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The Safety Element addresses public safety and quality of life issues. Natural events such as flooding and earthquakes can endanger property and human life while hazardous material use, crime and other human activities can impact community security. Residents can be protected from potential hazards by identifying threatening situations and taking steps to limit such situations in populated areas.

Purpose of the Safety Element

The Safety Element is a comprehensive program to identify and temper environmental factors that potentially threaten community health and safety. Public Safety is a key factor in the quality of life in a community. The Safety Element contains policies and programs to regulate existing and proposed development located in hazard-prone areas. Education of City staff and residents about emergency preparedness is also addressed.

Scope and Content of the Safety Element

The Safety Element complies with the requirements for the General Plan public safety element mandated in Government Code Section 65302(g). According to the state requirements, the safety element must address the following hazards if they pertain to East Palo Alto:

- Seismically induced conditions, including surface rupture, ground shaking, ground failure, tsunami and seiche;
- Slope instability leading to mudslides and landslides;
- Subsidence and other geologic hazards;
- Flooding;
- Wildland/urban interface fires; and
- Evacuation routes.
- Additional public safety hazards have also been identified. Consequently, hazardous materials, crime and aircraft overflight are also addressed in the Element.

The Safety Element is comprised of three sections: 1) Introduction; 2) Issues, Goals and Policies; and 3) the Safety Plan. In the Issues, Goals and Policies section, major issues pertaining to hazardous conditions are identified, and related goals and policies are established. The goals are overall statements of the City's desires and are comprised of broad statements of purpose and direction. The policies serve as guides for reducing the threat from natural and human activity hazards and maximizing community emergency preparedness. The Plan explains how the goals and policies will be achieved and implemented. Specific implementation programs for the Safety Element are contained in the General Plan Implementation Program (Appendix A).

Related Plans and Programs

There are a number of existing plans and programs that directly relate to the goals of the Safety Element. These plans and programs have been enacted through state and local legislation and are administered by agencies with powers to enforce state and local laws.

California Environmental Quality Act (CEQA) and Guidelines

The California Environmental Quality Act was adopted by the state legislature in response to a public mandate for a thorough environmental analysis of projects that might adversely affect the environment. The provisions of the law, review procedure and any subsequent analysis are described in the CEQA Statutes and Guidelines. Public safety hazards are recognized as environmental impacts under CEQA. Continued implementation of CEQA will ensure that City officials and the general public assess and mitigate potentially significant public safety impacts resulting from and affecting private and public development projects.

Alquist-Priolo Special Studies Zones Act

Pursuant to the Alquist-Priolo Special Studies Zones Act, the state Geologist delineates special study zones along traces of potentially and recently active major faults. Affected cities and counties must inform the public of the special studies zones, which usually are one-quarter mile or less in width. Information about special studies zones can be referenced in local General Plans and on other local maps. Proposed development plans within these zones must be accompanied by a report that describes possible surface rupture

from a registered geologist.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act requires the state Geologist to compile maps identifying seismic hazard zones. The state Mining and Geology Board established policies and criteria identifying the responsibilities of state and local agencies for development in seismic hazard areas. Approval of development on a site within seismic hazard zones requires the preparation of a geotechnical report and local agency consideration of the policies and criteria established by the Mining and Geology Board (Public Resources Code Section 2690 et. seq.).

Landslide Hazard Identification Program

Under the Landslide Hazard Identification Program, the state Geologist is required to prepare maps of landslide hazards within urban and urbanizing areas. Public agencies are encouraged to use these maps in land use planning and decisions about building, grading and development permits (Public Resources Code Section 2687 (a)).

Cobey-Alquist Flood Plain Management Act

The Cobey-Alquist Flood Plain Management Act encourages local governments to plan, adopt and enforce land use regulations for flood plain management, as well as to identify requirements for receiving state financial assistance for flood control. The Safety Element identifies flood zones and methods to avoid flood hazards.

**Hazardous
Waste
Management
Plan**

The Menlo Park Fire Protective District, which responds to all hazardous or toxic spill incidents in East Palo Alto has a Hazardous Materials Area Plan.

The Plan will guide all emergency response procedures for hazardous materials incidents. All facilities and personnel of the affected cities are organized in the Plan to effectively respond to hazardous material emergencies. Hazardous materials and emergency preparedness are discussed in this element.

