HEALTH AND SAFETY

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HEALTH AND SAFETY

VISION STATEMENT

Pinole will be a community that is prepared to cope with natural and man-made hazards. The City will anticipate the health and safety issues of air quality, water quality, noise, flooding hazard, earthquake hazard, fire hazard, and access to emergency health care services and other safety issues comprehensively to protect residents, workers and visitors within the community. The City will emphasize proper planning, innovative design, appropriate improvements, ongoing hazard preparedness education and civic responsibility to maximize long-term safety in Pinole. Quality design can increase actual and perceived safety by creating defensible space and increasing activity in and enjoyment of public places.

INTRODUCTION

A community's health and safety is influenced by many man-made and naturally occurring assets and hazards. While community assets are critical to residents' well-being, this section focuses primarily on the threats to community health and safety.

Threats to health and safety include air and water quality degradation, excessive noise, inadequate health care access, seismic risks, hazardous materials, crime, fire risk and flooding. The City's response to these issues will determine its success in maintaining and attracting residents and businesses. Pinole will address health and safety issues comprehensively, to ensure an enjoyable, safe and healthy environment for the residents, workforce and visitors to Pinole.

Among the issues the General Plan seeks to address are:

1. Enhancing flood protection by implementing the Pinole Creek Greenway Master Plan and exploring opportunities for floodwater detention in the upper reaches of the watershed.

2. Creating a railroad quiet zone through Pinole and protecting sensitive land uses from new background and construction noise.

3. Ongoing participation in local and regional emergency preparedness planning efforts.

4. Seeking to improve air quality through more compact development patterns and efforts to reduce vehicle emissions.

5. Seeking to improve San Pablo Bay, aquifer, and surface water quality in Pinole.

6. Maintaining exceptional emergency services with dwindling financial resources.

7. Addressing health and safety issues related to the transportation of hazardous materials through Pinole by truck, rail and pipeline.

8. Addressing health and safety issues related to natural hazards including wildland fire and earthquakes.

HEALTH AND SAFETY

PURPOSE

The Health and Safety Element seeks to recognize and remedy both present and anticipated concerns about the ongoing well-being of the city's residents, workforce and visitors. The goals, policies and actions identify viable solutions to minimize the potential risk of death, injuries, property damage, and economic hardship and social displacement resulting from fires, floods, earthquakes, landslides and other hazards. Additionally, this element addresses safety and hazards related to surface and groundwater contamination, the potential release of hazardous materials into the community, and general issues related to health care and police and fire protection services. By identifying these hazards and the appropriate abatement provisions, the Health and Safety Element will effectively reduce the potential for loss of life, property damage, and economic and social disruption from catastrophic events.

The Health and Safety Element addresses issues that will ensure the community's well-being from man-made and naturally occurring hazards.

This element combines the noise, water and air quality analysis required by the State to be included in the Health and Safety Element, and guides land use patterns in a way that minimizes the exposure of city residents to excessive natural and man-made hazards. The goal of the element's noise section is to identify the major sources of noise in the city and discuss the City's role in ensuring comfortable and safe noise levels throughout the community.

This element addresses air quality issues by establishing a framework for working with other communities in the region and the Bay Area Air Quality Management District (BAAQMD) to improve air quality in the Bay Area. The element's air quality section underscores the effects on air quality brought about by land use patterns and the resulting transportation behavior. The goals, policies and actions outlined in this element focus on improving air quality through embracing regional coordination, "smart growth" land use concepts, transportation demand management, energy conservation, encouraging cleaner industries and vehicles, and public education.

This element also addresses water quality issues. The element describes local efforts to satisfy the federal Clean Water Act and describes efforts to require on-site stormwater treatment in conjunction with new development to satisfy ongoing Regional Water Quality Control Board permit requirements.

Finally, this element addresses the significance of health care accessibility and affordability in Pinole. This element will outline health care that serves various sectors of the population, as well as the types of health care facilities that serve Pinole. In addition, attention will be given to initiatives that the City or related agencies have begun or are in the process of developing to increase accessibility to health care for the entire population.

By addressing all the components mentioned above, the City can maintain high levels of service while implementing necessary programs and capital improvements to ensure the community's well-being.

RELATIONSHIP TO OTHER GENERAL PLAN ELEMENTS

The Health and Safety Element works in conjunction with several of the other General Plan elements. Most specifically, it relates to the Community Services and Facilities Element to ensure the timely provision of public services and infrastructure, the Land Use and Economic Development Element and Community Character Element to promote safety through design, and the Sustainability Element which links land use, environmental protection and economic development to ensure a healthy community. The four health issues addressed in this element (air quality, water quality, noise, and health services) relate to other General Plan elements as described below.

Air quality, particularly as it relates to greenhouse gas (GHG) emissions, is a critical global issue that Pinole intends to address at a local level. Air quality is tied to the Land Use and Economic Development Element through policies related to land use patterns and density, and policies that encourage infill development to reduce air pollution. There are also ties to the Circulation Element as circulation systems around Pinole contribute greatly to GHG emissions.

Water quality is an important safety concern since the amount of impervious surface limits natural filtration, increases stormwater flows and urban runoff in the community, and causes the accumulation of contaminants in water bodies in Pinole. The water quality component is tied to the Land Use and Economic Development Element through policies related to land use patterns and density, and policies that encourage infill development in already urbanized areas. This component also relates to the Sustainability Element and efforts to protect natural resources in the Natural Resources and Open Space Element.

The noise component relates to several other elements in the General Plan, including the Land Use and Economic Development Element, Community Character Element, and Circulation Element. The Land Use and Economic Development Element and Community Character Element establish land use patterns and development/design policies to ensure land use compatibilities that include potential noise issues. The Circulation Element identifies the City's roadway network that is used in projecting transportation noise sources.

The health services component relates particularly to the Community Services and Facilities Element because the City's ability to provide adequate community services and facilities is dependent on ensuring adequate public infrastructure and facilities to accommodate new development under the General Plan.

RELATED PLANS AND PROGRAMS

The Health and Safety Element relates to several other plans and programs and the agencies who administer them, including the Federal Emergency Management Agency (FEMA), the California Emergency Management Agency (CalEMA) and the Pinole Emergency Operations Plan (EOP). The full list of related plans and programs and information about each is located in the **Appendix**. Many of the policies, programs and actions contained in the General Plan will be implemented through the City's Capital Improvement Program (CIP).

ISSUES AND CONSIDERATIONS

SAFETY SETTING

A responsive public health and safety system is critical to Pinole's future. Police and fire services must serve all areas of the community with an equal and adequate level of service.

The City actively promotes programs to protect its residents and property from noise nuisances, seismic and geologic hazards, flooding, air quality, and man-made hazards. The City maintains an Emergency Operations Plan and is working with Contra Costa County to prepare a regional Emergency Response Plan to support and direct public safety actions during times of emergency. Together, these plans and programs help make Pinole a safe community in which to live, work and recreate. The following discussion summarizes the safety issues for Pinole. Additional details can be found in the General Plan Environmental Impact Report and in the Background Report.

Seismic and Geologic Hazards

The Pinole Planning Area is located at the northwest end of the East Bay Hills, next to San Pablo Bay. While large portions of Pinole exhibit generally stable soils and geologic conditions, steeply sloped hillsides and mud deposits along Pinole Creek and San Pablo Bay experience instability during heavy rains or seismic events (see **Figure 9.1**).

The Planning Area is located approximately 1.5 miles to 3.9 miles northeast of the Hayward Fault and the Rodgers Creek/Healdsburg fault zone underneath San Pablo Bay (see **Figure 9.2**). The Planning Area is also located about 18 to 20 miles northeast of the San Andreas fault zone. The Green Valley-Concord fault trend is located approximately 12 miles east of the Planning Area. Though the San Andreas fault system, which forms the boundary between the North American and Pacific plates, is the principal source of earthquakes in California, given its proximity to Pinole, the Hayward Fault poses the greatest seismic threat to the city.[1]

Ground movement, soil liquefaction and landslides in susceptible areas can be expected to result in damage during a seismic event. The City's 1995 General Plan identifies the primary geologic and geotechnical concerns in Pinole as slope stability, earthquake ground shaking and fault ground rupture.

Fault ground rupture is a concern during a seismic event. Ground rupture is a visible breaking and displacement of the earth's surface along the trace of the fault, which may be of the order of several meters in the case of major earthquakes. Ground rupture is a major risk for large engineering structures

Given its proximity to Pinole, the Hayward Fault poses the greatest threat to the city.

[1] The North American Plate is a tectonic plate covering most of North America, Greenland and parts of Siberia and Iceland. It extends eastward to the Mid-Atlantic Ridge and westward to the Chersky Range in eastern Siberia. The North American Plate meets the Pacific Plate along the western coastline of California. The tectonic boundary between these two plates forms the San Andreas Fault. All land west of the fault on the Pacific Plate is moving slowly to the northwest, while all land east of the fault is moving southwest (relatively southeast as measured at the fault) under the influence of plate tectonics.

such as dams, bridges and nuclear power stations. According to data obtained by the United States Geologic Survey (USGS) and released to the public in 1999, there is a 70 percent likelihood of a 6.7 magnitude or greater earthquake between 2000 and 2030. The USGS has emphasized the need for the heavily urbanized East Bay to be prepared should a major earthquake strike.

Geologic Hazards

Geologic hazard concerns identified in the 1995 General Plan's Safety Background Report include ground subsidence and settlement, erosion, slope stability and foundation conditions. Details on each are given in the Background Report.

Regional landslide mapping has indicated the presence of extensive slope stability hazards in Pinole, with the hazard typically more pronounced on steeper slopes. The hazards can include relatively large, loose debris flows. **Figure 9.1** shows geologic hazards that include landslide hazard classifications for portions of Pinole and in the City's Sphere of Influence. Recently, slope stability has been a prevalent issue in the city. In April 2006, a large landslide was induced by heavy rainfall on Interstate 80 between Pinole Valley Road and Appian Way, closing the westbound No. 4 lane for a few months.

Seismic Hazards

Seismic hazard concerns identified in the 1995 General Plan's Safety Background Report include fault ground rupture, greatest potential secondary seismic events, and moderate to low potential secondary seismic events.

Damage to buildings and utilities in Pinole is likely to be on those sites underlain by deep, loose compressible deposits.

Figure 9.2 depicts faults (both certain and concealed) and the Alquist-Priolo Fault Zone in the region.

