

CHAPTER 9

Safety Element

Introduction

A safe place to live and work is a key objective of any community, and is at the core of community values in Pico Rivera. A safe community contributes to the well-being of its residents, is an important consideration in retaining and attracting quality businesses, positively affects property values and investment, and furthers overall quality of life. Thus, protecting the safety and security of local residents, businesses, employees and visitors is one of the city's highest priorities.

The occurrence of natural and man-made disasters in southern California, such as earthquakes and flooding, underscores the need to effectively address safety in the city. While some naturally occurring hazards may be unavoidable, their impacts on the community can be reduced through preparedness, reliable response, and thoughtful regulation.

This element addresses seismic and geological hazards, flood hazards, hazardous materials, and emergency preparedness. Related law enforcement and fire protection policies are included in the Community Facilities Element.

Seismic and Geologic Hazards

Pico Rivera's topography is relatively flat, ranging from approximately 200 feet above sea level in the northern portion of the city to 140 feet above sea level in the southern portion. Several soil types can be found in the city, the majority of which have low potential for shrink-swell or erosion hazards.

The Los Angeles Basin is criss-crossed by numerous regional earthquake faults, several of which lay in the vicinity of Pico Rivera (see **Figure 9-1**). While most of these faults are inactive, a few result in occasional earthquakes. Those faults most likely to impact the City as a result of seismic activity include the San Andreas, the Sierra Madre, and the Raymond Hill faults. The largest seismic event that affected the city was the 1987 Whittier Narrows Earthquake, a magnitude 5.9 quake that caused localized, but severe damage in Pico Rivera.

The primary seismic hazards associated with earthquakes are ground rupture and ground shaking. The extent of both and accompanying levels of damage are dependent upon a number of factors including magnitude of the event, distance from the epicenter, and underlying soil conditions. In addition, ground shaking