**Airport Land
Use Plan
(ALUP)**

The Airport Land Use Commission (ALUC) for San Mateo County has responsibility under state law for formulating a comprehensive land

use plan for the anticipated growth of each public airport and its surrounding vicinity. The San Mateo County ALUC adopted the Airport Land Use Plan governing the Palo Alto Municipal Airport and other airports in the county. The purpose of the ALUP is to safeguard the general welfare of the population within the vicinity of airports and to ensure the continued operation of the airports. The ALUP provides a basis for reviewing proposed development projects within areas impacted by airport noise. Building height and intensity restrictions are established by the ALUP for development in the defined Accident Potential Zone.

General Plans for cities subject to the ALUP must be consistent with the Plan. Three issue areas in the ALUP are addressed in the East Palo Alto General Plan: noise, safety and building height. The Safety Element of the General Plan addresses safety, the Noise Element addresses noise, and the Land Use Element addresses building height and the distribution of land use compatible with noise

and safety hazards.

**San Mateo
County
General Plan
Natural
Hazards
Element**

The San Mateo County General Plan Natural Hazards Element contains a comprehensive inventory of hazards impacting persons and property in the unincorporated areas.

Specific subjects include geotechnical, fire and flooding hazards. The element guides and directs local government decisions about safety matters and coordinates regional, state and federal policies and programs.

**City of East
Palo Alto
Emergency
Preparedness
Plan**

The City has prepared an Emergency Preparedness Plan. Additionally, an emergency information guide that identifies City personnel, equipment and facilities

to effectively deal with emergency situations is being utilized. An integral component of this element is emergency preparedness planning.

**City of East
Palo Alto
Codes**

The City has adopted the current Uniform Building Code, Uniform Mechanical Code and National Electrical Code which contain structural

requirements for existing and new buildings. The codes are designed to insure structural integrity during seismic and other hazardous events and prevent personal injury, loss of life and substantial structural damage. To protect public safety, planned development in East Palo Alto will be subject to these structural codes.

Relationship to Other General Plan Elements

The Safety Element must be consistent with the other General Plan elements. Each element is independent and all the elements comprise the General Plan. All elements of the General Plan are interrelated to a degree, and certain goals and policies of each element may also address issues that are the primary subjects of other elements. The integration of overlapping issues throughout the General Plan elements provides a strong basis for implementation of plans and programs and achievement of community goals. The Safety Element relates most closely to the Land Use and Circulation Elements.

Policies and plans in the Safety Element are designed to protect existing and planned land uses identified in the Land Use Element from public safety hazards. Potential hazards are identified in the Safety Element, and the programs are established to avoid or mitigate public safety impacts from planned development. Concurrently, the Land Use Element contains policy to ensure that environmental conditions, including hazards, are considered in all land use decisions. The distribution of residential and other sensitive land uses on the Land Use Policy Map is designed to avoid areas where hazardous conditions have been identified.

Certain natural conditions and human activities in the community create risks to individuals and properties with the community. Excessive risk from such hazards can be avoided or reduced through the Safety Element.

Three major issues are addressed by the goals, policies and plan of the Safety Element. These major issues include: 1) reducing risk from natural hazardous conditions; 2) reducing risk from hazards associated with human activities; and 3) preparing for emergency conditions. Each issue and the related goals and policies are included in the following section of the Element.

Natural Hazards

Safety Issue 1: Desire to reduce risks associated with natural hazardous conditions, such as geologic conditions, seismic activity and flooding.

In the Bay Area, communities are subject to risk attributable to certain natural hazards, such as geologic conditions, seismic activity, fire and flooding. This risk of exposure to such hazards should be minimized through appropriate planning, development engineering and building construction practices.

Safety Goal 1.0: Reduce the risk to the community from hazards associated with geologic conditions, seismic activity and flooding.

Policy 1.1: Reduce the risk of impacts from

geologic and seismic hazards by applying proper development engineering and building construction requirements.

Policy 1.2: Protect the community from flooding hazards by providing and regularly maintaining flood control facilities.

Human Activity Hazards

Safety Issue 2: Need to reduce risks attributable to human activity such as aircraft overflights, hazardous materials, fire and criminal activity.

Certain human activities, such as flying, use of hazardous or toxic materials, use of combustibles, and criminal actions, expose the population of East Palo Alto to risk. The risk of exposure to these hazards can be reduced to acceptable levels through proper planning and regulation of human activities.