A major earthquake may also trigger an industrial disaster. The City's EOP identifies this possibility as a particular concern for western Contra Costa County and Pinole. Western Contra Costa County contains a high concentration of petroleum and chemical industries. As a result, large quantities of potentially explosive, flammable and poisonous materials are being stored, processed and transported in the county and through Pinole. Because industrial structures and transport facilities may sustain significant damage in a major earthquake, the EOP establishes protocols for addressing potential failures.

The City's EOP includes the possible impacts on housing, population, transportation, medical services, communication, utilities, and facilities and buildings in Pinole in the case of a major earthquake. The Background Report contains more information on seismic hazards.

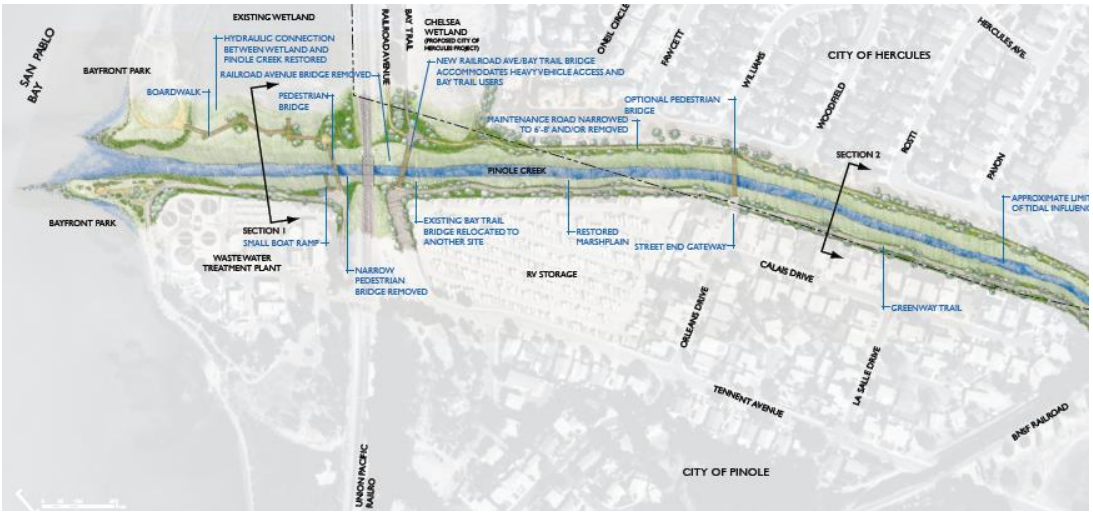
Flooding Hazards

Flooding hazards were identified in the 1995 General Plan's Safety Background Report. Flood hazards result from localized flooding and standing water that occur during brief, intense storms when runoff exceeds storm drain capacity. The potential for flooding also exists at locations along Pinole Creek. Creek flows along Pinole Creek would not be contained within the existing creek bank during a 100-year storm event. The creek channel was designed to carry projected flows from a 50-year storm event. Consequently, the City has worked with the Contra Costa County Flood Protection District to explore two approaches to enhancing flood protection: (1) increasing channel capacity in the lower reaches of the creek and (2) reducing stormwater flows in the creek by diverting stormwater to a detention basin in the upper reaches of the watershed. Maintenance of the channel is essential to successful flood protection. The Flood Protection District does not have a dedicated source of funding to maintain Pinole Creek. Flood protection could be improved by identifying potential funding sources to correct this condition.

Localized flooding and standing water may occur during brief, intense storms.

Figure 9.3 illustrates the City's flood hazards, including areas in the 100-year flood zone and areas between the 100-year and 500-year flood zones. It is anticipated that existing flood maps will be changing to include additional areas of floodways.

Areas of possible impacts due to flooding in Pinole include the Pinole-Hercules Water Pollution Control Plant (WPCP) and the freeway underpass at Interstate 80 and Pinole Valley Road. The WPCP is impacted by flooding of the creek when tidal surge and heavy rain runoff occurs. The ability for the facility to vent/drain is hampered by these conditions.



Pinole Creek Greenway Master Plan, Restoration Design Group, LLC, 2007

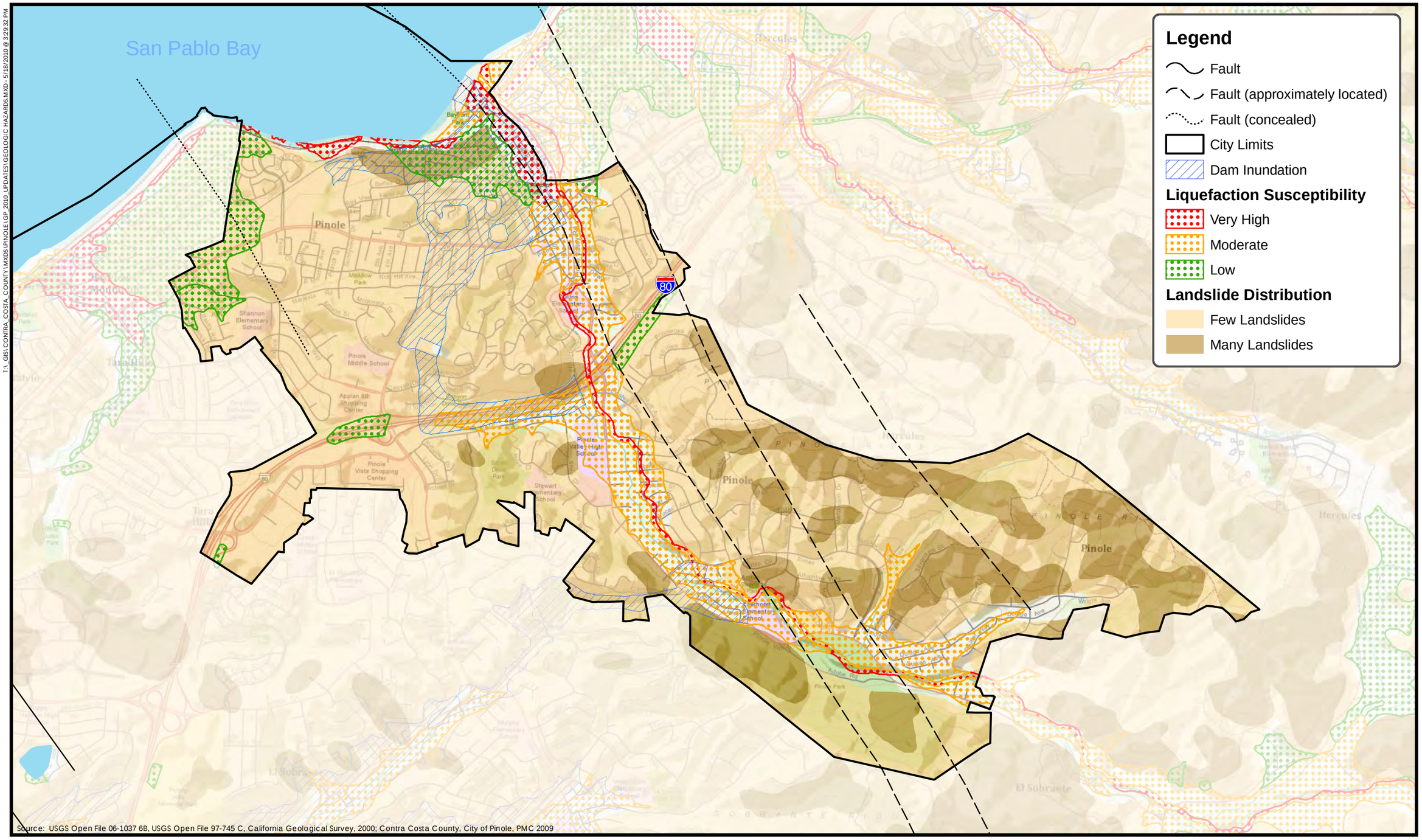


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Figure 9.1
Potential Geologic Hazards

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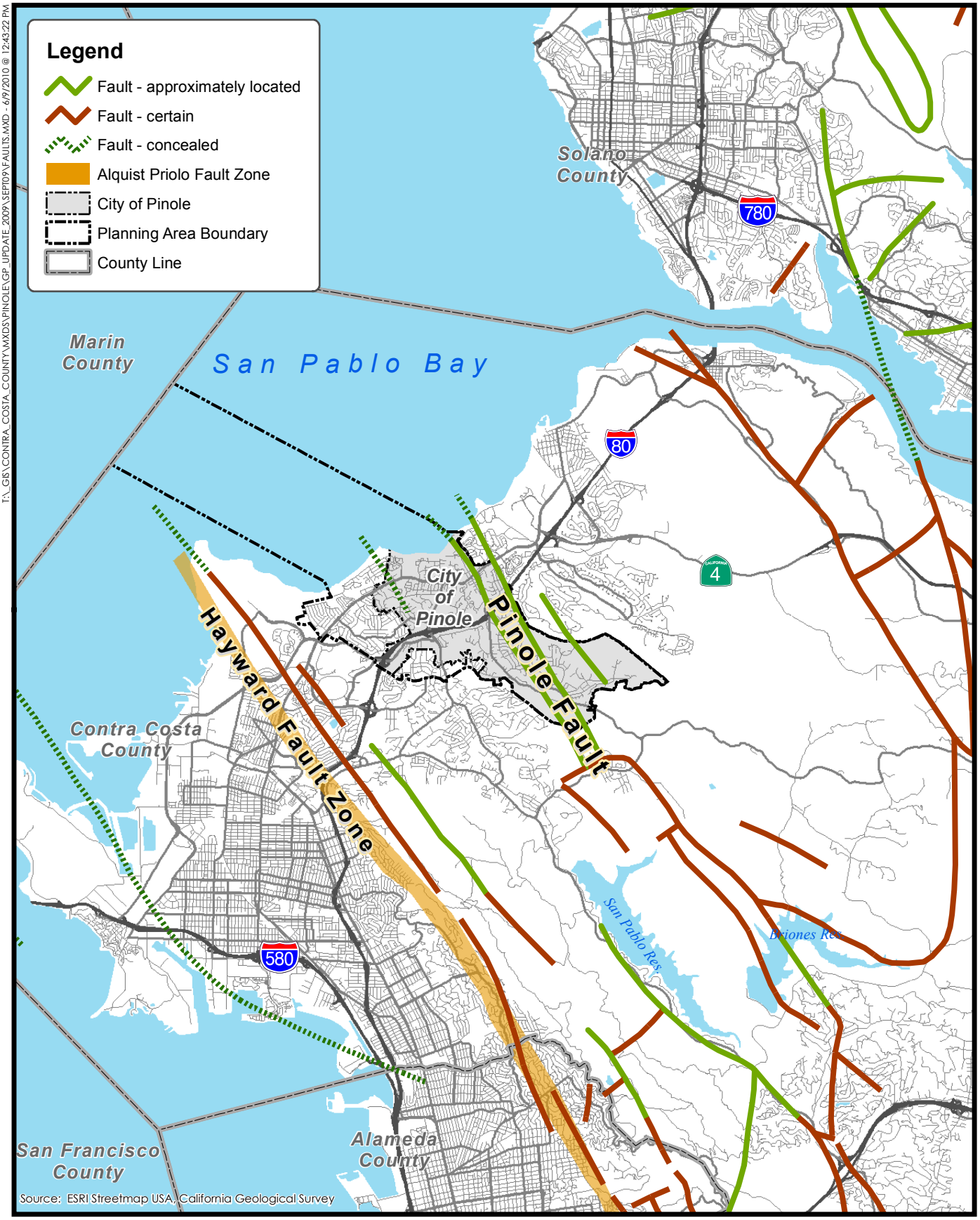

