

# HEALTH AND SAFETY ELEMENT

## INTRODUCTION

To maintain a high quality of life for Union City residents, the City must minimize natural hazard risks (e.g., earthquakes, wildfire, flooding) as well as manmade hazards and nuisances (e.g., noise, poor air quality, hazardous materials). Union City has several health and safety threats that may affect the quality of life its residents including: three major fault zones; roadway and air traffic noise; significant levels of CO, ozone, and PM10; and dam inundation threats during a major seismic event.

The purpose of this Element is to protect the public health, safety, and welfare of the community from any “unreasonable risks” while minimizing damage to structures, property, and infrastructure resulting from natural and man-made hazards. In consideration of the current energy crisis, the City should also focus attention on reducing energy consumption while identifying safe electrical generators for residential and/or business use to meet energy shortfalls.

Background information on terminology used in environmental acoustics and a detailed discussion of Federal and State guidelines for evaluating noise are provided in the General Plan Background Report.

## A. GENERAL

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<b>Goal</b>	To protect the public health and safety and minimize the damage to
<b>HS-A.1</b>	structures, property, and infrastructure as a result of natural and manmade hazards.

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### Policies

- HS-A.1.1 The City shall evaluate proposed projects and land use policy decisions based on the environmental hazards identified in this element, its hazard maps and reports, FEMA Flood Insurance Rate Maps, and hazard maps prepared by the California Division of Mines & Geology and the Association of Bay Area Governments.
- HS-A.1.2 The City shall continue to work with local, regional, State, and Federal agencies to maintain current natural hazards information or sources of information.
- HS-A.1.3 The City shall maintain information on soil and geologic hazards in the Planning Area, including maps that identify the locations of known hazard zones, as reported to the City or available from information published by State and Federal agencies. This information shall be used by the City to inform and guide review of proposed development.
- HS-A.1.4 The City shall encourage school districts and agencies that work with the aged and/or handicapped to develop and carry out education programs on individual disaster preparedness.

## Health and Safety Element

## City of Union City

- HS-A.1.5 The City shall work with community groups who provide emergency planning services to the aged and disabled community.
- HS-A.1.6 The City shall compile and keep up-to-date an inventory of public and private sources of heavy equipment such as earth movers and cranes that may be needed for search and rescue operations after a disaster.
- HS-A.1.7 To the extent practicable, the City shall discourage the location of “critical facilities or uses” in areas subject to natural hazards.
- HS-A.1.8 The City shall not permit new construction in areas where emergency access cannot be adequately ensured.
- HS-A.1.9 Following a State- or Federally-declared emergency or disaster, the City shall review the General Plan, any specific plans and plans for redevelopment pertaining to damaged areas to determine the relevance of the plans as a guide to rebuilding. The plans will be amended as necessary to reflect new information or changed circumstances. Building permits will be issued only for rebuilding and repair which are consistent with the City plans. This policy does not apply to emergency repairs necessary to protect public health, safety, and welfare.
- HS-A.1.10 The City shall maintain an up-to-date Emergency Plan which is consistent with the State and Federal disaster preparedness requirements, participate in disaster response exercises, provide for the training of personnel and elected officials after every election in emergency response.
- HS-A.1.11 The City shall include as part of the Emergency Plan, multiple disasters response, civilian community emergency response teams, and identification that the “terms of succession” shall follow Standard Emergency Management System as mandated by the State.
- HS-A.1.12 The City shall consider the needs of seniors and disabled when establishing emergency shelters and providing emergency food and water. Such considerations may include, but are not limited to, site accessibility, allowances for service animals, the ability for seniors and disabled to carry and transport emergency rations of food and water.
- HS-A.1.13 The City shall include as part of the Emergency Plan an emergency evacuation plan.
- HS-A.1.14 The City shall develop a program to inform and educate citizens about emergency preparedness.
- HS-A.1.15 The City shall conduct training programs for citizens in disaster preparedness.
- HS-A.1.16 The City shall work with health providers to provide emergency medical treatment during public disasters.
- HS-A.1.17 The City shall complete the upgrades to the Senior Center to allow its use as an Emergency Operations Center.

### Implementation Programs

HS-A.1 The City shall work with the Alameda County Office of Emergency Services to regularly review and update the Emergency Operations Plan.