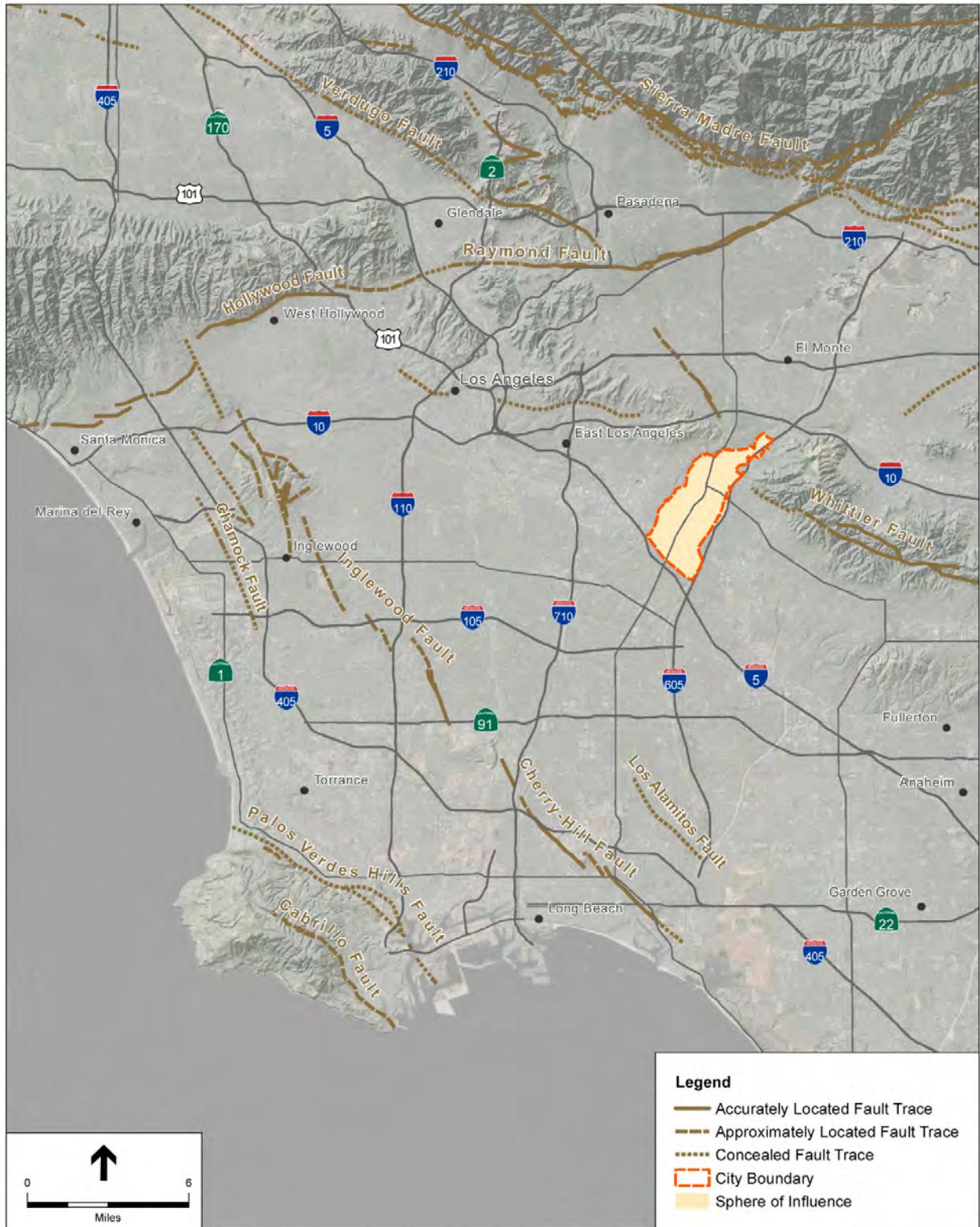


Figure 9-1: Regional Faults

can induce several secondary seismic hazards that may result in damage. These include liquefaction, differential settlement, landslides, and seiching. The central portion of the city and the Whittier Narrows Dam area has medium liquefaction potential, while the remainder of the City has low local liquefaction potential. While the potential for differential settlement, landslides, and seiches exist within Pico Rivera, given soil, topographic and other conditions, their likelihood and potential severity are generally limited.

The California Building Standards Code regulates the design and construction of foundations, building frames, retaining walls, excavations, and other building elements. A key objective of this code is to mitigate the effects of seismic shaking and adverse soil conditions.

Flood Hazards

The control of storm water in Pico Rivera is under the jurisdiction of the Los Angeles County Flood Control District, the U.S. Army Corps of Engineers, and the City. The Flood Control District constructs and maintains storm drain and flood control facilities in the city. The City sets drainage requirements for streets and highways and identifies areas that require infrastructure improvements. The City also identifies storm drain deficiencies, establishes priorities, and submits this information to Los Angeles County Flood Control District. The Army Corps of Engineers maintains the regional flood control facilities along the Rio Hondo and San Gabriel rivers.

Regional flood control structures along the two major surface water bodies in Pico Rivera -- the Rio Hondo River along the western boundary of the city, and the San Gabriel River along eastern boundary -- include the Whittier Narrows Dam to the north near Montebello, and the Rio Hondo and San Gabriel spreading grounds. The Whittier Narrows Dam, completed in 1957, captures regional stormwater flows for groundwater replenishment. The dam effectively removed the city from the natural flood plain of the San Gabriel and Rio Hondo rivers. The Rio Hondo River is contained within a lined channel, while the San Gabriel River remains in its natural state for several miles below the dam.

To protect the public from flood hazards and for home insurance purposes, FEMA publishes maps that show the boundaries of potential flooding. The limits of these floods are based on the largest storm that could be expected to occur, once every 100 and 500 years, respectively. A 100-year flood has a one percent chance of occurring in any given year, while a 500-year flood has a 0.2 percent chance of occurring in any given year.

The city in its entirety had at one time been located within a designated "AR" Flood Zone, which indicated that there was a flood risk from the San Gabriel and Rio Hondo rivers. This flood zone designation resulted in higher flood insurance



Whittier Narrows Dam

rates for property owners. However, upstream flood control measures were implemented and improvements to local river and dam areas have been accomplished. As a result, the entire city with the exception of the actual rivers is now designated as an "X" Flood Risk Zone indicating that the area is outside of the 500-year flood and that flood insurance is no longer mandated. The rivers are located in Flood Zone A which is subject to inundation by the one percent annual change flood event. **Figure 9-2** identifies the FEMA Flood Zones in the city.

