of the 2015 Natural Hazards Mitigation Plan, new development has primarily taken the form of infill development on underutilized sites within the City. The City Limits and Sphere of Influence (SOI) have not expanded since that time; however, the City of Glendora has experienced population growth and new development, while also adopting plans that support future development in specific areas of the city. Glendora's population has grown by approximately 2,022 people, or 4.0%, since 2015, while other demographic characteristics have remained largely unchanged.² Since preparation and adoption of the 2015 Natural Hazards Mitigation Plan, the City of Glendora has experienced population growth and new development and has adopted plans that provide opportunities for future development within specific areas of the City.

PROPOSED DEVELOPMENT

Table 3-7, *Major Development Projects*, shows current major development projects under construction, approved or proposed within the City. Major development projects include new residential construction of at least eleven dwelling units or more, and new commercial construction of 5,000 square feet (SF) or more.

² The 2015 Local Hazard Mitigation Plan estimated the City's population using the 2010 US Census population of 50,073.



Glendora Local Hazard Mitigation Plan

TABLE 3-7: MAJOR DEVELOPMENT PROJECTS

Project Address	Project Name	Type of Development	Project Description	Status
Northwest Glendora	La Colina (Former Monrovia Nursery)	Residential	121 lot single-family subdivision	Under Construction
950 Silent Ranch	"Grand Estates"	Residential	12 Lot single-family subdivision	Approved
1121 E Arrow Highway	"Central Park"	Residential	19 3-story residential units in 3 attached buildings	Approved
531 E Arrow Highway	N/A	Residential	33 attached 3-story residential condo units	Approved
1237 Bonnie Cove Ave	Citrus Oak	Residential	30 Detached condo subdivision 2-story homes	Approved
630 W Foothill Blvd	N/A	Commercial	9,500 SF Medical Office	Approved
210 S Grand Ave	N/A	Commercial	20,974 SF Medical Office	Approved
400 N Glendora Ave	Cornerstone Bible Church Expansion	Institutional	New 9,287 SF Sanctuary	Approved
1201 E Arrow Hwy	N/A	Residential	46 attached 3-story residential condo units	Approved
1861 E Route 66	SkinPerfect Building	Commercial	6,232 SF Medical Office	Approved
1717 S Grand Ave	N/A	Commercial	Car Wash	Proposed
723 E Route 66	N/A	Residential	39 attached 3-story residential condo units -- zone change	Approved
1332 S Lone Hill	N/A	Industrial Service	47,800 SF industrial	Proposed
631-657 Arrow Highway	N/A	Residential	46-unit residential	Proposed
Southwest corner of Sunflower and Gladstone	Sunflower & Gladstone	Residential	81 detached & attached residential units	Proposed

Source: City of Glendora, *Current Development Projects*, <https://www.cityofglendora.org/departments/economic-development/development-projects>, accessed November 7, 2024.



GENERAL PLAN HOUSING ELEMENT UPDATE

The Southern California Association of Governments (SCAG) 6th Cycle Final Regional Housing Needs Assessment (RHNA) Allocation Plan was approved in March 2021 and identifies housing growth by county and city to accommodate projected population growth needs. On December 16, 2022, the City of Glendora adopted their Housing Element Update to accommodate the RHNA projected housing needs. The RHNA Allocation for Glendora is outlined in [Table 3-8, *Glendora RHNA Allocation \(2021-2029\)*](#).

TABLE 3-8: GLENDORA RHNA ALLOCATION (2021-2029)

Income Category	2021-2029 RHNA
Extremely Low Income	368
Very Low	367
Low	386
Moderate	388
Above Moderate	767
Total	2,276

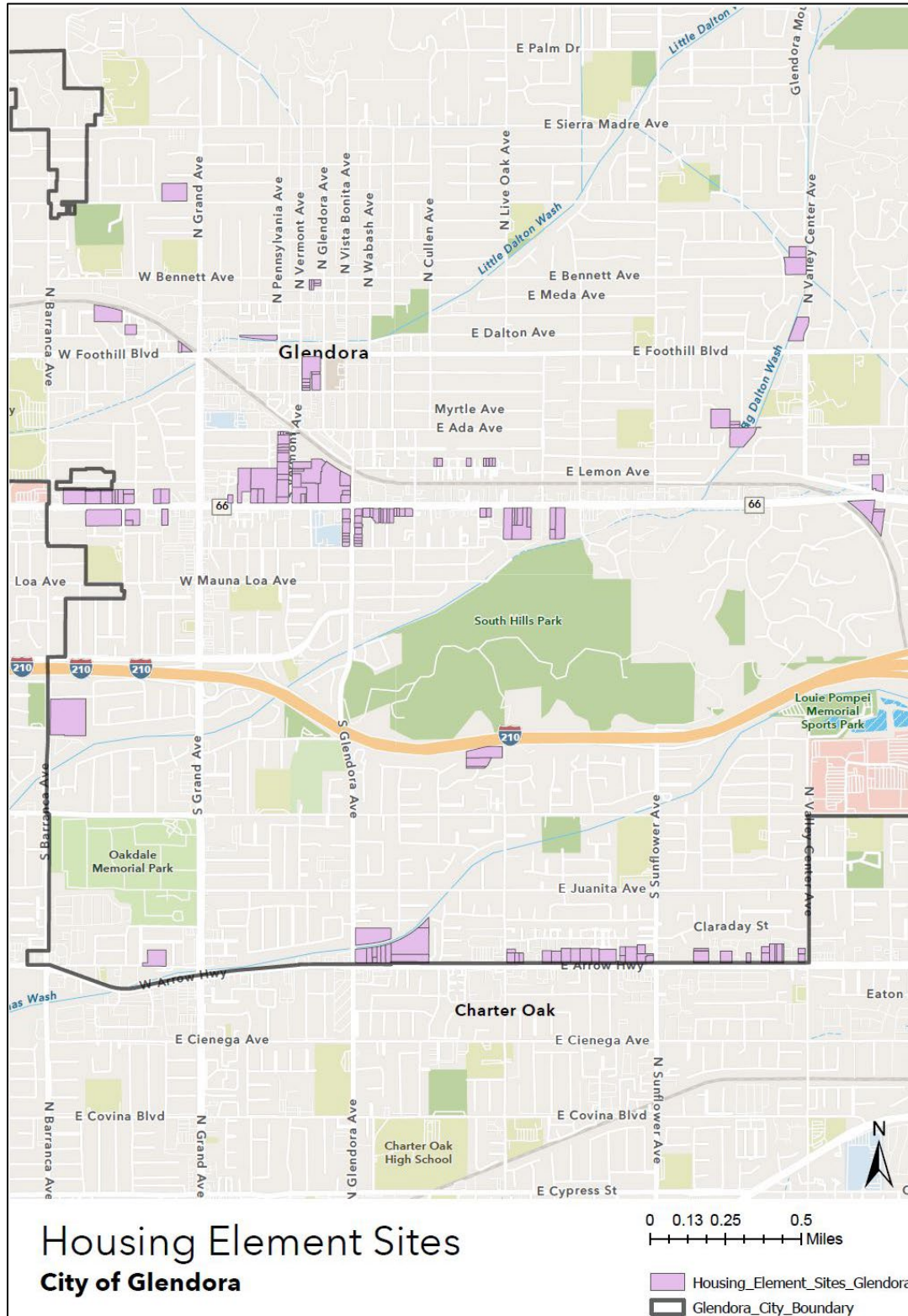
Source: Southern California Association of Governments, *SCAG 6th Cycle Final RHNA Allocation Plan*, 2021.

As shown in [Table 3-6](#), the RHNA plan allocated 2,276 new housing units to Glendora for the October 2021 through October 2029 planning period. Although the City is required to provide adequate land to accommodate the 2,276 new housing units, the City is not required to build housing. The 2021-2029 Housing Element accommodates the RHNA through a combination of new residential and mixed-use development on identified underutilized and vacant sites, located primarily within the Route 66 Corridor Specific Plan, Arrow Highway Specific Plan, and other urbanized areas of the City; the development of accessory dwelling units (ADUs) throughout the City; and projects that have either been approved or were in the entitlement process. [Figure 3-4, *Housing Element Sites Inventory*](#), shows the location of sites identified for future residential development by the 2021-2029 Housing Element.



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FIGURE 3-4: HOUSING ELEMENT SITES INVENTORY



Source: City of Glendora, *City of Glendora 2021-2029 Housing Element*, 2021.



The Route 66 Corridor Specific Plan establishes a comprehensive policy and regulatory guidance document for all properties within the Route 66 Corridor specific plan project area. The plan area contains approximately 287.18 acres, generally located along Route 66 from Barranca Avenue on the west to Amelia Avenue on the east. The Specific Plan was adopted in December 2003 and was revised in May 2017. The Specific Plan provides the necessary regulatory and design guidance that will ensure future development implements the adopted policy for the project area. The Route 66 Corridor Specific Plan is a community-based plan, developed with extensive input by policy makers, business owners and property owners. The policy and regulatory elements of the specific plan are reflective of public consultation with business and property owners, developers, appointed and elected officials, staff, and the public.

The Arrow Highway Specific Plan, adopted in 2018, outlines a long-term vision and goals for a 2.73-mile stretch of Arrow Highway. The plan aims to revitalize the corridor through a mix of redevelopment initiatives, including neighborhood-serving retail, office spaces, light industrial uses, a variety of housing options, as well as bike paths and open spaces. It also introduces new land use designations and development standards for both residential and commercial properties.

GLENDORA METRO STATION AND FOOTHILL EXTENSION

The Foothill Extension (formerly the Gold Line Foothill Extension) is an ongoing construction project extending the light rail A Line (formerly Gold Line), a part of the Los Angeles County Metropolitan Transportation Authority (Metro) public transit system. The Glendora Metro Station is located just south of the City's historic downtown, east of Vermont Avenue and west of Glendora Avenue. The center platform station has light rail tracks on either side (one for westbound and one for eastbound trains).³ Once the project is completed, a trip from Glendora to Pasadena will take approximately 22 minutes and further to downtown Los Angeles will take approximately 51 minutes. Major project construction was completed in January 2025; the extension is undergoing final testing, training, and preparation and is anticipated to open for passenger service in summer 2025.⁴

3.7 INFRASTRUCTURE SYSTEMS

Infrastructure systems within the City, such as roadways, water and wastewater facilities, electricity, and natural gas, provide vital community and individual functions. Local transportation and water and wastewater conveyance facilities and distribution systems are maintained and operated by the City. Electricity, natural gas, and regional wastewater conveyance and treatment facilities are primarily owned, operated, and maintained by other agencies. The ability for

³ Metro Gold Line Foothill Extension Construction Authority, *Glendora*, https://foothillgoldline.org/cities_stations/glendora/, accessed September 9, 2024.

⁴ Metro Gold Line Foothill Extension Construction Authority, *Foothill Gold Line News*, https://foothillgoldline.org/dual_content/sign-up-for-e-news/, accessed February 25, 2025.



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infrastructure systems to remain operational during hazard events and emergencies will contribute to the City's ability to withstand or recover sooner from hazard events.

TRANSPORTATION

Regional access is provided via the Foothill Freeway (I-210). The I-210 Freeway provides east-west regional circulation through the City, connecting with the Orange Freeway (SR-57) at the eastern boundary of the City. There are three roadways that interchange with the I-210 Freeway: Grand Avenue, Sunflower Avenue, and Lone Hill Avenue. Inspection and maintenance of the City's transportation facilities are critical to ensuring their protection against disasters, such as earthquakes.

Public transportation in the City is provided through a combination of regional transit systems and various city contracted bus systems. The Los Angeles County Metropolitan Authority (Metro) provides bus service, connecting the City to the larger San Gabriel region. Light rail service will be provided to the City with the future extension of the A Line (Gold Line). The Glendora to Pomona Foothill Extension segment was completed in January 2025 and is anticipated to begin operation in summer 2025. In addition to the public transit options, the City offers a Dial-Ride-Service, which is a shared ride, curb-to-curb, transportation service provided to Glendora Residents who are 62 years of age or older, as well as residents who are younger than 62 who are unable to independently use the public transportation system due to disability.

WATER AND WASTEWATER

The City of Glendora Public Works Department, Water Division (GWD) provides potable water service to the majority of the City's residents and businesses. A small portion of the City is served by Suburban Water Systems and the City of Azusa Light & Water Department. According to the City of Glendora 2020 Urban Water Management Plan (UWMP), the City is classified as an urban water supplier because it serves more than 3,000 customers. The City's main source of water supply is groundwater pumped from the Main San Gabriel Valley Basin. Additional water sources include the filtered surface water from the Metropolitan Water District of Southern California (MWD), and filtered surface water from the Covina Irrigating Company (CIC). According to GWD, potable water is disinfected with chlorine (CIC and groundwater) or chloramines (MWD) before it is delivered to residents and businesses. MWD imported water sources are a blend of State Water Project water from northern California and water from the Colorado River Aqueduct. CIC source water originates from the San Gabriel Mountains.

The wastewater generated in the City of Glendora is treated by the Sanitation Districts of Los Angeles County (LACSD). According to the UWMP, wastewater is tied through the City's local sewer collection system. The City's local sewers connect into LACSD's regional trunk sewers. The regional trunk sewer lines deliver wastewater to one or more water reclamation plants owned by LACSD for treatment. The water reclamation plants are not located in the City's service area.



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The water reclamation plants serving the City include the San Jose Creek Water Reclamation Plant (SJCWRP) and the Joint Water Pollution Control Plant (JWPCP). The SJCWRP has a treatment capacity of about 100 MGD. According to LACSD, the JWPCP treats 260 million gallons of wastewater per day (mgd) and has a total permitted capacity of 400 mgd.

ELECTRICITY

Southern California Edison (SCE) provides electricity to the City of Glendora. Electricity is distributed from power plants through power lines and substations. There are underground and overhead powerlines within the City. Damage to a substation or the larger distribution system outside of the City could result in power loss to the City. More localized power losses can also occur in the event transmission lines are damaged.

NATURAL GAS

Southern California Gas (SoCalGas) provides gas service to the City of Glendora. According to SoCalGas Gas Transmission Pipeline map of Los Angeles County, there is a high-pressure distribution line that runs along South Glendora Avenue to Route 66 within the City. Other gas transmission pipelines and high pressure (greater than 60 pounds per square inch) gas distribution mains run through other areas of Los Angeles County. Damage to these facilities could interfere with the natural gas service in the City. Similarly, more localized disruptions could occur in the event lower pressure distribution mains and smaller service lines connected to the gas meters at homes and businesses are damaged.



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Section 4.0 | Risk and Vulnerability Assessment

4.1 HAZARD IDENTIFICATION

This section outlines the natural hazards that may impact Glendora, detailing their identification, classification, and the considerations used to assess their potential risk to the community. FEMA identifies a wide range of natural hazards that could affect communities, though their list is not exhaustive and allows for the inclusion of additional hazards based on local context. While Glendora may not be susceptible to all of these hazards, the Planning Team utilized various resources—including the City’s 2015 Natural Hazards Mitigation Plan, the Glendora General Plan Safety Element, the County of Los Angeles General Plan 2035 Safety Element, the California State Hazard Mitigation Plan (SHMP), and FEMA’s hazard list—to evaluate the risks specific to the area. The discussion of each hazard was informed by past occurrences in the City and surrounding areas, along with input from the community through surveys, outreach events, and focused meetings. Professional expertise and knowledge also played a key role in identifying and analyzing hazards.

Table 4-1, *Glendora Hazard Identification*, summarizes the hazards considered for inclusion in the Local Hazard Mitigation Plan (LHMP), incorporating findings from FEMA’s National Risk Index to further assess the City’s exposure to each identified hazard. In the process, the Planning Team consolidated some hazards into broader categories, renamed others for clarity, and added new hazards. For example, fault rupture, seismic ground shaking, liquefaction, and seismic-induced landslides are now grouped under the broader category of Seismic and Geologic Hazards. Severe Weather encompasses Santa Ana winds, heavy rain events (including those during El Niño years), and extreme heat, with extreme heat being newly included. Dam/Reservoir Failure now includes the potential for reservoir failures, and mudflows are categorized under non-seismic induced landslides. Drought has also been added as a new hazard to the profile.

Climate change, while not considered a separate hazard, is recognized as a factor that may intensify existing hazards. The Planning Team decided to address climate change within the profiles of specific hazards it may exacerbate. Additionally, power outages—whether planned or unplanned—are a secondary concern linked to multiple hazards. These outages are discussed in detail within the Severe Weather profile and cross-referenced in other relevant hazard profiles.



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TABLE 4-1: GLENDORA HAZARD IDENTIFICATION

Hazards	Include in City LHMP?	Discussion of Hazard's Inclusion or Exclusion
Avalanche	No	Avalanches are not applicable to Glendora.
Climate Change*	Yes	Climate change is not a discrete hazard but may change the characteristics of a hazard that affects the community, such as frequency and intensity. Climate change is discussed within each of the applicable hazard profiles.
Coastal Flooding	No	Not applicable due to distance from the coast.
Cold Wave	No	Not applicable due to climatic conditions.
Dam/Reservoir Failure*	Yes	Dams and reservoirs occur within and around the City and their potential failure could impact the City.
Drought	Yes	The City depends on groundwater and imported surface water, both of which are susceptible to drought.
Earthquake	Yes	The City is underlain by the Sierra Madre Fault Zone. Hazards associated with earthquakes are addressed within the hazard category Seismic and Geologic Hazards.
Hail/Ice Storm	No	The City does not typically experience significant hail or ice storms.
Heat Wave (Extreme Heat)	Yes	Although extreme heat conditions are not typical within Glendora, they are becoming more common and typically have a greater impact on vulnerable populations. Extreme heat is addressed within the hazard category Severe Weather.
Landslide	Yes	Portions of the City are located within areas identified as having a potential to experience seismic-induced landslides. Additionally, due to the topography of the City, there is the potential for slope instability and mudflows. These topics are addressed within the hazard category Seismic and Geologic Hazards.
Lightning	No	The City does not typically experience significant lightning events resulting in damage.
Flood (Riverine Flooding)	Yes	FEMA-identified floodplains are located within the City and are therefore included.
Geological Hazards*	Yes	Geological hazards that occur within the City are primarily associated with landslides, mudflows, and slope instability. These are addressed under the hazard category Seismic and Geologic Hazards.
Hazardous Materials*	No	Hazardous materials are not generated within the City. Potential impacts associated with hazardous materials are more likely associated with a hazardous material spill along major transportation routes, which are addressed at the regional level and within the City's Emergency Operations Plan.
Hurricane	No	Hurricanes do not occur within the City.
Liquefaction*	Yes	Portions of the City are located within areas identified as having the potential for liquefaction. Liquefaction is addressed within the hazard category Seismic and Geologic Hazards.
Seismic Hazards*	Yes	The City is located within an area of southern California susceptible to earthquake ground shaking and associated seismic hazards, including liquefaction. These topics are addressed within the hazard category Seismic and Geologic Hazards.



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Hazards	Include in City LHMP?	Discussion of Hazard's Inclusion or Exclusion
Strong Wind	Yes	The City experiences periods of high wind events associated with Santa Ana wind conditions. Within the LHMP, these events are addressed under the hazard category Severe Weather.
Tornado	No	Tornadoes do not occur within the City.
Tsunami	No	Not applicable due to distance from the coast.
Volcanic Activity	No	The City is not located within an active volcano area.
Wildfire	Yes	The City contains areas identified as fire hazards. Wildfire is profiled within the LHMP.
Winter Weather	Yes	The City does not typically experience severe winter storm events. However, Glendora does experience heavy rain events with extended durations. Within the LHMP, heavy rains events are addressed under the hazard category Severe Weather.

Source: City of Glendora, 2024; FEMA National Risk Index.

Note: * indicates a hazard that is not included in FEMA's National Risk Index but is locally relevant.

The following hazards are discussed within the LHMP:

- Climate Change (integrated into each hazard)
- Dam/Reservoir Failure
- Drought
- Flood
- Seismic and Geologic Hazards (ground shaking, liquefaction, landslides, mudflows, slope instability)
- Severe Weather (heavy rains, Santa Ana wind events, extreme heat)
- Wildfire



4.2 HAZARD PROFILES

This section contains profiles for the hazards identified as having the potential to occur in Glendora. Each hazard includes a description of the hazard, location of where the hazard may occur, history of the hazard, and the probability of the hazard's future occurrence.

The probability of future occurrences are based on historical frequencies, statistical probabilities, hazard probability maps, and other available information. Probabilities are defined as follows:

- Unlikely – There may or may not have been historic occurrences of the hazard in the community or region and data suggest that occurrences are unlikely. The chance of future occurrences is less than 1 percent each year.
- Occasional – There may or may not have been historic occurrences of the hazard in the community or region, but data suggest there is a possibility that the hazard will occur in the community. The chance of future occurrences is between 1 to 10 percent each year.
- Likely – There has been historic occurrences of the hazard in the community or region and data suggest it is likely that the hazard will continue to occur in the community. The chance of future occurrences is between 10 to 90 percent each year.
- Highly likely – There has been historic occurrences of the hazard in the community or region and data suggest it is highly likely to continue to occur in the community. The chance of future occurrences is 90 percent or above each year.

DAM/RESERVOIR FAILURE

Description

A dam is an artificial barrier preventing the flow of water or loose solid materials (such as soil or snow) or a barrier built across a watercourse for impounding water. Dam failure is the uncontrolled release of impounded water from behind a dam. Flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism can all cause a dam to fail. Dam failure causes downstream flooding that can affect life and property.

Reservoirs are defined as an artificial lake, pond, impoundment or tank, used to store water. Reservoirs can be created on the surface by constructing dams to store water. Additionally, tank reservoirs can be constructed to store water either above ground, on the surface, or below ground. Reservoir failure is the uncontrolled release of impounded water from a reservoir. Similar to dams, flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism activities can all cause a reservoir to fail. Seismic activity may also cause inundation by the action of a differential movement of a reservoir and the water within, causing shearing or buckling of the reservoir infrastructure.



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Dam or reservoir failures are most likely to happen for the following reasons:¹

- Overtopping, caused by water spilling over the top of a dam; usually a precursor of dam failure because of inadequate spillway design, debris blockage of spillways, or settlement of the dam crest.
- Foundation defects, including settlement and slope instability.
- Cracking caused by natural settling of a dam or seismic movements.
- Inadequate maintenance and upkeep.
- Piping, when seepage through a dam is not properly filtered, soil particles continue to progress and form sinkholes in the dam.

FEMA and Cal OES require all dam owners to develop an Emergency Action Plan (EAP) for warning, evacuation, and post-flood actions. In the event of a major dam failure, mutual aid from all levels of government would be required for an extended period. Recovery efforts would include the removal of debris, clearing roadways, demolishing unsafe structures, assistance in reestablishing public services, and providing continued care for the affected population.

Dams are regulated by the Department of Water Resources, Division of Safety of Dams (DSOD). DSOD ensures dam safety by:²

- Reviewing and approving dam enlargements, repairs, alterations, and removals, and ensuring that the dam appurtenant structures are designed to meet minimum requirements.
- Performing independent analyses to understand dam and appurtenant structures performance, including structural, hydrologic, hydraulic, and geotechnical evaluations.
- Overseeing construction to ensure work is performed in accordance with approved plans and specifications.
- Inspecting each dam on an annual basis to ensure it is safe, performing as intended, and not development issues.
- Periodically reviewing the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California.

¹ Association of State Dam Safety Officials, *Dam Incident Database Search*, <https://damsafety.org/Incidents>, accessed July 19, 2023.

² California Department of Water Resources, *Division of Safety of Dams*, <https://water.ca.gov/programs/all-programs/division-of-safety-of-dams>, accessed June 4, 2024.



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DSOD is responsible for assigning each jurisdictional dam a downstream hazard potential. The downstream hazard potential is based on potential downstream impacts to life and property should the dam fail when operating with a full reservoir. The downstream hazard is not related to the condition of the dam or the likelihood of the dam failing in either the short- or long-term. Dams in southern California usually do not operate at full capacity at all times of the year, and thus hazard risks and classifications are a worst-case scenario assessment. The DSOD definitions for downstream hazards are borrowed from the Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures. FEMA categorizes the downstream hazard potential into three categories – low, significant, and high – DSOD adds a fourth category of extremely high:³

- Low: No probable loss of human life and low economic and environmental losses. Losses are expected to be principally limited to the owner's property.
- Significant: No probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
- High: Expected to cause loss of at least one human life.
- Extremely High: Expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more.



Source: Kiewit, Dams by Kiewit, https://www.linkedin.com/posts/kiewit_dams-by-kiewit-activity-7034553427934265344-P1-Z, accessed November 21, 2024.

DSOD uses the U.S. Army Corps of Engineer's National Inventory of Dams condition assessment rating definition as a guideline in assigning condition assessments. A dam safety deficiency is defined as a load capacity limit or other issue that can result in a failure of the dam or appurtenant structure. It is a characteristic or condition that does not meet the applicable minimum regulatory criteria. Conditions assessment definitions are as follows:

Satisfactory	No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the minimum applicable state or federal regulatory criteria or tolerable risk guidelines. Typical Circumstances:
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³ California Department of Water Resources, Definitions for Downstream Hazard and Condition Assessment, <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Division-of-Safety-of-Dams-Definitions-for-Downstream-Hazard-and-Condition-Assessment.pdf>, September 2021, accessed June 4, 2024.



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- No existing deficiencies or potentially unsafe conditions are recognized, with the exception of minor operational and maintenance items that require attention.
 - Safe performance is expected under all loading conditions including the design earthquake and design flood.
 - Permanent risk reduction measures (reservoir restrictions, spillway modifications, operating procedures, etc.) have been implemented to eliminate identified deficiencies.
- Fair
- No existing dam safety deficiencies are recognized for normal operating conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action. Note: Rare or extreme events are defined by the regulatory agency based on their minimum applicable state or federal criteria.
- Other Circumstances:
- Lack of maintenance requires attention to prevent developing safety concerns.
 - Maintenance conditions may exist that require remedial action greater than routine work and/or secondary studies or investigations.
 - Interim or permanent risk reduction measures may be under consideration.
- Poor
- A dam safety deficiency is recognized for normal operating conditions which may realistically occur. Remedial action is necessary. Poor may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Investigations and studies are necessary.
- Other Circumstances:
- Dam has multiple deficiencies or a significant deficiency that requires remedial work.
 - Lack of maintenance (erosion, sinkholes, settlement, cracking, unwanted vegetation, animal burrows, inoperable outlet gates) has affected the integrity or the operation of the dam under normal operational conditions and requires remedial action to resolve.
 - Critical design information is needed to evaluate the potential performance of the dam. For example, a field observation or a review of the dam's performance history has identified a question that can only be answered by review of the design and construction history for the dam. Uncertainty arises when there is no design and/or construction documentation available for review and additional analysis is needed to better understand the risk associated with operation under normal operational conditions.
 - Interim or permanent risk reduction measures may be under consideration.
- Unsatisfactory
- A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.



Typical Circumstances:

- A critical component of the dam has deteriorated to unacceptable condition or failed.
- A safety inspection indicates major structural distress (excessive uncontrolled seepage, cracks, slides, sinkholes, severe deterioration, etc.), advanced deterioration, or operational deficiencies which could lead to failure of the dam or its appurtenant structures under normal operating conditions.
- Reservoir restrictions or other interim risk reduction measures are required.
- A partial or complete reservoir drawdown may be mandated by the state or federal regulatory agency.

Not Rated

The dam has not been inspected, is not under state jurisdiction, or has been inspected but, for whatever reason, has not been rated.

Location and Extent

Critical dams and reservoirs with the potential to inundate parts of the City are identified in [Table 4-2, *Dams With Inundation Areas Affecting Glendora*](#) and shown on [Figure 4-1, *Dams With Inundation Areas Affecting Glendora*](#). DSOD's downstream hazard potential and condition assessment for each dam and reservoir are also provided in [Table 4-2](#).



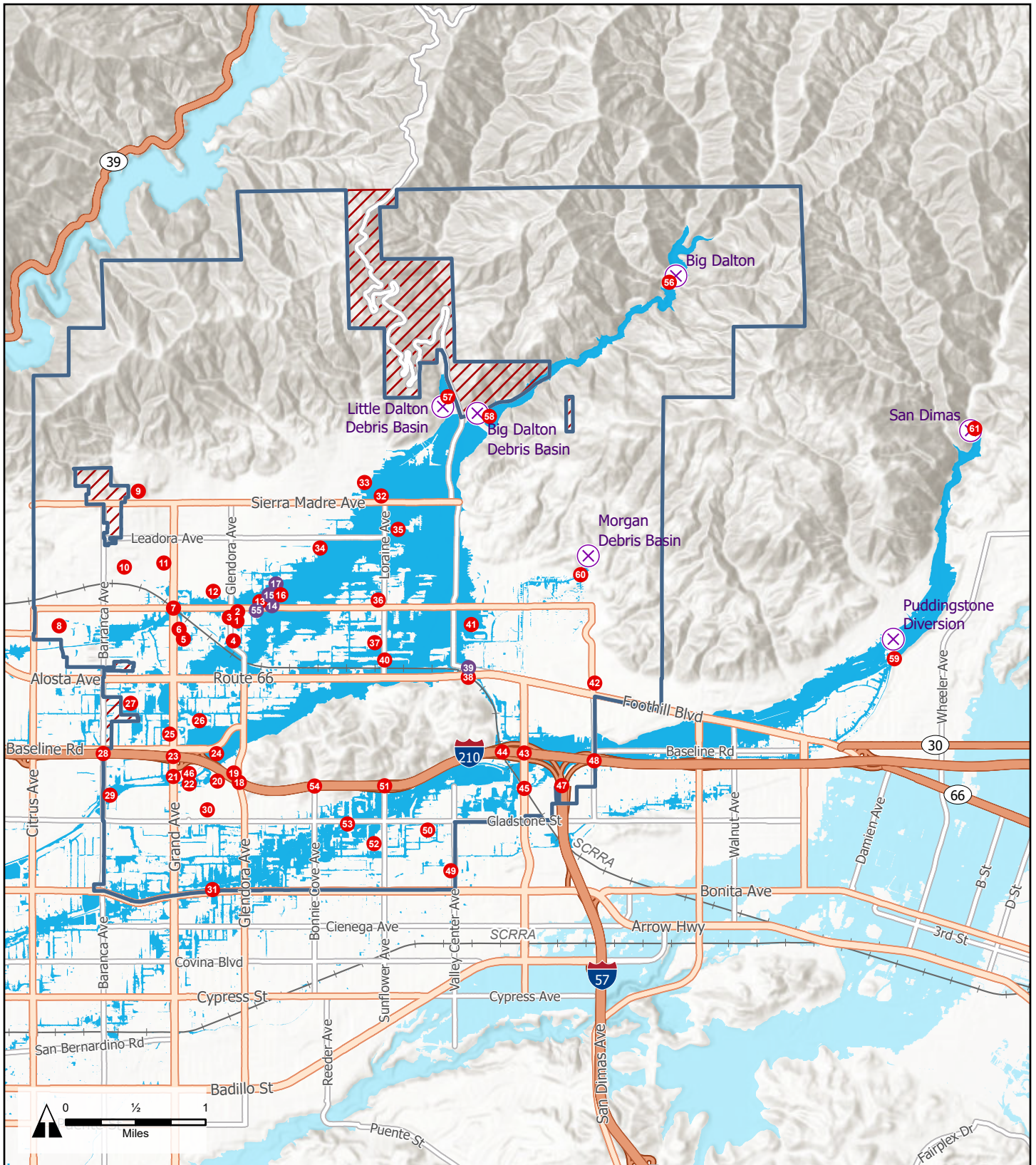
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TABLE 4-2: DAMS WITH INUNDATION AREAS AFFECTING GLENDORA

Name of Dam	Owner	Dam Purpose	Downstream Hazard Potential	Condition Assessment
Little Dalton Debris Basin	Los Angeles County Department of Public Works	Debris Control, Flood Risk Reduction	Extremely High	Satisfactory
Big Dalton Debris Basin	Los Angeles County Department of Public Works	Debris Control, Flood Risk Reduction	High	Satisfactory
Big Dalton	Los Angeles County Department of Public Works	Flood Risk Reduction, Water Supply	Extremely High	Satisfactory
Puddingstone Diversion	Los Angeles County Department of Public Works	Other, Flood Risk Reduction	High	Satisfactory
Morgan Debris Basin	Los Angeles County Department of Public Works	Debris Control	High	Satisfactory
San Dimas	Los Angeles County Department of Public Works	Flood Risk Reduction, Irrigation, Water Supply	Extremely High	Satisfactory

Source: Department of Water Resources, Division of Safety of Dams, *Dams Within Jurisdiction of the State of California, Dams Listed Alphabetically by Dam Name*, September 2023; National Inventory of Dams, *Dams of the Nation*, <https://nid.sec.usace.army.mil/#/>, accessed June 4, 2024.

The geographic extent of dam or reservoir failure is dependent on the type of infrastructure and amount of water stored at the time of the hazard incident. Development of maps that show inundation areas in the event of dam failure is the responsibility of the dam's owner. Inundation maps have been prepared as part of the EAP effort through DSOD and Cal OES. As shown in [Figure 4-1](#), inundation areas occur within a significant portion of the central and southern areas of the City, trending in a southwesterly direction, generally between Little Dalton Wash and Big Dalton Wash, and along San Dimas Wash. Inundation areas include, but are not limited to, residential and commercial uses. A total of 2,168.4 acres within the City and Sphere of Influence (SOI) are located within inundation areas.



LEGEND

- Critical Facility
- Facility of Concern
- City of Glendora
- Sphere of Influence
- X Dam with Inundation Area Affecting Glendora
- Dam Failure Inundation Areas affecting Glendora
- Nearby Dam Failure Inundation Areas

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Figure 4-1. Dams with Inundation Areas Affecting Glendora

Sources: California Department of Water Resources, Division of Dam Safety; Los Angeles County GIS. Map date: December 12, 2024.



Previous Occurrences

The City of Glendora has not experienced a dam or reservoir failure. Since the 20th century, there have been a total of seven dam incidences deemed as failures in California. Of these, six have been in southern California; refer to [Table 4-3, *Dam Failures in Southern California*](#). The most recent dam failure occurred in the San Fernando Valley area of Los Angeles County in 1971.

TABLE 4-3: DAM FAILURES IN SOUTHERN CALIFORNIA

Name of Dam	City/Region	County	Year	Reason for Failure
Lower Otay	Chula Vista	San Diego	1916	Heavy flooding, overtopped; 30 fatalities
Sweetwater	Bonita	San Diego	1916	Heavy flooding, overtopped; 30 fatalities
Sheffield	Santa Barbara	Santa Barbara	1925	Earthquake-induced slide
Saint Francis	San Francisquito Canyon	Los Angeles County	1928	Sudden failure at full capacity due to poor construction; 450 fatalities
Baldwin Hills	Los Angeles	Los Angeles County	1963	Leak through embankment turned into washout; 5 fatalities
San Fernando/ Van Norman	San Fernando/ Granada Hills	Los Angeles County	1971	Earthquake-induced slide; failed due to poor construction

Source: Association of State Dam Safety Officials, *Dam Incident Database Search*, <https://damsafety.org/incidents>, accessed June 5, 2024.

Probability of Future Occurrences

The primary hazards that could cause failure of the reservoirs and their associated dams are strong earthquake ground shaking, seiche, and liquefaction. Seiches are changes or oscillations of water levels within a confined water body caused by fluctuation in the atmosphere, tidal currents, or earthquakes. All the sites listed in [Table 4.1](#) would be subject to seismic ground shaking, as is the entire southern California region, due to the presence of numerous major faults; refer to the Seismic and Geologic Hazards Profile for more information. In addition, portions of the Little Dalton Debris Basin, Big Dalton Debris Basin, and Puddingstone Diversion are within a mapped liquefaction zone; portions of the Big Dalton, Morgan Debris Basin, and San Dimas are within a mapped landslide zone; and the Big Dalton Debris Basin is underlain by the Sierra Madre fault zone. There have been no dam or reservoir failures near the City and no recent failures within Los Angeles County. Over the years, the State of California has implemented stringent standards, regulations, and regular inspections of dam facilities, including after the Oroville Dam crisis in 2017, requiring additional inundation mapping and emergency preparedness planning. Additionally, as shown in [Table 4-2](#), all dams with the potential to inundate parts of Glendora have received a condition assessment rating of “satisfactory” by the DSOD. Therefore, the probability of future occurrences of reservoir or dam failure is considered to be unlikely.

Climate Change Considerations

Dam/reservoir failure is not directly correlated to climate change. Dam and reservoir failure could be caused by seismic activity, which is also not caused by climate change. However, ground failure (due to oversaturated soils) compromising infrastructure integrity or heavy rains overtopping dams could occur. Repetitive severe storm events could increase “wear and tear”



and require additional maintenance and infrastructure improvements to protect dam and reservoir integrity and function. Largely, dam and reservoir operations occur outside of climate change and are not directly impacted by climate change conditions.

DROUGHT

Description

Drought in its simplest definition is an extremely dry climatic period where the available water falls below a statistical average for a region. Drought is also defined by factors other than rainfall, including vegetation conditions, agricultural productivity, soil moisture, water levels in reservoirs, and stream flow. Droughts or water shortages are a gradual phenomenon, occurring over multiyear periods and increasing with the length of dry conditions. When precipitation is less than normal for a period, the flow of streams and rivers declines, water levels in lakes and reservoirs fall, and the depth to water in wells increases. If dry weather persists and water supply problems develop, the dry period can become a drought. Drought cycles are common in southern California and are influenced by cyclical El Niño and La Niña events.

El Niño and La Niña are opposing weather phenomena that significantly impact global climate patterns.⁴ El Niño occurs when Pacific trade winds weaken, causing warm ocean water to move eastward toward the Americas. This shift in water temperature alters atmospheric circulation, resulting in wetter conditions and increased flooding in the southern U.S. La Niña, the opposite of El Niño, occurs when trade winds strengthen, pushing more warm water toward Asia and increasing upwelling along the west coast of the Americas. This results in drier conditions in the southern U.S., often resulting in droughts.

The term “drought” can have different meanings depending on how a water deficiency affects day to day activities. Drought is a complex natural hazard, which is reflected in the following four definitions commonly used to describe it:⁵

- Agricultural – Agricultural drought is based on the impacts to agriculture by factors such as rainfall deficits, soil water deficits, reduced groundwater, or reservoir levels needed for irrigation.
- Hydrological – Hydrological drought is based on the impact of rainfall deficits on the water supply such as stream flow, reservoir and lake levels, and ground water table decline.
- Meteorological – Meteorological drought is based on the degree of dryness or rainfall deficit and the length of the dry period.

⁴ National Oceanic and Atmospheric Administration, *What are El Niño and La Niña?*, <https://oceanservice.noaa.gov/facts/ninonina.html>, accessed June 10, 2024.

⁵ National Oceanic and Atmospheric Administration, *Understanding Drought and How to Respond*, <https://www.weather.gov/safety/drought>, accessed June 5, 2024.



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- Socioeconomic – Socioeconomic drought is based on the impact of drought conditions (meteorological, agricultural, or hydrological drought) on supply and demand of some economic goods. Socioeconomic drought occurs when the demand for an economic good exceeds supply as a result of a weather-related deficit in water supply.

Although climate is a primary contributor to hydrological drought, other factors such as changes in land use (i.e., deforestation), land degradation, and the construction of dams all affect the hydrological characteristics of a region. Since regions are interconnected by natural systems, the impact of meteorological drought may extend well beyond the borders of the precipitation-deficient area. Changes in land use upstream may alter hydrologic characteristics such as infiltration and runoff rates, resulting in more variable stream flow and a higher incidence of hydrologic drought downstream. Land use change is one way human actions alter the frequency of water shortage even when no change in precipitation has been observed.

Droughts cause public health and safety impacts, as well as economic and environmental impacts. Public health and safety impacts are primarily associated with catastrophic wildfire risks and drinking water shortage risks for small water systems in rural areas and private residential wells. Examples of other impacts include costs to homeowners due to loss of residential landscaping, degradation of urban environments due to loss of landscaping, agricultural land fallowing and associated job loss, degradation of fishery habitat, and tree mortality with damage to forest ecosystems. Drought conditions can also result in damage to older infrastructure that is located within dry soils with potential to leak or break. Dead or dying vegetation poses a risk to falling and damaging structures and infrastructure systems.

In Los Angeles County, drought conditions typically result in implementation of large-scale conservation efforts, reducing water supplies to customers and altering the pricing system by implementing higher rates for water usage that exceeds certain levels (i.e., wasteful). Higher rates that may be imposed during a drought could have disproportionate impacts on lower-income households. Reduction in groundwater supplies during drought conditions can also result in the need for water agencies that have high reliance on local groundwater supplies to purchase larger amounts of imported water. Drought conditions have also resulted in drier brush and an increase in the size and severity of wildfires; refer to the Wildfire Hazard Profile for further discussion.

Location and Extent

Droughts are generally widespread events that could easily affect the entire City of Glendora, and the larger Los Angeles County region. The geographic extent of drought conditions could extend to every resident and business owner receiving water from the City of Glendora Water Division, Suburban Water Systems, and the City of Azusa Light & Water Department, the water suppliers for the City. These three water suppliers rely on imported water from other regions (e.g., Colorado River and Northern California) via aqueducts. As a result, droughts can be caused or made worse by conditions in the regions in which the water originates.



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Drought severity depends on numerous factors, including duration, intensity, geographic extent, as well as regional water supply demands by humans and vegetation. The severity of drought can be aggravated by other climatic factors, such as prolonged high winds and low relative humidity. The magnitude of drought is usually measured in time and the severity of the hydrologic deficit.

The U.S. Drought Monitor is a map released weekly that indicates the portions of the United States that are experiencing drought and the severity of the drought based on five classifications: abnormally dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought: moderate (D1), severe (D2), extreme (D3), and exceptional (D4); refer to [Table 4-4, *Drought Severity Classification*](#).

TABLE 4-4: DROUGHT SEVERITY CLASSIFICATION

Category	Description	Possible Impacts
D0	Abnormally Dry	Active fire season begins; dryland crop germination is stunted; soil is dry; snowpack is minimal.
D1	Moderate Drought	Dryland pasture growth is stunted; landscaping and gardens need irrigation earlier; wildlife patterns begin to change; stock ponds and creeks are lower than usual. .
D2	Severe Drought	Fire season is longer, with high burn intensity, dry fuels, and large fire spatial extent; river flows decrease; reservoir levels are low, and banks are exposed.
D3	Extreme Drought	Fire season lasts year-round; water conservation rebate programs increase; water use restrictions are implemented.
D4	Exceptional Drought	Water shortages are widespread; surface water is depleted; poor air quality affects health; fields are left fallow.

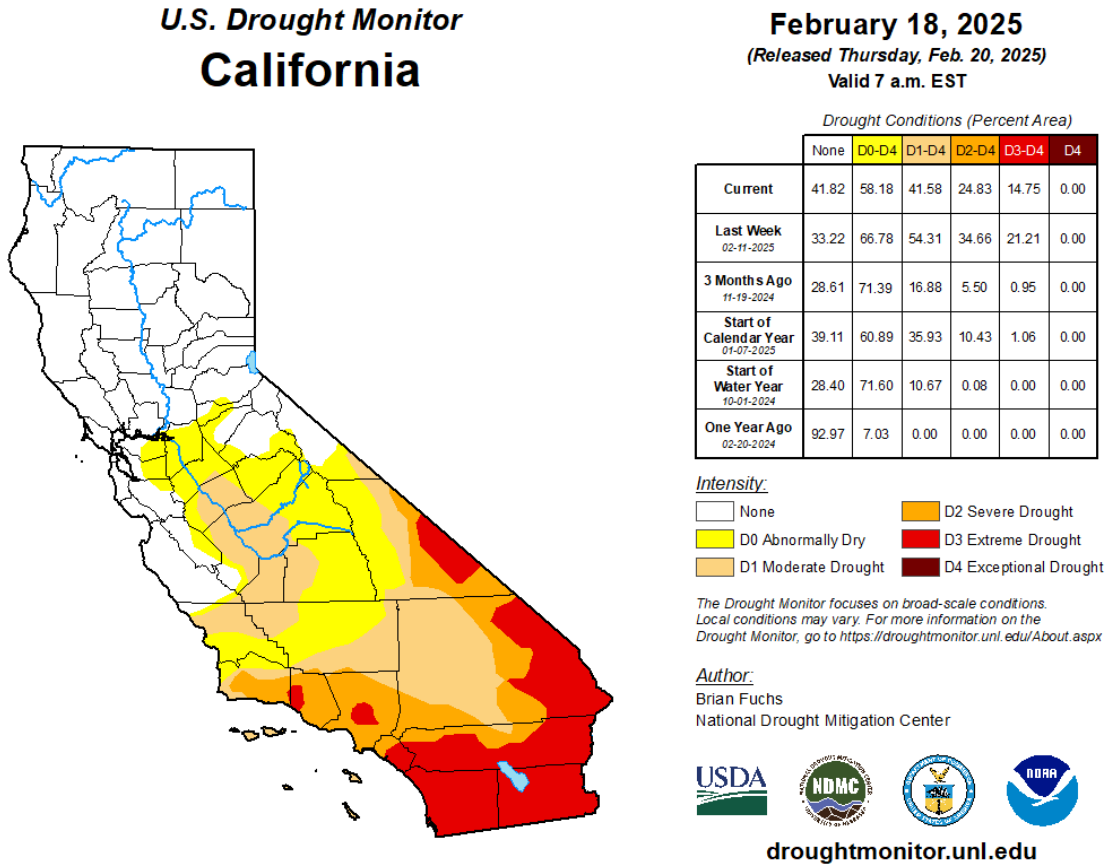
Source: U.S. Drought Monitor, *Drought Classification*, <https://www.droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx>, accessed June 3, 2024; U.S. Drought Monitor, *California*, <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA>, accessed June 3, 2024.

The Drought Monitor is not a forecast but looks backward, providing a weekly assessment of drought conditions based on how much precipitation did or did not fall. Because drought is a slow-moving hazard, it may take more than one good rainfall to end a drought, especially if an area has been in drought for a long time.

[Figure 4-2, *Drought Monitor Map*](#), depicts the drought monitor map, which identifies areas of drought and labels them by intensity as shown in [Table 4-3](#). As of February 18, 2025, Los Angeles County is classified as D1, D2, and D3 by the U.S. Drought Monitor, meaning parts of the County are currently experiencing moderate-to-extreme drought conditions. Glendora is identified as D2, meaning it is experiencing severe drought conditions.



FIGURE 4-2: DROUGHT MONITOR MAP



Source: United States Drought Monitor, *California*, <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA>, accessed February 25, 2025.

Previous Occurrences

Although defining drought can be challenging across a large geography, California has experienced numerous severe droughts over the past century. FEMA declared one drought emergency for California in January 1977, and other drought emergency declarations have been declared by the State. According to the 2023 State Hazard Mitigation Plan, from 1950 to 2022, there were 11 drought State Emergency Proclamations in California.⁶

Table 4-5, *Historical Droughts*, shows the historical droughts that have occurred in California from 1827 through the present.

⁶ California Governor’s Office of Emergency Services, *2023 California State Hazard Mitigation Plan*, https://www.caloes.ca.gov/wp-content/uploads/Hazard-Mitigation/Documents/2023-California-SHMP_Volume-1_11.10.2023.pdf, published August 2023, accessed June 4, 2024.



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TABLE 4-5: HISTORICAL DROUGHTS

Date	Area Affected	Notes
1827-1916	Statewide	Multiyear: 1827–29, 1843–44, 1856–57, 1863–64 (particularly extreme), 1887–88, 1897–1900, 1912–13.
1917-21	Statewide except central Sierra Nevada and north coast	Simultaneous in affected areas, 1919–20. Most extreme in north.
1922–26	Statewide except central Sierra Nevada	Simultaneous in effect for entire State only during 1924, which was particularly severe.
1928-37	Statewide	Simultaneously in effect for the entire State, 1929–34. Longest, most severe in State’s history.
1943–51	Statewide	Simultaneously in effect for entire State, 1947–49. Most extreme in south.
1959–62	Statewide	Most extreme in Sierra Nevada and central coast.
1976–77	Statewide, except for southwestern deserts	Driest 2 years in State’s history. Most severe in northern two-thirds of State.
1987–92	Statewide	Moderate, continuing through 1989. Most extreme in northern Sierra Nevada.
2000-2002	Statewide	Most severe in southern California.
2007-2009	Statewide	Twelfth driest 3-year period on record at the time. Most severe in western San Joaquin Valley.
2012-17	Statewide	Most severe California drought on record.
2021-23	Statewide	Drought emergency proclamation issued in April 2021 with additional orders May 2021, July 2021, October 2021, and October 2022. Drought restrictions eased in March 2023.

Source: Paulson, Chase, Roberts, and Moody, *National Water Summary 1988-89-- Hydrologic Events and Floods and Droughts*, 1991; California Department of Water Resources, *California’s Most Significant Droughts: Comparing Historical and Recent Conditions*, February 2015; California Governor’s Office of Emergency Services, *2023 California State Hazard Mitigation Plan*, August 2023.

The most severe drought on record began in 2012 and continued through 2016. On January 17, 2014, the governor of California declared a State drought emergency, and on April 1, 2014 the governor announced the first-ever mandatory 25 percent statewide water use reduction and a series of actions to help save water, increase enforcement to prevent wasteful water use, streamline the State’s drought response, and invest in new technologies that would make California more drought resilient. At the time of the announcement, the volume of snowpack in California’s mountains was approximately 14 percent of normal. Despite multiple storms in February 2014, drought conditions persisted. By the end of May 2014, all of California was in a condition of “extreme” or “exceptional” drought. At the same time, the volume of snowpack had decreased to less than 10 percent of normal and water stored in Statewide Reservoirs was at 56 percent of normal.⁷ On April 7, 2017, the governor issued an executive order ending the drought emergency in Southern California, including Los Angeles County.

On October 19, 2021, the governor of California declared a State drought emergency, which added the eight counties, including Los Angeles County (not included within an executive order

⁷ California Department of Water Resources, *California’s Most Significant Droughts: Comparing Historical and Recent Conditions*, February 2015.



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in April, May, or July 2021) calling for a voluntary reduction of water use by 15 percent across California.⁸ This declaration followed the second driest year on record and near record low storage in California's largest reservoirs. The proclamation required local water suppliers to implement water shortage contingency plans responsive to local conditions and prepare for the possibility of a third dry year. On March 28, 2022, the governor issued an executive order noting continued drought conditions and requiring urban water suppliers to activate, at a minimum, Level 2 of their customized Water Shortage Contingency Plans. These plans, required by State law, are developed by local water agencies to navigate drought and each plan is customized based on an agency's unique infrastructure and management. Triggering Level 2 of these plans involves implementing water conservation actions to prepare for a water shortage level of up to 20 percent. For example, in many communities, this would mean reducing the number of days that residents can water outdoors, among other measures. On March 24, 2023, the governor rolled back some drought emergency provisions that were no longer needed due to improving water conditions, while maintaining other measures that support regions and communities still facing water supply challenges, and that continue building up long-term water resilience.⁹

The City of Glendora Water Division provides water conservation programs and resources, including education programs, free water efficiency upgrades and rebates, water smart gardening workshops, water saving tips, and leak reporting.¹⁰ During drought conditions, the City of Glendora Water Division educates residents and business owners regarding State-mandated water conservation measures. The City's Municipal Code (Chapter 14.34, *Water Conservation* and 21.03.060, *State Model Water Efficient Landscaping Ordinance Adopted by Reference*) includes water conservation and landscape water use standards, guidelines, and calculations to promote conservation and efficient use of water in the City.

Probability of Future Occurrences

Based on previous occurrences and trends in California, the likelihood that Glendora will experience drought conditions in the future is considered high. The U.S. Seasonal Drought Outlook depicts large-scale trends based on U.S. Drought Monitor areas (intensities of D1 to D4), as shown in [Figure 4-3, U.S. Seasonal Drought Outlook](#). The coastal southern California region, including Glendora, is currently showing drought tendencies that are likely to persist. The probability of future occurrences is considered highly likely.

⁸ California Governor's Office, *Proclamation of a State of Emergency*, October 2021.

⁹ Governor Gavin Newsom, *Governor Newsom Eases Drought Restrictions*, <https://www.gov.ca.gov/2023/03/24/governor-newsom-eases-drought-restrictions/>, accessed June 5, 2024.

¹⁰ City of Glendora, *Water Conservation*, <https://www.cityofglendora.org/departments-services/public-works/water/water-conservation>, accessed June 5, 2024.

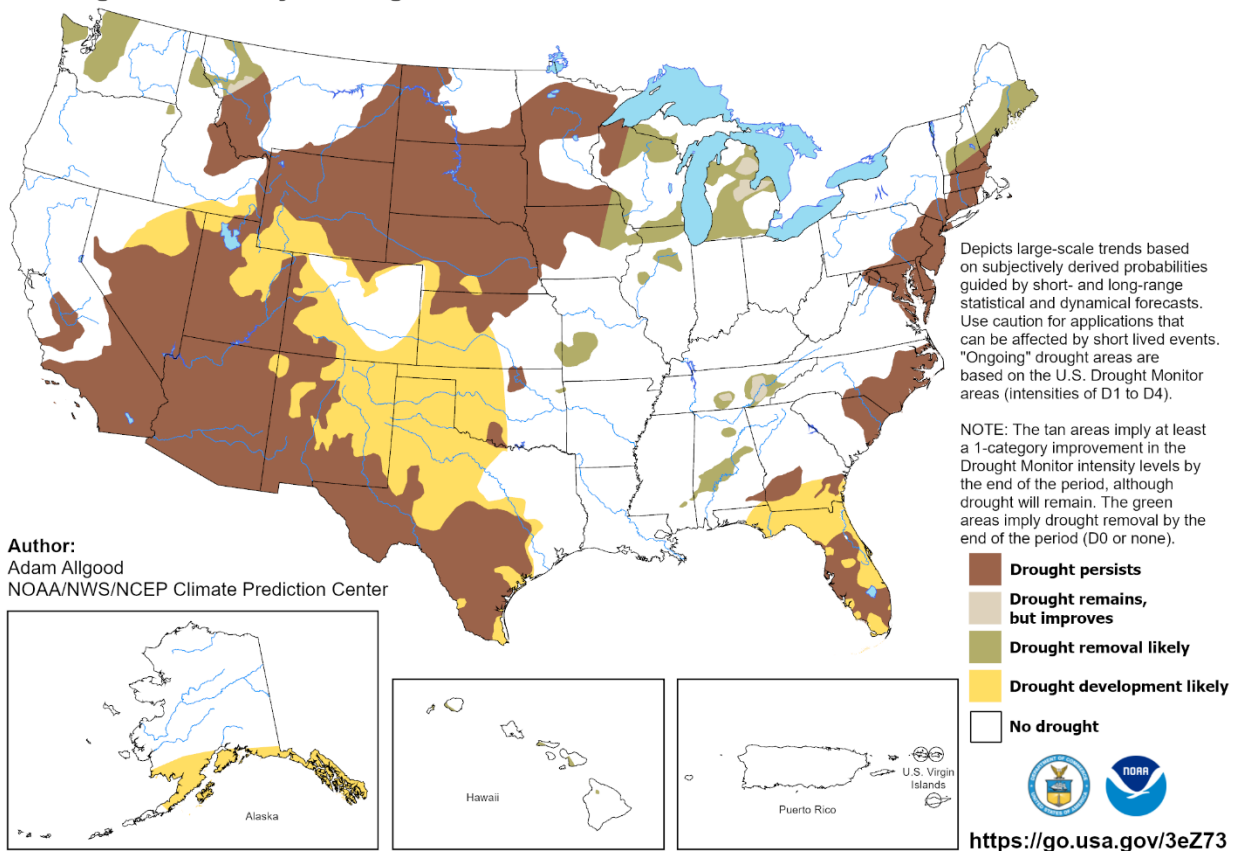


FIGURE 4-3: U.S. SEASONAL DROUGHT OUTLOOK

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for February 20 - May 31, 2025
Released February 20, 2025



Source: National Weather Service Climate Prediction Center, *U.S. Seasonal Drought Outlook*, https://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png, accessed February 25, 2025.

Climate Change Considerations

Climate change can exacerbate droughts by making them more frequent, longer, and more severe. According to the 2023 State Hazard Mitigation Plan, there is a high probability of future drought events in the State, with at least one period of drought occurring somewhere in California every year. Climate scientists studying California find that drought conditions are likely to become more frequent and persistent over the twenty-first century due to climate change, such as more frequent and extended periods of high temperature conditions. Decreasing snowmelt, reduced precipitation, and higher temperatures are all expected effects of climate change. The *California Adaptation Planning Guide* states that the pressure climate change places on ground water reliance during times of drought is not sustainable. *California's Fourth Climate Change Assessment* states that California has experienced a succession of dry spells, and with warmer conditions the impacts of these droughts have increased. Additionally, recent droughts (2012-2016 and 2020-2022) have been followed by very wet winters, providing further indication of continued climate volatility. Increasing populations and increasing demand for water in southern



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portions of California are anticipated to continue and may result in future challenges associated with drought conditions and climate change for Glendora and other communities.