Safety Goal 2.0: Protect the community from hazards associated with aircraft overflights, hazardous materials use, fire, ground transportation accidents, and criminal activity.

Policy 2.1: Work with the City of Palo Alto and its airport operator to reduce the risk posed by aircraft overflights.

Policy 2.2: Cooperate with responsible federal, state and county agencies to minimize amounts and reduce the risk from the use and transport of hazardous materials.

Policy 2.3: Provide fire protection to reduce

the risk of fire.

Policy 2.4: Provide well-designed City roadways to reduce the risk of ground transportation accidents.

Policy 2.5: Provide police protection to address criminal activity.

Policy 2.6: Minimize exposure of the community to hazardous materials by discouraging establishment of businesses that increase risk.

Safety Goal 3.0: Improve the ability of the City to respond to natural and human-caused emergencies.

Policy 3.1: Support the development of local preparedness plans and multi-jurisdictional cooperation and communication for emergency situations.

Policy 3.2: Educate residents and businesses regarding appropriate actions to safeguard life and property during and immediately after emergencies.

Hazards Response

Safety Issue 3: Need to be prepared for emergency conditions.

Major emergencies arise periodically in developed urban areas. Proper preparation for emergencies is an essential action to minimize the disruption, personal injury, and property damage associated with such events. Preventative measures and preparatory responses before an emergency occurs will hasten recovery from these emergencies.

Related Goals and Policies

The goals and policies described in the Safety Element are related to and support subjects included within other General Plan elements. In turn, many goals and policies from the other elements directly or indirectly support the goals and policies of the Land Use Element. These supporting goals and policies are identified in Table LU-1.

**Table S-1
Safety
Related Goals and Policies by Element**

Safety Issue Area	Related Goals and Policies by Element						
	Land Use	Circulation	Conservation and Open Space	Noise	Safety	Economic Development	Housing
Natural Hazards	2.2, 3.3						3.1
Human Activity Hazards	3.2, 3.3	4.1, 4.2, 4.3	5.2, 5.3			8.1	3.1
Hazards Response	4.1, 4.2	5.1, 5.2	5.2, 5.3				3.1



As in most urban settings, natural conditions and human activities occur in East Palo Alto which have an effect on the quality of life of its residents. Risk reduction is essential for creating an attractive and healthful urban environment for residents and businesses in the City. East Palo Alto is characterized by relatively flat topography, but contains other geographic features such as tidelands, which combined with development results in a mix of natural conditions and conditions created by humans that could pose hazards to public safety. In addition, the juxtaposition of East Palo Alto with the Palo Alto Municipal Airport poses other hazards. The City can minimize hazards and protect public health and private property through proper prevention and other measures.

This section of the Safety Element identifies the City approach for reducing potential hazards from natural conditions and human activities. Geologic conditions, seismic activity and flooding are considered natural hazards. Human activity hazards include aircraft overflights, hazardous materials, fire and crime. The Plan is based on goals and policies identified in the previous section. The Safety Element Implementation Program, which is part of the General Plan Implementation Program, is an extension of the Safety Plan and contains specific programs that the City will enact to protect community well-being.

Natural Hazards

Natural hazards addressed in the Safety Plan include geologic conditions, seismic activity and flooding.

Geologic Hazards

East Palo Alto is located in a region with active seismic faults and is subject to risks and hazards associated with earthquakes. Seismic activity poses two types of hazards: primary and secondary. Primary hazards include ground shaking, ground displacement, and subsidence and uplift from earth movement. Primary hazards can induce secondary hazards, including ground failure (lurch cracking, lateral spreading and slope failure), liquefaction, water waves (tsunamis and seiches), movement on nearby faults (sympathetic fault movement), and dam failure.

No known active faults exist within East Palo Alto. Consequently, the potential for ground rupture is low and no Alquist-Priolo Special Study Zone has been established by the state. However, the San Andreas Fault runs the length of the San Francisco peninsula, approximately 10 miles to the west of East Palo Alto. The Hayward Fault runs along the east side of the San Francisco Bay. Both of these faults are major, active faults. A major earthquake anywhere in the Bay Area would result in moderate to severe groundshaking in East Palo Alto. Damage to buildings and infrastructure can be expected from as a result of groundshaking during a seismic event.