Responsibility:

9 Police Department

9 Fire Department

Time Frame:

9 FY 02-03; every two years thereafter.

HS-A.2 The City shall develop and implement a program for training citizens in disaster preparedness and response.

Responsibility:

9 Police Department

9 Fire Department

Time Frame:

9 FY 02-03

HS-A.3 The City shall develop long-term and short-term goals and budget to support and supply the operation of essential City services for a period of up to 72 hours after a disaster. The City shall conduct education and training programs for residents and businesses about the need to establish adequate food and water supplies for the first 72 hour of a disaster.

Responsibility:

9 Police Department

9 Fire Department

Time Frame:

9 FY 03-04

### B. GEOLOGY AND SOILS

The City's Planning Area encompasses two distinctly different geologic and geomorphic regions that are separated by the northwest trending Hayward fault zone, located just east of Mission Boulevard. The western, urbanized half of the planning area is characterized by the low-lying, gently sloping and nearly level alluvial and estuarine landforms that surround the San Francisco Bay. The less developed (open space and agricultural uses) portions of the Planning Area lie east of the Hayward fault zone and are characterized by the strongly sloping and steep upland landforms of the northwest-trending East Bay Hills, which separate San Francisco Bay from the Livermore Valley to the northeast.

The primary limitations of these upland soils to urban development stem from the steep slopes on which they occur, which make them highly susceptible to water erosion and landsliding. Soils with high shrink-swell potential, which can also impose limitations on certain types of urban development, exist in some of the eastern, upland portions of the Planning Area as well.

Soils on the nearly level floodplains and tidal flats that occupy the westernmost portions of the Planning Area consist of very deep, poorly-drained clays and silty clays formed from fine-grained alluvium. These soils have slow permeability, no hazard of erosion unless distributed, and are often moderately alkaline. The primary limitations of the alluvial soils west of the Hayward fault zone to urban development stem from their physical attributes, which make them susceptible to various types of ground-failures including settlement and differential settlement, subsidence, and earthquake-induced liquefaction. Soils with high shrink-swell potential are thicker and more extensive on the alluvial landforms west of the Hayward fault zone than in the uplands east of the fault zone, and therefore may impose greater limitations on urban development than in the upland areas.



*Hillsides seen from Dry Creek, east of Mission Boulevard*

Segments of three major, northwest-trending fault zones fall within the boundaries of the Planning Area: the Hayward fault zone, the Mission fault zone, and the Silver Creek fault zone. However, of these three fault zones, only the Hayward fault zone contains fault traces that exhibit physical evidence of displacement during historic times. Although the likelihood is greatest that the next major San Francisco Bay Area earthquake will occur on the Hayward fault, major earthquake events on other active Bay Area faults, such as the San Andreas and the Calaveras faults, would also likely affect Union City. The relative intensity of ground shaking expected to occur in the Planning Area as a result of characteristic earthquake events on some nearby active faults are listed in Table HS-1.

The most extreme groundshaking is expected to occur as a result of earthquakes on the Hayward fault. Groundshaking intensity is expected to be greatest on the alluvial landforms that lie west of the Hayward fault zone due to their fine textured sediments and soils. These conditions tend to amplify seismic waves to a greater extent than the hard bedrock that underlies the upland landforms east of the Hayward fault zone.

<b>TABLE HS-1</b>		
<b>GROUNDSHAKING INTENSITY FROM NEARBY ACTIVE FAULTS</b>		
<b>Fault Name (Segment)</b>	<b>Characteristic Earthquake Magnitude (Richter scale)</b>	<b>Estimated Relative Shaking Intensity</b>
North segment of Hayward	6.6	Moderate to very strong
South segment of Hayward	6.9	Strong to very violent
Entire Hayward Fault	7.1	Strong to very violent
Central segment of Calaveras	6.6	Light to very strong
Entire San Andreas Fault	7.9	Moderate to violent
Source: Association of Bay Area Governments 1999.		

Liquefaction is a process by which water-saturated soils and sediments lose strength and fail during strong seismic groundshaking. Liquefaction hazards are most commonly associated with water saturated, noncohesive silty soils and sediments located within 50 feet of the ground surface. Liquefaction hazard maps (Association of Bay Area Governments (ABAG), 1983) indicate that the relative hazard or "susceptibility" of soils and sediments in the City's Planning Area to liquefaction is considered low in the steep uplands east of the Hayward fault zone and high to very high on the gently sloping and nearly level alluvial landforms west of the Hayward Fault zone.

