

# CHAPTER 2

## SAFETY ELEMENT



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### INTRODUCTION

The aim of the Safety Element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. Other locally relevant safety issues, such as emergency response, hazardous materials spills, and crime reduction, may also be included. The safety element overlaps topics also mandated in the land use, conservation, and open-space elements. Safety Element Definitions are provided at the end of this document.

#### **Safety Element Statutory Requirements**

*State law requires that every city and county within California adopt “a safety element for the protection of 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 the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wild land and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards...”*

#### **Relationship to other General Plan Elements and Program EIR**

California law requires that all elements of the General Plan be consistent. While all of the General Plan Elements are independent, they are also interrelated, some more so than others. As an example certain goals and policies of one element may also address items that are primary 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 Element is most directly related to Land Use, Circulation, Conservation and Open Space Elements.

A Program Environmental Impact Report (EIR) will be part of the 2005-2020 Duarte General Plan. Policies within the Safety Element will also become mitigation measures within the Program EIR.

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### GOALS, OBJECTIVES AND POLICIES

This section provides draft Goals, Objectives, and Policies for the Safety Element of the Duarte General Plan. Implementation measures for these policies are at the end of this chapter. The most likely natural or man-made disasters likely to strike Duarte are associated with wildfires and seismic and geologic hazards. To minimize the risk from these hazards, the following goal and policies will be implemented over the life of the plan.

#### Emergency Preparedness Goals, Objectives and Policies

**Safety Goal 1:** To protect the citizens, their property and public facilities from natural and man-made hazards.

**Objective 1.1** Prepare the community for any expected or unexpected disasters resulting from natural or man-made causes.

#### Policies

- Safe 1.1.1 Implement Section 11 (Multi-Hazard Goals and Action Items) of the City of Duarte Natural Hazards Mitigation Plan which would enable the city to operate in a self-sufficient manner following a natural or man-made disaster.
- Safe 1.1.2 Support community programs that train volunteers to assist police, fire, and civil defense personnel to perform effectively after the occurrence of a natural or man-made disaster.
- Safe 1.1.3 Expand and intensify precautionary measures in high risk areas to reduce loss from natural or man-made disasters.
- Safe 1.1.4 Enforce requirements that all development proposals be reviewed in order that they may be analyzed for safety implications.
- Safe 1.1.5 Provide adequate levels of service to ensure the public is protected from natural and man-made disasters.
- Safe 1.1.6 Cooperate with federal, state, and county agencies responsible for the enforcement of all health, safety, and environmental laws.

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**Safety Goal 2:** To establish, maintain, and develop an awareness on the part of all citizens of Duarte how to react, protect themselves and each other, as well as how to survive in the event of a natural or man-made disaster or danger.

**Objective 2.1** Prepare the citizens of Duarte to be prepared for danger or disaster and, if need be to be self reliant for a length of time in the event of a catastrophic natural or man-made event.

**Policies:**

- Safe 2.1.1 Establish and support all appropriate media for reaching all segments of the community (English-speaking and non-English speaking) to educate residents concerning emergency preparedness and safety.
- Safe 2.1.2 Present or support an on-going series of community meetings or seminars, and a community handbook on disaster preparedness and procedures. The program should be about minimizing hazards in the home, and precautions to be taken after the occurrence of an earthquake.
- Safe 2.1.3 Establish a citizens notification system regarding natural or man made hazards through AM Radio.
- Safe 2.1.4 The City will work closely with adjacent cities, Department of Fish and Game, County Animal Control, Sheriffs Department and monitor, inform and communicate to residents and schools the presence of wild animals in human habitat areas (including bear, coyote and mountain lion).

**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, while alternately considering the desirability of consolidating all safety services into a single entity.

**Objective 3.1** Communicate with Duarte citizens, through all available media, that their safety personnel are current on all aspects of community safety and prepared to effectively assist when needed.

**Policies:**

- Safe 3.1.1 Maintain high levels of emergency services and monitor safety services annually and evaluate safety services

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alternatives. Review, on an annual basis, the effectiveness of safety services relying on citizen input.

**Safety/hazardous mitigation Goals, Objectives and Policies** The following goals (4-6) and supporting policies express the city's concern regarding risks to citizens involving seismic, fire, and hazardous materials disasters.

**Safety Goal 4:** To minimize the risks to lives and property due to seismic activity.

**Objective 4.1** Implement Section 6 (Earthquake Mitigation Action Items) and Section 11 (Multi-Hazard Goals and Action Items) of the Natural Hazards Mitigation Plan.

**Policies:**

- Safe 4.1.1 Restrict development in areas prone to seismic safety hazards.
- Safe 4.1.2 New construction directly astride or across known active faults, or fault zones, should be regulated.

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

**Objective 5.1** Implement Section 7 (Wildfire Mitigation Action Items) and Section 11 (Multi-Hazard Goals and Action Items) of the Natural Hazards Mitigation Plan as updated from time to time through the course of this General Plan.

**Policies:**

- Safe 5.1.1 Continue to support "mutual assistance" agreements between the fire departments of the local cities, Los Angeles County, and the U.S. Government.
- Safe 5.1.2 Continue to support programs to reduce fire hazards of vegetation in areas of extreme to high fire risk. Such programs may take a variety of forms, but may include weed and brush removal and control and use of fire resistant plantings.
- Safe 5.1.3 Provide an adequate level of fire equipment, peakload water supply and personnel to protect the community.

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**Safety Goal 6:** To minimize the risks to lives and property due to the use and storage of hazardous materials.

**Objective 6.1** Reduce the possibility of hazardous materials becoming a health and safety issue within the community.

**Policies:**

- Safe 6.1.1 Monitor to the greatest extent possible the location of hazardous materials that could adversely impact Duarte residents, and businesses.
- Safe 6.1.2 Regulate the delivery, use, and storage of hazardous materials within the city limits according to regulations and guidelines set forth by the Los Angeles County Fire Department.