Governor Brown's 2014 drought emergency declaration noted that droughts could occur more regularly into the future. Additionally, Governor Newsom's 2022 executive order notes that climate change continues to intensify the impacts of droughts. The experiences faced by water supply agencies during the recent and current droughts have prompted actions to examine water storage, distribution, management, conservation, and use policies more closely. Water districts drafted administrative drought actions and implemented mechanisms allowing for administrative consistency and coordination to address drought conditions statewide.

FLOOD

Description

Flooding occurs when a waterway, either a natural one or an artificial drainage channel, receives more water than it is capable of conveying, causing the water level in the waterway to rise. Depending on how long these conditions last and the amount of water the waterway receives in proportion to its capacity, the rising water level may eventually overtop the waterway's banks or any other boundaries to the drainage area, resulting in flooding in the surrounding area.

Floods often occur during heavy precipitation events, when the amount of rainwater exceeds the capacity of storm drains or flood control channels. Floods can also happen when infrastructure such as levees, dams, or culverts fail, or when a section of drainage infrastructure fails, and water cannot be drained from an area fast enough. These failures can be linked to precipitation events (i.e., when water erodes away a levee, allowing water to escape and flood nearby areas), or can be a consequence of other emergency situations (i.e., a dam collapsing due to an earthquake).

FEMA defines flood or flooding as a general and temporary condition of partial or complete inundation of normally dry land areas from:

- The overflow of inland or tidal waters;
- The unusual and rapid accumulation or runoff of surface waters from any source; or,
- Mudslides (i.e., mudflows) which are proximately caused by flooding and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

Floods can be caused by several factors, including:

- Weather and climate patterns (e.g., El Niño, La Niña, Pineapple Express, Atmospheric River, etc.)



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- El Niño and La Niña are complex weather patterns resulting from variations in ocean temperatures in the equatorial Pacific. Warmer or colder than average ocean temperatures in one part of the world can influence weather around the globe. El Niño and La Niña episodes typically last 9 to 12 months, but some prolonged events may last for years.¹¹
- Pineapple Express is a name given to an atmospheric river on the West Coast. It is a channel in the atmosphere that moves vast amounts of moisture and can result in massive showers.
- Hydrologic features such as reservoirs, ponds, lakes, rivers, etc. can have a large impact on the amount of flooding.
- The absorption capacity of the ground depends on the composition of soil and bedrock of the area. Less absorbent soil conditions in addition to lack of proper storm infrastructure can result in flooding.
- Type and density of vegetation is related to absorption of moisture affecting the flow of water.
- Patterns of land use/urbanization relates to the pervious and impervious nature of the ground.
- Expected level, age, and condition of flood management infrastructure will impact flooding conditions.
- Large-scale wildfires dramatically alter the terrain and ground conditions. Vegetation absorbs rainfall, reducing runoff. However, wildfires leave the ground charred, barren, and unable to absorb water, creating conditions ripe for flash flooding and mudflow. Flood risk remains significantly higher until vegetation is restored – up to five years after a wildfire.¹²

The force of a flood can be enough to carry away large objects and damage structures, causing considerable damage to buildings and infrastructure. In severe instances, floodwaters themselves can destroy structures or move them off their foundation. Floods can saturate and weaken soil, potentially making structures built on them more susceptible to damage or collapse. Flooding can affect water quality, as large volumes of water can transport contaminants into water bodies and overload storm and wastewater systems. Additionally, large increases in water volume can cause water body erosion and loss of aquatic habitat. It can also cause great economic loss to people and government due to the destruction of roads, bridges, farms, businesses, houses, and automobiles.

¹¹ National Oceanic and Atmospheric Administration, *What are El Niño and La Niña?*, <https://oceanservice.noaa.gov/facts/ninonina.html>, accessed June 10, 2024.

¹² Federal Emergency Management Agency, *Flood Risks Increase After Fires*, https://www.fema.gov/sites/default/files/documents/fema_flood-after-fire_factsheet_nov20.pdf, accessed June 4, 2024.



Location and Extent

The City is adjacent to the San Gabriel Mountains and located within the San Gabriel River Watershed. The San Gabriel River Watershed is in the eastern portion of Los Angeles County where it is bounded by the San Gabriel Mountains to the north, San Bernardino/Orange County to the east, the division of the Los Angeles River from the San Gabriel River to the west, and the Pacific Ocean to the south.¹³ The watershed drains into the San Gabriel River from the San Gabriel Mountains flowing 58 miles south until its confluence with the Pacific Ocean. Three flood channels traverse Glendora: Little Dalton Wash, Big Dalton Wash, and San Dimas Wash. The concreted-lined channels serve as floodways that manage floodwater flow.

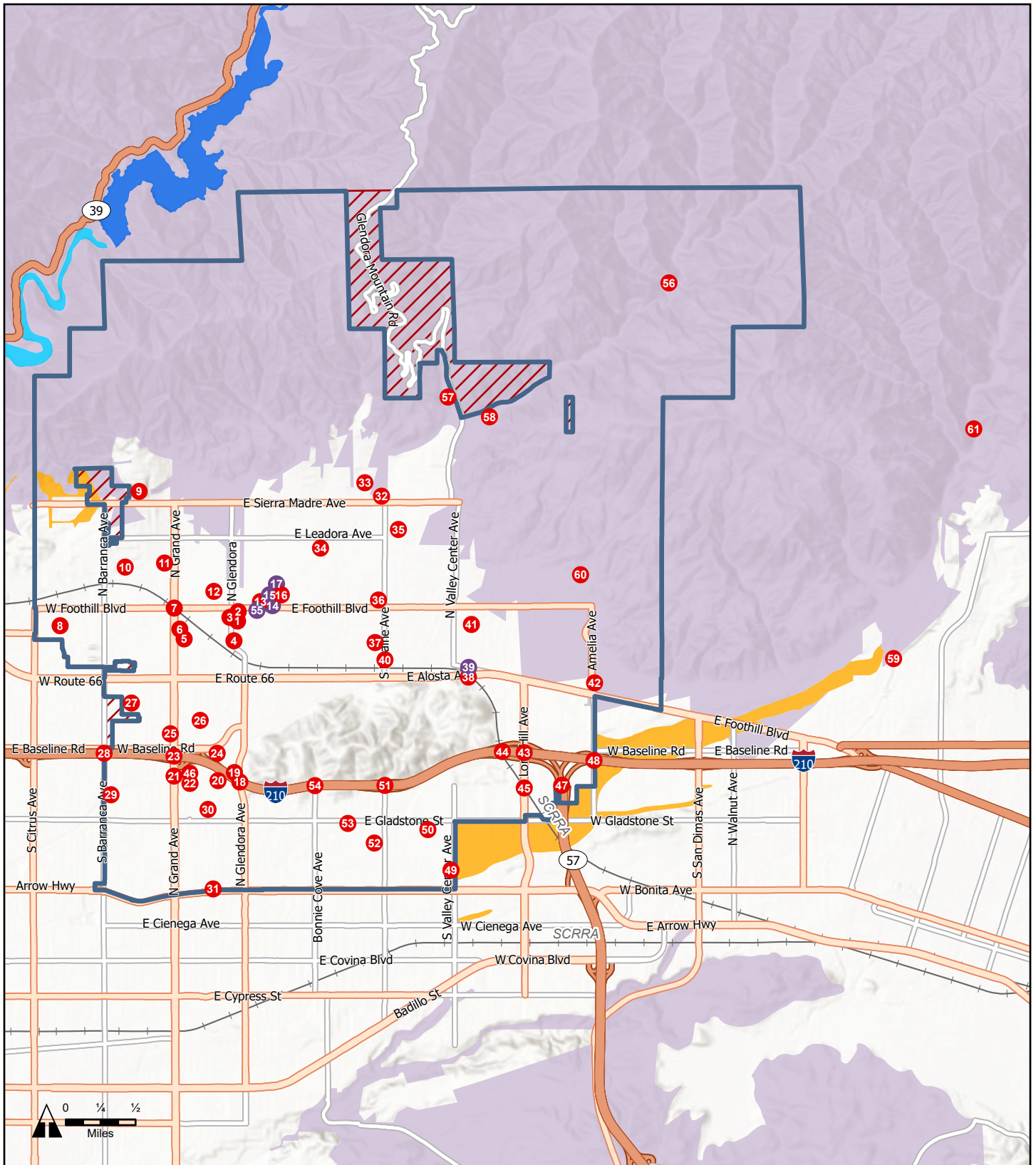
Flood zones within Glendora are determined by Flood Insurance Rate Maps (FIRMs), produced by FEMA in partnership with various communities. A FIRM is the official flood map that shows a community's flood hazard areas. These may include high-hazard (Special Flood Hazard Areas [SFHA]), moderate- to low-hazard areas, and undetermined areas. A SFHA map shows the 100-year floodplain, divided into zones A and AE.¹⁴ A FIRM also includes 500-year floodplains and higher, classified as moderate and minimal risk areas. The extent or magnitude of flooding is measured by percentage and annual chance floods. A 100- and 500-year flood is an event that has a 1 in 100 (1 percent) and 1 in 500 (0.2 percent) chance, respectively, of occurring in any given year. This data is incorporated into FIRMs to support the National Flood Insurance Program (NFIP) and provide the basis for community floodplain management regulations and flood insurance requirements.

A regulatory floodway is a subset of the 100-year floodplain and is defined by FEMA as the channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in these floodways to ensure that there are no increases in flood elevations.

Figure 4-4, *Flood Hazard Zones*, shows the locations of flood zones in Glendora, and Table 4-6, *Acreage by FEMA Flood Zones*, provides the details and acreage of these zones that occur within the planning area. The majority of developed areas in Glendora are identified as Zone X, meaning that the area is located outside of SFHAs and have minimal risk of flood hazard. Potential flooding could occur in a northwestern portion of the City mapped within the 500-year floodplain, generally located along Sierra Madre Avenue. Additionally, a significant portion of the City has not been mapped for flood hazards by FEMA. These unmapped areas occur in the northern and eastern foothills of the City and generally consist of open space and low-density residential uses. Development within flood hazard areas is expected to comply with flood protection standards that reduce vulnerability to flood impacts and ensure safe use and occupation of structures.

¹³ County of Los Angeles Public Works, *San Gabriel River Watershed*, <http://www.ladpw.org/wmd/watershed/sg/>, accessed July 7, 2023.

¹⁴ Federal Emergency Management Agency, *National Flood Insurance Program, Flood Insurance Manual*, April 2024, https://www.fema.gov/sites/default/files/documents/fema_nfip_flood-insurance-manual_042024.pdf, accessed June 10, 2024.



LEGEND

- Critical Facility
- Facility of Concern
- City of Glendora
- Sphere of Influence
- 100-year Flood Zone
- 500-year Flood Zone
- unshaded Area of Minimal Flood Hazard
- No Flood Hazard Study has been Conducted

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Figure 4-4. Flood Hazard Zones

Sources: FEMA National Flood Hazard Layer, Los Angeles County, 10-19-2023; Los Angeles County GIS. Map date: December 12, 2024.



TABLE 4-6: ACREAGE BY FEMA FLOOD ZONES

Flood	Risk	Area (Acres)
100-Year Flood and Regulatory Floodway	High	0.0
500-Year Flood	Moderate to Minimal	49.8
Area of Minimal Flood Hazard (Zone X)	Minimal	5,859.3
Undetermined/No Study Conducted (Zone D)	Undetermined	7,333.5

Source: Federal Emergency Management Agency, June 18, 2024.

Flooding can also occur outside of mapped flood hazard zones during heavy rain events associated with extensive runoff. Localized flooding typically occurs when significant amounts of rain fall over a short time and/or, because of overloaded or blocked stormwater drainage systems that cause sheet flow into streets and low-lying areas.



Source: Ralls, T., ABC 7, *Rain floods Southern California roads*, <https://abc7.com/rain-flooding-mud-slide-socal-camarillo-glendora-silverado-flow-debris-southern-california-1a/419008/>, accessed November 21, 2024.

Previous Occurrences

Past occurrences of flood damage in the City of Glendora have occurred as early as 1938, when one of the worst rainstorms on record caused overflow of the Little Dalton Wash channel and street flooding throughout the City.¹⁵ Another significant flood event affecting the City of Glendora occurred in 1969 and was caused by intense rainfall.¹⁶ The 1969 flood event had a significant impact, particularly in the northern part of the City, where flooding and mudslides caused over 50 million dollars in damages to private and public properties. Improvements to City and County flood control systems after these events has greatly reduced the flooding hazard in Glendora.

¹⁵ The Glendora Press-Gleaner, *Glendora Escapes with Minor Damage as Rain Floods Southland Area*, March 4, 1938, <https://ccd1.claremont.edu/digital/collection/cwd/id/4756>, accessed June 10, 2024.

¹⁶ U.S. Geologic Survey, *Flood of January 1969 near Azusa and Glendora, California*, <https://pubs.er.usgs.gov/publication/ha424>, accessed June 10, 2024.



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The National Weather Service report, *A History of Significant Weather Events in Southern California*, includes a chronological list of events organized by weather type.¹⁷ One of these events specifically mentions heavy rainfall occurring in Glendora in 1956. Additionally, the National Oceanic and Atmospheric Administration (NOAA) Storm Event Database summarizes flood events of regional significance affecting the City of Glendora. These are documented below:¹⁸

- In May 1998, heavy rain produced local urban flooding across Los Angeles County. Local street flooding was reported in Glendora.
- In April 1999, moderate to locally heavy rainfall produced minor street flooding across coastal areas of Ventura and Los Angeles counties.
- In February 2000, heavy rain totaling two to six inches produced flash flooding across Santa Barbara, Ventura, and Los Angeles counties. Flash flooding and mudslides closed parts of San Gabriel Canyon Road in the Angeles National Forest. The heavy showers resulted in numerous reports of street flooding across the area.
- In March 2000, heavy showers produced widespread street flooding across Los Angeles County.
- In April 2000, a powerful Pacific storm brought heavy rain, causing urban flooding in Los Angeles County.
- In March 2001, Los Angeles county received one to three inches of heavy rainfall, with numerous reports of flooding and mudslides.
- In February 2003, a powerful winter storm brought heavy rain to southern California. Rainfall totals over coastal areas ranged from one to five inches with higher amounts in the mountains. Widespread flooding was reported across Los Angeles County.
- In January 2005, a powerful Pacific storm brought heavy rain, snow, flash flooding, high winds and landslides to central and southern California. During the five-day event, rainfall totals ranged from three to 10 inches over coastal areas with up to 32 inches in the mountains
- In January 2008, a powerful Pacific storm brought strong winds, heavy rainfall, flash flooding, and winter storm conditions to central and southern California. Rainfall totals ranged from five to 11 inches in the foothills and mountains. The heaviest rainfall fell over favored south-facing mountain slopes.
- In January 2010, a series of powerful winter storms affected central and southern California. As this series of storms moved across the area, they brought heavy rain, flash flooding, gusty

¹⁷ National Weather Service, *A History of Significant Weather Events in Southern California*, <https://www.weather.gov/media/sgx/documents/weatherhistory.pdf>, March 2024.

¹⁸ National Oceanic and Atmospheric Administration, *Storm Events Database*, <https://www.ncdc.noaa.gov/stormevents/>, accessed Jun 10, 2024.



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winds, heavy snow, and severe weather to the area. Rainfall ranged from eight to 16 inches in the foothills and mountains.

- In February 2014, heavy showers and thunderstorms moved across the communities of Azusa and Glendora, generating flash flooding and debris flows. Rainfall totals ranged from between six and 12 inches across the mountains and foothills. Law enforcement reported that several homes were damaged due to debris flows.
- In January 2016, a powerful winter storm brought heavy rain and snow, flash flooding, and gusty winds to the Los Angeles area. Rainfall totals from this storm generally ranged between two and six inches with locally higher amounts in some foothill areas.
- In December 2021, a winter storm hit southern California, producing heavy rainfall ranging between two to eight inches. Numerous reports of nuisance roadway flooding as well as downed trees were reported.
- In August 2023, Tropical Storm Hilary brought heavy rain and significant flooding to Ventura and Los Angeles counties. Rainfall totals in mountain areas ranged between three to nine inches. Rainfall rates were impressive, with rates of around one inch in less than an hour reported at times. With such heavy rainfall, numerous reports of flash flooding as well as mud and debris flows were received.

Probability of Future Occurrences

This section addresses flooding resulting from heavy precipitation events, distinct from flooding caused by reservoir or dam failure, which was covered in the previous section. Areas within the 100-year flood zone have a 1 percent chance of flooding in any given year. However, Glendora has no areas within this high-risk zone. The 500-year flood zone, with a much lower risk of flooding (0.2 percent chance per year), includes a small area of approximately 49.8 acres in the northwestern part of the city, near Sierra Madre Avenue. Flooding incidents are most likely to occur within FEMA-designated flood zones.

The City and County maintain an extensive storm drain system that would normally divert any excessive rainfall into appropriate channels. After the historic flooding events discussed above, the City made improvements to infrastructure such as the construction of dams, basins, and flood control channels to mitigate flood hazards. These improvements decrease the probability of a major flood occurrence in the City. Additionally, the City prohibits development in any area determined to be subject to flood hazard by reason of inundation, overflow, or erosion unless provisions are made to eliminate the hazards to the satisfaction of the City Engineer by providing adequate drainage facilities, protective walls or devices, suitable fill, raising the floor level of the structures, or by a combination of methods. The City also prepares for flood events by maintaining and proactively removing debris prior to significant rain events. However, infrastructure and flood control facilities could be overwhelmed during a large storm event, resulting in flooding not limited to the FEMA flood zones. The probability of future occurrences is considered likely.



Climate Change Considerations

Climate change is expected to influence the frequency and intensity of precipitation events throughout California and could have a direct effect on flooding. According to research conducted by UCLA, California will experience extremely wet and extremely dry seasons by the end of the century. It is predicted that “over the next 40 years, the State will be 300 to 400 percent more likely to have a prolonged storm sequence as severe as the one that caused the legendary California flood more than 150 years ago.”¹⁹ The Fourth Climate Change Assessment indicates the intensity of heavy precipitation events is increasing and identifies a medium-high confidence for future change. While the annual rainfall averages may remain constant, the wet season may be narrower, leading to large downpours in a short period of time that overwhelm infrastructure and lead to increased flooding. With population density and increased urbanization of Los Angeles County, increased precipitation events and associated flooding could be devastating.



Source: City of Glendora, February 28, 2014.

¹⁹ Colgan, D. (UCLA), *Study forecasts a severe climate future for California*, April 2018, <https://newsroom.ucla.edu/releases/california-extreme-climate-future-ucla-study>, accessed June 10, 2024.



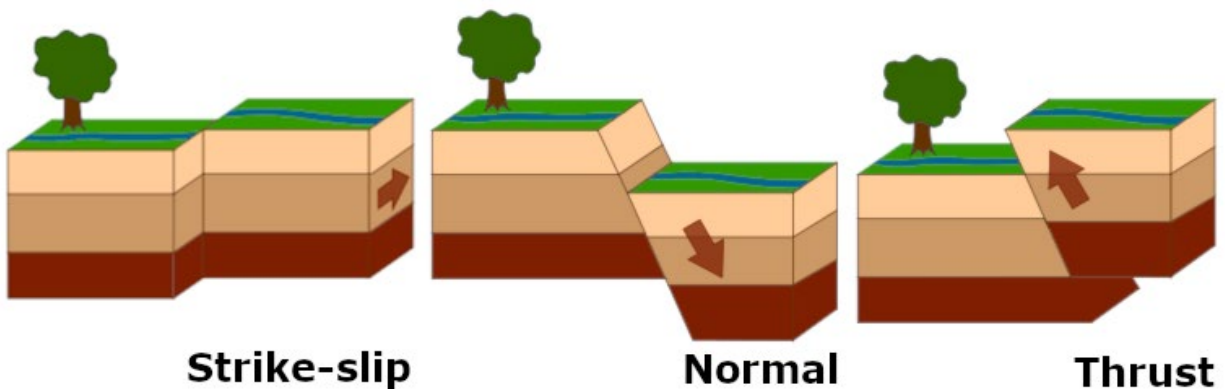
SEISMIC AND GEOLOGIC HAZARDS

Description

Surface Faulting and Ground Motion

The US Geological Survey (USGS) defines an earthquake as a sudden slip on a fault and the resulting ground shaking and radiated seismic energy caused by the slip (or any other sudden stress changes in the earth).²⁰ Faults are fractures along the earth's crust between two blocks of earth and can be defined as a strike slip, normal, or thrust faults, as depicted in Figure 4-5, *Types of Faults*, below.

FIGURE 4-5: TYPES OF FAULTS



Source: U.S. Geological Survey, *Earthquake Hazards Program*, <https://www.usgs.gov/programs/earthquake-hazards>, accessed June 11, 2024.

Fault movement can occur rapidly, in the form of an earthquake, or may occur slowly, in the form of creep. During an earthquake, the rock on one side of a fault suddenly slips with respect to the other. Earthquakes occur without warning and result in effects such as ground motion, surface faulting, and ground failure (including liquefaction and landslides), described below.

Ground motion is seismic shaking (vibration) of the ground during an earthquake.²¹ When a fault ruptures, seismic waves radiate in all directions and cause the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can further amplify ground motion.

Seismic shaking can be strong enough to result in widespread devastation or virtually undetectable by the average person. The intensity of seismic shaking is a result of the release by the fault rupture (how much of the accumulated stress was released), the length of the rupture (the longer the slip along the fault line, the greater the shaking), and the depth at which the rupture occurs (ruptures that occur closer to the surface often cause stronger shaking). Usually, areas

²⁰ U.S. Geological Survey, *Earthquake Hazards Program*, <https://www.usgs.gov/glossary/earthquake-hazards-program>, accessed June 11, 2024.

²¹ U.S. Geological Survey, *What are the Effects of Earthquakes?*, <https://www.usgs.gov/programs/earthquake-hazards/what-are-effects-earthquakes>, accessed June 11, 2024.



Glendora Local Hazard Mitigation Plan

closest to the site of the rupture experience the greatest shaking, although differences in geology and soil can also have an impact.

Seismic shaking can damage or destroy buildings and structures and may cause partial or total collapse. Ground movement can damage or destroy infrastructure on or beneath the surface, such as roads, rail lines, and utility lines and pipes. This in turn, can cause hazardous materials releases, water main breaks, and other dangerous situations resulting from infrastructure failure. Falling debris and structures also create a risk of personal injury or death.

Surface faulting is the differential movement of two sides of a fracture, where the ground breaks apart. The length, width, and displacement of the ground characterize surface faults, which occur based on the type of underlying fault.

Faults occur at the boundaries between large sections of the earth's surface, called tectonic plates. While most of California sits on the North American plate, the San Gabriel Valley area (which includes the City of Glendora) is on the Pacific plate. The San Andreas Fault is the main boundary between the North American and Pacific plates, but other fault lines can be found up to 200 miles away. The presence of the San Andreas Fault and other faults is the reason for California's frequent seismic shaking and other tectonic activity.

Landslides, Mudflows, and Slope Instability

Areas with steep slopes and valleys are potentially subject to instability. These areas may be prone to hazards such as rock falls, slope failures, and debris flows (mudflows). While seismic shaking can cause landslides, other causes can include erosion, soil saturation, excess weight from accumulation of rain or snow, and human-made conditions such as construction disturbance or vegetation removal.

When a hillside or other slope becomes unstable, the soil and rocks that make up the slope slide toward the bottom. Landslides are often sudden, although some occur very slowly over a long period of time. Loose and fractured materials are more likely to slide than compact materials or solid rock, and steep slopes are at greater risk than gentle rises. Areas that have been recently burned by wildfires are more susceptible to sliding because the fire destroys the plant cover that helps stabilize slopes.

Regardless of the cause or specific form, a landslide can damage or destroy structures built on the sliding material or in its path. Underground infrastructure, such as pipelines or telecommunication lines, may be severed during a landslide. This could lead to infrastructure-induced flooding if water pipes are broken. In addition to property damage, landslides can crush or bury people, creating a risk of serious injury or death.



Liquefaction

Liquefaction is a phenomenon that occurs when ground shaking causes saturated soils, primarily clay-free deposits such as sand or silt, to lose strength and act like a viscous fluid. Soils that are poorly consolidated and combine with groundwater during an earthquake lose their shear strength and take on the properties of a heavy liquid. Certain soils are more susceptible to liquefaction, particularly younger and looser sediment closer to the water table. Liquefaction causes three types of ground failure, as described below:²²

- Lateral spreads involve the lateral movement of large blocks of soil as a result of liquefaction of an underlying layer. They generally develop on gentle slopes, most commonly between 0.3 and 3 degrees. Horizontal movements commonly are as much as 10 to 15 feet. However, where slopes are particularly favorable, and the duration of ground shaking is long, lateral movement may be as much as 100 to 150 feet. Lateral spread usually breaks up internally, forming numerous fissures and scarps.
- Flow failures consist of liquefied soil or blocks of intact material riding on a layer of liquefied soil and are the most catastrophic type of ground failure caused by liquefaction. They commonly move several feet and up to dozens of miles under certain conditions. Flow failures usually form in loose saturated sands or silts on slopes greater than three degrees.
- Loss of bearing strength occurs when the soil supporting buildings or other structures liquefies. When large deformations occur, structures settle and tip. The general subsurface geometry required for liquefaction-caused bearing failures is a layer of saturated, cohesionless soil that extends from near the ground surface to a depth equal to about the width of the building.

Location and Extent

Surface Faulting and Ground Motion

The City of Glendora is located within the seismically active southern California region. The City is underlain by the Sierra Madre Fault Zone, a major fault zone which runs along the southern margin of the San Gabriel Mountains. In addition, several other major faults are located within the region that could have an impact on the City; refer to Figure 4-6, *Regional Fault Map*. The San Andreas Fault, considered the most seismically active fault in the southern California region, is located approximately 20 miles northeast of the City.

Earthquakes that could affect the City would most likely originate from the Sierra Madre or San Andreas Fault Zones, described below. These faults are close enough in proximity or expected to generate strong enough shaking that could affect the City. Geologic conditions within the foothill portions of the City could be impacted more severely due to the steep topography and the relative instability of some of the geologic units in this portion of the City.

²² U.S. Geological Survey, *What are the Effects of Earthquakes?*, <https://www.usgs.gov/programs/earthquake-hazards/what-are-effects-earthquakes>, accessed June 11, 2024.



Glendora Local Hazard Mitigation Plan

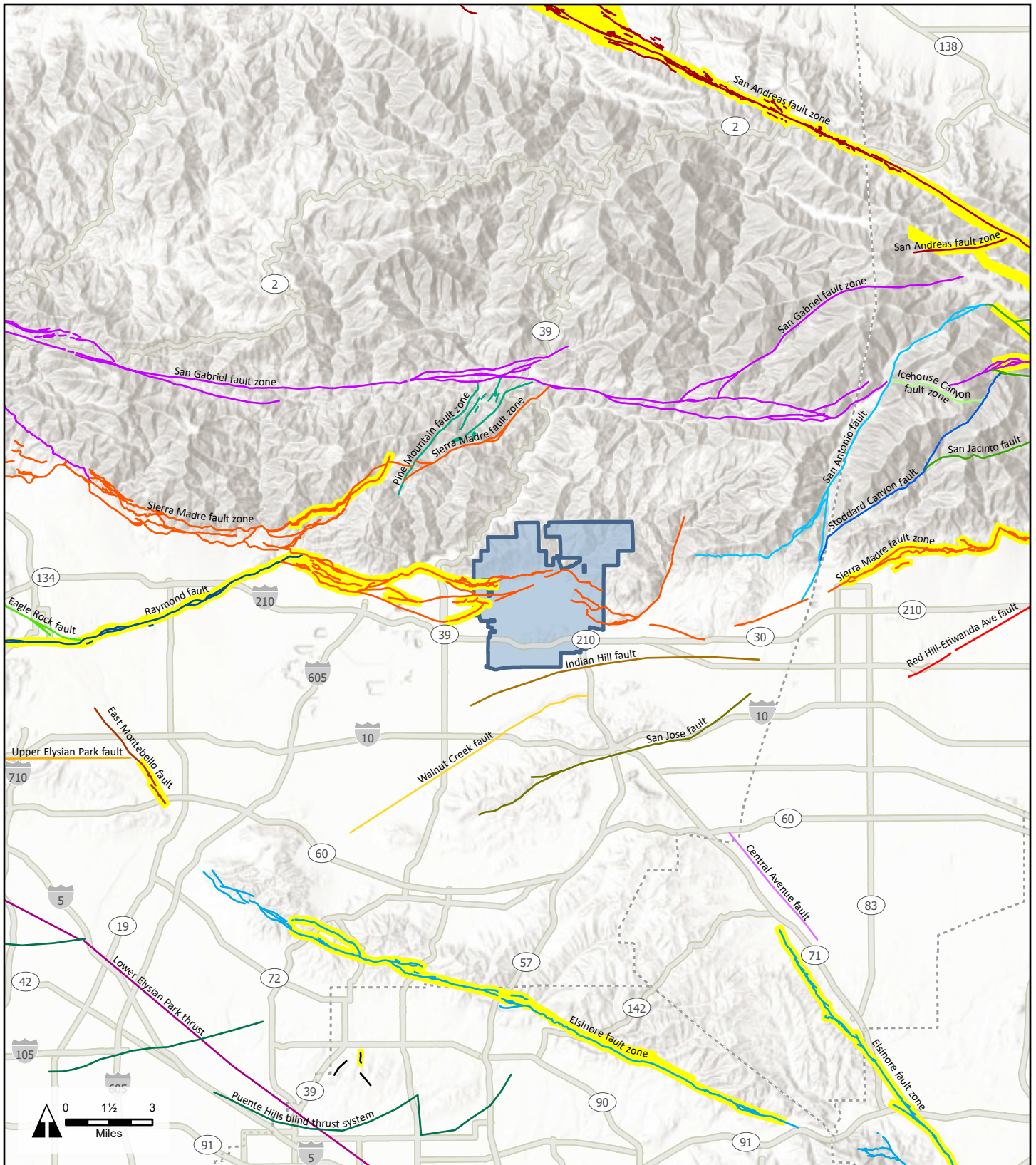
- Sierra Madre Fault Zone: The Sierra Madre Fault Zone consists of east-west trending faults and folds, which extend along the southern margin of the San Gabriel Mountains. This fault zone is approximately 35 miles in length and terminates at Dalton Canyon to the east and at the San Fernando Fault to the west. This fault is composed of five individual segments, which range in activity. Portions of the City overlying this fault are located within Alquist-Priolo Special Study zones; the segments within the City are considered potentially active. Data gathered on this fault suggests that the slip rate ranges from 0.36 to 4 millimeters per year and this fault is expected to generate earthquakes with a magnitude of 6.0-7.0.²³ Faults that are associated with this fault system include the:
 - Cucamonga Fault
 - Duarte Fault
 - San Fernando Fault
 - San Gabriel Fault
 - Clamshell-Sawpit Canyon Fault
 - Raymond Fault
- San Andreas Fault Zone: The San Andreas Fault Zone, located approximately 20 miles northeast of the City, is a right-lateral strike-slip that extends approximately 745 miles from Cape Mendocino to the Salton Sea. It has caused numerous major earthquakes throughout California's history and has the potential to cause destructive ground shaking in the southern California region. Data gathered on this fault suggests that the slip rate ranges from 20 to 35 millimeters per year and this fault is expected to generate earthquakes with a magnitude of 6.8-8.0.

Southern California is subject to potential ground shaking in the event of an earthquake. Ground shaking can result in extensive structural damage, injury, and death. Ground shaking would be particularly damaging to residential buildings constructed of wood or reinforced masonry construction, and to mobile homes. Other buildings that do not typically perform well in earthquakes are soft-story buildings. These types of buildings have a story (typically the first floor) that lacks adequate strength or toughness due to too few shear walls.



Source: County of Los Angeles Fire Department, *Northridge Earthquake 30th Anniversary: Reflections and Lessons Learned*, <https://fire.lacounty.gov/northridge-earthquake-30th-anniversary-reflections-and-lessons-learned/>, accessed November 21, 2024.

²³ Southern California Earthquake Center, *Earthquake Information*, <https://scedc.caltech.edu/earthquake/sierramadre.html>, accessed June 11, 2024.



LEGEND

- City of Glendora
- Quaternary Fault (various colors)
- County Boundary
- Alquist-Priolo Zone of Required Investigation

CITY OF GLENDORA, CALIFORNIA

Figure 4-6. Regional Fault Map

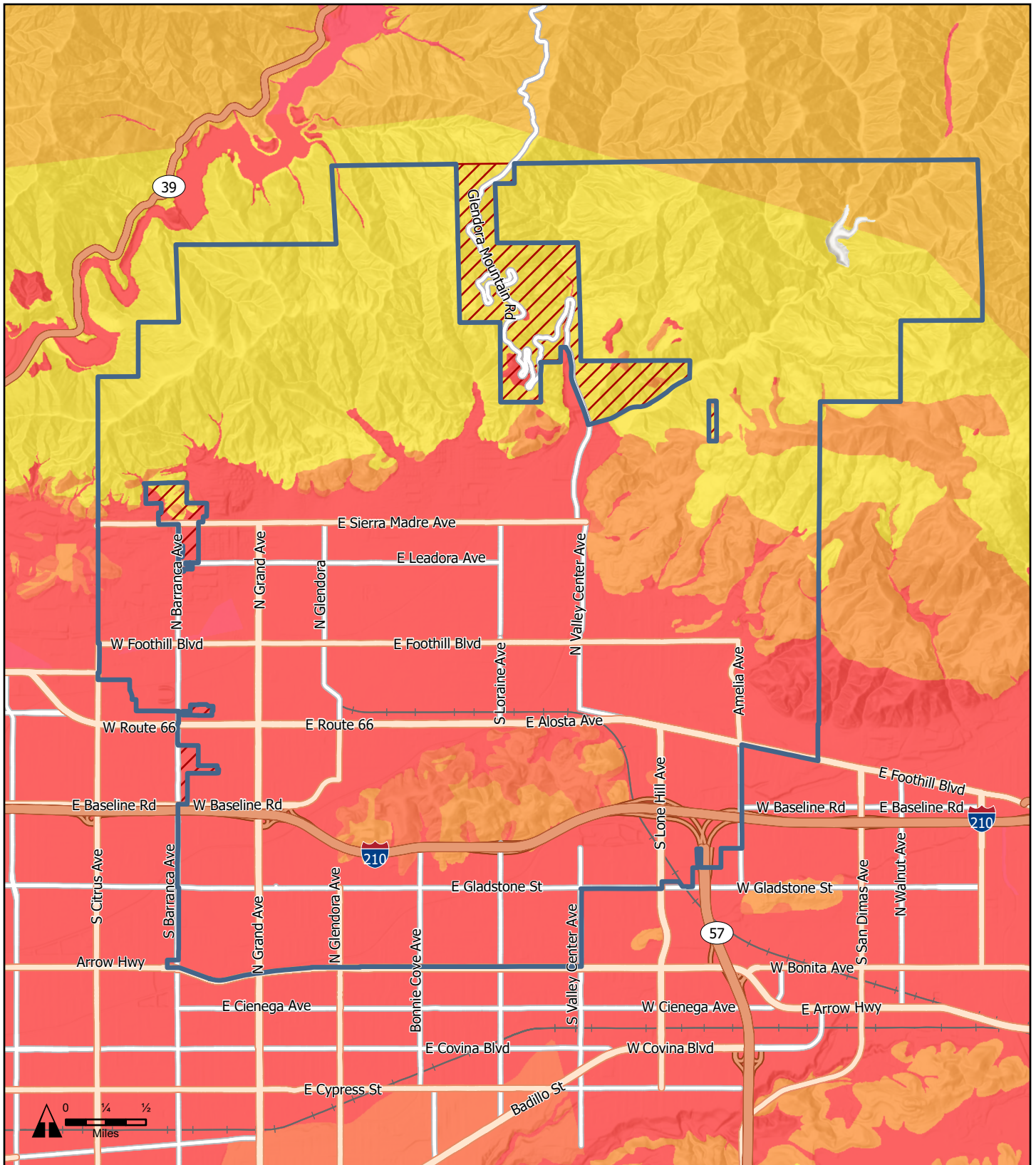


Intensity and Magnitude



Earthquake ground shaking is generally expressed in terms of intensity and magnitude. Several scales may be used to measure the strength or intensity of an earthquake.²⁴ Magnitude scales, like the moment magnitude (Mw), measure the size of the earthquake at its source. An earthquake event has a single magnitude; however, the degree of ground shaking that the earthquake causes varies from place to place based on distance, type of surface material, and other factors. Figure 4-7, *Earthquake Shaking Potential*, shows the potential for the City to experience earthquake ground shaking. As shown, the entire City is identified as having lower-to-moderate ground shaking potential, with more populated flat areas generally having a higher ground shaking potential than the hillside areas.

In contrast to magnitude, other scales describe earthquake intensity, which can vary depending on distance from earthquake epicenter and local characteristics. The Modified Mercalli intensity scale expresses earthquake intensity experienced at a particular location on a scale of increasing levels of intensity that range from imperceptible shaking to catastrophic destruction. It does not have a mathematical basis; instead, it is an arbitrary ranking based on observed effects. The level of intensity assigned to a specific location is a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects experienced. Table 4-7, *The Modified Mercalli Intensity Scale*, lists abbreviated descriptions of the Modified Mercalli intensity levels.

²⁴ U.S. Geological Survey, *Earthquake Magnitude, Energy Release, and Shaking Intensity*, [https://www.usgs.gov/programs/earthquake-hazards/earthquake-magnitude-energy-release-and-shakingintensity#:~:text=Moment%20Magnitude%20\(MW\)%20is,magnitude%20range%20where%20they%20overlap](https://www.usgs.gov/programs/earthquake-hazards/earthquake-magnitude-energy-release-and-shakingintensity#:~:text=Moment%20Magnitude%20(MW)%20is,magnitude%20range%20where%20they%20overlap), accessed June 11, 2024.



LEGEND

-  City of Glendora
-  Sphere of Influence

Earthquake Shaking Potential



CITY OF GLENDORA, CALIFORNIA

Figure 4-7. Earthquake Shaking Potential

Sources: California Geological Survey Map Sheet 48, Earthquake Shaking Potential for California 2016; Los Angeles County GIS. Map date: March 7, 2024.



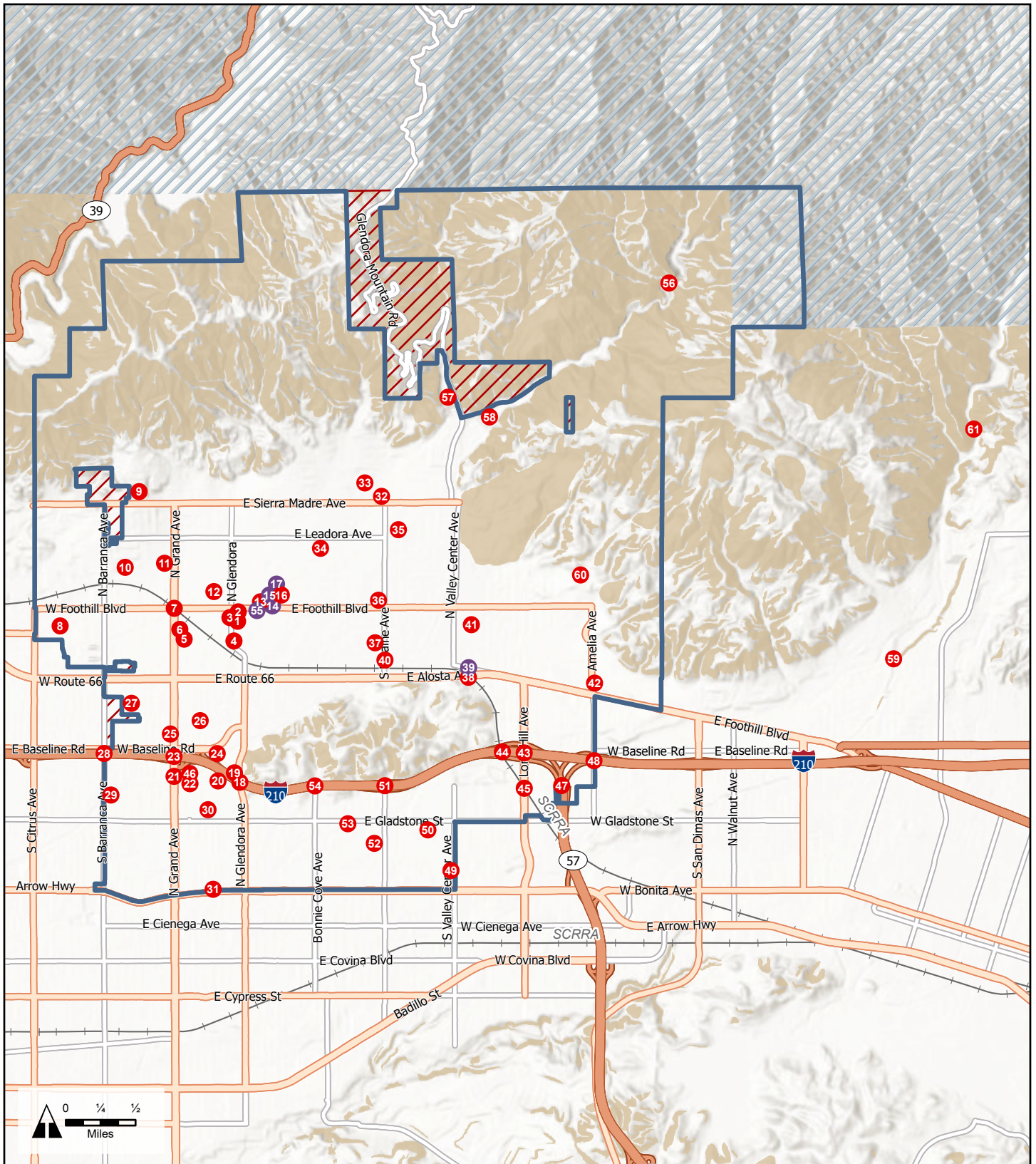
TABLE 4-7: THE MODIFIED MERCALLI INTENSITY SCALE

Intensity	Shaking	Description/Damage
I	Not Felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes and windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specifically designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: U.S. Geological Survey, *The Modified Mercalli Intensity Scale*, https://www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects, accessed June 11, 2024.

Landslides, Mudflows, and Slope Instability

The topography of Glendora includes areas characterized by moderate to very steep hillsides and therefore has the potential for slope instability and landslides. According to the General Plan Safety Element, geologic conditions within the foothill portions of Glendora could be impacted more severely due to the steep topography and the relative instability of some of the geologic units in this area of the City. Such areas may be prone to hazards such as surficial failures, mudflows, debris flows, rock falls, soil creep, and erosion. Failures of human-made slopes could also occur in some of the previously developed areas of the City. In addition, wildfires can destabilize hillsides and create hydrophobic soils, leading to an increased potential of landslides and debris flows. The potential for earthquake-induced landslides in hillside terrain is also present. Areas of known landslides or areas generally susceptible to landslides and slope instability within Glendora have been identified and mapped by the California Geological Survey (CGS); refer to [Figure 4-8, *Landslide Hazard Zones*](#). As shown, areas susceptible to landslides include the northern and eastern foothills of the City, as well as the “South Hills” located in the southern portion of the City.



- LEGEND**
- Critical Facility
 - Facility of Concern
 - City of Glendora
 - Sphere of Influence
 - Landslide Zone

CITY OF GLENDORA, CALIFORNIA

Figure 4-8. Landslide Hazard Zones

Sources: California Geological Survey Regulatory Maps Portal; Los Angeles County GIS. Map date: December 12, 2024.



Liquefaction

Liquefaction generally occurs within areas that have high groundwater (less than 50 feet below the earth's surface), loose sandy alluvial deposits (usually of recent age), and the potential for significant ground shaking. Available data indicates that groundwater levels beneath the City range between 100 to 150 feet deep. Certain locations, however, have shallow groundwater conditions and could be susceptible to liquefaction. Areas susceptible to liquefaction within the City have been identified and mapped by the CGS; refer to [Figure 4-9, *Liquefaction Hazard Areas*](#). As shown, areas susceptible to liquefaction include the northern foothills, a western portion of the City along Foothill Boulevard, and the southeastern portion of the City along Interstate 210 (I-210).

Previous Occurrences

Surface Faulting, Ground Motion, and Liquefaction

As discussed above, a variety of faults are located within and near the City of Glendora. [Table 4-8, *Major Earthquake Faults of Particular Concern*](#), identifies faults of concern and last major ruptures.



Glendora Local Hazard Mitigation Plan

TABLE 4-8: MAJOR EARTHQUAKE FAULTS OF PARTICULAR CONCERN

Fault Name	Type of Faulting	Last Major Rupture	Slip Rate	Interval Between Major Ruptures	Probable Magnitude (Mw)
Cucamonga	Thrust	Very recent Holocene	5 to 14 mm/year	Estimated roughly between 600-700 years	6.0 – 7.0
Elsinore	Right-lateral strike-slip	May 15, 1910 (Mw6, no surface rupture observed)	Roughly 4.0 mm/year	Roughly 250 years	6.5 – 7.5
Newport Inglewood	Right-lateral; local reverse slip associated with fault steps	March 10, 1933 (Mw6.4, no surface rupture)	0.6 mm/year	Unknown	6.0 - 7.0
Palo Verdes	Right-reverse	Holocene, offshore; Late Quaternary, onshore	0.1 to 3.0 mm/year	Unknown	6.0 – 7.0
Santa Monica	Left-reverse	Late Quaternary	0.27 to 0.39 mm/year	Unknown	6.0 – 7.0
San Andreas	Right-lateral strike-slip	January 9, 1857 (Mojave segment)	20 to 35 mm/year	Average of about 140 years on the Mojave segment; recurrence interval varies greatly	6.8 – 8.0
San Fernando	Thrust	February 9, 1971 (Mw6.6).	5 mm/year	Roughly 200 years	6.0 – 6.8
San Jacinto	Right-lateral strike-slip	April 9, 1968 (Mw6.5 on Coyote Creek segment)	7 to 17 mm/year	Between 100 and 300 years	6.5 – 7.5
Sierra Madre	Reverse	Holocene	0.36 to 4 mm/year	Several thousand years	6.0 – 7.0

Sources: Southern California Earthquake Center, *Earthquake Information*, <https://scecdc.caltech.edu/earthquake/faults.html>, accessed on June 11, 2024.

Notes: mm = millimeters; Mw = moment magnitude

Table 4-9, *Significant Historical Earthquakes in Southern California*, identifies major earthquakes that have occurred in southern California. The Northridge Earthquake and the Whittier Narrows Earthquake both resulted in major disaster declarations from the federal government, which included Los Angeles County as a designated area.²⁵

²⁵ Federal Emergency Management Agency, *Disasters and Other Declarations*, <https://www.fema.gov/disaster/declarations>, accessed June 12, 2024.

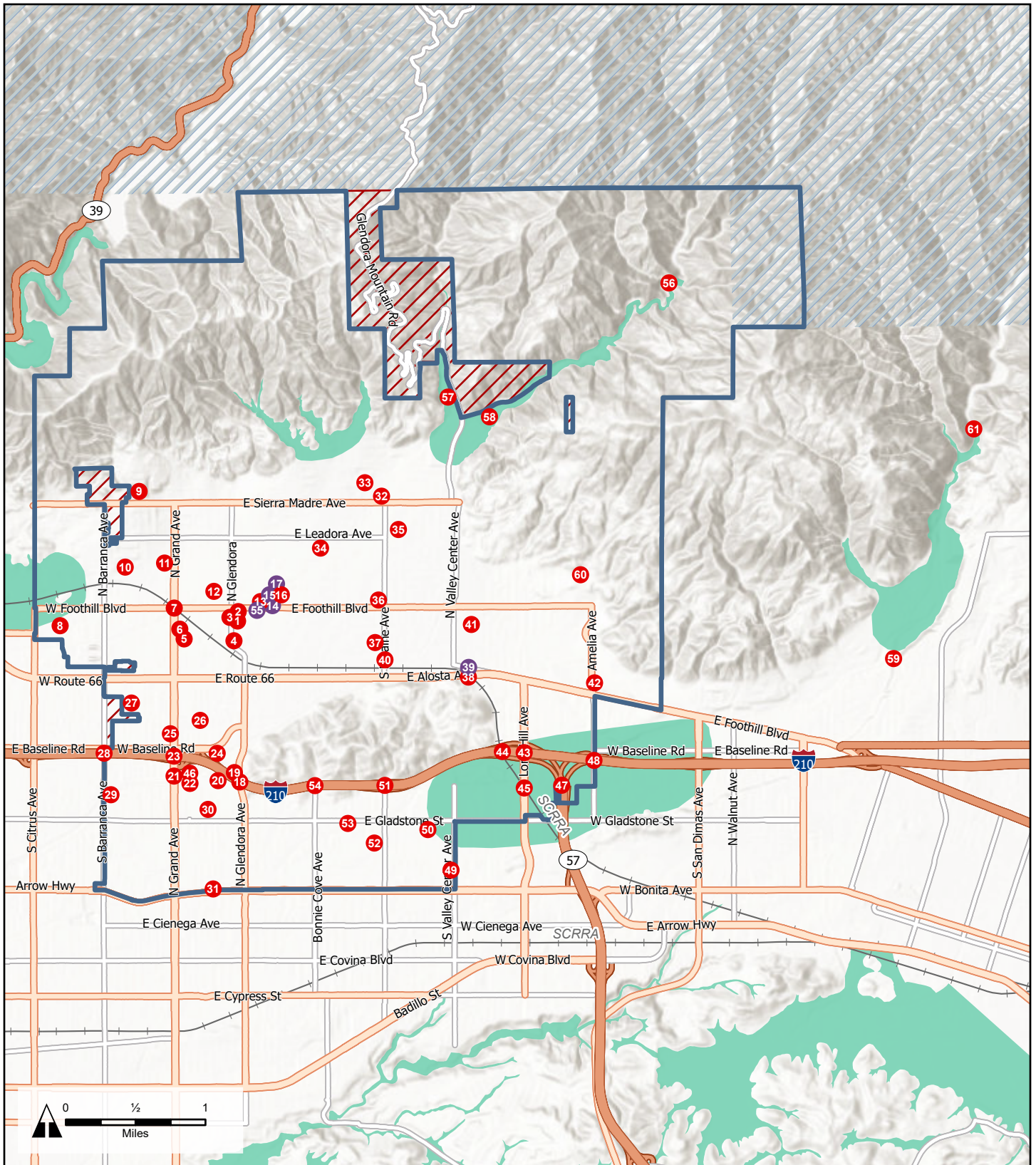


Glendora Local Hazard Mitigation Plan

TABLE 4-9: SIGNIFICANT HISTORICAL EARTHQUAKES IN SOUTHERN CALIFORNIA

Earthquake Name	Year	Estimated Magnitude
Wrightwood	1812	7.5
Santa Barbara Earthquake	1812	7.1
Los Angeles	1855	6.0
Palmdale	1857	6.3
San Bernardino	1858	6.0
Wrightwood	1899	6.4
San Jacinto	1899	6.7
Elsinore	1910	6.0
San Jacinto	1918	6.8
North San Jacinto	1923	6.3
Long Beach	1933	6.4
San Fernando	1971	6.5
Whittier Narrows	1987	5.8
Landers	1992	7.2
Big Bear	1992	6.5
Northridge	1994	6.7
Chino Hills	2008	5.4
Ridgecrest	2019	7.1

Source: Southern California Earthquake Data Center, *Significant Earthquakes and Faults*, <http://scedc.caltech.edu/significant/index.html>, accessed June 12, 2024; California Department of Conservation, *California's Big Earthquakes*, <https://www.conservation.ca.gov/cgs/earthquakes/significant>, accessed June 12, 2024; U.S. Geological Survey, *Search Earthquake Catalog*, <https://earthquake.usgs.gov/earthquakes/search/>, accessed June 12, 2024.



LEGEND

- Critical Facility
- Facility of Concern
- City of Glendora
- Sphere of Influence
- Liquefaction Zone

CITY OF GLENDORA, CALIFORNIA

Figure 4-9. Liquefaction Hazard Areas

Sources: California Geological Survey Regulatory Maps Portal; Los Angeles County GIS. Map date: December 12, 2024.



Glendora Local Hazard Mitigation Plan

Liquefaction-induced ground failure historically has been a major cause of earthquake damage in southern California. During the 1971 San Fernando and 1994 Northridge earthquakes, significant damage to roads, utility pipelines, buildings, and other structures in the Los Angeles area was caused by liquefaction-induced ground displacement.²⁶ According to the CGS Seismic Hazard Zone Reports, no areas of documented historic liquefaction are known within the City limits or the larger Glendora, Azusa, Baldwin Park, and San Dimas Quadrangles.²⁷

Landslides, Mudflows, and Slope Instability

Like much of California, Los Angeles County has experienced landslides. Landslides in Los Angeles are generally triggered by intense and/or prolonged rainfall but can also occur after an earthquake.²⁸ There were 17 federally declared landslide disasters in Los Angeles County between 1953 and 2019.²⁹

CGS landslide mapping identifies numerous landslide events that have occurred in Glendora, specifically within the northern and eastern foothills and South Hills.³⁰ Significant landslides in Glendora include the 1969 landslide, which destroyed approximately 175 homes due to debris flow and caused nearly 14.6 million dollars in damages. More recently, Glendora experienced mudflows in 2014 due to heavy winter storms, prompting evacuations in the foothills affected by the Colby Fire.³¹



Source: City of Glendora, 1969.

Probability of Future Occurrences

Surface Faulting, Ground Motion, and Liquefaction

The City of Glendora is in a known seismically active area, and thus the probability for future seismic hazard occurrences is considered high. Given the significant seismic shaking events in the region, it is certain that such events will continue. The southern California region has many fault lines (including major faults), and it is almost inevitable that a regional fault line will rupture in the foreseeable future and cause a major seismic shaking event.

The USGS Uniform Earthquake Rupture Forecast Version 3 released in 2017 provides a perspective of the likelihood each California region will experience a magnitude 6.7 or larger earthquake in the next 30 years; refer to [Table 4-10, *Los Angeles Region Earthquake*](#)

²⁶ California Department of Conservation, Division of Mines and Geology, *Seismic Hazard Zone Report for the Glendora, Azusa, San Dimas, and Baldwin Park 7.5-Minute Quadrangles, Los Angeles County, California*, 1998.

²⁷ Ibid

²⁸ County of Los Angeles, *2020 County of Los Angeles All-Hazards Mitigation Plan*, 2020.

²⁹ California Governor's Office of Emergency Services, *California State Hazard Mitigation Plan*, November 2023.

³⁰ California Department of Conservation, *Landslide Inventory*, <https://maps.conservation.ca.gov/cgs/lsi/app/>, accessed June 13, 2024.

³¹ Guinyard, T., Lopez, A., and Lloyd J., *Glendora Police: Evacuate Before It's Too Late*, February 2014, <https://www.nbcalosangeles.com/news/local/mud-debris-flows-reported-in-glendora/1972470/>, accessed June 13, 2024.



Glendora Local Hazard Mitigation Plan

Probabilities, and Table 4-11, Likelihood of One or More Earthquakes Occurring in the Next 30 Years in Los Angeles County Region by Fault.

TABLE 4-10: LOS ANGELES REGION EARTHQUAKE PROBABILITIES

Magnitude (greater than or equal to)	Average Repeat Time (years)	30-Year Likelihood of One or More Events
5.0	1.4	100%
6.0	10	96%
6.7	40	60%
7.0	61	46%
7.5	109	31%
8.0	532	7%

Source: U.S. Department of the Interior and U.S. Geological Survey, *UCERF3: A New Earthquake Forecast for California's Complex Fault System Fact Sheet*, March 2015.

Notes:

1. $M \geq 5$ means magnitude greater than or equal to 5.0, and likewise for the other two magnitude thresholds.
2. The 30-year period measured by this report is 2014 to 2044; a 30-year period is used as it is the typical duration of a homeowner mortgage.
3. Actual repeat times will exhibit a high degree of variability and will almost never exactly equal the average listed in the table above.

TABLE 4-11: LIKELIHOOD OF ONE OR MORE EARTHQUAKES OCCURRING IN THE NEXT 30 YEARS IN LOS ANGELES COUNTY REGION BY FAULT

Magnitude	Sierra Madre, Subsection 2	Cucamonga, Subsection 3	Elsinore (Glen Ivy) rev, Subsection 0	Newport-Inglewood alt 2, Subsection 4	San Andreas San Bernardino N), Subsection 1
$M \geq 6.7$	1.12%	1.08%	3.21%	0.74%	22.44%
$M \geq 7.0$	1.08%	0.98%	1.81%	0.61%	19.74%
$M \geq 7.5$	0.72%	0.63%	1.01%	0.27%	16.13%
$M \geq 8.0$	0.03%	0.03%	<0.01%	--	6.61%

Source: U.S. Department of the Interior and US Geological Survey, *The Third California Earthquake Rupture Forecast (UCERF3)*, Google Earth file with fault probabilities, March 2015.

Notes:

1. $M \geq 6.7$ means magnitude greater than or equal to 6.7, and likewise for the other magnitude thresholds.
2. Values shown are the magnitude mean over a 30-year period (2014 to 2044); a 30-year period is the typical duration of a homeowner mortgage.

