General Plan 2012-2030

Health and Safety Element

(Noise and Safety Elements Combined)

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Health and Safety Element

The City of Bradbury General Plan Health and Safety Element consists of the combination of the State required Noise Element and Safety Element. The required General Plan Elements have been combined for clarity and to eliminate redundancy.

Noise Chapter

Purpose

The Noise Chapter of the Bradbury General Plan establishes guidelines for controlling noise in the City. The Noise Chapter examines the characteristics and effects of noise. It describes State and Federal guidelines relating to noise control. An evaluation of the existing noise environment is included. This portion of the Health and Safety Element contains a discussion of the anticipated future noise environment. The Chapter identifies sensitive land uses and potential noise sources that may cause impacts.

As mandated by the California Government Code Section 65302(f), the Noise Chapter follows the guidelines established by the State Office of Planning and Research. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that "minimizes the exposure of community residents to excessive noise." Noise level contours must be mapped and the conclusions of the element used as a basis for land use decisions.

The element must include implementation measures and possible solutions to existing and foreseeable noise problems. Furthermore, the policies and standards must be sufficient to serve as a guideline for compliance with sound transmission control requirements. The noise element directly correlates to the land, circulation, and housing elements. Pursuant to these requirements, the Noise Chapter must indicate noise levels from traffic along major roads and highways. Noise contours are used to illustrate noise levels in areas adjacent to major roadways. The noise contour map identifies existing noise levels in the City and noise levels anticipated from projected traffic volumes.

The Chapter provides a framework within which future planning and noise-related decisions will be made and implemented. Development and traffic have a direct bearing on noise in the local environment. The community survey conducted as part of General Plan Update found that most residents view the relatively quiet and noise free environment of the City as an important amenity that must be preserved.

The Noise Chapter of the Health and Safety Element includes goals, policies, and objectives that will aid in the creation and maintenance of an acceptable noise environment for the City's residents. The single-family nature of the community is the use of land that creates the least noise impacts. Although single-family dwellings create minimal noise generators it is important to review the surrounding uses of land that may cause concern to the community. In residential areas such

as Bradbury major contributors to noise are transportation, construction, garden equipment, as well as human and animal services. Additionally, sensitive noise receptors have been identified and goals and policies have been created to protect these uses from excessive noise impacts.

Noise Chapter Objective

The objective of the Noise Chapter is to maintain and preserve the existing quiet and relative noise free environment in the City. The effects of noise can be eliminated or reduced through regulatory noise controls and responsible land use planning. Noise and land use guidelines have been developed by State and Federal agencies including the Federal Highway Administration, the Environmental Protection Agency, the Department of Housing and Urban Development, the American National Standards Institute, and the State of California.

Relationship to Other General Plan Elements

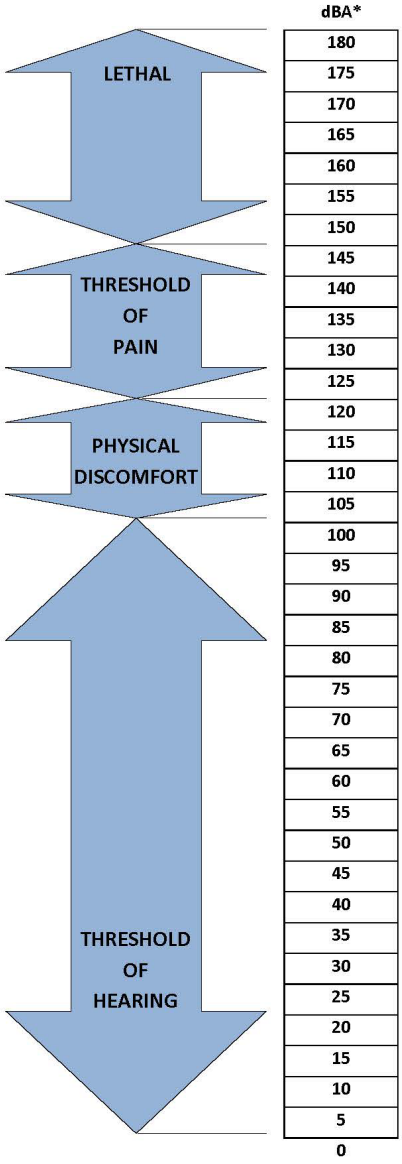
California Planning Law requires that all elements of the General Plan be consistent. While each of the General Plan Elements could be characterized as independent documents, they are also interrelated in the common goal of providing a long-range integrated plan for the ongoing development of the City. The Noise Chapter is most directly related to the Land Use, Circulation, and Community Resources Elements.

Goals, objectives, and policies set forth in all of the General Plan Elements have been reviewed and assessed for internal consistency.

Overview of Noise Chapter Issues

Noise is defined as any unwanted sound. Sound is defined in terms of loudness (amplitude) and frequency (pitch). The standard unit of measurement for loudness is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a frequency-dependent rating scale rates the level of noise to the sensitivity of the human ear. The A-weighted decibel scale (dBA) discriminates against frequencies in a manner approximating to the sensitivity of the human ear. Decibels are based on the logarithmic scale, in terms of human response to noise. Everyday sounds normally range from 20 dB (very quiet) to 100 dB (very loud).

The Single Event Noise Exposure Level (SENEL) is the most appropriate noise level-duration rating scale for a single noise event. The SENEL is given in decibels. The noise exposure level of a single event is measured over the time interval between the initial sounds to the final sound for which it exceeds the threshold of acceptable noise level. A single event is a solitary occurrence such as a train passing by or an aircraft flying overhead (overflight). Examples of various sound levels due to varying activities are shown in Exhibit H-S Noise No. 1.



*The unit of sound is the decibel (dB). The loudness of sound is typically measured using a sound meter, the A-Scale of which corresponds closely to the way the human ear perceives sound. Thus the sound level for noise evaluations is frequently expressed in dBA.

Exhibit H-S Noise No. 1

ACOUSTICAL SCALE

Cumulative noise measurements have been developed to assess community response to noise. These scales attempt to include the loudness of each event, the duration of these events, the total number of events, and the time of day that these events occur, into one single number rating scale. The cumulative noise measurement includes the Equivalent Noise Level (Leq) and the Community Noise Equivalent Level (CNEL). The Leq represents the average sound level energy for a one-hour period and employs an A-weighted decibel correction, which corresponds to the optimal frequency response of the human ear. CNEL is a 24-hour, time-weighted annual noise level and is a measure of the overall noise exposure for a 24-hour period. So that, noise levels during the evening (7 p.m. to 10 p.m.) are penalized by 5 dB and noise levels at night (10 p.m. to 7 a.m.) are penalized by 10 dB.

Environmental factors that impact noise levels include: wind direction and speed; temperature and humidity; characteristics of the ground surface; the presence of turf, shrubbery, and trees. This is particularly true where the view of the target roadway is interrupted by isolated buildings, bushes, scattered trees, or if the intervening ground is soft or covered with vegetation. Another important factor is the location of the source or the receiver. If either the source or the receiver is located more than three meters above the ground the level of the intruding noise will be affected. In an area which is relatively flat and free of barriers or impediments, the sound resulting from a single source spreads in a spherical manner away from the source (similar to the way waves are formed after a rock is thrown into a pond). The sound level decreases by six decibels for each doubling of distance or 20 decibels for each factor of ten in distance. This applies to fixed noise sources and mobile noise sources which are temporarily stationary, such as an idling truck or other heavy equipment operating within a confined area (such as industrial processes).

Characteristics of Traffic Noise

Generally, it can be shown that a 26 percent increase in traffic volume will cause a 1.0 dBA increase in CNEL. Doubling the number of vehicles on a given route increases the adjacent noise levels by 3.0 dBA, but changing the vehicle speed has an even more dramatic effect. Increasing the vehicle speed from 35 to 45 mph raises the adjacent noise levels approximately 3.2 dBA. Reducing vehicle speeds from 35 to 30 mph decreases adjacent noise levels by 1.5 dBA on major roadways. A speed decrease from 40 mph to 35 mph also reduces adjacent noise levels by 1.6 dBA. Consequently, lowering motor vehicle speeds can have a significant positive impact in terms of reducing adjacent noise levels.

Existing Noise Environment

Bradbury is exclusively zoned and developed with single-family residential detached dwelling units. Outdoor noises generated from single-family residences are associated with yard and agricultural grove maintenance, barking dogs, children playing, and other typical sounds emanating from low density residential communities. Indoor noise includes appliances, radio, television as well as people and animals. Noise levels acceptable for commercial and industrial uses in other communities are not acceptable for this residential community. The large parcels have significant setbacks and they generally contain dense landscaping. The result is that noises emanating from adjacent uses of land are adequately buffered for the most part. The Irwindale Raceway located south of the City of Bradbury has been identified as a noise source that has on occasion caused distress to some residents. The City of Irwindale and the Raceway officials are aware of the noise impacts created by activities at the Raceway. Efforts have been made to reduce the offending noise. Dwelling units constructed within the past several decades are well

insulated and they use double and triple pane windows. These construction techniques substantially reduce the level of sound within the interior of a dwelling unit.

The highest noise levels within the community can be found adjacent to major arterial roadways located beyond the City's boundary. Local collector streets such as Lemon Avenue, Royal Oaks Drive North, and Mount Olive Drive are used by City and area residents during the morning and evening peak traffic periods. Huntington Drive, a major arterial street, and the I-210 and I-605 freeways are the significant sources of noise that have an impact on the community. Both freeways are located to the south and beyond the City's boundary. Since noise travels upwards, the impact may be greater on those properties located close to the major arterial roads and freeways and to dwellings located on the south-facing slopes.

Two types of noise sources have been considered: 1) stationary sources and 2) mobile sources. Stationary noise is attributed to air conditioning units, pool equipment, audio or television usage, power tools, lawn mowers, and other typical household equipment. Stationary noises are usually of short duration such as lawn mowers and power tools. Air conditioning and pool equipment noises can be reduced through design measures (placement and screening). The mobile noise source is vehicular traffic. The major sources of noise within the City are associated with transportation-related activities such as motor vehicles, aircraft, and railroads. All of these significant mobile noise generators are located beyond the Bradbury city limits. These sources include the Interstate I-210 and I-605 freeways.

The major traffic noise includes vehicles operating on major arterials that serve the City including Royal Oaks Drive (bordering the City) and Huntington Drive, Buena Vista Street, Highland Avenue, and Duarte Road. Interstate I-210 freeway generates significant noise levels since it is a constant and consistent noise especially during peak traffic periods. The railroads generate higher levels of noise but only for a short duration of time.

There are no industrial uses in close proximity to the residents of Bradbury. Noise measurements taken along Mount Olive Drive and Royal Oaks Drive (City of Duarte General Plan 2007) indicated that there was no noise level greater than 65 CNEL.

Controlled gate-guarded neighborhoods within the City restrict undesirable traffic and thus reduce or eliminate significant traffic-related noise. Traffic related noise is minimal within the community of Bradbury due to the lack of major arterial roadways. The Bradbury public street system is comprised of local and local collector streets only. Most dwellings located near the internal collector streets and the exterior arterial highways are buffered from intruding noise through the use of walls.

The average residential lot in the City of Bradbury is substantially larger than single-family residential lots in adjacent communities. The larger parcels allow for landscape buffering and significant separation between dwelling units and setbacks from local streets. The highest ambient noise level in the community (64 dbA) is generated by traffic using Royal Oaks Drive (located in the City of Duarte). Noise in this area is attributed to traffic south of the old Pacific Electric Railroad right-of-way, which is also outside the Bradbury city limits.