Storm drains in Pico Rivera serve to convey local water runoff into the main channels of the Rio Hondo and San Gabriel Rivers. Per an assessment conducted by the County of Los Angeles, the City has several focused areas with localized flooding and deficient storm drain systems.

The entire City lies within the flood inundation area of the Whittier Narrows Dam (See **Figure 9-3**). Flood risk for this structure under normal operations or as a consequence of an event such as an earthquake is classified as high by both the U.S. Army Corps of Engineers Dam Safety Action Classification (DSAC) System, and the FEMA HAZUS program. The Whittier Narrows Dam is currently classified as DSAC-II, which is defined as being unsafe or potentially unsafe. The U.S. Army Corps of Engineers is currently preparing a Dam Safety Modification Study to be completed in 2014. In the study, engineers will develop and evaluate scenarios to modify the dam to withstand failure during rare events. The result of the study will be a recommended mitigation plan that will ultimately be designed and constructed.

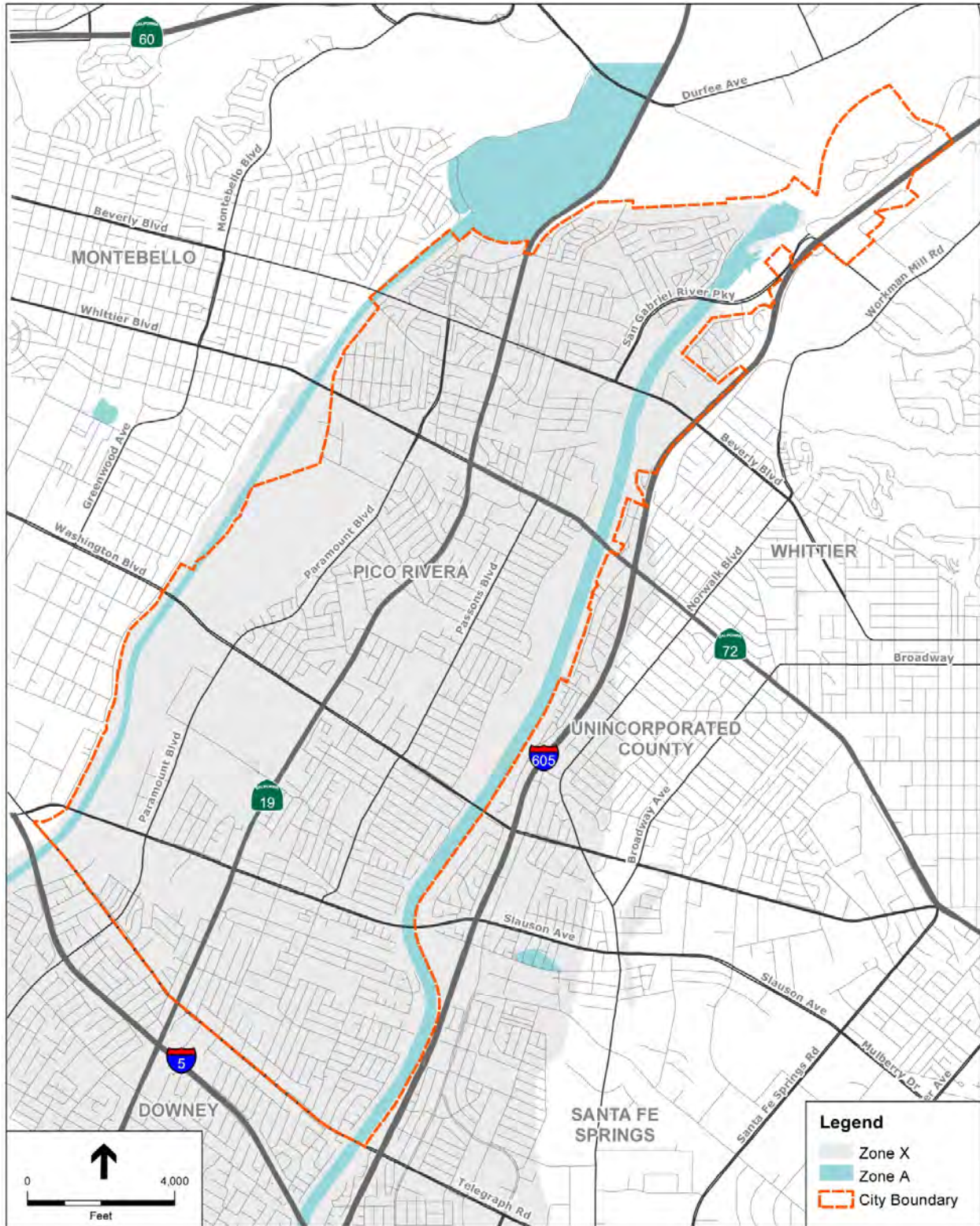


Figure 9-2: FEMA Flood Zones

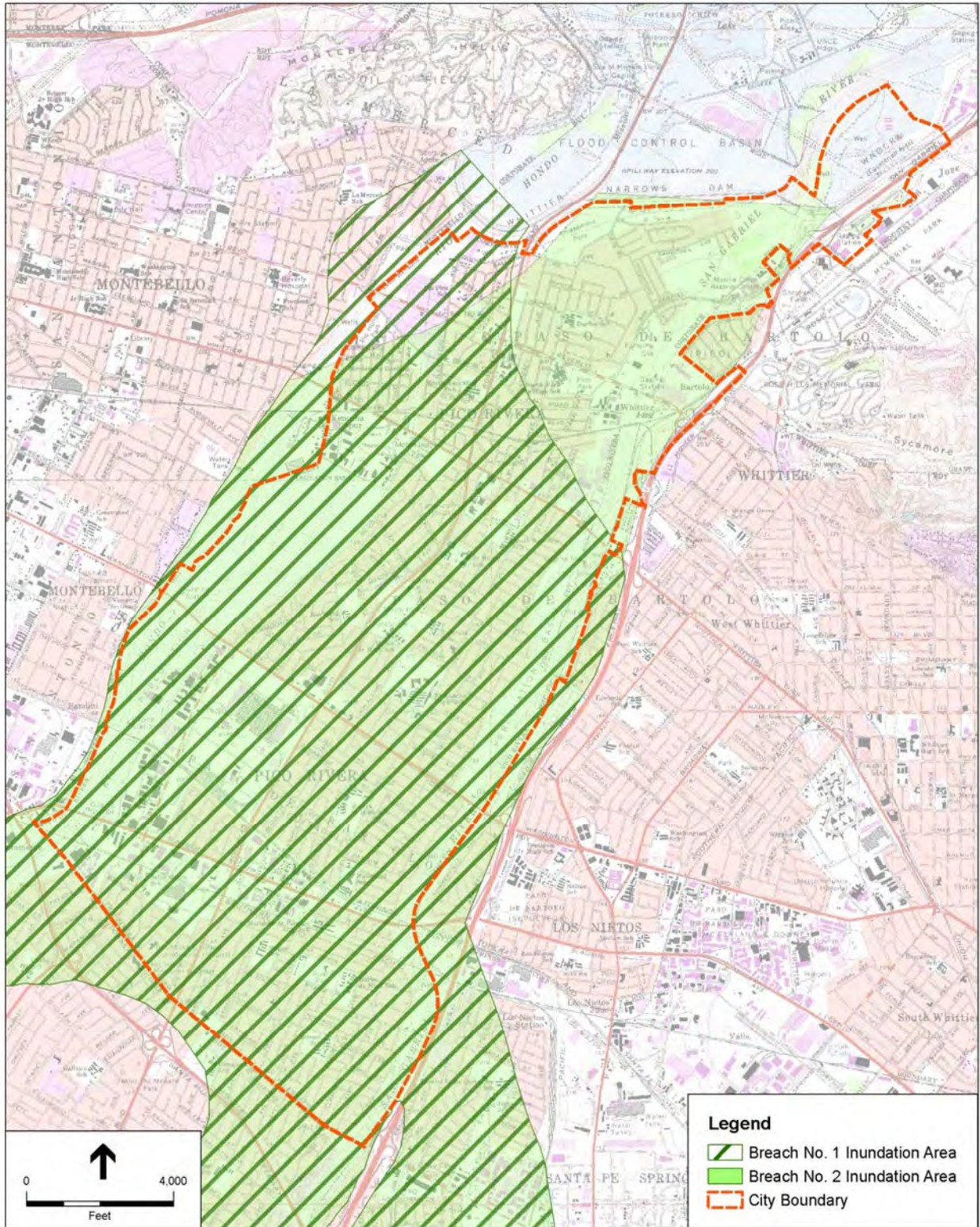


Figure 9-3: Dam Inundation

Hazardous Materials

Hazardous materials are defined as any injurious substance, including pesticides, herbicides, toxic metals, chemicals, explosives, and nuclear fuels and materials. Hazardous materials are commonly handled by a range of industrial, manufacturing, commercial, auto related, medical, educational, and residential uses. Because of the locations of large industrial areas, major truck routes, and main line railroads within the city, the transport, use, and storage of various hazardous materials within the community is a common occurrence. Risks related to the transport, use, and storage of these hazardous materials is low, however. Since these materials represent a potential danger to human health and safety, their transport, use, storage, and disposal is highly regulated by a variety of federal, state, and local laws and agencies.