Damage from earthquakes are most often a result of liquefaction. Areas within East Palo Alto have been identified as having the potential for liquefaction to occur during a seismic event. East Palo Alto to the west of University Avenue and to the south of Highway 101 is identified as in the low to high range. There is a 1 to 10 percent probability of liquefiable sediments in these areas. The area of East Palo Alto to the east of University Avenue and to the north of Highway 101 is in the low to moderate range. There is a .1 to 1 percent probability of liquefiable sediments in this area. Because East Palo Alto is situated adjacent to the San Francisco Bay, the eastern portions of the City have the potential to be impacted by tsunami (tidal wave action). These geologic hazards, combined with groundshaking, can result in substantial structural damage and related loss of life and personal injury.

The City will continue to enact programs to reduce geologic hazards to protect public safety. To minimize hazards from earthquakes and other geologic hazards, the most recent state seismic guidelines and guidelines for other geologic hazards will be implemented for structural design. The stability of residential structures, critical structures and vital emergency facilities will be given particular attention. During the review of development proposals involving grading, unstable soils, and other hazardous conditions, surveys of soil and geologic conditions by a state-licensed engineering geologist will be required. Based on the results of the survey, design measures will be incorporated into projects to minimize geologic hazards. Open space easements will be considered to avoid geologic hazards.

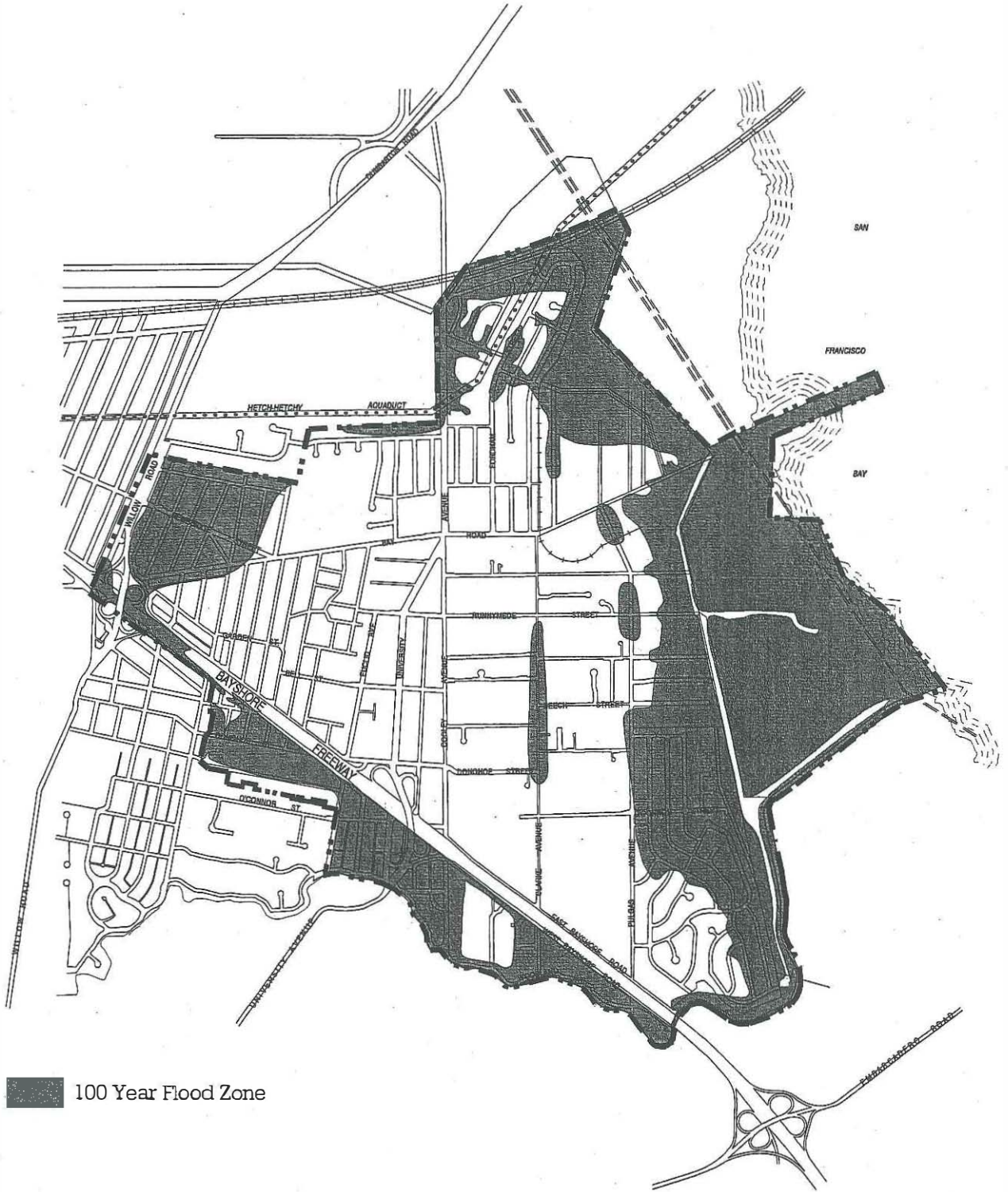
Earthquake preparedness is one of the best methods to minimize human suffering and property damage and accelerate recovery. The City will promote earthquake preparedness in