## RELATED AGENCIES, LAWS AND PLANS

The following existing laws, plans and programs relate to the goals of the Duarte Safety Element. These laws, plans and programs, enacted through state and local action, are administered by various agencies with responsibility for their enforcement.

### **California Environmental Quality Act**

The California Environmental Quality Act (CEQA) was adopted by the state legislature in response to a public mandate for a thorough environmental analysis of projects that might adversely affect the environment. The provisions of the law, review procedure and any subsequent analysis are described in the CEQA Statutes and Guidelines as amended in 1998. Safety hazards, as well as noise and air quality impacts are recognized as environmental impacts under CEQA.

### **Colbey-Alquist Floodplain Management Act**

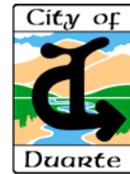
The Colbey-Alquist Floodplain Management Act encourages local governments to plan, adopt and enforce land use regulations for floodplain management, in order to protect people and property from flooding hazards. This act also identifies requirements which jurisdictions must meet in order to receive state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

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### **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 landslide hazards within urbanizing areas.

### **Federal Clean Air Act**

The Federal Clean Air Act established National Ambient Air Quality Standards (NAAQS) in 1970 for six pollutants: carbon monoxide, ozone, particulates, nitrogen dioxide, sulfur dioxide, and lead. The Act requires states with air pollution that exceeds the NAAQS to prepare air quality plans demonstrating how the standards would be met (State Implementation Plans-SIPs). In 1990, amendments to the Act established categories of severity for non-attainment areas ("marginal" to "extreme"). In 1994, the California Air Resources Board adopted a revised State Implementation Plan for ozone to meet the requirements of the 1990 amendments.

### **City of Duarte Natural Hazard Mitigation Plan**

In August of 2004 the Duarte City Council approved Resolution No. 04-18 adopting Natural Hazards Mitigation Plan of 2004 in accordance with the Federal Disaster Mitigation Act of 2000. This plan established goals and objectives to ensure health, safety, and welfare of Duarte citizens, even in the event of a natural disaster. The plan was a result of a process involving city departments, local agencies, business people, landowners, developers, and citizens, and reflects local values and concerns.

The City of Duarte Natural Hazard Mitigation Plan adopted the following Goals:

#### Protect Life and Property

- Identify natural and manmade hazards that threaten life and property in the City of Duarte.
- Implement programs and projects that assist in protecting lives by making infrastructure, critical facilities, and other property more resistant to losses from all hazards.
- Protect life and property by adopting state-of-the-art standards, codes, and construction procedures.

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- Improve hazard assessment information to make recommendations for encouraging preventive measures for existing development in areas vulnerable to natural hazards.

### Increase Public Awareness

- Increase public awareness of existing threats and the means to reduce these threats by conducting educational and outreach programs to all the various community groups in the City.
- Provide informational brochures, partnership opportunities, and funding resource information to assist in implementing mitigation activities.

### Strengthen Partnerships

- Strengthen communication and coordinated participation among public agencies, residents, organizations, businesses and industries to aid in the implementation of mitigation measures.
- Encourage leadership within the public and the private sectors to promote and implement local hazard mitigation activities.

### City Emergency Services

- Establish policy to ensure the importance of mitigation programs and projects for critical facilities, services, and infrastructure.
- Continue providing emergency services with training and equipment to address all identified hazards.
- Continue developing and strengthening coordination and cooperation among the various emergency service agencies.

### Environmental

- Balance land use planning, natural resource planning and watershed management, with natural hazard mitigation measures to protect life, property, and the environment.
- Preserve existing natural systems and enhance man-made systems to promote natural hazard mitigation programs.

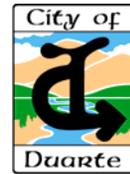
### **Unified Hazardous Waste and Hazardous Materials Management Regulatory Program**

The Los Angeles County Fire Department Health Haz Mat Division administers the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program for the City of Duarte.

Senate Bill 1082 (1993) established the "Unified Hazardous Waste and

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Hazardous Materials Management Regulatory Program". The Unified Program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste programs (Program Elements):

- Hazardous Waste Generation (including onsite treatment under Tiered Permitting),
- Aboveground Petroleum Storage Tanks (only the Spill Prevention Control and Countermeasure Plan or "SPCC"),
- Underground Storage Tanks (USTs),
  
- Hazardous Material Release Response Plans and Inventories,
- California Accidental Release Prevention Program (Cal ARP), and,
- Uniform Fire Code Hazardous Material Management Plans and Inventories.

## OVERVIEW OF DUARTE'S SAFETY ISSUES

### Fire Hazards

Duarte's location at the base of the San Gabriel Mountains creates an urban/wildland interface that makes Duarte more susceptible to wildfires than cities that do not border the foothills. When surveys were mailed to Duarte residents and businesses in preparation of this Natural Hazard Mitigation Plan, many residents expressed their concern that wildfires pose the "highest threat" to their home. This was particularly true of residents living north of Royal Oaks Drive who reside closest to urban/wildland interface areas. Several of the surveys expressed a concern that Duarte could experience another fire like the Stable Fire that occurred in 1980.

### **Historic Wildfires in the City of Duarte**

#### 1953 Duarte Fire

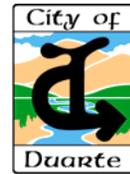
This fire originated between Spinks Canyon and Maddock Canyon in wildland area. A total of 561 acres burned in this fire. Of the 561 acres that burned, 256 acres were considered within the "Duarte area".

#### 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. Of the 6,440 acres, 2,505 acres of land were within Duarte's boundaries. (Mostly wilderness areas).