To assess the existing noise environment, field measurements were taken at six locations in the City (refer to Exhibit H-S Noise No.2). Two readings were taken at each location, one 10-minute reading and one 1-minute reading. The results of the noise survey are summarized below in Table H-S Noise No.1. The highest noise levels are expected in the southern area of the City. This is

due to the higher density of development and the presence of through traffic in that area. Development in these areas should be subject to detailed noise analysis when there is a potential to exceed acceptable noise levels.

Future Noise Environment

The Land Use Plan for the City of Bradbury shows that the City will remain exclusively single-family residential. This land use is not expected to result in any significant increases in local traffic. Thus, future development under the provisions of the Land Use Plan is not likely to result in any significant changes in the ambient noise levels of the community.

Residential development is a noise-sensitive use. Any development along major roadways in the City shall be subject to noise evaluation to determine the need for specific noise control measures, in order to achieve an acceptable noise environment. Land uses and activities which may generate excessive noise shall also be regulated to prevent any adverse effect on the City's future noise environment.

Table H-S Noise No. 1
Existing Noise Measurements

EXISTING NOISE MEASUREMENTS						
Site	**Location**	L_{max}	L_{10}	L_{33}	L_{50}	L_{90}
1	Lemon Ave. west of Winston Ave	55	50	50	50	54
2	Deodar Ln. near Sycamore Ln.	52	50	50	50	54
3	Sycamore Ln. near Oak Mtn. Rd.	55	52	50	50	45
4	Royal Oaks Dr. west of Winston Ave.	64	54	50	45	40
5	Mount Olive Dr. @ north City boundary	61	58	50	50	50
6	Mount Olive Dr. at Gardi St.	62	60	55	50	50

Lmax = The Maximum sound level recorded during the noise measurement period.
L10 = The sound level exceeded 10 percent of the noise measurement period.
L33 = The sound level exceeded 33 percent of the noise measurement period.
L50 = The sound level exceeded 50 percent of the noise measurement period.
L90 = The sound level exceeded 90 percent of the noise measurement period, (*also considered as the Background Noise Level).*

The main source of noise in the City is traffic on roadways. Traffic noise affects noise-sensitive land uses that may be located along and near these routes. Because of the primarily low density residential nature of the City and the presence of many private roads, future development in Bradbury is not expected to result in major increases in traffic volumes and noise along City streets. Increases in traffic volumes on major roadways are expected to be generated by development located outside the City. This will result in increased noise levels along selected roadways. Table H-S Noise No. 2 presents the results of a noise modeling analysis based on future traffic volumes. It indicates the distance from the roadway centerline to the 65, 60, and 55 CNEL noise contours.

Table H-S Noise No. 2
Existing and Future Roadway Noise Levels (CNEL)

EXISTING AND FUTURE ROADWAY NOISE LEVELS (CNEL)					
Roadway Segment	**Distance (in feet) from Roadway Centerline to CNEL (Db)**				
	65 CNEL	**60 CNEL**	**55 CNEL**	**CNEL @ 50 feet**	**Change in CNEL (1)**
Mount Olive Dr. North of Royal Oaks Ln.	**0**	**40**	**90**	**55**	**0**
Royal Oaks Dr. west of Woodlyn Ln.	**20**	**45**	**80**	**54**	**0**
Deodar Ln. north of Woodlyn Ln.	**0**	**0**	**40**	**48**	**0**
Note: 1 Changes in CNEL compared noise levels from existing traffic to projected traffic 50 feet from the roadway centerline.					

Noise Sensitive Land Uses

Land uses in Bradbury and the immediate area considered noise sensitive by the State of California include: schools, hospitals, rest homes, and long-term care and mental care facilities. There are no hospitals, rest homes, or long-term medical or mental care facilities within the City of Bradbury. The Royal Oaks Elementary School is located in the southeastern corner of the City. The Be Royal Oaks (formally Royal Oaks Manor) retirement/assisted living care facility is located on Royal Oaks Drive North, east of Braewood Drive. This facility is located adjacent to the City of Bradbury in an unincorporated portion of Los Angeles County.

Noise Mitigation Plan

Transportation noise is the prevalent noise issued faced by Bradbury residents. Traffic using arterial highways and freeways located beyond the City's jurisdiction poses the most significant noise generator that can impact the City's tranquil and peaceful environment. Peak a.m. and p.m. traffic periods generate the most noise. Local governments have little direct control of transportation noise at the source. State and Federal agencies have the responsibility to control vehicle noise emission levels. The most effective methods cities have to mitigate transportation noise on their communities are by use of effective site planning and the construction of noise barriers.

Noise impacts can be mitigated in three basic ways: 1) reduce the sound level of the noise generator; 2) increase the distance between the source and the receiver; and 3) insulate the receiver. People must be protected from excessive noise from non-transportation sources. These impacts are most effectively controlled through the application of the City's Noise Ordinance and the City's development design guidelines.

Government Code 65400 requires the legislative body to consider and adopt reasonable and practical means for implementing the General Plan policies. The State felt that this was necessary so that the General Plan will serve as an effective guide for orderly growth and development, and the efficient expenditure of public funds relating to the subjects addressed in the General Plan. The State also requires an annual report to the legislative body, State Department of Housing and

Community Development (HCD), and State Office of Planning and Research on the status of the General Plan and the progress in implementing the General Plan.

***Existing Noise Regulations*.** The primary objective of the City of Bradbury Noise Chapter is to maintain and preserve the existing noise free environment. As indicated previously, the effects of noise can be eliminated or reduced through regulatory noise controls and responsible land use planning. Noise and land use guidelines have been developed by State and Federal agencies including the Federal Highway Administration, the Environmental Protection Agency, the Department of Housing and Urban Development, the American National Standards Institute, and the State of California.

Noise Control Act. In 1972, the Noise Control Act authorized the US Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) with an adequate margin of safety. In March 1974, the EPA published information on Levels of Environmental Noise Required to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA 550/9-74.004). According to this publication, 55 dB Ldn is described as the required maximum noise level to provide an adequate margin of safety for areas with outdoor uses including residences and recreational areas. The EPA report does not establish standards, specifications, or regulations, but identifies safe levels of environmental noise exposure without consideration for the costs to achieve these levels.

Federal Highway Administration (FHWA). The FHWA adopted and published noise abatement criteria for Federally-funded highway construction projects. The FHWA noise abatement criteria, basically, establishes an exterior noise goal of 67 dBA Leq for residential land uses and an interior goal of 52 dBA Leq for dwellings.

Department of Housing and Urban Development (HUD). The Department of Housing and Urban Development (HUD) has adopted environmental criteria and standards for determining project acceptability and necessary mitigation measures to ensure that projects assisted by HUD provide a suitable living environment. The standards include noise limits of 65 dB Ldn for residential areas.

California Streets and Highways Code. Division 1, Chapter 1, Article 6 of this Code requires State funded noise abatement programs for freeway construction or use which will result in noise levels exceeding 55 dBA L_{10} or 52 dBA Leq at existing classrooms, libraries, multi-purpose rooms, and pupil personnel services of public and private elementary and secondary schools. The noise abatement program may include acoustical treatment, elimination of windows, air conditioning, sound buffer structures and other mitigation measures.

Sound Transmission Control Standards in the California Administrative Code, Title 24, Building Standards, Chapter 2.5 outline noise insulation performance standards for new hotels/motels, apartment houses, and dwellings other than detached single-family units. It requires an interior noise level of 45 dB CNEL or less for residential projects. For projects near noise sources (airports, major roads, and industrial areas), an acoustical analysis must be made to show compliance with the standards.

California Motor Vehicle Code. The State of California has adopted noise standards for areas not regulated by the federal government. State standards regulate noise levels of motor vehicles

and motor boats, establish noise impact boundaries around airports, regulate freeway noise affecting classrooms, sound transmission control, occupational noise control, and identify noise insulation standards. The California Motor Vehicle Code sets operational noise limits according to the type of vehicle and date of manufacture.

California Occupational Noise Control Standards. The California Code of Regulations, Title 8, Industrial Relations, Chapter 4, as revised and effective September 28, 1984, outlines permissible noise exposure at a work place.

City Noise Ordinance. The City of Bradbury adopted a Noise Ordinance to establish acceptable noise levels generated on private property in residential neighborhoods. It is designed to control unnecessary, excessive and annoying sounds generated from stationary sources that may impact adjacent property. It differentiates between environmental and nuisance noise. Environmental noise is measured under a time average period while nuisance noise cannot exceed the established Noise Ordinance levels at any time. Chapter 9.06.110 of the Bradbury Development Code establishes controls regarding unnecessary, excessive, and annoying noise. No person shall create or allow the creation of noise on any residential property which causes the noise level to exceed the actual measured median ambient noise level, or the following presumed ambient noise level, whichever is greater:

Time	Allowable Noise Level - dBA
7:00 a.m. to 10:00 p.m.	55
10:00 p.m. to 7:00 a.m.	50

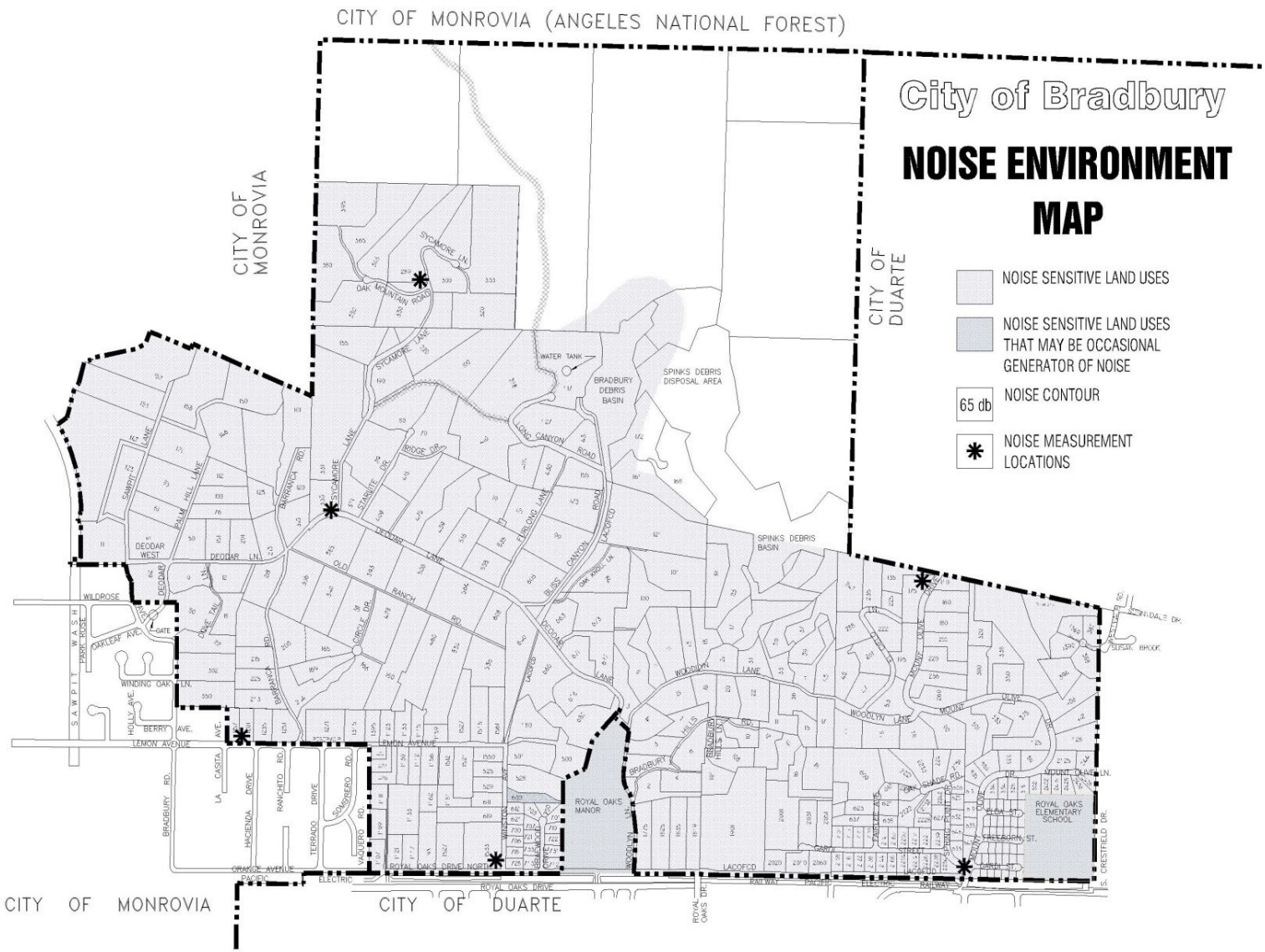


Exhibit H-S Noise No. 2 NOISE CONTOUR MAP

Noise Goals, Objectives and Policies

The City's Noise Control Ordinance provides a means to enforce the existing quiet, noise free environment. The City will continue to:

- Incorporate measures into future residential projects which attenuate exterior noise levels in outdoor activity areas to a maximum of 65 CNEL and interior noise levels to a maximum CNEL of 45 dB.

- Ensure through the design review process that schools are located and designed so that they comply with the acoustical criteria promulgated by the California Collaborative for High Performance Schools (CHPS).

- Enforce State vehicle noise regulations (Section 23130, 23130.5, 27150, 27151 and 38275 of the California Vehicle Code) to curtail the use of vehicles equipped with illegal or faulty exhaust systems and "hot rods" exhibiting tire squeal or excessive exhaust noise.

- Enforce the California Noise Insulation Standards (Title 24 California Building Code) for dwellings to ensure an acceptable maximum interior noise level of 45 CNEL in habitable rooms, and maintain adequate noise insulation.

- Acoustical privacy, consistent with the California Noise Insulation Standards and all existing and future requirements outlined in the State Housing Code, shall be strictly enforced for residential construction.

- No roosters or peacocks are permitted in the City.

Noise Goals:

Noise Goal No. 1. Reduce noise impacts from transportation sources.

Noise Goal No. 2. Develop measures to address non-transportation noise impacts such as those that are generated from surrounding commercial and recreational activities (racetracks, etc.).

Noise Goal No. 3. Establish land uses which are compatible with existing noise levels within the community.

Noise Goal No. 4. Prevent and mitigate the adverse impacts of noise on City residents.

Noise Objectives:

Noise Objective 1. Maintain and reduce where feasible background noise levels emanating from citywide transportation sources.

Noise Objective 2. Identify and mitigate construction activity and other sources of noise that may impact the community.

Noise Objective 3. Careful consideration of noise impacts should be a part of all land use decisions.

Noise Objective 4. Maintain the quiet residential character of the City free from excessive noise from mobile and fixed source generators both Citywide and region-wide.

Noise Policies:

Noise Policy 1. Ensure noise mitigation measures are included in the design of new developments.

Noise Policy 2. Encourage the State Department of Transportation (Caltrans) to continue programs that lead to the reduction of noise levels on the Interstate I-210 and I-605 freeways.

Noise Policy 3. Continue the City's street improvement program to help reduce noise levels.

Noise Policy 4. Encourage the use of acoustical materials in all new residential developments.

Noise Policy 5. Limit delivery, and truck traffic to designated routes.

Noise Policy 6. Ensure residential developments are designed and mitigated to achieve a maximum exterior CNEL of 65 dB and a maximum interior CNEL of 45 dB.

Noise Policy 7. Encourage, support, and enforce all State and Federal legislation designed to abate and control noise pollution.

Noise Policy 8. Encourage the use of rubberized asphalt for resurfacing streets.

Noise Policy 9. Continuously review the Noise Ordinance to ensure noise-generating uses are adequately addressed.

Noise Policy 10. Strive to resolve existing and potential conflicts between noise-generating uses and human activities.

Noise Policy 11. Prohibit significant noise-generating activities on land located near sensitive noise receptors.

Noise Policy 12. Evaluate the noise impacts generated by existing and future projects located in surrounding communities that impact or may impact the Bradbury ambient noise level.

Noise Policy 13. Enforce limits set by the State to control noise levels, particularly those governing motor vehicles.

Noise Policy 14. Ensure that construction noise does not cause an adverse impact to the residents of the City.

Noise Implementation Action Program

The City of Bradbury intends to complete the following items which address the objectives and policies of the Noise Chapter of the General Plan:

Noise Action 1. Review current policies regarding the use of gas-powered maintenance equipment and consider restricting the type of equipment used and duration of operation.

Noise Action 2. The City will continue to enforce the noise ordinance to protect residents from undue disturbance.

Safety Chapter

Purpose

The Bradbury General Plan Health and Safety Element is comprised of two state-mandated general plan elements (Noise and Safety). The Safety Chapter of the Health and Safety Element focuses on those elements of risk to the residents that should be considered in current and future development planning.

The purpose of the Safety Chapter is to protect the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other hazards known to the legislative body; including flooding; and wildland and urban fires.

The Safety Chapter of the Health and Safety Element includes mapping of known seismic and other geologic hazards. It also addresses evacuation routes, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards. Pursuant to Senate Bill (SB) 379, the Safety Chapter addresses climate adaptation and resilience strategies applicable to the City as well.

This Safety Chapter is the primary vehicle for relating local safety planning with the City's land use decisions. The City has established land use policies, standards, and designations based on among other things the criteria set forth in this Safety Chapter. Additionally, local decisions related to zoning, subdivisions, and entitlement permits, for example, will be tied to the Safety Chapter's identification of hazards and hazard abatement provisions. The City of Bradbury Safety Chapter examines those issues related to protecting the community from any unreasonable risks associated with earthquakes, slope instability, flooding, and fire. The Chapter also indicates design standards, such as peakload water supply requirements; minimum road widths; and clearances around structures. Finally, the Safety Chapter identifies evacuation routes and emergency reception centers.

The Safety Chapter works in conjunction with the City's Hazard Mitigation Plan, which was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's Local Hazard Mitigation Plan guidance. The Hazard Mitigation Plan incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning, policy changes, programs, projects, and other activities. To access the latest Hazard Mitigation Plan, please visit the City's web site at:

https://www.cityofbradbury.org/community/public_safety/lhmp___cwpp.php

Safety Chapter Objective

Hazards affecting the City of Bradbury can be divided into two major categories: 1) naturally occurring hazards; and 2) human-caused hazards. Naturally occurring hazards include

earthquakes, wildland fires, floods, and slope failure. Chemical contamination, structural fires, transportation accidents and air and water pollution are examples of human-caused hazards.

The objective of the Safety Chapter is to enable the City to be sensitive to those natural and human-caused hazards in future decision-making and to be able to respond in a timely manner in the event of an emergency. As a result, the following principal serves as the framework for the City of Bradbury Safety Chapter: *Public safety is the focus of the emergency preparedness plan which emphasizes the risks associated with earthquakes, wildfire, flooding, and other human-caused and natural hazards.* In response to this principal, the Safety Chapter provides the foundation for a detailed inventory of those risks that need to be considered. This Chapter also establishes standards related to public safety.

Relationship to Other General Plan Elements

California Planning Law requires that all elements of the General Plan be consistent. While all of the General Plan Elements are independent, they are also interrelated. Certain goals and policies of one element may also address items that are issues of other elements. This integration of issues throughout the General Plan creates a strong basis for the implementation of plans, programs and achievement of community goals. The Safety Chapter is most directly related to the Land Use and Circulation Elements and the Conservation and Open Space Chapters.

Related Agencies, Laws and Plans

The following state mandates impact planning and development:

Colbey-Alquist Floodplain Management Act. The Colbey-Alquist Floodplain Management Act encourages local governments to plan, adopt and enforce land use regulations for floodplain management, in order to protect people and property from flooding hazards. This Act also identifies requirements which jurisdictions must meet in order to receive state financial assistance for flood control.

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act requires the state Geologist to identify earthquake fault zones along traces of both recently and potentially active major faults. Cities and counties that contain such zones must inform the public regarding zone location.

Seismic Hazards Mapping Act. Pursuant to the Seismic Hazards Mapping Act, the state Geologist compiles maps identifying seismic hazard zones. Development in seismic hazard areas is subject to policies and criteria established by the State Mining and Geology Board. Additionally, approval of development on a site within a seismic hazard area mandates the preparation of a geotechnical report and local agency consideration of compliance with applicable state requirements.

Landslide Hazard Identification Program. The Landslide Hazard Identification Program requires the state Geologist to prepare maps of potential landslide zones within urbanizing areas.

Fire Hazards. Government Code Sections 51175 through 51189 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map 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 strategies to reduce the hazard associated with wildland fires. As part of

this mapping effort, areas designated for management by CAL FIRE are identified as State Responsibility Areas (SRA). Areas managed by local fire departments are identified as Local Responsibility Areas (LRA). The entire City of Bradbury lies within a LRA and fire protection is provided by the County of Los Angeles Fire Department (LACoFD). Most of the City is located within a Very High Fire Hazard Severity Zone (VHFHSZ) established by CAL FIRE and reflected on Exhibit H-S Safety No. 1. In 2012, the California State Legislature adopted SB 1241 which requires communities to protect themselves against wildland and urban fires by addressing the fire hazard in areas designated as VHFHSZ.

Overview of Safety Chapter Issues

The City of Bradbury has attempted to identify and analyze natural and human-caused hazards and the associated risks that residents may be subjected to.

Fire Hazards The threat of wildfires in foothill areas in Southern California has been of concern for many years. Very high risk for wildfire is evident in areas having steep slopes that are covered with chaparral vegetation and where there is limited access for fire control equipment. Low hazard areas are developed urban areas where fire access is readily available and the terrain is relatively flat. Industrial areas, hazardous material users, structures with substandard electrical wiring, overhead high voltage power lines, and high pressure gas lines are examples of urban fire hazards.

The City of Bradbury developed a Community Wildfire Protection Plan (CWPP) with input and direction from City of Bradbury stakeholders and the community. The purpose of the CWPP is to serve as a fire protection planning document that presents the City's physical characteristics, wildfire hazard, assets at risk from wildfire, vegetation/fuel management projects and specifications, and goals and action items intended to reduce wildfire hazards in the City. The ultimate goal of the CWPP is to protect lives, property, and natural resources threated by wildland fire. The final version of the CWPP was adopted by the Bradbury City Council on March 15, 2022 and was annexed into the City's Hazard Mitigation Plan on August 16, 2022. To access the Community Wildfire Protection Plan, please visit the City's website at:

https://www.cityofbradbury.org/community/public_safety/lhmp___cwpp.php

In order to facilitate immediate firefighting response, the City should have the following standards for areas that are located in high or very high FHSZs:

- There should be sufficient access routes and roads for emergency vehicles and for the evacuation of residents from all areas.