the community, adopt a disaster preparedness plan, and continue to conduct mock exercises. The programs will be coordinated with emergency service providers and school districts to maximize public participation and effectiveness.

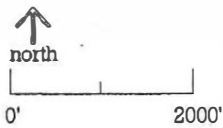
Flood Hazards

Two water bodies - the San Francisco Bay, and the San Francisquito Creek are located adjacent to East Palo Alto. The San Francisco Bay acts as the City's eastern boundary. The San Francisquito Creek forms the City's border with Palo Alto to the south, and also empties into the Bay. The creek is channeled for flood control on the segment west of Highway 101. East of Highway 101 the creek is bounded by levees through Palo Alto Baylands Nature Preserve. Floods along any water course can be expected. While floods are generally perceived as potential hazards, the degree of hazard associated with a flood is related to the types of land use in the floodplain. For example, tidal flooding benefits marshland; however, floods in residential areas are considered hazardous due to the potential for injury and property damage. Business and commercial activities can be impeded by floods due to facility damage and access problems.

East Palo Alto participates in the National Flood Insurance Administration (NFIA) program, which is administered by the Federal Emergency Management Agency (FEMA). The NFIA program provides federal flood insurance subsidies and federally-financed loans for property owners in flood-prone areas. To qualify for federal flood insurance, the City must identify flood hazard areas and implement a system of protective controls. Flood prone areas in the City have been mapped by FEMA. Figure S-1 *Flood Zones* shows the inundation areas for 100-year and 500-year floods. A 100-year flood means that



100 Year Flood Zone



SOURCE: FEMA Flood Insurance Rate Map
 Community-Panel Number 060708 0001 B (1999)

*Figure S-1
 Flood Zones*

a flood of this size has a one percent chance of occurring in a given year, and a 500-year flood means that a flood of this size has a 0.2 percent chance of occurring in a given year. Two areas within East Palo Alto have been identified as subject to serious flooding. The eastern edge of the City, including the wetlands area, is subject to a 100-year flood. Flood insurance is required in these areas. The other area subject to flooding is the western most portion of the City north of Highway 101. This portion of the City is subject to a 500-year flood.

The City will continue to control development in the floodway and floodway fringe. Figure S-2 *Floodplain Schematic* shows the diagram of the floodplain including the floodway and floodway fringe. Development will be prohibited in the floodway unless encroachment will not obstruct flows and increase flood levels. In the floodway fringe, development encroachment will be permitted if the lowest floor of the structures is one foot above the highest estimated flood elevation.

A flood control system is in place in the City, however it is currently deficient. The City has adopted a master plan for storm drainage, and ensure regularly scheduled maintenance of flood control channels and completion of necessary repairs. The City will also investigate the availability of federal funds for levee reconstruction and identify needed improvements for new development projects.

Human Activity Hazards

Human activity hazards addressed in the Safety Plan include aircraft overflights, hazardous materials, fire and crime.