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Figure 9.2
Faults Hazard Map

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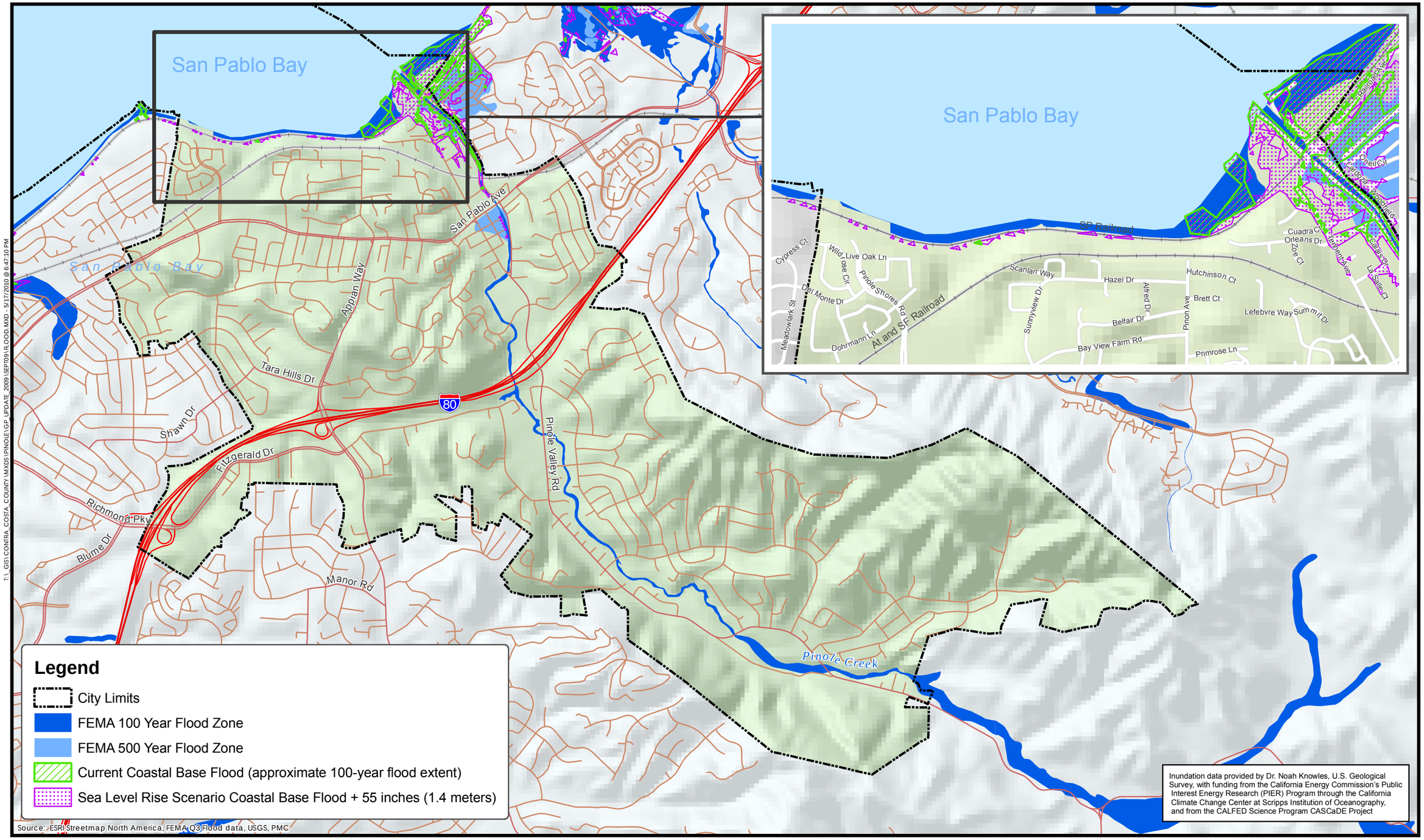

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Figure 9.3
Flood Map

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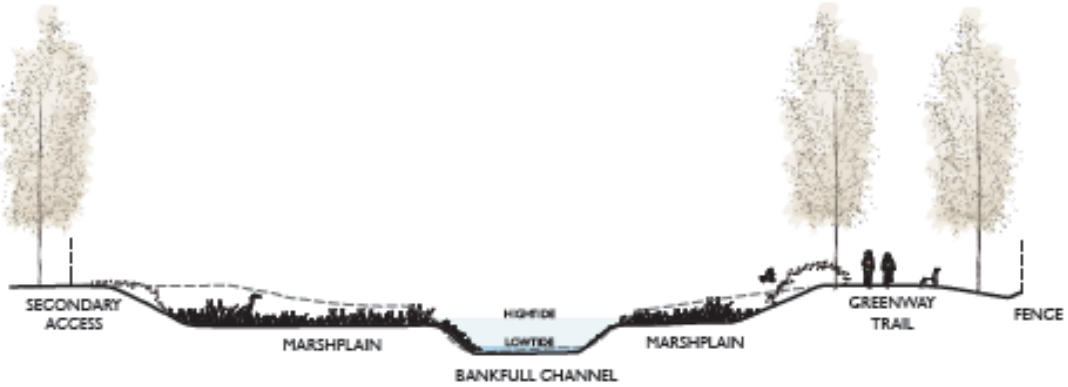
The Pinole Creek Watershed Vision Plan includes a proposed lower flood control channel restoration project that aims to improve creek habitat while enhancing flood protection. The flood control channel restoration design has been submitted to the U.S. Army Corps of Engineers for potential implementation under the Section 1135 program, which allows the Corps to revisit and restore prior projects that have had detrimental resource impacts. The Pinole Creek Greenway Master Plan seeks to improve the level of flood protection, as well as habitat quality and diversity, while improving opportunities for recreation.

Wildland fire is a persistent threat to residential neighborhoods in the hillside areas in Pinole.



Pinole Creek Greenway Master Plan, Restoration Design Group, 2007

The Pinole Emergency Operations Plan (EOP) addresses flooding in the city. The EOP was updated and adopted in May 2006. The Background Report contains more information on flood hazards in the City of Pinole.

Wildland Fire Hazards

In January 2009, the Pinole Fire Department received notification of the adjusted "Very High Fire Hazard Severity Zone" (VHFHSZ) from the California Department of Forestry and Fire Protection (CalFire). The review and reclassification of certain areas that are prone to wildfire was done under authority of California Government Code Sections 51175–51189 as a means to address the wildfire threat statewide. Once in place, this designation places certain restrictive building codes on development in the area. For the City of Pinole, the reclassified area involves the Sobrante Ridge boundary of the city from Duncan Canyon south through the slopes above Pinole Valley Park. Only a few buildable parcels are actually encompassed in the fire zone within the city limits, although many homes are adjacent to this zone.

Management, maintenance and use restriction issues will evolve as the City designates the new classification of the area by ordinance. The VHFHSZ is shown in **Figure 9.4**, which shows fire hazard areas in the city's regions. Additionally, moderate fire severity areas are located directly south of the city's southern border. This issue is

also discussed in the Natural Resources and Open Space Element (Chapter 10).

Vegetation management exists with interjurisdictional and interdepartmental cooperation. In general, the Fire Department manages open space boundary issues and requires a 30-foot abated separation between flammable vegetation and any property. Additional distances may be required depending upon the slope or other factors.

The Fire Department also maintains the fire roads and fire breaks in the city's open space areas and patrols the open space with assistance from the Pinole Police Department. Please see the Community Services and Facilities Element (Chapter 8) for more information about public safety services in Pinole.

East Bay Municipal Utility Division (EBMUD) maintains a Fire Management Plan which includes the Pinole Valley watershed basin located within Pinole's Sphere of Influence. EBMUD provides fire suppression and protection services on watershed lands. See the Land Use and Economic Development Element (Chapter 5) for a discussion and diagram of Pinole's Sphere of Influence, and the Community Services and Facilities Element for further discussion of EBMUD.

Hazardous Materials and Waste

Hazardous materials consist of any substance which has the potential to cause injury and can include flammable liquids and gases, poisons, corrosives, explosives, radioactive materials, and medical supplies and wastes. In Pinole, hazardous materials are transported over highways, in underground pipelines and by rail. Such materials are also often found in locations that have a long history of development, such as the City of Pinole. When these materials are found, there is a responsibility to clean them up and/or mitigate the effects of the materials on the environment.

The storage and cleanup (remediation) of hazardous sites is largely regulated by a series of federal, state and local agencies, including the U.S. Environmental Protection Agency (EPA), the California Environmental Protection Agency (Cal EPA) and the California Department of Toxic Substance Control. The latter maintains a list of hazardous wastes and substances. The Contra Costa County Health Department, Hazardous Materials Division specifically administers permitting and land use related to hazardous materials in the City of Pinole. The Fire Department works within the recently adopted County Hazardous Materials Plan.

The storage and transportation of hazardous materials to and from nearby refineries in the cities of Richmond, Rodeo and Martinez has the potential to impact Pinole and degrade air and water quality in the community.