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### 1980 Stable Fire

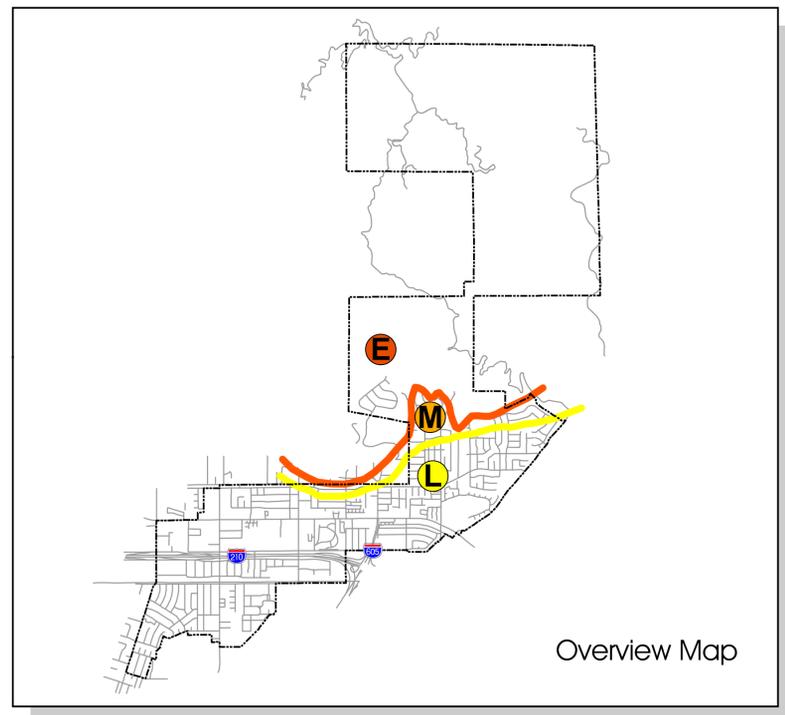
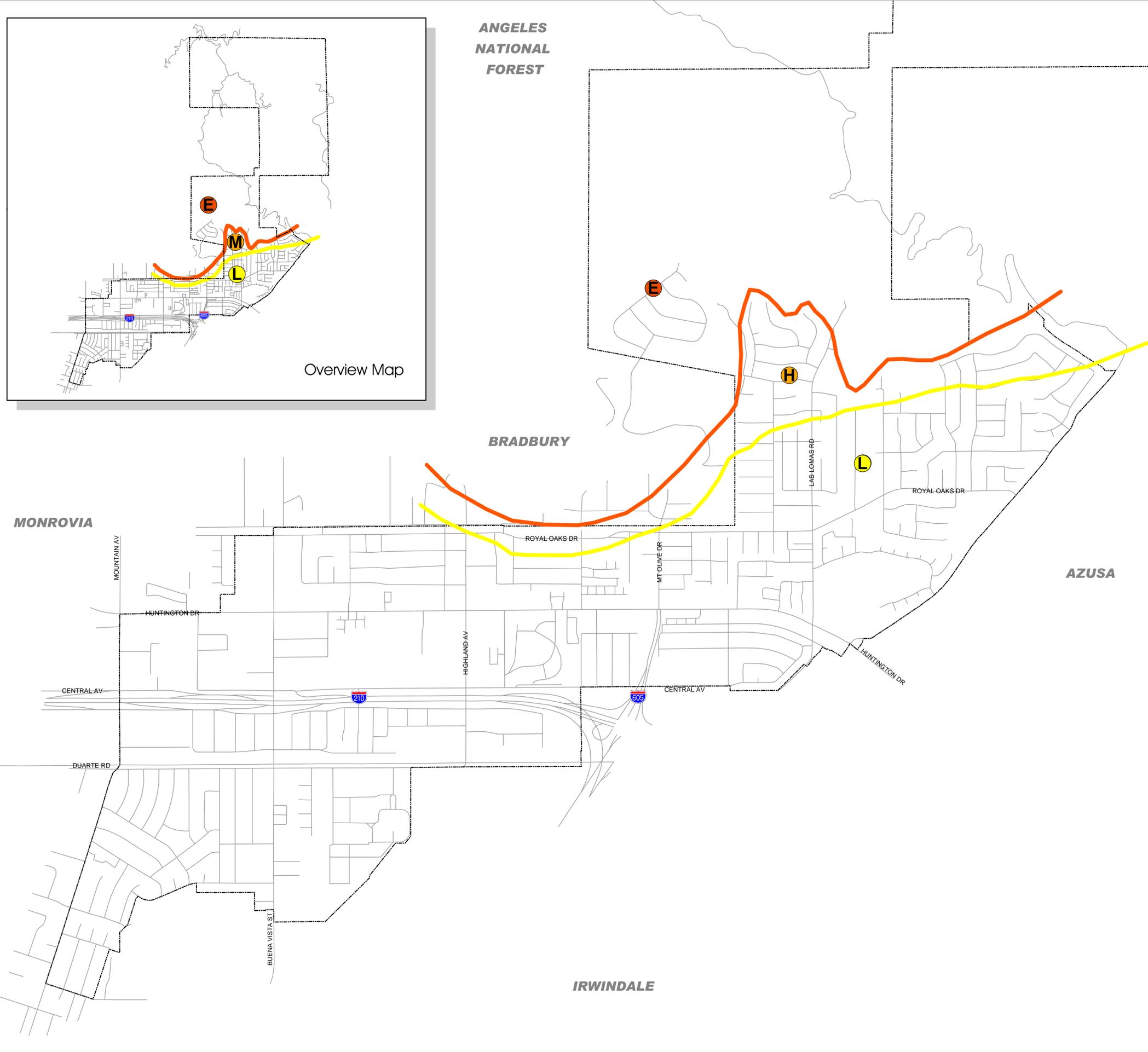
On November, 16, 1980 a fire storm that had been fanned by Santa Ana Wind conditions swept down from the foothills and destroyed 35 homes in the City of Duarte and 14 homes in the City of Bradbury. Reports indicated that the fire had moved from the City of Azusa, east of the San Gabriel River to the 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 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 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, 50,000 sandbags were distributed, and parking was restricted on streets with potential slides. Since the Stable Fire occurred during California's rainy season, "Storm Watch" flyers were also issued to residents in Duarte's hillside areas. The Disaster Center at City Hall monitored weather reports and storm situations and kept residents informed of these situations. City staff was also prepared to mobilize personnel and equipment if needed to clear mud flows from the public streets and parkways. As quickly as possible, several temporary debris basins were constructed and existing debris basins were cleared and reinforced with sandbags. Parts of Duarte are still susceptible to wildfires as shown on Diagram Safe – 1.