Based on the data, and the historic occurrences of earthquake activity in southern California, it is concluded that the probability of future occurrences impacting the City is highly likely.

Landslides, Mudflows, and Slope Instability

Glendora's steep topography and geological conditions make it especially vulnerable to slope instability and landslides. Additionally, the City and surrounding San Gabriel Mountains are prone to wildfires, which can further destabilize hillsides and create hydrophobic soils, increasing the likelihood of landslides and debris flows. Earthquake-induced landslides in the area's hillside terrain also pose a risk. Given these factors, the probability of future landslides, mudflows, and other slope stability issues impacting the City is considered highly likely.



Climate Change Considerations

Surface Faulting, Ground Motion, and Liquefaction

Earthquakes are caused by seismic activity, which is not directly correlated with climate change. Therefore, climate change is not expected to cause any changes to the frequency or intensity of seismic shaking or liquefaction with Glendora or the region.

Landslides, Mudflows, and Slope Instability

Climate change could bring increased drought conditions, resulting in drier soil conditions, as well as a possibility of increased precipitation levels of greater frequency and duration. Drought conditions cause soil to dry out over time, reducing the ability for soils to absorb precipitation when storms occur. Decreased absorption can result in increased amounts of runoff with the potential for landslide and/or mudflow conditions. More significant or frequent storm events can also result in more precipitation to be absorbed by the soil of slopes in Glendora and could destabilize hillsides and cause an increase in the frequency of landslide events, mudflows, or liquefaction. Increased temperatures and dry conditions can also result in wildfires. When wildfires burn through an area, they often cause reduced vegetation and destabilization of soil that can also result in landslides or mudflows during intense storm events.

SEVERE WEATHER

Description

Heavy Rains

During severe weather events such as strong storms, rain can fall at such a high rate that it cannot drain away fast enough. Heavy rain can cause flooding, leading to inundation and potential damage to buildings, roadways, and other critical infrastructure. Heavy rainfall conditions can also trigger landslides, mudflow, and slope instability due to the added weight of rain-saturated slopes and weakened slopes from the pressure the groundwater exerts on porous hillside materials. In California, heavy rainfall events are often short, intense bursts of rain, but in some cases, heavy rain can persist for multiple days.

Thunderstorms are rainstorms with lightning that can also include strong winds and hail. According to the National Weather Service, a severe thunderstorm must have at least one of the following: hail that is one inch in diameter or larger; or winds of 58 miles per hour or greater.³² Such storms form from a combination of moisture, rapidly rising warm air, and a force capable of lifting air, such as a warm front, cold front, or mountain. Typical thunderstorms are 15 miles in diameter and last an average of 30 minutes.

³² National Weather Service, *What Constitutes a Severe Thunderstorm*, https://www.weather.gov/bmx/outreach_svr, accessed June 13, 2024.



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Lightning is a flash of electrical energy produced by a thunderstorm. Lightning kills approximately 50 people in the United States each year and injures hundreds.³³ Lightning can be cloud to air, cloud to cloud, or cloud to ground. Cloud to ground strikes can also be the cause of wildfires.

Santa Ana Winds

Santa Ana winds are warm, dry winds that push dry air from the inland deserts of California and the Southwest over the mountains between coastal California and the deserts. They form when high pressure builds over the desert of the Great Basin region, causing winds to blow from the east toward the Pacific Ocean and lower air pressure offshore. As air moves west from the Great Basin toward California, where pressure is lower, it gains speed as it whips through mountain valleys and passes. The resulting airflow can reach speeds upwards of 30 mph, and gusts of more than twice this speed.³⁴ The phenomenon occurs during the fall and early winter. Santa Ana windstorms can last for several days at a time. These hot and very dry winds dry out vegetation, increasing the fuel available to feed fires. The gusts can also fan flames and spread wildfires.

Extreme Heat

Extreme heat conditions are defined as weather that is much hotter than average for a particular time and place, and sometimes more humid. The heat index is a measure of how hot it feels when relative humidity is factored into the actual temperature. High humidity can cause the heat index to increase drastically and create dangerous health conditions.³⁵

Typically, the National Weather Service (NWS) issues Excessive Heat Warning/Advisory when the heat index is predicted to be 105°F or greater for two or more consecutive days, although the temperature cut-off varies for different regions.³⁶ Cal-Adapt identifies an extreme heat day or warm night as a day in a year when the daily maximum/minimum temperature exceeds the 98th historical percentile of daily maximum/minimum temperatures based on the historical data from 1961-1990 between April and October. For the City of Glendora, the 98th percentile would be 100.2°F.³⁷ Additionally, Cal-Adapt defines a heat wave as periods of four consecutive extreme days or warm nights when the daily temperature is above the extreme heat threshold.

Power Outage

Power outages are a secondary effect of severe weather events in Glendora. During severe weather incidents, such as high winds, Southern California Edison (SCE), electricity supplier to the City, may implement an operational practice called Public Safety Power Shutoffs (PSPS), to

³³ California Governor's Office of Emergency Services, *2023 California State Hazard Mitigation Plan*, https://www.caloes.ca.gov/wp-content/uploads/Hazard-Mitigation/Documents/2023-California-SHMP_Volume-1_11.10.2023.pdf, published August 2023, accessed June 4, 2024.

³⁴ California Governor's Office of Emergency Services, *2023 California State Hazard Mitigation Plan*, https://www.caloes.ca.gov/wp-content/uploads/Hazard-Mitigation/Documents/2023-California-SHMP_Volume-1_11.10.2023.pdf, published August 2023, accessed June 4, 2024.

³⁵ U.S. Environmental Protection Agency, *Climate Change and Extreme Heat*, <https://www.epa.gov/sites/default/files/2016-10/documents/extreme-heat-guidebook.pdf>, accessed June 13, 2024.

³⁶ National Weather Service, *Heat Watch vs. Warning*, <https://www.weather.gov/safety/heat-ww>, accessed June 13, 2024.

³⁷ Cal-Adapt, *Extreme Heat Days & Warm Nights*, <https://cal-adapt.org/tools/extreme-heat/>, accessed June 13, 2024.



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preemptively shut off power in high-risk areas during potentially dangerous fire conditions. This program is designed to proactively prevent electric systems from starting a wildfire when winds and temperatures are high.

Strong Santa Ana winds, high temperatures, and low humidity are all severe weather conditions that could trigger a PSPS event. The frequency of PSPS events depends on weather and environmental factors; SDG&E and SCE make decisions to implement PSPS based on internal thresholds, assessment of real-time information, and situational awareness data. If a PSPS is necessary, SCE communicates with public safety authorities, first responders, and the affected communities. Additionally, customers are notified prior to shutting off power, where conditions allow advanced notification.

When weather forecasts indicate extreme fire conditions, SCE begins predictive modeling to assess potential impacts while monitoring weather watch alerts from the National Weather Service. Leading up to an event, weather forecasts and the potential for wildfire are refined. Two days prior to extreme fire conditions forecasted, SCE would coordinate first with the local government, emergency management community, and first responders. A first notification would go out to customers 48 hours prior to the shut off, a second notification 24 hours prior, and a final notification with power shut off. It is noted that actual or sudden onset of extreme weather conditions could impact coordination and notification efforts.³⁸

Outside of the PSPS events, there is the potential for power outages to occur within the City. SCE defines a major outage as a large, unexpected outage caused by either accidents or natural disasters. While uncommon, loss of electrical power is a potential secondary effect of severe weather events.

Location and Extent

A heavy rain, Santa Ana wind, or extreme heat event would occur throughout the entire City. While PSPS would only affect certain circuits within the City, a major power outage could affect the entirety of the City, including public infrastructure such as water/wastewater, transportation facilities, and emergency services. Power lines located aboveground are more likely to be impacted during an event. However, local lines are connected to regional lines which are typically located aboveground. Therefore, power outages or interruptions could occur from events not directly impacting the City.

Heavy Rains

One of the indicators for a heavy rain season is the Oceanic Niño Index (ONI), used to monitor the El Niño-Southern Oscillation (ENSO). To calculate the ONI, scientists from NOAA's Climate Prediction Center calculate the average sea surface temperature in the El Niño 3.4 region (area of the east-central equatorial Pacific Ocean) for each month, and then average it with values from

³⁸ Southern California Edison, *Public Safety Power Shutoffs*, <https://www.sce.com/safety/wildfire/pssp>, accessed March 20, 2019.



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the previous and following months. This running 3-month average is compared to a 30-year average. The observed difference from the average temperature in that region, whether warmer or cooler, is the ONI value for that 3-month “season.” Based on the ONI, the El Niño (warm) and La Niña (cool) events in the tropical Pacific are categorized as weak, moderate, strong, or very strong.³⁹

Glendora experiences an average of 21.7 inches of rain per year and experiences an average of 39 days of precipitation per year.⁴⁰ Precipitation is rain, snow, sleet, or hail that is at least .01 inches on the ground. Storm drain infrastructure in the City is jointly owned and operated by the City of Glendora and the Los Angeles County Flood Control District (LACFCD). Typically, the City’s drainage systems can accommodate heavy rain events, as the City and LACFCD proactively inspect, clean, and clear catch basins, flow lines, channels, and other drainage infrastructure to prevent flooding and other issues in anticipation of a storm. However, localized flooding has occurred throughout the City, particularly in low spots or where infrastructure is unable to accommodate peak flows during a storm event; refer to the Flood discussion above. In most cases, localized flooding dissipates quickly after heavy rain ceases. During heavy rain events, sandbags are utilized to prevent erosion and runoff into the public storm drain.



Source: Gauthier, R., Los Angeles Times, *Los Angeles prepares for rainstorms*, <https://www.latimes.com/local/la-me-ln-los-angeles-rain-storms-photos-photogallery.html>, accessed November 21, 2024.

Santa Ana Winds

Hurricane winds are measured using the Saffir-Simpson Hurricane Wind Scale. Although hurricane events are not typical within Glendora, the scale can be used to measure strong winds that are not associated with a hurricane event. The scale uses measurements in pressure, wind speed, and damage potential to identify the types of damage associated with sustained wind events; refer to Table 4-12, *Saffir-Simpson Hurricane Wind Scale*. Depending on the severity of the wind event, any part of the City can be affected by severe winds.

³⁹ National Oceanic and Atmospheric Administration, *Climate Variability: Oceanic Niño Index*, <https://www.climate.gov/news-features/understanding-climate/climate-variability-oceanic-nino-index>, published August 30, 2009, accessed June 13, 2024.

⁴⁰ Best Places, *Glendora, CA Climate*, <https://www.bestplaces.net/climate/city/ca/glendora>, accessed June 14, 2024.



TABLE 4-12: SAFFIR-SIMPSON HURRICANE WIND SCALE.

Category	Sustained Wind Speed	Description of Damages
1	74–95 mph	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding, and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96–110 mph	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3	111–129 mph	Devastating damage: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130–156 mph	Catastrophic damage: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	157 mph or higher	Catastrophic damage: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or

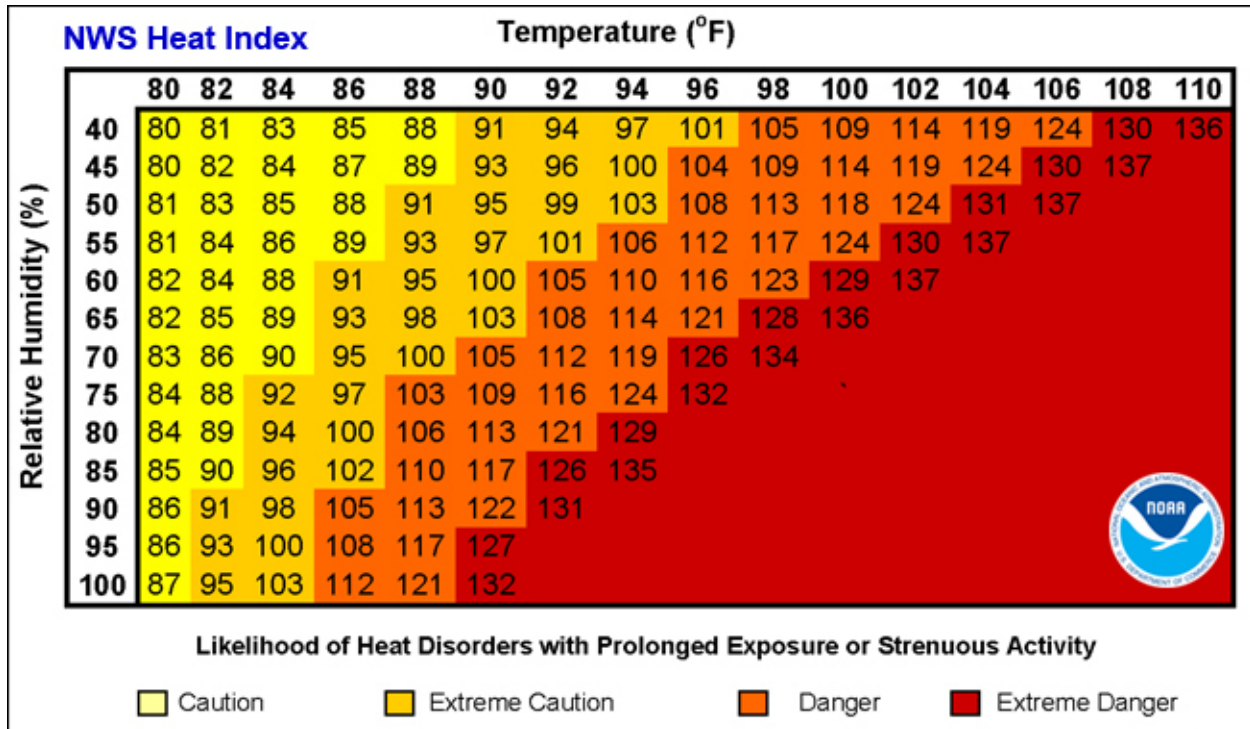
Source: National Weather Service, *Saffir-Simpson Hurricane Wind Scale*, <https://www.nhc.noaa.gov/aboutsshws.php>, accessed June 14, 2024.

Extreme Heat

The Heat Index, which measures the “apparent temperature” when considering both air temperature and humidity, is used by the NWS to identify extreme heat days. Extreme heat is particularly dangerous when occurring for a prolonged period (heat waves). Figure 4-10, *Heat Index*, shows the likelihood of heat disorder with prolonged exposure or strenuous activity associated with various temperatures and relative humidity. As described above, the NWS indicates alert procedures when the Heat Index is expected to exceed 105°F (depending on local climate). An extreme heat event would occur throughout the City.



FIGURE 4-10: HEAT INDEX



Source: National Weather Service, *NWS Heat Index*, <https://www.weather.gov/images/safety/heatindexchart-650.jpg>, accessed June 14, 2024.

Power Outage

High Fire Risk Areas are areas with circuits within California Public Utilities Commission’s (CPUC) Tier 2 (elevated risk) and Tier 3 (extreme risk) Fire Threat Areas. The CPUC Fire-Threat Map was developed with input from the U.S. Forest Service, California Department of Forestry and Fire Protection, and the State’s investor-owned utilities, including SCE.

SCE uses their own thresholds prior to initiating a PSPS event. When evaluating weather and environmental conditions, SCE considers a variety of factors which include but are not limited to:

- National Weather Service Red Flag Warnings
- SCE meteorological assessments
- SCE Fire Potential Index
- SCE Fire Scientist assessments
- Real-time situational awareness information
- SCE Fire Management/Office of Emergency Management input
- Concerns from local or State fire authorities
- Mandatory or voluntary evacuation orders in place



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- Expected impact of de-energizing circuits on essential services (including public safety agencies, water pumps, traffic controls, etc.)
- Other operational considerations to minimize wildfire ignitions

Previous Occurrences

Heavy Rains

The rainy season in Glendora traditionally occurs between November into early May; although severe rains have occurred during other times of the year when weather conditions permit. Refer to the Flood Hazard Profile for a summary of specific regional storms that caused heavy rains in the City.

Santa Ana Winds

Santa Ana winds occur annually between September to May in the City of Glendora. These events have caused tree limbs to fall and debris to scatter, at times resulting in blocked roadways and downed powerlines. Significant Santa Ana wind events in Glendora's recent history include an event in December 2011, where wind gusts of up to 80 miles per hour caused trees to fall and damage to power lines. As many as 230,000 were reported without power in the area and the City declared a state of emergency due to the severe winds, which caused an estimated \$300,000 in damage.⁴¹ Since then, there have been many records of high winds. Most incidents of high wind in the City of Glendora are the result of either the Santa Ana winds or La Niña/El Niño wind conditions.

Extreme Heat

Based on Cal Adapt's observed historical information (1961 through 2004), the City experiences four extreme heat days per year on average.⁴² Over the past 20 years (2003-2023), the Santa Fe Dam monitoring station in Irwindale (located approximately 3.5 miles west of the City) has experienced an extreme heat event (101°F or higher) every year.⁴³ During this period, the maximum temperature during extreme heat events reached an average of 104.5°F. The southern California region experienced one of the most severe heatwaves during June 2012. During a seven-day period from June 14th to 20th, 2012, maximum daily temperatures stayed above 110°F. More recently, in 2022, California experienced a record-breaking severe heatwave. From September 1st through September 9th, 2022, temperature records for September were shattered across the western portion of the United States, including the San Gabriel Valley, where temperatures reached 111°F.

⁴¹ Lodevico-To'o, Hazel, *Glendora City Manager Estimates \$300,000 in Wind Damages*, <http://glendora.patch.com/articles/glendora-city-manager-estimates-300-000-in-wind-damages>, published December 7, 2011, accessed June 14, 2024.

⁴² Cal-Adapt, *Extreme Heat Days & Warm Nights*, <https://cal-adapt.org/tools/extreme-heat/>, accessed June 13, 2024.

⁴³ National Oceanic and Atmospheric Administration, *Climate Data Online Search: Santa Fe Dam California, CA US*, <https://www.ncei.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USR0000CSFD/detail>, accessed June 18, 2024.



Power Outage

Power outages due to severe weather events have affected parts of the City. Recent power outages include an event in January 2022 due to downed trees from Santa Ana winds;⁴⁴ and an event in December 2021, where hundreds of homes lost power due to high winds and storm conditions.⁴⁵ Recent PSPS events include a November 2023 warning for the City of Glendora and surrounding area, as a precaution because of dry conditions and strong winds that could damage power lines and potential spark wildfires.⁴⁶ Advance notice was provided to SCE customers advising that power could be off for the whole period; turned off more than once; may not begin exactly at the announced plan outage started time; and conditions may require the planned outage to be postponed. More recently, PSPS warnings and power outages affecting some areas occurred in January 2025 due to high winds and fire conditions associated with the Eaton Fire.

Probability of Future Occurrences

Heavy Rains

El Niño and La Niña are opposite phases of a natural climate pattern across the tropical Pacific Ocean that swings back and forth every 3-7 years on average.⁴⁷ Together, they are called El Niño-Southern Oscillation (ENSO). The ENSO pattern in the tropical Pacific can be in one of three states: El Niño, Neutral, or La Niña. El Niño (the warm phase) and La Niña (the cool phase) lead to significant differences from the average ocean temperatures, winds, surface pressure, and rainfall across parts of the tropical Pacific. Neutral indicates that conditions are near their long-term average.

According to the National Weather Service, ENSO conditions have returned to neutral after experiencing El Niño conditions from winter to spring 2023-24; however, La Niña conditions are projected to develop during July to September (65% chance) and persist into the Northern Hemisphere during winter 2024-25 (85% chance).⁴⁸ Typically, El Niño is associated with warm, wet winters in southern California, while La Niña is associated with cooler and drier conditions. As such, the southern California area could experience a rapid swing from heavy precipitation to dryness. However, due to the cyclical nature of these climate patterns, and based on previous occurrences and weather trends in southern California, it is anticipated that heavy rains will continue to occur in the City. The probability of future occurrences is considered highly likely.

⁴⁴ City of Glendora, *City Updates: SCE Power Outage Map Link & Phone Number*, <https://www.cityofglendora.org/Home/Components/News/News/6270/23?page=14>, accessed June 19, 2024.

⁴⁵ Fernandes, S. and Hernández, C., *LA Is Drenched. Here's How The Storm Is Impacting The Area*, <https://laist.com/news/climate-environment/los-angeles-storm-what-you-need-to-know>, accessed June 19, 2024.

⁴⁶ McMillan, R., *SoCal Edison warns of possible power shutoffs as powerful Santa Ana winds increase fire threat*, <https://abc7.com/wind-power-shutoffs-socal-edison-fire/14029054/>, accessed June 19, 2024.

⁴⁷ National Oceanic and Atmospheric Administration, *El Niño and La Niña: Frequently asked questions*, <https://www.climate.gov/news-features/understanding-climate/el-ni%C3%B1o-and-la-ni%C3%B1a-frequently-asked-questions#:~:text=El%20Ni%C3%B1o%20and%20La%20Ni%C3%B1a%20are%20opposite%20phases%20of%20a,for%20El%20Ni%C3%B1o%20Southern%20Oscillation>, accessed June 19, 2024.

⁴⁸ National Oceanic and Atmospheric Administration, *El Niño/Southern Oscillation (ENSO) Diagnostic Discussion*, https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml, published June 13, 2024, accessed June 19, 2024.



Santa Ana Winds

High winds, or Santa Ana wind events for purposes of this LHMP, have historically occurred annually within southern California and the City of Glendora. According to the National Weather Service, these winds are most common during the cooler months of the year, occurring from September to May. Due to the topography of the area, weather patterns, and annual occurrence, there is no indication that these events will not continue to occur in the future. Thus, due to their 100 percent annual occurrence, it is highly likely that high winds related to Santa Ana wind events will continue to occur in the City.

Extreme Heat

Extreme heat events have historically occurred within southern California and the City. According to the National Weather Service, California has been experiencing more frequent and severe heat waves. Cal-Adapt Extreme Heat Days & Warm Nights tool indicates that for most areas of California, the climate models project a significant rise in the number of days exceeding what is now considered extremely hot for the given area. For Glendora, baseline data (1961 through 1990), shows the City experiences four extreme heat days per year on average, which is projected to increase to increase to 18 days per year on average by mid-century (2035 through 2064).⁴⁹ Thus, based on the historical occurrence of four extreme heat days per year and projected increase in future occurrences of 18 days per year, the probability that extreme heat events will continue to occur in the City is highly likely.

Power Outage

Power outage and/or PSPS events are typically associated with heavy rains, Santa Ana winds, and extreme heat. These associated events are highly likely to continue to occur in the City. Thus, based on previous occurrences and the probability of future heavy rains, Santa Ana winds, and extreme heat, power outage is highly likely to continue to occur in the City.

Climate Change Considerations

Climate change has direct effects on heavy rain events. According to research conducted by UCLA, California will experience extremely wet and extremely dry seasons by the end of the century. Climate scientists predict that “over the next 40 years, the State will be 300 to 400 percent more likely to have a prolonged storm sequence as severe as the one that caused the legendary



Source: LADWP, *LADWP Crews Prepared as Heavy Rain and Wind Storm Forecasted, Reminds Public to Stay Away from Downed Power Lines*, <https://www.ladwpnews.com/ladwp-crews-prepared-as-heavy-rain-and-wind-storm-forecasted-reminds-public-to-stay-away-from-downed-power-lines/> accessed November 21, 2024.

⁴⁹ Cal-Adapt, *Extreme Heat Days & Warm Nights*, <https://cal-adapt.org/tools/extreme-heat/>, accessed June 13, 2024.



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California flood more than 150 years ago.”⁵⁰ The Fourth Climate Change Assessment indicates the intensity of heavy precipitation events is increasing and identifies a medium-high confidence for future change. While the annual rainfall averages may remain constant, the wet season may be narrower, and precipitation is expected to fall in fewer, more extreme events.

According to the California Adaptation Planning Guide, local heat waves are likely to occur much more frequently. Climate models project a significant rise in the number of days exceeding what is normally considered extremely hot for Glendora. The number of heat waves is very likely to increase because of climate change, reflecting the global trend. According to Cal-Adapt, the number of extreme heat days in Glendora, defined as a day when the high temperature is at least 100.2°F, is expected to rise from a historical annual average of four days per year to 18 days per year by the middle of the century (2035 through 2064), and to an average of 24 days per year by the end of the century (2070 through 2099).⁵¹ The number of warm nights in Glendora is also expected to increase, which is defined as temperatures above 68.6°F. Climate change is expected to increase the number of warm nights from a historical annual average of four nights per year to 35 warm nights per year by the middle of the century (2035 through 2064) and 49 warm nights per year by the end of the century (2070 through 2099).

SCE reports that increased power outages are directly related to climate change, and states on their website that PSPS will become “the new normal during high fire/wind events.” PSPS will become increasingly required to mitigate fire risk as increased severity and duration of extreme weather events occur.

Additionally, climate change may result in storm events, Santa Ana winds, and heat waves occurring outside of traditional seasons of the year. This could increase secondary effects, such as flooding, erosion, or wildfire events.

WILDFIRE

Description

A wildfire is defined as an unplanned and unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fire where the object is to extinguish the fire. Wildfire is a natural part of the southern California ecosystem, helping to clear brush and debris, and is a necessary part of the various species’ life cycles. Wildfires can be sparked by lightning, accidents, or arson.

Human activity has changed the buffer zone between urbanized and undeveloped areas, known as the wildland-urban interface, where naturally fire-prone landscapes abut developed neighborhoods. The natural setting of a wildland-urban interface can make these areas highly

⁵⁰ Colgan, D. (UCLA), *Study forecasts a severe climate future for California*, April 2018, <https://newsroom.ucla.edu/releases/california-extreme-climate-future-ucla-study>, accessed June 10, 2024.

⁵¹ Cal-Adapt, *Extreme Heat Days & Warm Nights*, <https://cal-adapt.org/tools/extreme-heat/>, accessed June 13, 2024.

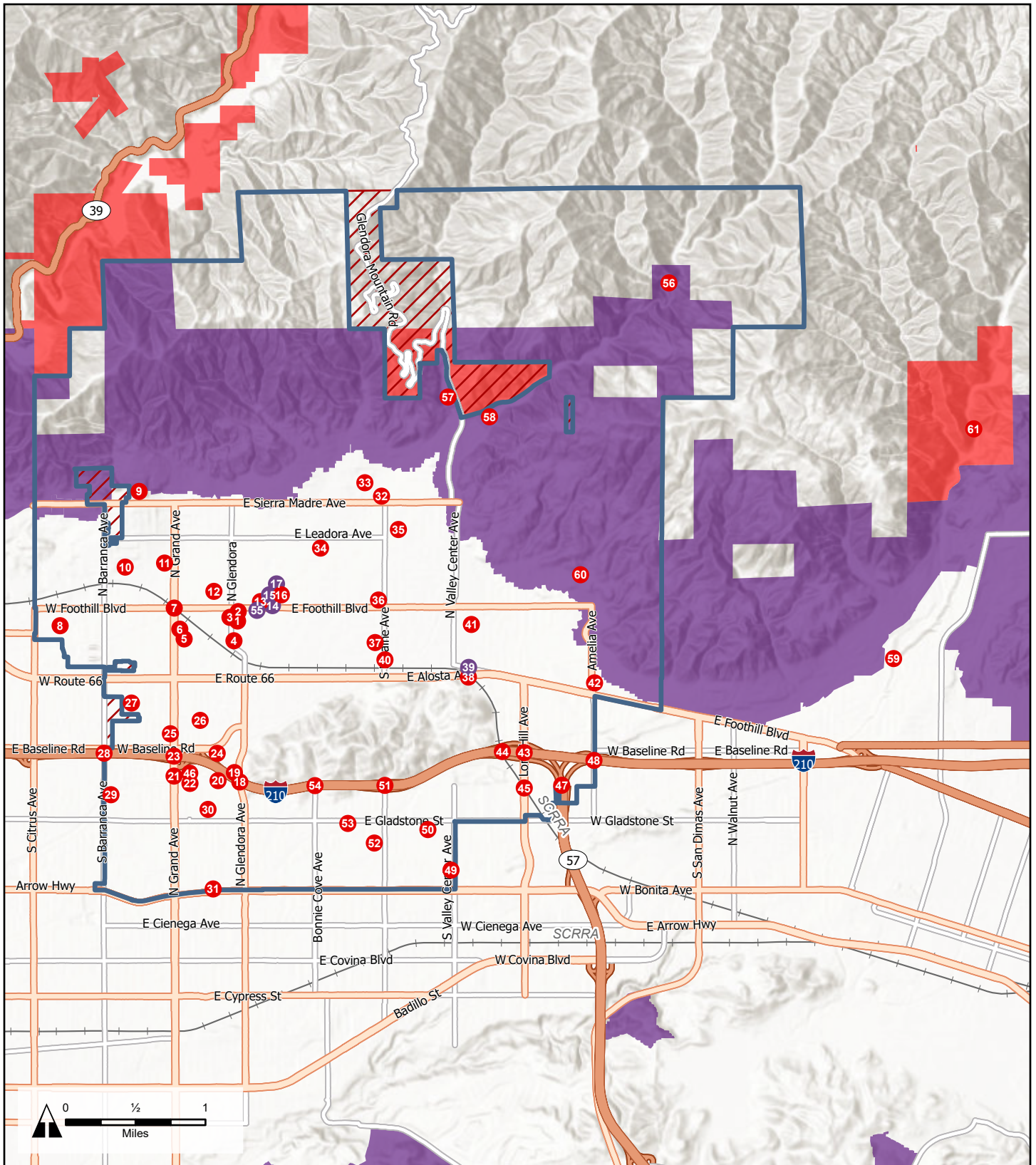


desirable places to live, and many of these areas in California are now developed. This development has brought more people into wildfire-prone areas. The availability of fuel and increasing encroachment into the wildland-urban interface have made wildfires a common and dangerous hazard in California. Certain development patterns pose more difficult fire problems. These include multi-story, wood frame, high-density apartment developments; multi-story research developments; large continuous developed areas with combustible roofing materials; and facilities that use and/or store hazardous materials. Features of structural conditions that affect fire control include the type and use of structure, area of building, number of stories, roof covering, and exposures to the building.

Location and Extent

CAL FIRE prepares wildfire hazard severity maps including mapping areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), define the application of various mitigation strategies and influence how people construct buildings and protect property to reduce the risk associated with wildland fires. While FHSZ do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern. Zones are designated on varying degrees from moderate, high, and very high. A large portion of land within the City is open space and includes rugged topography with highly flammable chaparral vegetation, making wildland fires a significant risk to the community and within the City's SOI. Very High Fire Hazard Severity Zones (VHFHSZs) are in the northern and eastern foothills of the City; refer to [Figure 4-11, *Fire Hazard Severity Zones*](#). Additionally, FHSZ are not limited to the City of Glendora. Land designed as VHFHSZ is also located within the cities of Azusa and San Dimas, immediately west and east-southeast of Glendora, respectively. The Angeles National Forest is located to the north of the City and contains land designated as VHFHSZ within a State Responsibility Area and land within a Federal Responsibility Area.

Fire protection challenges within Glendora occur where development is located within and directly adjacent to wildland-urban interface areas. As the number of structural features increase, so does the risk of incidence of fire. Wildfires are not measured on a specific scale and are usually classified by size or impact. The size and severity of any fire depends on the availability of fuel, weather conditions, and topography, although wildfires in the wildland-urban interface do not need to be identified as large to be damaging. Due to the location of development within and adjacent to Very High Fire Hazard Severity Zones, there is the potential for a wildfire to spread quickly and through a large portion of the City, depending on the conditions and nature of the fire.



LEGEND

- Critical Facility
- Facility of Concern
- City of Glendora
- Sphere of Influence
- Fire Hazard Severity Zones in Local Responsibility Areas
 - Very High
- Fire Hazard Severity Zones in State Responsibility Areas
 - Moderate*
 - High*
 - Very High

* there are no lands with this classification within the mapped extent

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Figure 4-11. Fire Hazard Severity Zones



Previous Occurrences

Fire season in southern California traditionally occurs between May and September. However, it should be noted that Glendora has experienced some of its most devastating fires during the fall (outside of the traditional fire season), including the Colby fire, as described below.

Major Wildfires in Los Angeles County History

Los Angeles County has experienced a number of major wildfires in the past, including the 1919 Ravenna and San Gabriel fires which claimed a combined 115,000 acres, and the 1970 Wright-Clampitt-Agua Dulce Fire which claimed approximately 135,000 acres.⁵² Since 2005, there have been over 110 incidents burning 10 acres or more in Los Angeles County.⁵³ Table 4-13, *Major Wildfires in Recent Los Angeles County History*, identifies the most significant historical fires in Los Angeles County dating back to 2004 in terms of the amount of acreage claimed.

TABLE 4-13: MAJOR WILDFIRES IN RECENT LOS ANGELES COUNTY HISTORY

Name	Year	Acres Claimed
Station Fire	2009	160,577
Bobcat Fire	2020	115,796
Woolsey Fire	2018	96,949
Ranch Fire	2007	58,401
Bridge Fire	2024	56,030
Buckweed (Agua Dulce) Fire	2007	38,000
Lake Fire	2020	31,089
Powerhouse Fire	2013	30,274
Topanga Fire	2005	24,175
Creek Fire	2017	15,619
Sesnon Fire	2008	14,703
Crown Fire	2010	13,918
Sayre Fire	2008	11,262

Source: California Department of Forestry and Fire Protection, Incidents, <https://www.fire.ca.gov/incidents>, accessed June 13, 2024; County of Los Angeles Fire Department, *Bobcat Fire Status*, <https://fire.lacounty.gov/bobcat-fire-status/>, accessed June 13, 2024.

Note: For purposes of this LHMP, major wildfires are defined as burning more than 10,000 acres in total.

Significant Historical Wildfires Near Glendora

Some of the most significant fires occurring in the vicinity of Glendora area are described below.

2009 Station Fire. The Station Fire is the 10th largest wildfire in California history, burning 160,577 acres and killing two firefighters once it began in late August 2009. The fire started in the Angeles National Forest near the U.S. Forest Service ranger station on the Angeles Crest Highway (SR 2). The blaze threatened 12,000 structures in the National Forest and the nearby communities of La Cañada Flintridge, Glendale, Acton, La Crescenta, Littlerock, Pasadena, and Altadena, as well as the Sunland and Tujunga neighborhoods of Los Angeles. The fire was predicted to burn for months and travel miles to the City of Azusa adjacent to Glendora. The

⁵² Los Angeles County Fire Museum, *Timeline of Significant Dates*, <https://www.lacountyfiremuseum.com/lacofd-timeline/>, accessed June 13, 2024.

⁵³ California Department of Forestry and Fire Protection, Incidents,



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Station Fire burned on the slopes of Mount Wilson, threatening numerous television, radio, and cellular antennas on the summit, as well as the Mount Wilson Observatory, which includes several historically significant telescopes and astronomical facilities operated by UCLA, USC, UC Berkeley, and Georgia State University. In October 2009, the fire extinguished due to a fall rainstorm.

2014 Colby Fire. The Colby Fire was a wildfire in the Angeles National Forest. It was ignited along the Colby Truck Trail in the San Gabriel Mountains in northern Los Angeles County. The fire started on January 16, 2014, caused by an illegal campfire that blew out of control. January fires are unusual in southern California, but there was little rainfall in the area leading up to the fire, which led to a “red flag” fire danger situation. Warm temperatures, low humidity, and an excess of dry brush in the foothills around Glendora (which had not burned significantly since the 1960s) encouraged the growth of the fire. By January 26, the Colby Fire was contained but had burned 1,992 acres. The fire, which was fanned by strong Santa Ana winds, destroyed five homes, injured one person, and forced the evacuation of 3,600 people at its peak.

2016 San Gabriel Complex Fire. The San Gabriel Complex Fire ignited the morning of June 20, 2016. The Complex Fire consisted of two fires: the Reservoir Fire and the Fish Fire. Both fires originated northeast of the city limits. The cause of the Reservoir Fire was due to a vehicle crash, while the cause of the Fish Fire is still under investigation. The fires burned fuel that was between seven and 10 years old with six- to eight-foot-tall chaparral and large grass crops. At the height of the fire, 1,376 homes were evacuated. The American Red Cross established an evacuation center and 1,460 staff from multiple local, state, and federal agencies worked to protect property and suppress the fire. Road closures were in place and law enforcement patrolled for security while firefighters worked through the night to contain the fire. Although the San Gabriel Complex Fire threatened homes in the City, no property damage was reported.

2020 Bobcat Fire. The Bobcat Fire started on September 6, 2020. By December 18, it was fully contained and had burned 115,796 acres in the central San Gabriel Mountains in the Angeles National Forest. It is one of the largest fires on record in Los Angeles County. The fire triggered mandatory evacuation orders in parts of Arcadia and Camp Williams. Forest Service investigators determined the cause of the fire was a power line conductor igniting overhead trees. The fire initially spread southward prompting evacuation orders for residents in Sierra Madre, Monrovia, Bradbury, and Duarte, along with evacuation warnings for those in Arcadia, Pasadena, and Altadena. The fire then grew westward and threatened the Mount Wilson Observatory, approaching within 500 feet of the observatory as firefighters worked to protect the structure. By September 17, the fire rapidly expanded to the north into Pleasant View Ridge Wilderness due to moderate coastal winds, leading to mandatory evacuations in Antelope Valley as the fire approached Juniper Hills. Containment difficulties were exacerbated by very dry vegetation and rugged topography that made it difficult to access. An estimated 6,000 structures were threatened and there were six injuries. The fire destroyed 27 residences and damaged 28 others. It also destroyed 83 structures and damaged 19 others.



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2024 Bridge Fire. The Bridge Fire began on September 8, 2024 in the Angeles National Forest near Glendora. The fire began after a recent heat wave and fueled by dry conditions and high winds, spread to over 56,030 acres in Los Angeles and San Bernardino counties. Evacuation orders were issued in the Angeles National Forest area, including Wrightwood and Mount Baldy, and evacuation warnings were issued for the Foothill Communities, including portions of Claremont, La Verne, and San Dimas. The fire destroyed 17 structures and damaged 81 others. There were eight confirmed fire personnel and civilian injuries.



Source: Margolis, J. and Ujiye, T., *Bridge Fire explodes to 47K acres; more than 30 homes destroyed*, <https://laist.com/news/climate-environment/bridge-fire-angeles-national-forest-evacuations>, accessed November 21, 2024.

2025 Eaton Fire. The Eaton Fire began on the evening of January 7, 2025 in Eaton Canyon in the San Gabriel Mountains, near Altadena. The fire was one of several major concurrent fires in the County being driven by dry conditions and extremely powerful Santa Ana winds, including the Palisades Fire and Hughes Fire. By February 20, 2025, the fire was completely contained and had burned 14,021 acres. The Eaton Fire is one of the most destructive wildfires in California history, destroying an estimated 9,414 structures, damaging 1,074 others, and resulting in 17 confirmed fatalities and nine injuries.

Probability of Future Occurrences

Wildfires have a high probability of occurring due to Glendora's location at the base of the San Gabriel Mountains, which creates a wildland-urban interface that makes the City particularly susceptible to wildfire. Los Angeles County is continually exposed to Santa Ana winds during the fall season; however, these winds can occur at other times of the year as well. Additionally, as with the recent Eaton, Bobcat, San Gabriel Complex, Colby, and Bridge fires, it is highly likely that



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fires of regional significance will occur in the San Gabriel Mountains that could impact the City of Glendora. The wildland-urban interface is likely to experience wildfires in future years.

Climate Change Considerations

Several of the largest California wildfires have occurred in the past decade, including the August Complex Fire, Dixie Fire, and Mendocino Complex Fire.⁵⁴ During 2018, the Camp Fire became the deadliest wildfire in California history, killing 85 civilians and burning over 153,000 acres in Butte County.⁵⁵ Southern California experienced several severe fires in recent history, including the Eaton Fire, Palisades Fire, Bobcat Fire, Woolsey Fire, Lake Fire, and Creek Fire.

Climate change is expected to cause an increase in temperatures, as well as more frequent and intense drought conditions. The severity of a wildfire is dependent on the amount of oxygen, heat, wind, relative humidity, and fuel. Excessive heat and low humidity during the summer and fall months are likely to occur. It is possible that higher temperatures could cause local native chaparral and scrub ecosystems to change to grasslands. This would increase dry plant matter, which could cause wildfires to move more quickly or spread into developed areas of Glendora.

It is well documented that regional wildfires will likely become an increased threat, which could have secondary consequences for the City. Fires located in different parts of Los Angeles, Orange, Riverside, or San Bernardino counties can negatively impact air quality in the City. Wildfires release smoke, ash, and other particulate matter that substantially degrade air quality (including fine particulate matter, PM_{2.5}). PM_{2.5} is particularly damaging to human health since particulate matter of this size can deeply penetrate lung tissue and affect a person's respiratory and cardiovascular systems. While poor air quality affects everyone, people with weakened immune systems or preexisting conditions, children, seniors, and people who spend a disproportionate amount of time outside are at an increased risk of wildfire smoke. The increase in wildfire frequency and size can contribute to periods of unhealthy to hazardous air quality, which leads to respiratory health impacts and worsens health impacts in persons with preexisting health conditions.

⁵⁴ California Department of Forestry and Fire Protection, *Top 20 Largest California Wildfires*, October 2022.

⁵⁵ California Department of Forestry and Fire Protection, *Camp Fire*, <https://www.fire.ca.gov/incidents/2018/11/8/camp-fire/>, accessed June 13, 2024.



4.3 VULNERABILITY/RISK ASSESSMENT

Vulnerability refers to a description of which assets, including structures, systems, populations, and other assets as defined by the community, within locations identified to be hazard-prone, are at risk from the effects of the identified hazards. A vulnerability analysis predicts the extent of damage to the built environment that may result from a hazard event of a given intensity in a specific area.

HISTORY OF DISASTERS AND OTHER DECLARATIONS

Federally declared disasters and other declarations affecting Los Angeles County from 2014 to 2025 are listed below in Table 4-14, *Los Angeles County FEMA Disaster Declarations (2014-2025)*. As shown, the greatest threats to the County and City include fire, severe weather, flooding, and seismic and geologic hazards such as landslide and mudslide.



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TABLE 4-14: LOS ANGELES COUNTY FEMA DISASTER DECLARATIONS (2014-2025)

Disaster Number	Description	Declaration Date/ Incident Period	Assistance Provided
5051	Fire (California Colby Fire)	01-16-2014 (01-16-2014 to 01-22-2014)	N/A
5124	Fire (California Old Fire)	06-05-2016 (06-04-2016 to 06-10-2016)	Public Assistance
5129	Fire (California Fish Fire)	06-21-2016 (06-20-2016 to 06-30-2016)	Public Assistance
5132	Fire (California Sage Fire)	07-09-2016 (07-09-2016 to 07-14-2016)	Public Assistance
5135	Fire (California Sand Fire)	07-23-2016 (07-22-2016 to 08-01-2016)	Public Assistance
4305	Flood (Severe Winter Storms, Flooding, and Mudslides in California)	03-16-2017 (01-18-2017 to 01-23-2017)	Public Assistance, Risk Mitigation Assistance
5201	Fire (California la Tuna Fire)	09-02-2017 (09-01-202017 to 09-10- 2017)	Public Assistance
5225	Fire (California Creek Fire)	12-05-2017 (12-05-2017 to 12-14-2017)	Public Assistance
5226	Fire (California Rye Fire)	12-05-2017 (12-05-2017 to 12-14-2017)	Public Assistance
5227	Fire (California Skirball Fire)	12-06-2017 (12-06-2017 to 12-15-2017)	Public Assistance
3396	Fire (California Wildfires)	12-08-2017 (12-04-2017 to 12-29-2017)	N/A
4353	Fire (California Wildfires, Flooding, Mudflows, and Debris Flows)	01-02-2018 (12-04-2017 to 01-31-2018)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance
3409	Fire (California Wildfires)	11-09-2018 (11-08-2018 to 11-25-2018)	N/A
5280	Fire (California Woolsey Fire)	11-09-2018 (11-08-2018)	N/A
4407	Fire (California Wildfires)	11-12-2018 (11-08-2018 to 11-25-2018)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance
5293	Fire (California Saddleridge Fire)	10-11-2019 (10-10-2019)	Public Assistance, Hazard Mitigation Assistance
5296	Fire (California Tick Fire)	10-24-2019 (10-24-2019)	Public Assistance
5297	Fire (California Getty Fire)	10-28-2019 (10-28-2019)	Public Assistance
3428	Biological (California Covid-19)	03-13-2020 (01-20-2020 to 05-11-2023)	Public Assistance
4482	Biological (California Covid-19 Pandemic)	03-22-2020 (01-20-2020 to 05-11-2023)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance
5374	Fire (California Bobcat Fire)	09-13-2020 (09-13-2020)	N/A



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Disaster Number	Description	Declaration Date/ Incident Period	Assistance Provided
4569	Fire (California Wildfires)	10-16-2020 (09-04-2020 to 11-17-2020)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance
3591	Flood (California Severe Winter Storms, Flooding, and Mudslides)	01-09-2023 (01-08-2023 to 01-31-2023)	N/A
4683	Flood (California Severe Winter Storms, Flooding, Landslides, and Mudslides)	01-14-2023 (12-27-2022 to 01-31-2023)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance
3592	Flood (California Severe Winter Storms, Flooding, Landslides, and Mudslides)	03-10-2023 (03-09-2023 to 07-10-2023)	N/A
4699	Severe Storm (California Severe Winter Storms, Straight-line Winds, Flooding, Landslides, and Mudslides)	04-03-2023 (02-23-2023 to 07-10-2023)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance
4769	Severe Storm (California Severe Winter Storms, Tornadoes, Flooding, Landslides, and Mudslides)	04-13-2024 (01-31-2024 to 02-09-2024)	Public Assistance
5537	Fire (California Bridge Fire)	09-11-2024 (09-08-2024 to ongoing)	Public Assistance
5548	Fire (California Franklin Fire)	12-10-2024 (12-9-2024 to ongoing)	Public Assistance
5549	Fire (California Palisades Fire)	1-7-2025 (1-7-2025 to ongoing)	Public Assistance
5550	Fire (California Eaton Fire)	1-7-2025 (1-8-2025 to ongoing)	Public Assistance
5551	Fire (California Hurst Fire)	1-7-2025 (1-8-2025 to ongoing)	Public Assistance
4856	California Wildfires and Straight-line Winds	1-7-2025 (1-8-2025 to ongoing)	Individual Assistance, Public Assistance, Hazard Mitigation Assistance

Source: Federal Emergency Management Agency, *Disasters and Other Declarations*, <https://www.fema.gov/disaster/declarations>, accessed January 24, 2025.



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State-proclaimed disasters affecting Los Angeles County from 2014 to 2025 are listed in Table 4-15, California State Disaster Declarations for Los Angeles County (2014-2025). State-proclaimed disasters affecting the County and City include severe weather and wildfire.

TABLE 4-15: CALIFORNIA STATE DISASTER DECLARATIONS FOR LOS ANGELES COUNTY (2014-2025)

Disaster Code	Description	Date of Disaster
65	Severe Rainstorms	July 2015
68	Rainstorms	October 2015
71	Sand Fire	July 2016
77	January Winter Storms	January 2017
77.1	February Winter Storms	February 2017
86	La Tuna Fires	September 2017
93	Creek & Rye Fires	December 2017
108	Hill & Woolsey Fires	November 2018
109	Atmospheric River Storm System	January and February 2019
112	Eagle, Reche, Saddleridge, Sandalwood, and Wolf Fires	October 2019
113	Kincade and Tick Fires	October 2019
116	CA wildfires	September 2020
127	December Winter Storms	December 2021
135	Tropical Storm Kay	September 2022
138	Route Fire (Declared November 2022)	August 2022
140	Severe Winter Storms	December 2022 and January 2023
141	Severe Winter Storms	February 2023 and March 2023
142	Tropical Storm Hilary	August 2023
146	Severe Winter Storms	February 2024
147	Storms	March 2024
153	Bridge & Airport Fires	September 2024
157	Fires & Windstorm	January 2025

Source: California State Franchise Tax Board, *List of California Disasters*, <https://www.ftb.ca.gov/file/business/deductions/disaster-codes.html>, accessed January 24, 2025.

METHODOLOGY

For each of the hazards profiled in the previous section, a vulnerability/risk assessment is provided in this section. It should be noted that the actual losses will depend on the type, location, magnitude, and extent of the hazard event.

The vulnerability/risk examines three aspects of each hazard: the physical threat to critical facilities, facilities of concern, and residential and non-residential structures; the social threat to vulnerable populations, including residents and visitors to the City; and the threat to any other assets that may be affected.



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This section relies primarily on the following data sources:

- U.S. Census [2017-2021 American Community Survey (ACS) 5-year estimates]
- Center for Disease Control and Prevention (CDC)/ Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index (SVI)
- California Environmental Protection Agency (CalEPA) SB 535 Disadvantaged Communities
- FEMA's National Risk Index

Census data and associated analysis/mapping conducted as part of the City's Housing Element Update were reviewed and compared to the hazards and associated mapping provided within this LHMP to provide an understanding of socially vulnerable populations that may potentially reside within an area of the City subject to hazards. This information was supplemented by the CDC/ATSDR SVI, which uses U.S. census data to determine the social vulnerability of each census tract and ranks each tract on 16 variables, in order to identify communities that may need support before, during, or after disasters. These variables are grouped into four themes that cover major areas of social vulnerability: socioeconomic status (e.g., income below 150% of poverty level, unemployed, no health insurance), household characteristics (e.g., 65 years or older, aged 17 years or younger, single parent households, English language proficiency), racial and ethnic minority status, and housing type and transportation (e.g., multi-unit structures, mobile homes, crowding, no vehicle).

FEMA's National Risk Index was reviewed in regard to the risks associated with the natural hazards with the potential to affect the City and County. FEMA's National Risk Index leverages available data for natural hazard and community risk factors to develop a baseline risk measurement at the county and census tract level. Risk refers to the potential for negative impacts as a result of a natural hazard. FEMA's National Risk Index does not include human-induced hazards. For example, a flood resulting from changes in river flows is a natural hazard, whereas flooding due to a dam failure is considered a manmade hazard, and therefore excluded from the National Risk Index.

In determining risk, FEMA's National Risk Index considers three components: a natural hazards component (expected annual loss), a consequence enhancing component (social vulnerability), and a consequence reduction component (community resilience). Expected Annual Loss represents the average economic loss in dollars resulting from natural hazards each year. It is calculated for each hazard type and quantifies loss for relevant consequence types: buildings, people, and agriculture. Social vulnerability is the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. Community resilience is the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions



CRITICAL FACILITIES AND FACILITIES OF CONCERN

The LHMP Planning Team identified 61 critical facilities and facilities of concern for incorporation in the hazard vulnerability/risk analysis; refer to [Table 4-16](#) and [Figure 4-12](#), *Glendora Critical Facilities and Facilities of Concern*. Critical facilities and facilities of concern are owned, operated, and maintained by various agencies, not just the City. Critical facilities are buildings that are essential for the delivery of vital services or protection of a community. Critical facilities include emergency operation centers, healthcare facilities, police and fire stations, schools and power stations. These facilities support critical community lifelines that enable the continuous operation of critical business and government functions and are essential to human health and safety or economic security. Damage to these facilities caused by a hazard event has the potential to impair response and recovery and may lead to disruption of services. Facilities of concern are less vital to safety and well-being, but may assist in evacuations, serve as assembly points or temporary shelters, or provide a supportive role in preparing for and recovering from hazard events.

Where available, the LHMP Planning Team identified a facility's potential loss value, comprised of replacement and contents for each facility. The data was provided by the City's property insurance schedule and therefore, information for facilities not owned by the City are not shown (e.g. infrastructure, private buildings). In some instances, replacement cost information was not made available. If a facility is destroyed in a hazard event, the replacement and contents values indicate the cost to replace the entire facility and all of its contents. Typically, the cost to repair a damaged facility would be less than the replacement value. While the replacement and contents values are used throughout this plan to estimate potential losses, it is noted that the actual cost to recover from a hazard event will depend on the type and magnitude of the event.

The critical facilities were mapped in GIS and overlaid with mapped hazard areas (those hazards that have a specific geographic area) to determine which assets are located in each hazard area. Hazard areas and critical facility overlays were conducted for dam inundation, flood, seismic ground shaking, landslide (specific to seismic conditions), liquefaction, and wildfires.

Due to the nature of the hazards and availability of information, hazard overlays were not prepared for drought, landslide/mudflow, and severe weather. These hazards are not geographically defined and have the potential to affect the entire community. There are no defined hazard areas for moisture-induced landslides and mudflows, although as discussed in the hazard profile, they typically occur along hillside areas and can result from conditions caused by other hazards, such as heavy rains following wildfires. For the purposes of this LHMP, it is assumed these hazards could potentially impact the entire community, including the critical facilities.

Replacement and contents values for the facilities in each hazard area are provided to estimate the potential losses based on the method described above. However, the likelihood that all facilities are completely damaged at the same time or that the entirety of a structure and its



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contents are damaged is extremely unlikely. Most impacts are anticipated to be isolated to certain locations based on the hazard.