- Adequate access should be provided for all developed areas. All roadways to hazard areas should be of sufficient width to accommodate firefighting equipment. Streets should be marked and addresses should be posted in plain view. Adequate water supply should be available and sufficient for fire suppression activity.

All development within the VHFHSZ should comply with the standards set forth in LACoFD's Fuel Modification Plan. The three primary components needed to reduce fire losses are:

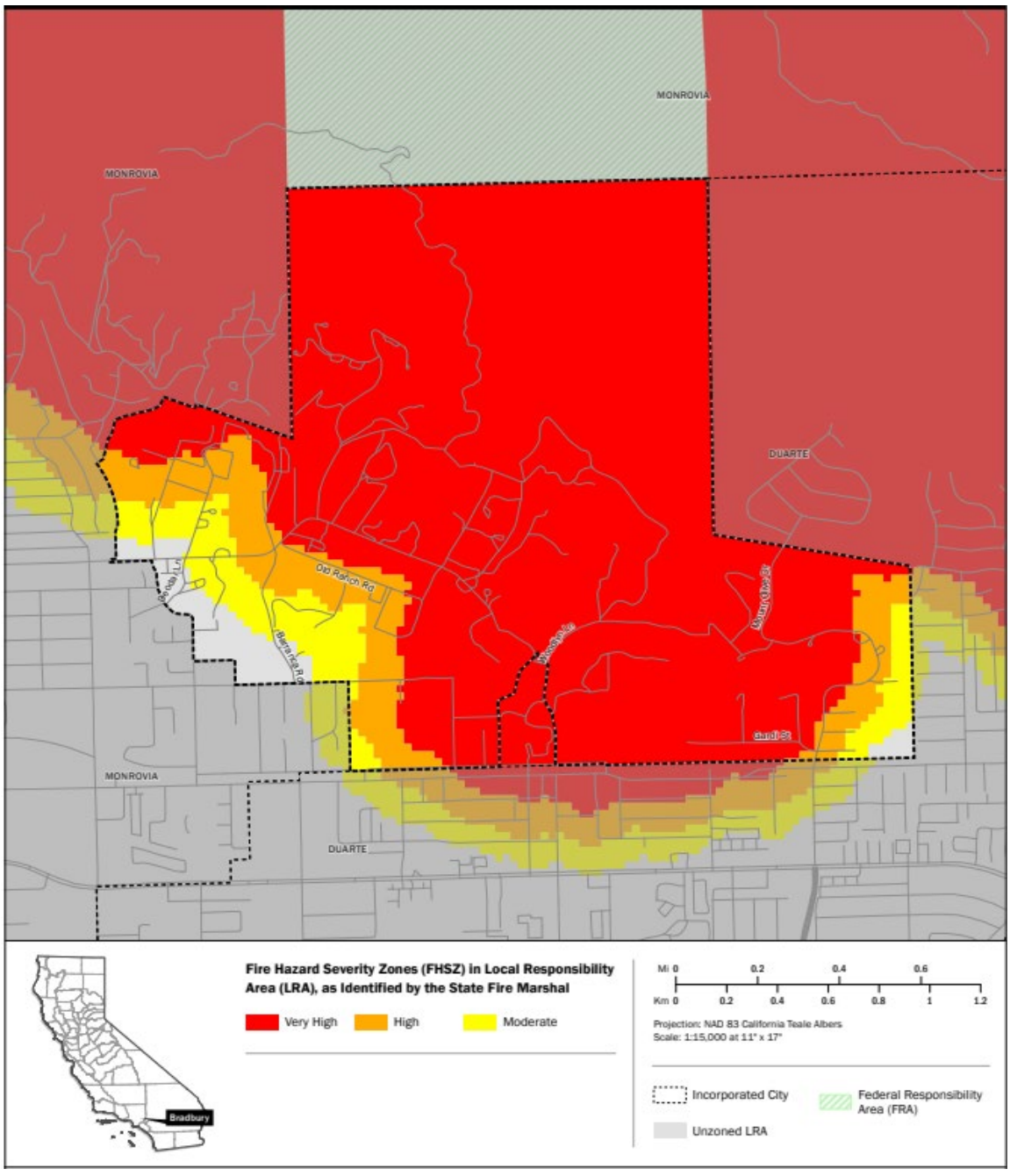
1. Implementing building construction methods that reduce building fire hazards;
2. Providing adequate defensible space around structures to reduce fuel; and

3. Identifying areas where there is a significant risk and a history of significant losses.

Good defensible space around structures allows adequate area for firefighters to fight a fire and avoid injury to personnel and equipment. Terrain, climate conditions, and vegetation interact to affect fire behavior.

Public Resources Code (PRC) Section 4291 requires that homeowners provide fuel modification to 100 feet around their buildings to create a defensible space for firefighters and to protect their homes from wildfires. Residents must reduce dry fuel around the perimeter of any structure and comply with the adopted codes that provide standards for mitigating fire hazards. Good defensible space around structures allows adequate area for firefighters to fight a fire and avoid injury to personnel and equipment. Terrain, climate conditions, and vegetation interact to affect fire behavior.

Exhibit H-S Safety No. 1 FIRE HAZARD SEVERITY ZONES



Local Responsibility Area in Fire Hazard Severity Zones (2025), depicts the fire hazard areas in the City of Bradbury as identified by CAL FIRE and adopted by the City Council.

Sources: CAL FIRE, Los Angeles County GIS; Map date: March 24, 2025

Bradbury's location at the base of the San Gabriel Mountains creates a wildland-urban interface (WUI) that makes Bradbury more susceptible to wildfires than cities that do not border the foothills. During community workshops many residents expressed their concern that safety and preparedness were the highest priority for the community.

The U.S. Geological Survey (USGS) in partnership with the U.S. Forest Service (USFS) provides fire danger forecasting tools that utilize a combination of satellite-derived vegetation indices, various biogeophysical variables, and weather information to produce 7-day forecasts. The City may use these tools in coordination with LACoFD to determine fire potential index, large fire probability, and fire spread probability.

Historic Wildfires in the City of Bradbury

Fortunately, there have been limited wildfire outbreaks within the City, and they are described below.

1953 Duarte Fire. This fire originated between Spinks Canyon and Maddock Canyon in wildland area. A total of 561 acres burned in this fire.

1958 Norum Fire. This fire burned in the foothills north of Monrovia, Duarte, Bradbury and Azusa. A total of 6,440 acres burned in the Norum Fire.

1980 Stable Fire. On November 16, 1980 a fire storm that had been fanned by Santa Ana Wind conditions swept down from the foothills and destroyed 35 homes in the City of Duarte and 14 homes in the City of Bradbury. Reports indicated that the fire had moved from the City of Azusa, east of the San Gabriel River to the Duarte and Bradbury homes in 8 to 10 minutes, due to a strong shift in winds. Immediately after the fire, city and county personnel began taking measures to deal with the devastation. A Disaster Assistance Center was established at Duarte City Hall and federal and state agencies were contacted for help. The Los Angeles County Fire District set up a mobile command center and the City of Duarte set up an emergency shelter. In the weeks that followed the fire, the City established several programs to deal with possible floods and mudslides that could occur due to the bare slopes where all vegetation had been burned off. Mud diversion structures were constructed, sandbags were distributed, and parking was restricted on streets with potential slides.

2009 Station Fire. Since the Stable Fire other large wildland fires have occurred in the surrounding communities near Bradbury. The largest being the Station Fire of 2009. The Station Fire was the 10th largest wildfire in California history, burning 160,577 acres and killing two firefighters since it began in late August. The fire started in the Angeles National Forest near the U.S. Forest Service ranger station on the Angeles Crest Highway (State Highway 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 the City of Los Angeles. The fire was predicted to burn for months and travel miles to the City of Azusa behind the City of Bradbury. The Station Fire burned on the slopes of Mount Wilson, threatening numerous television, radio and cellular telephone antennas on the summit, as well as the Mount Wilson Observatory, which includes several historically significant telescopes and multi-million-dollar astronomical facilities operated by UCLA, USC, UC Berkeley and Georgia State University. In October 2009, the fire went out due to a fall rainstorm.

Historic Wildfires near the City of Bradbury

Areas bordering the City are highly prone to wildfires and, therefore, the City is exposed to a threat from wildfires originating outside the city limits. Below are descriptions of two of the most recent notable fires outside the City. A list of additional fires within five miles of the City can be found in the CWPP.

2016 San Gabriel Complex Fire. The most recent wildfire outbreak closest to Bradbury was the San Gabriel Complex Fire which ignited the morning of June 20, 2016. The San Gabriel 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 were burning fuel that was 7-10 years old with 6 to 8-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 and around the Angeles National Forest. It is one of the largest fires on record in Los Angeles County to date. The fire triggered mandatory evacuation orders in parts of Arcadia and Camp Williams. The cause was due to a power line conductor torching overhead trees. The fire initially spread southward which prompted 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 by September 15, 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. Two hundred forty personnel were deployed.

2024 Eaton Fire. The Eaton Fire began on the evening of January 7, 2025, in the Eaton Canyon in the San Gabriel Mountains, and was driven by powerful Santa Ana winds of up to 100 miles per hour into the foothill communities, particularly Altadena. The fire burned area totaled 14,021 acres, killed at least 17 people, and destroyed more than 9,000 buildings, becoming the fifth deadliest and second most destructive wildfire in the history of the state of California. The cause of the fire is under investigation; however, news reports and lawsuits have focused on the possible involvement of powerlines operated by the electrical utility Southern California Edison. The fire ultimately caused evacuation orders and warnings on residents of Altadena, La Canada Flintridge, Sierra Madre, Pasadena, Arcadia, Monrovia, Bradbury, and Duarte.

Flood Hazards The potential for flooding is generally described in terms of a statistically projected frequency. For example, a 100-year flood has a 1.0 percent chance of occurring in a given year, while a 500-year flood is one which has a 0.2 percent chance of happening in any given year. A 500-year flood would be slightly deeper and cover a greater area than a 100-year flood. The San Gabriel River lies east of the City of Bradbury, and it is designed to contain a 100-

year flood. The river is fully operational and is maintained by the U.S. Army Corps of Engineers and the Los Angeles County Flood Control District. The construction of San Gabriel River improvements in 1947 reduced the local area's risk of flooding. Los Angeles County Drainage Area studies performed by the Army Corps of Engineers have shown no deficiencies along the San Gabriel River. The elevated nature of the City removes Bradbury from flood danger from the San Gabriel River.

The San Gabriel River is the central backbone of the San Gabriel River Watershed. The watershed for the San Gabriel River is one of several coastal watersheds in Southern California that drain hundreds of square miles of mountainous and urban lands to the Pacific Ocean. The character of the river changes dramatically along its 58-mile journey from Cogswell Dam (near the headwaters in San Gabriel Mountains) to its mouth at the Pacific Ocean. On its run to the sea, the San Gabriel River passes through 19 different cities. A network of dams and flood control measures controls the San Gabriel River. The natural water cycle and flow are significantly altered to protect adjacent communities from flood damage and to better use local water resources for urban and agricultural water supplies.

Serious flooding has not been a problem in Bradbury because the low density residential development has permitted the retention of natural ground cover which retards serious floods. In addition to the natural ground cover, the Bradbury Debris Basin and the Spinks Debris Basin and check dams, maintained by the Los Angeles County Flood Control District, also provide the City with protection from large scale floods. A series of concrete lined channels and underground storm drains exist within and around the perimeter of the City. These backbone storm drain facilities are maintained by the Los Angeles County Flood Control District. The City's large agriculturally zoned and developed parcels either retain surface run-off on-site or it is directed to the public facilities by a system of privately owned and maintained drainage swales. Minor occurrences concerning water runoff occurred in the past during extremely wet years, however privately owned improvements have been made to rectify the local flooding issues. These minor flooding problems tend to be localized and primarily relate to very small mudslides and small erosion problems in areas where the natural topography had been altered.