The State of California identified 23 hazardous materials sites in Pinole as of February 2009, including underground storage tanks (USTs), leaking underground fuel tanks (LUFTs), and abandoned or leaking pipelines; 19 sites involved LUFTs. **Figure 9.5** includes the location of hazardous sites in the City of Pinole as of 2009. The primary risk they pose is leaking of gasoline and diesel fuel hydrocarbons and related compounds into the soil and groundwater. Six previously identified sites have undergone successful remediation, which usually involves removal of the LUFT and any contaminated soil. Several of the remaining LUFTs in the city have undergone interim remediation.

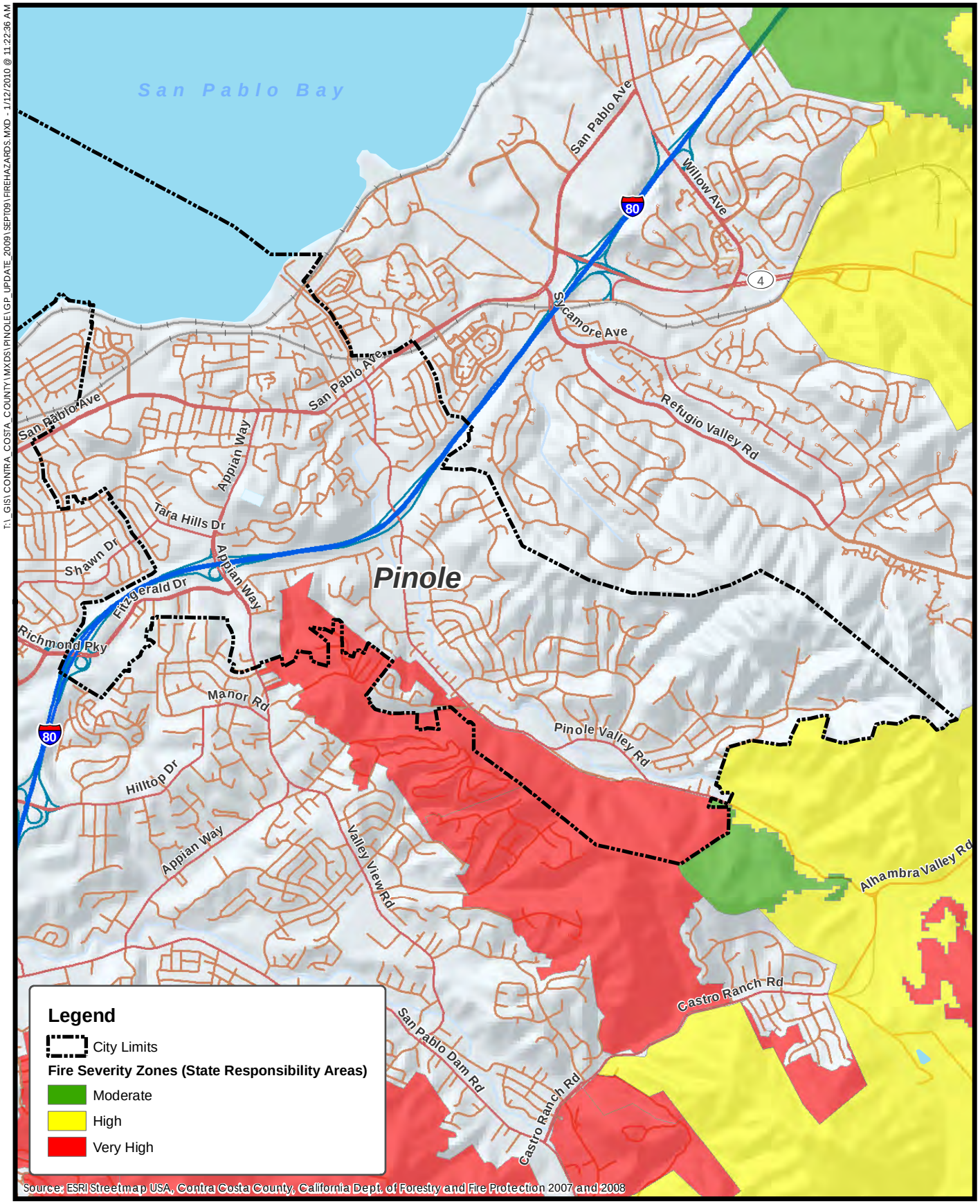


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Figure 9.4
Wildland Fire Hazard Map

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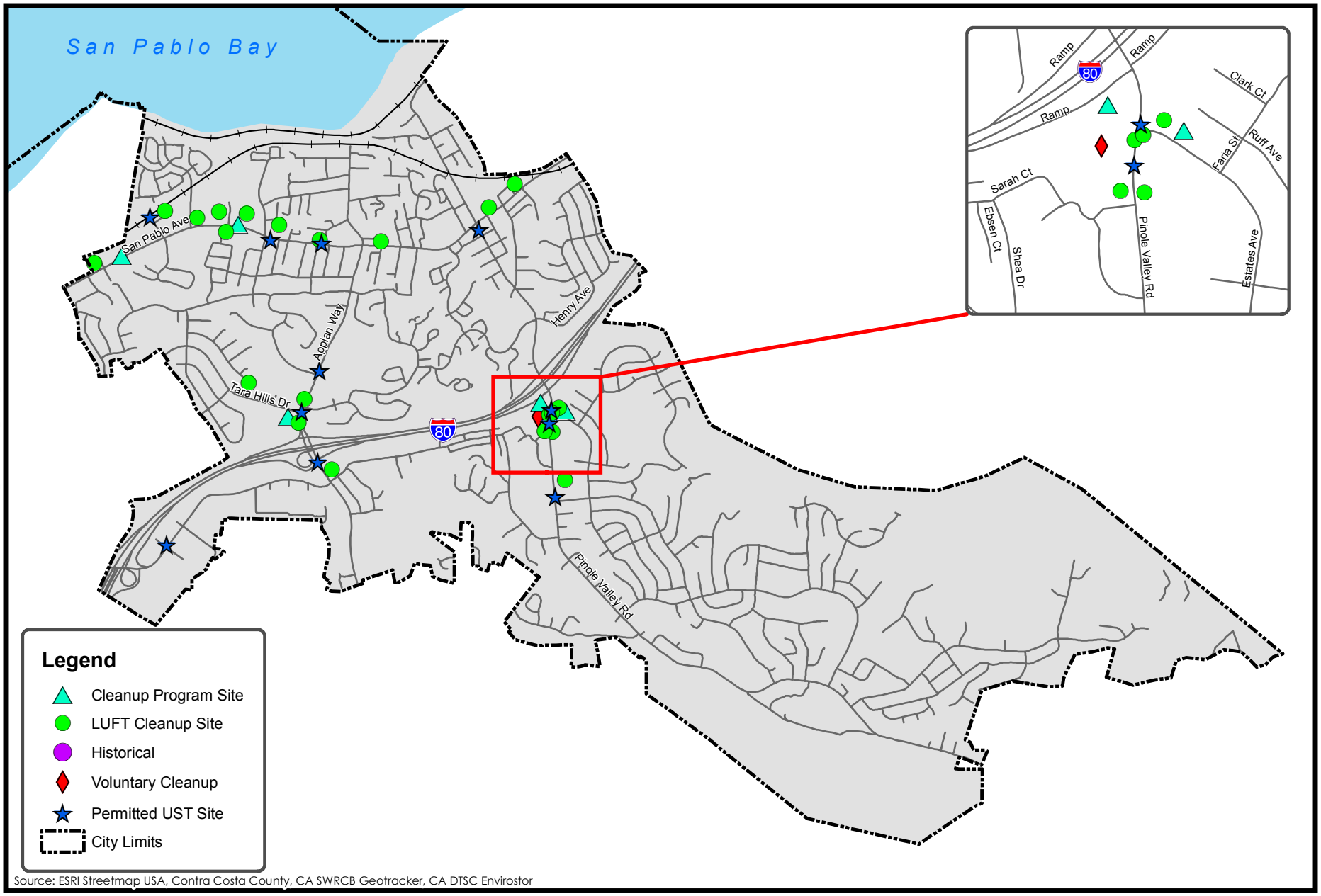

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Figure 9.5
Hazardous Materials Sites

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Law Enforcement

Police protection services in the City of Pinole are provided by the City's Police Department, which is responsible for services related to the enhancement and maintenance of public safety in Pinole. These services include preventing and controlling conduct that is threatening to life and property, aiding individuals who are in danger of physical harm, protecting constitutional guarantees, facilitating the movement of people and vehicles, assisting those who cannot care for themselves, resolving conflict, identifying potential problems in the community, creating a feeling of security in the community, and developing and implementing strategies and programs which enhance delivery of police services to the community. Law enforcement services are explored more thoroughly in the Community Services and Facilities Element (Chapter 8).

Fire Protection

The City of Pinole Fire Department provides fire protection services within the city limits and has long-term contracts to serve several county unincorporated neighborhoods adjacent to the city. The Fire Department's mission is to provide for the safety and welfare of the public through preservation of life, property and the environment. The Fire Department promotes disaster preparedness, fire prevention and safety in the city by providing free services and safety devices, public outreach (schools, businesses) and public education and/or training courses (safety demonstrations including child car seat safety and earthquake preparedness), maintenance (station upgrades, etc.) and biannual inspections (commercial occupancies). Fire protection services are explored more thoroughly in the Community Services and Facilities Element.

Emergency Preparedness

In 2006, the City of Pinole updated and adopted an Emergency Operations Plan (EOP). The goal of the EOP is to effectively and efficiently organize and coordinate the City's response to major emergencies. The EOP is designed to be implemented and exercised prior to an emergency. The plan identifies four phases of emergency management: preparedness, mitigation, response, and recovery.

The Emergency Operations Plan aims to organize and coordinate the City's response to major emergencies.

To ensure preparedness for an emergency, the EOP identifies the responsibilities of the following departments in an emergency situation: Fire, Police, Public Works, Finance, the City Manager's Office, the Community Development Group, Administrative Services, and the Emergency Operations Center. These departments, as directed by the EOP, are responsible for developing and maintaining standard operational procedures.

The City's "Mutual Aid System" is the system which allows for the mobilization of resources to and from emergency response agencies, local governments, operational areas, regions and the state, with the intent of providing adequate resources to requesting agencies. The City of Pinole is in the Contra Costa County Operational Area, which is in the OES Coastal Region (administratively) and Fire/Rescue Region II, and requests mutual aid through this region. The City's EOP describes Pinole's Mutual Aid System extensively.