### State Department of Conservation

State law requires the Division of Mines and Geology of the Department of Conservation and the Office of Emergency Services be consulted for the purpose of including information known by and available to the department in the General Plan. Robert H. Sydnor, the Senior Engineering Geologist for the California Geological Survey, of the Department of Conservation, computed Earthquake Ground Motion for Duarte. The Earthquake Ground Motion report along with an Engineering Geology and Seismology Bibliography for the City of Duarte can be found in the General Plan Background/Existing Conditions Report. Mr. Sydnor's calculations show that residential & commercial buildings in Duarte can use the standard default earthquake values found in the Uniform Building Code. However, public schools are plan checked by the State Division of State Architect who reviews and approves the plans. Hospital plans are reviewed and approved by the Office of Statewide Health Planning and Development. As with public schools, hospitals use higher earthquake values applied by structural engineers consistent with the Earthquake Ground Motion report provided by Mr. Sydnor.

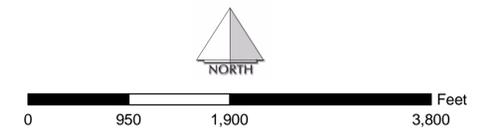
**Wildfire Risk Areas Diagram**  
**Diagram Safe - 1**



LEGEND

- City Limits
- E** Extremely High Fire Hazard
- H** High Fire Hazard
- L** Low Fire Hazard

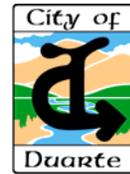
Source: City of Duarte - June 2006



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### Seismic Hazards

Duarte is within the Sierra Madre, Duarte, and Lower Duarte faults. On May 25, 2005, the Southern California Earthquake Center reported: "A temblor on the Puente Hills fault might kill up to 18,000 people, new computer models predict. But it may not hit for 3,000 years. The northern boundary of the Puente Hills fault zone includes Duarte and could destroy 11% - 40% of the building in a 7.5 magnitude earthquake. Diagram Safe – 2 identifies sections of the Sierra Madre Fault in proximity to the City of Duarte.

### Geologic Hazards

There are geologic conditions within and around Duarte that cause problems if proper precautions are not taken. The northeast mountainous areas of the City are generally too steep and bedrock is too unstable for typical construction. Erosion, landslides and shaking from earthquakes can be severe hazards within these areas. Diagram Safe – 3 identified the portions of Duarte susceptible to landslide and liquefaction.

### Flood Hazards

The Federal Emergency Management Administration has not mapped Duarte and no part of the City is within the 100 year flood plain. Three major dams in the upper watershed of the San Gabriel River provide flood protection for the City of Duarte. Two of these dams, Cogswell Dam and San Gabriel Dam, were built in San Gabriel Canyon between 1934 and 1937 respectively. A third dam, known as Morris Dam was constructed in 1934 by the City of Pasadena. There is a fairly low possibility for a severe earthquake to cause flooding due to the failure of Morris, San Gabriel and/or Cogswell dams.

Diagram Safe - 4 (Flood Inundation Areas) shows how long it would take for flood waters to reach different parts of Duarte in the unlikely possibility of a flood. Should this happen flood waters would last about one hour then recede.

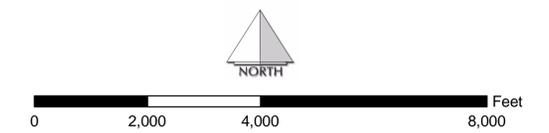
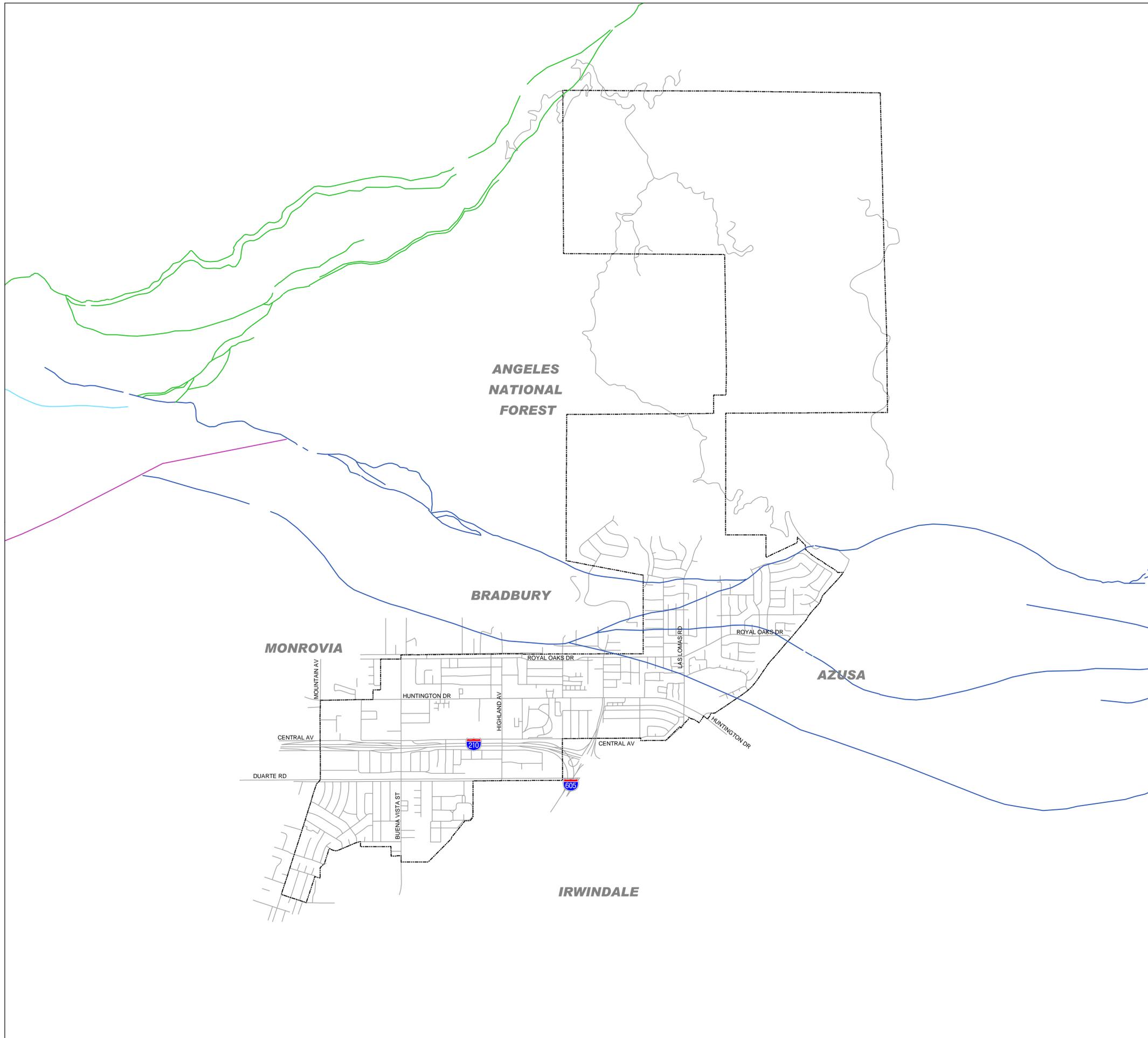
The City of Duarte entered the National Flood Insurance Program on September 7, 1984. The City was given a Community Panel Number (#065026) however, there have been no Flood Insurance Studies (FIS) completed by NFIP for the City of Duarte, to date. The flood hazard zone designation for the City of Duarte is "Zone D". The Zone D designation on NFIP maps is used for areas where there are possible but undetermined flood hazards. In areas designated as Zone D, no analysis of flood hazards has been conducted. Mandatory flood insurance