Much of the soil in Bradbury Canyon is of an alluvium base material and it is susceptible to runoff problems if the natural ground cover has been removed and not replaced with landscaping or other mitigating measures. The City maintains a policy of investigating any localized runoff or mudslide problems through the assistance of the City Engineer and the Los Angeles County Department of Public Works.

Since the City of Bradbury has not been studied by the National Flood Insurance Program (NFIP) to ascertain flood hazards, it is difficult to estimate if there is an area that might be at risk of flooding. The City's history does not contain any reports of catastrophic flooding that would endanger resident's health or safety. The National Flood Insurance Program (NFIP) designated Bradbury as "Zone D" which means that no analysis of flood hazards has been conducted. Mandatory flood insurance purchase requirements do not apply, but coverage is available.

Geologic Hazards The City of Bradbury is situated along the foothills of the San Gabriel Mountains, west of the San Gabriel River as reflected on Exhibit H-S Safety No. 2. Geographically, the San Gabriel Mountain Range is made up of two roughly parallel ranges. The northern, inland range extends from Mt. Gleason eastward past the 9,000-ft. summit of Mt. Waterman and Baden-Powell and terminates near the only summit over 10,000-ft. (Mt. San Antonio or Old Mt. Baldy).

The range's major watershed is the San Gabriel River who's three main forks and countless tributaries drain approximately 20 percent of the precipitation in the mountains.

There are geologic conditions within and around the City of Bradbury that could cause problems if proper precautions are not taken. The northern mountainous areas of the City are generally too steep and bedrock is too unstable for typical construction. Erosion, landslides and ground shaking from earthquakes can be severe hazards within these areas. Exhibit H-S Safety No. 3 identifies the portions of the City of Bradbury that are susceptible to landslide and liquefaction.

Landslides Geologic hazards in the City of Bradbury include the potential for landslides, erosion, and debris flow and liquefaction in areas with loose soils and high water tables. Landslide hazards may involve relatively intact, dense bedrock materials or highly fractured and broken, jumbled bedrock. Landslides often occur along pre-existing zones of weakness within the bedrock. Local folding of the bedrock adds to the potential for slope failure. However, many landslides do not seem to be controlled by the position of the bedding rock relative to the topography but by other factors such as rock type and its attendant characteristics (density of jointing and fracturing). Landslides have been known to occur in the northern steep sections of the City. Other areas of the City may experience landslides should conditions change that adversely affect slope stability.

Erosion Erosion is the natural process by which earth materials are loosened, worn away, decomposed, or dissolved, and transported to another site. Precipitation, runoff, running water, and wind are common agents of erosion. The potential for erosion is generally low in exposed natural slopes but it greatly increases when slopes have been denuded of all ground cover and vegetation. Barren slopes are more susceptible to erosion and subject to riling or raveling.

The potential for debris flow depends primarily on the presence of Colluvium deposits upstream and the increase in soil moisture due to heavy rainfall. A debris flow is a fast moving, liquefied landslide of unconsolidated, saturated debris that looks like flowing concrete. It is differentiated from a mudflow in terms of the viscosity and textural properties of the flow. Flows can carry material ranging in size from small stones to large boulders. Often debris flows contain large amounts of woody debris such as logs and tree stumps. The soil known as Colluvium is loose bodies of sediment that have been deposited or built up at the bottom of a low-grade slope or against a barrier. The deposits that collect at the foot of a steep slope or cliff are also known by the same name. The Bradbury and Spinks Canyon Debris Basins control debris flows.

Seismic Hazards The U.S. Geologic Survey (USGS) is responsible for providing scientific information regarding natural hazards and disasters within the United States in order to protect and save lives. Geologic events and seismic activity in particular, are the primary natural hazards of the community. Earthquakes are caused by violent and abrupt releases of strain built up along faults. When a fault ruptures, energy is released in all directions from the source, or epicenter, in the form of seismic waves. Earthquakes generate two types of hazards. Primary hazards are ground shaking and surface rupture along faults. Secondary hazards result from the interaction of ground shaking with existing ground instabilities and include: liquefaction, settlement, and landslides.

The City of Bradbury is located in a seismically active region and in an area of potential fault rupture, strong ground shaking, and slope instability. These geologic and seismic hazards can affect the integrity of structures and utilities, and in turn can cause severe property damage and

potential loss of life. In California, faults are common, ranging from small breaks of an inch or less, to the significant breaks experienced along the San Andreas Fault which extends for hundreds of miles. In addition to size, the age of a fault has a direct bearing on the likelihood of generating an earthquake. Many large faults have not moved for millions of years and are considered “dead” or inactive.

The two principal seismic considerations for most cities in Southern California are damage to structures due to seismically induced ground shaking and surface rupture along active fault traces. Strong ground motions could have a major impact on the City of Bradbury due to the proximity and earthquake potential of nearby active faults. The local geologic and topographic conditions of Bradbury’s location at the base of the San Gabriel Mountains could either amplify or attenuate the seismic waves. Surface ruptures could also have a major impact on the City of Bradbury. Surface ruptures occur during an earthquake when movement along an active fault breaks the ground surface.

The City of Bradbury contains two earthquake faults (Exhibit H-S Safety No. 3). The Sierra Madre Fault extends through the major portion of the Bradbury along the base of the San Gabriel Mountains. The Duarte Fault extends across the southern portion of Bradbury and bisects an unincorporated County island. The Duarte fault is actually a “segment” of the Sierra Madre Fault. Movement along these frontal faults has resulted in the uplift of the San Gabriel Mountains. Seismic activity is expected to be a maximum of 7.2 magnitude.

The Sierra Madre-Cucamonga Fault Zone includes several fault segments extending for over 86 miles along the southern margin of the San Gabriel Mountains. The two main portions of the Sierra Madre-Cucamonga Fault Zone include the Sierra Madre fault to the west and the Cucamonga fault to the east. The fault zone is inclined to the north, dipping below the San Gabriel Mountains and uplifting them above the Los Angeles Basin. The fault zone was responsible for the 1971 6.6 magnitude San Fernando earthquake on its westernmost segment near the City of Sylmar. The Sierra Madre fault passes through the northern portions of Pasadena, Arcadia, Monrovia, Bradbury, Duarte, Azusa, and portions of San Dimas. The locations of the regional faults are shown in H-S Exhibit Safety No. 2.

The Sierra Madre fault zone is divided into five main segments, labeled with the letters A through E, to more easily characterize this fairly complex system. It was not the fault responsible for the 1991 Sierra Madre earthquake.

Source: California Institute of Technology, SCEC, 02/07/2012

Exhibit H-S Safety No. 2

REGIONAL FAULT SEGMENTS

The most recent surface ruptures are seen on the B and D segments. The least active segment, is the A segment, also known as the Vasquez Creek fault, which runs between the San Gabriel fault and the intersection of the B and C segments of the Sierra Madre fault zone. At the junction of the C and D segments, the Clamshell - Sawpit Canyon fault splays off from the fault zone, toward the northeast (shown in sea green on the map above). It was this fault, not the Sierra Madre fault zone itself, that ruptured to produce the Sierra Madre earthquake of 1991.

One of the strands that make up segment D is known as the Duarte fault, because of its location near that community. Segment E represents the easternmost part of this fault zone, and at its eastern end, it meets up with several other faults in a complex zone northwest of the City of Upland, near the epicenter of the 1990 Upland earthquake. The general trend of the Sierra Madre fault zone continues eastward from this point along the base of the San Gabriel Mountains, but this eastern continuation is known as the Cucamonga fault zone. The Cucamonga fault zone seems to be more active, (has a higher slip rate) than the Sierra Madre fault zone.

Faults are continuously being found by geologists/seismologists within the region. These scientists have identified almost 100 faults in the Los Angeles area that are suspected of being capable of generating earthquakes with a magnitude of 6.0 or greater. Included within the newly discovered faults are faults classified as “blind thrusts.” These faults do not reach the ground surface but do connect many of the known surficial faults at depth and under virtually the entire

Los Angeles, San Fernando, and San Gabriel Basins. When a fault ruptures, energy spreads in the form of seismic waves. Seismic waves travel through the earth's crust and eventually reach the ground interface creating surface waves which cause the ground to vibrate up and down and side to side. The City of Bradbury may experience some or all of the hazards associated with seismic waves including ground rupture, ground shaking, landslides, flooding, and liquefaction.

Ground Rupture represents the primary hazard associated with earthquakes since it is the initial result of seismic events. Surface rupture poses a difficult seismic problem from an engineering standpoint because it is far more expensive and complicated to design a foundation and structure to withstand the displacement of even fractions of a foot than to build without consideration of ground rupture. Such ground fractures can cause parallel displacement in the foundation, causing buildings to crack and split. Development should be avoided in areas of high fault potential.

Ground Shaking The most significant earthquake action in terms of structural damage and loss of life is ground shaking. Ground shaking is the movement of the earth's surface in response to a seismic event. The intensity of the ground shaking and the resultant damages are determined by the magnitude of the earthquake, distance from the epicenter and characteristics of surface geology. This hazard is the primary cause of the collapse of buildings and other structures. Increased hazards from earthquakes occur when the seismic activity occurs in a highly urbanized area. The significance of an earthquake's ground shaking action is directly related to the density and type of buildings and the number of people exposed to its effect.

Liquefaction is a phenomenon involving the loss of shear strength of soil. Liquefaction involves a sudden loss in strength of saturated, cohesion soil (mostly sand) which is caused by shock or strain, such as generated by an earthquake and results in temporary transformation of the soil to fluid mass. If the liquefying layer is near the surface the effects are much like that of quicksand on any structure located on it. If the layer is in the subsurface, it may provide a sliding surface for the material above it.

Liquefaction typically occurs in areas where the groundwater surface is less than 30 feet below the ground surface and where the soils are composed of soft fine sand. There are several liquefaction zones located in the northern and eastern portions of the City of Bradbury. During and after a severe rain event, liquefaction could occur should a moderate severe earthquake take place.

Although, Bradbury has not experienced measurable ground failure due to an earthquake in recent years, the potential for damage due to ground failure is still present. Past seismic events indicate that the City of Bradbury has been free of major damaging earthquakes for at least 130 years. However, a number of historic earthquakes have affected the City in varying degrees from nonstructural damage (toppling of building contents) to minor structural damage (cracks in swimming pools).

A major earthquake occurring in or near Bradbury may cause injuries and even death, extensive property damage, fire, hazardous spills and other hazardous effects that could be aggravated by aftershocks and by the secondary effects of fire, hazardous materials/chemicals accidents and possible failure of waterways and dams.

Seiches, or periodic oscillations ("sloshing") of bodies of water such as ponds, lakes, and bays, usually occur in moderate to great earthquakes. Seiches may raise and lower a water surface from a few inches to several feet, and may occur several thousand miles away from the earthquake epicenter.