The City's EOP is consistent with the Emergency Operation Plans of Contra Costa County and the State of California's Disaster and Civil Defense Master Mutual Aid Agreement. The Master Mutual Aid Agreement details that all of the resources and facilities of the State, its various departments and agencies, and all its political subdivisions, municipal corporations, and other public agencies be made available to prevent and combat the effect of disasters which may result from such calamities as flood, fire, earthquake, pestilence, war, sabotage and riot. The agreement also states that it is desirable that each of the parties should voluntarily assist each other in the event of disaster with fire, police, medical and health, communication, and transportation services and facilities.

In addition to the EOP, the City of Pinole is participating with Contra Costa County, neighboring cities and special districts to prepare a Natural Hazards Mitigation Plan (NHMP) to address regional emergency preparedness.

For more information on the City's emergency preparedness, please see the Background Report.

Homeland Security

Homeland security is of growing concern in the United States and therefore homeland security is an important aspect of the City of Pinole's health and safety. The City's Emergency Operations Plan addresses national security issues related to the city. The EOP identifies sites in Contra Costa County that may be subject to attack. These sites include the large petroleum refineries and other industry, local, state or federal government facilities, power and communications facilities, other utilities, dense population areas and major transportation centers such as BART stations.

California has published a Terrorism Response Plan (1998) and Contra Costa County has developed a Terrorism Annex to the Operational Area EOP (1999). The Terrorism Working Group was developed in Contra Costa to address terrorism response planning.

HEALTH SETTING

Air Quality

Pinole is located in western Contra Costa County, which is part of the nine-county San Francisco Bay Air Basin and the Northern Alameda and Western Contra Costa Counties Climatological Subregion. This subregion stretches 20 miles from the Richmond area through Oakland to San Leandro. Its western boundary is defined by the San Francisco Bay and its eastern boundary by the Oakland-Berkeley Hills. The hills are a significant barrier to air flow since they have an approximate ridgeline height of 1,500 feet.

The air pollution potential of areas close to the marine air is minor, due to frequent ventilation and less influx of high pollutant concentrations from upwind sources. However, the occurrence of light winds (mainly during the night and early morning) may set the scene for occasional elevated pollutant levels. Pinole is downwind and surrounded by air pollution sources, notably the Chevron Refinery, that could intensify pollutant levels.

Air Pollutants of Concern in the Bay Area and Pinole

Most of the federal ambient air quality standards are met in the Bay Area. However, as of February 2009, the Bay Area was designated as a nonattainment area for the federal 8-hour ozone standard. The more stringent state standards for ozone and particulate matter (PM_{10} and $PM_{2.5}$) are exceeded.

Several air quality monitoring stations are located in the proximity of Pinole including:

- Richmond – 7th Street
- Richmond – Point Richmond
- Rodeo – Third Street
- San Pablo – Rumrill

Greenhouse Gases

In the City of Pinole, climate change could impact air quality and increase health problems. The State of California is undertaking programs and policies to decrease its greenhouse gas (GHG) emissions. Please see the Background Report for more information on those policies, such as Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006.

The EPA's U.S. Inventory of Greenhouse Gas Emissions and Sinks demonstrates that electricity, transportation and industrial sectors account for most of the anthropocentric emissions of criteria pollutants and GHG emissions between 1990 and 2004.[2] A draft GHG emissions inventory for the City of Pinole was submitted to the City in January 2009. In addition, the Bay Area Air Quality Management District recently produced the Source Inventory of Bay Area Greenhouse Gas Emissions by county. Neither the California Air Resources Board (CARB) nor BAAQMD maintain an inventory of any GHG emissions by city.

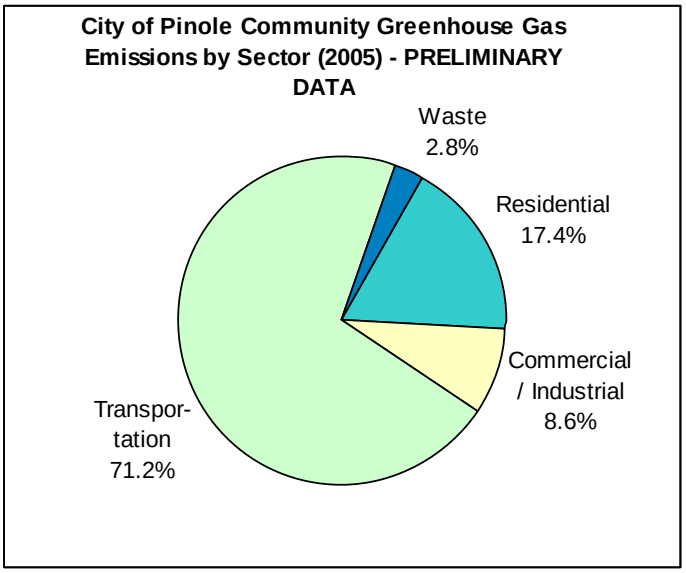
Climate change could impact air quality and water resources and increase health problems in Pinole.

Greenhouse Gas Inventory

The City of Pinole is developing a GHG inventory to calculate emissions caused by activities within Pinole's boundaries. This inventory quantifies GHGs from municipal and community activities, including energy consumption, vehicle miles traveled and waste production, and provides a baseline against which future emissions reductions can be measured. A preliminary analysis shows that the community of Pinole, including government operations, emitted approximately 159,369 metric tons of carbon dioxide equivalent (CO2e) in 2005. The

[2] Environmental Protection Agency, the U.S. Inventory of Greenhouse Gas Emissions and Sinks: 1990–2004, April 2006.

transportation sector is the largest emitter (71 percent), producing approximately 113,452 metric tons of CO2e in 2005. Emissions from the residential, commercial and industrial sectors accounted for a combined 26 percent of the total, and the remaining 3 percent was the result of emissions from waste sent to landfills in 2005. This GHG inventory will inform Pinole's efforts to reduce GHG emissions and prepare for the effects of global climate change while at the same time ensuring local planning and environmental documents are compliant with state legislation such as AB 32 and Senate Bill (SB) 97.



GHG reduction in Pinole will be challenging due to the high percentage of emissions from transportation as the result of high traffic volumes on Interstate 80 through Pinole. These trips are the result of land use changes in surrounding communities and will not significantly change as the result of land use changes in the City of Pinole.

Other Air Quality Issues

Other air quality issues of concern in the Bay Area include nuisance impacts of odors and dust. In Pinole, surrounding refineries, particularly the downwind refinery in Richmond, emit odors and particulate matter that can impact Pinole. BAAQMD has enacted an odorous substances control program as part of its effort to control the use and emission of odorous substances and nuisance dust in the Bay Area.

Sensitive Receptors and Pollution Sources

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include schools, retirement homes, convalescent homes, hospitals and medical clinics. Such sensitive receptors are spread through most parts of Pinole.

The BAAQMD inventory lists no major emitting facilities for criteria pollutants in Pinole. The current inventory does, however, identify dry cleaners and gas stations as sources of toxic air contaminants (TACs) in Pinole. None of the sources of TACs in Pinole are considered as facilities with health risks requiring public notification under BAAQMD's Air Toxics Hot Spots Program. Larger industrial uses located at the west end of San Pablo Avenue store materials that can become airborne and contribute to a degradation of air quality in the vicinity of these properties and result in nuisance.

Water Quality

Federal and state laws govern water quality and regulate the major sources of water pollution. The laws are implemented regionally through the San Francisco Bay Regional Water Quality Control Board (RWQCB). The Pinole Planning Area is drained primarily by the Pinole Creek and Garrity Creek watersheds. The quality of surface water and groundwater is affected by land uses and activities in these watersheds, as well as by underlying geologic conditions.

Cities are required to implement Stormwater Management Plans (SWMP) with performance standards and controls to reduce pollutants in stormwater discharge. The City of Pinole has, and will continue to promulgate, policies and standards that govern water quality and watershed protection issues to control surface runoff.

The City East Bay Municipal Utility District (EBMUD) provides domestic water service to the City of Pinole.

Noise

Major noise sources in the City of Pinole are vehicular and rail noise.

The ambient noise environment in Pinole is defined primarily by traffic on Interstate 80, which runs northeast to southwest through the community.[3] The ambient noise environment is also influenced by two existing rail transportation lines located at the northern edge of the community. At locations removed from Interstate 80 and the railroads, the ambient noise environment tends to be defined by local traffic and typical neighborhood noise sources. No significant noise-producing commercial or industrial activities are identified in the City of Pinole.

Roadways and Railroads

The major noise sources in the City of Pinole are vehicular and rail traffic. The level of vehicular noise generally varies with the volume of traffic, the number of trucks or buses, the speed of traffic and the distance from the roadway. Noise generated by vehicular traffic in Pinole is greatest along Interstate 80 and San Pablo Avenue. Two rail lines traverse the city, the Burlington Northern Santa Fe (BNSF) and the Union Pacific. There are no significant sources of aircraft or industrial noise in the City of Pinole. The noise contours are shown on **Figure 9.6**.

The General Plan includes policies that would support a request to designate railroad quiet zones around crossings in the city. Quiet zones would relieve the railroad of a requirement to signal the train's approach to crossings by blowing the train whistle. This signal, particularly late at night and early in the morning, can be disruptive to adjoining properties. To ensure public safety, the City should consider enhancing traffic controls at the Tennent Avenue crossing.

Non-Transportation Noise Sources

Industrial noise sources (auto repair, wrecking yards, equipments lots, etc.) are generally significant only in industrial areas. However, there are locations where undeveloped properties or current noise-sensitive areas abut industrial activities. Commercial, recreational and public service facility activities can also produce noise that affects adjacent sensitive land uses.

[3] The "ambient" noise level can be defined as the all-encompassing noise level associated with a given noise environment.

From a land use planning perspective, there are two goals for controlling fixed-source noise: to prevent the introduction of new noise-producing uses in noise-sensitive areas and to prevent encroachment of noise-sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses in proximity to noise-producing facilities include mitigation measures to ensure compliance with those noise performance standards.

Some general types of existing fixed noise sources in the City of Pinole are general service commercial and light industrial uses, parks and school playing fields, and airplane flyovers.

Site-specific noise analyses would be performed where noise-sensitive land uses are proposed in proximity to these (or similar) noise sources, or where similar sources are proposed to be located near noise-sensitive land uses. Please see the Background Report for more details.