The Los Angeles County Fire Department, acting as the City's contracted fire protection provider, administers a number of hazardous waste management programs in Pico Rivera. In addition, the County Fire Department enforces environmental laws and regulations pertaining to hazardous materials throughout the County. The Fire Department's Health Hazardous Materials Division permits and inspects hazardous material handling and generating businesses to ensure all federal, state, and local laws and regulations are followed. The division also provides 24-hour emergency response services to hazardous materials incidents and investigates criminal complaints alleging violations of hazardous materials and waste laws.

The Los Angeles County Hazardous Waste Management Plan describes existing and future conditions, needed management facilities, and recommended programs on a County-wide basis. The City of Pico Rivera has adopted the Los Angeles County Hazardous Waste Management Plan along with a City Household Hazardous Waste Plan, both of which reduce risks to human health and the environment. In addition, the City provides several hazardous waste disposal alternatives for businesses and residents, including participation in the County's Household Hazardous Waste Round Up events.

Hazardous materials are transported via rail lines in the City (BNSF and Union Pacific), and major roadways, particularly designated truck routes. The transport of hazardous materials by truck or rail is regulated by the United States Department of Transportation through National Safety Standards and the California Department of Toxic Substances Control.

Emergency Preparedness

The Los Angeles County Fire Department and Sheriff's Department provide first response within Pico Rivera in the event of disasters and emergencies. Proper preparation can help minimize exposure to potential disasters, and improve the