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**Goal** To minimize the risks associated with geologic and soils hazards in order to protect public health, safety, and property.  
**HS-B.1**

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**Policies**

- HS-B.1.1 The City shall require investigations by both registered soils engineers and engineering geologists prior to issuing building permits or discretionary approvals (i.e., general plan amendment, rezoning, conditional use permit, tentative subdivision map, etc.) for any new construction unless waived due to current existing information and location. Soils engineering reports shall specifically address secondary seismic hazards, especially potential for soil liquefaction, ground shaking, lateral spreading, local subsidence and lurch cracking. All such reports shall be independently evaluated, on behalf of the City, for completeness and accuracy.
- a. All development proposals for lands west of Union City Boulevard shall coordinate with Alameda County Flood Control and Water Conservation District to evaluate the stability of all levees in order to identify potential hazards and necessary mitigation measures. Such evaluation will be the responsibility of the applicant(s) to prepare.
  - b. Soils and geologic engineering reports shall be required for sites within the "Special Seismic Studies Zone" and lands east of Mission Boulevard to deal specifically with risks related to primary effects of ground rupture along fault traces and secondary seismic effects of slope instability and erosion control.

- c. For buildings larger than single-family residences, there shall be a soils report and an engineer-of-record. Contract services for structural review of plans, when necessary, should be done at the applicant’s expenses. Soils engineer reports shall address secondary seismic hazards, especially potential for soil liquefaction, lateral spreading and lurch cracking.

HS-B.1.2 The City shall file and maintain geologic and soils reports and information by parcel number or street address.

HS-B.1.3 The City shall review and regularly update its geologic hazard mapping based on new information, including soils and geologic reports for specific sites and updated maps from the State Geologist.

HS-B.1.4 The City shall continue to implement updated editions of the Uniform Building Code published by the International Conference of Building Officials.

HS-B.1.5 All environmental analyses submitted to the City under the California Environmental Quality Act in support of development proposals shall include sections evaluating seismic and geologic hazards.

HS-B.1.6 After approval of a specific plan in response to proposed development in the hillsides, the City shall review and amend the Hillside Combining District zoning ordinance to incorporate and reflect appropriate changes.

HS-B.1.7 The City shall not develop any lands which are found to contain potential geologic or seismic hazards defined as an "unacceptable risk." An unacceptable risk is a level of risk above which specific action by government is deemed to be necessary to protect life and property.

HS-B.1.8 The City shall not extend utility service lines and streets across known or suspected active fault traces or active or historic slide planes. The City may permit exceptions when special engineering practices or techniques are employed that ensure that the extension can remain operational after a disaster.



*New residential construction*

HS-B.1.9 The City shall require all structures designed for human occupancy in high risk areas and all critical structures throughout the city to meet local and State-applied code regulations.

HS-B.1.10 When feasible, the City shall require the upgrading of the structural integrity of older, unreinforced, residential and commercial buildings. The City shall not permit major alterations of unreinforced masonry structures, other than single-family houses, without evaluation by a registered structural engineer of the adequacy of seismic resistance of the building in relation to the proposed use.

- HS-B.1.11 In the City's Emergency Plan, the City shall plan for emergency evacuation of those areas that could flood as a result of levee failure, and shall include plans of evacuation of affected areas.
- HS-B.1.12 The City shall formally request State and local water agencies to conduct periodic seismic evaluations of all dams, reservoirs, aqueducts (Hetch Hetchy) and water tanks which are located within Union City or could affect the City's post-seismic emergency operations. Such evaluation should encompass specific potential hazards of fault rupture, dam failure, inundation and interruption of water service.

**Implementation Programs**

- HS-B.1 The City shall update the Zoning Ordinance to incorporate the location of the "Earthquake Fault Zone" as defined by the Alquist-Priolo Act and illustrated by the California Division of Mines and Geology (State Geologist). Specific reference to data required by the State, scope of study and procedural requirements will be included.