## Fault Lines Diagram Safe-2

### LEGEND

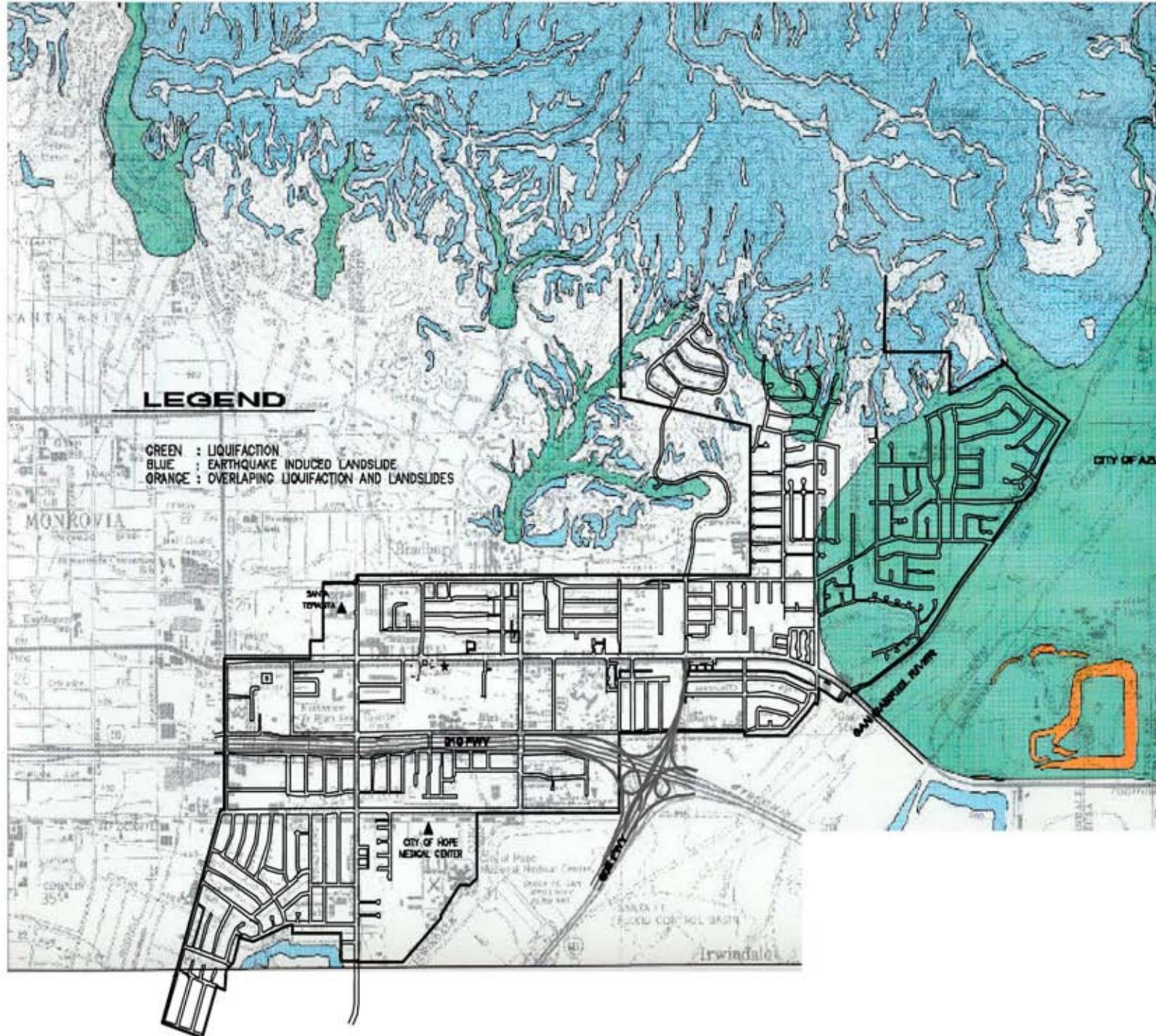
- City Limits
- Roads
- Raymond fault
- Sierra Madre fault zone, Clamshell-Sawpit section
- Sierra Madre fault zone, Sierra Madre C section
- Sierra Madre fault zone, Sierra Madre D section