ability to respond during an emergency. To prepare for disasters it is important that the City works closely with local agencies to maintain essential services, help facilitate disaster operations, and speed recovery systems.

Pico Rivera has an Emergency Management Division that works in coordination with all departments to strengthen the City's ability to prepare for, mitigate against, respond to, and recover from threatened or actual natural disasters, acts of terrorism, or other man-made disasters. Various preparedness activities are conducted regularly such as trainings, drills, and exercises to promote a safer, less vulnerable community.

The City, being led by the Sheriff's Department, is participating in the development of an inter-agency emergency communication system that is being developed for all jurisdictions within Los Angeles County to utilize in the event of a major Southern California disaster.

The City has adopted a Standardized Emergency Management System/National Incident Management System (SEMS/NIMS) Emergency Operation Plan. This plan identifies responsibilities, common tactics, and a chain of command for federal, state, and City agencies in the event of an emergency. The intent is to provide a common methodology for the agencies to request resources and equipment from each other, minimize duplicative efforts, and coordinate overall response.

The City has also adopted a Multi-Jurisdictional Hazard Mitigation Plan in coordination with the El Rancho Unified School District and Pico Water District to integrate hazard mitigation activities. This plan includes the designation of several evacuation routes in the case of a disaster as shown on **Figure 9-4**. The major restriction to city-wide evacuation is limited regional access routes. Without additional freeway facilities, regional evacuation routes for the Pico Rivera area are anticipated to be constrained.