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TABLE 4-16: GLENDORA CRITICAL FACILITIES AND FACILITIES OF CONCERN

Map ID	Name	Type	Owner/ Responsible Agency	Location	Critical Facility	Facility of Concern
1	Glendora Police Facility / City Transmitter Site	Government	City of Glendora	150 S Glendora Avenue	X	
2	Glendora City Hall	Government	City of Glendora	116 E Foothill Boulevard	X	
3	Glendora Library and Cultural Center	Government	City of Glendora	140 S Glendora Avenue	X	
4	Frontier Telephone Center	Communications	Frontier	252 S Glendora Avenue	X	
5	Foothill Presbyterian Hospital	Medical	Emanate Health	250 S Grand Avenue	X	
6	Foothill Medical Arts Building	Medical	Privately Held	210 S Grand Avenue	X	
7	A Line (Gold Line) Overcrossing	Transportation Infrastructure	Los Angeles County Metropolitan Transportation Authority	Grand Avenue / Foothill Boulevard	X	
8	Citrus College	School	Citrus Community College District	1000 W Foothill Boulevard	X	
9	St. Lucy's Priory High School	School	St. Lucy's Priory	655 W Sierra Madre	X	
10	Sandburg Middle School	School	Glendora Unified School District	819 W Bennett Avenue	X	
11	La Fetra Elementary School	School	Glendora Unified School District	547 W Bennett Avenue	X	
12	LA County Fire Station #151	Government	Los Angeles County Fire Department	231 W Mountain View Avenue	X	
13	La Fetra Senior Center	Community	City of Glendora	333 E Foothill Boulevard	X	
14	City Transportation Center	Government	City of Glendora	410 E Dalton Avenue		X
15	Glendora Youth Center	Community	City of Glendora	427 E Dalton Avenue		X
16	American Legion Building	Community	City of Glendora	159 N Cullen Avenue	X	
17	Liberty House	Community	City of Glendora	181 N Cullen Avenue		X
18	I-210 Overcrossing at Glendora Ave	Transportation Infrastructure	Caltrans	I-210/ Glendora Avenue	X	
19	LA Dept of Water and Power High Voltage Transmission Lines	Electrical Infrastructure	Los Angeles Department of Water and Power	1000 S Glendora Avenue west to Grand Avenue and east to the South Hills	X	



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Map ID	Name	Type	Owner/ Responsible Agency	Location	Critical Facility	Facility of Concern
20	Crowther Teen Center	Community		241 W Dawson Avenue	X	
21	SCE Sub-Station	Electrical Infrastructure		Grand Ave / Citrus Edge	X	
22	LA Dept of Water and Power High Voltage Transmission Lines	Electrical Infrastructure	Los Angeles Department of Water and Power	1100 S Grand Avenue east to Glendora Avenue and west to Barranca Avenue	X	
23	I-210 Overcrossing at Grand Ave	Transportation Infrastructure	Caltrans	I-210/ Grand Avenue	X	
24	Foothill Christian School #1	School	Foothill Christian	242 W Baseline Road	X	
25	Foothill Christian School #2	School	Foothill Christian	901 S Grand Avenue	X	
26	Whitcomb High School	School	Glendora Unified School District	350 W Mauna Loa Avenue	X	
27	Stanton Elementary School	School	Glendora Unified School District	725 S Vecino Avenue	X	
28	I-210 Overcrossing at Barranca Ave	Transportation Infrastructure	Caltrans	I-210/Barranca Avenue	X	
29	LA Dept of Water and Power High Voltage Transmission Lines	Electrical Infrastructure	Los Angeles Department of Water and Power	1200 S Barranca Avenue east to Grand Avenue	X	
30	Washington Elementary School	School	Charter Oak Unified School District	325 W Gladstone Avenue	X	
31	Covina Irrigating Company	Water/Wastewater Infrastructure	Covina Irrigating Company	255 W Arrow Highway	X	
32	City of Glendora Water Yard	Water/Wastewater Infrastructure	City of Glendora	1051 E Sierra Madre Avenue	X	
33	Goddard Middle School	School	Glendora Unified School District	859 E Sierra Madre Avenue	X	
34	Cullen Elementary School	School	Glendora Unified School District	440 N Live Oak Avenue	X	
35	Glendora USD Office / Sellers Elementary School	School	Glendora Unified School District	500 N Loraine Avenue	X	
36	Hope Lutheran School	School	Hope Lutheran Church	1041 E Foothill Boulevard	X	
37	Williams Educational Center	School	Glendora Unified School District	301 S Loraine Avenue	X	



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Map ID	Name	Type	Owner/ Responsible Agency	Location	Critical Facility	Facility of Concern
38	A Line (Gold Line) / Railroad Overcrossing	Transportation Infrastructure	Los Angeles County Metropolitan Transportation Authority	1400 E Route 66	X	
39	Glendora Community Service Yard	Government	City of Glendora	1626 E Compromise Line Road		X
40	Glendora City Yard	Government	City of Glendora	440 S Loraine Avenue	X	
41	Glendora High School	School	Glendora Unified School District	1600 E Foothill Boulevard	X	
42	LA County Fire Station #86	Government	Los Angeles County Fire Department	520 S Amelia Avenue	X	
43	I-210 Overcrossing at Lone Hill Ave	Transportation Infrastructure	Caltrans	I-210/Lone Hill Avenue	X	
44	I-210 Overcrossing at Railroad tracks	Transportation Infrastructure	Caltrans	I-210/Railroad Tracks (west of Lone Hill Avenue)	X	
45	A Line (Gold Line) Overcrossing at Lone Hill Ave	Transportation Infrastructure	Los Angeles County Metropolitan Transportation Authority	Lone Hill Avenue/ Railroad Tracks (south of Lone Hill Avenue/ Auto Centre Drive)	X	
46	LA Dept. of Water and Power High Voltage Transmission Lines	Electrical Infrastructure	Los Angeles Department of Water and Power	900 S Lone Hill Avenue east to Amelia Avenue and west to Pompei Park	X	
47	I-210/SR-57 Overcrossing at Auto Centre Dr	Transportation Infrastructure	Caltrans	I-210/SR-57	X	
48	I-210 Overcrossing at Amelia	Transportation Infrastructure	Caltrans	I-210/Amelia Avenue	X	
49	Water Storage Facility	Water/Wastewater Infrastructure	Cal Water	Valley Center / Plymouth	X	
50	Willow Elementary School	School	Charter Oak Unified School District	1427 S Willow Avenue	X	
51	I-210 Overcrossing at Sunflower Ave	Transportation Infrastructure	Caltrans	I-210/Sunflower Avenue	X	
52	Sunflower School	School	Charter Oak Unified School District	1505 S Sunflower Avenue	X	

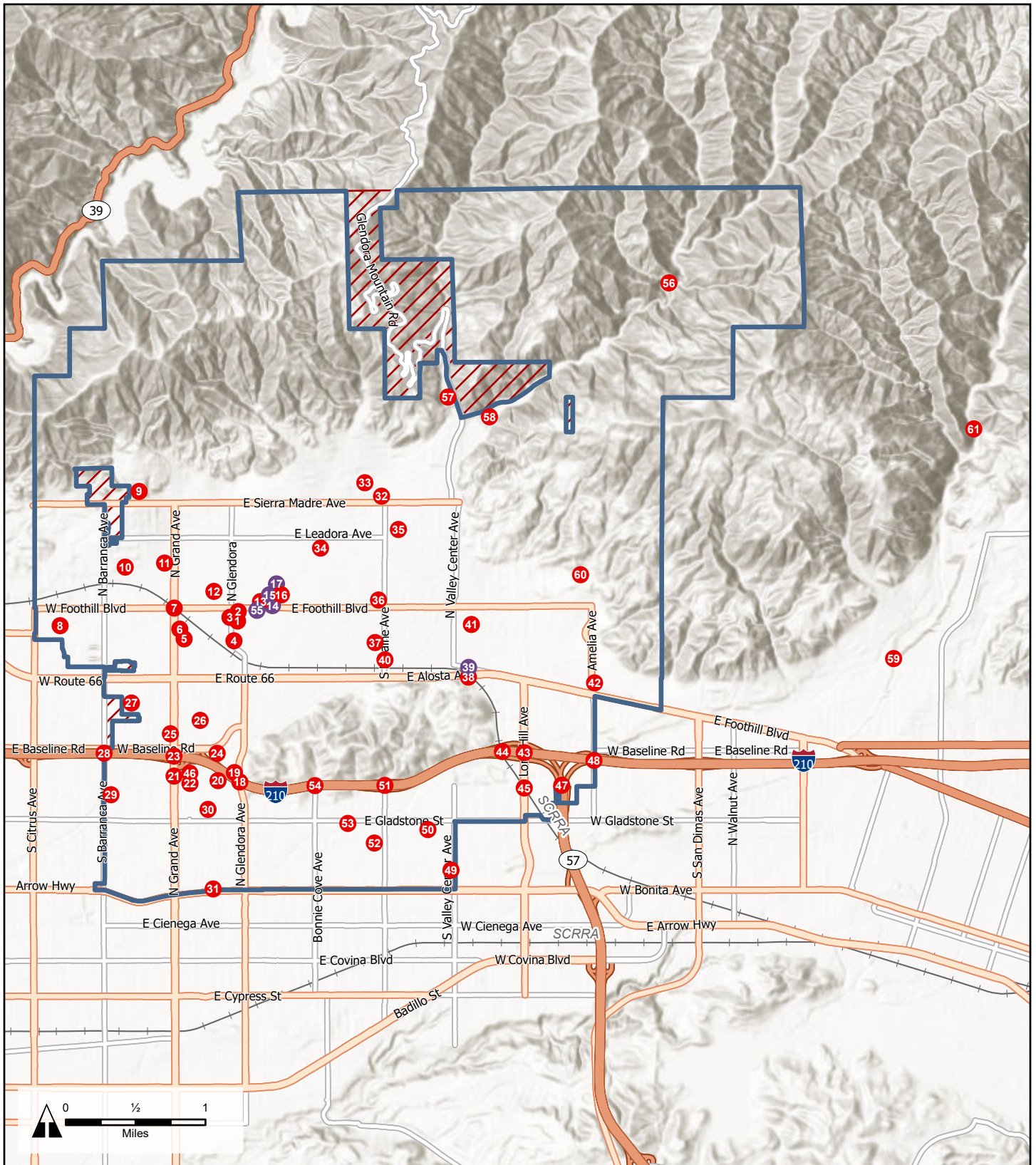


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Map ID	Name	Type	Owner/ Responsible Agency	Location	Critical Facility	Facility of Concern
53	LA County Fire Station #85	Government	Los Angeles County Fire Department	650 E Gladstone Street	X	
54	I-210 Overcrossing at Bonnie Cove	Transportation Infrastructure	Caltrans	I-210/Bonnie Cove	X	
55	Angeles National Forest Glendora Ranger Station	Government	U.S. Forest Service	110 N Wabash Avenue		X
56	Big Dalton	Dam	Los Angeles County Department of Public Works	2600 Big Dalton Canyon Road	X	
57	Little Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Glendora Mountain Road/Big Dalton Canyon Road	X	
58	Big Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Glendora Mountain Road/Big Dalton Canyon Road	X	
59	Puddingstone Diversion*	Dam	Los Angeles County Department of Public Works	N San Dimas Canyon Road/Terrebonne Avenue	X	
60	Morgan Debris Basin	Dam	Los Angeles County Department of Public Works	Morgan Ranch Road/Valiant Street	X	
61	San Dimas*	Dam	Los Angeles County Department of Public Works	9865 N San Dimas Canyon Road	X	

Source: City of Glendora, 2024.

Note: * These critical facilities are located outside of the Glendora Planning Area, but have dam inundation areas affecting the City.



LEGEND

- Critical Facility
- Facility of Concern
- City of Glendora
- Sphere of Influence

CITY OF GLENDORA, CALIFORNIA

Figure 4-12. Glendora Critical Facilities and Facilities of Concern



VULNERABLE POPULATIONS

Factors such as age, socioeconomic status, access to key services, physical and/or mental conditions, and other factors affect the ability of people to prepare for and respond to a hazard event. Even though some hazard events may impact all parts of Glendora with equal severity, different people may experience the impacts to a greater or lesser extent. For example, lower-income households are less likely to have the financial resources to implement mitigation actions in their homes, and less likely to have the financial means to recover as a result of a hazard event. As a result, certain groups are considered to be more vulnerable to specific hazards than other groups.

This assessment includes a social threat analysis that examines how hazard events are likely to impact different populations within Glendora and where these populations live in the City. This includes assessing whether the people in an area of an elevated hazard risk are more likely than the average person to be considered a vulnerable population. The following criteria are used to assess the threat to vulnerable populations:

- **Disability status:** Persons with disabilities often have reduced mobility and may experience difficulties living independently. As a result, they may rely on the assistance of others to prepare for and mitigate hazard conditions.
- **Income levels:** Lower-income households are less likely to have the financial resources to implement mitigation activities on their residences. They may also struggle with having the necessary time to find and access educational resources discussing hazard mitigation strategies. Furthermore, lower-income households are less likely to be able to move to safer areas that are less at risk of being impacted by a hazard.
- **Age:** Seniors (individuals 65 years of age or older) are more likely to have reduced mobility, physical and/or mental disabilities, and lower-income levels, all of which may decrease their ability to prepare for and mitigate a hazard event. Similarly, individuals under 18 years of age may rely on the assistance of their parent(s) or guardian to prepare for and mitigate hazard conditions.
- **Other variables:** Other demographic and socioeconomic factors may adversely affect communities that encounter hazards. For instance, persons without access to a vehicle or non-English speakers may have greater difficulty during an evacuation event; persons without health insurance may have difficulties recovering from injuries sustained during a hazard event; and unsheltered persons are particularly vulnerable to severe weather events.

Social vulnerability refers to the potential negative effects on communities caused by external stresses on human health, including natural or human-caused hazards. Reducing social vulnerability can decrease both human suffering and economic loss. The CDC SVI uses 16 variables to help local officials identify communities that may need support before, during, or after disasters. These variables are grouped into four themes that cover major areas of social vulnerability: socioeconomic status (e.g., income below 150% of poverty level, unemployed,



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housing cost burden, no high school diploma, no health insurance), household characteristics (e.g., 65 years or older, aged 17 years or younger, civilian with a disability, single parent households, English language proficiency), racial and ethnic minority status, and housing type and transportation (e.g., multi-unit structures, mobile homes, crowding, no vehicle, group quarters). The CDC SVI uses Census data to determine the social vulnerability of every census tract. Each tract receives a separate ranking for each of the four themes, as well as an overall ranking. Maps of the four themes are shown in the figures below. The overall SVI map is shown in [Figure 4-13](#); the socioeconomic SVI is shown in [Figure 4-14](#); the household composition SVI is shown in [Figure 4-15](#); the minority and language SVI is shown in [Figure 4-16](#); and the housing and transportation SVI is shown in [Figure 4-17](#).

[Table 4-17](#), *Social Vulnerability Index*, shows the CDC’s SVI percentile ranking for each census tract in the City (Statewide comparison). The percentile ranking represents the proportion of tracts that are equal to or lower than a tract of interest in terms of social vulnerability. For example, a CDC SVI ranking of 0.85 signifies that 85% of tracts in the State are less vulnerable than the tract of interest and that 15% of tracts in the State are more vulnerable. Tracts with higher SVI ranking are more likely to contain vulnerable populations.

TABLE 4-17: SOCIAL VULNERABILITY INDEX

Census Tract	Overall SVI	Socioeconomic Status	Household Characteristics	Racial/Ethnic Status	Housing Type & Transportation
4004.02	0.3657	0.448	0.0556	0.3496	0.6819
4004.04	0.0242	0.0528	0.2652	0.1424	0.0253
4005.01	0.185	0.3341	0.1597	0.1016	0.211
4008.01	0.3225	0.1692	0.2198	0.4465	0.6698
4010.01	0.1153	0.1874	0.4831	0.3753	0.0264
4010.02	0.3606	0.3167	0.147	0.3557	0.6797
4011.01	0.6844	0.4295	0.8571	0.4855	0.8436
4011.02	0.6825	0.5007	0.4796	0.4476	0.9589
4012.01	0.1533	0.074	0.5982	0.4365	0.1072
4012.02	0.3915	0.4314	0.7635	0.4507	0.1352
4012.03	0.633	0.4291	0.7069	0.5438	0.8092
4039.01	0.4479	0.4469	0.6415	0.5092	0.284
4039.02	0.5372	0.2531	0.7436	0.554	0.7589

Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, CDC/ATSDR Social Vulnerability Index 2022 database California, accessed July 17, 2024.

As shown, there are four census tracts in the City with an overall SVI that falls within the third quartile (0.5001 to 0.7500), which the CDC categorizes as having “Medium-High” level of vulnerability. These tracts are generally located in the central, south-central, and southwestern areas of the City, whereas the northern and eastern portions of the City contain lower overall SVI. The census tracts with the highest overall SVI (that are thus more likely to contain vulnerable populations) include:



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- Tract 4011.01. This census tract is located in the south-central portion of the City, north of I-210, east of Glendora Avenue/Cullen Avenue, west of Loraine Avenue, and south of Foothill Boulevard. This tract is predominantly composed of single-family residential uses, with higher density and multi-family residential, commercial, and light industrial uses located generally along Route 66 and Glendora Avenue. This tract also includes a large portion of the South Hills open space area. Notable residential uses that may contain vulnerable populations include Tropics Park, Western Skies, and Alostia mobile home parks. This tract also contains the Elwood Family Apartments, an affordable housing complex restricted to low-income families; and Heritage Oaks, an affordable housing complex restricted to low-income seniors. The City of Glendora 2021-2029 Housing Element identifies this tract as one of the two census tracts in the City identified as being vulnerable to displacement.
- Tract 4011.02. This census tract is located in the central portion of the City, north of Mauna Loa Avenue, south of Foothill Boulevard, east of Grand Avenue, and generally west of Cullen Avenue. This tract contains a mix of single- and multi-family uses, commercial, and civic uses. Notable residential uses that may contain vulnerable populations include the Park Manor mobile home park and Joy's Mobile Home Park, which is restricted to seniors. Other notable uses with vulnerable populations include Glendora Hospital, Foothill Presbyterian Hospital, and Glendora Canyon Transitional Care Unit. According to U.S. Census data (2017-2021 ACS), this census tract has the highest rate of overcrowding in the City, with 9.6 percent considered overcrowded and 4.9 percent considered severely overcrowded. The City of Glendora 2021-2029 Housing Element identifies this tract as one of the two census tracts in the City identified as being vulnerable to displacement.
- Tract 4012.03. This census tract is located in the southern portion of the City, south of I-210, east of Glendora Avenue, and west of Sunflower Avenue. This tract is predominantly composed of single-family residential uses, with higher density and multi-family residential and commercial uses located generally along Arrow Highway. Notable residential uses that may contain vulnerable populations include the Glenair and Arrowhead mobile home parks.
- Tract 4039.02. This census tract is located in the southwest portion of the City, generally south of Big Dalton Wash and I-210, and west of Glendora Avenue. This tract consists mostly of single-family residential uses, but also includes commercial and multi-family residential uses, located along Gladstone Street, Grand Avenue, and Arrow Highway. Notable residential uses that may contain vulnerable populations include the Rancho Glendora and Bonita Mobile Estates mobile home parks.

While other census tracts within the City had lower overall SVI scores than the four tracts identified above, vulnerable populations may still occur. For instance, persons over the age of 65 and persons with disabilities are located throughout the City. Areas that are less likely to have significant vulnerable populations are largely concentrated in the northern and northeastern portions of the City, generally located north of Foothill Boulevard. This area is predominantly made up of single-family residential uses and open space.



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Another indicator of vulnerable populations is the California Environmental Protection Agency (CalEPA) SB 535 Disadvantaged Communities map, which shows geographic areas containing designated disadvantaged communities for the purpose of SB 535. The designation is based in part on census tracts receiving the highest 25 percent of scores according to the Office of Environmental Health Hazard Assessment's CalEnviroScreen tool, which identifies communities experiencing disproportionate amounts of pollution, environmental degradation, and socioeconomic and public health conditions. There are no disadvantaged communities in Glendora according to CalEPA's SB 535 Disadvantaged Communities map.⁵⁶

According to the 2024 Los Angeles County Continuum of Care Point-in-Time, the City has a population of 61 unsheltered people.⁵⁷ The 2024 count shows a 32 percent decrease in persons experiencing homelessness from 2022. It is assumed that the number of people experiencing homelessness in the City fluctuates and is likely to be higher than reported by the Point-in-Time count due to the often-transient nature of homeless living arrangements and other difficulties in obtaining accurate data. Conversations with local service providers indicate that while persons experiencing homelessness can occur throughout the City, higher concentrations of unsheltered persons can generally be found along flood control channels, within open space areas in the northern and eastern foothills, and within cars and RVs parked along Arrow Highway.

Overall, the data suggest that the more urbanized central, south-central, and southwestern areas of the City contain higher concentrations of vulnerable populations, likely due to the relatively higher incidence of multi-family housing, mobile home parks, and age-restricted and assisted housing developments. Areas that are less likely to have significant vulnerable populations are largely concentrated in the northern and eastern portions of the City, which are predominantly made up of single-family residential uses and open space. These northern and eastern areas of the City are developmentally constrained due to steep hillsides, endangered or protected flora and fauna, and wildfire potential. It is important to note, however, that the absence of data showing concentrations of vulnerable groups within the northern and eastern areas of the City does not mean that vulnerable populations do not exist in these areas. While it is important to identify socially vulnerable groups and develop targeted assistance programs, it is equally important to support broad-based strategies that address the community as a whole.

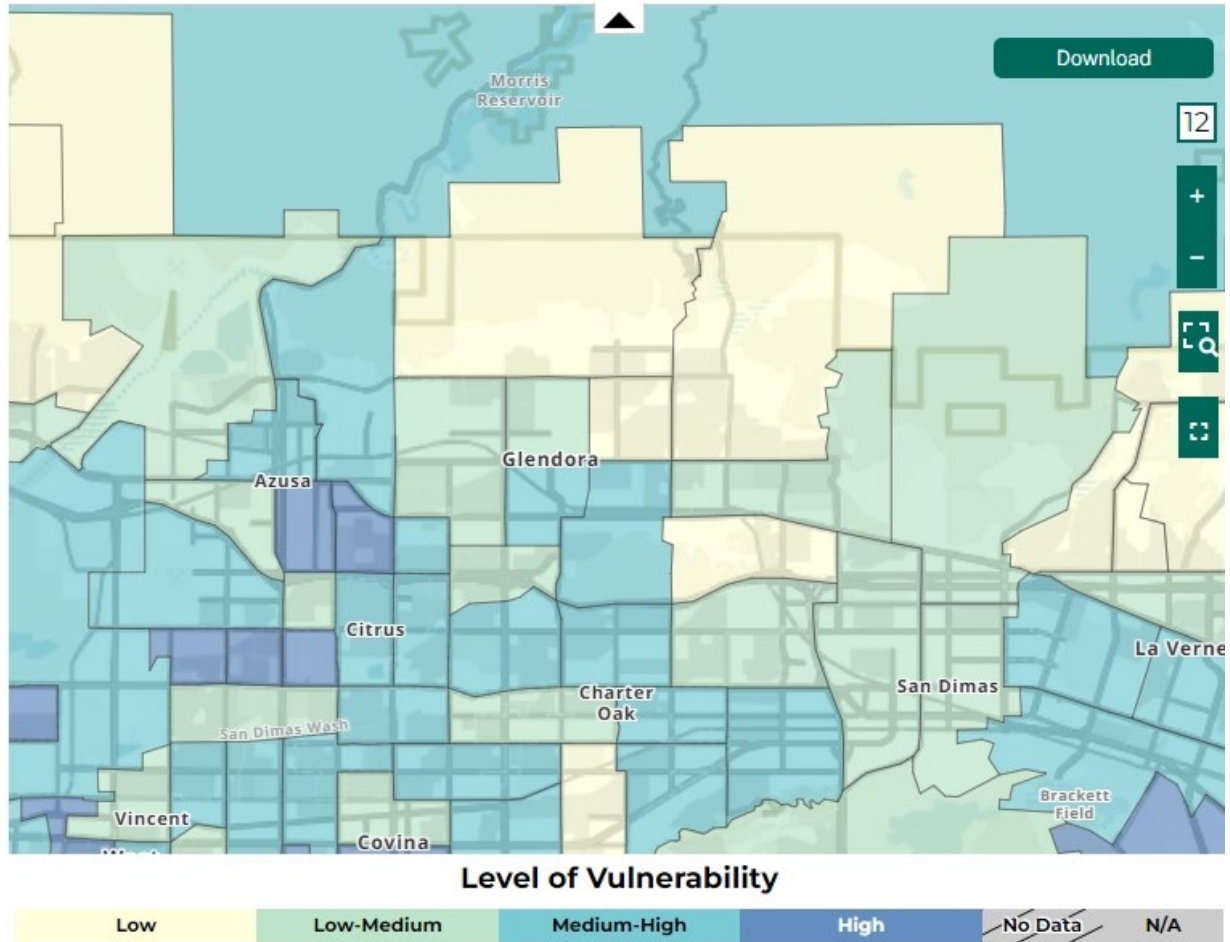
⁵⁶ California Environmental Protection Agency, *SB 535 Disadvantaged Communities (2022 Update)*, <https://oehha.ca.gov/calenviroscreen/sb535>, accessed July 23, 2024.

⁵⁷ Los Angeles Homeless Services Authority, *Homeless Count By City in the LA CoC*, <https://www.lahsa.org/homeless-count/dashboards/hc24-localities-dashboard>, accessed September 10, 2024.



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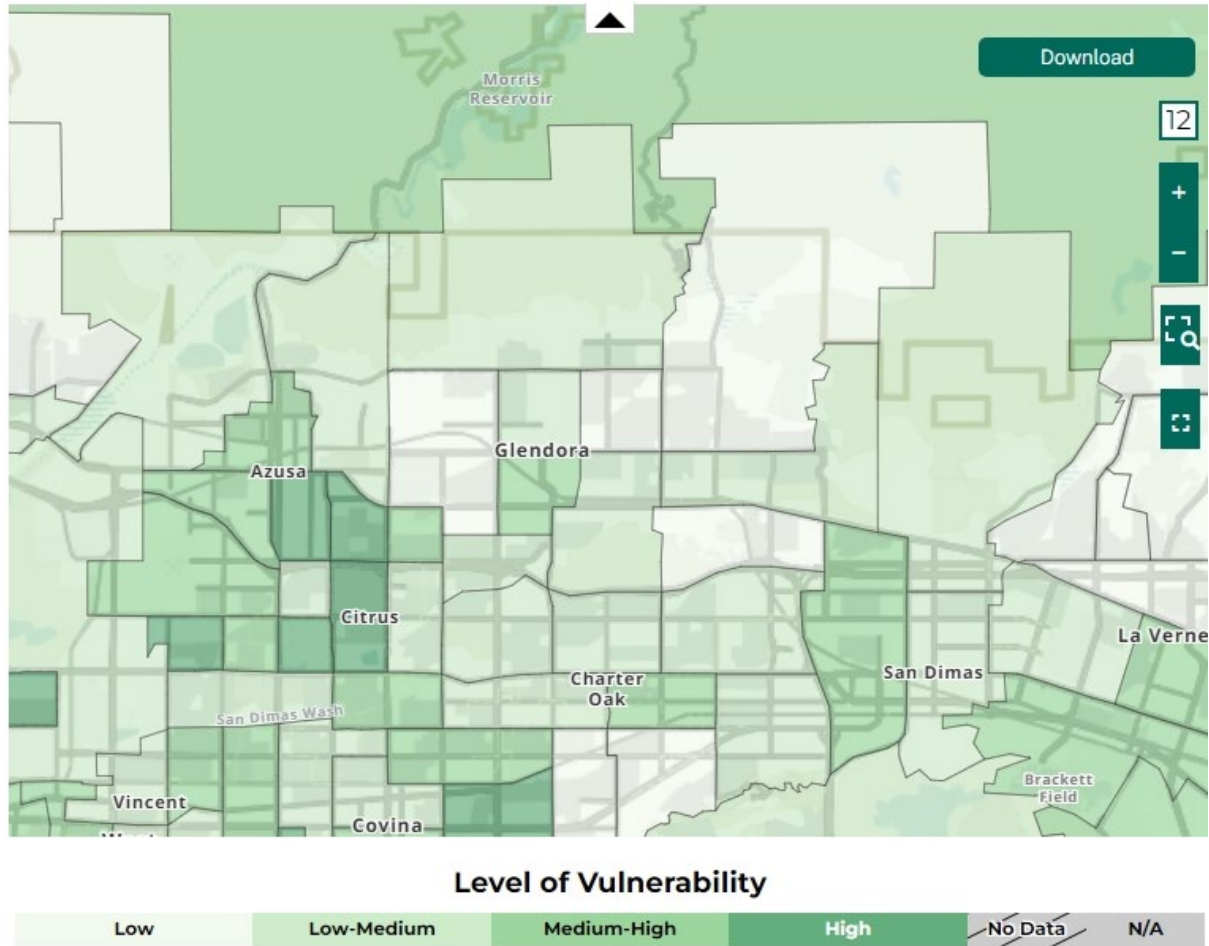
FIGURE 4-13: OVERALL SVI



Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, CDC/ATSDR Social Vulnerability Index 2022 database California, accessed July 17, 2024.



FIGURE 4-14: SOCIOECONOMIC SVI

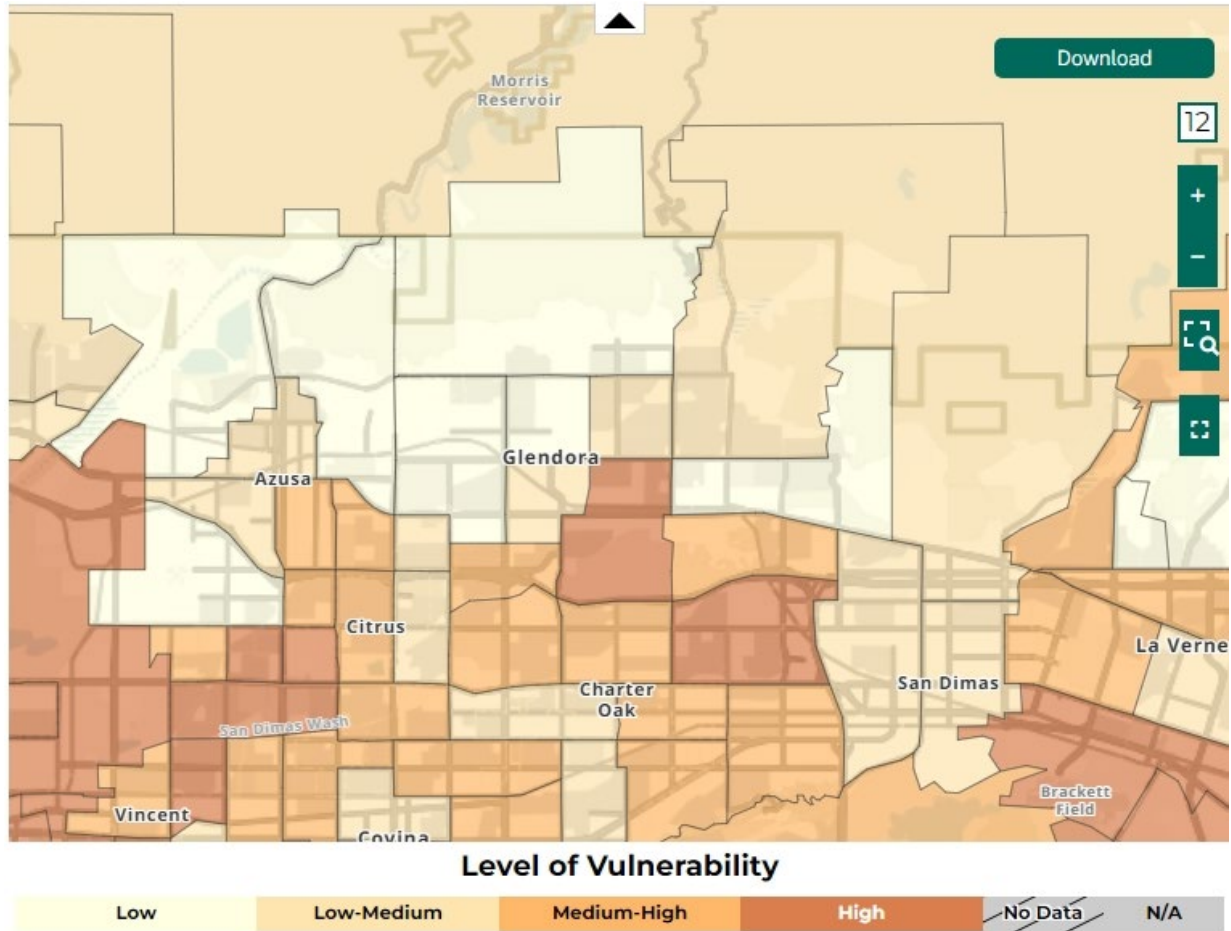


Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, CDC/ATSDR Social Vulnerability Index 2022 database California, accessed July 17, 2024.



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FIGURE 4-15: HOUSEHOLD CHARACTERISTICS

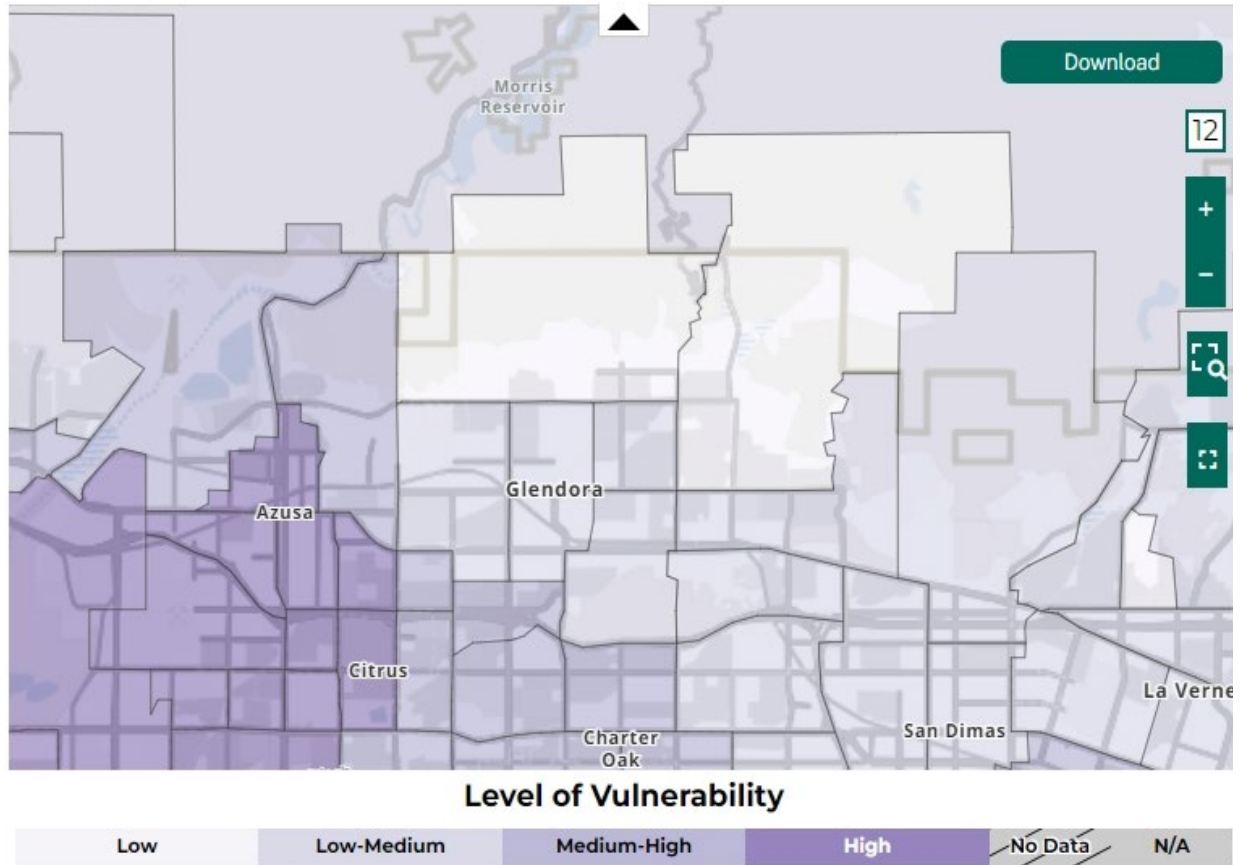


Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, CDC/ATSDR Social Vulnerability Index 2022 database California, accessed July 17, 2024.



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FIGURE 4-16: RACIAL AND ETHNIC MINORITY STATUS

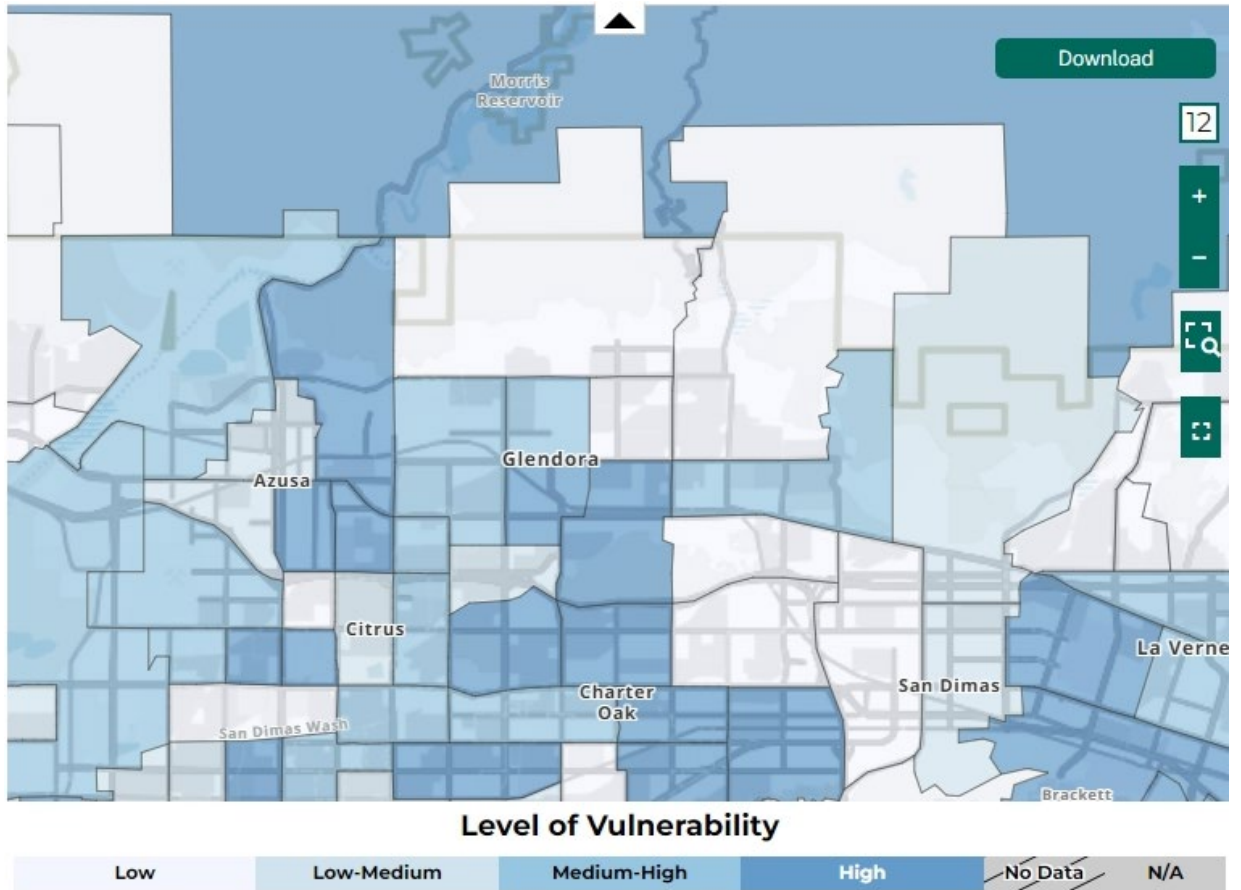


Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, CDC/ATSDR Social Vulnerability Index 2022 database California, accessed July 17, 2024.



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FIGURE 4-17: HOUSING TYPE/TRANSPORTATION



Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, CDC/ATSDR Social Vulnerability Index 2022 database California, accessed July 17, 2024.



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Other Assets

In addition to critical facilities, facilities of concern, and vulnerable populations, other assets could be affected by hazards, including services, cultural resources, or local economic activities. The vulnerability/risk assessment describes the potential harm to these other assets based on available information.

VULNERABILITY ASSESSMENT

Dam/Reservoir Failure

A significant portion of the City is located within dam inundation areas, including the central and southern areas of the City, trending in a southwesterly direction, generally between Little Dalton Wash and Big Dalton Wash, and along San Dimas Wash. As shown in [Table 4-18, Critical Facilities in a Dam Inundation Areas](#), 22 critical facilities and four facilities of concern are located with dam inundation areas.

TABLE 4-18: CRITICAL FACILITIES IN A DAM INUNDATION AREAS

Map #	Facility	Type	Owner/Responsible Agency	Total Loss Potential
Critical Facilities				
1	Glendora Police Facility / City Transmitter Site	Government	City of Glendora	\$8,704,522
2	Glendora City Hall	Government	City of Glendora	\$8,008,112
3	Glendora Library and Cultural Center	Government	City of Glendora	\$16,011,728
13	La Fetra Senior Center	Community	City of Glendora	\$6,564,780
16	American Legion Building	Community	City of Glendora	\$3,059,853
23	I-210 Overcrossing at Grand Ave	Transportation Infrastructure	Caltrans	Not Available
24	Foothill Christian School #1	School	Foothill Christian	Not Available
28	I-210 Overcrossing at Barranca Ave	Transportation Infrastructure	Caltrans	Not Available
29	LA Dept of Water and Power High Voltage Transmission Lines	Electrical Infrastructure	Los Angeles Department of Water and Power	Not Available
31	Covina Irrigating Company	Water/Wastewater Infrastructure	Covina Irrigating Company	Not Available
32	City of Glendora Water Yard	Water/Wastewater Infrastructure	City of Glendora	\$3,943,885
34	Cullen Elementary School	School	Glendora Unified School District	Not Available
35	Glendora USD Office / Sellers Elementary School	School	Glendora Unified School District	Not Available
38	A Line (Gold Line) / Railroad Overcrossing	Transportation Infrastructure	Los Angeles County Metropolitan Transportation Authority	Not Available
40	Glendora City Yard	Government	City of Glendora	\$2,796,670



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Map #	Facility	Type	Owner/Responsible Agency	Total Loss Potential
41	Glendora High School	School	Glendora Unified School District	Not Available
43	I-210 Overcrossing at Lone Hill Ave	Transportation Infrastructure	Caltrans	Not Available
53	LA County Fire Station #85	Government	Los Angeles County Fire Department	Not Available
56	Big Dalton	Dam	Los Angeles County Department of Public Works	Not Available
57	Little Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
58	Big Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
60	Morgan Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
Facilities of Concern				
14	City Transportation Center	Government	City of Glendora	\$1,064,061
17	Liberty House	Community	City of Glendora	\$333,041
39	Glendora Community Service Yard	Government	City of Glendora	\$593,712
55	Angeles National Forest Glendora Ranger Station	Government	U.S. Forest Service	Not Available

The areas of the City identified as having the potential for inundation associated with a dam/reservoir failure primarily include, but are not limited to, residential, commercial, and civic uses. Major roadways within inundation areas include Sierra Madre Avenue, Foothill Boulevard, Route 66, Valley Center Avenue, Grand Avenue, Glendora Avenue, Lone Hill Avenue, and Gladstone Street. I-210 is also located within a dam inundation area but is unlikely to be affected as it is elevated above grade; on- and off-ramps connecting to I-210, however, could be impacted. A failure could damage critical facilities and infrastructure (e.g., roads, water, wastewater, electricity, natural gas), resulting in short-term interruption or extended loss of surface, loss of business income, and displacement of individuals and businesses. A catastrophic dam failure, depending on the size of the dam and the population downstream, could exceed the response capability of public safety personnel and resources, or significantly impair their ability to respond.

It is noted that Table 4-18 includes critical facilities and facilities of concern that may only be partially located within dam inundation area boundaries. For instance, some portions of the Glendora Civic Center, which houses the Glendora Police Facility, City Hall, and Library and Cultural Center (map numbers 1, 2, and 3, respectively), are subject to dam inundation at maximum flood depths of 1-2 feet, while other portions of these facilities are located outside of dam inundation areas. The primary Police Facility building is not within an inundation area, but an eastern extension of the building, which currently houses the Glendora IT Department, is subject



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to maximum flood depths of 1-2 feet. Similarly, the majority of the City Hall building is not within an inundation area, but the eastern portion of the building, which currently houses the council chambers and other offices, is subject to maximum flood depths of 1-2 feet.

According to U.S. Census ACS estimates (2017-2021), the census tracts containing inundation areas have a mix of median household incomes, ranging from the lowest in the City (\$66,740) to the highest in the City (\$178,438). Areas of the City with lower median household incomes are generally located in the central, southern, and western portions of Glendora, which are further downstream from dams and generally have lower maximum inundation depths and a longer time of arrival than areas upstream with higher median household incomes. Inundation areas also include census tracts with a mix of percentage of population with a disability, with areas in the northeast and west generally having lower percentages of population with a disability; and a mix of percentage of renter-occupied housing units, with higher proportions of renters generally located in the central portion of the City. All census tracts within inundation areas have a low (less than five percent) percentage of population living alone; and a lower (less than ten percent) percentage of housing units experiencing overcrowding.

There is the potential that lower-income households and households experiencing housing costs as a greater percentage of their income within the City could be susceptible to cost burden with limited income and resources and may experience greater difficulties in the event they need to leave the area for an extended period of time. A dam or reservoir failure could also impact more vulnerable populations, such as senior citizens and persons with disabilities, as they may not have access to transportation to evacuate the area. Additionally, there is the potential for community members to be impacted due to damage to utility transmission lines and infrastructure outside of the immediate hazard area.

Land use and population patterns have not substantially changed within Glendora since preparation of the 2015 Natural Hazards Mitigation Plan. New development in Glendora over the last decade has been minimal; thus, vulnerabilities to land uses and populations related to dam and reservoir failure are similar. As discussed in [Section 3.6, *Development Trends and Future Development*](#), future residential and mixed-use development is anticipated to occur primarily within the Route 66 Corridor Specific Plan, Arrow Highway Specific Plan, and other urbanized areas located in the central, southern, and western portions of the City. While it is unlikely that all anticipated growth would occur within the five-year period of this LHMP, the City anticipates some level of population growth to occur within these areas, some of which are within dam inundation areas. Residential growth is also anticipated throughout the City in the form of new accessory dwelling unit (ADUs). However, future development is not anticipated to significantly increase vulnerabilities associated with dam/reservoir failure. Future development projects would be subject to applicable federal, State, and local laws and regulations, including the latest iteration of the Building Code and City's floodplain management regulations, that would decrease vulnerability associated with dam/reservoir failure. Further, all dams with the potential to inundate parts of Glendora have received a condition assessment rating of "satisfactory" by the DSOD.



Drought

Drought conditions would affect the entire Glendora planning area; therefore, all critical facilities and facilities of concern, businesses, and residents within the City are considered vulnerable to drought hazards. Droughts do not typically result in physical damage to buildings and infrastructure, thus critical facilities and facilities of concern are not at risk of destruction or structural failure.

Prolonged drought conditions often result in stricter conservation measures, such as targeted reduction percentages or penalties for using potable water above a specific threshold. Higher rates or penalties could disproportionately impact lower-income households or residents on a fixed income. Water service providers in the City (i.e., Glendora Water Division, Suburban Water Systems, and City of Azusa Light & Water Department) are required to prepare and adopt Water Shortage Contingency Plans (WSCP) to prepare for and respond to water shortages. A water shortage, when water supply available is insufficient to meet the normally expected customer water use at a given point in time, may occur due to several reasons, such as drought, climate change, and catastrophic events. The WSCP serves as an operating manual to prevent catastrophic service disruptions through proactive, rather than reactive, management.

Vulnerabilities to drought conditions within Glendora are typically associated with drought conservation measures, which may include targeted reduction percentages and higher rates or penalties. Higher water rates or penalties could disproportionately impact lower-income households or residents on a fixed income residing within the City. Households that earn 30 percent or less than the County's median income (up to \$41,600 for a family of four in 2024, based on HCD Income Limits) are considered "extremely low-income." Extremely low-income (ELI) households are more likely to contain seniors on fixed incomes, persons with disabilities, and other special-needs groups such as large families, families with female heads of households, and persons in need of emergency shelter. Within Glendora, approximately 11.7 percent of the total number of households are ELI households.⁵⁸ ELI households represent a smaller percentage of households in Glendora when compared to the County as a whole (21.0 percent of County households are ELI households). ELI households in Glendora are more likely to be renters than homeowners. Based on 2016-2020 Comprehensive Housing Affordability Strategy (CHAS) data, ELI households comprise 9.2 percent of owner-occupied households compared to 17.7 percent of renter-occupied households. ELI households are particularly susceptible to cost burden, or paying at least 30 percent of gross monthly income toward housing-related costs, reducing the ability for households to have money available for other necessities and emergency expenditures.

Some businesses, such as restaurants, can also be vulnerable to drought and water conservation measures. The City does not have a significant share of industries typically known to utilize large amounts of water, such as farming and manufacturing.

⁵⁸ U.S. Department of Housing and Urban Development, Consolidated Planning/CHAS Data 2016-2020, <https://www.huduser.gov/portal/datasets/cp.html>, accessed September 10, 2024.



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Prolonged drought conditions can also cause impacts to the environment, resulting in dead or dried vegetation, dry soils, damage to wildlife habitat, and degradation of landscape quality. These conditions can increase the vulnerability of other hazards within the community, such as wildfires.

Minimal new development has occurred in the City since the adoption of the 2015 Natural Hazards Mitigation Plan; thus, vulnerabilities to drought related to development have remained similar over that time period. As discussed in [Section 3.6](#), the 2021-2029 Housing Element accommodates the City's RHNA allocation of 2,276 housing units. While it is unlikely that all anticipated growth would occur within the five-year period of this LHMP, the City anticipates some level of population growth to occur, resulting in additional residential and mixed-use development. However, future growth within the City is not expected to substantially increase vulnerabilities associated with drought. New development would be required to install water efficient fixtures and landscaping pursuant to requirements of the City's Municipal Code. Additionally, water suppliers take growth projections into account when planning for future water supply and have accounted for population growth in the City. UWMPs are required to be updated every five years to ensure that adequate water supplies are available to meet existing and future water needs. As part of the UWMPs, a drought risk assessment assesses the reliability of water supplies by comparing projected future water demands with expected available water supplies under normal year, single dry year, and multiple dry year conditions. Because of the history of droughts within California, UWMPs are required to address reliability and provide for contingency plans in the event of drought or other water interruptions.

Flood

According to FEMA FIRMs, there are no mapped 100-year flood or regulatory floodways within the City. A small portion of the northwestern portion of the City, generally along Sierra Madre Avenue, is located within the 500-year floodplain. Additionally, the northern and eastern foothills of the City have not been mapped for flood hazards by FEMA. These unmapped areas generally consist of open space and low-density residential uses. There are no critical facilities or facilities of concern in Glendora located within the 100- or 500-year floodplain.

The majority of developed areas in Glendora are identified by FEMA as Zone X, meaning that the area has minimal risk of flood hazard. A relatively small number of single-family residential uses located near Sierra Madre Avenue in the western portion of the City are located within the FEMA-identified 500-year floodplain. Waterways in the City include three concreted-lined flood control channels, which are designed to manage floodwater flows. However, infrastructure and flood control facilities could be overwhelmed during a large storm event, resulting in flooding not limited to the FEMA flood zones. A significant flood resulting in damage to critical transportation facilities could interfere with the ability to evacuate specific areas of the community or to provide emergency response and equipment to an area. Similarly, localized flooding of roadways can strand motorists and hinder access to and from an area.



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Residents with mobility challenges and those without access to reliable transportation may have difficulty evacuating during a flood event. Vulnerable populations with regards to flooding include seniors, persons with disabilities, and lower-income households, as these populations may experience greater mobility challenges or access limitations to personal transportation. According to U.S. Census ACS estimates (2017-2021), approximately 15.6 percent of the City's population is 65 years of age or older. While the City's median household income of \$103,159 is relatively high compared to the County's median household income of \$76,367, approximately 11.7 percent of the total number of households in Glendora are ELI households, meaning they earn 30 percent or less than the County's median income. Areas of Glendora with lower median incomes are concentrated in the central and southwestern areas of the City, which are correlated with a higher proportion of multi-family residential units, mobile home parks, and seniors.

Land use and population patterns have not substantially changed within the City's Planning Area since preparation of the 2015 Natural Hazards Mitigation Plan; thus, vulnerabilities to land uses and populations related to flood hazards are similar. As discussed in Section 3.0, future residential and mixed-use development is anticipated to occur primarily within the Route 66 Corridor Specific Plan, Arrow Highway Specific Plan, and other urbanized areas located in the central, southern, and western portions of the City. While it is unlikely that all anticipated growth would occur within the five-year period of this LHMP, the City anticipates some level of population growth to occur within these areas. These areas are not located within FEMA-designated flood hazard zones and future growth is not anticipated to increase vulnerabilities to flooding. Minimal residential growth is also anticipated throughout the City in the form of new ADUs, which could be built in the area of undetermined flood levels. Future development projects would be subject to applicable federal, State, and local laws and regulations, including the latest iteration of the Building Code and City's floodplain management regulations, that would decrease vulnerability associated with flood hazards.

Repetitive Loss and Severe Repetitive Loss

Addressing risk to repetitive loss and severe repetitive loss structures is an important step in reducing the financial impact of flooding as repetitive losses require extensive disaster management resources and high NFIP claims.

FEMA defines a repetitive loss as any NFIP-insured structure that has had at least two paid flood losses of more than \$1,000 each in any 10-year period since 1978. FEMA defines a severe repetitive loss as any NFIP-insured structure that has met one of the following paid flood loss criteria since 1978:

- Four or more separate claim payments of more than \$5,000 each (Including building and contents payments); or
- Two or more separate claim payments (building payments only) where the total of the payments exceeds the current value of the property.



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The City of Glendora is not a participant in the NFIP since the City is located within Zone X, as identified on the FIRM. Zone X is an area of moderate or minimal hazard from the principal source of flood in the area. Glendora does not have any repetitive loss or severe repetitive loss properties.

Seismic and Geologic Hazards

The entire Glendora Planning Area is at risk of experiencing strong ground shaking as a result of an earthquake. During a seismic event, critical facilities and facilities of concern as well as residences, businesses, and infrastructure could be damaged. The extent of damage would depend upon the location and magnitude of the earthquake. Depending upon the damage, emergency services, communication systems, and utility services may all be hindered. Senior citizens and persons with disabilities that have limited mobility may be harmed if they are unable to react quickly and seek out areas of safety from falling debris. As previously stated, 15.6 percent of the City's population is 65 years of age or older. According to CHAS data, over 48 percent of all senior households had extremely low, very low, or low incomes. Approximately 10.0 percent of Glendora residents reported having one or more disabilities.

In addition to mobility limitations and the potential to be harmed during an earthquake, some populations may experience significant challenges in the event their homes are damaged and require repairs or displacement due to the extent of damages. Approximately 77.7 percent of the City's housing stock was constructed prior to 1980. Although a majority of the City's housing stock is not considered substandard or in need of rehabilitation or replacement, there is the potential for large portions of the housing stock to be susceptible to damage associated with a more significant earthquake. Additionally, approximately 11.7 percent of the total number of households in Glendora are ELI households. ELI households are particularly susceptible to cost burden, or paying at least 30 percent of gross monthly income toward housing-related costs, reducing the ability for households to have money available for other necessities and emergency expenditures, including structural repairs and relocation funding in the event their home becomes unlivable.

Further, extended interruptions in services, including power outages, would disproportionately affect people with medical conditions requiring power for medical equipment. Depending upon the extent of damage, businesses could be closed and experience economic losses.

Portions of the City are also at risk for seismic-induced landslides and liquefaction. Table 4-19, Critical Facilities in a Landslide Zone and Table 4-20, Critical Facilities in a Liquefaction Zone, identify the critical facilities located within landslide and liquefaction zones, respectively.



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TABLE 4-19: CRITICAL FACILITIES IN A LANDSLIDE ZONE

Map #	Facility	Type	Owner/Responsible Agency	Total Loss Potential
Critical Facilities				
56	Big Dalton	Dam	Los Angeles County Department of Public Works	Not Available
61	San Dimas	Dam	Los Angeles County Department of Public Works	Not Available

TABLE 4-20: CRITICAL FACILITIES IN A LIQUEFACTION ZONE

Map #	Facility	Type	Owner/Responsible Agency	Total Loss Potential
Critical Facilities				
44	I-210 Overcrossing at Railroad tracks	Transportation Infrastructure	Caltrans	Not Available
45	A Line (Gold Line) Overcrossing at Lone Hill Ave	Transportation Infrastructure	Los Angeles County Metropolitan Transportation Authority	Not Available
47	I-210/SR-57 Overcrossing at Auto Centre Dr	Transportation Infrastructure	Caltrans	Not Available
48	I-210 Overcrossing at Amelia	Transportation Infrastructure	Caltrans	Not Available
57	Little Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
58	Big Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available

Landslides can damage structures and block roadways causing long-term disruptions to the roadway network, infrastructure systems and City capabilities. Utility lines in slide-prone areas can be damaged in a landslide, causing service outages. Liquefaction can also damage buildings and infrastructure, including pipelines within soils subject to liquefaction. Damage to transportation infrastructure can impede access and hinder emergency response and evacuation. Damaged utilities can result in service interruptions or complete outages. Lower income households, those on fixed incomes, and those with mobility challenges or no access to transportation may have difficulty evacuating an area and may have more difficulty in the event of displacement.

The areas identified as having the potential for landslide susceptibility primarily occur within the northern and eastern foothills, as well as the “South Hills” located in the southern portion of the City. These areas have not been identified as having significant concentrations of socially vulnerable populations; however, socially vulnerable persons may reside in these areas. Areas with the potential for liquefaction hazards within the City primarily occur within the northern



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foothills, a western portion of the City along Foothill Boulevard, and the southeastern portion of the City along I-210. These areas are shown to have households with incomes near or above the HCD State Median Income of \$111,300, and a relatively high percentage of homeowners; however, between 40 and 60 percent of homeowners in these areas pay more than 30 percent of their household income on their mortgage. Thus, vulnerable populations within these areas may include low-income households experiencing housing costs as a greater percentage of their income. These households could be susceptible to cost burden with limited income and resources and may experience greater difficulties in the event they need to leave the area for an extended period in the event their residence experiences damage associated with landslide or liquefaction activity.

Minimal new development has occurred in the City since development of the 2015 Natural Hazards Mitigation Plan; thus, vulnerabilities to seismic and geologic hazards have remained similar over that time period. Construction within the City has taken geologic conditions, including landslide- and liquefaction-susceptibility into consideration. Future residential and mixed-use development is anticipated to occur primarily within the Route 66 Corridor Specific Plan, Arrow Highway Specific Plan, and other urbanized areas located in the central, southern, and western portions of the City. While it is unlikely that all anticipated growth would occur within the five-year period of this LHMP, the City anticipates some level of population growth to occur within these areas, including residential and non-residential development. However, future growth within these areas is not expected to substantially increase vulnerabilities associated with seismic and geologic hazards, as future development projects would be subject to applicable federal, State, and local laws and regulations, including the Building Code, which would reduce vulnerabilities associated with these hazards.

Severe Weather

A severe weather event, such as heavy rains, Santa Ana winds, and extreme heat conditions, could affect the entire City; therefore, all critical facilities and facilities of concern, business, and residents within the area are considered vulnerable to severe weather hazards. Heavy rain can damage structures if the roof is compromised, or drainage systems overflow and cause flooding. Landslides, slope instability, and mudflows can also occur along slopes and along creeks and channels. Flooding of roadways can also occur, stranding vehicles and limiting emergency access and response. Santa Ana wind events can damage structures, particularly from falling trees or branches or potential debris that is carried by the wind. Extreme heat events do not typically result in damage to structures. However, these events can place greater demand on the power system and result in power outages that can impact residents and businesses. Young children, the elderly, or people suffering from serious medical conditions are physiologically more vulnerable to heatstroke. People requiring the use of medical equipment with a power source could be impacted. Additionally, people experiencing homelessness are also at higher risk of health complications during an extreme heat event. Lower-income households or those with limited mobility may be unable to acquire or seek out cooling devices without significant advance preparations. This can be further compounded by the threat of Public Safety Power Shutoff



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events. During these events, extreme heat impacts may affect larger portions of the City and populations that would not be viewed as vulnerable under normal circumstances.

The impact on socially vulnerable populations would be dependent upon the event and what types of facilities, services, and operations are impacted. There is the potential that if some services, such as medical, public transit, and social services are impacted to the extent that they could not operate, that the elderly, persons with disabilities, and lower-income households reliant on these services would experience significant challenges. These populations would also be more vulnerable to extreme heat events, as they may not have access to air conditioning or the financial means to provide air conditioning for extended periods of time. Some people may be required to work outside or travel via walking or public transit which could increase their exposure to the elements. Extended exposure to extreme heat could result in severe medical conditions.