Source: City of Duarte - June 2006  
USGS Earth Quake Hazards Program



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**Diagram Safe - 3**  
**Areas of Potential Landslides**



California Geological Survey  
 Extract from: Seismic Hazard Zones Map Azusa 7 1/2-minute Quadrangle

Original Map Scale: 1:24,000

with application to the  
 City of Duarte  
 Safety Element within the General Plan for the City of Duarte

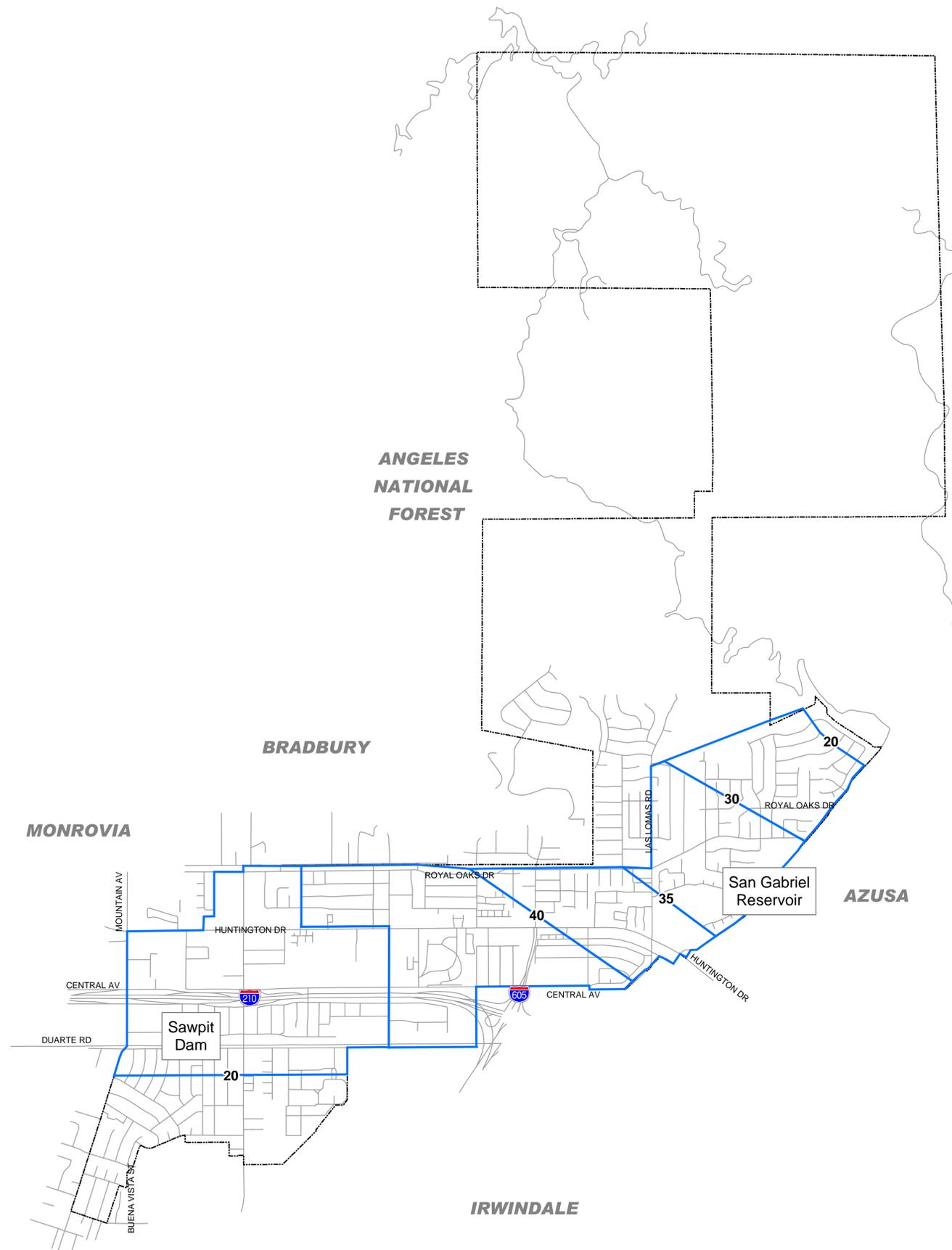
Issued as an Official Map by State Geologist on March 25, 1999  
 Delineated in compliance with Chapter 7.8, Division 2, California Public Resources  
 Code

Seismic Hazards Mapping Act of 1990  
 The green areas indicate official zones for liquefaction investigations.  
 The blue areas indicate official zones for landslide investigations.  
 The orange areas indicate both landslides and liquefaction investigations.

For explanation, refer to California Geological Survey Special Publication 117,  
 Guidelines for Evaluating and Mitigating Seismic Hazards in California, 1997, 74 pages.  
 SP-117 and the complete Azusa Quadrangle, the adjacent Baldwin Park Quadrangle (to the south),  
 and the Mount Wilson Quadrangle (to the west) may be downloaded free  
 from the CGS homepage at: [www.conservation.ca.gov](http://www.conservation.ca.gov)



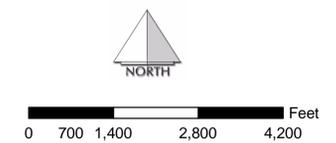
### Diagram Safe - 4



**LEGEND**

- City Limits
- 35— Elapsed time in minutes from dam failure to arrival of first water

Source: City of Duarte - June 2006

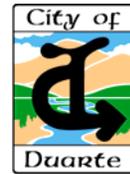


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purchase requirements do not apply, but coverage is available. The flood insurance rates for properties in Zone D are commensurate with the uncertainty of the flood risk.