Responsibility:

- 9 Public Works Department
- 9 Community Development Department

Time Frame:

- 9 FY 01-02

- HS-B.2 The City will establish and implement a program to inspect facilities critical for response to an earthquake, such as fire stations and communication centers, and, where needed, to make structural changes so that the facility will remain functional after a damaging earthquake.

Responsibility:

- 9 Public Works Department
- 9 Building Department
- 9 Fire Department

Time Frame:

- 9 FY 02-03

- HS-B.3 The City will adopt guidelines and procedures for evaluating and mitigating geologic hazards (e.g., surface faulting, liquefaction, landslides, and groundshaking) in the review and approval of both public and private projects.

Responsibility:

- 9 City Council
- 9 Building Department

Time Frame:

- 9 FY 03-04

HS-B.4 The City shall disseminate through City offices information for homeowners and business owners regarding seismic retrofitting of residential and commercial structures.

Responsibility:

9 Building Department

9 Community Development Department

Time Frame:

9 FY 03-04

### C. NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale (i.e., dB scale) is used to keep sound intensity numbers at a convenient and manageable level.

Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting" written as dBA.

Various noise descriptors have been developed to describe time-varying noise levels. The following noise descriptor is used by the city.

# *Community Noise Equivalent Level (CNEL)* - CNEL is the energy average of the A-weighted sound levels occurring during a 24-hour period with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. and 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m.

Noise sources within the city can be grouped into two categories: stationary (uses in a fixed location, such as those from industrial land uses) and mobile sources. Like most East Bay communities, Union City's primary source of noise is roadway noise. Secondly, air traffic noise from Bay Area airports is becoming a local concern. Other noise sources include rail use (including Bay Area Rapid Transit) and primary stationary sources such as industrial operations.

High noise levels can interfere with a broad range of human activities including conversation, listening to television and radio, concentration during mental and physical activities, relaxation, and sleep. High levels of noise can also result in hearing loss, either total or partial, and either permanent or temporary.

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**Goal** To protect public health and welfare by minimizing excessive noise.  
**HS-C.1**

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**Policies**

- HS-C.1.1 The City shall consider the following land uses to be "noise sensitive":
- C single and multi-family residential;
  - C group homes;
  - C hospitals and extended medical facilities;
  - C schools and other learning institutions;
  - C libraries; and
  - C similar uses as may be determined by the City.
- HS-C.1.2 The City shall use the standards in Table HS-2 as the acceptable limits of noise for various land uses throughout the community. These standards specify the maximum exterior noise levels allowable for developments. For noise sensitive land uses, mitigation shall be included in structural design to reduce interior noise levels to a maximum of 45 dBA CNEL.
- HS-C.1.3 For proposed development of new noise sensitive land uses as identified in HS-C.1.1, the City shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation sources (i.e., roadway, highway/freeway, rail uses, and aircraft noise), or stationary sources exceed the noise standards contained in Table HS-2. This study shall be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California with a minimum of three years experience in acoustics). The study shall include recommendations and evidence to establish mitigation that will reduce noise exposure to an acceptable level.

**Table HS-2 on next page**

**Table HS-2**

**Maximum Allowable Noise Exposure by Land Use**

	Noise Level (CNEL)						
	0-55	56-60	61-65	66-70	71-75	75-80	>81
Residential - Low Density Single Family, Duplex, Mobile							
Residential - Multiple Family, Group Homes							
Motels/Hotels							
Schools, Libraries, Churches, Hospitals, Extended Care							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation,							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

	<b>Normally Acceptable.</b> Specified land use is satisfactory, based on the assumption that any buildings involved are of normal, conventional construction, without any special noise insulation
	<b>Conditionally Acceptable.</b> New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed insulation features
	<b>Normally Unacceptable.</b> New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction
	<b>Unacceptable.</b> New construction or development should not be undertaken.

HS-C.1.4 The City shall require a noise impact evaluation by a qualified acoustical engineer for all new non-residential land uses that have the potential to exceed the City's noise standards for noise sensitive land uses measured at the property line of the noise sensitive use or district. Noise from an intervening transportation source shall be considered as part of the noise evaluation.

- HS-C.1.5      The City shall minimize potential transportation noise through the proper design of street circulation, coordination of routing, and other traffic control measures.
  