As described above, 15.6 percent of the City's population is 65 years of age or older. Approximately 10.0 percent of Glendora residents reported having one or more disabilities. Households that earn 30 percent or less than the County's median income (up to \$41,600 for a family of four in 2024) are considered ELI households. Within Glendora, approximately 11.7 percent of the total number of households are ELI households. ELI households are particularly susceptible to cost burden and therefore may not have the financial means or the existing resources to alleviate extreme heat conditions, or address damage that could occur from significant rain and Santa Ana wind events.

Minimal new development has occurred in the City since development of the 2015 Natural Hazards Mitigation Plan and has not exacerbated vulnerabilities related to severe weather. While it is unlikely that all anticipated growth would occur within the five-year period of this LHMP, the City anticipates some level of population growth to occur, resulting in additional residential and mixed-use development. Future growth in the City is not expected to substantially increase vulnerabilities associated with severe weather.

Wildfire

A significant portion of the City is located within a fire hazard zone. [Table 4-21, Critical Facilities in a Fire Hazard Zone](#), identifies the critical facilities and facilities of concern located within fire hazard zones. These include dams/reservoirs.



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TABLE 4-21: CRITICAL FACILITIES IN A FIRE HAZARD ZONE

Map #	Facility	Type	Owner/Responsible Agency	Total Loss Potential
Critical Facilities				
56	Big Dalton	Dam	Los Angeles County Department of Public Works	Not Available
57	Little Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
58	Big Dalton Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
60	Morgan Debris Basin	Dam	Los Angeles County Department of Public Works	Not Available
61	San Dimas	Dam	Los Angeles County Department of Public Works	Not Available

FHSZ areas are located in the northern and eastern foothills of the City and include single-family residential and open space uses. Wildfires can impact structures and also impact people, especially in the event of an evacuation. Seniors and persons with disabilities may have limited mobility and therefore evacuation may be a greater challenge. Persons with disabilities may require special mobility devices or caregiver assistance to evacuate. Other groups with increased threat levels include people with lower-incomes, renters, and persons experiencing homelessness. These groups may not possess enough financial resources to rebuild their homes or search for new homes in the event of evacuation or damage resulting from a wildfire.

Depending upon the location and extent of the fire, transportation routes could be impaired or inaccessible, which could impede evacuation and hinder emergency response. Evacuation and shelter areas may not be available to evacuees depending upon the location of the wildfire. Wildfires within the area, even if not within the City, can also impact people’s health due to the poor air quality. Senior citizens, youth, and people with preexisting medical conditions are most at risk. Utility systems could be damaged or interrupted. Controlled and proactive power outages are highly likely during a wildfire event to reduce the risk for additional fires to be initiated. These power outages can extend beyond the area of the fire.

Similar to severe weather conditions, the impact on socially vulnerable populations within Glendora would be dependent upon the event, location, and severity. A wildfire could directly damage residences, businesses, service providers, transportation and utility infrastructure, or cause services to be impacted. Direct impacts to these facilities would greatly impact those that may not have the financial means to address the damage, cannot relocate to other areas, do not have alternative transportation options, or have medical conditions that limit their mobility and could result in greater health-related impacts. Within Glendora, this would include the elderly, persons with disabilities, and those households with lower incomes, as previously described.



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Minimal new development has occurred in the City since development of the 2015 Natural Hazards Mitigation Plan. This development has occurred primarily as infill in existing urbanized areas; thus, vulnerabilities to wildfire have remained similar over that time period. Future residential and mixed-use development is anticipated to occur primarily within the Route 66 Corridor Specific Plan, Arrow Highway Specific Plan, and other urbanized areas located in the central, southern, and western portions of the City. These areas are not identified as very high or high fire hazard severity zones. Additionally, these areas are developed with existing urban uses and not located adjacent to wildland urban interface areas. While it is unlikely that all anticipated growth would occur within the five-year period of this LHMP, the City anticipates some level of population growth to occur within these areas, including residential and non-residential development. However, future growth within these areas is not expected to substantially increase vulnerabilities associated with wildfire, as future development projects would be subject to applicable federal, State, and local laws and regulations, including the Fire Code, which would reduce vulnerabilities.

Summary of Vulnerability

Overall, FEMA's National Risk Index identifies Los Angeles County as having a Risk Index rating of "Very High" when compared to the rest of the United States. The Risk Index components for the County include a rating of very high for expected annual loss; very high for social vulnerability; and very low for community resilience.

For the census tracts comprising Glendora, the Risk Index rating ranges from "Relatively Low" to "Relatively High." Expected annual losses range from "Relatively Low" to "Relatively High," with the highest losses throughout the City attributed to earthquakes and wildfire.

Table 4-22, *Risk Assessment Summary*, shows a summary of critical facilities and facilities of concern that intersect with hazard areas in the City. Those facilities that intersect with a hazard area are indicated with a "Y" and a red-shaded cell. Critical facilities and facilities of concern that do not fall within the hazard area are designated with an "N" and a green-shaded cell. The risks of drought, ground shaking, and severe weather are considered to have the potential to impact the entire community.



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TABLE 4-22: RISK ASSESSMENT SUMMARY

Map ID	Name	Dam/ Reservoir Failure	Drought	Flood	Ground Shaking	Landslides	Liquefaction	Severe Weather	Wildfire
1	Glendora Police Facility / City Transmitter Site	N	Y	N	Y	N	N	Y	N
2	Glendora City Hall	N	Y	N	Y	N	N	Y	N
3	Glendora Library and Cultural Center	Y	Y	N	Y	N	N	Y	N
4	Frontier Telephone Center	N		N	Y	N	N	Y	N
5	Foothill Presbyterian Hospital	N	Y	N	Y	N	N	Y	N
6	Foothill Medical Arts Building	N	Y	N	Y	N	N	Y	N
7	A Line (Gold Line) Overcrossing	N		N	Y	N	N	Y	N
8	Citrus College	N		N	Y	N	N	Y	N
9	St. Lucy's Priory High School	N		N	Y	N	N	Y	N
10	Sandburg Middle School	N	Y	N	Y	N	N	Y	N
11	La Fetra Elementary School	N	Y	N	Y	N	N	Y	N
12	LA County Fire Station #151	N	Y	N	Y	N	N	Y	N
13	La Fetra Senior Center	Y	Y	N	Y	N	N	Y	N
14	City Transportation Center	Y	Y	N	Y	N	N	Y	N
15	Glendora Youth Center	N	Y	N	Y	N	N	Y	N
16	American Legion Building	Y	Y	N	Y	N	N	Y	N
17	Liberty House	Y	Y	N	Y	N	N	Y	N
18	I-210 Overcrossing at Glendora Ave	N	Y	N	Y	N	N	Y	N
19	LA Dept of Water and Power High Voltage Transmission Lines	N	Y	N	Y	N	N	Y	N
20	Crowther Teen Center	N	Y	N	Y	N	N	Y	N
21	SCE Sub-Station	N	Y	N	Y	N	N	Y	N
22	LA Dept of Water and Power High Voltage Transmission Lines	N	Y	N	Y	N	N	Y	N
23	I-210 Overcrossing at Grand Ave	Y	Y	N	Y	N	N	Y	N
24	Foothill Christian School #1	Y	Y	N	Y	N	N	Y	N
25	Foothill Christian School #2	N	Y	N	Y	N	N	Y	N
26	Whitcomb High School	N	Y	N	Y	N	N	Y	N
27	Stanton Elementary School	N	Y	N	Y	N	N	Y	N
28	I-210 Overcrossing at Barranca Ave	Y	Y	N	Y	N	N	Y	N
29	LA Dept of Water and Power High Voltage Transmission Lines	Y	Y	N	Y	N	N	Y	N
30	Washington Elementary School	N		N	Y	N	N	Y	N
31	Covina Irrigating Company	Y	Y	N	Y	N	N	Y	N
32	City of Glendora Water Yard	Y	Y	N	Y	N	N	Y	N
33	Goddard Middle School	N	Y	N	Y	N	N	Y	N
34	Cullen Elementary School	Y	Y	N	Y	N	N	Y	N
35	Glendora USD Office / Sellers Elementary School	Y	Y	N	Y	N	N	Y	N
36	Hope Lutheran School	N	Y	N	Y	N	N	Y	N



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Map ID	Name	Dam/ Reservoir Failure	Drought	Flood	Ground Shaking	Landslides	Liquefaction	Severe Weather	Wildfire
37	Williams Educational Center	N	Y	N	Y	N	N	Y	N
38	A Line (Gold Line) / Railroad Overcrossing	Y	Y	N	Y	N	N	Y	N
39	Glendora Community Service Yard	Y	Y	N	Y	N	N	Y	N
40	Glendora City Yard	Y	Y	N	Y	N	N	Y	N
41	Glendora High School	Y	Y	N	Y	N	N	Y	N
42	LA County Fire Station #86	N	Y	N	Y	N	N	Y	N
43	I-210 Overcrossing at Lone Hill Ave	Y	Y	N	Y	N	N	Y	N
44	I-210 Overcrossing at Railroad tracks	N	Y	N	Y	N	Y	Y	N
45	A Line (Gold Line) Overcrossing at Lone Hill Ave	N	Y	N	Y	N	Y	Y	N
46	LA Dept. of Water and Power High Voltage Transmission Lines	N	Y	N	Y	N	N	Y	N
47	I-210/SR-57 Overcrossing at Auto Centre Dr	N	Y	N	Y	N	Y	Y	N
48	I-210 Overcrossing at Amelia	N	Y	N	Y	N	Y	Y	N
49	Water Storage Facility	N	Y	N	Y	N	N	Y	N
50	Willow Elementary School	N	Y	N	Y	N	N	Y	N
51	I-210 Overcrossing at Sunflower Ave	N	Y	N	Y	N	N	Y	N
52	Sunflower School	N	Y	N	Y	N	N	Y	N
53	LA County Fire Station #85	Y	Y	N	Y	N	N	Y	N
54	I-210 Overcrossing at Bonnie Cove	N	Y	N	Y	N	N	Y	N
55	Angeles National Forest Glendora Ranger Station	Y	Y	N	Y	N	N	Y	N
56	Big Dalton	Y	Y	N	Y	Y	N	Y	Y
57	Little Dalton Debris Basin	Y	Y	N	Y	N	Y	Y	Y
58	Big Dalton Debris Basin	Y	Y	N	Y	N	Y	Y	Y
59	Puddingstone Diversion*	Y	Y	N	Y	N	N	Y	N
60	Morgan Debris Basin	Y	Y	N	Y	N	N	Y	Y
61	San Dimas*	Y	Y	N	Y	Y	N	Y	Y

Note: * These critical facilities are located outside of the Glendora Planning Area but have dam inundation areas affecting the City.



Section 5.0 | Hazard Mitigation Strategy

Hazard mitigation strategies are used to reduce hazard impacts on residents, public infrastructure, and critical facilities. The hazard mitigation actions will help to protect the safety and well-being of residents and visitors, critical facilities, facilities of concern, other buildings and structures, key services, the local economy, and other important community assets. Some actions will also help with emergency preparedness, allowing for a more effective community response to hazard events. Preparedness actions are not a required component of an LHMP, but they support and complement mitigation activities, and the Planning Team chose to include them as part of the overall hazard mitigation strategy.

This section of the LHMP is derived from an in-depth review of the vulnerabilities and capabilities described in this plan. Overall, the actions represent the City's risk-based approach for reducing and/or eliminating the potential losses as identified in the Vulnerability/Risk Assessment section.

5.1 CAPABILITIES ASSESSMENT

This capabilities assessment has been designed to identify existing local agencies, personnel, planning tools, public policy and programs, technology, and funds that have the capability to support hazard mitigation activities and strategies outlined in this plan. The Planning Team collaborated to identify capabilities and mechanisms available to the City and partner agencies for reducing damage from future hazard events. After initial identification, the capabilities were reviewed again and updated in the context of developing the mitigation actions.

The capabilities assessment considered the following types of resources:

- Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development.
- Administrative and technical capabilities refer to the community's staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively.
- Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions.
- Education and outreach capabilities are programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Table 5-1, *Capabilities Assessment*, summarizes the capabilities assessment for Glendora.



Glendora Local Hazard Mitigation Plan

TABLE 5-1: CAPABILITIES ASSESSMENT

Resources	Description of Ability to Support Mitigation
Planning & Regulatory	
General Plan Responsible Department: Community Development Department	The Glendora General Plan establishes the overall vision for future growth and development. As a blueprint for the future, the plan contains policies and programs designed to provide a solid basis for decisions related to land use and development. The General Plan provides the framework for the implementation of the LHMP mitigation actions. The Safety Element identifies hazards that could impact the community and establishes policy for the preparation and update of the LHMP. The City is updating the General Plan Safety Element concurrent with the LHMP and will incorporate the LHMP into its Safety Element to ensure compliance with AB 2140, making the City eligible for additional funding under the California Disaster Assistance Act (CDAA). As future General Plan Updates occur, hazard information will be updated to reflect current conditions, including updated mapping and assessments of hazards to be considered when determining the placement and development of land uses.
Zoning Ordinance Responsible Department: Community Development Department	The Glendora Zoning Ordinance implements the General Plan by establishing regulations for land use control within the City, including where and how development occurs. Zoning is used to protect the public health, safety and welfare of a community. The City can use the Zoning Ordinance to implement mitigation actions to reduce risks associated with future development. The Zoning Ordinance is incorporated into Municipal Code as Title 21.
Subdivision Ordinance Responsible Department: Community Development Department	The City's Subdivision Ordinance regulates development of housing, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots. The Subdivision Ordinance can ensure future subdivisions account for the risk of hazards on future development. The Subdivision Ordinance is included as Title 20 of the Municipal Code.
Building Code Responsible Department: Community Development Department	The Building Code regulates how buildings are constructed. The City adopts the State Building Code with amendments, as applicable. Mitigation actions to construct buildings to safer standards to better resist damage during a hazard event could be considered as part of future building code updates. The Building Code is incorporated as Chapter 19.02 of the Municipal Code.
Capital Improvement Program Responsible Department: Public Works Department	The Capital Improvement Program (CIP) is established to provide for the planning, funding, design, construction, maintenance and repair of City facilities and infrastructure. The CIP is a "roadmap" that provides direction and guidance to the City to carefully plan and manage its capital and infrastructure assets. Typical improvement and maintenance projects included within the CIP include streets, signals, and lighting; flood control and water quality; parks; and public facilities. The City can use the CIP to identify priority projects for hazard mitigation.
Los Angeles County Flood Control District Responsible Agency:	The Los Angeles County Flood Control District (LACFCD) was established in 1915 and provides flood risk management and water conservation to the entire County except the Antelope Valley. The LACFD Flood Maintenance Division operates and maintains dams, open channels, storm drains, debris basins, and pumping plants,



Glendora Local Hazard Mitigation Plan

Resources	Description of Ability to Support Mitigation
<p>County of Los Angeles, Los Angeles County Flood Control District</p>	<p>while the Watershed Management Division handles the National Pollutant Discharge Elimination System (NPDES) Permit Program, which controls water pollution by issuing permits to industrial, municipal, or other facilities that discharge pollutants into surface water.</p>
<p>Upper San Gabriel River Enhanced Watershed Management Program</p> <p>Responsible Agencies: County of Los Angeles, Los Angeles County Flood Control District and City of Glendora</p>	<p>The Upper San Gabriel River Enhanced Watershed Management Program (EWMP) fulfills the requirements of the NPDES Municipal Separate Storm Sewer System (MS4) Permit Order No. R4-2012-0175. The EWMP contains strategies, watershed control measures, and best management practices (BMPs), including multi-benefit regional projects that retain and infiltrate stormwater runoff from the 85th-percentile, 24-hour storm event for the upper portion of the San Gabriel River Watershed, to which the City contributes runoff.</p>
<p>Urban Water Management Plan</p> <p>Responsible Agencies: City of Glendora Public Works Department, Suburban Water Systems, and City of Azusa Light & Water Department</p>	<p>Urban Water Management Plans (UWMP) are prepared every five years. An UWMP provides long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. The UWMP addresses drought conditions and the ability to provide water to its customers. The UWMP can be used to coordinate and implement mitigation actions associated with drought and water supply reliability.</p>
<p>Water Shortage Contingency Plan</p> <p>Responsible Agency: City of Glendora Public Works Department, Suburban Water Systems, and City of Azusa Light & Water Department</p>	<p>The Water Shortage Contingency Plan (WSCP) is a strategic planning document designed to prepare for and respond to water shortages. This plan is used to prevent catastrophic service disruptions through proactive, rather than reactive, management. This WSCP provides a structured guide for the District to deal with water shortages, incorporating prescriptive information and standardized action levels, along with implementation actions in the event of a catastrophic supply interruption.</p>
<p>Greater Los Angeles County Region Integrated Regional Water Management Plan</p> <p>Responsible Agencies: County of Los Angeles, Los Angeles County Flood Control District</p>	<p>The purpose of the Greater Los Angeles County Region Integrated Regional Water Management Plan (IRWMP) is to define a clear vision and direction for the sustainable management of water resources in the Greater Los Angeles County. The IRWMP identifies a comprehensive set of solutions to reduce the region's reliance on imported water; comply with water quality regulations by improving the quality of urban runoff, stormwater and wastewater; protect, restore and enhance natural processes and habitats; increase watershed friendly recreational space for all communities; reduce flood risk in flood prone areas by either increasing protection or decreasing needs using integrated flood management approaches; and adapt to and mitigate against climate change vulnerabilities. The IRWMP can be used to coordinate and implement mitigation actions associated with drought and water supply reliability.</p>
<p>Los Angeles County Water Plan</p> <p>Responsible Agencies: County of Los Angeles, Public Works Department</p>	<p>The Los Angeles County Water Plan (CWP) focuses on achieving regional water resilience through a framework of targets and strategies organized around four key focal areas: improving regional water supply reliability by better leveraging our collective local and imported water resources and infrastructure; realizing our shared groundwater management opportunities by sharing expertise and resources to overcome challenges; ensuring a consistently high standard of water service for everyone in Los Angeles County by providing regional support for small systems, with focused attention</p>



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Resources	Description of Ability to Support Mitigation
	to under-resourced communities; and mitigating the impacts of wildfire on our water supplies through coordinated efforts between land and water managers. The CWP can be used to coordinate and implement mitigation actions associated with drought and water supply reliability.
<p>Mutual Aid Agreements</p> <p>Responsible Agencies: City of Glendora Police Department, City of Glendora, Los Angeles County Fire Department (LACoFD), Los Angeles County Sheriff's Department (LASD)</p>	<p>The City and its public safety providers maintain agreements with emergency responders to lend assistance across jurisdictional boundaries when an emergency response exceeds local resources. Access to these resources provides opportunities to implement mitigation actions to reduce damage and risk of injury during an event. It also provides for collaboration and sharing of information specific to hazards.</p> <ul style="list-style-type: none"> • Fire – Federal, State, and local agreements • Police – State and local agreements • City – State and County agreements
<p>Los Angeles County/Operational Area Emergency Operations Center</p> <p>Responsible Agency: County of Los Angeles</p>	<p>The Los Angeles County/Operational Area Emergency Operations Center (EOC) is the central coordination point that provides for multi-agency emergency coordination and support to agencies/jurisdictions within the Operational Area during an emergency or disaster. It also assists in coordination and communication between Mutual Aid Coordinators and the California Governor's Office of Emergency Services during County-wide and State-wide emergency response and recovery operations. The EOC can be used to gather and process information to and from the County, cities, school and special districts, business and industry, volunteer organizations, individuals, and State and federal government agencies. It has the ability to function as a virtual EOC so that Operational Area Members may communicate even if the primary EOC is inaccessible or otherwise unavailable. Accurate and timely communication is critical during a hazard event and can reduce more significant damage and injury. Mitigation actions specific to communications and information can be implemented through the communication systems and response efforts to reduce risk of injury and damage.</p>
<p>2020 County of Los Angeles All-Hazards Mitigation Plan</p> <p>Responsible Agencies: County of Los Angeles</p>	<p>The 2020 County of Los Angeles All-Hazards Mitigation Plan (AHMP) assesses risks posed by natural hazards and establishes a mitigation action plan to protect residents, critical facilities infrastructure, private property, and the environment from hazards in the unincorporated areas of the County and County-owned facilities. The AHMP ensures the County's continued eligibility for disaster relief funds from the federal and State governments.</p>
<p>Los Angeles County Fire Department Strategic Fire Plan</p> <p>Responsible Agency: LACoFD</p>	<p>The LACoFD Strategic Fire Plan focuses on enhancing the protection of lives, property, and natural resources from wildland fire, as well as improving environmental resilience to wildland fires. The plan identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce the loss of values at risk within the operational area.</p>
<p>Weed Abatement Program</p> <p>Responsible Agencies:</p>	<p>The County performs weed abatement services designed to reduce fire hazards during the fire season. The weed abatement program is operated pursuant to the California Health & Safety Code sections 13879 - 14922 and Title 32 of the Los Angeles County Code, also</p>



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Resources	Description of Ability to Support Mitigation
County of Los Angeles Departments of Fire and the Agricultural Commissioner/Weights and Measures	known as the Los Angeles County Fire Code. Assessment and integration can be tailored to address localized conditions, such as drought conditions and increased wildfire threat.
Wildfire Mitigation Plan Update Responsible Agencies: Southern California Edison	Electrical corporations are required to prepare and submit Wildfire Mitigation Plans (WMPs) to the Office of Energy Infrastructure Safety for review and approval. WMPs describe how the electrical corporation is constructing, maintaining, and operating its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire.
Administrative & Technical	
Community Development Department	The Community Development Department provides services for long-range land planning, land development, economic development, affordable housing, and transportation. Services include zoning review, building permits, dial-a-ride and affordable housing. The department is organized into the following four divisions: Building and Safety, Housing and Economic Development, Planning, and Transportation.
Building & Safety Division	The Building and Safety Division is responsible for the building and safety standards for the design, construction, use, and occupancy, of all buildings and structures within the City. The Building and Safety Division serves as a contact point for the permit and inspection process, which may involve other departments and agencies. Services include those operations relating to development, plan review, inspection, and enforcement of the adopted building codes and applicable codes within the City in order to ensure the safety of occupants and the general public.
Public Works Department	The Public Works Department is responsible for the design, construction, and maintenance of public facilities including public streets, traffic signals, storm drains, parks, and landscaping. The Public Works Department deals with mitigation actions pertaining to public facilities, maintenance of transportation systems, maintenance of local storm drain systems, and maintenance and removal of tree limbs or debris.
Finance Department	The Finance Department manages the financial operation of the City in conformity with generally accepted accounting standards and principles, and in compliance with federal and State laws. The department accounts for all City revenues and expenditures, monitors internal controls over a variety of transactions, administers water utility collections, cashiering and public counter services, payroll, accounts payable and receivable, manages several competitive grants, prepares payment of all obligations for review and approval by the City Council.
Computer Services	The MyGlendora Geographic Information System (GIS) hub is an interactive portal featuring community maps and information about programs and services offered by the City. The application is accessible on the City's website and provides the public with property specific information, including fire hazard severity zones,



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Resources	Description of Ability to Support Mitigation
	fault zones, liquefaction zones, landslide zones, evacuation zones, and cooling center locations.
Glendora Police Department	The Glendora Police Department's primary mission is to enhance the safety and security of the community by providing professional, frontline law enforcement services. Services include Patrol, Community Preservation, Investigations, Traffic, Jail, as well as the K-9 Program, and Emergency Services.
Glendora Police Department; Emergency Services	Emergency Services is responsible for City-wide, local homeland security requirements, and conducts community relations presentations regarding emergency preparedness. Members who work and assist in the area of Emergency Services also may coordinate volunteer services such as Police Auxiliary members, Community Emergency Response Team (CERT), and Glendora Emergency Amateur Radio Services (GEARS).
Glendora Emergency Alert Program	The Glendora Emergency Alert system enables the City to provide community members with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons, and evacuations of buildings or neighborhoods.
City of Glendora Public Works Department, Suburban Water Systems, and City of Azusa Light & Water Department	Water services in the City are provided by the City of Glendora Public Works Department, Suburban Water Systems, and City of Azusa Light & Water Department. Mitigation actions related to water conservation and hardening of critical facilities specific to water and wastewater will be implemented in coordination with these service providers.
Los Angeles County Sanitation Districts	Within the Sanitation Districts' service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and County that are tributary to the Sanitation Districts' wastewater collection system. The Sanitation Districts own, operate, and maintain approximately 1,400 miles of sewers, ranging from 8 to 144 inches in diameter, that convey approximately 500 million gallons per day of wastewater to 11 wastewater treatment plants.
Consolidated Sewer Maintenance District of Los Angeles County	The Consolidated Sewer Maintenance District of Los Angeles County (CSMD) system includes over 4,600 miles of sanitary sewers, 155 pump stations, and 4 wastewater treatment plants.
California Department of Transportation	The California Department of Transportation (Caltrans) has jurisdiction, owns, operates, and maintains several of the roadways/bridges within Glendora. Mitigation actions related to ensuring emergency transportation routes are maintained, repaired, and strengthened will require coordination and implementation by Caltrans.
Southern California Edison	Southern California Edison (SCE) provides electrical service to Glendora. These providers own and maintain electrical conveyance infrastructure. Mitigation actions specific to the provision of these services will be implemented in coordination with SCE.
Southern California Gas Company	Southern California Gas Company (SoCalGas) provides natural gas service to Glendora. SoCalGas owns and maintains natural gas conveyance infrastructure. Mitigation actions specific to the provision of these services will be implemented in coordination with the SoCalGas.
Wireless Facilities	A variety of service providers provide communication services within Glendora. Mitigation actions specific to the provision of these



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Resources	Description of Ability to Support Mitigation
	services will be implemented in coordination with these service providers.
Partnering Arrangements or Intergovernmental Agreements	The Glendora Police Department and LACoFD have memorandums of understanding with other fire and law enforcement agencies to provide services in emergency events.
American Red Cross	The American Red Cross office in Arcadia serves the San Gabriel/Pomona Valley area. The Red Cross provides both technical and education/outreach support in the implementation of mitigation actions.
Financial	
Federal Emergency Management Agency	FEMA is the federal agency responsible for hazard mitigation, emergency preparedness, and emergency response and recovery activities. It provides guidance to State and local governments on hazard mitigation activities, including best practices and how to comply with federal requirements. FEMA also provides funding for hazard mitigation actions through three grant programs: Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) Grant, and Building Resilient Infrastructure and Communities (BRIC). The HMGP requires a presidential hazard declaration before funding is available; after a hazard is declared, grant applications can be submitted on a rotating basis. Both BRIC and FMA applications typically open during the fall. Outside of the Hazard Mitigation Assistance Grants, FEMA also administers Preparedness Grants and Resilience Grants that may be applicable to future City projects.
California Governor's Office of Emergency Services	Cal OES is responsible for overseeing and coordinating emergency preparedness, response, recovery and homeland security activities within California. Cal OES regularly dispatches team members to join first responders, emergency leaders and those affected by disasters that threaten public safety, to provide information essential to the public. Cal OES can assist in obtaining funding for mitigation actions identified in the plan and providing guidance on future plan updates. Additionally, Cal OES is responsible for administration and distribution of federal grant funding for the FEMA grant programs listed above.
Emergency Reserve Fund	The City maintains an emergency reserve fund for emergency needs in an amount equal to the cost to fund operations for a six-month period.
EOC Activation	When the City's EOC is activated, costs are tracked for eligible reimbursement.
Education & Outreach	
Alert LA County	Alert LA is an opt-in mass notification program utilized by the County of Los Angeles that allows individuals to receive emergency alerts by text, email and/or phone call. Alert LA County has accessibility features for people with disabilities and others with access and functional needs. This system can be used to implement mitigation actions pertaining to public outreach and dissemination of accurate and timely information during a hazard event.
Community Emergency Response Team	The Community Emergency Response Team (CERT) program was developed by the Los Angeles County Fire Department to provide basic training in safety and lifesaving skills for the general public. Upon completion of the course, CERT members can assist others in



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Resources	Description of Ability to Support Mitigation
	their neighborhood or workplace following an event when professional responders are not immediately available to help. The City also offers a CERT course, at minimum annually, for its residents.
Glendora Police Auxiliary	The Glendora Police Auxiliary is group of trained, informed volunteers who could be called upon during emergency situations or in the event of a disaster. The Auxiliary may participate in Special Details which could range from appearances at community events, parades, and check-points or emergency response in times of disaster.
Glendora Police Department; Community Academy	The Community Academy is an outreach program to demystify the workings of the Glendora Police Department. Participants learn about the various duties and activities of the police department and criminal justice system.
Glendora Safe Schools	The Glendora Police Department partners with the Glendora Unified School District, the Charter Oak Unified School District, and the Azusa Unified School District to work together to maintain a safe school environment. In addition to on-site patrols and traffic enforcement, the Police Department communicates and meets regularly with school staff and committees and attends PTA meetings. The Police Department can help to implement mitigation actions through the distribution of information through these communication channels.
Neighborhood Watch Program	Neighborhood Watch is a crime prevention program which enlists the active participation of residents in cooperation with law enforcement to reduce crime in their communities. It involves neighbors getting to know each other and working together in a program of mutual assistance. Residents become trained to recognize and report suspicious activities, and can then implement crime prevention techniques such as residential and vehicle security, and personal safety into their neighborhoods.
Los Angeles County Fire Department Education and Outreach Programs	The LACoFD hosts a series of education and outreach programs including the <i>Ready! Set! Go!</i> guide, which provides residents with critical information on creating defensible space around their home, retrofitting their home with fire-resistant materials, and preparing them to safely evacuate well ahead of a wildfire; and the <i>Family Instructions for Rapid Escape</i> (F.I.R.E.) guide so families can make their homes F.I.R.E. ready and learn how to safely escape in an emergency event.
Emergency Preparedness Outreach	Disasters cannot be prevented; however, the community can reduce the effects of disasters before they occur, prepare for what could happen, and improve response and recovery. Several mitigation actions pertain to outreach and information to the community and can be implemented through a variety of programs and events in coordination with the City and other partner agencies and stakeholders.
Police/Fire Community Awareness Events	Events provide an opportunity to implement mitigation actions specific to educating and informing the community regarding hazards and ways to reduce impacts from the hazards and what to do during an emergency.



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Resources	Description of Ability to Support Mitigation
Homeowner Associations	Several Homeowners Associations exist in the City of Glendora. The associations can help to implement mitigation actions through the distribution of information to their residents.
City Website, E-Newsletter, Social Media, Brochures and Pamphlets	These various forms of communication provide an opportunity to convey information and implement mitigation actions specific to educating and informing the community regarding all hazards and ways to reduce impacts from the hazards.
<p>How can these capabilities be expanded upon and improved to reduce risk?</p> <p>Several mitigation actions provide opportunities to expand upon the City's capabilities to reduce risk. Examples of these opportunities include:</p> <p><u>Planning/Regulatory</u>: Adopt the LHMP Update into the General Plan Safety Element (Mitigation Action 1). Monitor and update building and fire codes (Mitigation Action 32). Review information from dam inspections and Emergency Action Plans and implement physical improvements as needed (Mitigation Actions 14 and 15). Maintain flood control facilities in coordination with LACFCD (Mitigation Action 20). Perform mechanical thinning, weed abatement, and other wildfire mitigation activities to reduce wildfire risk (Mitigation Action 30 and 31). Review Wildfire Mitigation Plans prepared by the electric utility provider and coordinate opportunities to implement measures to reduce fire caused by electric infrastructure (Mitigation Action 34).</p> <p><u>Administrative/Technical</u>: Work with partners and vulnerable populations to identify opportunities to mitigate impacts (Mitigation Actions 9, 10, and 11). Identify organizations to assist property owners and renters with simple earthquake mitigation activities and small project-based structural improvements (Mitigation Action 22). Provide water conservation resources and strategies to reduce water usage and opportunities for cost savings (Mitigation Actions 17 and 18).</p> <p><u>Financial</u>: Funding resources for housing/shelter (Mitigation Action 9) and to mitigate impacts to vulnerable populations (Mitigation Action 11). Funding resources for seismic hazard mitigation activities (Mitigation Action 21, 22, and 23). Funding resources to mitigate potential damages associated with heavy rains or Santa Ana wind events (Mitigation Action 25).</p> <p><u>Education/Outreach</u>: Education and dissemination of information aimed at mitigating natural hazards and reducing risk (Mitigation Actions 3, 5, and 6). Education about the dangers of extreme heat, particularly to vulnerable populations (Mitigation Action 27). Outreach and education related to wildfires, including mitigation activities such as home hardening and vegetation management to address wildfire risk (Mitigation Actions 28 and 33).</p>	



5.2 HAZARD MITIGATION OVERVIEW

FEMA'S NATIONAL FLOOD INSURANCE PROGRAM

The National Flood Insurance Program (NFIP) provides affordable insurance to property owners, renters and businesses by encouraging communities to adopt and enforce floodplain management regulations. Participation in the NFIP is optional; however, property owners who live in a non-participating community with flood-prone areas are not able to buy flood insurance through the program. Communities with mapped floodplains cannot receive federal grants or loans for development activities in flood-prone areas and cannot receive federal disaster assistance to repair flood damaged buildings in mapped floodplains if they are not participants of the NFIP.

The City of Glendora is a participant in the NFIP and manages its flood-prone areas through Glendora Municipal Code Chapter 9.58, *Floodplain Management*, effective 2007. Chapter 9.58 applies to all areas identified as flood-prone within the jurisdiction of the City of Glendora. Pursuant to Section 9.58.060, *Compliance*, no structure or land can be constructed, located, extended, converted, or altered without full compliance with the term of this chapter and other applicable regulations.

Glendora Municipal Code Section 9.58.110, *Designation of the floodplain administrator*, appoints the Director of Public Works as the Floodplain Administrator. Pursuant to Section 9.58.120, *Duties and responsibilities of the floodplain administrator*, the floodplain administrator reviews all development permit applications to determine permit requirements have been satisfied; all other related State and federal permits have been obtained; and the site is reasonably safe from flooding. The floodplain administrator also obtains, reviews, and utilizes any base flood data available from other federal or State agency or other source. Municipal Code Section 9.58.130, *Standards of construction*, identifies the required standards of construction in all flood-prone areas, including for all new construction and substantial improvements. Other standards are addressed in Section 9.58.140, *Standards for subdivisions or other proposed new development*, and Section 9.58.150, *Standards for utilities*.

As part of the City's concurrent General Plan Safety Element update, current floodplain information has been incorporated and the goals and policies adequately respond to floodplain conditions within the City to reduce vulnerability to flood hazards. Implementation of LHMP update Mitigation Actions 1, 19, and 20 would continue to assist with compliance. Mitigation Action 1 addresses adoption of the LHMP into the City's General Plan Safety Element, including any future updates. Mitigation Action 19 encourages property owners to improve drainage on their properties through low-impact development features. Mitigation Action 20 directs the City to maintain flood control facilities, in coordination with LACFCD. Additionally, it should be noted that the City's General Plan Land Use map identifies where a specific land use is allowed within the City. The



City's Utility and Flood Control Right-of-Way (ROW) designation is applied to areas in the City that are developed for utility and flood control use.

HAZARD MITIGATION GOALS

The mitigation goals, presented in Section 1.0, serve as the basis for direction to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from hazards. The plan's goals guide the direction of future activities aimed at reducing risk and preventing loss from hazards. The goals also serve as checkpoints as agencies and organizations begin implementing mitigation action items.

The hazard mitigation actions identified below list those activities that the City will use to reduce their risk of potential hazards. These mitigation actions were identified through discussions and collaboration with the LHMP Planning Team. All the mitigation actions that were discussed have been included within the plan. Some of these actions may be eligible for funding through federal and State grant programs and other funding sources as made available to the City. The mitigation actions are intended to address the comprehensive range of identified hazards. Some actions may address risk reduction from multiple hazards.

HAZARD MITIGATION PRIORITIZATION

The Planning Team prioritized the mitigation actions using the following as guidance:

- High Priority: Top organizational priority and is generally a well-detailed project idea. Protects population, resources or properties at high risk. Uses feasible methods, techniques or technology.
- Medium Priority: A good idea that needs more information or is an action that addresses a moderate hazard.
- Low Priority: An idea that needs a lot more information or will take a lot of preliminary action to build support.

Some actions, although possibly in need of more information, were identified as a high priority due to current conditions, the risk of the hazard, and the probability of its occurrence. The Planning Team considered the frequency and severity of the hazard; the vulnerability of the community; the impacts the mitigation action would avoid or reduce; the benefits of the action on the community; the critical facilities that would benefit; the environmental benefits of the action; and the capability of the City and its partner agencies to implement the action.

The Planning Team reviewed the STAPLE/E (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria, as described in [Table 5-2, *STAPLE/E Review and Selection Criteria*](#), when considering and prioritizing the mitigation actions. This methodology, as



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endorsed by FEMA, requires that social, technical, administrative, political, legal, economic, and environmental factors are considered when reviewing potential actions.

TABLE 5-2: STAPLE/E REVIEW AND SELECTION CRITERIA

STAPLE/E Review	Selection Criteria
Social	<ul style="list-style-type: none"> ▪ Is the proposed action socially acceptable to the jurisdiction and surrounding community? ▪ Are there equity issues involved that would mean that one segment of the jurisdiction and/or community is treated unfairly? ▪ Will the action cause social disruption?
Technical	<ul style="list-style-type: none"> ▪ Will the proposed action work? ▪ Will it create more problems than it solves? ▪ Does it solve a problem or only a symptom? ▪ Is it the most useful action in light of other jurisdiction goals?
Administrative	<ul style="list-style-type: none"> ▪ Can the jurisdiction implement the action? ▪ Is there someone to coordinate and lead the effort? ▪ Is there sufficient funding, staff, and technical support available? ▪ Are there ongoing administrative requirements that need to be met?
Political	<ul style="list-style-type: none"> ▪ Is the action politically acceptable? ▪ Is there public support both to implement and to maintain the project?
Legal	<ul style="list-style-type: none"> ▪ Is the jurisdiction authorized to implement the proposed action? ▪ Are there legal side effects? Could the activity be construed as a taking? ▪ Will the jurisdiction be liable for action or lack of action? ▪ Will the activity be challenged?
Economic	<ul style="list-style-type: none"> ▪ What are the costs and benefits of this action? ▪ Do the benefits exceed the costs? ▪ Are initial, maintenance, and administrative costs considered? ▪ Has funding been secured for the proposed action? If not, what are the potential funding sources (public, nonprofit, and private)? ▪ How will this action affect the fiscal capability of the jurisdiction? ▪ What burden will this action place on the tax base or local economy? ▪ What are the budget and revenue effects of this activity? ▪ Does the action contribute to other jurisdiction goals? ▪ What benefits will the action provide?
Environmental	<ul style="list-style-type: none"> ▪ How will the action affect the environment? ▪ Will the action need environmental regulatory approvals? ▪ Will it meet local and State regulatory requirements? ▪ Are endangered or threatened species likely to be affected?



HAZARD MITIGATION BENEFIT-COST REVIEW

FEMA requires local governments to analyze the benefits and costs of a range of mitigation actions that can reduce the effects of each hazard within their communities. Benefit-cost analysis is used in hazard mitigation to show if the benefits to life and property protected through mitigation efforts exceed the cost of the mitigation activity. Conducting benefit-cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now to avoid disaster-related damages later. The analysis is based on calculating the frequency and severity of a hazard, avoiding future damage, and risk.

A hazard mitigation plan must demonstrate that a process was employed which emphasized a review of benefits and costs when prioritizing the mitigation actions. The benefit-cost review must be comprehensive to the extent that it can evaluate the monetary as well as the nonmonetary benefits and costs associated with each action. The benefit-cost review should at least consider the following questions:

- How many people will benefit from the action?
- How large an area is impacted?
- How critical are the facilities that benefit from the action (e.g., which is more beneficial to protect, the fire station or the administrative building)?
- Environmentally, does it make sense to do this project for the overall community?

These questions were considered to help determine the appropriateness of mitigation actions. Those actions that did not have adequate benefits were excluded from the list of mitigation actions.

5.3 HAZARD MITIGATION ACTIONS

PREVIOUS HAZARD MITIGATION ACTIONS

The 2015 LHMP identified 27 mitigation actions. The Planning Team has reviewed the mitigation actions and documented their status.

The Planning Team considered the following in their review:

- Is the mitigation action still relevant?
- What steps/actions are you aware of that have been taken to address the specific mitigation action?

Table 5-3, *Status of Previous Plan Mitigation Actions*, provides a consolidated summary of the status of each action.



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TABLE 5-3: STATUS OF PREVIOUS PLAN HAZARD MITIGATION ACTIONS

Mitigation Reference Number	2015 Mitigation Action	Completed	Removed; No Longer Necessary or Feasible	Carried Into Plan Update	Status
Multi-Hazard #1	Integrate the goals and action items from the City of Glendora Natural Hazard Mitigation Plan into existing regulatory documents and programs, where appropriate.			X	The City implemented this mitigation action. As an ongoing opportunity, this mitigation action will be revised and carried into the plan update.
Multi-Hazard #2	Identify and pursue funding opportunities to develop and implement local and city mitigation activities.			X	This mitigation action is on-going.
Multi-Hazard #4	Identify, improve, and sustain collaborative programs focusing on the real estate and insurance industries, public and private sector organizations, and individuals to avoid activity that increases risk to natural hazards.		X		The City continues to conduct education and outreach regarding natural hazards. New mitigation actions related to education and outreach included in the plan update will supersede this mitigation action.
Multi-Hazard #5	Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration in City of Glendora.			X	The City continues to do this and the mitigation action is on-going.
Multi-Hazard #6	Develop inventories of at-risk critical facilities (buildings and infrastructure).			X	The Glendora Public Works Department has a Facility Condition Assessment that is continually updated/considered to identify at-risk critical facilities. This mitigation action will be revised and carried into the plan update.
Multi-Hazard #7	Strengthen emergency services preparedness and response by linking emergency services with natural hazard mitigation programs, and enhancing public education on a regional scale.			X	The City and partner agencies continue to conduct education and outreach regarding preparedness and response. For instance, the City offers Community Emergency Response Team (CERT) basic training to residents and has hosted a Prepare Fair. This mitigation action will be carried into the plan update.
Multi-Hazard #8	Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools.			X	The City and partner agencies continue to conduct education and outreach regarding hazard mitigation. For instance, the City hosts a Prepare Fair. This mitigation action will be carried into the plan update.
Multi-Hazard #9	Review ordinances that protect natural systems and resources to mitigate for natural hazards for possible enhancements.	X			The City implemented this mitigation action. The City reviews qualifying development projects for compliance with existing ordinances, including the Model Water Efficient Landscaping Ordinance and Storm Water and Runoff Pollution Control Ordinance. Applicable projects are also subject to the California Environmental Quality Act (CEQA), which may include mitigation measures related to natural hazards.
Earthquake #1	Integrate new earthquake hazard mapping data for the City of Glendora and improve technical analysis of earthquake hazards.	X			The City implemented this mitigation action through this plan update and the General Plan Safety Element update.
Earthquake #2	Review, update, and incorporate the Evacuation Routes into appropriate planning documents.	X			The City implemented this mitigation action through the General Plan Safety Element update.
Earthquake #3	Identify funding sources for structural and nonstructural retrofitting of City-owned structures that are identified as seismically vulnerable.			X	The City continues to identify funding sources. This mitigation action will be revised and carried into the plan update.
Earthquake #4	Encourage purchase of earthquake hazard insurance.		X		The City continues to conduct education and outreach regarding seismic hazards. New mitigation actions related to education and outreach included in the plan update will supersede this mitigation action.
Earthquake #5	Encourage seismic strength evaluations of critical facilities in the City of Glendora to identify vulnerabilities for mitigation of schools and universities, public infrastructure, and critical facilities to meet current seismic standards.	X			Public Works conducts a Facility Condition Assessment that is ongoing to continue to identify at-risk critical facilities. A revised mitigation action related to critical facilities evacuations is included in the plan update and will supersede this mitigation action.
Earthquake #6	Encourage reduction of nonstructural and structural earthquake hazards in homes, schools, businesses, and government offices.			X	The City and partner agencies continue to conduct education and outreach related to seismic hazards. A revised mitigation action related to critical facilities evacuations is included in the plan update and will supersede this mitigation action.



Mitigation Reference Number	2015 Mitigation Action	Completed	Removed; No Longer Necessary or Feasible	Carried Into Plan Update	Status
Flood #4	Develop a storm drain clean out program for areas prone to urban flooding.	X			LACFCD cleans and maintains a majority of the City's storm drain system. LACFCD inspects and/or cleans all catch basins annually.
Wildfire #1	Educate agency personnel on federal cost-share and grant programs, Fire Protection Agreements and other related federal programs so the full array of assistance available to local agencies is understood.		X		The City continues to educate staff on grant programs and cooperative agreements. New mitigation actions related to wildfire support programs such as funding and mutual aid included in the plan update will supersede this mitigation action.
Wildfire #2	Encourage development and dissemination of maps relating to the fire hazard to help educate and assist builders and homeowners in being engaged in wildfire mitigation activities and to help guide emergency services during response.	X			The California Department of Forestry and Fire Protection (CAL FIRE) prepares and periodically updates wildfire hazard severity maps. The City reviews development projects within designated fire hazard severity zones and continues to conduct education and outreach regarding wildfire hazards. A revised mitigation action related to wildfire hazards education and outreach is included in the plan update and will supersede this mitigation action.
Wildfire #3	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners and businesses to natural hazards.			X	The City and partner agencies continue to conduct education and outreach related to wildfire hazards. This mitigation action will be carried into the plan update.
Wildfire #4	Increase communication, coordination and collaboration between wildland/urban interface property owners, local and county planners and fire prevention crews and officials to address risks, existing mitigation measures and federal assistance programs.			X	The City reviews development projects within designated fire hazard severity zones and continues to conduct education and outreach regarding wildfire hazards. New development is required to comply with existing regulations to reduce wildfire risk, including the Fire Code. This mitigation action will be carried into the plan update.
Wildfire #5	Encourage implementation of wildfire mitigation activities.			X	Mechanical thinning is regularly conducted as required by law in areas of the City's responsibility. This mitigation action will be revised and carried into the plan update.
Wildfire #6	Clear trimmings, trees, brush and other debris completely from sites when performing routine maintenance and landscaping to reduce fire risk.			X	These efforts are ongoing with the City's landscaping and tree maintenance contracts. This mitigation action will be revised and carried into the plan update.
Windstorm #1	Public Awareness Campaign: To provide public education materials to City of Glendora residents and all School District staff, parents and age-appropriate students with mitigation materials pertaining to the protection of life and property before, during, and after a windstorm.			X	The City and partner agencies continue to conduct education and outreach related to severe weather, including Santa Ana winds. This mitigation action will be revised and carried into the plan update.
Windstorm #2	Create local City and utility awareness of tree pruning and Fire Code Sections relevant to wind-resistant utility operations.		X		This action is not necessary; tree trimming related to the electric grid and infrastructure is handled by the service provider, Southern California Edison.
Windstorm #3	Encourage Critical City Facilities to purchase and/or test backup power facilities for use during a power failure. Create an equipment testing log to ensure backup power equipment is in working service.			X	The Glendora Police Department tests backup command post. The Glendora Public Works Department tests backup generator for radio communications. This mitigation action will be revised and carried into the plan update.
Landslide #2	Public awareness regarding hillside ground cover and erosion control.			X	The City and partner agencies continue to conduct education and outreach related to seismic and geologic hazards. This mitigation action will be revised and carried into the plan update.
Dam Failure #1	Produce Dam Inundation Maps	X			Inundation maps approved by the Division of Safety of Dams have been prepared for all dams with the potential to inundate portions of Glendora.
Dam Failure #2	Review Emergency Action Plans (EAP) as they relate to the warning, evacuation, and post-flood actions.			X	The Glendora Police Department reviewed Los Angeles County's EAP's for Big Dalton and Puddingstone. This mitigation action will be revised and carried into the plan update.



2025 HAZARD MITIGATION ACTIONS

The hazard mitigation actions identified below list those activities that the City will use to reduce their risk of potential hazards. These mitigation actions were reviewed and updated in the context of the updated hazards and vulnerability assessment, community outreach, discussions and collaboration with the LHMP Planning Team, and review and status of the previous plan's mitigation actions. All the mitigation actions that were discussed have been included within the plan. Some of these actions may be eligible for funding through federal and State grant programs and other funding sources as made available to the City. The mitigation actions are intended to address the comprehensive range of identified hazards and associated risks and vulnerabilities. Some actions may address risk reduction from multiple hazards.

The process used to update the hazard mitigation actions for this plan included the following:

- Review of the vulnerability and risk assessment presented in Section 4.0;
- Review of the capabilities assessment presented in Subsection 5.1;
- Review of the City's previously approved hazard mitigation plan mitigation actions;
- Review of the results of the community survey, and feedback received as part of the community outreach and focus outreach meetings; and
- The Planning Team's discussion of concerns/issues that need to be addressed to reduce hazards to critical facilities and the community.

Table 5-4, Hazard Mitigation Actions, identifies the mitigation action, hazard(s) it addresses, City Department and/or partner agency/stakeholder responsible for implementation, priority, and the timeline for implementation. The timeline for implementation is defined as follows:

- Ongoing: 1-2 years and ongoing thereafter
- Short-Term: 1 to 2 years
- Medium-Term: 3 years
- Long-Term: 4 to 5 years



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TABLE 5-4: HAZARD MITIGATION ACTIONS

Mitigation Reference Number	Mitigation Action	Hazard(s) Identified	Responsible Departments	Potential Funding Sources	Priority	Timeline
1	The City will incorporate the approved Local Hazard Mitigation Plan into its General Plan Safety Element, including any future updates, to ensure compliance with AB 2140, making the City eligible for additional funding under the California Disaster Assistance Act (CDAA).	Multiple Hazards	Community Development	General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC)	High	Short-Term
2	Identify and pursue funding opportunities to develop and implement local and city mitigation activities.	Multiple Hazards	Community Development	Staff time/General Fund	Medium to High	Long-Term
3	Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration and to enhance outreach and education programs aimed at protection of life and property before, during, and after an event.	Multiple Hazards	Public Information Officer; Public Works; Police; Community Development	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Hazard Mitigation Grant Program (HMGP)	Low	Long-Term
4	Continue to assess and inventory at-risk critical facilities (buildings and infrastructure) through the Facility Condition Assessment. If vulnerabilities or deficiencies are identified, document a retrofit plan, schedule, and funding source.	Multiple Hazards	Public Works	Staff time/General Fund	Low	Ongoing
5	Strengthen emergency services preparedness and response by linking emergency services with natural hazard mitigation programs and enhancing public education on a regional scale.	Multiple Hazards	Community Development; Police; Public Works	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC)	High	Long-Term
6	Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools.	Multiple Hazards	Community Development; Police; Public Works	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC)	High	Long-Term
7	Conduct a feasibility assessment of installation of backup energy systems (solar, battery, fuel cell, natural gas generator) at key critical facilities within the City. Maintain an equipment testing log to ensure backup power equipment is in working service.	Multiple Hazards	Public Works	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC)	Low	Medium-Term
8	At all City-sponsored communitywide events, advertise and inform residents/business owners of the City's alert notification system and assist people in registering for notifications, if requested.	Multiple Hazards	Police	Staff Time/General Fund	High	Ongoing
9	Partner with the County, neighboring cities, and local nonprofits to identify potential housing/shelter opportunities, including funding resources, for vulnerable populations in the event of a hazard resulting in displacement.	Multiple Hazards	Police, Community Development	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Hazard Mitigation Grant Program (HMGP)	Medium to High	Medium- to Long-Term
10	Partner with local nonprofits to identify and implement targeted mitigation actions to support vulnerable or underserved populations.	Multiple Hazards	Police, Community Development	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); LUCI Extreme Heat and Community Resilience Program	High	Ongoing
11	Partner with the local community and other organizations, such as L.A. CADA, the American Red Cross, religious organizations, nonprofits, and partner agencies to work directly with vulnerable populations (elderly, homeless, low income, special needs, etc.) to	Multiple Hazards	Police, Public Works, Community Development	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC);	High	Ongoing



Mitigation Reference Number	Mitigation Action	Hazard(s) Identified	Responsible Departments	Potential Funding Sources	Priority	Timeline
	identify opportunities to mitigate impacts in the event of a natural disaster, including the identification of available resources and how to access and implement those resources.			LUCI Extreme Heat and Community Resilience Program		
12	Consider developing pre-established contracts/ memorandums of understanding (MOUs) with outside entities to ensure availability of equipment to assist with hazard mitigation.	Multiple Hazards	Public Works, Community Development	Staff Time/General Fund; LUCI Regional Resilience Planning and Implementation Grant Program	Medium	Medium-Term
13	Avoid locating new critical facilities within or immediately adjacent to mapped hazard zones, where feasible. If no feasible alternative exists, integrate best-practices into the development to reduce vulnerability and risk to the maximum extent.	Multiple Hazards	Public Works, Community Development	Staff Time/General Fund	Medium	Ongoing
14	Review Emergency Action Plans (EAP) as they relate to the warning, evacuation, and post-flood actions.	Dam/Reservoir Failure	Police	Staff time/General Fund	Medium	Ongoing
15	Continue to monitor and review the results of the annual dam inspections conducted by the Division of Safety of Dams. If the inspections determine physical improvements are required, coordinate with the owners to document a plan to implement the necessary improvements, including a schedule and provide assistance to identify opportunities for funding.	Dam/Reservoir Failure	Public Works, Community Development	Staff time/General Fund	Medium	Ongoing
16	Proactively monitor and communicate drought conditions or water conservation warnings issued by State and Federal agencies.	Drought	Public Works (Water Division)	Staff time/General Fund	High	Ongoing
17	Educate residents and business owners on water conservation, the availability of financial incentives and programs to conserve water and encourage implementation of water-saving measures.	Drought	Public Works (Water Division)	Staff time/General Fund	Medium	Ongoing
18	Continue to offer information and services that reduce water usage, are cost-effective, and provide cost savings for both the property owner and tenants. Water conservation resources can include, but are not limited to, low-cost or free water audits, rebate programs, and pilot programs.	Drought	Public Works (Water Division)	Staff time/General Fund; California DWR Watershed Resilience Program	Medium	Ongoing
19	Encourage property owners to improve drainage on their properties through low-impact development features.	Flood	Public Works	Staff Time/General Fund	Medium	Ongoing
20	In coordination with LACFCD, maintain flood control facilities. Develop and implement a storm drain clean out program for areas prone to urban flooding.	Flood	Public Works, in coordination with LACFCD	Staff Time/General Fund	Medium	Medium-Term
21	Work with owners of critical facilities to ensure facilities are evaluated for seismic safety. If any critical facilities are determined to be seismically vulnerable, work with the owner to identify a plan for implementation of seismic retrofit, including schedule and assist to identify potential funding sources.	Seismic and Geologic Hazards	Community Development; Public Works	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Pre-disaster Mitigation Program (PDM)	Medium	Long-Term
22	Coordinate with property owners and other community partners to identify funding and in-kind resources and develop a small project-based seismic retrofit program to educate and directly assist property owners and renters with simple earthquake mitigation activities to reduce the potential for injury and damage and the strain on City resources during an event. Examples include anchoring bookcases, dressers, and file cabinets, installing latches on drawers and cabinet doors, securing desktop computers and appliances, using flexible	Seismic and Geologic Hazards	Community Development; Public Works	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Pre-disaster Mitigation Program (PDM)	High	Short-Term



Mitigation Reference Number	Mitigation Action	Hazard(s) Identified	Responsible Departments	Potential Funding Sources	Priority	Timeline
	connections on gas water lines, and securely mounting framed pictures and mirrors.					
23	Identify and seek funding opportunities for low- to moderate-income homeowners to identify the need for and to implement seismic retrofit projects.	Seismic and Geologic Hazards	Community Development; Public Works	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Pre-disaster Mitigation Program (PDM)	High	Short- to Medium Term
24	Monitor conditions during a high wind event to ensure fallen tree limbs or debris do not block roadways or the storm drain system.	Severe Weather	Public Works	Staff Time/General Fund	High	Ongoing
25	Coordinate with property owners and other community partners to identify funding and in-kind resources for low- to moderate-income homeowners to implement small project-based structural improvements to mitigate potential damage associated with heavy rains or Santa Ana wind events. Examples include roof repair/ replacement, rain gutter repair/cleanout, tree trimming/ removal, downspouts, rain barrels, or other drainage improvements.	Severe Weather	Community Development; Public Works	Staff Time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Pre-disaster Mitigation Program (PDM); LUCI Adaptation Planning Grant Program	High	Short- to Medium- Term
26	Monitor trees, limbs, and other vegetation near power lines, and promptly inform Southern California Edison of the need for any tree trimming.	Severe Weather	Public Works	Staff Time/General Fund	High	Ongoing
27	Provide education, particularly to vulnerable populations, about the dangers of extreme heat and ways to stay safe when extreme heat events occur. Continue to publicize the locations of cooling centers in the community. Explore opportunities to further support vulnerable populations and underserved communities during extreme heat events.	Severe Weather	Community Development	Staff Time/General Fund	High	Ongoing
28	Partner with agency partners, including the electric utility provider, to enhance outreach and education programs designed to increase awareness about fires, identify potential vulnerabilities, and implement fire mitigation techniques. Develop communication methods and approaches that include underserved or vulnerable populations, who may be uniquely impacted by wildfire risk.	Wildfire	Community Development, in coordination with LACoFD	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC)	High	Long-Term
29	Reduce wildfire risks by enforcing fire-related requirements pertaining to evacuation routes, minimum road widths, clearances around structures, and peak load water supply for fire response.	Wildfire	Community Development, Public Works, in coordination with LACoFD	Staff time/General Fund	High	Ongoing
30	Perform mechanical thinning, weed abatement, and other wildfire mitigation activities, both independently and in coordination with LACoFD.	Wildfire	Public Works, in coordination with LACoFD	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC)	High	Ongoing
31	Clear trimmings, trees, brush and other debris completely from sites when performing routine maintenance and landscaping to reduce fire risk.	Wildfire	Public Works, in coordination with LACoFD	Staff time/General Fund	High	Ongoing
32	Adopt and enforce the most up-to-date California Building Code and California Fire Code, with local amendments as appropriate.	Wildfire	Community Development	Staff time/General Fund	High	Ongoing
33	Coordinate with LACoFD to educate homeowners on opportunities for home hardening and vegetation management to address wildfire risk.	Wildfire	Community Development, in coordination with LACoFD	Staff time/General Fund; FEMA Building Resilient Infrastructure and	High	Long-Term



Mitigation Reference Number	Mitigation Action	Hazard(s) Identified	Responsible Departments	Potential Funding Sources	Priority	Timeline
				Communities (BRIC); Cal OES/CAL FIRE California Wildfire Mitigation Program (CWMP)		
34	Continue to review Wildfire Mitigation Plans prepared by the electric utility provider and coordinate opportunities to implement measures to reduce fire caused by electric infrastructure.	Wildfire	Community Development, Public Works	Staff time/General Fund; FEMA Building Resilient Infrastructure and Communities (BRIC); FEMA Pre-disaster Mitigation Program (PDM)	High	Long-Term
<p>Ongoing: 1-2 years and ongoing thereafter Short-Term: 1 to 2 years Medium-Term: 3 years Long-Term: 4 to 5 years Note: *The Potential Funding Sources column identifies potential grant programs for the City to pursue. No award has been made at this time, and other grant programs may apply.</p>						



Section 6.0 | Plan Maintenance

This section outlines the formal process for maintaining the LHMP as an active and relevant document. It includes a schedule for annual monitoring and evaluation, along with a five-year update cycle, to ensure the City remains eligible for federal and State hazard mitigation funding. Additionally, the section details how the City will integrate public participation into the plan's maintenance and implementation, and how it will incorporate the mitigation actions outlined in the plan into existing planning mechanisms and programs. The plan's format also allows for easy updates when new data becomes available, ensuring it remains current and effective.