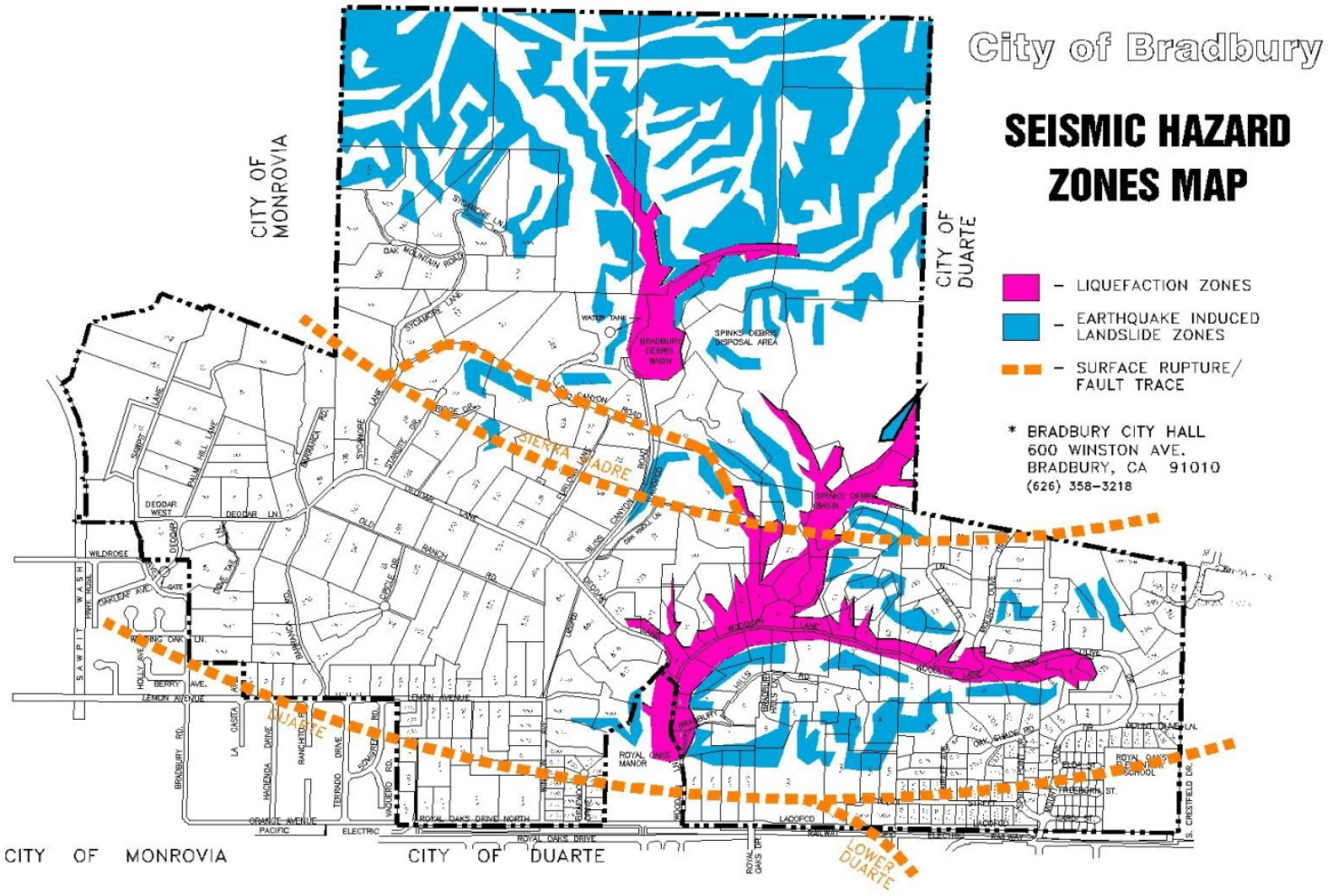


Exhibit H-S Safety No. 3 BRADBURY SEISMIC HAZARD ZONE MAP

Safety and Emergency Preparedness Plan

The two existing emergency response plans, the County of Los Angeles All-Hazards Mitigation Plan and the Los Angeles County Operational Area Emergency Response Plan (OAERP), provide the tools to coordinate the disaster recovery operations of County fire control and law enforcement agencies with local agencies and governments. The City currently has a number of ordinances, programs and requirements in existence pertaining to seismic and fire hazards. Primary among these are the subdivision and building permit approval requirements for seismic strengthening and adequate access. The State Office of Emergency Services (Cal OES) has established three levels of emergency response to peacetime emergencies, which are based on the severity of the situation and the availability of local resources in responding to that emergency. The three levels of emergency response include:

- Level 1: A minor-to-moderate incident wherein local resources are adequate in dealing with the current emergency.
- Level 2: A moderate-to-severe emergency where local resources are not adequate in dealing with the emergency and mutual aid assistance would be required on a regional or statewide basis.
- Level 3: A major disaster where local resources are overwhelmed by the magnitude of the disaster and state and federal assistance are required.

Each potential hazard to the public safety has been assessed according to the following levels of risk:

- Low Risk: The level of risk below which no specific action is deemed necessary. The occurrence of a specific event is unlikely.
- Medium Risk: The level of risk above which specific action is required to protect life and property, though the probability of the event taking place is low to moderate.
- High Risk: Risk levels are significant and occurrence of a particular emergency situation is highly probable or inevitable.

The scope or risk refers to the geographic area that could be potentially affected with the occurrence of one of the hazards. The scope of risk includes three levels:

- Local: The affected geographic area that is directly affected is localized or site specific.
- Citywide: The affected area includes a significant portion or all of the City.
- Regional: The affected area includes the entire City as well as the surrounding region.

The low-density character of Bradbury has been mentioned as a positive factor in terms of general safety. Any incremental intensification of existing residential uses may, to some degree, increase susceptibility to fire and/or seismic events. The expansion of urban uses is preceded by, or accomplished in conjunction with, the expansion of infrastructure, and the provision of a wide range of vital services and facilities. Future development plans and proposals for all property located within the City, including the 302 acres of privately owned undeveloped hillside open space, will be scrutinized for compliance with the City's Safety and Emergency Preparedness Plans and to minimize exposure to hazards.

Police Services. Police protection is provided by the Los Angeles County Sheriff's Department (LACSD). The City maintains a contract with the Sheriff's Department law enforcement services. Although the City contracts for a minimum level of service, in times of emergency the Sheriff dedicates all available personnel and equipment to address the community's needs.

The Duarte Satellite Sub-Station is the launching center for 30 police officers. These officers are responsible for providing police services to the City of Duarte, the City of Bradbury and surrounding unincorporated areas. The Satellite Sub-Station does not have dispatch or booking facilities. The Temple City Sherriff's Station is the base of operations location for the region. Dispatch and booking facilities are located there.

Fire Services. Fire protection / emergency medical services are provided to the City by the Los Angeles County Consolidated Fire Protection District (CFPD). The closest fire station, Station 44, is located at 1105 Highland Avenue in the City of Duarte. The station is staffed with at least seven firefighters 24 hours a day. The equipment includes two fire trucks, one patrol vehicle and one water tender. Backup paramedic assistance is provided by Station 29 which is located in the City of Baldwin Park and Station 32 which is located in the City of Azusa. The City of Monrovia Fire Department offers additional mutual aid when necessary and requested by the County. Los Angeles County Fire also provides hazardous material services. The U.S. Forest Service in San Dimas provides wildfire service in the Angeles National Forest.

Medical Services. Emergency medical services are available throughout Los Angeles County. Acute care facilities near Bradbury include Methodist Hospital in Arcadia, Huntington Hospital in Pasadena, City of Hope National Medical Center in Duarte, Kaiser-Permanente Foundation Hospital in Baldwin Park and Foothill Presbyterian Hospital in Glendora.

Peakload Water Supply

Peakload water supply is defined as the supply of water available to meet both domestic water and firefighting needs during the particular season and time of day when domestic water demand on a water system is at its peak. California American Water provides potable water to the City of Bradbury. Potable water is provided from ten (10) wells located in and around Bradbury.

Storage of potable water in the Duarte service area (which includes the City of Bradbury) is provided by eight (8) reservoirs of which four (4) are located within Bradbury. The total storage capacity is 11.5 million gallons, which is the equivalent of about 175% of an average day's demand. All of the reservoirs are covered to reduce evaporation.

California American Water is seeking the State Water Resources Control Board's Division of Drinking Water approval to operate the new Live Oak Well and Reservoir located on Arrow Highway in the Duarte service area. It is anticipated that the new facilities will be online by the end of 2023.

Peakload water supply on August 11, 2005 was 19.5 million gallons. Peakload water demand is always highest during the hot summer months. The maximum day demand (MDD) over the last 20 years has been 12.9 million gallons. Design capacity is based on the peak demand periods.

Hazard Mitigation Plan

The City of Bradbury adopted the updated Hazard Mitigation Plan on February 18, 2025 by City Council Resolution No. 25-04. The updated plan fulfills the City's obligation pursuant to the Federal Disaster Mitigation Act of 2000. The plan adoption and update process involved the participation of all City departments and interested City residents.

The Hazard Mitigation Plan includes the following mitigation goals:

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.
- Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to 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.

Preserve Natural Systems

- Support management and land use planning practices with hazard mitigation to protect life.
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

Encourage Partnerships and Implementation

- Strengthen communication and coordinate participation with public agencies, citizens, non-profit organizations, business, and industry 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.
- Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.
- Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

Hazard mitigation is the responsibility of the City; however, the following agencies provide support and assistance with preparedness, response, recovery, and administration of funding efforts.

- Governor's Office of Emergency Services (Cal OES) – responsible for disaster mitigation, preparedness, response, recovery, and the administration of federal funds after a major disaster declaration.

- Southern California Earthquake Center (SCEC) – gathers information on earthquakes and releases information to the public to increase earthquake awareness, reduce economic losses, and save lives.
- California Department of Forestry and Fire Protection (CAL FIRE) – responsible for all aspects of wildland fire protection on private and state-owned land. CAL FIRE administers forest preservation regulations, including landslide mitigation, on non-federally owned land.
- California Division of Mines and Geology (DMG) – responsible for geologic hazard characterization, public education, and reduction of risk of tsunami inundation.
- California Division of Water Resources (DWR) – plans, designs, constructs, operates, and maintains the State Water Project, regulates dams, provides flood protection, and assists in emergency management.

Hazardous Waste and Materials Management Program The LACoFD Health Hazardous Materials Division administers the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program for the City of Bradbury. The Unified Program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste programs (Program Elements):

- Hazardous Waste Generation (including on-site treatment under Tiered Permitting).
- Above ground Petroleum Storage Tanks (only the Spill Prevention Control and Countermeasure Plan of "SPCC").
- Underground Storage Tanks (UST).
- Hazardous Material Release Response Plans and Inventories.
- California Accidental Release Prevention Program (Cal ARP) and Uniform Fire Code Hazardous Material Management Plans and Inventories.

Emergency Preparedness

Bradbury's location in Southern California and in the San Gabriel Valley makes it susceptible to a number of natural disasters and other emergencies. As such, the City Council appointed a Public Safety Committee – a five-member advisory body to the Bradbury City Council to help prepare the community. Committee members serve as a communication link between the community, City Council and staff regarding issues pertaining to emergency preparedness. Committee members are hands-on volunteers who assist in the emergency operations and with the emergency related programs and services offered to the community.

The specific and primary purpose of the Public Safety Committee is to:

A. Assess and define emergency needs;
B. Locate and publicize available resources;
C. Conduct exercises, manage responses and oversee simulated, actual or impending emergencies when called upon to do so by the Mayor, Mayor Pro-Tem or City Manager.

Committee members serve for a term of four years, beginning July 1st and ending June 30th, and are eligible upon request to serve one additional consecutive term for a total of eight years.