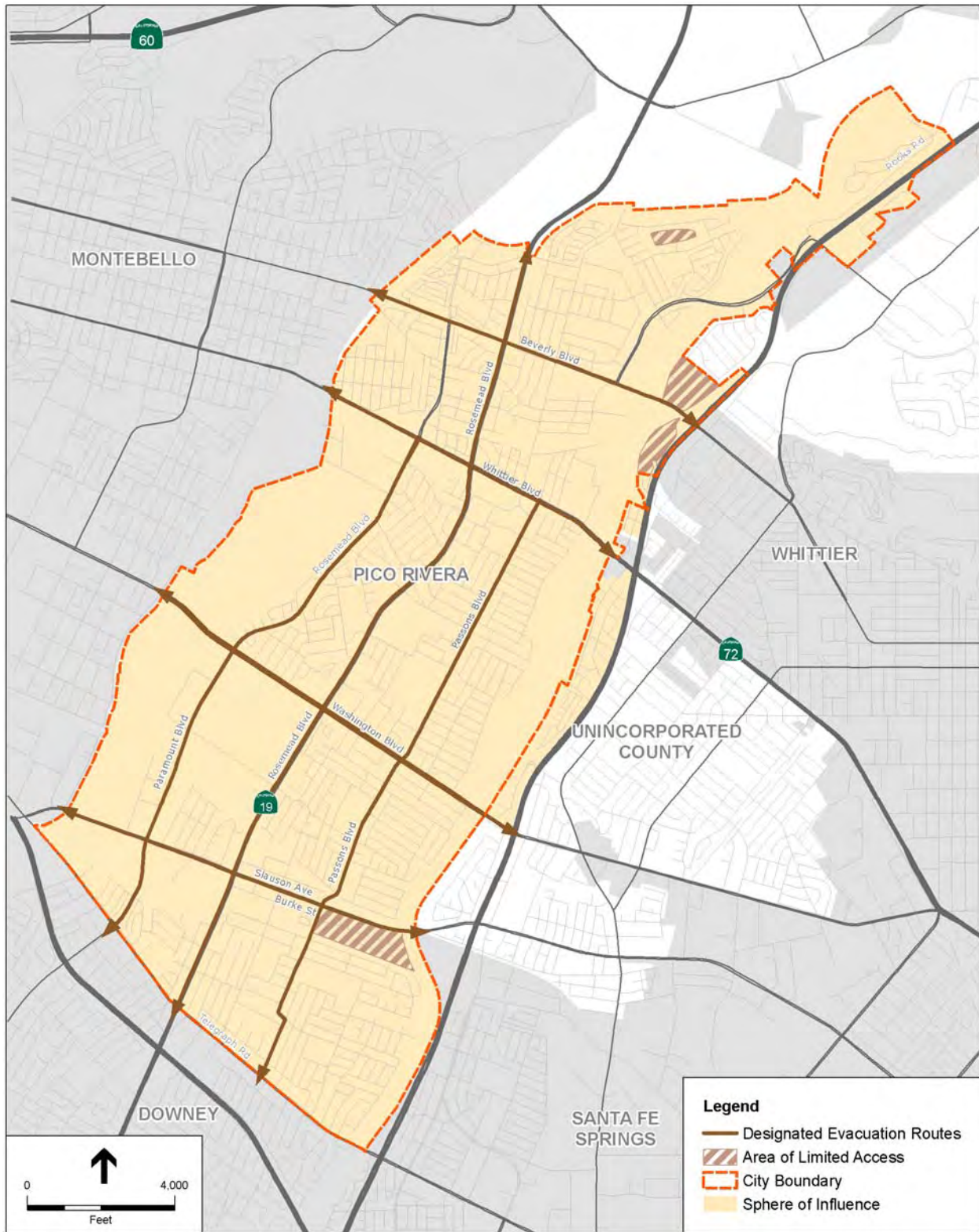


Figure 9-4: Evacuation Routes

Goals, Policies, and Implementation Actions

Seismic and Geologic Hazards

Goal 9.1

Standards, improvements and actions that minimize risks posed by geologic and seismic hazards.

Policy 9.1-1 Safety Standards. Maintain enforcement of up-to-date seismic safety and structural design standards, including the California Building Standards Code for new and retrofitted buildings.

Policy 9.1-2 Geotechnical Studies. Require that geotechnical studies be prepared for development in areas where geologic or seismic hazards may be present, such as liquefaction in the central portion of the city and in the Whittier Narrows Dam area.

Policy 9.1-3 Infrastructure. Encourage property owners, Caltrans, the railroads, and local utility companies to regularly inspect and strengthen (as needed) infrastructure susceptible to failure during an earthquake.