6.1 METHOD AND SCHEDULE FOR MAINTAINING AND UPDATING THE PLAN

PURPOSE AND AUTHORITY

Section 201.6.(d)(3) of Title 44 of the Code of Federal Regulations requires that local hazard mitigation plans be reviewed, revised if appropriate, and resubmitted for approval to remain eligible for benefits awarded under the DMA. As described below, monitoring the progress of the mitigation actions will be on-going throughout the five-year period between the adoption of the LHMP and the next update effort. The LHMP Planning Team will meet on an annual basis to monitor the status of the implementation of mitigation actions and develop updates as necessary.

The City intends to update the plan on a five-year cycle from the date of initial plan adoption. It is anticipated that this update process will be initiated 18 months prior to expiration of the existing plan. The cycle may be accelerated to less than five years based on the following triggers:

- A presidential disaster declaration that impacts the City.
- A hazard event that causes loss of life.

Under the direction of the City's Project Management Team, which is comprised of designees from the Police Department and Community Development Department, the LHMP Planning Team (identified in Section 2.0, *Planning Process*) will be responsible for the on-going maintenance and five-year update of this LHMP. The Police Department designee will take the primary lead in the LHMP maintenance by coordinating maintenance of this plan with the Planning Team, including undertaking the formal review process and updating the plan. Key City departments who should have an active role in maintenance and future updates are identified below.



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- Police Department
- Community Development
- Public Works
- Risk Management
- Human Resources

In addition to City staff, the following partner agencies, organization, and stakeholders who were invited to and/or participated on the Planning Team during preparation of the plan should be included in the maintenance and future update activities:

- Azusa Pacific University
- City of Azusa
- City of Covina
- City of San Dimas
- Charter Oak Unified School District
- Citrus College
- Emanate Health
- Foothill Gold Line
- Glendora Unified School District
- Los Angeles County Area D Disaster Management
- Los Angeles County Fire
- Los Angeles County Public Works (Flood)
- Pomona Valley Hospital
- Red Cross
- Southern California Edison
- Southern California Gas Company
- St. Lucy's Priory High School
- U.S. Forest Service



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The composition of the Planning Team may change over time, but key City staff positions, departments, and partner agencies should remain integral to the plan's ongoing implementation and maintenance. Opportunities to expand the Planning Team should also be considered, particularly by including stakeholders who are outside the core team. This should include community partners, service agencies, and organizations that directly engage with the community, with particular focus on underserved and vulnerable populations.

The Project Management Team, led by designees from the Police Department and Community Development Department, will facilitate the Planning Team meetings and assign tasks related to plan updates, presentations, and coordination with other departments, stakeholder groups, or elected officials. This ensures the plan is communicated and integrated across various sectors of the City.

The Planning Team will be responsible for maintaining, updating, and implementing the plan through their respective departments and agencies. Plan implementation and evaluation will be a shared responsibility among all team members, requiring close coordination to ensure that the goals and strategies outlined in the plan are effectively achieved.

ANNUAL PLAN MONITORING AND MAINTENANCE

It will be important to monitor the progress of the mitigation actions throughout the five-year period between adoption and the next required update. At a minimum, designees from the Police Department and Community Development Department, representatives from each City Department, and Planning Team members should meet annually to monitor implementation of the LHMP. However, in the event a significant disaster occurs within Glendora, the Police Department designee, Community Development Department designee, and City Department representatives will convene within 30 days of the disaster to review and update the LHMP as needed. In addition to City staff, partner agencies, organizations, and stakeholders, may be identified for participation, as appropriate.

Designees from the Police Department and Community Development Department will coordinate with responsible City departments and agencies/organizations identified for each mitigation action. These responsible departments and agencies/organizations will monitor and evaluate the progress made on the implementation of mitigation actions and report to the LHMP Planning Team on an annual basis. Working with the LHMP Planning Team, these responsible departments and agencies/organizations will be asked to assess the effectiveness of the mitigation actions and modify the mitigation actions as appropriate. A LHMP Mitigation Action Progress Report worksheet or tracking mechanism will assist departments and agencies/organization responsible for implementing mitigation actions in reporting on the status and assessing the effectiveness of the mitigation actions.



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Information from the departments and agencies/organizations will be used to monitor mitigation actions and inform the annual evaluation of the LHMP. The following questions will be considered as criteria for evaluating the plan's effectiveness:

- Has the nature or magnitude of hazards affecting the City changed?
- Are there new hazards that have the potential to impact the City?
- Do the identified goals and actions address current and expected conditions?
- Have mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the LHMP?
- Can additional local resources be committed to address identified hazards?

As part of the annual meeting, the progress of implementing the mitigation actions will be documented and opportunities to incorporate the actions into other planning documents will be identified. This review will include the following:

- Summary of any hazard events that occurred during the prior year and their impacts on the community.
- Review of successful mitigation initiatives identified in the plan.
- Discussion about why targeted mitigation actions were not completed.
- Reevaluation of the mitigation actions to determine if the timeline for identified projects needs to be amended (such as changing a long-term project to a short-term project due to funding availability).
- Recommendations for new mitigation actions.
- Changes in, or potential for, new funding options/grant opportunities.
- Integration of new data and maps that can be used to inform the plan.
- Evaluation of any other planning programs or initiatives within the City that involve hazard mitigation.

The purpose of the annual evaluation will be to ensure consideration and implementation of the LHMP and document progress to inform future LHMP updates. Future updates to the LHMP will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. Issues that arise during the annual LHMP evaluation that require changes to the risk assessment, mitigation strategy, and other components of the plan, will be incorporated into the next update of the LHMP in 2030. The questions identified above would remain valid during the preparation of the 2030 plan update.



FIVE-YEAR UPDATE

The intent of the five-year update process will be to add new planning process methods, community profile data, hazard data and events, vulnerability analyses, mitigation actions, and goals to the adopted plan so that the LHMP will always be current and up to date. Based on the needs identified by the Planning Team and incorporating information from the annual monitoring and maintenance activities, the update will, at a minimum, include the elements below:

- The update process will be convened 18 months prior to expiration of the existing plan through a Planning Team identified by the City's Project Management Team.
- The hazard risk assessment will be reviewed and updated using the best available information and technologies.
- Based on new/updated information provided by facility owners and available funding, the evaluation of critical facilities and mapping will be updated and improved.
- The mitigation actions will be reviewed and revised to account for any actions completed, deferred, or changed to account for changes in the risk assessment or new City policies identified under other planning mechanisms, as appropriate (such as the City's General Plan).
- The draft update will be sent to appropriate agencies for comment.
- The public will be given an opportunity to comment prior to adoption.
- The City Council will adopt the updated LHMP.

6.2 ADOPTION

The LHMP update will be presented to both the Glendora Planning Commission and the City Council prior to transmittal to Cal OES and FEMA for review. The Glendora City Council is responsible for adopting the LHMP. This formal adoption should take place every five years. Once the plan has received FEMA Approval Pending Adoption, the City Council will be requested to adopt the plan. Upon adoption, the Project Management Team will transmit the adopted plan and resolution to Cal OES.

6.3 INCORPORATION INTO EXISTING PROGRAMS AND PLANNING MECHANISMS

The effectiveness of the nonregulatory LHMP depends on the implementation of the plan and incorporation of the mitigation action items into City plans, policies, and programs. The City's General Plan is an integral part of this plan. The City, through updating the General Plan Safety Element concurrent with the LHMP, has planned for the impact of hazards. The LHMP process has allowed the City to review the goals and policies contained in the General Plan Safety Element and identified mitigation actions that will further implement these policies. The City views the



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General Plan and the LHMP as complementary planning documents that work together to achieve the goal of risk and vulnerability reduction to Glendora citizens and property. Many of the ongoing recommendations identified in the mitigation strategy further the goals and policies of the General Plan and other adopted plans. Further, as part of the Safety Element update, the City will acknowledge the LHMP and will continue to incorporate it by reference.

The plan includes a range of action items that, if implemented, would reduce loss from hazard events in the City. Together, the mitigation action items in the LHMP provide the framework for activities that the City may choose to implement over the next five years. The City has prioritized the plan's goals and identified actions that will be implemented (resources permitting) through existing plans, policies, and programs. In addition to the General Plan, the City will coordinate the recommendations of the LHMP with other existing plans and programs, which include, but are not limited to:

- Glendora General Plan Updates
- County of Los Angeles All-Hazards Mitigation Plan
- Capital Improvement Program
- Glendora Municipal Code
- California Environmental Quality Act Review

As a guidance document, implementation of the mitigation actions can be accomplished most effectively by integrating the LHMP into ongoing programs, policies, and practices. Additional opportunities to integrate the mitigation actions include the following:

- Integration of mitigation actions in emergency response and post-disaster recovery planning.
- Ongoing education and outreach programs to increase staff, residents, business owners, employees, and overall community awareness of the risks and opportunities to implement mitigation actions associated with natural hazards.
- Continued coordination with the City and other partner agencies and organizations on emergency operations and training opportunities.
- Continued consideration of hazard implications and opportunities to implement hazard mitigation as City plans, policies, procedures, and practices are prepared and updated.

The LHMP Project Managers (Public Safety Management Analyst and Principal Planner) are responsible for overseeing the plan's implementation and maintenance through the City's existing programs. The Public Safety Management Analyst, Principal Planner, or designated appointee will assume lead responsibility for facilitating LHMP implementation and maintenance meetings. Although the Police Department will have primary responsibility for review, coordination, and promotion, plan implementation and evaluation will be a shared responsibility among all



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departments identified as lead departments in the mitigation action plan. The City will reference and incorporate this LHMP into all relevant planning documents, programs, decisions, processes, and regulations. The LHMP will be reviewed and considered by internal City departments, as applicable plans or programs are drafted or updated in the future. Opportunities to integrate the mitigation action plan into other planning mechanisms and documents will be identified as part of the annual plan monitoring and maintenance described in Section 6.1.

2015 NATURAL HAZARD MITIGATION PLAN PAST INCORPORATION EFFORTS

The hazard mitigation actions identified in the City's previously adopted 2015 Natural Hazard Mitigation Plan were incorporated into existing programs and other planning mechanisms when appropriate. Several successful integrations of the 2015 LHMP are outlined in Table 5-3, as previous mitigation actions marked "completed." For example, the City implemented Mitigation Reference Number Earthquake 1 and 2 by including seismic hazard mapping data and evacuation information into the LHMP Update and General Plan Safety Element update, as required by State law. Mitigation Reference Number Dam Failure 1 was implemented by including the new dam inundation maps approved by the Division of Safety of Dams into the LHMP Update and General Plan Safety Element update. Additionally, the City implemented Mitigation Reference Number Multi-Hazard 9 by reviewing applicable development projects for compliance with existing ordinances, including the Model Water Efficient Landscaping Ordinance and Storm Water and Runoff Pollution Control Ordinance.

6.4 CONTINUED PUBLIC INVOLVEMENT

The City recognizes the need for continued public involvement throughout the five-year planning period to keep community members and partner agencies updated on the LHMP, including socially vulnerable populations. The public will continue to be informed on LHMP actions through regular updates to the City websites and through annual progress reports. The adopted LHMP will remain permanently available for review on the City's website, with contact information for interested parties to direct comments and concerns. Additionally, the City will ensure continued public involvement through the promotion of hazard and emergency preparedness education, interagency coordinated outreach efforts, public disaster fairs, drills and other hazard awareness campaigns as included in applicable Mitigation Actions in Section 5.0, Hazard Mitigation Strategy. These mitigation actions include outreach and communication methods designed to appeal to the entire community, including targeted outreach to socially vulnerable populations. All public feedback will be reviewed and considered for incorporation (if deemed appropriate) into the next LHMP update. Additionally, coordination and implementation of individual mitigation actions will involve direct coordination and interaction with the public, such as those involving targeted support to vulnerable or underserved populations, programs to assist property owners and renters to implement risk reduction improvements, and working with Homeowners Associations, property managers, and property owners. Implementation of these mitigation actions will provide additional opportunities for continued public involvement and assist in determining how best to implement



mitigation actions, assess the effectiveness of the mitigation actions, and identify additional opportunities for mitigation actions to be considered in the next update. Upon initiation of the LHMP update, the Planning Team will review feedback and outreach efforts, which will be analyzed and incorporated into a new public involvement strategy based on the needs and capabilities of the City at the time of the update. At a minimum, this strategy will include the use of the City website, email distribution lists, and social media, as well as coordination with partner agencies and organizations, and will include specific outreach to vulnerable populations.

6.5 POINT OF CONTACT

Primary point of contact for the LHMP:

Julie Linger, P.E., T.E.
Business Services Manager
City of Glendora
150 S. Glendora Avenue
Glendora, CA 91741
(626) 852-4880
JLinger@cityofglendora.gov



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Glendora Local Hazard Mitigation Plan

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Glendora Local Hazard Mitigation Plan

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APPENDIX A
City Adoption Resolution

PLACEHOLDER FOR RESOLUTION

APPENDIX B

Planning Process Documentation

[REDACTED]

From: Linger, Julie <JLinger@cityofglendora.org>
Sent: Monday, May 15, 2023 9:05 AM
To: [REDACTED]

Cc: [REDACTED]
Subject: [REDACTED]

Good Morning,

The City of Glendora is initiating preparation of a Local Hazard Mitigation Plan (LHMP). Mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. It is the City's intent to obtain a FEMA-approved LHMP.

As part of the planning process, we are assembling a team of partners to participate on the planning team. The Planning Team will be the core group responsible for making decisions, guiding the planning process, and agreeing upon the final contents of the plan.

We would like to invite you to be part of the Planning Team. There will be four planning team meetings held the fourth Wednesday of the month, beginning June 28, 2023, at the Glendora Police Department (150 S. Glendora Avenue). The meetings will be for two hours, from 10:00 a.m. to 12:00 p.m. The remaining Planning Team meetings are tentatively scheduled for July 26, August 23, and October 25. We understand the importance of your time and the meetings will be structured to maximize results.

Please let me know if you (or a designee) can participate on the Planning Team. We appreciate your time and commitment. Your involvement will ensure a comprehensive and robust plan that meets FEMA's requirement of incorporating a whole community approach in the development process.

For planning purposes, please provide a response regarding your participation by May 26, 2023. If you have any questions regarding development of the LHMP and your involvement, please contact me.

Thank you,
Julie

Julie Linger | Public Safety Management Analyst
Glendora Police Department | City of Glendora
150 S. Glendora Ave. | Glendora, CA 91741
jlinger@glendorapd.org

[REDACTED]

[REDACTED]

From: [REDACTED]

Sent: Tuesday, June 27, 2023 7:31 AM

To: 'Linger, Julie'; 'HFriedel@cityofglendora.org'; [REDACTED]

Subject: Glendora LHMP - Planning Team Meeting #1 - June 28

Attachments: Glendora LHMP Update_Planning Team Mtg #1_Agenda.pdf

Good morning Planning Team,

Thank you again for participating on the Planning Team for the City of Glendora's update to their Local Hazard Mitigation Plan. We are looking forward to seeing you tomorrow and/or at our future meetings. Attached is the Agenda for the first meeting. Tomorrow will serve partly as an introduction to the team and the process, as well as starting to identify key information and input for the plan update. There is no preparation required; we ask that you bring your knowledge and understanding of the community and specific expertise and be prepared to discuss and share information. It is not necessary, but if you would like to review the City's 2015 plan prior to the meeting, it can be downloaded at the dropbox link below. Since we will be updating the plan, we will revisit the 2015 document as part of our process.

<https://www.dropbox.com/t/EkYsykPDxLJ2oOqF>

If you have any questions prior to the meeting, please reach out to Julie Linger or myself.

Thank you,
[REDACTED]

[REDACTED]



**GLENDORA
LOCAL HAZARD MITIGATION PLAN UPDATE**

HAZARD MITIGATION PLANNING TEAM MEETING #1

Wednesday, June 28, 2023

10:00 am – 12:00 pm

AGENDA

1. Introductions
2. Roles and Responsibilities
 - a. Data needs
 - b. Planning Team meetings
3. Project and LHMP Goals
4. Purpose and Requirements of the LHMP
 - a. What is Hazard Mitigation and a Hazard Mitigation Plan?
 - b. Plan requirements
 - c. LHMP process
 - d. LHMP process – risk assessment
5. Confirm Hazards and Identify Community Assets
 - a. 2015 LHMP hazards
 - b. Identify community assets
6. Next Steps
 - a. Planning Team
 - b. Plan development
7. Questions/Additional Discussion

Planning Team Meetings:

- July 26, 2023; 10:00 am – 12:00 pm
- August 23, 2023; 10:00 am – 12:00 pm
- October 25, 2023; 10:00 am – 12:00 pm

Local Hazard Mitigation Plan

Planning Team Meeting #1

June 28, 2023



AGENDA

- Introductions
- Roles and responsibilities
- Project and LHMP goals
- Purpose and requirements of the LHMP
- LHMP Process
- Confirm hazards and identify community assets
- Next steps

ROLES AND RESPONSIBILITIES

- Our Job
 - Facilitate the process
 - Provide LHMP technical expertise
 - Maintain schedule
 - Do the heavy work
 - Ensure FEMA-compliant plan
- What We Ask of You
 - Participate
 - Assist with outreach
 - Provide agency-specific information, local insight and expertise
 - Meet internal deadlines
 - Ensure plan is feasible and meets needs

ROLES AND RESPONSIBILITIES

- Data Needs
 - Plans/studies
 - Policies/programs
 - Technical data
 - Intrinsic/historic knowledge
 - Photos
 - Asset inventory for loss estimates
 - Any additional relevant information



ROLES AND RESPONSIBILITIES

- Planning Team Meetings
 - Meeting #1 – June 28: process; confirm hazards and identify community assets
 - Meeting #2 – July 26: hazard profiles & mapping; risk assessment
 - Meeting #3 – August 23: capabilities assessment; mitigation goals and actions
 - Meeting #4 – October 25: refine mitigation actions and prioritization

PROJECT AND LHMP GOALS

- Update plan with current and relevant information
- Achieve certification by FEMA for mitigation funding
- Establish framework to review and update plan
- Useful and implementable
- Others?



Disaster Mitigation Act (DMA) of 2000 requires states and local governments prepare a hazard mitigation plan as a precondition for receiving FEMA mitigation project grants.

PROJECT AND LHMP GOALS

- 2015 LHMP Mitigation Goals
 - Protect life and property
 - Enhance public awareness
 - Preserve natural systems
 - Encourage partnerships and implementation
 - Strengthen emergency services
- Any revisions/modifications? Other goals?



PURPOSE AND REQUIREMENTS OF THE LHMP

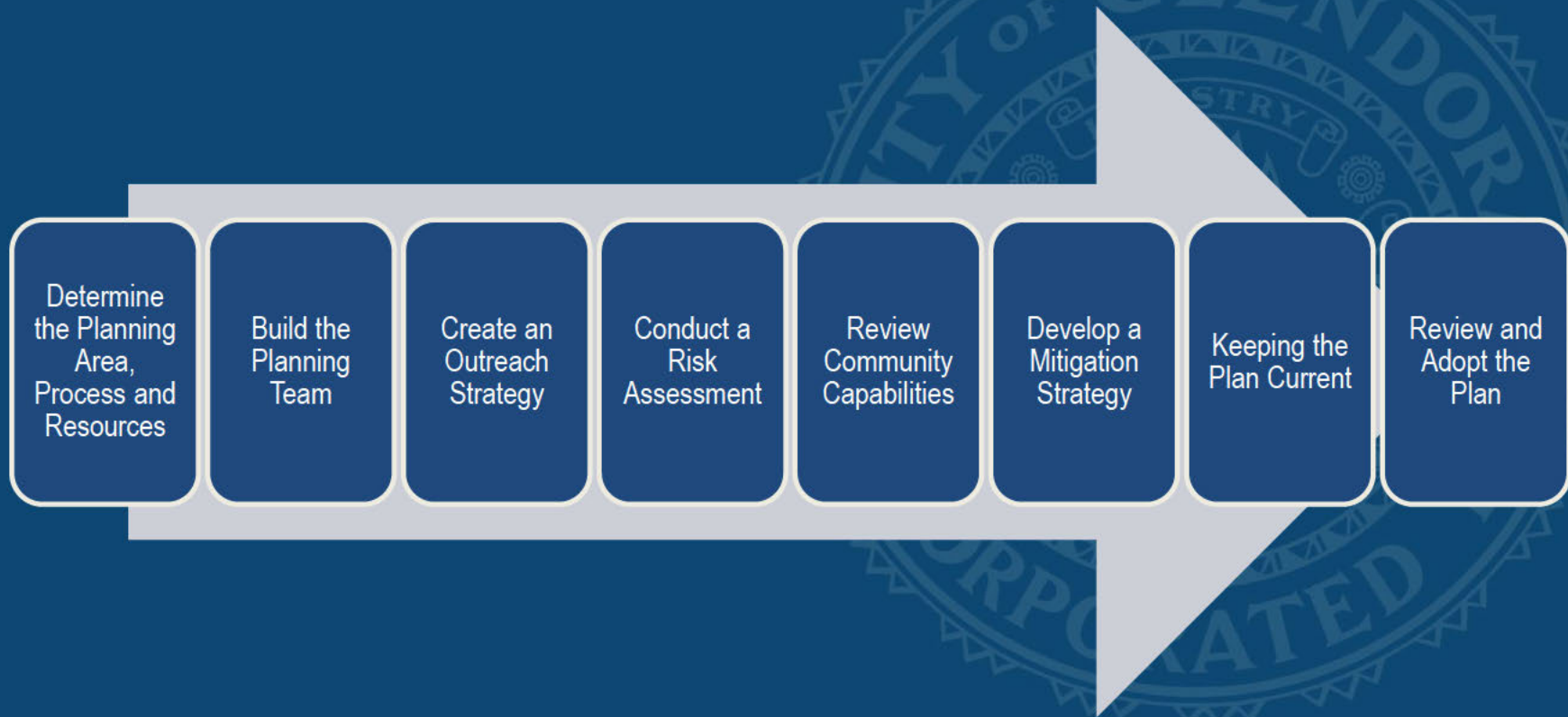
What is Hazard Mitigation?

- Sustained actions taken to reduce or eliminate long-term risk to life and property from hazards

PURPOSE AND REQUIREMENTS OF THE LHMP

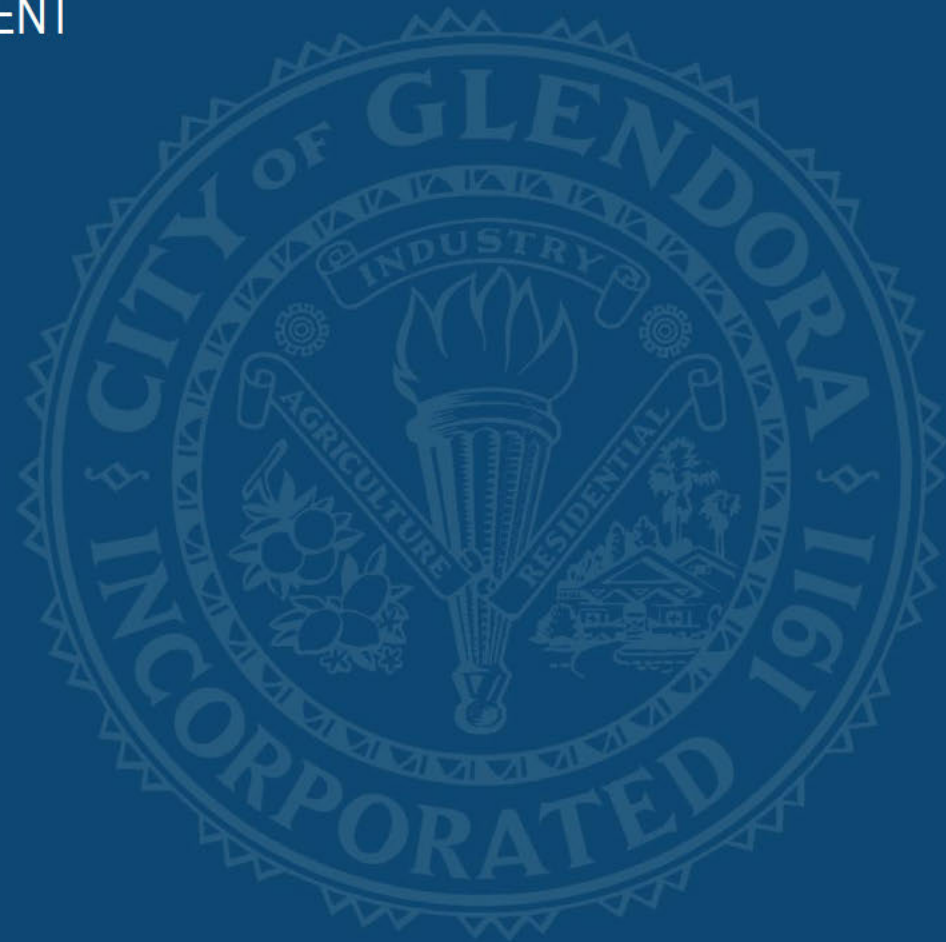
- Provide and document the planning process, including opportunities for stakeholder and public involvement
- Review and incorporate new plans, studies, reports and technical information; address changes in development and priorities
- Validate/update hazards and hazard profiles since last plan
- Validate/update community assets and capabilities
- Update risk assessment and mitigation strategy
- Identify how the plan will be monitored, evaluated, and updated within a five-year cycle

LHMP PROCESS



LHMP PROCESS – RISK ASSESSMENT

Identify & Describe
Hazards



CONFIRM HAZARDS

- 2015 LHMP Hazards
 - Earthquakes
 - Flood
 - Wildfire
 - Landslide
 - Dam Failure
 - Windstorm

Climate change and risks will need to be integrated into the update

IDENTIFY COMMUNITY ASSETS

- Assets are anything important to the character and function of a community
 - People, including underserved communities and socially vulnerable populations
 - Structures, including new and existing buildings
 - Community lifelines and other critical facilities
 - Natural, historic and cultural resources
 - Economy and other activities that have value to the community

IDENTIFY COMMUNITY ASSETS

For each community asset category:

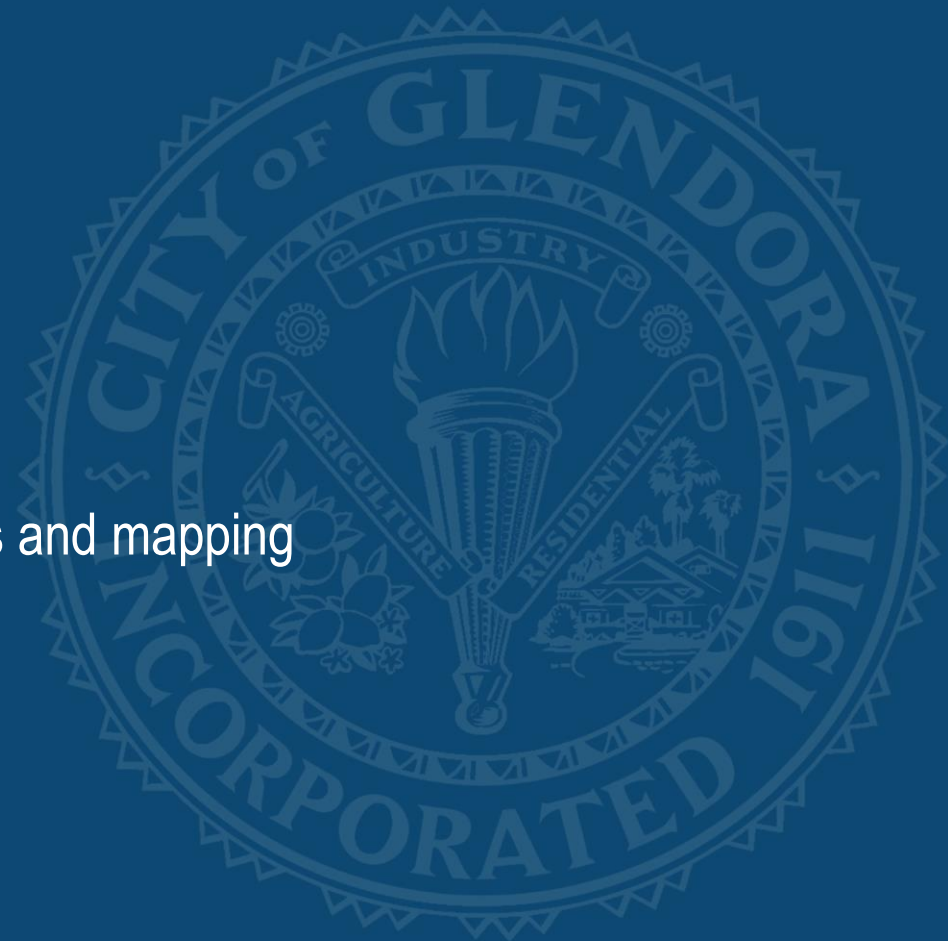
- Identify **2-3 assets at risk to hazards**
- Write 1 asset on each post-it
- Place post-its on sheet by community asset category

NEXT STEPS

- Planning Team
 - Provide any information or resources to Julie Linger by July 14
 - Plans/studies
 - Policies/programs
 - Technical data
 - Intrinsic/historic knowledge
 - Photos
 - Assets
 - Attend Meeting #2 – July 26, 2023

NEXT STEPS

- Plan Development
 - Confirm LHMP template
 - Update community profile
 - Update/prepare hazard profiles and mapping
 - Confirm outreach strategy



Questions/Additional Discussion?



Avalanche	Flood	Sea level rise
Climate change	Geological hazards	Seismic hazards
Coastal erosion	Hailstorm	Severe winter storm
Coastal storm	Hazardous materials	Tornado
Dam/reservoir failure	Human-caused hazards	Tsunami
Disease/pest management	Hurricane	Volcano
Drought	Land subsidence	Wildfire
Earthquake fault rupture	Landslide and mudflow	Wind
Expansive soils	Lightning	Windstorm
Extreme heat	Liquefaction	

Glendora Local Hazard Mitigation Plan Planning Team Meeting #1 June 28, 2023

Last and First Name	Title	Organization/Department	E-Mail Address	Phone Number	Initials
Anderson, Erik	Assistant Planner	De Novo Planning Group	[REDACTED]		[REDACTED]
Barker, Starla	Principal Planner	De Novo Planning Group	[REDACTED]		[REDACTED]
Clark, Jessica	<i>Business Services Mgr.</i>	City of Glendora, Public Works	[REDACTED]		[REDACTED]
Chan, Ryan	Disaster Program Manager	Red Cross	[REDACTED]		[REDACTED]
Diaz, George	Corporate Director of Safety and Security	Emanate Health	[REDACTED]		[REDACTED]
Egan, Matt	Police Chief	City of Glendora, Police Department	[REDACTED]		[REDACTED]
Friedel, Hans	Principal Planner	City of Glendora, Planning Division	[REDACTED]		[REDACTED]
Fry, Tamra	Safety/Risk Compliance Officer	Glendora Unified School District	[REDACTED]		[REDACTED]
Inman, Mike	Assistant Fire Chief	Los Angeles County Fire	[REDACTED]		[REDACTED]

Glendora Local Hazard Mitigation Plan Planning Team Meeting #1 June 28, 2023

Last and First Name	Title	Organization/Department	E-Mail Address	Phone Number	Initials
Lind, Bob	Director of Maintenance and Operations	Charter Oak Unified School District			
Linger, Julie	Public Safety Management Analyst	City of Glendora, Police Department			
Livas, Anissa	Senior Administrative Analyst	City of San Dimas			
Macias, Ben	Director of Campus Safety	Citrus College			
O'Shields	Public Affairs Mgr.	Southern California Gas Company			
Pankratz, Dain	Safety Manager	Foothill Gold Line			
Randazzo, Mike	Police Captain	City of Glendora, Police Department			
Ricci, Marie	Administrative Services Director	City of Glendora, Risk Management			
Rodriguez, Nahomi	Amen Corps with	Red Cross			

Glendora

Local Hazard Mitigation Plan

Planning Team Meeting #1

June 28, 2023

Last and First Name	Title	Organization/Department	E-Mail Address	Phone Number	Initials
Sharma, Angela	Assistant Director, Environment of Care and Emergency Management	Emanate Health			
Stabio, Chris	Police Captain	City of Glendora, Police Department			
Storbakken, Steven	<i>Dir. EM</i>	Pomona Valley Hospital			
Watson, Adriana	Community Services Liaison	Los Angeles County Fire			
Wendling, Rita	<i>Rita Wendling</i> Interim Assistant Director	City of Glendora, Human Resources			
Wu, Jennifer	Emergency Manager	City of Azusa			
<i>Robinson, Noble</i>	<i>LACo FD Battalion Chief</i>	<i>Los Angeles County Fire Dept</i>			

Local Hazard Mitigation Plan

Planning Team Meeting #2

July 26, 2023

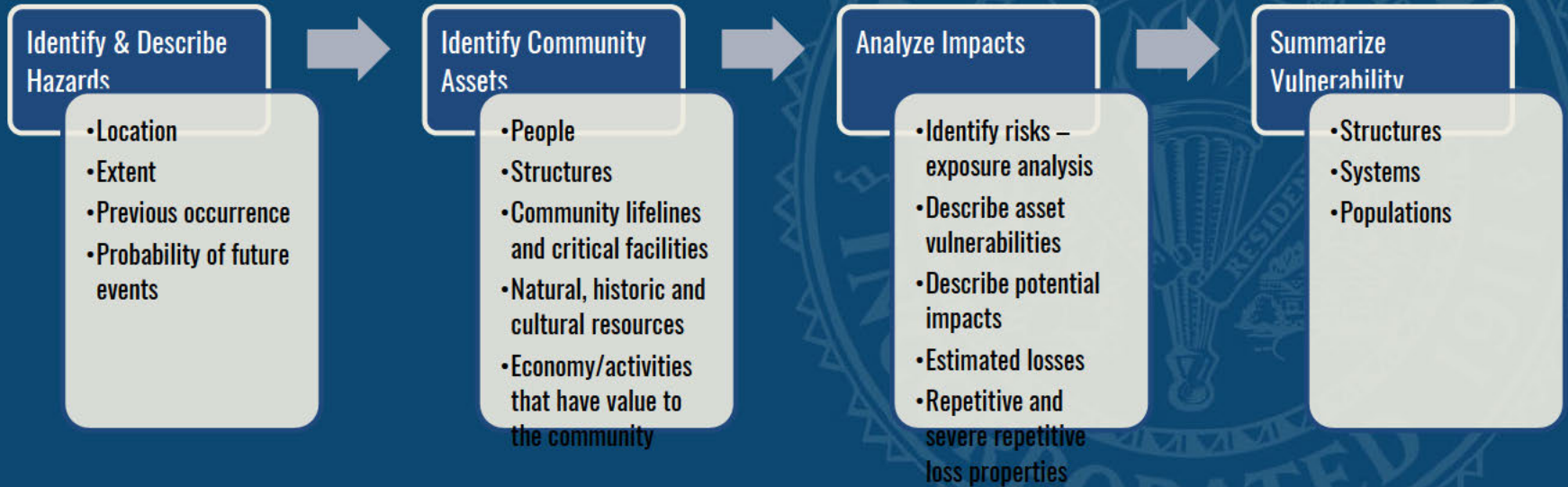


AGENDA

- Hazards to be Profiled
- Critical Facilities
- Problem/Issue Statements
- Capabilities Assessment
- Review Existing Mitigation Actions
- Public Involvement Update
- Next Steps



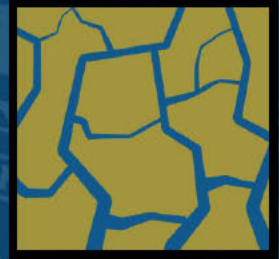
LHMP PROCESS – RISK ASSESSMENT



HAZARDS TO BE PROFILED

- Seismic
 - Earthquake, surface faulting, liquefaction, landslide
- Flood
- Wildfire
- Landslide (existing) and mudflow (new)

- Dam failure
 - Add reservoirs?
- Severe weather
 - Santa Ana winds, heavy rain storms, add extreme heat?
- Drought (new)



CRITICAL FACILITIES

- Risk assessment will look at what facilities are in hazard zones
 - Considers their replacement cost and value to the community
- Mitigation strategies reflect vulnerabilities of critical facilities
 - Strengthen existing vulnerable facilities
 - Avoid building new ones in at-risk areas

Critical Facilities

- **Current Plan**

- City Hall
- Police Department
- Fire Station No. 85
- Fire Station No. 86
- Fire Station No. 151

- **Additions/Revisions**

- Schools
- Hospitals - dialysis centers, urgent care
- Community Facilities
 - La Fetra
 - Teen Center
 - Library
 - Legion building
- Infrastructure – water/wastewater
- Others?

PROBLEM/ISSUE STATEMENTS

For each hazard:

- Identify **2-3 issues or concerns** specific to each hazard
- Write 1 issue/concern on each post-it
- Place post-its on hazard sheet grouping like ideas

CAPABILITIES ASSESSMENT

- **Two components**
 - Inventory of existing resources and tools to accomplish mitigation and reduce long-term vulnerability, and understanding of ability to use them effectively
 - Identification of gaps, conflicts, and/or weaknesses that may need to be addressed through mitigation
- **Types of capabilities**
 - Planning and regulatory
 - Administrative and technical
 - Financiald
 - Education and outreach

CAPABILITIES ASSESSMENT

- **Planning and regulatory**
 - Ordinances
 - Policies
 - Local laws and state statutes
 - Plans and program that guide and manage growth
- **Questions to consider:**
 - Does the plan address hazards?
 - Does the plan identify projects to include in the mitigation strategy?
 - Can the plan be used to implement mitigation actions?
 - How can the capabilities be expanded and improved to reduce risk?

CAPABILITIES ASSESSMENT

- **Administrative and technical**
 - City staff – skills/tools and capacity
 - Public and private resources
 - Ability to access and coordinate resources effectively
- **Questions to consider:**
 - Is coordination effective?
 - Is staffing adequate to enforce regulations?
 - Is staff trained on hazards and mitigation?
 - Is coordination between agencies and staff effective?
 - Has the capability been used to assess/mitigate risk in the past?
 - How can the capabilities be expanded and improved to reduce risk?

CAPABILITIES ASSESSMENT

- **Financial**
 - Resources have or eligible to use to fund mitigation
 - Staff time, existing operating budgets, impact fees
 - Local, state and federal funding sources
- **Questions to consider:**
 - Has the funding resource been used in the past and for what types of activities?
 - Could the resource be used to fund future mitigation actions?
 - How can the capabilities be expanded and improved to reduce risk?

CAPABILITIES ASSESSMENT

- Education and outreach
 - Programs and methods in place to implement mitigation actions and communicate hazard-related information
 - Fire safety programs, education programs
 - Public information or communication activities
- Questions to consider:
 - Could the program/organization help to implement future mitigation activities?
 - How can the capabilities be expanded and improved to reduce risk?

PROBLEM/ISSUE STATEMENTS

For each type of capability:

- Identify **2-3 available capabilities/resources**
- Identify **1-2 gaps or weaknesses**
- Write 1 issue/concern on each post-it
- Place post-its on hazard sheet grouping like ideas

REVIEW EXISTING MITIGATION ACTIONS

- Mitigation actions – reduce or eliminate long-term risk
- Different from actions to prepare or respond to an event
- Mitigation activities lessen or eliminate the need for preparedness or response resources
- Emphasis on the impact or vulnerabilities – not on the hazard itself

PUBLIC INVOLVEMENT UPDATE

- Survey – anticipated in next 2 weeks
- The Prepare Fair – September 14

Focused Outreach Meetings

- Seniors
- Youth
- Chamber of Commerce
- Others?

DISASTER HAPPENS ARE YOU READY?

THE PREPARE FAIR
GLENORA EMERGENCY PREPAREDNESS DAY | THURSDAY, SEPTEMBER 14TH | 3PM - 7PM

PREPAREDNESS TIPS
EMERGENCY VEHICLES • PET PREPAREDNESS • HAM RADIOS • FIRE ALARMS
KNOW YOUR EVACUATION ZONE • HANDS ONLY CPR • UTILITIES & MORE!

FEATURED
Glendora Police Dept. • SCE • Falck Ambulance LA County Fire Dept. • CERT • Red Cross • CA Dept. of Forestry • GEARS - Inland Valley Humane Society • Emarate Health • Glendora Library • LA County Dept of Health • Dept. of Insurance

PRESENTATIONS
3:30 - 4:30 Pillowcase Project (Elementary Kids) by Red Cross
4:45 - 5:15 Fire Safety by LA County Forestry
5:30 - 6:00 Basic Emergency Preparedness by Glendora CERT
6:15 - 6:45 Safer from Wildfires by Dept. of Insurance

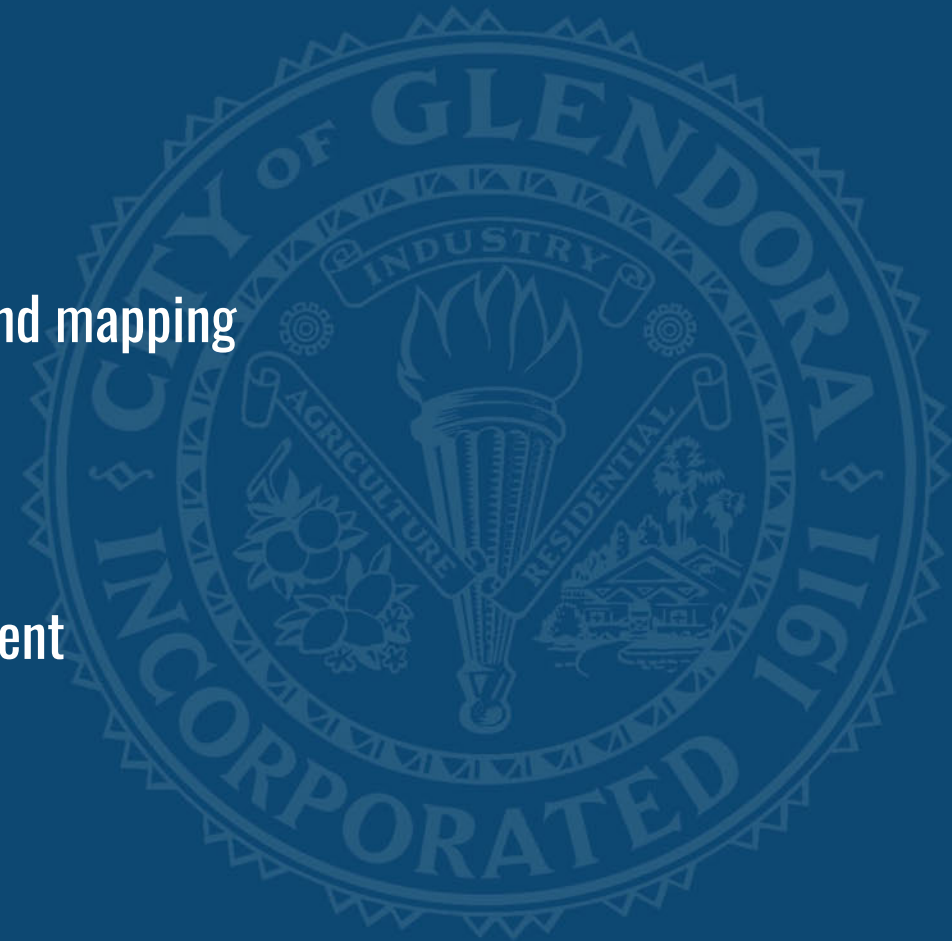
 **SEPTEMBER 14TH | 3PM - 7PM**
JOIN US! CIVIC CENTER PARKING LOT 116 E. FOOTHILL BLVD (BEHIND CITY HALL)

NEXT STEPS

- **Planning Team**
 - Provide any information or resources to Julie Linger
 - Distribute/Advertise Survey and The Prepare Fair
 - Send links or screenshots to Julie and/or Starla
 - Attend Meeting #3 August 23, 2023

NEXT STEPS

- **Plan Development**
 - **Finalize draft hazard profiles and mapping**
 - **Prepare and conduct outreach**
 - **Initiate risk assessment**
 - **Complete capabilities assessment**



Questions/Additional Discussion?



Glendora

Local Hazard Mitigation Plan

Planning Team Meeting #2

July 26, 2023

Last and First Name	Title	Organization/Department	E-Mail Address	Phone Number	Initials
Anderson, Erik	Assistant Planner	De Novo Planning Group			
Barker, Starla	Principal Planner	De Novo Planning Group			
Clark, Jessica	Business Services Manager	City of Glendora, Public Works			
Chan, Ryan	Disaster Program Manager	Red Cross			
Diaz, George	Corporate Director of Safety and Security	Emanate Health			
Egan, Matt	Police Chief	City of Glendora, Police Department			
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Glendora

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Macias, Ben	Director of Campus Safety	Citrus College			
Lanae O'Shields	Public Affairs Manager	Southern California Gas Company			
Pankratz, Dain	Safety Manager	Foothill Gold Line			
Randazzo, Mike	Police Captain	City of Glendora, Police Department			
Ricci, Marie	Administrative Services Director	City of Glendora, Risk Management			
Robinson, Noble	Battalion Chief	LACoFD			

Glendora

Local Hazard Mitigation Plan

Planning Team Meeting #2

July 26, 2023

Last and First Name	Title	Organization/Department	E-Mail Address	Phone Number	Initials
Rodriquez, Nahomi	AmeriCorps	Red Cross			
Sharma, Angela	Assistant Director, Environment of Care and Emergency Management	Emanate Health			
Stabio, Chris	Police Captain	City of Glendora, Police Department			
Storbakken, Steven		Pomona Valley Hospital			
Watson, Adriana	Community Services Liaison	Los Angeles County Fire			
Wendling, Rita	Interim Assistant Director	City of Glendora, Human Resources			
Wu, Jennifer	Emergency Manager	City of Azusa			
NATE CABIBIL	MAINT. SUPERVISOR	COUSD			

City of Glendora

Planning Updates

Here are a few plans the City is working on this year...



LOCAL HAZARD MITIGATION PLAN

This plan will identify and assess the City's vulnerability to natural and manmade hazards such as floods, drought, wildfires and severe weather, and will identify specific actions that can be taken to reduce the risk from the hazards.



SAFETY ELEMENT

The Safety Element of the General Plan will be updated to include goals and policies to reduce the potential short and long-term risk of loss of life, personal injury, property damage and economic and social dislocation resulting from fire, floods, earthquakes and other hazards.



ENVIRONMENTAL JUSTICE

The General Plan will be updated to include goals and policies that address:

- Pollution Exposure and Air Quality
- Access to Public Facilities and Physical Activity
- Healthy Food Access
- Safe and Sanitary Homes
- Meaningful Community Engagement Opportunities



To learn more and share your input, visit:

<https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement>

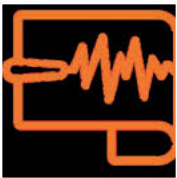
City of Glendora

PLANNING UPDATES



The City is updating the
Safety Element
and
**Local Hazard
Mitigation Plan**

The City's Safety Element and Local Hazard Mitigation Plan (LHMP) work together to identify Glendora's vulnerability to natural and manmade hazards and include specific actions that can be taken to reduce the risk from those hazards such as:



Earthquakes



Floods



Fires



**Severe
Weather**

Visit the Police Department's LHMP booth or project website to share any concerns, ideas, or suggestions related to hazards in Glendora.

Learn More



To learn more, visit the City's website at:

<https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement>

Advanced Planning & Community Engagement

What's New

Your input is important to us! Please take a few minutes to complete a short survey and share your thoughts on (1) [Safety and Hazard Mitigation Planning](#) and on (2) [Environmental Justice](#).

SAFETY, HAZARD MITIGATION & ENVIRONMENTAL JUSTICE

The City of Glendora is preparing an update to the General Plan Safety Element and Local Hazard Mitigation Plan (LHMP). The project will address Federal and State requirements to identify hazards and vulnerabilities associated with natural disasters and develop long-term strategies for protecting people and property from future hazard events. Federal law mandates that all state, tribal, and local governments prepare hazard mitigation plans to maintain eligibility for certain funding programs. State law requires local governments to update their safety elements to address fire hazard planning, climate change, and resiliency planning. Glendora will address these Federal and State requirements together with a joint Safety Element/LHMP update process.

In conjunction with the updates to the Safety Element and LHMP, the City will amend the General Plan to include goals and policies that address Environmental Justice, which is defined by the State of California as “the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.”

Safety Element



The State of California has long recognized the need for local governments to conduct their planning with an awareness of hazards that could affect the people and property within their jurisdictions. Accordingly, State Planning Law requires that all local government general plans include “safety elements” that contain documentation of such hazards and goals, policies, and programs to protect against their impacts. Following the institution of Federal requirements for the preparation of mitigation plans, the California Legislature established a series of requirements to strengthen the linkage between safety elements and LHMPs. This includes substantive requirements that are triggered by the preparation or update of a mitigation plan, most recently through Senate Bill 379, which requires safety elements to include climate adaptation and resiliency content, including a vulnerability assessment, adaptation and resilience goals, policies, and objectives, and feasible implementation measures.

Local Hazard Mitigation Plan



Hazard mitigation is the implementation of sustained actions to reduce or eliminate long-term risk to people and property from natural or human-caused hazards and their effects. Mitigation planning is the collaborative process of determining what actions are appropriate and responsive to local conditions. Consistent with Federal and State requirements and in line with the priorities of the California Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA), the mitigation planning process will be documented in a new LHMP that contributes to achieving the following objectives:

- Protection of public safety and prevention of loss of life and injury.
- Reduction of harm to existing and future development.
- Prevention of damage to unique economic, cultural, and environmental assets.

- Minimization of operational downtime and acceleration of restoration of government and business after disasters.
- Reduction of disaster response and recovery costs and exposure to risk for first responders.
- Accomplishment of other community objectives, such as leveraging capital improvements, infrastructure protection, open space preservation, and economic resiliency.
- Reduction of exposure for public assets.
- Assistance to the public in becoming more aware of local hazards and their implications.
- Presentation of information to enhance eligibility for Federal and State funding programs.
- Alignment with other planning initiatives.
- Identification of targeted capital improvements focused on risk reduction.

To advance these objectives, the LHMP will identify a combination of physical improvements and emergency management activities that serve to mitigate the impacts of locally relevant hazards. Recognizing that successful mitigation planning efforts must be communicated and understood by the public, the City will include opportunities for local stakeholder participation and input, including through the use of GIS technology to map and update the hazard information for each hazard profiled.

Environmental Justice



In 2016, the State Legislature passed Senate Bill 1000 (SB 1000), also known as “The Planning for Healthy Communities Act”, to address the inequitable distribution of pollution and associated health effects in low-income communities and communities of color. SB 1000 requires local governments to identify environmental justice communities (called “disadvantaged communities”) in their jurisdictions and address environmental justice in their general plans.

Although Glendora does not have any census tracts that are considered disadvantaged communities (based on findings using CalEnviroScreen 4.0), the City will focus its environmental justice efforts on strategies to reduce pollution exposure and environmental burdens affecting low-income and minority populations within Glendora.

SB 1000 specifies seven topics that need to be integrated into environmental justice-related goals, policies, and implementation programs:

1. Pollution Exposure and Air Quality
2. Public Facilities
3. Food Access
4. Safe and Sanitary Homes
5. Physical Activity
6. Community Engagement
7. Prioritize the Needs of Disadvantaged Communities

How to Get Involved

There are many ways that the public can get involved and provide input. The success of the project depends on residents giving input and insight. It is important that the Safety Element, Local Hazard Mitigation Plan, and Environmental Justice goals and policies reflect Glendora’s values and priorities. The community can get involved by:

- Joining the email list to stay informed HFriedel@cityofglendora.org
- Participating in the project outreach events (to be announced)
- Completing an online survey (coming soon)

Documents Available for Viewing

- [Current Safety Element](#)

Contacts

For general inquiries regarding the Safety Element and Environmental Justice Project, please contact the Planning Division at (626) 914-8214 or email HFriedel@cityofglendora.org.

For general inquiries about Hazard Mitigation, please contact the Police Department at (626) 914-8250 or email jlinger@glendorapd.org.

Safety Element and LHMP Survey Social Media Posts

Twitter:

Glendora is updating its Local Hazard Mitigation Plan and Safety Element! The City is hosting an online survey to understand the community's concerns on natural and human-made hazards. Please visit <https://www.surveymonkey.com/r/FPNX2TK> to take the survey and help the community prepare and respond to those hazards.

Facebook:

The Local Hazard Mitigation Plan (LHMP) and Safety Element Updates are currently underway! We want the community's perspective on hazards that could impact Glendora. We are hosting an online survey through Friday, September 22, 2023. Please visit <https://www.surveymonkey.com/r/FPNX2TK> to get involved. Your input will help the Planning Team understand the community's concerns and will guide development of the LHMP and Safety Element.



Instagram:

We are hard at work at the City of Glendora updating our Local Hazard Mitigation Plan (LHMP) and Safety Element. The LHMP provides a framework for the community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, flooding, and wildfires, while the Safety Element provides goals, policies, and programs to protect against their impacts. We'd like to know your thoughts on Hazard Mitigation Planning. Please visit <https://www.surveymonkey.com/r/FPNX2TK> to take a brief survey to help the community prepare and respond to those hazards.



NextDoor:

The City of Glendora is in the process of updating our Local Hazard Mitigation Plan (LHMP) and Safety Element and we want to hear from community members like you about your Hazard Mitigation Planning priorities. We invite you to take an online survey by Friday, September 22nd to provide input that will help the Planning Team understand the community's concerns and

Safety Element and LHMP Survey Social Media Posts

guide development of the LHMP and Safety Element. Please visit <https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement> to learn more and to take the survey.

 **Nixle:**

Glendora is updating its Local Hazard Mitigation Plan and Safety Element! The City has an online survey to understand the community's concerns on natural hazard events such as earthquakes and wildfires, and human-caused events such as hazardous spills. Please visit <https://www.surveymonkey.com/r/FPNX2TK> to take the survey and help the community prepare and respond to those hazards.



City of Glendora ✓



Senior Digital Media Specialist Greg Morton • 6 days ago

City staff is hard at work updating our Local Hazard Mitigation Plan (LHMP) and Safety Element.

The LHMP provides a framework for the community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, flooding, and wildfires, while the Safety Element provides goals, policies, and programs to protect against their impacts.