Temporary Noise

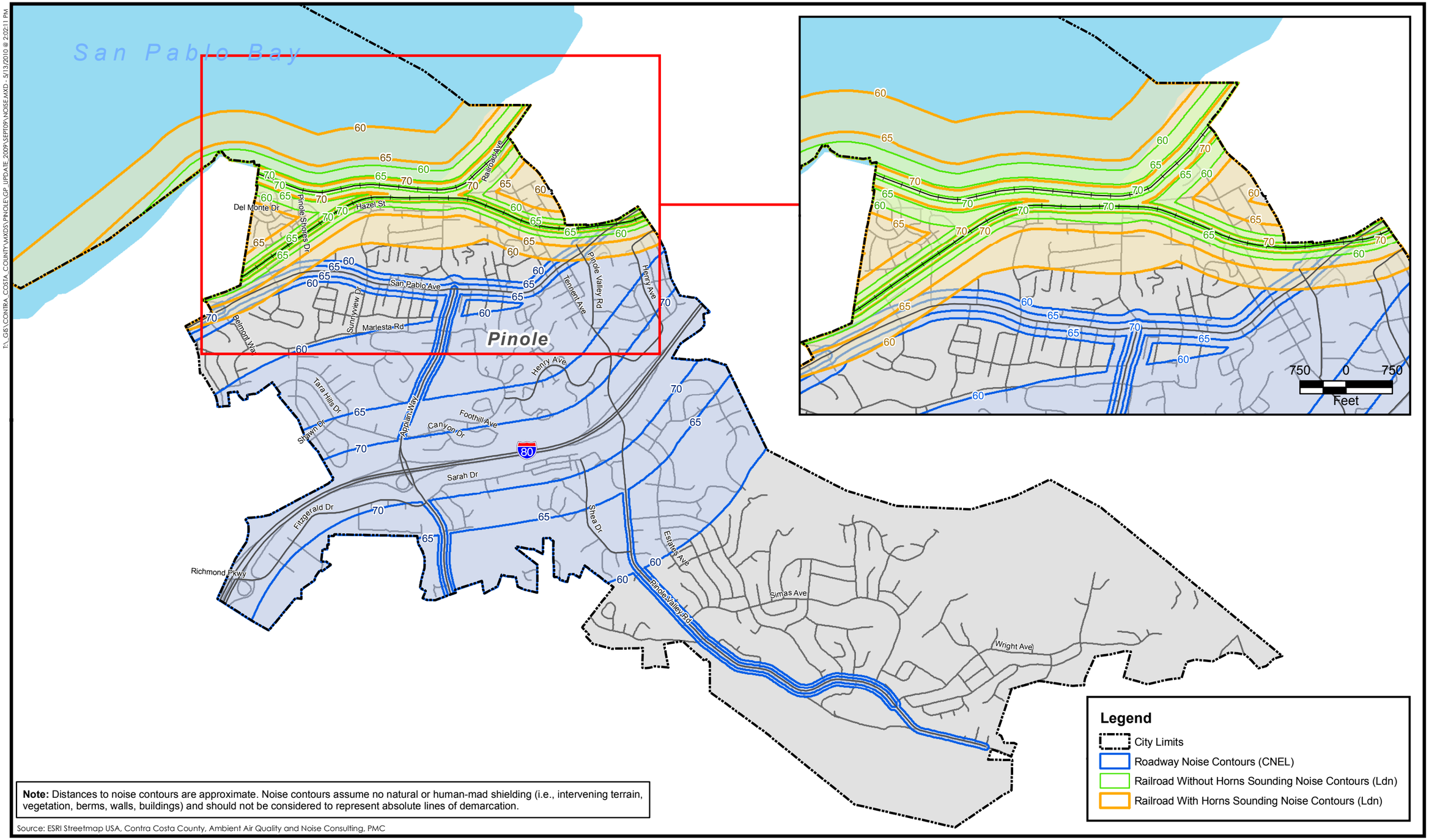
Other noise generators in Pinole tend to be temporary and/or transitory and may be associated with special events and non-stationary sources, including emergency vehicles. By their nature, such short-term and transitory noise events are typically tolerable, but the City of Pinole continues to look for opportunities to minimize noise from such sources. For example, the City seeks to minimize noise associated with emergency vehicles by establishing control at signalized intersections in order to minimize the length of time that vehicles using sirens are stationary.

Health Services

There are no hospitals or urgent care centers in the City of Pinole.

New Kaiser medical offices were built in the City of Pinole along Pinole Valley Road just north of Interstate 80. The facility opened January 12, 2009. The Pinole campus of Doctors Hospital closed prior to 2005, though there is a possibility of a medical center being located in the building in the future. A significant portion of the city's jobs are in the medical and health field, so it would benefit both the employment sector and the health and safety of the city's residents to have another medical use established in the Doctors Hospital building or elsewhere in the city.

Issues with health care facilities and services are addressed in greater detail in the Community Services and Facilities Element (Chapter 8), which describes the health services available to the residents of Pinole.



Note: Distances to noise contours are approximate. Noise contours assume no natural or human-mad shielding (i.e., intervening terrain, vegetation, berms, walls, buildings) and should not be considered to represent absolute lines of demarcation.

Source: ESRI Streetmap USA, Contra Costa County, Ambient Air Quality and Noise Consulting, PMC

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Figure 9.6
Future Noise Contours

PMC®

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ISSUES THIS ELEMENT ADDRESSES

This element provides goals, policies and actions that address the following issues, many of which were raised at public meetings during research to prepare for the update of the General Plan:

- Taking further actions to prevent flooding along Pinole Creek and improve stormwater drainage when possible, and measures to minimize damage from flooding and drainage issues when preventive actions are insufficient.
- Managing geologic and seismic hazards through rehabilitation and renovation of older buildings, and using inspection as a way to ensure new structures will be safe in the event of any likely geologic or seismic hazards.
- Improving traffic and pedestrian safety and taking measures to prevent accidents.
- Preparing to respond to major emergencies that could threaten the community and its citizens.
- Creating procedures to decrease the likelihood of harm to humans or the ecosystem in the event of a release of toxic or hazardous materials.
- Preventing further groundwater contamination while cleaning existing contaminated areas to minimize harm to humans and the ecosystem.
- Providing adequate police and fire protection in all areas of the city.
- Addressing both real and perceived safety concerns in the community through design of public and private projects, as well as enhanced activities and services.
- Reversing increases in regional air pollution, reducing local greenhouse gas emissions, and achieving attainment for ozone levels at both the federal and state standards.
- Improving visibility of scenic vistas.
- Making Pinole a healthier community in which to live.
- Creating opportunities to decrease the number of vehicle miles traveled, length of trips, and traffic congestion.
- Improving air quality through land use and circulation patterns to discourage fossil fuel-powered transport.
- Improving water quality through land use and site design controls to reduce surface water pollutant discharge.

- Creating more choices for multiple forms of transportation and strengthening pedestrian and bicycle mobility.
- Reducing noise from vehicle traffic, especially in residential areas.
- Controlling noise from industrial uses and aggregate operations.
- Maintaining livability in more compact neighborhoods.

GOALS, POLICIES AND ACTIONS

- Goal HS.1: Minimize the potential for loss of life, injury, damage to property, economic and social dislocation, and unusual public expense due to natural and man-made hazards.
- Goal HS.2: Protect the community from the risk of flood damage and improve surface water quality.
- Goal HS.3: Minimize hazards of soil erosion, weak and expansive soils, potentially hazardous soils materials, other hazardous materials, geologic instability and seismic activity.
- Goal HS.4: Ensure that government agencies, citizens and businesses are prepared for an effective response and recovery in the event of emergencies or disasters.
- Goal HS.5: Support land use patterns and densities that lessen air and water quality impacts.
- Goal HS.6: Support multiple forms of transportation and a circulation system design that reduces vehicle trips and emissions.
- Goal HS.7: Ensure that all new development meets or exceeds state and federal water quality standards.
- Goal HS.8: Ensure all new development complies with the noise standards established in the Pinole Health and Safety Element, and prevent all new noise sources from increasing the existing noise levels above acceptable standards.
- Goal HS.9: Eliminate or reduce noise from existing objectionable noise sources.
- Goal HS.10: Ensure that environmental and public service conditions are adequate to support a healthy community.

GOAL HS.1 Minimize the potential for loss of life, injury, damage to property, economic and social dislocation, and unusual public expense due to natural and man-made hazards.

POLICY HS.1.1 Permit development only in those areas and with design features that mitigate potential danger to the health, safety and welfare of the residents.

Action HS.1.1.1 Maintain detailed hazard maps for use in development review.

Action HS.1.1.2 Maintain and implement the Emergency Operations Plan (EOP), including necessary training, emergency preparedness drills and community education.

Action HS.1.1.3 Adopt a Very High Fire Hazard Severity Zone (VHFHSZ) ordinance to implement regulations.

Action HS.1.1.4 Apply Crime Prevention Through Environmental Design (CPTED) principles when planning for public and private improvements.

Action HS.1.1.5 Maintain and expand where feasible the network of surveillance cameras in the community to discourage and help investigate criminal activity based on Police Department advice and experience.

POLICY HS.1.2 Require appropriate studies to assess identified hazards and ensure that impacts are adequately mitigated.

Action HS.1.2.1 Regulate new pipeline development through the Use Permit process. Require new development to screen, protect or underground all utilities and provide underground connections to improve public safety as well as the city's appearance.

Action HS.1.2.2 Evaluate ongoing fire protection and emergency medical service delivery in the community, and identify sites for potential relocation of existing fire stations on the General Plan Land Use Map to improve service coverage and decrease response times.

POLICY HS.1.3 Create programs and practices that provide information and education to the citizens of Pinole related to hazards, emergency preparedness and other safety issues.

GOAL HS.2 Protect the community from the risk of flood damage and improve surface water quality.

POLICY HS.2.1 Implement the Pinole Creek Vision Plan, Greenway Master Plan, and Restoration Project.

Action HS.2.1.1 Work with creek restoration stakeholders to implement the Pinole Creek Vision Plan and Greenway Master Plan during review of specific development proposals.

Action HS.2.1.2 Continue to seek funding to implement the Pinole Creek Vision Plan, Greenway Master Plan, and Restoration Project.

Action HS.2.1.3 Establish land use controls for properties that abut Pinole Creek in order to minimize potential conflicts between flood, resource protection and recreational goals. This action could be accomplished by adopting a creek ordinance.