Implementation Program for Policy 9.1-3:

- *Work with Caltrans, the railroads, and local utility companies to pursue funding sources for the retrofit of infrastructure.*

Flood Hazards

Goal 9.2

A community protected from potential flood and dam inundation hazards.

Policy 9.2-1 Sufficient Infrastructure. Coordinate with the Los Angeles County Flood Control District to ensure that the City's storm drainage system is adequately sized, maintained, rehabilitated and funded to accommodate stormwater runoff and prevent flooding.

Implementation Program for Policies 9.2-1, 9.2-2 and 9.2-6:

- *Pursue available state, federal, and other funding sources to support facilities, projects, and programs for storm drainage and flood control.*

Policy 9.2-2 Deficient Areas. Prioritize the construction and upgrade of storm drainage infrastructure in areas where localized flooding and deficient storm drainage systems exist.

Implementation Program for Policy 9.2-2:

- *Identify required improvements and funding sources to eliminate deficient storm drainage systems, and incorporate such improvements into the City's Capital Improvement Program. Locations with deficient storm drainage are: Washington Street (north side) between Rosemead and Paramount, Mines (south side) at Manzanar, Olympic north of Acacia Avenue, Beverley Road and Tobias Avenue, Terradell Street and Pico Vista Road, Greenvale and Masoncrest Drive.*

Policy 9.2-3 Adequate Capacity for New Development. Require new development to demonstrate the availability of adequate capacity in the storm drainage system to accommodate projected flows and not exacerbate existing deficiencies.

Policy 9.2-4 New Development Contribution. Ensure that new development constructs, dedicates and/or pays its fair share contribution to the storm drainage system improvements necessary to serve the demands created by the development.

Policy 9.2-5 Coordination. Maintain up-to-date mapping of dam inundation areas within the City.

Implementation Program for Policy 9.2-6:

- *Work with the Los Angeles County Flood Control District, the U.S. Army Corps of Engineers, and other agencies in the timely implementation of updated flood control measures and regular maintenance and monitoring of regional flood control facilities such as the Whittier Narrows Dam.*

Hazardous Materials

Goal 9.3

Safe production, use, storage, and transports of hazardous materials.

Policy 9.3-1 Hazardous Materials Regulation. Coordinate with County, State and other applicable agencies to enforce pertinent laws, disclosures and siting requirements that regulate the production, use, storage, disposal, and transport of hazardous materials.

Policy 9.3-2 Hazardous Materials Uses. Ensure that land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials are located and operated in a manner that minimizes risk to other land uses.

Implementation Program for Policy 9.3-2:

- *When approving new development, ensure that the site:*
 - *Is sufficiently surveyed for contamination and remediation, particularly for sensitive uses near existing or former toxic or industrial sites.*
 - *Is adequately remediated to meet all applicable laws and regulations, if necessary.*
 - *Is suitable for human habitation.*
 - *Is protected from known hazardous and toxic materials.*
 - *Does not pose higher than average health risks from exposure to hazardous materials.*

Policy 9.3-3 Hazardous Waste Management Plan. Require businesses that store, generate, use or transport hazardous materials to comply with the Los Angeles County Hazardous Waste Management Plan. Provide appropriate response and notification in the event of an emergency or violation.

Policy 9.3-4 Site identification. Participate in efforts to identify sites previously used for hazardous materials handling, storage and disposal.

Policy 9.3-5 Known Areas of Contamination. Require new development in areas of known contamination to perform comprehensive soil and groundwater contamination assessments prior to development approvals. If contamination exceeds regulatory levels, require remediation procedures consistent with applicable regulations for the proposed use prior to any site disturbance.

Policy 9.3-6 Best Practices. Encourage industries, businesses and residents to utilize best practices and technologies that reduce the use of hazardous materials and generation of hazardous wastes.

Policy 9.3-7 Education. Promote public education efforts regarding the proper use, storage, and disposal of hazardous wastes, including common household items.

Policy 9.3-8 Household Hazardous Waste Plan. Provide for the management of household hazardous waste through implementation and regular update of the City's Household Hazardous Waste Plan.

Policy 9.3-9 Household Hazardous Waste Disposal. Continue to partner with Los Angeles County to encourage homeowners to dispose of hazardous waste and E-waste at regular collection events.