- HS-C.1.6      To minimize the impacts of transportation-related noise, the City shall:
  - C      Require for new development projects that are impacted by noise or cannot meet the standards specified in Table HS-2, the construction of barriers to mitigate sound emissions where necessary or where feasible.
  
  - C      Require, where necessary and feasible, the inclusion of noise mitigation measures in the design of new roadway projects in Union City. The City shall request from Caltrans a noise study for any portions of State roadways Caltrans proposes to modify, (e.g. widen to 4 lanes). Appropriate mitigation measures should be included in any final project plans.
  
  - C      Ensure the effective enforcement of City, State and Federal noise levels by all appropriate city departments.
  
- HS-C.1.7      To minimize the impacts of stationary noise, the City shall limit construction activities between the hours of eight a.m. and eight p.m. on Monday through Friday, nine a.m. and eight p.m. on Saturdays, and Sundays and holidays, between ten a.m. and six p.m.
  
- HS-C.1.8      The City shall encourage the use of berms and increased building setbacks, or both, in the design of residential or other noise sensitive land uses that are adjacent to major roads, commercial, or industrial areas.
  
- HS-C.1.9      The City shall provide for continued evaluation of truck movements and routes within the city to provide effective separation from residential or other noise sensitive land uses.
  
- HS-C.1.10     The City shall develop a Construction Abatement/Mitigation Plan to reduce adverse noise effects from construction activity.

**Implementation Programs**

- HS-C.1      The City shall amend the Noise Ordinance to ensure consistency with the noise policies of this Element.

Responsibility:

9      Community Development Department

Time Frame:

9      FY 02-03

HS-C.2 The City shall monitor air traffic noise levels and seek local, regional, and State assistance to mitigate noise impacts.

Responsibility:

- 9 Public Works Department
- 9 Community Development Department

Time Frame:

- 9 Ongoing

HS-C.3 The City shall develop a Construction Abatement/Mitigation Plan to reduce adverse noise effects from construction activity. Key elements of the plan shall include but not be limited to the following:

- Construction contractors shall comply with all relevant provisions of applicable local noise policies and ordinances.
- All construction equipment shall have sound-control devices no less effective than those provided on the original equipment. No equipment shall have un-muffled exhaust.
- As directed by the City, the contractor shall implement appropriate additional noise mitigation measures including, but not limited to changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, re-routing heavy truck traffic, or installing acoustic barriers around stationary construction noise sources or construction sites.

Responsibility:

- 9 Public Works Department
- 9 Community Development Department

Time Frame:

- 9 Ongoing

## D. AIR QUALITY

Air quality in a given location is described as the concentration of various pollutants in the atmosphere, generally expressed in units of parts per million (ppm) or in micrograms per cubic meter (ug/m3). Air quality is determined by the type and amount of regulated air pollutants emitted into the atmosphere, existing (ambient) air quality conditions, the size and topography of the regional air basin, and the prevailing meteorological conditions.

Comparing it to Federal and State ambient air quality standards defines the significance of a given pollutant's concentration. Both the State of California and the Federal Government have established ambient air quality standards for several different pollutants. These standards represent the maximum allowable atmospheric concentrations of each pollutant that may occur and still protect public health and welfare. For some pollutants, separate standards have been set for different periods. Most standards have been set to protect public health, but a few pollutants have standards based on additional values such as protection of agricultural products, protection of materials, or avoidance of nuisance conditions.

Union City falls within the San Francisco Bay Area Air Basin (SFBAAB). Within the basin the Bay Area Air Quality Management District (BAAQMD) is responsible for developing air quality plans, monitoring air quality, and reporting air quality data for both the city of Union City and the surrounding area. Several pollutants are regulated by the BAAQMD; however, carbon monoxide, ozone, and particulate matter (e.g., PM10 and PM2.5) are of greatest concern due to the SFBAAB's nonattainment status for ozone and PM10.

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<b>Goal</b>	To prevent the deterioration of and to improve air quality within the
<b>HS-D.1</b>	Union City Planning Area.