POLICY HS.2.2 Work with the Contra Costa County Flood Control District and other property owners in the Pinole Creek watershed, particularly the East Bay Municipal Utility District (EBMUD), to establish a diversion basin that could reduce stormwater flows during severe storm conditions.

Action HS.2.2.1 Establish a land use designation for land to be set aside for detention basin purposes and seek out opportunities to establish detention basins to better protect the community from flooding hazards.

POLICY HS.2.3 Continue implementing a Clean Water Program to reduce surface water discharge through project design (e.g., reduce water runoff by minimizing impervious surfaces, use green areas for drainage) and to monitor compliance with the National Pollution Discharge Elimination Systems (NPDES) permit program and the Clean Water Act.

POLICY HS.2.4 Continue to monitor studies that identify anticipated changes in sea level and create appropriate standards and improvements to minimize flood risks.

Action HS.2.4.1 Create a long-range plan to govern the San Pablo Bay waterfront and any other areas that may be impacted by changes in sea level.

POLICY HS.2.5 Establish appropriate capital improvements and management programs to reduce wet weather sewer treatment demand and avoid discharge to the shallow water outfall.

Action HS.2.5.1 Require project applicants to investigate and report on project impacts on stormwater runoff and the wastewater treatment plant and ensure that project-specific impacts are mitigated.

Action HS.2.5.2 Seek funding to upgrade facilities to reduce inflow and infiltration and treat runoff.

GOAL HS.3 Minimize hazards of soil erosion, weak and expansive soils, potentially hazardous soils materials, other hazardous materials, geologic instability and seismic activity.

POLICY HS.3.1 Require geotechnical studies for development proposals. Such studies should determine the actual extent of geotechnical hazards, optimum location for structures, the advisability of special structural requirements, and the feasibility and desirability of a proposed facility in a specified location.

Action HS.3.1.1 Continually update the geologic hazard map with new information provided by geotechnical studies.

POLICY HS.3.2 Require soils and geologic review of development proposals in accordance with City procedures to assess potential seismic hazards, liquefaction, land sliding, mud sliding, erosion, sedimentation, hydromodification and settlement in order to determine whether these hazards can be adequately mitigated.

POLICY HS.3.3 Require that all geologic hazards be adequately addressed and mitigated through project development. Development proposed in areas of potential geological hazards should not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties.

POLICY HS.3.4 Assure existing and new structures are designed to protect people and property from seismic hazards. Evaluate new development on sites which may have involved hazardous materials prior to development approvals.

Action HS.3.4.1 Update the Building Code and other codes as necessary to address earthquake, fire and other hazards, and support programs for the identification, abatement or mitigation of existing hazardous structures.

Action HS.3.4.2 Implement actions to address safety issues related to unreinforced masonry buildings in coordination with historic preservation policies and programs.

Action HS.3.4.3 Ensure that sites in Pinole which are contaminated with hazardous substances are cleaned through decontamination of soils, treatment, and filtration of groundwater.

POLICY HS.3.5 Require proper handling, storage, disposal and cleanup of hazardous materials to prevent leakage, potential explosions, fires or the escape of harmful gases and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

Action HS.3.5.1 Work with Contra Costa County and other regional partners to implement the County Hazardous Waste Management Plan and notify the public

about locations and opportunities to properly dispose of household hazardous materials.

Action HS.3.5.2 Use the Conditional Use Permit and Encroachment Permit process to ensure pipeline safety when construction occurs. New developments should screen, protect or underground all gas, electric and communication lines, screen facilities (e.g., transformers) as safety and conditions require, and provide underground connections when feasible, to improve public safety and the city's appearance.

Action HS.3.5.3 A comprehensive investigation of hazardous materials storage tanks should be undertaken for specific sites when development is proposed. The potential hazard of any tanks or former tank sites found should then be evaluated using California EPA and local regulatory guidelines, and sites shall be remediated as needed.

Action HS.3.5.4 At the time of new development, any known or discovered hazardous material should be cleaned up and any impacts mitigated as required by the governing law.

POLICY HS.3.6 Support measures to responsibly manage hazardous waste to protect public health, safety and the environment, and support state and federal safety legislation to strengthen requirements for hazardous materials transport.

POLICY HS.3.7 Limit development and require appropriate control measures in conjunction with proposed development in areas susceptible to erosion.

Action HS.3.7.1 Consider adoption of a habitat protection ordinance that would identify and protect areas of biological value, including streams, creeks and wetlands. The ordinance would include setbacks from creeks, guidelines for avoidance of filling of creeks or wetlands and destruction of riparian vegetation, standards for compensation of habitat loss (as established by City of Pinole General Plan (1995) Open Space and Environmental Protection 7-9), and requirements for mitigation, monitoring and habitat enhancement plans. The ordinance would also cover implementation and enforcement of specific criteria to ensure that safety, natural resources and aesthetic values of Pinole Creek, other creeks and major drainages are protected and enhanced.

Action HS.3.7.2 Establish riparian and stream restoration programs that include stormwater treatment, erosion control measures, stream cleanup projects and revegetation plans for denuded areas. These programs may also result in the removal of invasive, non-native vegetation that would be replaced with native plant materials to stabilize slopes and enhance wildlife habitat.

GOAL HS.4 Ensure that government agencies, citizens and businesses are prepared for an effective response and recovery in the event of emergencies or disasters.

POLICY HS.4.1 Continue to provide essential emergency public services during natural catastrophes.

Action HS.4.1.1 Maintain and implement the Emergency Operations Plan (EOP), including periodic training exercises.

Action HS.4.1.2 Continue working with Contra Costa County and other concerned agencies to adopt a regional Emergency Response Plan (ERP).

Action HS.4.1.3 The City Fire Department staff shall review newly proposed or modified roadway designs (e.g., median modifications and speed humps) to ensure that they do not significantly impair movement of emergency vehicles and equipment.

Action HS.4.1.4 Locate and design emergency buildings and vital utilities, communication systems and other public facilities so that they remain operational during and after an emergency or disaster.

Action HS.4.1.5 Establish an emergency warning/notification system in Pinole to notify the public during a natural or man-made disaster. Provide a public communication system to help advise the public about how best to respond during the recovery phase of a disaster and notify the community when safety has been restored.

Action HS.4.1.6 The City shall increase the number of individuals that receive Citizen Emergency Response Training to increase emergency preparedness within the city and encourage greater self-reliance during and after a natural or man-made hazard event.

POLICY HS.4.2 Undertake disaster preparedness planning in cooperation with other public agencies and appropriate public interest organizations.

Action HS.4.2.1 Publicize disaster plans and promote resident awareness and caution regarding hazards, including soil instability, earthquakes, flooding and fire. Maintain detailed hazard maps for use in development review.

Action HS.4.2.2 Develop and adopt a pre-disaster ordinance for post-disaster recovery and reconstruction that includes provisions for debris clearance, damage assessment, demolitions, re-occupancy and building moratorium criteria, fee waivers and deferrals, and expedited permitting procedures for repair and reconstruction.

Action HS.4.2.3 Coordinate with local, regional, state and federal agencies regarding a potential rise in sea level.

POLICY HS.4.3 Incorporate technological enhancements in new and substantially remodeled structures and facilities to support and improve emergency services.

Action HS.4.3.1 Develop a fiber optic network plan that can provide visual access for emergency services providers and assist with crime prevention and the monitoring of critical public facilities (e.g., storm drain and flood protection facilities).

Action HS.4.3.2 Incorporate necessary improvements into new and substantially remodeled structures to ensure that emergency service providers are able to transmit and receive radio communications within structures.

GOAL HS.5 Support land use patterns and densities that lessen air and water quality impacts.

POLICY HS.5.1 Promote strategic land use patterns for businesses that reduce the number and length of motor vehicle trips and that encourage multiple forms of transportation for employees and patrons.

Action HS.5.1.1 Support the location of ancillary employee services, including child care, restaurants, banking facilities and convenience markets, at major employment centers for the purpose of reducing mid-day vehicle trips.

POLICY HS.5.2 Encourage mixed-use developments that put residences in close proximity to services, employment, transit, schools and civic facilities/services.

Action HS.5.2.1 Encourage compact, transit-oriented development within one-quarter to one-half mile of transit stations and transit service stops along transit corridors.

Action HS.5.2.2 Continue to work with transportation and transit agencies and organizations to improve transit service and encourage increased ridership.

Action HS.5.2.3 Adopt and implement the Three Corridors Specific Plan for commercial corridors along San Pablo Avenue, Pinole Valley Road and Appian Way, establishing mixed-use development land use designations and design guidelines that encourage walkable communities, improved bicycle facilities and improved public transit facilities.

POLICY HS.5.3 Improve land use planning to minimize air and water quality pollution.

Action HS.5.3.1 Change zoning and land use policies to limit land use conflicts between residential areas and sources of diesel pollution.

Action HS.5.3.2 Reduce pollution from construction equipment.

Action HS.5.3.3 Work with federal, state and local agencies coordinate decisions that respect each agency's goals.

Action HS.5.3.4 Evaluate creation of an environmental justice ordinance and ensure community outreach to incorporate environmental justice principles into new project development review.

Action HS.5.3.5 Adopt a green building ordinance to reduce construction waste, improve water conservation and reduce reliance on nonrenewable resources. This ordinance should identify practices that can be employed in the design, construction and operation of projects that will protect air and water quality in Pinole.

GOAL HS.6 Support multiple forms of transportation and a circulation system design that reduces vehicle trips and emissions.

POLICY HS.6.1 Promote and encourage walking and bicycling as viable forms of transportation to services, shopping and employment.

Action HS.6.1.1 Include street design features that facilitate biking and walking trips in both new and established areas.

Action HS.6.1.2 Require all new development to be designed to enable easy pedestrian and bicycle access and circulation.

POLICY HS.6.2 Reduce greenhouse gas emissions.

Action HS.6.2.1 Create partnerships of community groups, businesses and agencies to develop strategies to reduce air and water pollution.

Action HS.6.2.2 The City of Pinole should create a model for other large employers in the city that makes use of programs to reduce single-occupant vehicle trips, support the use of alternative fuels and encourage alternative modes of transportation. Such programs could include:

- Creating rideshare/carpooling incentives for employees who commute together.
- Replacing City-owned vehicles with alternative fuel vehicles.
- Ensuring that necessary infrastructure is in place (e.g., showers, bike racks, shared automobile leasing stations) and available to employees and visitors who rely on such facilities to support alternative modes of transportation.

Action HS.6.2.3 Perform additional outdoor air monitoring and enforce mandated truck and bus routes.