### **Hazardous Materials Management**

The Los Angeles County Fire Department Health Haz Mat Division administers the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program for the City of Duarte. Refer to page 6 of this chapter to find more about the “City of Duarte Natural Hazard Mitigation Plan” which addresses hazardous materials within the city.

### **Emergency Preparedness**

In August of 2004 the Duarte City Council approved the Natural Hazards Mitigation Plan of 2004 in accordance with the Federal Disaster Mitigation Act of 2000. This plan established goals and objectives to ensure health, safety, and welfare of Duarte citizens, even in the event of a natural disaster. The plan was a result of a process involving city departments, local agencies, business people, landowners, developers, and citizens, and reflects local values and concerns. Refer to page 6 and 7 of this chapter to find out more about the “City of Duarte Natural Hazard Mitigation Plan” which addresses emergency preparedness.

There are no above or below ground petroleum storage facilities in Duarte other than those used by service stations and individual businesses. City staff did not have any information on pipelines within the city. Regarding other potential hazardous condition, the Rancho Duarte Golf Course was formerly a landfill. The City of Duarte owned this 18.5 acre golf course until about ten years ago. This golf course is designated Open Space in the Open Space and Land Use Elements.

### **Law enforcement**

Police protection is provided by the Los Angeles County Sheriff out of the Duarte Satellite Station. The Duarte Satellite Station is the launching center for 30 male and female officers that begin and end their shift to provide Duarte, Bradbury and the unincorporated area west of Duarte with law enforcement services 24 hours a day. The station does not have dispatch or booking ability. Special Assignment Deputies, including two Night Special Assignment Deputies, handle gang identification, operations pertaining to narcotic sales, managing D.R.A.G.N.E.T.

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(Duarte Residents Against Graffiti Neighborhood Enhancement Team) and overall trouble shooting of crimes that may be on the increase. A School Resource Officer works pro-actively with Duarte schools to provide prevention, intervention and suppression services. In addition to working with the schools, this officer also assists in Duarte's gang enforcement and D.A.R.T. Program. Detective services and a variety of other services are provided by the Sheriff's office as prescribed by the contract between the City and County Sheriff.

### **Fire Services**

Fire protection in the City of Duarte is provided by the Los Angeles County Fire Department. Fire (LACFD) station 44 is located at 1105 S. Highland Avenue. This station provides the following apparatus and personal including engines # 44, # 244, and # 544, patrol truck # 44, and water truck # 44. The station is typically staffed by a seven member crew.

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.

### **Peakload Water Supply**

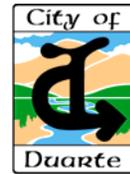
Peakload water supply is defined as the supply of water available to meet both domestic water and fire fighting needs during the particular season and time of day when domestic water demand on a water system is at its peak. California – American Water Company provides potable water to the Duarte service area which includes about 300 metered connections in Bradbury and all of the incorporated area of Duarte. Potable water is provided from eight wells in and around Duarte.

The San Gabriel groundwater basin has been found to be contaminated with volatile organic compounds (VOCs). A strategy for addressing the problem and ultimately removing the contamination is being successfully implemented. In 1999, the California – American Water Company determined that the quality of water from the Mountain Avenue Well, which has been out of service for many years, has improved to the point where it meets State and Federal Drinking Water Standards. The well equipment is proposed to be rehabilitated so the facility can be placed back in service, increasing the areas groundwater production capacity.

Storage in the Duarte Service Area is provided by 7 reservoirs and 4 steel tanks with a total storage capacity of 11.2 million gallons, the equivalent of about

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175% of an average day's supply. All of the reservoirs are covered to reduce evaporation and control losses.

Peakload water supply on August 11, 2005 was 19.5 million gallons a day. Peakload water demand is always highest during the hottest summer months and is important to know so that adequate water is available in case of an emergency.

### IMPLEMENTATION MEASURES

Government Code 65400 requires the legislative body to consider and adopt reasonable and practical means for implementing the general plan. This is necessary so that the plan will serve as an effective guide for orderly growth and development, preservation and conservation of open-space land and natural resources, 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 plan and progress in implementing the plan. HCD checks to see if the city is making progress in meeting its fair share of regional housing needs.

This section provides an implementation matrix for policies found in the Safety Chapter. The matrix identifies the policy to be implemented, the implementation measure to be used for that policy, the responsible agency or department that will be implementing the measure, the funding source and the estimated timeframe to complete the implementation.

#### Responsible Agency:

All = All Departments	AS = Administrative Services
CD = Community Development	PS = Public Safety
CM = City Manager	P&R = Parks and Recreation

#### Funding Source:

GF = General Fund	SF = State funds
RA = Redevelopment Agency	FF = Federal Funds
G = Grants	OF = Other Funds
DF = Development Fees	

#### Implementation Timeframe (or as resources provide):

ST = Short-term by 2009	LT = Long Term by 2020
MT = Mid-term by 2015	On = Ongoing