We'd like to know your thoughts on Hazard Mitigation Planning. Please visit <https://www.surveymonkey.com/r/FPNX2TK> to take a brief survey to help the community prepare and respond to those hazards. Survey ends September 22nd.



City of Glendora Local Hazard Mitigation Plan & Safety Eleme... >

[surveymonkey.com](https://www.surveymonkey.com/r/FPNX2TK)

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Hazard Mitigation Plan Survey

Post Date: 08/17/2023 11:10 AM

What has been your experience with weather or other hazards in Glendora? Let us know!

The City of Glendora is in the process of updating its Local Hazard Mitigation Plan (LHMP) and Safety Element and we want to hear from community members about their planning priorities. The LHMP provides a framework for the community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, flooding, and wildfires, while the Safety Element provides goals, policies, and programs to protect against their impacts.

Hurry, the survey ends on Friday, September 22nd!

- Please visit <https://www.surveymonkey.com/r/FPNX2TK> to take a brief survey to help the community prepare and respond to those hazards.
- Please visit <https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement> to learn more and to take the survey.

[Return to full list >>](#)

Free viewers are required for some of the attached documents.
They can be downloaded by clicking on the icons below.





City of Glendora - Local Government is in Glendora.

Published by Greg Morton · 5d · 🌐



🚒 We are in the process of updating our Local Hazard Mitigation Plan (LHMP) and Safety Element. Help us better prepare by taking this survey <https://www.surveymonkey.com/r/FPNX2TK>

🚒 We'd like to know your thoughts on Hazard Mitigation Planning.

🚒 The LHMP provides a framework for the community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, flooding, and wildfires, while the Safety Element provides goals, policies, and programs to protect against their impacts.

#Emergencypreparedness #glendora #localgovernment



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cityofglendora
Glendora, California



cityofglendora 📢 📄 We are in the process of updating our Local Hazard Mitigation Plan (LHMP) and Safety Element. Help us better prepare by taking a quick survey in our 📍. We'd like to know your thoughts on Hazard Mitigation Planning!

📢 The LHMP provides a framework for the community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, flooding, and wildfires, while the Safety Element provides goals, policies, and programs to protect against their impacts.

#Emergencypreparedness #glendora
#localgovernment

Edited · 5d



robert.andnicola ❤️ ❤️ ❤️ ❤️ ❤️ ❤️ ❤️ ❤️ ❤️ ❤️ ❤️

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... Please make sure that all...

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Liked by **glendorachamber** and 505 others

5 DAYS AGO



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We are in the process of updating our Local Hazard Mitigation Plan (LHMP) & Safety Element. Help us better prepare by taking this survey

surveymonkey.com/r/FPNX2TK
We'd like to know your thoughts on Hazard Mitigation Planning!
[#Emergencypreparedness](#) [#glendora](#) [#localgovernment](#)

4:47 PM · Aug 17, 2023 from Glendora, CA · 337 Views

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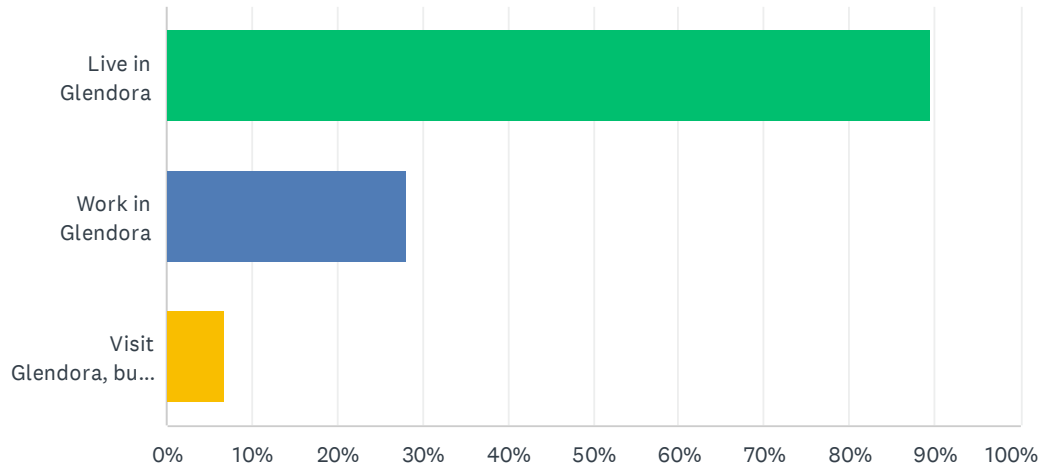
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Comment icons: speech bubble, refresh, heart, bookmark, share

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Q1 Do you... (Check all that apply)

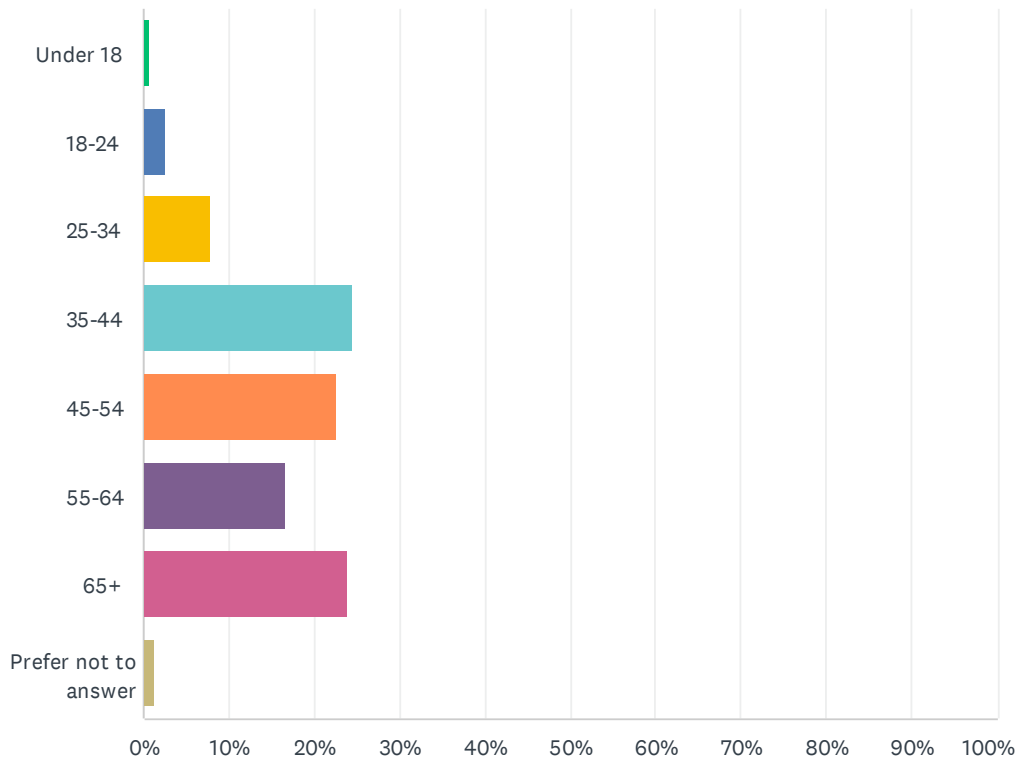
Answered: 163 Skipped: 1



ANSWER CHOICES	RESPONSES	
Live in Glendora	89.57%	146
Work in Glendora	28.22%	46
Visit Glendora, but live and work elsewhere	6.75%	11
Total Respondents: 163		

Q2 What is your age group?

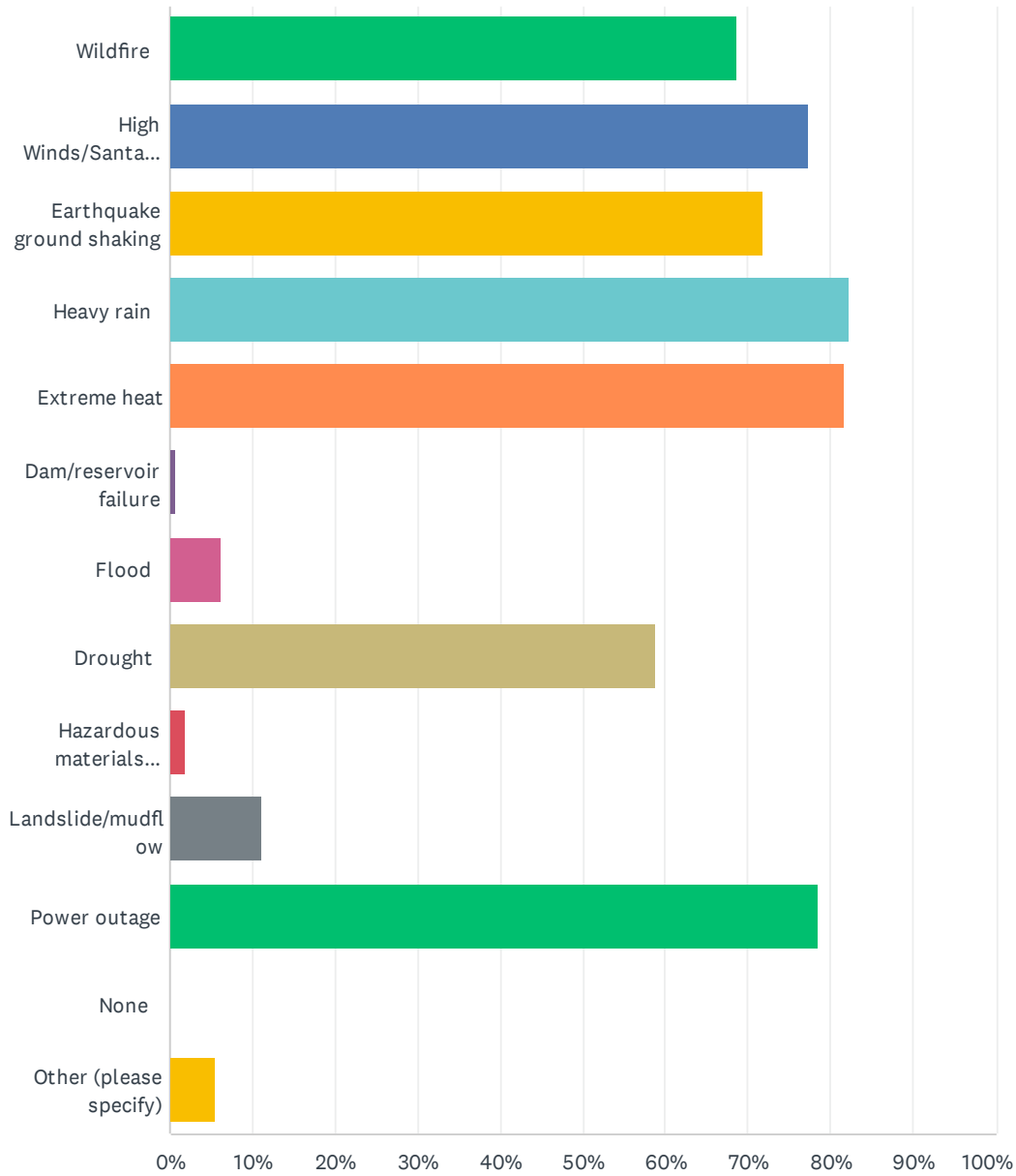
Answered: 163 Skipped: 1



ANSWER CHOICES	RESPONSES	
Under 18	0.61%	1
18-24	2.45%	4
25-34	7.98%	13
35-44	24.54%	40
45-54	22.70%	37
55-64	16.56%	27
65+	23.93%	39
Prefer not to answer	1.23%	2
TOTAL		163

Q3 Which of the following types of hazards have you or someone in your household experienced while residing and/or working in Glendora?

Answered: 163 Skipped: 1

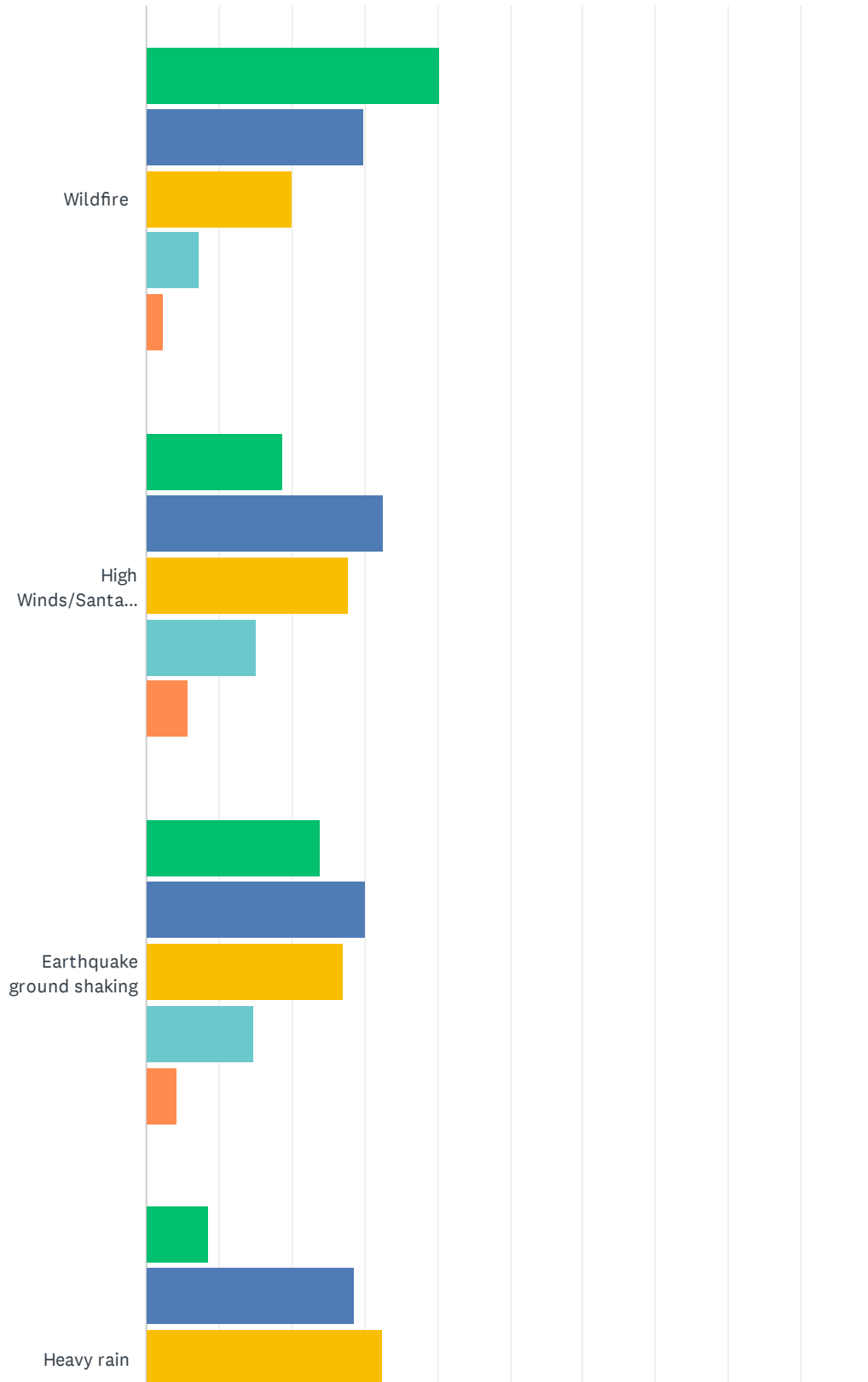


City of Glendora Local Hazard Mitigation Plan & Safety Element Update

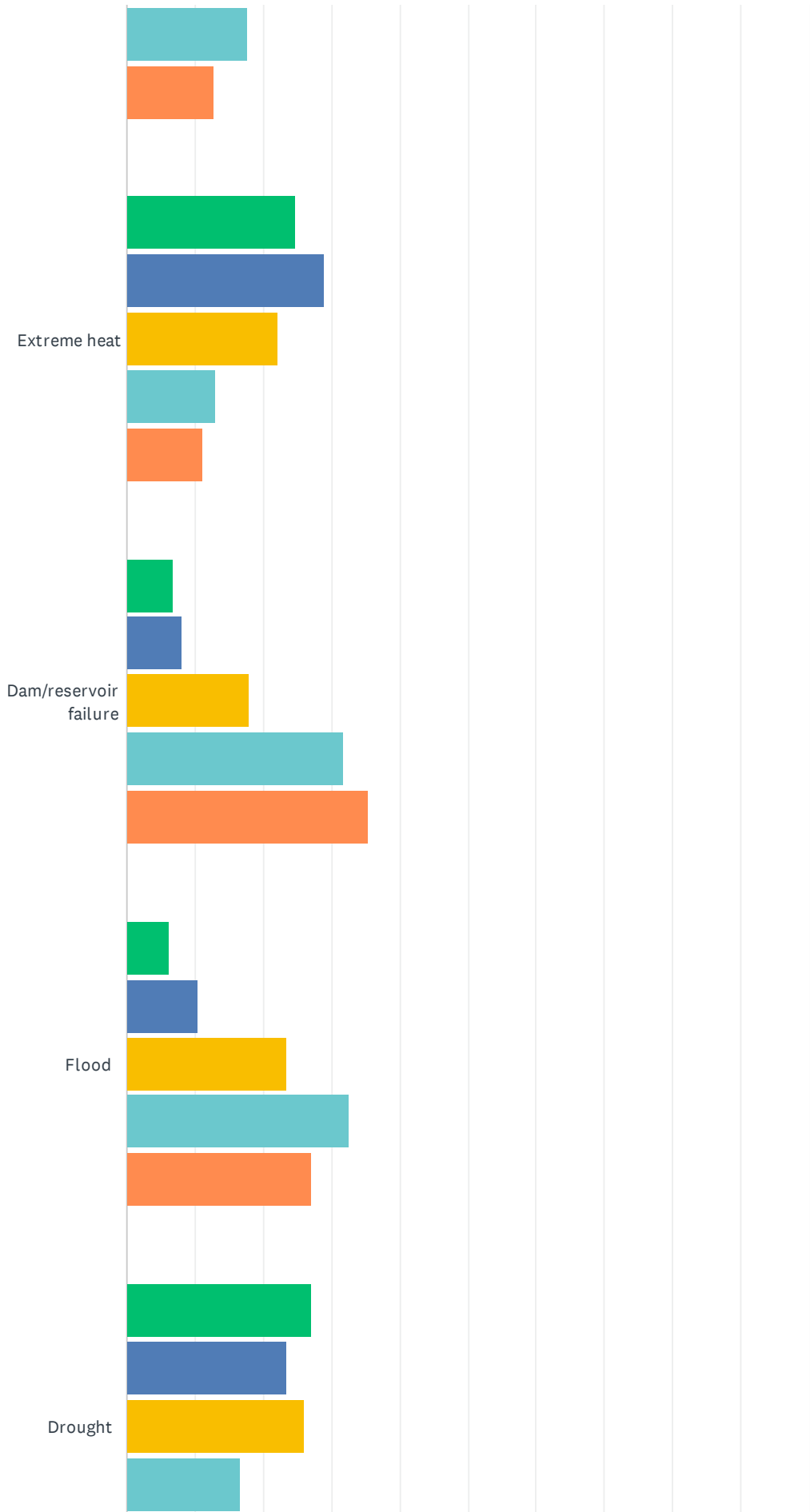
ANSWER CHOICES	RESPONSES	
Wildfire	68.71%	112
High Winds/Santa Anas	77.30%	126
Earthquake ground shaking	71.78%	117
Heavy rain	82.21%	134
Extreme heat	81.60%	133
Dam/reservoir failure	0.61%	1
Flood	6.13%	10
Drought	58.90%	96
Hazardous materials incidents/spills	1.84%	3
Landslide/mudflow	11.04%	18
Power outage	78.53%	128
None	0.00%	0
Other (please specify)	5.52%	9
Total Respondents: 163		

Q4 How concerned are you that the following hazards will happen in or impact Glendora? Please check ONE response for each hazard.

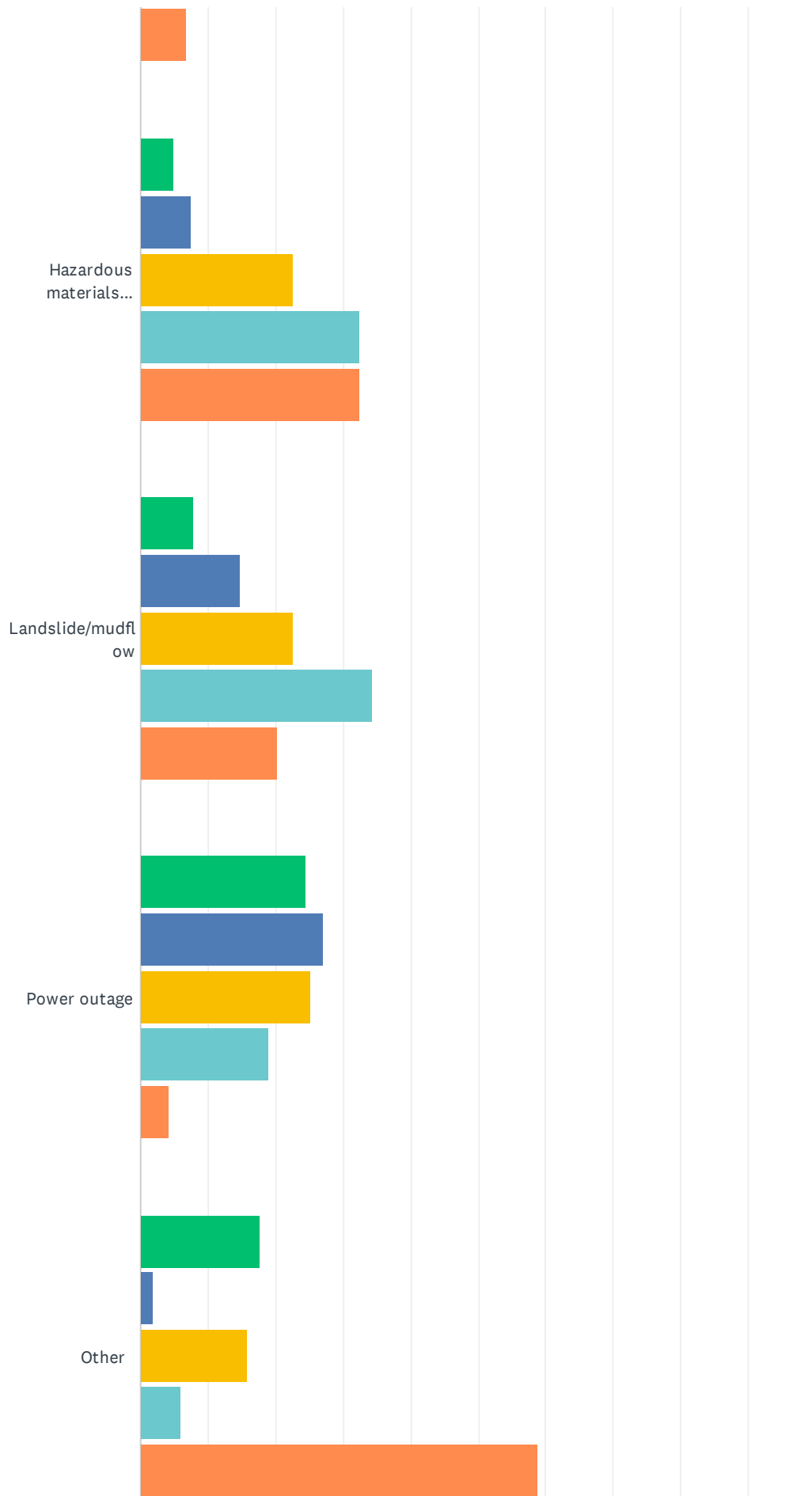
Answered: 164 Skipped: 0



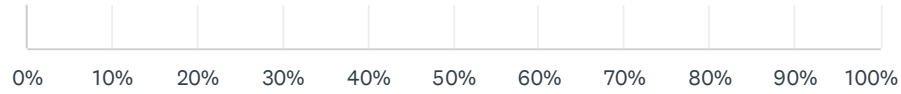
City of Glendora Local Hazard Mitigation Plan & Safety Element Update



City of Glendora Local Hazard Mitigation Plan & Safety Element Update



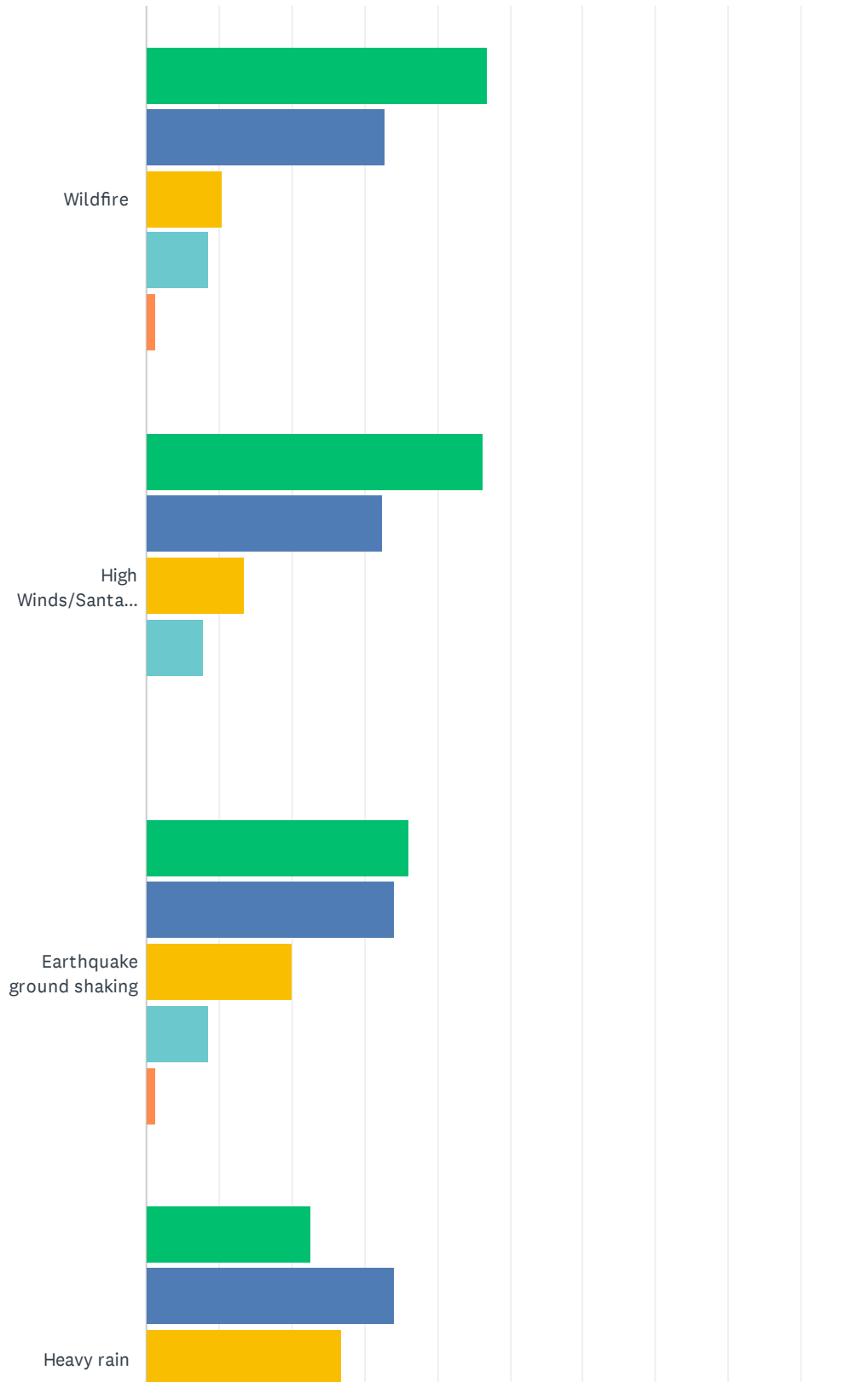
City of Glendora Local Hazard Mitigation Plan & Safety Element Update



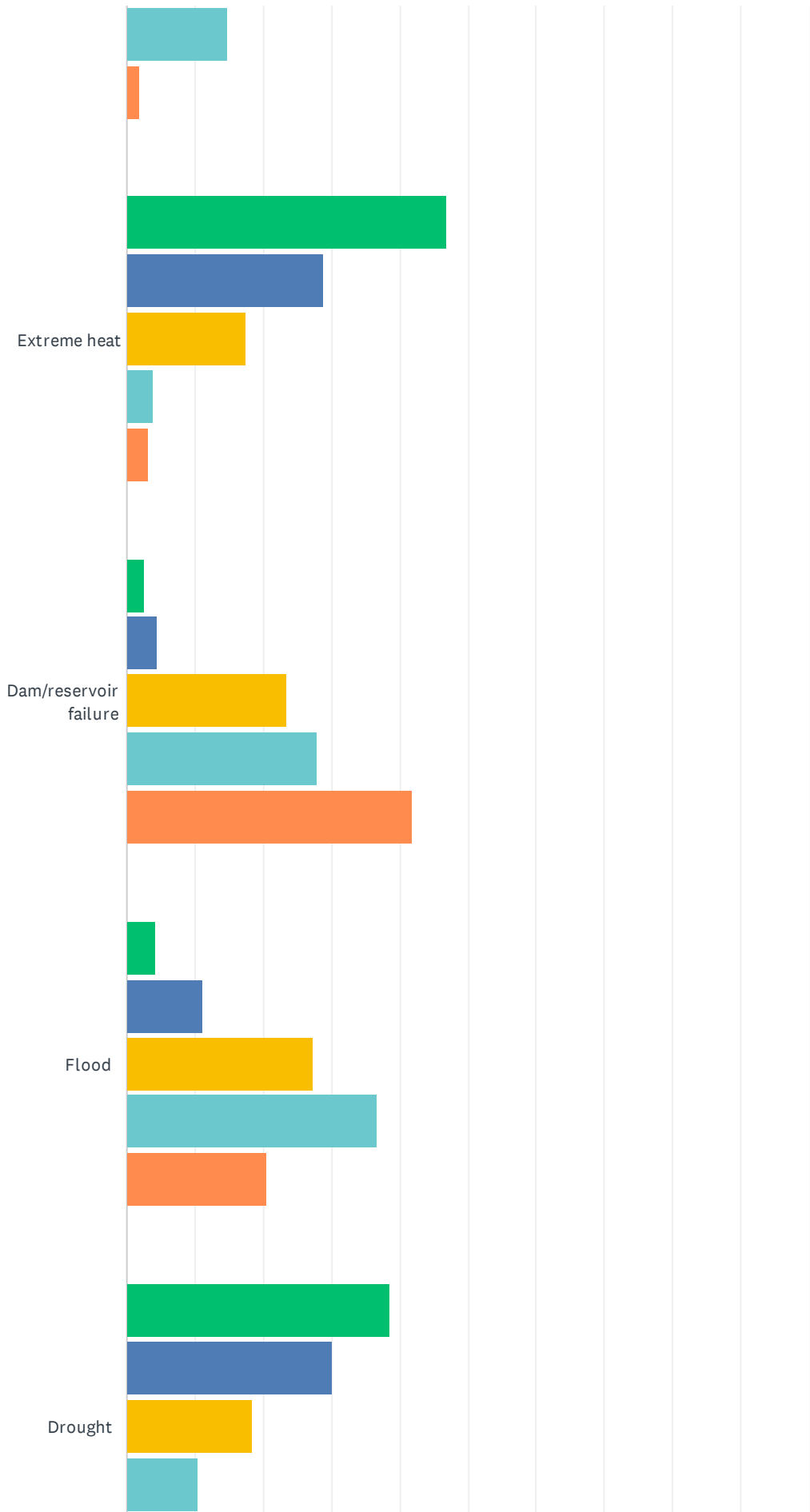
	EXTREMELY CONCERNED	VERY CONCERNED	CONCERNED	SOMEWHAT CONCERNED	NOT CONCERNED	TOTAL	WEIGHTED AVERAGE
Wildfire	40.24% 66	29.88% 49	20.12% 33	7.32% 12	2.44% 4	164	3.98
High Winds/Santa Anas	18.87% 30	32.70% 52	27.67% 44	15.09% 24	5.66% 9	159	3.44
Earthquake ground shaking	23.93% 39	30.06% 49	26.99% 44	14.72% 24	4.29% 7	163	3.55
Heavy rain	8.54% 14	28.66% 47	32.32% 53	17.68% 29	12.80% 21	164	3.02
Extreme heat	24.69% 40	29.01% 47	22.22% 36	12.96% 21	11.11% 18	162	3.43
Dam/reservoir failure	6.83% 11	8.07% 13	18.01% 29	31.68% 51	35.40% 57	161	2.19
Flood	6.17% 10	10.49% 17	23.46% 38	32.72% 53	27.16% 44	162	2.36
Drought	27.16% 44	23.46% 38	25.93% 42	16.67% 27	6.79% 11	162	3.48
Hazardous materials incidents/spills	5.00% 8	7.50% 12	22.50% 36	32.50% 52	32.50% 52	160	2.20
Landslide/mudflow	7.98% 13	14.72% 24	22.70% 37	34.36% 56	20.25% 33	163	2.56
Power outage	24.54% 40	26.99% 44	25.15% 41	19.02% 31	4.29% 7	163	3.48
Other	17.65% 9	1.96% 1	15.69% 8	5.88% 3	58.82% 30	51	2.14

Q5 What do you believe is the likelihood that these hazards will occur in or impact the City of Glendora? Please check ONE for each hazard.

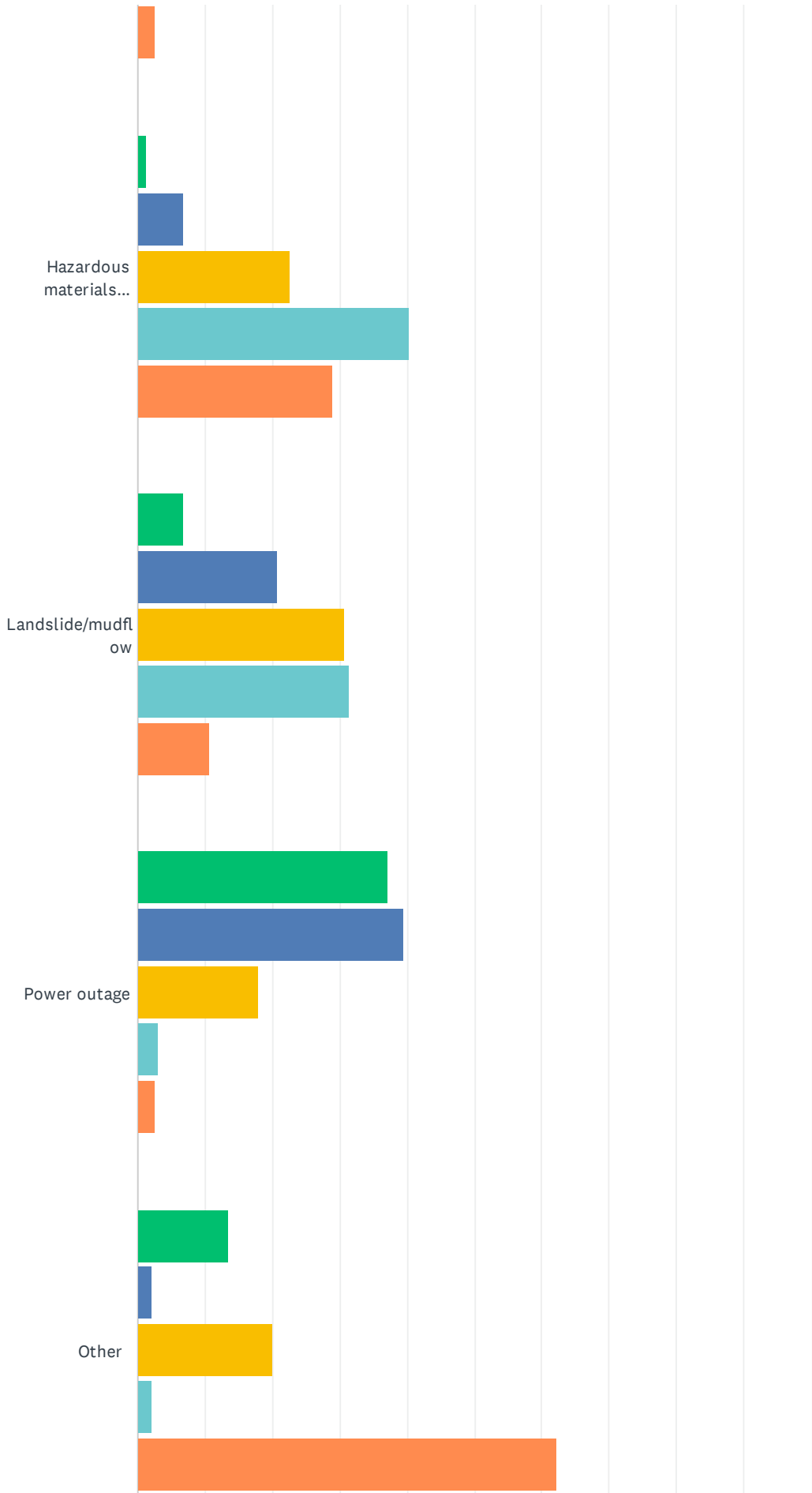
Answered: 164 Skipped: 0



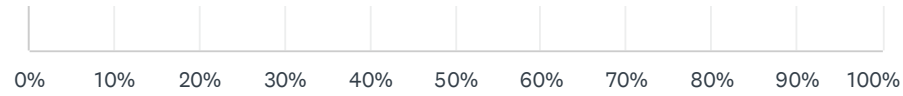
City of Glendora Local Hazard Mitigation Plan & Safety Element Update



City of Glendora Local Hazard Mitigation Plan & Safety Element Update



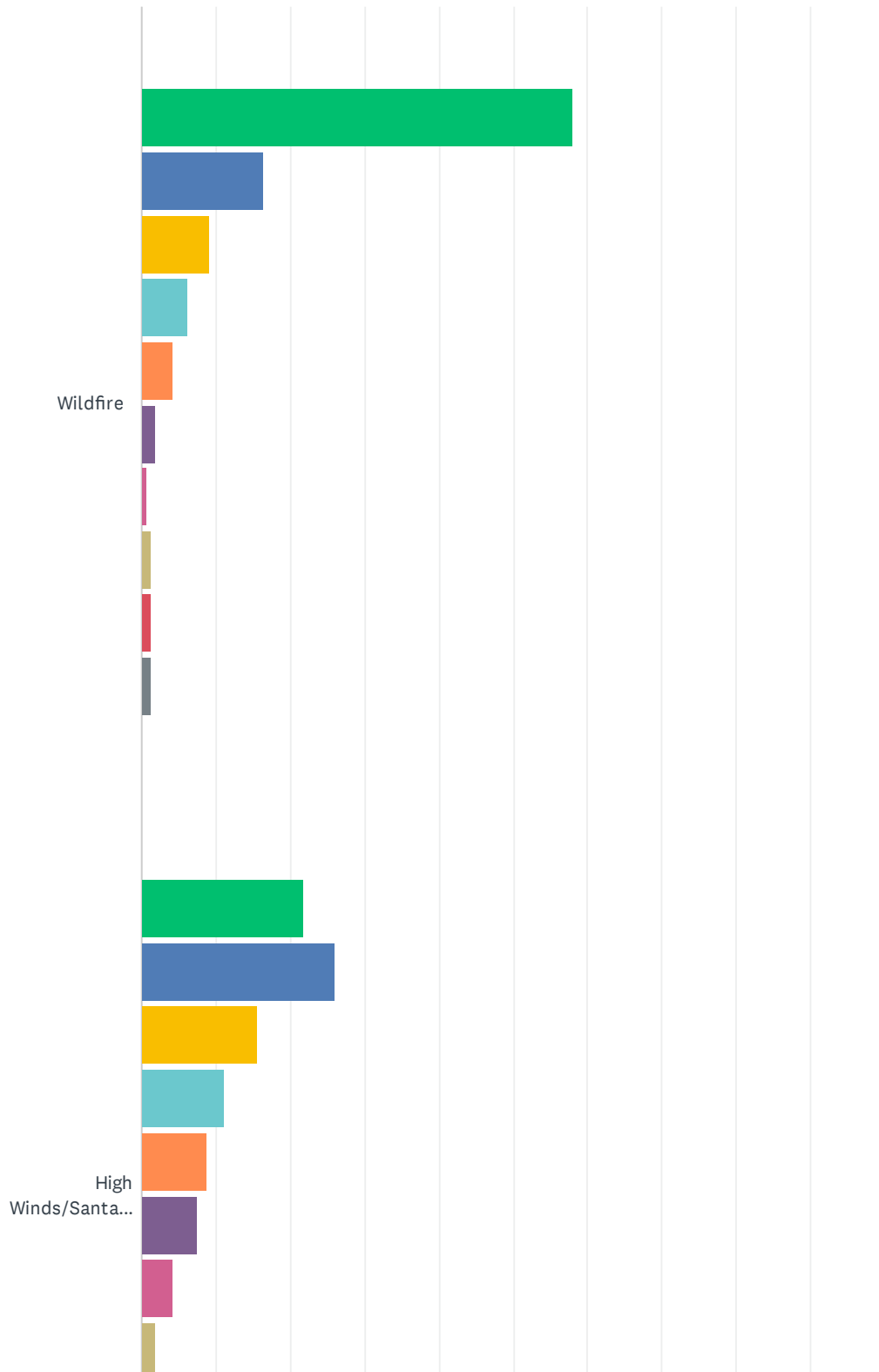
City of Glendora Local Hazard Mitigation Plan & Safety Element Update



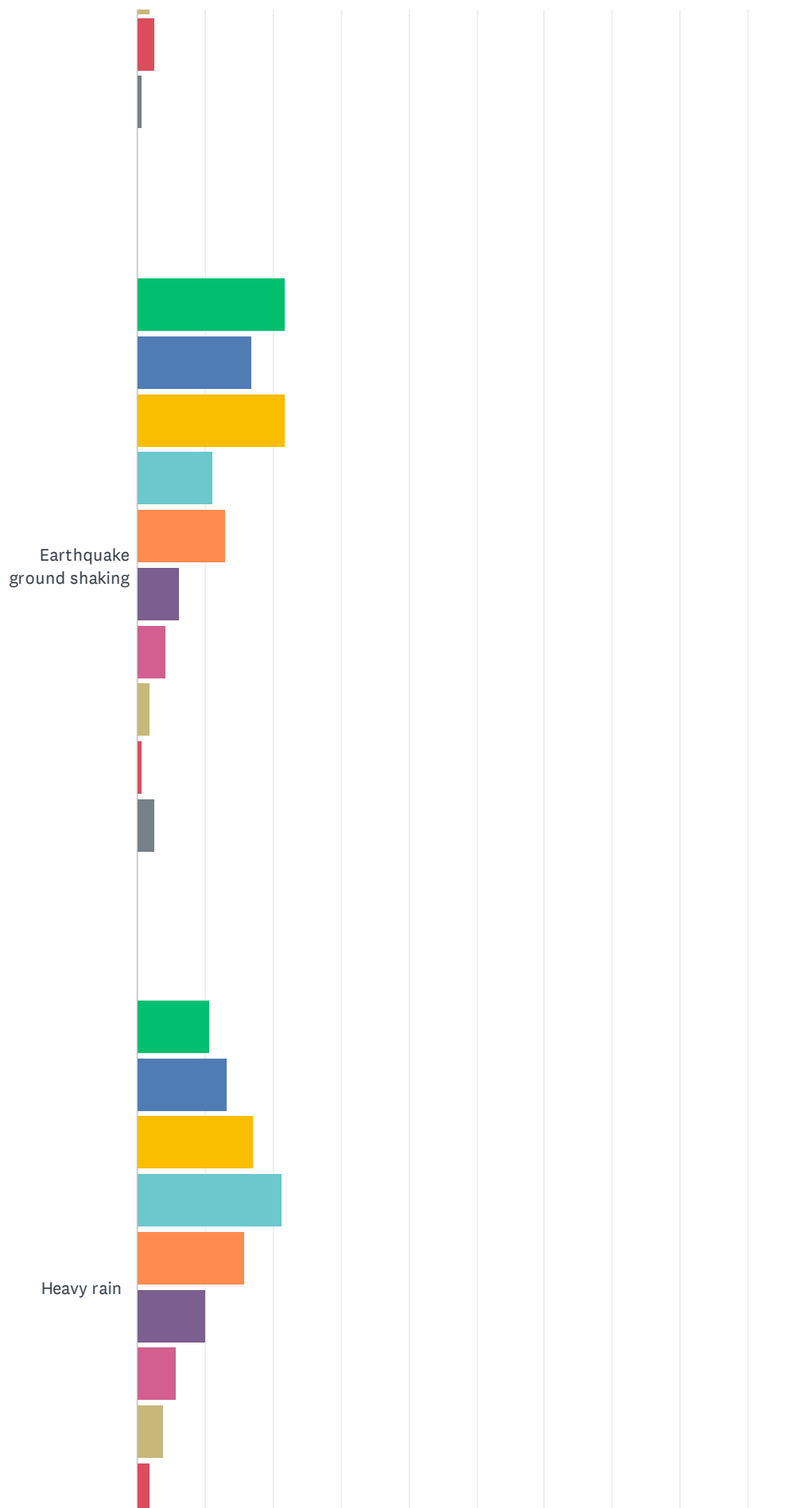
	EXTREMELY LIKELY	VERY LIKELY	LIKELY	SOMEWHAT LIKELY	NOT LIKELY	TOTAL	WEIGHTED AVERAGE
Wildfire	46.95% 77	32.93% 54	10.37% 17	8.54% 14	1.22% 2	164	4.38
High Winds/Santa Anas	46.34% 76	32.32% 53	13.41% 22	7.93% 13	0.00% 0	164	4.33
Earthquake ground shaking	35.98% 59	34.15% 56	20.12% 33	8.54% 14	1.22% 2	164	4.17
Heavy rain	22.56% 37	34.15% 56	26.83% 44	14.63% 24	1.83% 3	164	3.98
Extreme heat	46.88% 75	28.75% 46	17.50% 28	3.75% 6	3.13% 5	160	4.33
Dam/reservoir failure	2.53% 4	4.43% 7	23.42% 37	27.85% 44	41.77% 66	158	4.21
Flood	4.35% 7	11.18% 18	27.33% 44	36.65% 59	20.50% 33	161	3.98
Drought	38.65% 63	30.06% 49	18.40% 30	10.43% 17	2.45% 4	163	4.23
Hazardous materials incidents/spills	1.26% 2	6.92% 11	22.64% 36	40.25% 64	28.93% 46	159	4.08
Landslide/mudflow	6.88% 11	20.63% 33	30.63% 49	31.25% 50	10.63% 17	160	3.87
Power outage	37.04% 60	39.51% 64	17.90% 29	3.09% 5	2.47% 4	162	4.22
Other	13.33% 6	2.22% 1	20.00% 9	2.22% 1	62.22% 28	45	4.56

Q6 Rank the hazards based on the likelihood of potential threat to Glendora with 1 being the HIGHEST threat and 10 being the LOWEST threat.

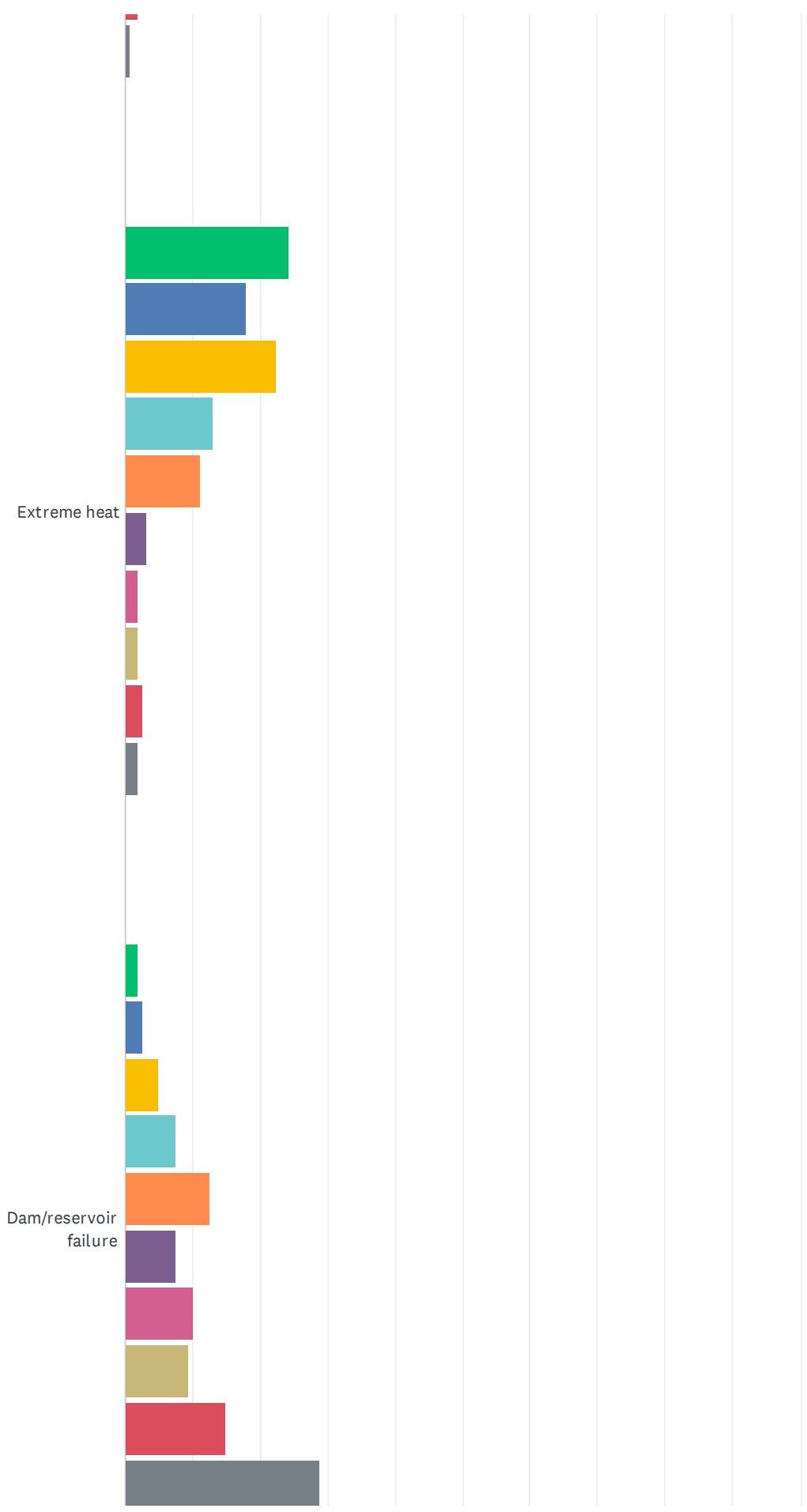
Answered: 164 Skipped: 0

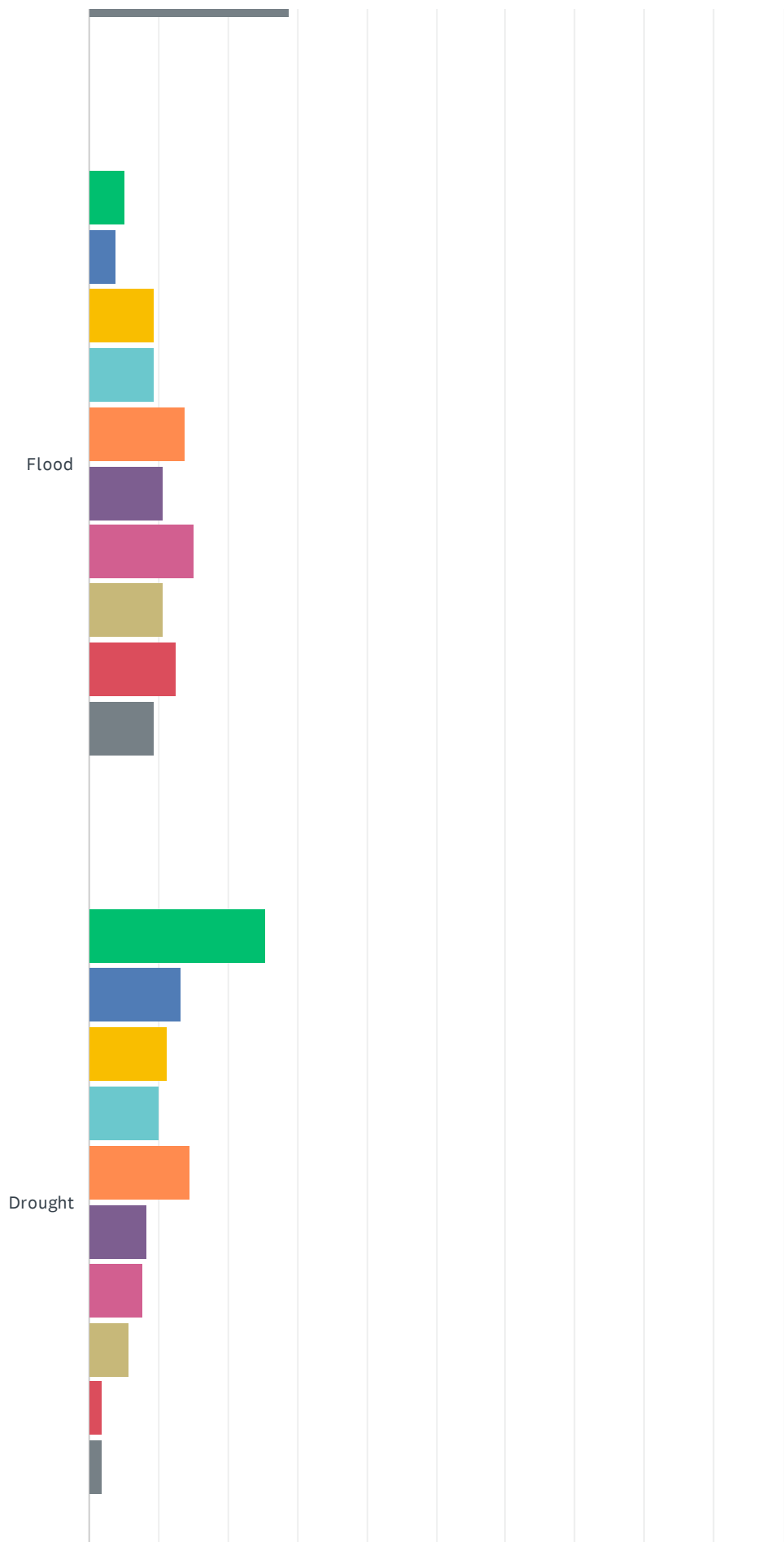


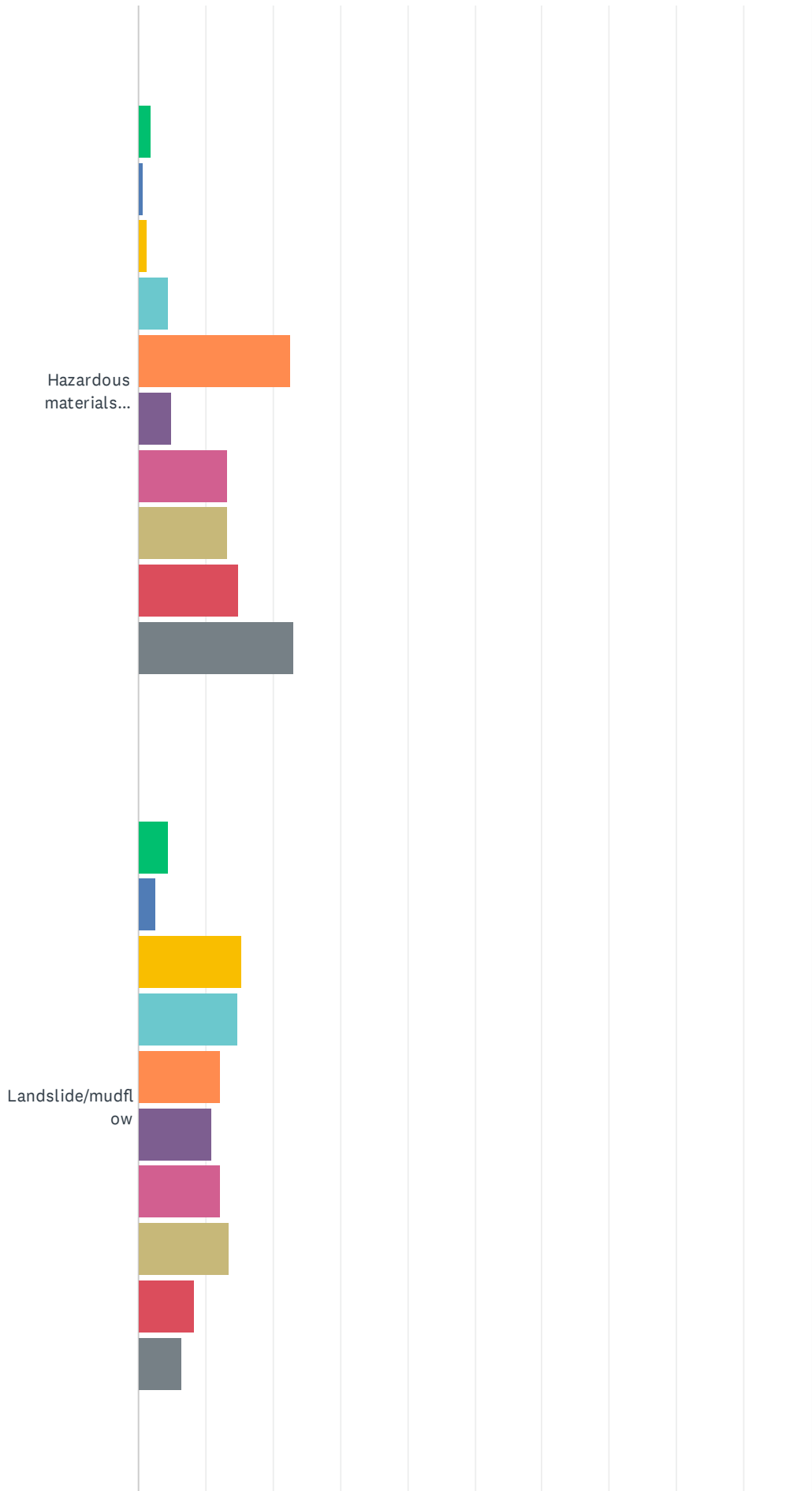
City of Glendora Local Hazard Mitigation Plan & Safety Element Update