Most committee members are CERT (Community Emergency Response Team) trained. These volunteers are educated about disaster preparedness for hazards that may impact the area and in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help.

Additionally, the City of Bradbury has implemented the Connect-CTY service to provide the City the ability to communicate with residents regarding time-sensitive matters, such as unforeseen events or emergencies.

With the Connect-CTY system, the City can quickly contact residents by telephone, cell phone, text message or e-mail regarding urgent and important information. For example, in the event of an emergency, the City can quickly let residents know what to do or where to go for services. Only authorized City officials are allowed to send messages. Other non-emergency messages can be sent by e-mail regarding upcoming meetings, events or workshops.

***Disaster Area Management*.** During World War II, the National Civic Defense Program was activated. The Los Angeles County and the local military authorities quickly recognized that the size and complexity of the county would require a unique management structure to effectively coordinate war-related activities amongst the county, cities, private sector and other agencies. Civil Defense Areas were formed and each area was supervised by an Area Coordinator. After the war, Civil Defense transformed into Disaster Management with an emphasis on planning, training, exercising and public education for earthquakes, fires, floods, severe weather events and epidemics. The City of Bradbury resides in the “Area D” area of responsibility. Other cities in “Area D” include Arcadia, Azusa, Baldwin Park, City of Industry, Claremont, Covina, Diamond Bar, Duarte, El Monte, Glendora, Irwindale, La Puente, La Verne, Monrovia, Pomona, Rosemead, West Covina, Temple City, Walnut, South El Monte, Sierra Madre, and San Dimas. There are eight Disaster Management Areas; each has a coordinator, to work with cities and partner agencies to assist their emergency management activities and to act as a liaison between local government and county, state and federal agencies.

City Staff meets with cities within this area of responsibility once a month to discuss topics such as federal reporting and reimbursement after a disaster, incident command, working with minorities, the disabled and the underserved community, public relations and emergency evacuation. The City also participates in a monthly county-wide radio checks with “Area D” Coordinators.

***Alert LA County*.** Alert LA County is an emergency mass notification system established by Los Angeles County to contact County residents and businesses via recorded phone messages, text messages or e-mail messages in case of emergencies. The system will be used by the County’s Emergency Operations Center to notify residents and businesses of emergencies or critical situations and provide information regarding necessary actions, such as evacuations. The system uses the telephone companies’ 911 database and is able to contact land-line telephone numbers, whether listed or unlisted. If the call is picked up by an answering machine, the system will leave a recorded message. If the number called is busy or does not answer, the system will redial the number in an attempt to deliver the message. The system is also TTY/TDD compatible.

Alert LA County uses 911 databases; therefore, only land-line numbers are automatically included in the system. To be notified at a cellular phone or receive an e-mail notification, a person must register the cellular phone number and/or e-mail address. Each cellular number and/or e-mail

address can only be associated with one street address in the system. The registered telephone number and e-mail address will be contacted only when the street address it is associated with is impacted by a disaster or emergency.

Specific Needs Disaster Voluntary Registry (SNAP). The purpose of Specific Needs Disaster Voluntary Registry (SNAP) is to facilitate the planning and implementation of disaster response by first-responder agencies to Specific Needs persons living in the County of Los Angeles. The registry is a project of the Los Angeles County Office of Emergency Management in cooperation with other cities and agencies in the Los Angeles County disaster response operational area.

If a person living in Los Angeles County has any of the following conditions which might impede their abilities to evacuate a building, travel to or stay safely in an emergency evacuation center, or to securely shelter in place without assistance, they should enroll in the program:

- Physical disabilities
- Cardiac and/or respiratory circumstances
- Developmental disabilities
- Emotional or psychiatric disabilities
- Deafness or hearing loss
- Blindness or severe vision loss
- Speech impairments
- Short-term disabilities
- Reliance on technologies that use electricity
- Using medications
- Participation in a home delivery program
- Need specialized paratransit vehicles
- Experience seizures
- Immune system deficiencies
- Communicable diseases

Should a disaster strike in the area, this registry will be used to enhance the efficiency of those agencies called upon to respond, including the Los Angeles County Sherriff's Department (LACoSD) and LACoFD.

Evacuation Routes and Reception Centers

Emergency preparedness includes the designation of evacuation routes and emergency facilities. The following facilities are delineated in Exhibit H-S Safety No. 4 and the following rules apply:

***Primary Evacuation Routes*.** The roads are to be kept open at all times. In the event of temporary closure due to maintenance and/or construction, LACoFD is to be notified.

***Reception Centers*.** The Bradbury Civic Center (600 Winston Avenue, Bradbury, CA 91008) and the City of Duarte Community Center (1600 Huntington Drive, Duarte, CA 91010) will serve as Reception Centers for disseminating information, collection points, distribution centers, etc.

Local Emergency Operations Center (EOC). The Bradbury Civic Center will serve as the local EOC, the alternate site is City of Duarte Community Center until which time the County of Los Angeles designates another local facility.

Critical Facilities. Certain public facilities require special consideration because of the number of persons located in the facility at any one-time. Only one critical facility is located within the City (Royal Oaks Elementary School). Royal Oaks (a senior assisted living facility) is located adjacent to the City in the County unincorporated area.

Residential Developments. The City prepared an analysis consistent with SB 99 to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. The analysis identified one area of concern in the southeast corner of the City with limited emergency access points that warrants further study. The City will continue to coordinate with LACoFD and LACSD to ensure adequate exit strategies are available for all residential developments. For all new developments, roadways are to be a minimum 20 feet wide and will include emergency turnarounds with minimum dimensions established in coordination with LACoFD. A White Paper describing the methodology used to map the evacuation routes is included as Appendix H-S B to the Safety Chapter.

The evacuation routes in the City and those facilities that will serve as collection/information centers are located on Exhibit H-S Safety No. 4. The Emergency Evacuation Plan does not apply to normal day-to-day emergencies and the well-established and routine procedures used in coping with such emergencies. In the event of a serious hazard which would require the evacuation of Bradbury residents, the following streets would be used as primary evacuation routes:

- Mount Olive Drive.
- Woodlyn Lane (gates will be opened to permit exiting at Royal Oaks Drive, North). The access gate located near Mount Olive Drive will be used by “First Responders” to gain access to the Woodlyn Lane neighborhood.
- Deodar Lane (gates at Wild Rose, Barranca, and Woodlyn Lane) will be opened to permit exiting from the Bradbury Estates neighborhood.
- Winston Avenue and the Lemon Avenue access to the Flood Control Channel will be used as access points for “First Responders.”

Evacuation will be handled by Los Angeles County safety personnel under contract to the City (i.e. Fire, Sheriff, etc.). In a major disaster, mutual aid sources in adjacent jurisdictions are likely to be fully committed to their own needs, and there may be substantial delays in the request and

transport of assistance from more distant locations. Ingress to and egress from the City is likely to be inhibited by damage caused by the disaster and related congestion. Effective disaster preparedness will require the concerted efforts of City personnel, contracted first responders and residents. Not only must effective plans and procedures be in effect, but those plans should be tested and improved through disaster preparedness exercises.

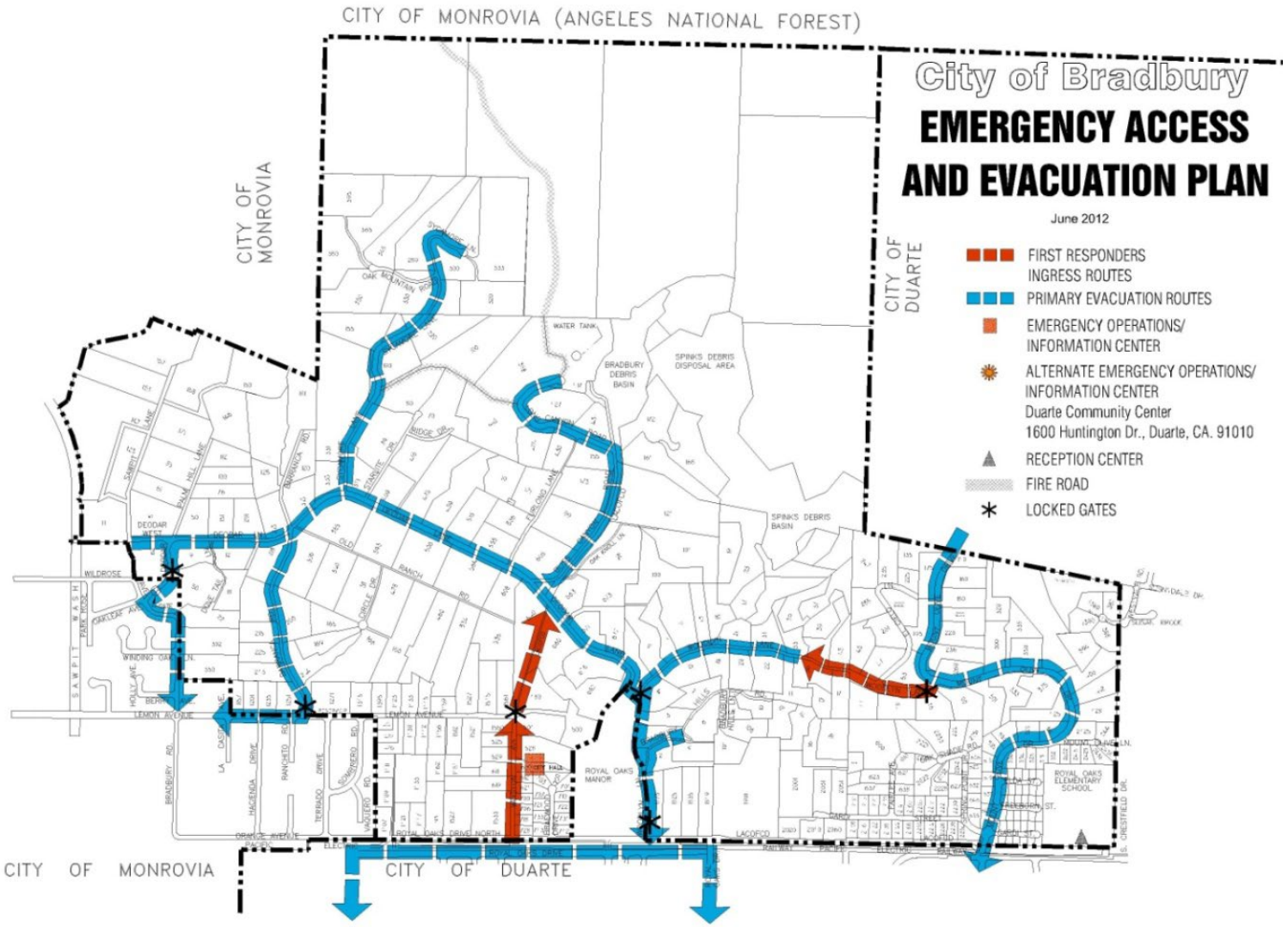


Exhibit H-S Safety No. 4 EMERGENCY ACCESS AND EVACUATION PLAN

Climate Change and Resiliency Planning

As a result of climate change, Bradbury, like other cities in California, may experience more frequent and intense heat waves, drought, wildfires, flooding, and more severe storms and extreme weather events. The impacts of climate change pose an increasing and growing challenge to the safety and well-being of Bradbury's residents. SB 379 is a state law requiring the City to update the Health and Safety Element to address climate change adaptation and resiliency strategies applicable to Bradbury. A Climate Vulnerability Assessment (CVA) has been prepared to identify risks that climate change poses to the City and is attached as Appendix H-S A. Relevant goals, policies, objectives, and actions informed by the CVA have been added to the Health and Safety Element, and a high-level overview of the findings is provided below.