# CHAPTER 2

## SAFETY ELEMENT



**Table Safe - 1**  
**Safety Element Implementation Measures**

<b>Policy #</b>	<b>Implementation Measure</b>	<b>Responsible Agency</b>	<b>Funding Source</b>	<b>Time frame</b>
Safe 1.1.1	Conduct periodic emergency exercises among city staff members and other key personnel and implement and update the city's emergency preparedness plan on an on-going basis.	PS	GF	On
Safe 1.1.2	Prepare a registry of volunteers who live and work in the city and will be able to perform medical assistance, security, and damage assistance in an emergency.	PS	GF, G	ST
Safe 1.1.3	Identify high risk areas and prepare programs which will help minimize loss.	PS	GF, G, FF, SF	ST
Safe 1.1.4	Continue to update and enforce the city's fire and building codes as appropriate.	CD	GF	On
Safe 1.1.5	Incorporate fire and police department expansion needs in each year's operating budget as the yearly budget provides.	AS	GF, FF, SF, G	On
Safe 1.1.6	Support federal, state, and county regulations pertaining to health and safety, and fire regulations and ordinances. Train city personnel to help identify hazardous materials and associated violations.	CM, PS,	GF,	On
Safe 2.1.1	Develop and support public information and education programs to familiarize the citizens of Duarte with seismic safety.	PS	GF, G	ST
Safe 2.1.2	Develop and disseminate a disaster preparedness plan and acquire the related resources which will enable the community to be self sufficient for a minimum of 7 days following a natural or man- made disaster.	PS	G, FF, SF	ST
Safe 2.1.3	Investigate how best to provide local AM band width to communicate emergency messages to Duarte residents and businesses.	PS	G, SF, FF, GF	ST
Safe 2.1.4	Consider establishing a wild animal task force to study providing hard copy and web material, how to store and secure trash, relocation of bear and mountain lions, installing bear and mountain warning signs.	PS	G, SF, FF, GF	ST
Safe 3.1.1	Establish a minimum level of emergency service. Ensure that these services are responsive to the community's needs by periodically evaluating these services through the use of surveys and questionnaires.	PS	GF, FF, SF	On
Safe 4.1.1	Comply with the provisions of the Alquist-Priolo Act requiring site-specific soils, geologic, or geotechnical engineering studies prior to development approval of sites potentially subject to seismic activities.	CD	GF	On
Safe 4.1.2	Require appropriate engineering and design	CD	GF	On

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	mitigations for structures proposed in these areas.			
Safe 5.1.1	Continue to participate in the mutual assistance program.	PS	GF	On
Safe 5.1.2	Ensure that all buildings and areas be accessible to fire vehicles and firefighting equipment. Support fire department policy of controlled burns in high risk areas.	CD	GF	On
Safe 5.1.3	Develop a system of fire hazard mitigations based upon the probability of occurrence and number of people at risk. Replace out- of-date apparatus and equipment on a scheduled basis. Determine peakload water demand and supply.	PS	FF, SF, GF	ST
Safe 6.1.1	Prepare a hazardous materials storage permit ordinance.	PS	GF, G	ST

### Safety Element Definitions

**Alquist-Priolo Earthquake Fault Zone:** A regulatory zone, delineated by the State Geologist, within which site-specific geologic studies are required to identify and avoid fault rupture hazards prior to subdivision of land and/or construction of most structures for human occupancy.

**Critical Facility:** Facilities that either (1) provide emergency services or (2) house or serve many people who would be injured or killed in case of disaster damage to the facility. Examples include hospitals, fire stations, police and emergency services facilities, utility facilities, and communications facilities.

**Fault:** A fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a zone of related faults which commonly are braided, but which may be branching. A fault trace is the line formed by the intersection of a fault and the earth's surface.

**Active Fault:** A fault which has exhibited surface displacement within Holocene time (approximately the past 11,000 years).

**Potentially Active Fault:** A fault which shows evidence of surface displacement during Quaternary time (the last 2 million years).

**Flooding:** A rise in the level of a water body or the rapid accumulation of runoff, including related mudslides and land subsidence, that results in the temporary inundation of land that is usually dry. Riverine flooding, coastal flooding, mud flows, lake flooding, alluvial fan flooding, flash flooding, levee failures, tsunamis, and fluvial stream flooding are among the many forms that flooding takes.

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Ground Failure: Mudslide, landslide, liquefaction or soil compaction.

**Hazardous Building:** A building that may be hazardous to life in the event of an earthquake because of partial or complete collapse. Hazardous buildings may include:

1. Those constructed prior to the adoption and enforcement of local codes requiring earthquake resistant building design.
2. Those constructed of unreinforced masonry.
3. Those which exhibit any of the following characteristics:
  - exterior parapets or ornamentation which may fall on passersby
  - exterior walls that are not anchored to the floors, roof or foundation
  - sheeting on roofs or floors incapable of withstanding lateral loads
  - large openings in walls that may cause damage from torsional forces
  - lack of an effective system to resist lateral forces
  - non-ductile concrete frame construction

**Hazardous Material:** An injurious substance, including pesticides, herbicides, toxic metals and chemicals, liquefied natural gas, explosives, volatile chemicals, and nuclear fuels.

**Landslide:** A general term for a falling, sliding, or flowing mass of soil, rocks, water, and debris. Includes mudslides, debris flows, and debris torrents.

**Liquefaction:** A process by which water-saturated granular soils transform from a solid to a liquid state during strong ground shaking.

**Peakload Water Supply:** The supply of water available to meet both domestic water and fire fighting needs during the particular season and time of day when domestic water demand on a water system is at its peak.

**Seiche:** An earthquake-induced wave in a lake, reservoir, or harbor.

**Seismic Hazard Zone:** A regulatory zone, delineated by the State Geologist, within which site-specific geologic, soils, and foundation engineering studies are required to identify and avoid earthquake-caused ground-failure hazards, or selected other earthquake hazards, prior to subdivision of land and for construction of most structures for human occupancy.

**Subsidence:** The gradual, local settling or sinking of the earth's surface with little or no horizontal motion (subsidence is usually the result of gas, oil, or water extraction, hydrocompaction, or peat oxidation, and not the result of a landslide or slope failure).

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**Seismically Induced Surface Rupture:** A break in the ground's surface and associated deformation resulting from the movement of a fault.

**Tsunami:** A wave, commonly called a tidal wave, caused by an underwater seismic disturbance, such as sudden faulting, landslide, or volcanic activity.

**Wildland Fire:** A fire occurring in a suburban or rural area which contains uncultivated lands, timber, range, watershed, brush or grasslands. This includes areas where there is a mingling of developed and undeveloped lands.