Action HS.6.2.4 Wherever possible, use low impact design (LID), green barriers and sound barriers to reduce sound impacts and greenhouse gas emissions, and require on-site stormwater pretreatment. In particular, all new development in close proximity to Interstate 80 and Pinole Creek should include a landscape buffer between Interstate 80 and development areas to improve air quality.

GOAL HS.7 Ensure that all new development meets or exceeds state and federal water quality standards.

POLICY HS.7.1 Support regional, state and federal clean water programs

Action HS.7.1.1 Enforce the National Pollution Discharge Elimination System (NPDES) permit regulations.

Action HS.7.1.2 Prohibit development in areas that are particularly susceptible to erosion and sediment loss.

Action HS.7.1.3 Provide public information about water quality and best management practices.

Action HS.7.1.4 Implement the Stormwater Management Plan.

POLICY HS.7.2 Where appropriate, maximize infiltration of rainwater into the soil.

Action HS.7.2.1 Ensure that impervious surfaces created in new development and redevelopment is designed to optimize infiltration.

Action HS.7.2.2 Minimize or eliminate direct connections between impervious surfaces and storm drains.

POLICY HS.7.3 Reduce the transport of runoff and surface pollutants off site.

Action HS.7.3.1 Provide regular maintenance and monitoring of stormwater collection and treatment facilities to ensure that they are operating effectively.

Action HS.7.3.2 Regularly inspect commercial, industrial and public facilities to ensure proper connections to the sanitary system and avoid illicit discharge.

POLICY HS.7.4 Preserve natural water bodies and drainage systems in a natural condition wherever possible.

Action HS.7.4.1 Limit disturbance of natural water bodies and drainage systems to only those activities related to public recreation and circulation or to activities designed to enhance environmental conditions.

Action HS.7.4.2 Participate in local and regional restoration projects to improve water quality in the watersheds.

POLICY HS.7.5 Reduce pollutant loading in the wastewater system.

Action HS.7.5.1 Apply best management practices to sanitary sewer system discharges.

Action HS.7.5.2 Establish protocol for reducing the use of pesticides in City parks and other public spaces maintained by the City.

POLICY HS.7.6 Establish appropriate capital improvements and management programs to reduce wet weather sewer treatment demand and avoid discharge to the shallow water outfall.

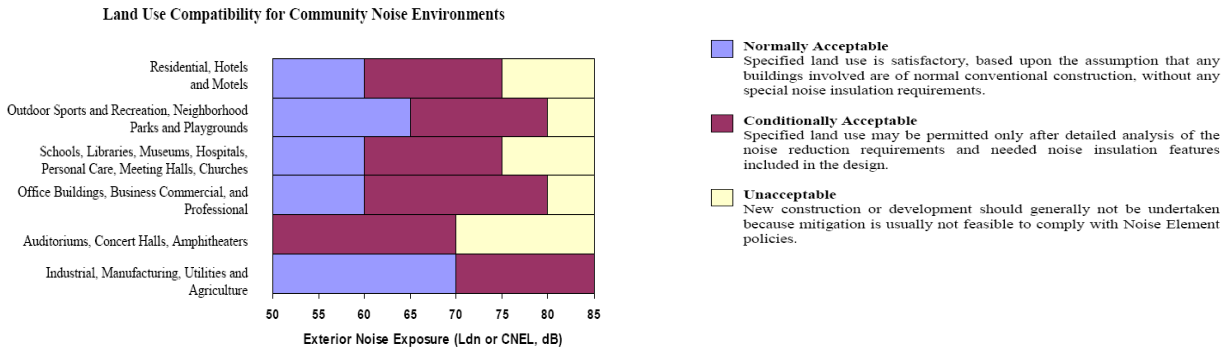
Action HS.7.6.1 Require project applicants to investigate and report on project impacts on the wastewater treatment plant and assure that the project mitigates for any impacts.

Action HS.7.6.2 Seek funding to upgrade facilities in order to reduce inflow and infiltration.

Action HS.7.6.3 Establish a sewer lateral rehabilitation program that requires property owners to inspect and rehabilitate sewer laterals at the time property is sold.

GOAL HS.8 Ensure all new development complies with the noise standards established in the Pinole Health and Safety Element, and prevent all new noise sources from increasing the existing noise levels above acceptable standards.

POLICY HS.8.1 New development projects should meet acceptable exterior noise level standards. The normally acceptable noise standards for new land uses are established in Land Use Compatibility for Community Exterior Noise Environments (as shown below).



Action HS.8.1.1 Adopt a noise ordinance with noise level performance standards, including maximum allowable noise exposure, ambient versus nuisance noise, method of measuring noise, and enforcement procedures.

Action HS.8.1.2 Review development proposals to assure consistency with noise standards. Require new development of noise-creating uses to conform to the City's noise level standards.

Action HS.8.1.3 Require a combination of design features to reduce noise impacts on adjacent properties through the following and other means, as appropriate:

- Screen and control noise sources such as parking, outdoor activities and mechanical equipment.
- Increase setbacks for noise sources from adjacent dwellings.
- Modify building designs and site planning to reduce noise exposure through a combination of sound attenuation (e.g., sound-rated windows and ventilation systems, insulation, physical and landscape buffers) and site planning (e.g., increased separation and private open area buffers) to reduce noise exposure.
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.
- Require additional landscaping to assist with buffering where feasible.

POLICY HS.8.2 Ensure that proposed nonresidential land uses likely to exceed the City's standards do not create noise disturbances in existing noise-sensitive areas.

Action HS.8.2.1 Require an acoustical analysis as part of the environmental review process when noise-sensitive land uses are proposed in areas where current or projected exterior noise levels exceed the City's standards.

Action HS.8.2.2 Require that any potential noise impacts identified during the acoustical analysis be mitigated in the project design to the maximum extent feasible.

Action HS.8.2.3 Prepare and periodically update a map of citywide noise-sensitive areas.

POLICY HS.8.3 Work with the railroads and adjoining communities to seek quiet zone status for rail lines through Pinole.

GOAL HS.9 Eliminate or reduce noise from existing objectionable noise sources.

POLICY HS.9.1 Noise created by commercial or industrial sources associated with new projects or developments should be controlled so as not to exceed the noise level standards set forth in the table below (Maximum Allowable Noise Exposure for Stationary Noise Sources), as measured at any affected residential land use.

Action HS.9.1.1 Adopt the following allowable noise standards:

Maximum Allowable Noise Exposure for Stationary Noise Sources[1]

	Daytime [5] (7 AM to 10 PM)	Nighttime [2, 5] (10 PM to 7 AM)
Hourly L_{eq}, dB [3]	55	45
Maximum Level, dB [3]	70	65
Maximum Level, dB – Impulsive Noise [4]	65	60

1. *As determined at the property line of the receiving land use. When determining effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.*
2. *Applies only where the receiving land use operates or is occupied during nighttime hours.*
3. *Sound level measurements shall be made with "slow" meter response.*
4. *Sound level measurements shall be made with "fast" meter response.*
5. *Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level.*

POLICY HS.9.2 Require new noise sources to use best available control technology (BACT) to minimize noise emissions.

Action HS.9.2.1 Noise control techniques used should be what most effectively mitigates the noise impacts of the development. Such measures may include building setbacks, building orientation and noise barriers. If a noise barrier is required for mitigation of exterior noise levels, it should be constructed of tight-fitting, massive materials (1-inch-thick wood, stucco, masonry, etc.) and should be of sufficient height to interrupt line of sight between the source and receiver. Line of sight should be determined by drawing a straight line between the effective heights of the noise source and receiver.

POLICY HS.9.3 Work with the railroad companies to reduce existing rail noise in Pinole.

Action HS.9.3.1 Establish a quiet zone designation at the railroad crossings in Pinole. Work with railroad companies to determine and install required safety devices to acquire the designation.

GOAL HS.10 Ensure that environmental and public service conditions are adequate to support a healthy community.

POLICY HS.10.1 Ensure resources and programs are available for the health needs of the entire community, including children and senior citizens.

Action HS.10.1.1 The City should continue to work with local health care providers to ensure the availability of adequate levels of health care services and facilities.

Action HS.10.1.2 To the extent practical, the City shall support the efforts of public and private providers to make available the full range of medical care to all segments of the population.

Action HS.10.1.3 Identify health services that are not readily available in the community and seek to improve access to these services over time.

Action HS.10.1.4 The City should consult with area medical service providers to consider the establishment of urgent care facilities or other appropriate medical service facilities in outlying areas of the community.

Action HS.10.1.5 The City should encourage the development of medical center or hospital uses in the Doctors Hospital building.

POLICY HS.10.2 Ensure that adequate access to healthy foods and access to recreation and open space are available to help prevent obesity.

Action HS.10.2.1 Improve conditions for walking and bicycling in neighborhoods surrounding schools. Install crosswalks, colored pavement, curb bulbouts and other improvements to ensure safety for pedestrians and bicyclists.

Action HS.10.2.2 Collaborate with school districts to form joint use of facilities agreements for use of pools and sports/recreation facilities.

Action HS.10.2.3 Encourage and support efforts by schools to help shape curriculum at schools and improve access to information related to nutrition and exercise.

Action HS.10.2.4 Ensure that educational facilities are located in areas that will encourage walking and physical activity to promote student health.

Action HS.10.2.5 Help schools set up community gardens by identifying land adjacent to schools that can be used as a garden or by making City staff available to assist the school in starting a garden.

Action HS.10.2.6 Explore using zoning regulations to help create a healthier environment for children by limiting or restricting the number of fast-food outlets near schools.

POLICY HS.10.3 Encourage availability of healthy and sustainable food for residents of Pinole through active community participation.

Action HS.10.3.1 Encourage establishment of community gardens or agricultural parks on vacant properties, designated open space and rural lands, and in suitable locations on public property to increase the availability of locally grown fresh produce in the community.

POLICY HS.10.4 Support and encourage educational programs and practices that improve public health, and work cooperatively with the medical community to support healthy lifestyles, including improved diets, exercise, smoking cessation and diabetes prevention and treatment, in order to support a healthy community.

Action HS.10.4.1 Integrate healthy life choices into City recreation programs for all age groups.

Action HS.10.4.2 Participate in programs, events and ongoing outreach efforts that disseminate information about maintenance of physical and mental health and illness prevention.

Action HS.10.4.3 Continue to encourage physical activity and provide a broad range of recreational activities in the community.