Policy 9.3-10 Pipelines. Require that new pipelines channels carrying hazardous materials avoid residential areas and other sensitive land uses to the greatest extent feasible.

Policy 9.3-11 Truck Routes. Maintain a system of truck routes that minimizes truck travel adjacent to and through areas designated for residential use.

Implementation Program for Policy 9.3-11:

- *In conjunction with Caltrans, the County and adjacent cities, periodically review and update designated truck routes in order to minimize the potential transport of hazardous materials through residential and other sensitive land use areas.*

Policy 9.3-12 Pesticides and Herbicides. Encourage integrated pest management principles to reduce or discontinue the use of pesticides and herbicides.

Implementation Program for Policy 9.3-12:

- *Review landscaping procedures to determine the extent to which integrated pest management principles can be employed to reduce or discontinue the use of pesticides and herbicides at city-owned facilities.*
- *Provide educational materials to multi-unit residential, commercial, and industrial uses outlining alternatives to the use of pesticides and herbicides.*

Emergency Preparedness

Goal 9.4

Collaborative community preparation, response and recovery in the event of disasters and emergencies.

Policy 9.4-1 Emergency Management Division. Continue to support the efforts of the City's Emergency Management Division to prepare for, mitigate against, respond to, and recover from disasters and emergencies.

Implementation Program for Policies 9.4-1, 9.4-2, 9.4-4 and 9.4-7:

- *Pursue available state, federal, and other funding sources to support emergency preparedness programs, staffing, plans, exercises, education and training.*

Policy 9.4-2 Emergency Management Plans. Maintain a Standardized Emergency Management System/National Incident Management System Emergency Operation Plan and Multi-Jurisdictional Hazard Mitigation Plan in coordination with local, state and federal agencies and organizations.

Implementation Program for Policy 9.4-2:

- *Regularly update the City's Emergency Management System/National Incident Management System Emergency Response Plan, Multi-Jurisdictional Hazard Mitigation Plan, and the Emergency Operations Plan as required and in coordination with local, state and federal agencies and organizations.*

Policy 9.4-3 Mutual Aid. Continue to participate in mutual and automatic aid agreements for the provision of fire, law enforcement, medical response, public works, mass care, and other assistance.

Implementation Program for Policy 9.4-3:

- *Participate with Los Angeles County and other applicable agencies in conducting disaster-preparedness exercises to periodically test and improve emergency response.*

Policy 9.4-4 Evacuation Routes. Coordinate with Caltrans, the County and adjacent cities to improve roadway capacity along evacuation routes, and to designate additional routes.

Implementation Programs for Policy 9.4-5:

- *Work with Caltrans, the County and adjacent cities to pursue funding to enhance roadway capacity along evacuation routes.*
- *Develop dam failure evacuation plans in cooperation with the Corps of Engineers, the Los Angeles County Flood Control District, and the County Fire and Sheriff's departments.*
- *Evaluate structural stability of all bridges within the City and obtain county, state or federal grants to rehabilitate.*

Policy 9.4-5 Critical Facilities. Require critical facilities (e.g., fire, police, mainline utilities, emergency command center, and other essential facilities) to incorporate construction standards that resist damage and allow continued function following a major disaster.

Policy 9.4-6 Emergency Response Facilities and Staffing. Ensure that public safety infrastructure and staff resources keep pace with growth and change in the community.

Implementation Program for Policies 9.4-6:

- *As part of contract renewals for sheriff and fire protection services, conduct periodic reviews of the ability of local sheriff and fire personnel to respond to emergencies within the community.*

- *Work with the Los Angeles County Fire Department to maintain an active swift water rescue response capability for the Rio Hondo and San Gabriel rivers.*
- *Strategically cross-train Fire Department personnel as emergency medical technician defibrillators and paramedics, as well as in urban search and rescue and swift water rescue.*
- *Strategically cross-train Fire Department personnel to be ready to operate at the level of Hazardous Materials First Responder.*

Policy 9.4-7 Education & Training. Promote public education and training efforts to prepare residents and businesses to effectively respond to disasters and emergencies, including the Pico Rivera Community Emergency Response Team (CERT), and Los Angeles County's Mass Notification System (ALERT) and Neighborhood Preparedness (AWARE) effort.