- Wildland fires represent the threat most likely to affect Bradbury as a result of climate change. While most likely to ignite within the CAL FIRE designated FHSZs, the effects of wildfire can adversely impact larger areas, cascading out towards the entirety of Bradbury and the surrounding cities, with smoke, ash, and poor air quality.

- The most vulnerable populations are those living in or adjacent to VHFHSZs within the City. Other vulnerable populations include seniors and people with pre-existing health conditions such as asthma.

- The most vulnerable natural areas are the sensitive hillside areas (and wildlife within these environments) located in the northern portion of the City, which are within the VHFHSZ. This largely undeveloped area contains the most open space and natural landscape in the City and consists of high amounts of often dry foliage that is highly susceptible to fires. As prolonged dry spells are predicted to lengthen, plants, animals, and habitats that receive less and less water are more likely to burn from wildfire, leave the area, or die out from lack of resources.

- The most vulnerable infrastructure is power and energy infrastructure, as well as homes within and bordering the VHFHSZs. Extreme weather and heat conditions can increase the risk of fires, which can lead to the destruction of energy infrastructure such as power lines that are in more remote (and more fire prone) areas. Since energy grids are interconnected and provide energy throughout the region, large parts of the Southern California population are expected to be impacted by distant fires or power outages.

- Regional drought is also a key hazard to Bradbury as the City is served entirely by groundwater sources from the main San Gabriel Basin. Drought may also result in increased tree mortality, which contributes to higher fuel loading and wildfire size and severity. As expected with climate change, droughts are anticipated to increase both in frequency and intensity.

Safety Goals, Objectives and Policies

Safety Goals:

Safety Goal 1. To protect the citizens, their property and public facilities from natural and human-caused hazards.

Safety Goal 2. To establish, maintain, and develop awareness on the part of all residents of Bradbury as to how to react and protect themselves and each other in the event of a natural or human-caused hazard or disaster.

Safety Goal 3. To achieve a greater sense of citizen satisfaction with the safety services within the community, through constantly monitoring the effective and efficient staffing of safety service personnel.

Safety Goal 4. To minimize the risk to persons and property due to seismic activity.

Safety Goal 5. To minimize the risk to lives and property due to fire hazards.

Safety Goal 6. To minimize the risk to persons and property due to the use and storage of hazardous materials.

Safety Goal 7. Protect the community from floods and landslides.

Safety Goal 8. Assure that existing and new development addresses fire protection in a proactive and preventative way.

Safety Goal 9. Prevent or minimize personal injury, loss of life, and property damage due to climate hazards and climate-induced secondary impacts.

Safety Objectives:

Safety Objective 1. Prepare the community for expected or unexpected disasters resulting from natural or human causes.

Safety Objective 2. Prepare the residents of Bradbury to be aware of potential hazards and disasters and to be prepared to be self-reliant for at least seven days in the event of a disaster.

Safety Objective 3. Communicate with Bradbury residents through all available media, that safety personnel are properly trained to provide assistance in the event of a disaster.

Safety Objective 4. Implement the City's Hazard Mitigation Plan in a timely manner.

Safety Objective 5. Reduce the possibility of hazardous materials becoming a health and safety issue within the community.

Safety Objective 6. Assure that potential flooding and landslide hazards are reviewed during new development.

Safety Objective 7. Ensure that adequate service levels of fire protection are maintained in the City.

Safety Objective 8. Promote a well-prepared City that can effectively overcome natural disasters and scarcity of resources due to climate change.

Safety Objective 9. Demonstrate leadership in local climate planning efforts through a range of tangible policies and actions at the municipal operations level.

Safety Policies:

Safety Policy 1. Coordinate with LACoFD to proactively develop ongoing emergency services training to stay current with best practices and support community programs that train volunteers to assist "First Responders" in the implementation of the Hazard Mitigation Plan programs and Community Wildfire Protection Plan actions.

Safety Policy 2. Implement precautionary measures in high-risk areas to reduce injury and loss of property caused by natural or human-caused hazards.

Safety Policy 3. Review all development proposals for compliance with established hazard avoidance criteria.

Safety Policy 4. Provide adequate levels of service to ensure that the residents are protected to the best of the City's ability from natural and human-caused disasters.

Safety Policy 5. Cooperate with federal, state and county agencies responsible for the enforcement of all health and safety laws and regulations.

Safety Policy 6. Establish and maintain a variety of media sources to enable interactive safety awareness and preparedness educational opportunities for the residents.

Safety Policy 7. Obtain materials and support the dissemination of written information to all Bradbury households regarding minimizing or avoiding hazards within the home.

Safety Policy 8. Provide opportunities to continually advise and update community residents regarding actions and activities they

should engage in after a significant natural or human-caused disaster.

Safety Policy 9. Support continuing review and updating of the City's Disaster Preparedness Program manual.

Safety Policy 10. Work closely with adjacent cities, county, state and federal agencies to inform, monitor and communicate the presence of wild animals.

Safety Policy 11. Maintain and evaluate the level of safety services available to the community.

Safety Policy 12. Regulate development in accordance with state statutes in areas prone to seismic hazards.

Safety Policy 13. Continue to support mutual aid / mutual assistance agreements between local, state, and federal firefighting agencies, including the California Master Mutual Aid Agreement.

Safety Policy 14. Require that all new development within Bradbury comply with local, state, and federal regulatory standards such as the California Building and Fire Codes as well as other applicable fire safety standards.

Safety Policy 15. Provide sufficient fire protection services, firefighting equipment, and firefighting personnel to adequately respond to fire hazards.

Safety Policy 16. Coordinate with the City's water purveyor to ensure necessary water supply systems and fire flow for structural fire suppression are provided and maintained.

Safety Policy 17. Require adequate Fire Protection Plans and emergency vehicle access for new development in VHFHSZs.

Safety Policy 18. Coordinate with LACoFD to identify and incorporate fire resistive building and fire safe site design methods to prevent and minimize damage if new structures are proposed in VHFHSZs on undeveloped land and/or when rebuilding after a fire.

Safety Policy 19. Consider fire safe design (i.e. fire-resistant building and site design, materials, and landscaping) for development within Very High Fire Hazard Severity Zones as part of the development review process.

Safety Policy 20. Locate, when feasible, new essential public facilities and infrastructure outside of VHFHSZs, including but not limited to, hospitals and health care facilities, emergency shelters,

emergency command centers, emergency communication facilities, and utilities or identify construction methods or other methods to minimize damage if these facilities must be located in VHFHSZs.

Safety Policy 21. Work with LACoFD to identify and maintain fire hazard reduction projects, including community fire breaks and vegetation clearance around private and public roads.

Safety Policy 22. As part of the LACoFD review process, require ongoing brush management, fuel management/modification, defensible space, fire retardant landscaping, and other project design features for new development located in areas of or adjacent to the VHFHSZs.

Safety Policy 23. Coordinate with LACoFD to define minimum standards for evacuation of residential areas in VHFHSZs. If areas with inadequate access/evacuation routes are identified, develop appropriate mitigation measures, improvement plans, and educational programs to ensure safe evacuations.

Safety Policy 24. Provide access to potable water for emergency purposes.

Safety Policy 25. Regulate and monitor, to the extent possible, the delivery, use and storage of hazardous materials within the City.

Safety Policy 26. Require all existing and new development to install and maintain adequate smoke detection systems.

Safety Policy 27. Require all new development to install fire sprinkler systems.

Safety Policy 28. Require that all new development incorporate sufficient measures to mitigate flood and landslide hazards including but not limited to on-site drainage systems and grading of site to minimize stormwater runoff.

Safety Policy 29. Collaborate with local, regional, state and/or federal jurisdictions and agencies on climate resiliency and adaptation strategies.

Safety Policy 30. Reduce communitywide greenhouse gas emissions locally by actively supporting regional efforts to reduce greenhouse gases throughout the county.

Safety Policy 31. Monitor climate change-related effects with local, regional, state, and/or federal partners to provide information on effectiveness of existing infrastructure and programs.

Safety Implementation Action Program

The City of Bradbury intends to complete the following items which address the objectives and policies of the Safety Chapter of the General Plan:

Safety Action 1. Ensure that the Land Use Element recognizes and addresses seismic threats.

Safety Action 2. Promote public education about fire safety at home.

Safety Action 3. Promote public education about disaster preparedness, with an emphasis on protecting vulnerable and at-risk populations such as seniors and those with limited mobility.

Safety Action 4. Update the hillside development standards to include fire prevention design measures and specific LACoFD standards which will be required for new development.

Safety Action 5. Continue to make emergency and disaster preparedness a community priority.

Safety Action 6. Implement the City's Emergency Operations Plan to ensure the most effective allocation of resources for protection of people and property in time of an emergency, and update and review the Plan annually.

Safety Action 7. City staff to continue to work with LACoFD on brush removal and weed abatement from April to June.

Safety Action 8. Conduct public outreach on wildfire prevention awareness.

Safety Action 9. Promote voluntary tree trimming and brush and weed abatement. If voluntary efforts are not effective, continue to enforce city-mandated tree trimming requirements and coordinate with Code Enforcement on brush and weed abatement when residents fail to mitigate their own fire hazards.

Safety Action 10. Maintain and update the Hazard Mitigation Plan for the City.

Safety Action 11. Continue support and participation with the Public Safety Committee.

Safety Action 12. Work with LACoFD to maintain and regularly update the City's Fire Hazard Severity Zones Map (Exhibit H-S Safety No. 1) for changes in fire hazard severity zones consistent with changes in hazard designations by CAL FIRE.

Safety Action 13. Work with LACoFD to maintain an ongoing fire inspection program to reduce fire hazards associated with multifamily development, critical facilities, public assembly facilities, industrial buildings, and nonresidential buildings.

Safety Action 14. For all new developments, roadways are to be a minimum 20 feet wide and shall include emergency turnarounds with minimum dimensions established in coordination with LACoFD.

Safety Action 15. Require all new development in the City's VHFHSZs to meet the most recent version of the California Fire Code and California Building Code. A Fire Protection Plan that describes project specific fuel modification shall be required.

Safety Action 16. Modify, as feasible, existing non-conforming development to contemporary fire safety standards, including road standards and vegetation standards.

Safety Action 17. Work with CAL FIRE, United States Forest Service, United States Geologic Service, and applicable nongovernmental agencies to create a plan to address post-fire recovery activities and projects that allow burned areas to fully recover and minimize repetitive losses and further damage.

Safety Action 18. Assess site constraints when considering land use designations near wildlands to avoid or minimize wildfire hazards as part of a land use update or amendment.

Safety Action 19. Locate, design and construct development to provide adequate defensibility and minimize the risk of structural loss from wildland fires.

Safety Action 20. Design development on or at the base of hillsides and canyons to reduce the increased risk of fires from topography features (i.e. steep slopes, ridge saddles).

Safety Action 21. Require all streets, both public and private, to be marked and visible and all street addresses to be posted in plain view.

Safety Action 22. Implement necessary actions and programs to improve drought impact preparation.

Safety Action 23. Promote plans and programs that support sustainable energy sources.

Safety Action 24. Promote the use of sustainable and carbon-neutral energy sources in new development.

Safety Action 25. Explore using renewable energy and clean generation technologies such as solar, wind, biogas, or fuel cells to power city-owned and operated facilities where feasible.