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### Policies

- HS-D.1.1 The City shall cooperate with the Bay Area Air Quality Management District to implement the Air Quality Plan.
- HS-D.1.2 The City shall implement measures to protect air quality that may be required to mitigate the effects of population growth in the Planning Area.
- HS- D.1.3 The City shall encourage development designs for city circulation systems that conserve air quality and minimize direct and indirect emissions of air pollutants.
- HS- D.1.4 The City shall encourage a reduction in vehicle-trips through Transportation Systems Management (TSM), Bay Area Air Quality Management district (BAAQMD) Transportation Congestion Management (TCM) and the use of non-polluting forms of transportation, including electric hybrid buses, vans, city vehicles, bicycles and walking.
- HS-D.1.5 The City shall encourage developers of large projects to install fueling stations for alternative energy vehicles.
- HS-D.1.6 The City shall require all businesses, in particularly fast food and manufacturing, to minimize odors generated by the business so that the odors are not detectable off-site.

### Implementation Programs

- HS-D.1 The City shall prepare a Transportation Systems Management Plan and seek grant money to assist in implementation.

#### Responsibility:

- 9 Community Development Department
- 9 Union City Transit

#### Time Frame:

- 9 FY 02-04

**E. URBAN AND WILDLAND FIRES**

Fire hazards in the Planning Area include both grass or brush fires and structural fires. The potential for wildland fires is greater in the more open hillside areas in the eastern part of the Planning Area.

The Union City Fire Department provides fire protection services to the City’s Planning Area, has signed the California Master Mutual Aid Agreement, and participates in mutual aid operations as requested. Levels of fire protection services provided by the Department in the Planning Area are discussed in the Public Facilities and Services Element.

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<b>Goal</b>	To provide increased fire safety through the provision of adequate fire protection infrastructure, public education, and outreach programs.
<b>HS-E.1</b>	

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**Policies**

HS-E.1.1 The City shall time all future development within the city to coincide with the establishment of adequate fire control facilities and equipment.

HS-E.1.2 The City shall require sprinkler systems and/or smoke detectors according to Uniform Fire Code standards.

HS-E.1.3 The City will endeavor to reduce the risk of loss from brushfires in the undeveloped hillside areas of the city through such measures as landscaping with fire resistant plants between residential and open space areas, weed control, controlled burns, and placement of trails and roads to serve as firebreaks. New development within the hillside area will only be permitted where studies in support of the specific plan for that area demonstrate that fire safety can be assured. The City Fire Department will continue to work with land owners to ensure adequate land management practices are employed to minimize wildland fire hazard.



*Residential development in the hills*

HS-E.1.4 The City shall require weed abatement, brush clearance and vegetative management for all existing properties.

HS-E.1.5 The City shall require new development in the urban/wildland interface to prepare a brush clearance and vegetative management program.

HS-E.1.6 The City shall maintain fire roads and keep them passable at all times.

HS-E.1.7 The City shall monitor water fire-flow capability throughout the city and improve water availability if any locations have flows considered inadequate for fire protection.

- HS-E.1.8 The City shall require subdivision and zoning regulations to include street widths and clearance areas sufficient to accommodate fire protection equipment and emergency vehicles.
- HS-E.1.9 The Fire Department shall continue to expand public education, outreach, and inspection programs.
- HS-E.1.10 The City shall encourage the County to maintain roads for emergency vehicle access.

### Implementation Programs

- HS-E.1 The City shall periodically conduct a capital equipment evaluation to determine equipment acquisition and replacement priorities.

#### Responsibility:

9 Fire Department

#### Time Frame:

9 Ongoing

## F. FLOODING

The Federal Emergency Management Agency (FEMA) has prepared flood zone maps for the City's Planning Area. FEMA-defined 100-year flood hazard areas include: Dry Creek, the M Line Channel and along the western Baylands areas of the Planning Area.

The City's flooding concerns are associated with potential failures of the Calaveras, Del Valle, and Ward Creek dams. Dam failures can result from a number of natural or manmade causes such as earthquakes, erosion of the dam face or foundation, landsliding, rapidly rising floodwaters, and structural/design flaws. All three dams are located east of the Planning Area. Calaveras Dam is owned by the City and County of San Francisco, and the Del Valle Dam is owned by the Alameda County Flood Control and Water Conservation District. Failure of the Calaveras and Del Valle dams pose the greatest threats; the threat from failure of Ward Creek Dam is substantially less.

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<b>Goal</b>	To provide flood protection which minimizes potential damage, while
<b>HS-F.1</b>	creating or enhancing existing recreational opportunities, wildlife habitats, and water quality.