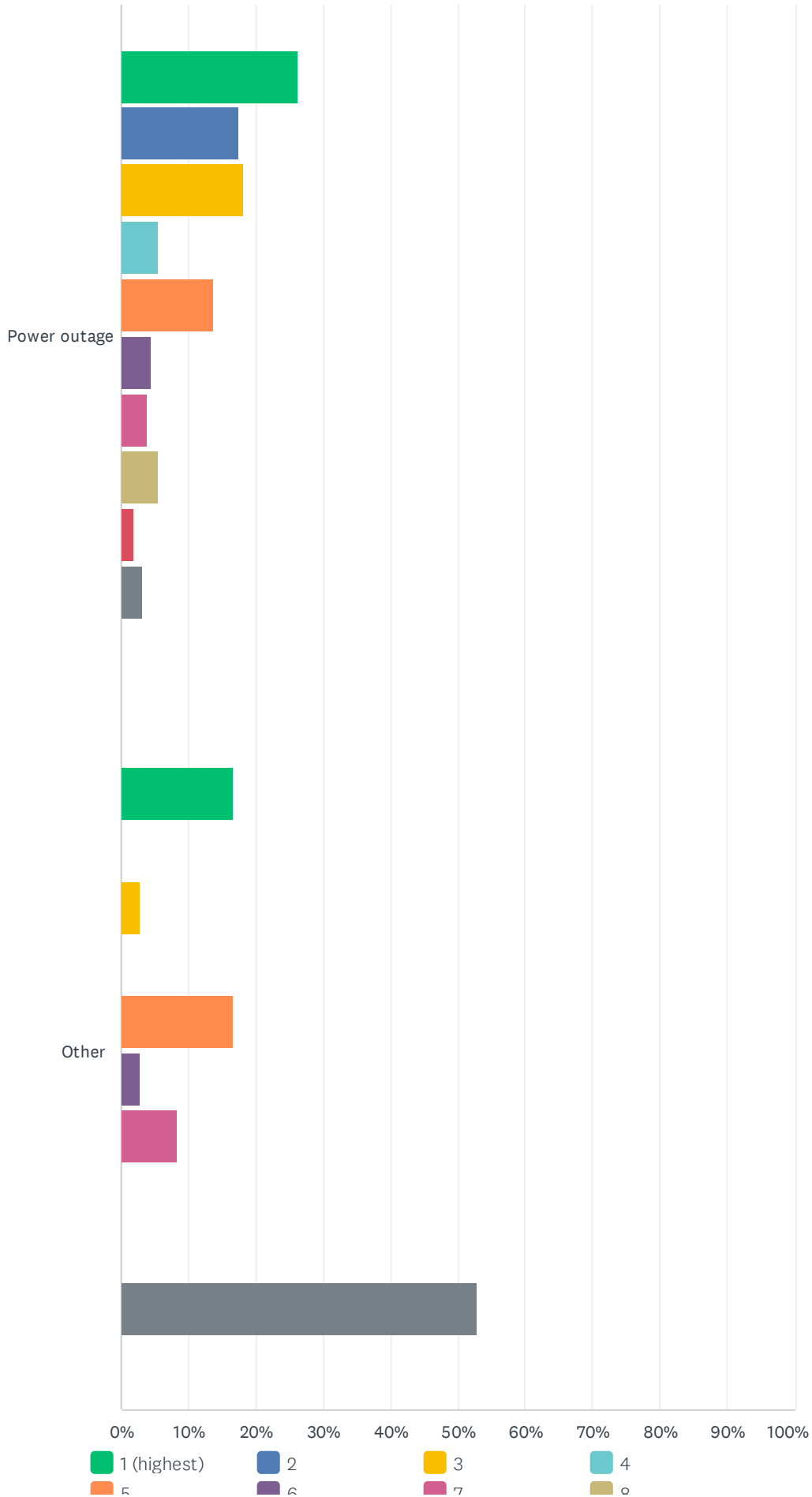
City of Glendora Local Hazard Mitigation Plan & Safety Element Update







City of Glendora Local Hazard Mitigation Plan & Safety Element Update



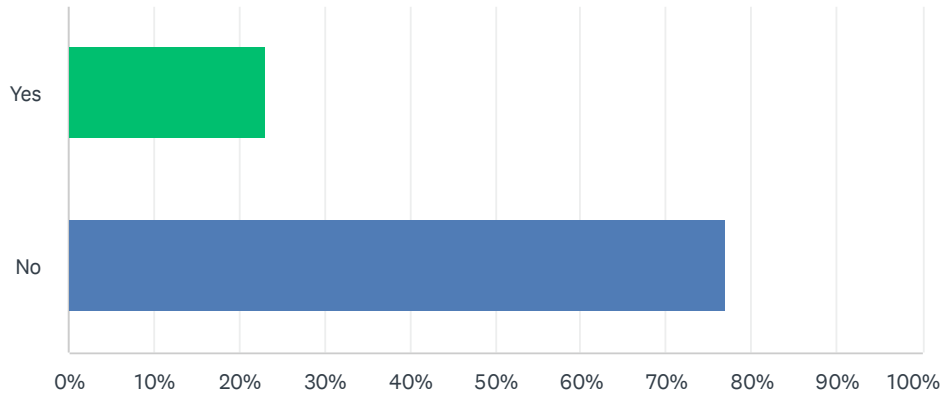
City of Glendora Local Hazard Mitigation Plan & Safety Element Update



	1 (HIGHEST)	2	3	4	5	6	7	8	9	10 (LOWEST)
Wildfire	57.93% 95	16.46% 27	9.15% 15	6.10% 10	4.27% 7	1.83% 3	0.61% 1	1.22% 2	1.22% 2	1.22% 2
High Winds/Santa Anas	21.74% 35	26.09% 42	15.53% 25	11.18% 18	8.70% 14	7.45% 12	4.35% 7	1.86% 3	2.48% 4	0.62% 1
Earthquake ground shaking	21.74% 35	16.77% 27	21.74% 35	11.18% 18	13.04% 21	6.21% 10	4.35% 7	1.86% 3	0.62% 1	2.48% 4
Heavy rain	10.69% 17	13.21% 21	16.98% 27	21.38% 34	15.72% 25	10.06% 16	5.66% 9	3.77% 6	1.89% 3	0.63% 1
Extreme heat	24.22% 39	18.01% 29	22.36% 36	13.04% 21	11.18% 18	3.11% 5	1.86% 3	1.86% 3	2.48% 4	1.86% 3
Dam/reservoir failure	1.88% 3	2.50% 4	5.00% 8	7.50% 12	12.50% 20	7.50% 12	10.00% 16	9.38% 15	15.00% 24	28.75% 46
Flood	5.03% 8	3.77% 6	9.43% 15	9.43% 15	13.84% 22	10.69% 17	15.09% 24	10.69% 17	12.58% 20	9.43% 15
Drought	25.32% 40	13.29% 21	11.39% 18	10.13% 16	14.56% 23	8.23% 13	7.59% 12	5.70% 9	1.90% 3	1.90% 3
Hazardous materials incidents/spills	1.88% 3	0.63% 1	1.25% 2	4.38% 7	22.50% 36	5.00% 8	13.13% 21	13.13% 21	15.00% 24	23.13% 37
Landslide/mudflow	4.46% 7	2.55% 4	15.29% 24	14.65% 23	12.10% 19	10.83% 17	12.10% 19	13.38% 21	8.28% 13	6.37% 10
Power outage	26.25% 42	17.50% 28	18.13% 29	5.63% 9	13.75% 22	4.38% 7	3.75% 6	5.63% 9	1.88% 3	3.13% 5
Other	16.67% 6	0.00% 0	2.78% 1	0.00% 0	16.67% 6	2.78% 1	8.33% 3	0.00% 0	0.00% 0	52.78% 19

Q7 Is there a hazard not listed above that you think is a wide scale threat to Glendora?

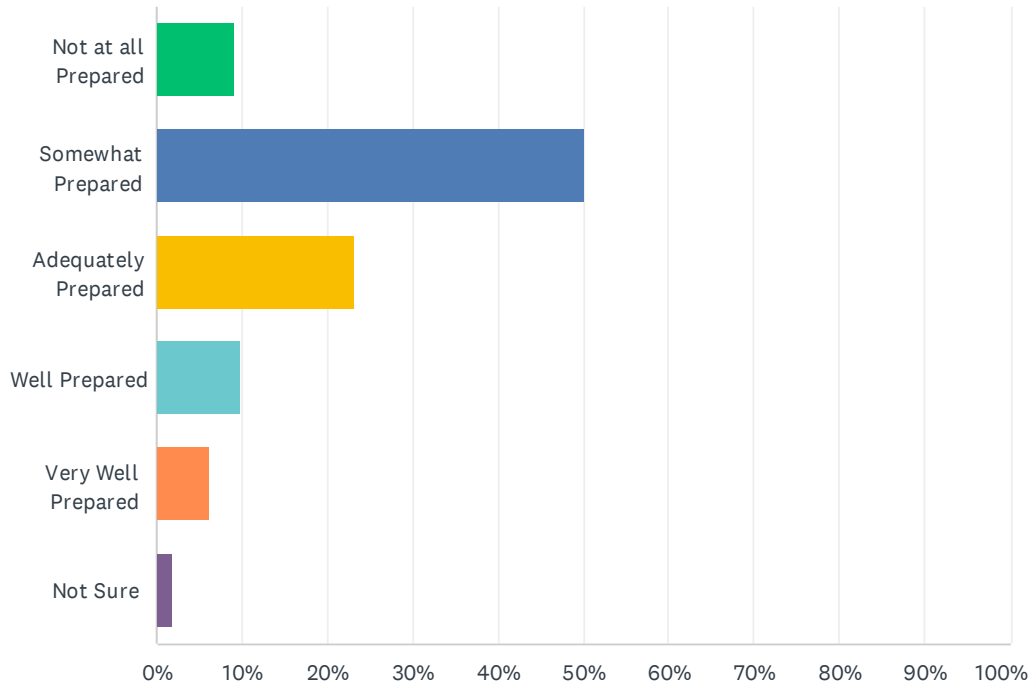
Answered: 148 Skipped: 16



ANSWER CHOICES	RESPONSES	
Yes	22.97%	34
No	77.03%	114
TOTAL		148

Q8 How prepared is your household to deal with a hazard event likely to occur in Glendora?

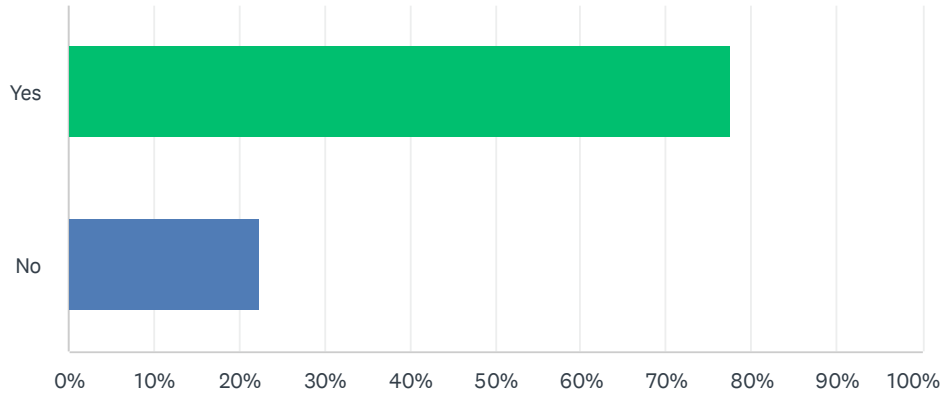
Answered: 164 Skipped: 0



ANSWER CHOICES	RESPONSES	
Not at all Prepared	9.15%	15
Somewhat Prepared	50.00%	82
Adequately Prepared	23.17%	38
Well Prepared	9.76%	16
Very Well Prepared	6.10%	10
Not Sure	1.83%	3
TOTAL		164

Q9 Have you taken actions to make your home, business, or neighborhood more resistant to hazards (such as anchored furniture and service utilities, maintain functioning smoke detectors, regularly trimmed trees, annually cut-down dry weeds to reduce fire hazards, etc.)?

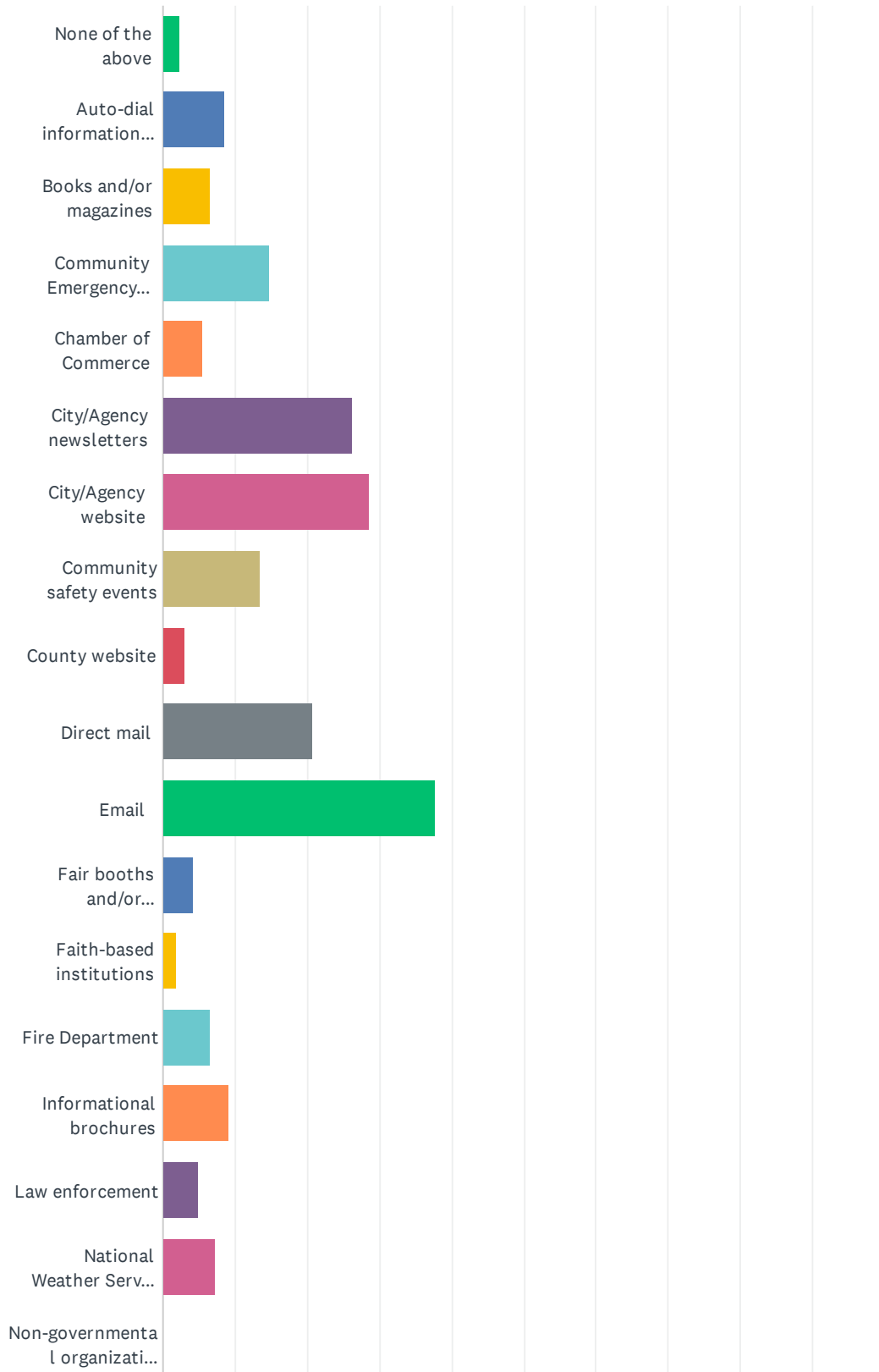
Answered: 161 Skipped: 3



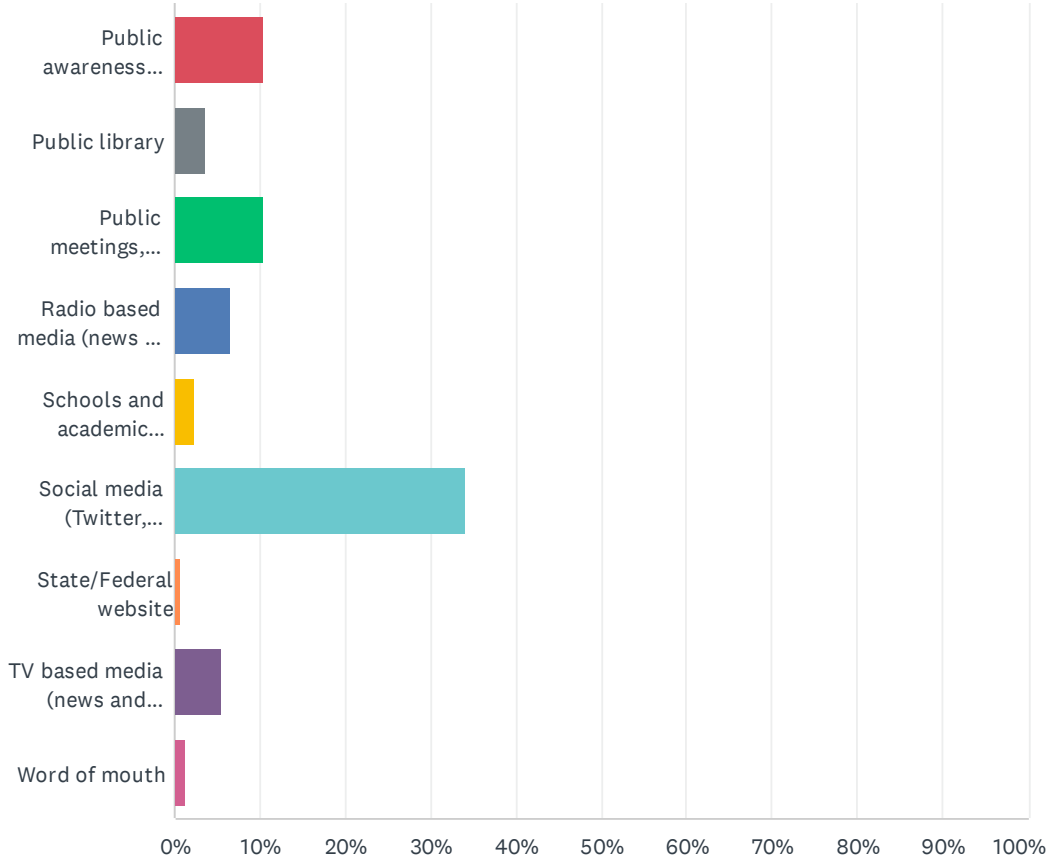
ANSWER CHOICES	RESPONSES	
Yes	77.64%	125
No	22.36%	36
TOTAL		161

Q10 Choose the top 3 ways you prefer to receive information about how to make your home and neighborhood more resistant to hazards?

Answered: 164 Skipped: 0



City of Glendora Local Hazard Mitigation Plan & Safety Element Update

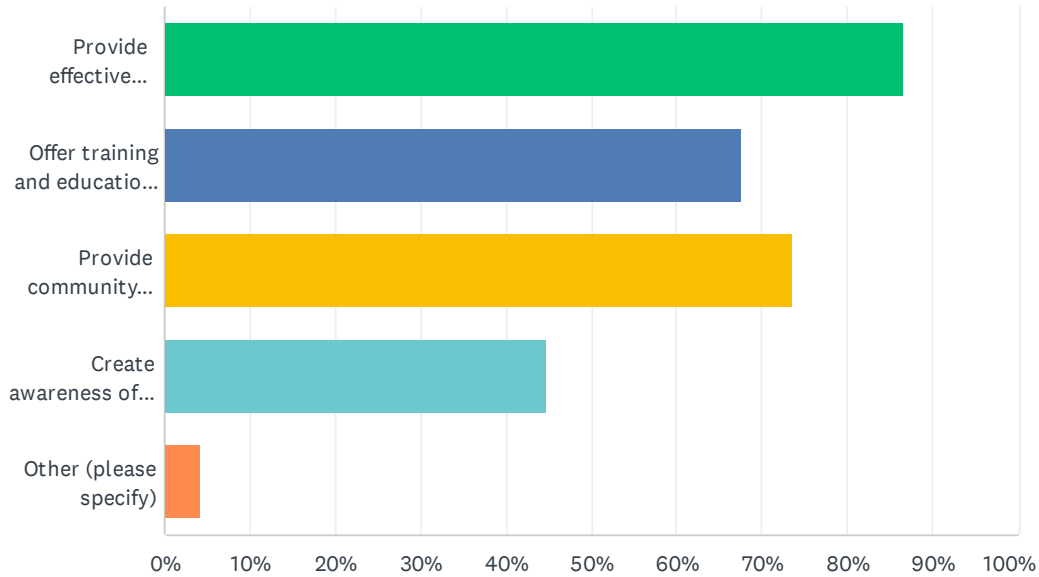


City of Glendora Local Hazard Mitigation Plan & Safety Element Update

ANSWER CHOICES	RESPONSES	
None of the above	2.44%	4
Auto-dial information from "911" center	8.54%	14
Books and/or magazines	6.71%	11
Community Emergency Response Training (CERT) classes	14.63%	24
Chamber of Commerce	5.49%	9
City/Agency newsletters	26.22%	43
City/Agency website	28.66%	47
Community safety events	13.41%	22
County website	3.05%	5
Direct mail	20.73%	34
Email	37.80%	62
Fair booths and/or festivals	4.27%	7
Faith-based institutions	1.83%	3
Fire Department	6.71%	11
Informational brochures	9.15%	15
Law enforcement	4.88%	8
National Weather Service website	7.32%	12
Non-governmental organizations (Red Cross)	0.00%	0
Public awareness campaigns (Flood Awareness Week; the Great Shakeout)	10.37%	17
Public library	3.66%	6
Public meetings, workshops, and/or classes	10.37%	17
Radio based media (news and public service announcements)	6.71%	11
Schools and academic institutions	2.44%	4
Social media (Twitter, Facebook, LinkedIn, Instagram)	34.15%	56
State/Federal website	0.61%	1
TV based media (news and public service announcements)	5.49%	9
Word of mouth	1.22%	2
Total Respondents: 164		

Q11 How can your City, County or other Agencies help you become better prepared for disaster? Choose all that apply.

Answered: 163 Skipped: 1



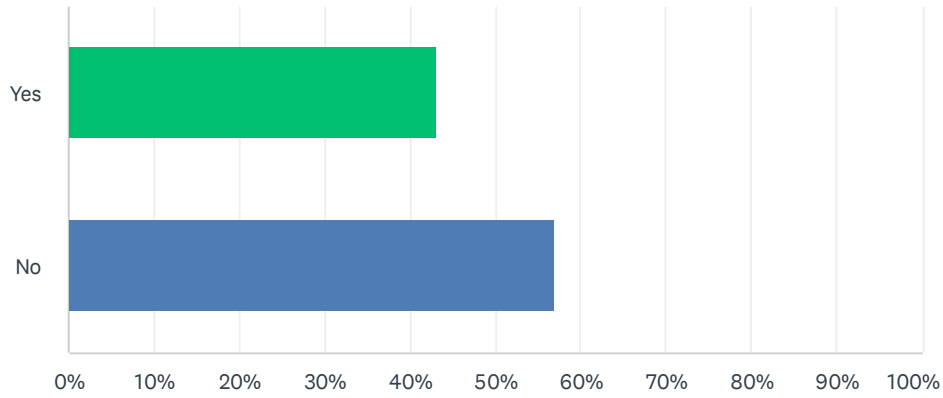
ANSWER CHOICES	RESPONSES	
Provide effective emergency notifications and communications in a disaster	86.50%	141
Offer training and education to residents and business owners on how to reduce risk	67.48%	110
Provide community outreach regarding emergency preparedness and evacuation procedures	73.62%	120
Create awareness of special needs and vulnerable populations	44.79%	73
Other (please specify)	4.29%	7
Total Respondents: 163		

Q12 Please utilize the space below to provide any additional comments regarding local hazards, disasters, and preparedness.

Answered: 21 Skipped: 143

Q13 Would you like to review and comment on the drafts of the Glendora Local Hazard Mitigation Plan and Safety Element?

Answered: 158 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	43.04%	68
No	56.96%	90
TOTAL		158

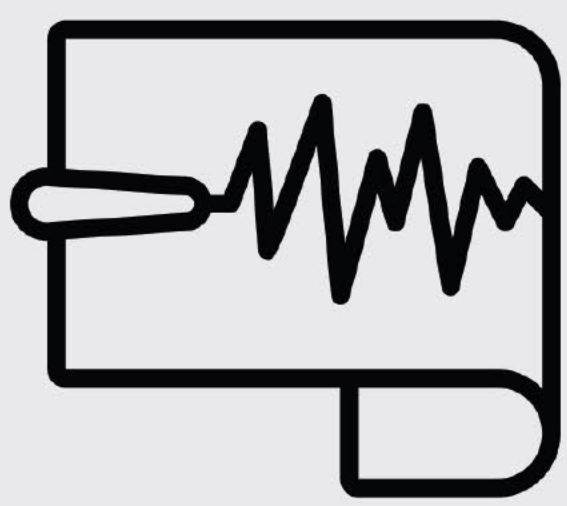
TAKE THE SURVEY HERE:



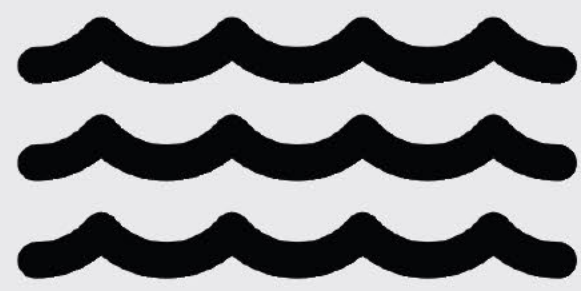
[HTTPS://WWW.SURVEYMONKEY.COM/R/FPNX2TK](https://www.surveymonkey.com/r/fpnx2tk)

SAFETY ELEMENT UPDATE AND LOCAL HAZARD MITIGATION PLAN

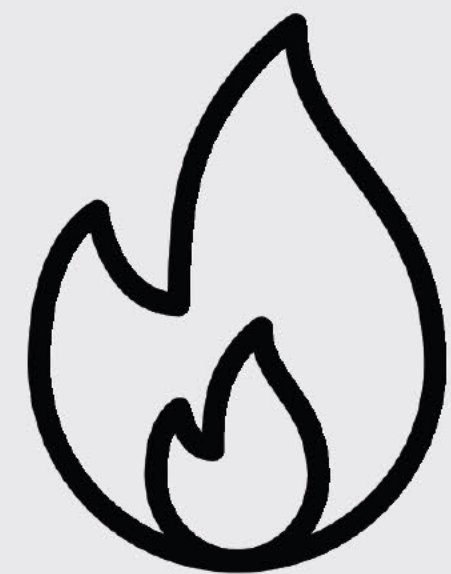
THE CITY IS ASSESSING ITS VULNERABILITY
TO NATURAL AND MANMADE HAZARDS AND NEEDS YOUR
INPUT ON TOPICS SUCH AS:



**SEISMIC
HAZARDS**



**FLOOD &
DROUGHT**



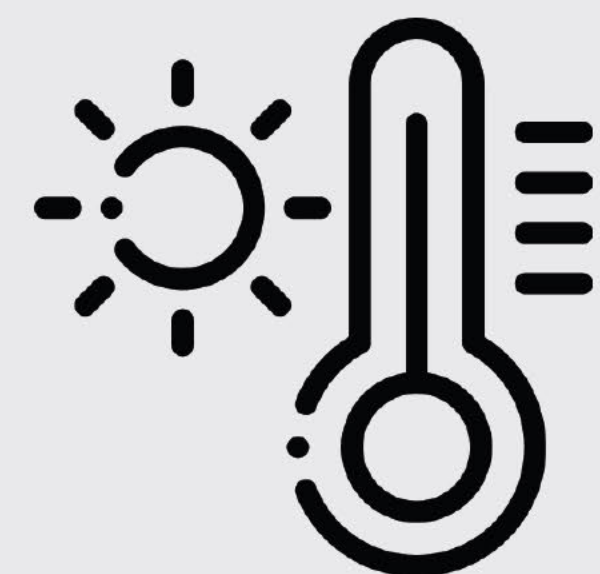
WILDFIRE



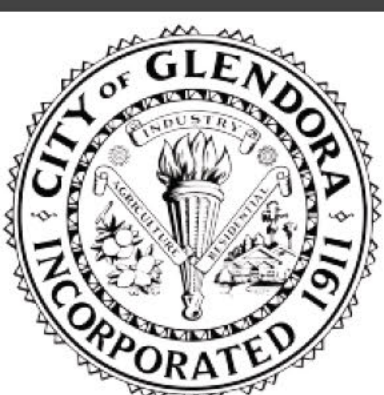
**LANDSLIDE &
MUDFLOW**



**DAM/RESERVOIR
FAILURE**



**SEVERE
WEATHER**



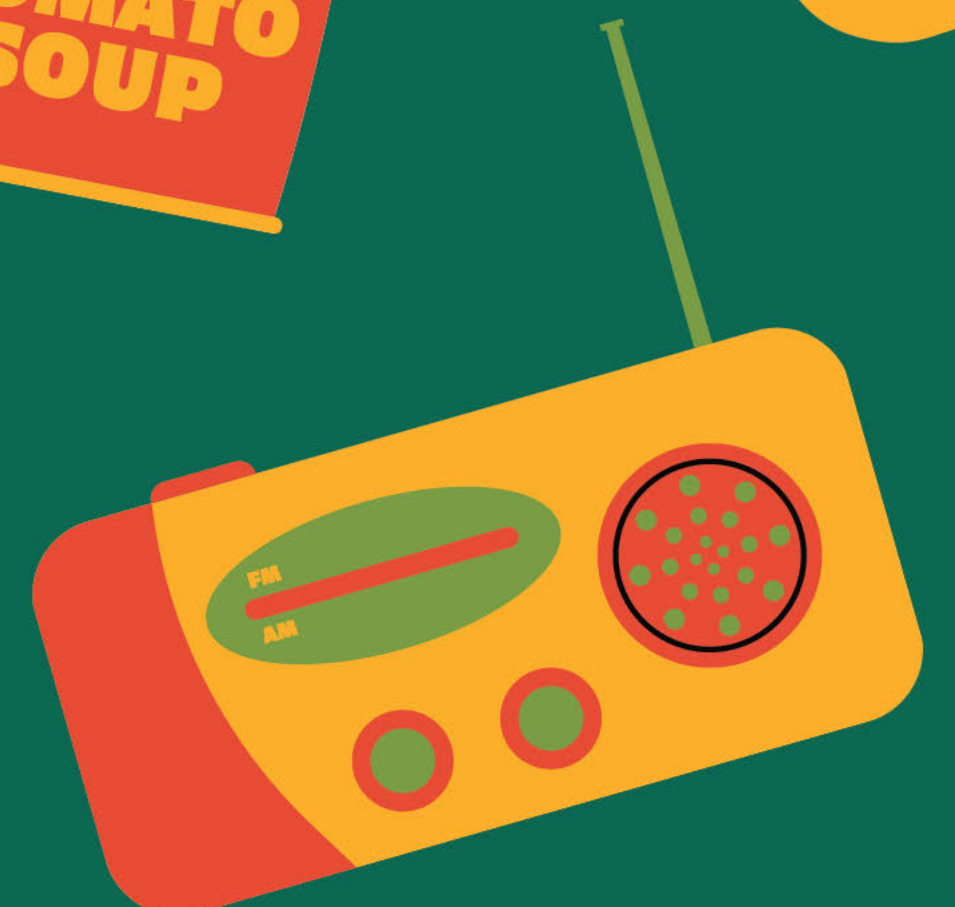
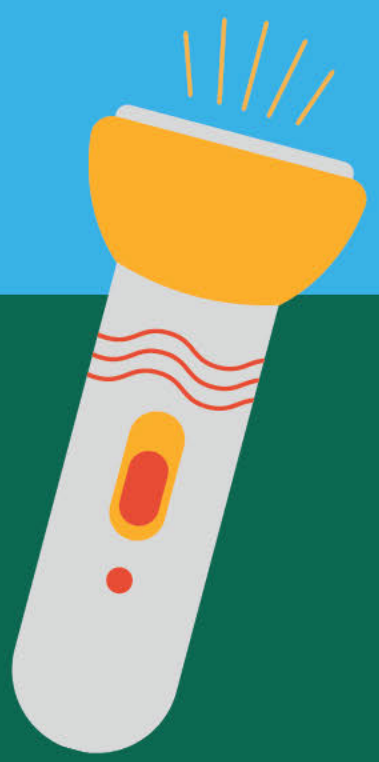
TO LEARN MORE AND SHARE YOUR INPUT, VISIT:
[HTTPS://WWW.CITYOFGLENDORA.ORG/DEPARTMENTS/COMMUNITY-DEVELOPMENT/
ADVANCED-PLANNING-COMMUNITY-ENGAGEMENT](https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement)

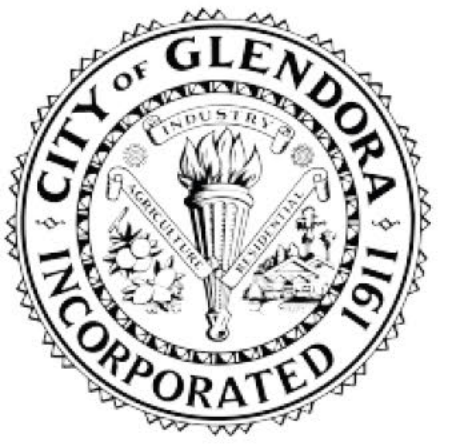
EMERGENCY KIT

RAFFLE

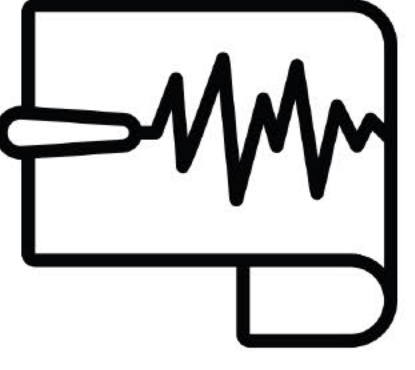
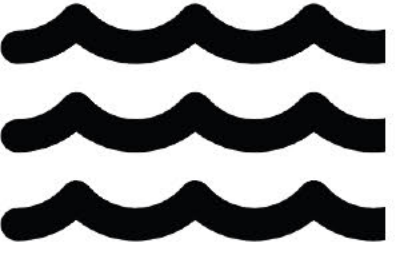
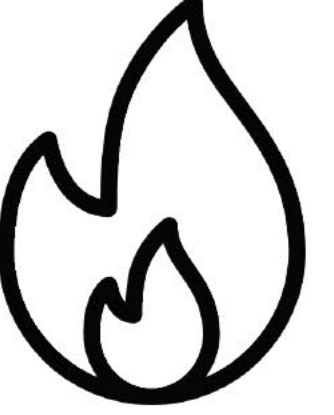

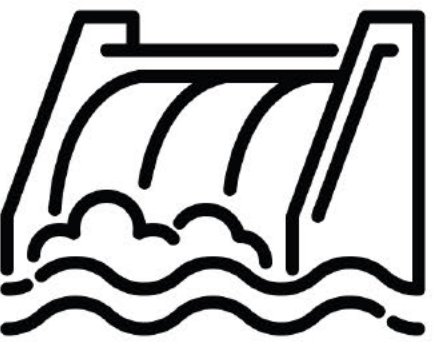
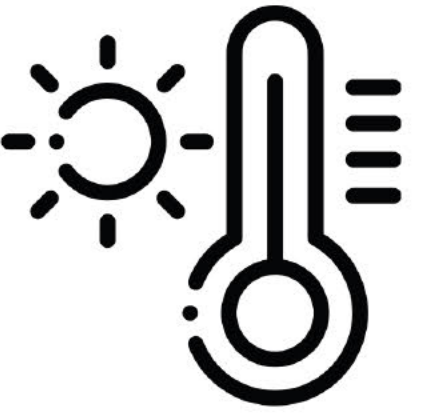
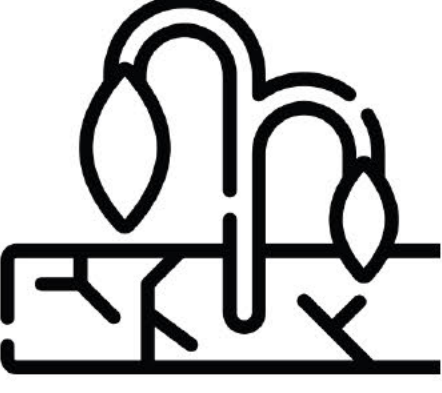
*Enter
Now!*

**Supplies!
Gift card!**












Below is a list of natural hazards that may affect the City of Glendora. Please use a Post-It note to write your responses to each of the prompts and stick them to the board.

Natural Hazard	How does the hazard affect your home, work, or neighborhood?	What actions can be taken to reduce the risk or vulnerability?	What else would you like us to know?
 Seismic Hazards (earthquake, liquefaction, landslide)			
 Flood			
 Wildfire			
 Landslide and Mudflow			
 Dam or Reservoir Failure			
 Severe Weather (Santa Ana winds, heavy rain storms, extreme heat)			
 Drought			

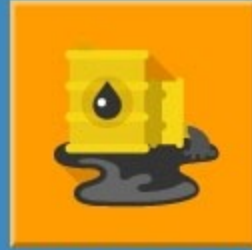


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Natural Hazard	How does the hazard affect your home, work, or neighborhood?	What actions can be taken to reduce the risk or vulnerability?	What else would you like us to know?
 Seismic Hazards (earthquake, liquefaction, landslide)	Transportation don't drive live on DMV Earthquake Stability	You have to check with your neighbors! each other! Earthquake Structure foundation checks - provide people with info California Brace & Bolt Program - retrofit - building earthquake drive to do	Communication how will residents be notified? Mosquitos Older times if damage where to go - seismic Schools - # of kids! Impact on school system Hospitals - capacity; flexibility; availability
 Flood	Concern for my family's safety Impacted	Wildfire Wildfire (House in two square feet)	Financial impact of wildfire and insurance Mitigating against responsible recreation use: on edge of fire
 Wildfire	CEDAR FIRE 2003 having burned area before the fire hillsides - landslide mudflow - wildfire	Wildfire Wildfire (House in two square feet)	Wildfire Wildfire
 Landslide and Mudflow	hillsides - landslide mudflow - wildfire	Wildfire Wildfire (House in two square feet)	Wildfire Wildfire
 Dam or Reservoir Failure	to much water	Wildfire Wildfire (House in two square feet)	Wildfire Wildfire
 Severe Weather (Santa Ana winds, heavy rain storms, extreme heat)	localized flooding from rains cloud seeding	Winds xx fences blow down!! Trees! from city trees	damage from heavy rain windows taking electrical root came in Cooling Center where to go during outage generators during outages WINDS Tree removal and development
 Drought	Water Availability Drought resistant landscaping	Mulch your garden!! Water use... Native plants	Plant more native plants More plants native to Glendora (not just California) Tree removal and development



DISASTER HAPPENS ARE YOU READY?



THE PREPARE FAIR

GLENDORA EMERGENCY PREPAREDNESS DAY | THURSDAY, SEPTEMBER 14TH | 3PM - 7PM

PREPAREDNESS TIPS

EMERGENCY VEHICLES • PET PREPAREDNESS • HAM RADIOS • FIRE ALARMS
KNOW YOUR EVACUATION ZONE • HANDS ONLY CPR • UTILITIES & MORE!

FEATURED

Glendora Police Dept. • SCE • Falck Ambulance LA County Fire Dept. • CERT • Red Cross • CA Dept. of Forestry • GEARS • Inland Valley Humane Society • Emanate Health • Glendora Library • LA County Dept of Health • Dept. of Insurance

PRESENTATIONS

3:30 - 4:30 Pillowcase Project (Elementary Kids) by Red Cross
4:45 - 5:15 Fire Safety by LA County Forestry
5:30 - 6:00 Basic Emergency Preparedness by Glendora CERT
6:15 - 6:45 Safer from Wildfires by Dept. of Insurance



SEPTEMBER 14TH | 3PM - 7PM

JOIN US! CIVIC CENTER PARKING LOT 116 E. FOOTHILL BLVD (BEHIND CITY HALL)









TAKE THE SURVEY HERE:

[HTTPS://WWW.SURVEYMONKEY.COM/R/FPNX2TK](https://www.surveymonkey.com/r/FPNX2TK)

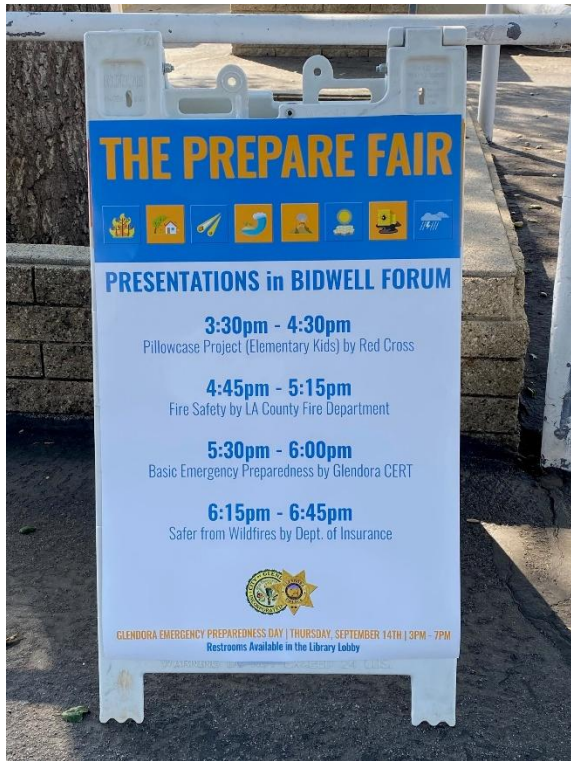
SAFETY ELEMENT UPDATE AND LOCAL HAZARD MITIGATION PLAN

THE CITY IS ASSESSING ITS VULNERABILITY TO NATURAL AND MANMADE HAZARDS AND NEEDS YOUR INPUT ON TOPICS SUCH AS:

 SEISMIC HAZARDS	 FLOOD & DROUGHT	 WILDFIRE
 LANDSLIDE & MUDFLOW	 DAM/RESERVOIR FAILURE	 SEVERE WEATHER

TO LEARN MORE AND SHARE YOUR INPUT, VISIT:
[HTTPS://WWW.CITYOFELENDORA.ORG/DEPARTMENTS/COMMUNITY-DEVELOPMENT/ADVANCED-PLANNING-COMMUNITY-ENGAGEMENT](https://www.cityofelendora.org/departments/community-development/advanced-planning-community-engagement)





City of Glendora

COMMUNITY MEETING

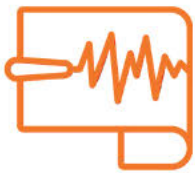


The City is preparing an update to their **Local Hazard Mitigation Plan** and needs your input!

APRIL 17, 2024
10:30 AM

CHARTER OAK UNIFIED SCHOOL DISTRICT
STUDENT AND FAMILY RESOURCE CENTER
303 S. Glendora Ave.
Covina, CA 91724

The Local Hazard Mitigation Plan will identify and assess the City's vulnerability to natural and manmade hazards such as:



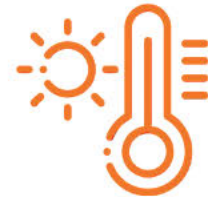
Seismic



**Flood &
Drought**



Wildfire



**Severe
Weather**

and will identify specific actions that can be taken to reduce the risk from the hazards. At the meeting, you'll have the opportunity to share your concerns, ideas, and suggestions related to hazards in the City.

Learn More

To learn more, visit the City's website at:
<https://www.cityofglendora.org>

Ciudad de Glendora

JUNTA COMUNITARIA

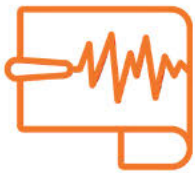


¡El Ayuntamiento está preparando la actualización de su **Plan Local de Mitigación de Peligros** y necesita su opinión!

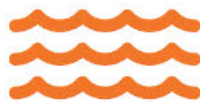
**17 DE ABRIL, 2024
10:30 AM**

DISTRITO ESCOLAR UNIFICADO DE
CHARTER OAK
CENTRO DE RECURSOS PARA
ESTUDIANTES Y FAMILIAS
303 S. Glendora Ave.
Covina, CA 91724

El Plan Local de Mitigación de Peligros identificará y evaluará la vulnerabilidad de la Ciudad a peligros naturales y los causados por el hombre tales como:



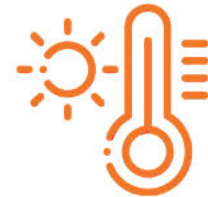
Sísmos



**Inundaciones
y sequías**



**Incendios
forestales**



**Clima
severo**

e identificará las medidas específicas que pueden tomarse para reducir el riesgo de estos peligros. En la junta, tendrá la oportunidad de compartir sus preocupaciones, ideas y sugerencias relacionadas con los peligros que ponen en riesgo a la ciudad.

Más información

**Para obtener más información, visite el
sitio web de la Ciudad en:**

<https://www.cityofglendora.org>

Hazard Planning in Glendora

Focus Group Meetings

April 2024



CityOfGlendora.org

Agenda



Introductions



Meeting Purpose



What is a LHMP?



Discussion



How You Can Help

Introductions

Name

Fun Fact



Purpose of Our Meeting Today

We want to know
YOUR experience with
and thoughts about
hazards in Glendora



Hazard Examples



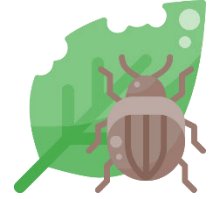
Earthquakes



Lighting Storms



Wildfires



Pests



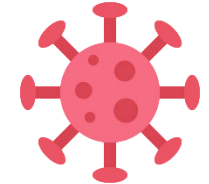
Landslides



Extreme Heat



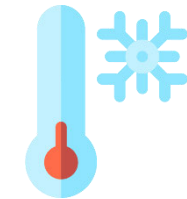
Windstorms



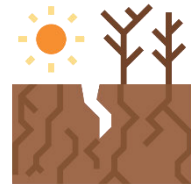
Disease



Floods



Extreme Cold



Drought



Cyber Attacks

What is a LHMP?

Local:	Specifically for the City of Glendora
Hazard:	Identifies hazards, likelihood of occurring, and community's risk/vulnerability to the hazard
Mitigation:	Finds ways to lessen the risks/vulnerabilities and make the hazards less harmful
Plan:	Identify long-term policies and actions to increase resilience and reduce vulnerabilities

Why is the City Preparing a LHMP?

01

Make the community more “disaster resistant”

02

Understand threats and hazards, including risks and community’s vulnerability to risks

03

Maintain eligibility for federal emergency funds



Discussion

Hazards Identified



Earthquakes



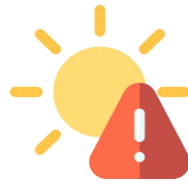
Heavy Rain Storms



Wildfires



Landslides/Mudflow



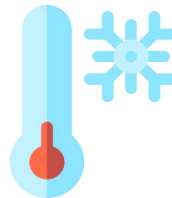
Extreme Heat



Santa Ana Winds



Floods & Dam Failure



Extreme Cold



Drought

Discussion Questions

Do you have any personal experiences with these hazards in Glendora?

What are the most likely types of hazards that could affect you and do you feel prepared for them?

Do you know where to go and what to do in an emergency?

Do you know where to find information about hazards and emergencies in Glendora?

What is your biggest concern about any of these hazards or in an emergency?

Are there any hazards missing from the list that we should consider in Glendora?

How You Can Help



By participating today!



Provide feedback on the Draft Plan:

<https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement>



Send comments and questions to:

Julie Linger

jlinger@glendorapd.org

How We Use Your Input

1

Input from today's meeting helps us inform and create the Draft Plan

2

We share the Draft Plan with you for additional input

3

We revise the Draft Plan based on your feedback and share it with:

- ✓ California Governor's Office of Emergency Services
- ✓ Federal Emergency Management Agency
- ✓ Glendora City Council

Timeline

- **Draft Plan for Public Review**
 - Anticipated late Summer/early Fall
- **Revise Draft Plan and submit to Cal OES/FEMA**
 - Anticipated late Fall/early 2025
- **Final Plan for City Council Adoption**
 - Anticipated Spring/Summer 2025



Thank You!

For additional information and updates:

<https://www.cityofglendora.org/departments/community-development/advanced-planning-community-engagement>

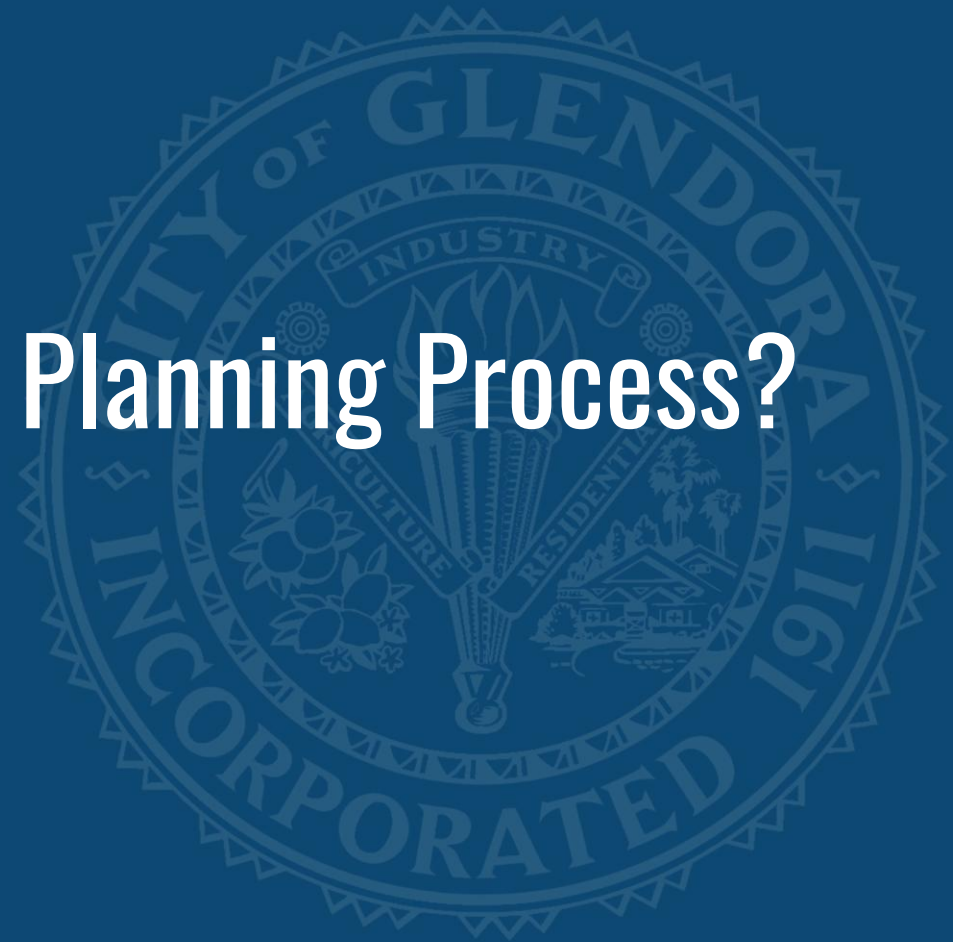
Emergency preparedness website:

<https://www.cityofglendora.org/departments-services/police/emergency-preparedness>

Smart911: Create a profile at

<https://www.smart911.com/smart911/ref/reg.action?pa=glendorapd>

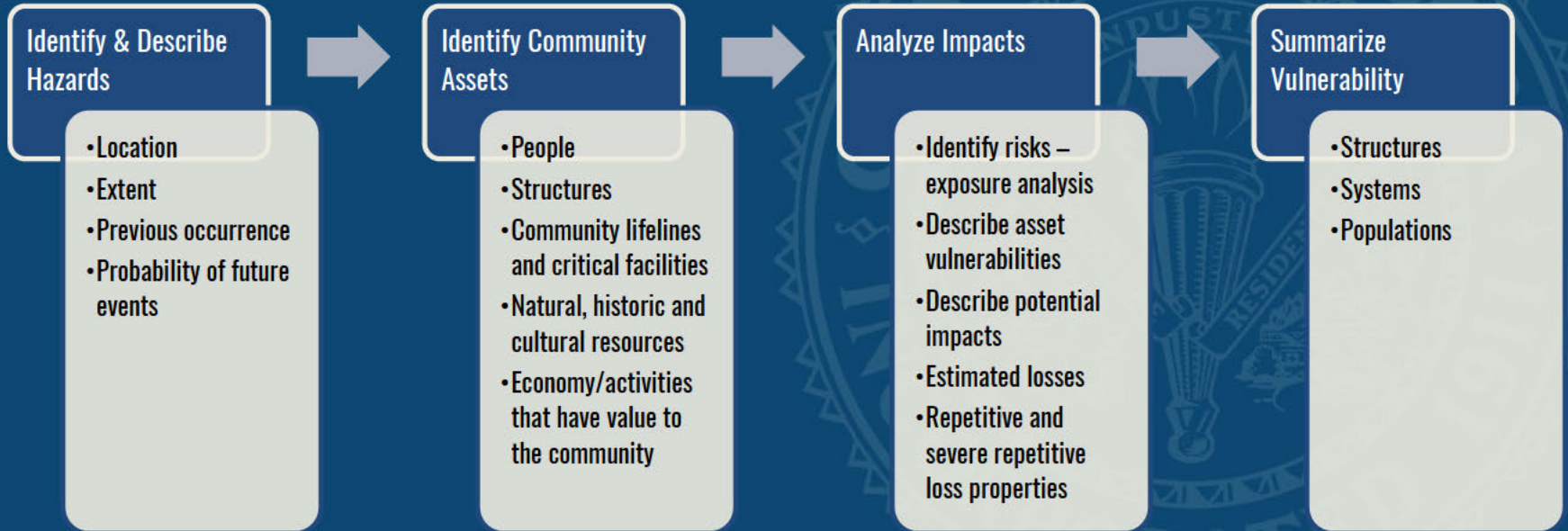
What is the LHMP Planning Process?



LHMP PROCESS



LHMP PROCESS – RISK ASSESSMENT



IDENTIFY COMMUNITY ASSETS

- **Assets are anything important to the character and function of a community**
 - **People, including underserved communities and socially vulnerable populations**
 - **Structures, including new and existing buildings**
 - **Community lifelines and other critical facilities**
 - **Natural, historic and cultural resources**
 - **Economy and other activities that have value to the community**

Mitigation Strategy

Goals: What long term outcomes do you want to achieve?

- Evaluate and prioritize goals and mitigation actions to reduce or avoid long-term vulnerabilities associated with each hazard

Action Plan: How will the actions be prioritized and implemented?

Actions: What specific actions will local government, community organizations, and others take to reduce risk to hazards?

Mitigation Examples 1

- Local plans and regulations
 - General Plan
 - Zoning ordinances
 - Subdivision regulations
 - Building codes
 - Capital improvement programs
- Structure and infrastructure projects
 - Acquisition, relocation, elevation of flood-prone structures
 - Levees and floodwalls
 - Seismic retrofitting
 - Strengthening critical facilities
 - Burying utility lines
 - Stormwater diversion, retention, or detention

Mitigation Examples 2

- **Natural Systems Protection**
 - Floodplain protection
 - Wetlands preservation
 - Coastal or riverine setbacks
 - Sediment and erosion control
 - Forest and vegetative management
- **Education and Awareness Programs**
 - Risk communication
 - Community events
 - Brochures/written materials
 - Website with maps/information
 - Educational programs