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### Policies

- HS-F.1.1 The City shall continue to participate in the Federal Flood Insurance Program and comply with requirements to gain acceptance into the regular phase of the program. New development is prohibited within the channel of Dry Creek and the M Line Channel. New development within Special Flood Hazard Areas outside of the channels will be prohibited unless mitigation measures are taken to locate improvements above flood elevations as required under the Flood Insurance Program.
- HS-F.1.2 The City should continue to work with the Alameda County Flood Control District to minimize flood hazards in the community.

HS-F.1.3 The City shall encourage Alameda County Flood Control District to periodically clean and dredge the creeks and actively encourage East Bay Regional Parks to manage and maintain the creeks to avoid the residue of brush from clogging the creek beds.

HS-F.1.4 The City should strive to work with the owners of the Calaveras, Del Valle, and Ward Creek Dams to clearly define the risk of potential failures and reasonable actions to minimize risk to people and property in the Planning Area.

**Implementation Programs**

HS-F.1 The City shall continue to provide information to the public regarding flood zone locations

Responsibility:

- 9 Community Development Department
- 9 Public Works Department

Time Frame:

- 9 On-going

HS-F.2 The City shall work with the Alameda County Flood Control District to implement measures for the abatement of flooding hazards, as appropriate. The measures may include, but are not limited to, the following: (1) removal or relocation of development from flood hazard areas; (2) construction of impoundments or channel diversions provided that adequate mitigation of any environmental impacts can be demonstrated; and (3) debris and silt removal programs conducted in a manner so as not to disrupt existing sensitive habitat communities.



*Trail along Alameda Creek flood control channel*

Responsibility:

- 9 Public Works Department
- 9 Community Development Department

Time Frame:

- 9 Ongoing

**F. HAZARDOUS MATERIALS**

The release of hazardous materials within the City’s Planning Area can result from several different types of occurrences including pesticide or herbicide applications; illegal disposal of hazardous waste into sewer/drainage systems, at landfill sites, directly into creeks or streams, and dumping along roadways, and as a result of on-site or transportation-related accidents. While hazardous materials releases can happen almost anywhere, parts of the Planning Area near roadways or industrial land uses have a higher potential for the risk of exposure.

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<b>Goal</b> <b>HS-G.1</b>	To protect the public health and safety by reducing the use, storage, and disposal of toxic and hazardous substances.
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### Policies

- HS-G.1.1 The City shall strictly control the use, storage and transport of toxic, explosive or other hazardous materials and wastes at facilities within Union City.
- HS-G.1.2 The City shall limit locations of hazardous materials storage and use to those areas where potential accidents will not cause undue risk to people and property, and where effective emergency response can be provided. Actions, as found appropriate, shall include the prohibition of certain hazardous materials, combinations of materials or quantities of materials in particular land use areas and/or facilities. This shall be accomplished during the facility review, permitting and site development review processes.
- HS-G.1.3 Where potential for contamination exists or for critical facilities and/or uses, the City shall require an applicant for new development to prepare a Phase I and II Environmental Site Assessment. The property owner shall:
- a. Provide appropriate notification to the City, and any additional responsible agencies concerning the source(s) of any contaminate(s) found and their extent.
  - b. Remediate all environmental hazards and contamination to the most stringent requirements of Federal, State and local law, code or practice.
- HS-G.1.4 The City shall monitor the transportation of hazardous materials within the city limits.
- HS-G.1.5 The City shall encourage the appropriate county and state agencies to monitor and respond promptly to questions and/or complaints regarding possible public health threats related to environmental hazards.

### Implementation Programs

- HS-G.1 The City shall review the following for compliance with Federal, State and local laws, regulations and ordinances:
- a. Hazardous Materials Release Response Plans and Inventories,
  - b. Underground Storage Tanks,
  - c. Above Ground Storage Tanks,
  - d. Hazardous Waste Generators and Onsite Treatment,
  - e. Risk Management and Prevention Program,
  - f. Uniform Fire Code Hazardous Materials Requirements, and
  - g. Storm Water Conveyance Systems and Runoff.

High hazard facility inspections shall be conducted annually (at a minimum). All others shall be inspected within a two or three year cycle.