Aircraft Overflight

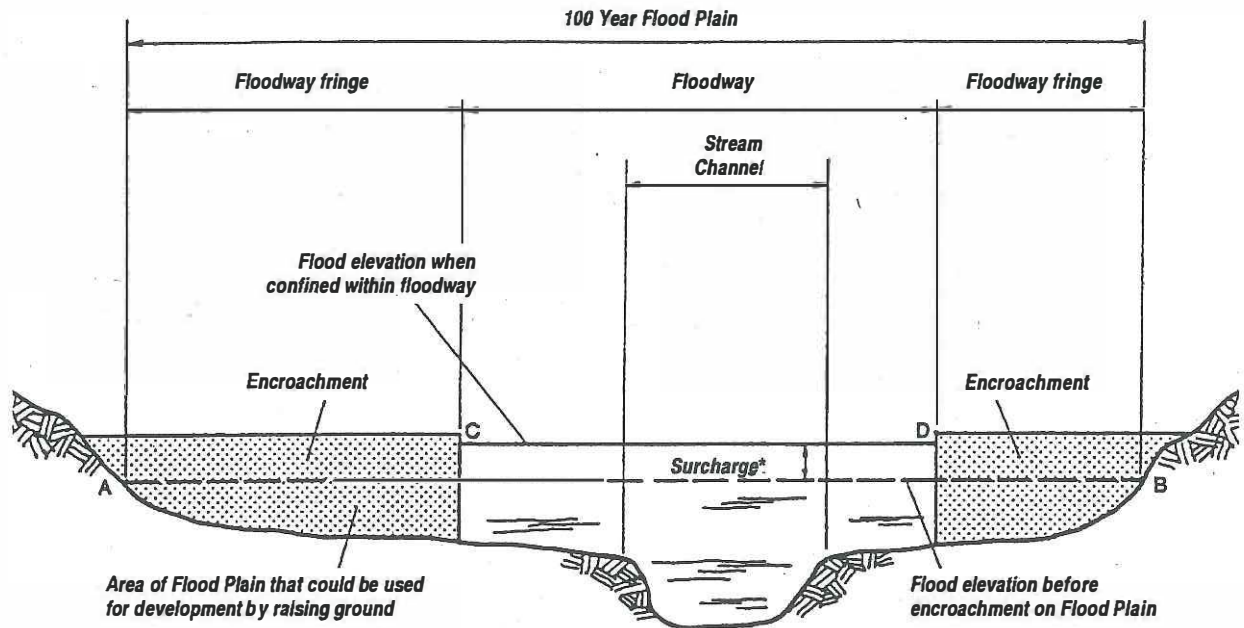
The City experiences overflights from aircraft using the Palo Alto Airport. Overflight hazards increase near runways from which aircraft are taking off or landing. Figure S-3 *Palo Alto Airport Proposed North Safety Zone* identifies the area of greatest hazard in East Palo Alto which is entirely included within open space and undeveloped land.

Hazardous Materials

Public safety concerns associated with the possible and confirmed presence of hazardous materials exist in East Palo Alto. Figure S-4 *Hazards Materials Concentrations* identifies general areas of concern. With the diversity of industrial activities, particularly in the Ravenswood Industrial area, the potential for hazardous materials represents a risk. To address this risk, the City will cooperate with federal state and local agencies to regulate the use of hazardous materials and waste. This cooperative effort includes working with San Mateo County to implement the County Hazardous Waste Management Plan as it applies to East Palo Alto.

Fire

The Menlo Park Fire Protection District has one fire station located on the corner of University and Runnymede. Structural and chemical fires are two fire safety issues in the City. Two chemical plants in East Palo Alto are cause for extra fire prevention measures due to the solvent reclamation operation and the manufacturing of bio-rational pesticides. Both chemical plants are first-class facilities that operate in compliance with applicable federal, state, county, and local regulations, however their very nature holds the potential for explosion or chemical fire.



Line AB is the Flood Elevation before encroachment

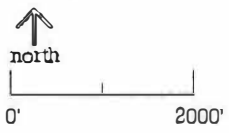
Line CD is the Flood Elevation after encroachment

*Surcharge is not to exceed 1.0 foot (FEMA requirement) or lesser amount if specified by state

SOURCE: Federal Emergency Management Agency, 1986





Figure S-2
Floodplain Schematic

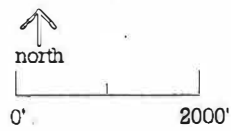


SOURCE: Santa Clara County Airport Land Use Plan, 1992

Figure S-3
Palo Alto Airport
Proposed North Safety Zone



-  Key Hazardous Material Industries
-  Contaminated Hazardous Waste Site (approximate location)



SOURCE: San Mateo County General Plan

Figure S-4
Hazardous Material
Concentration

The City will reduce the potential for dangerous fires by continuing to work cooperatively with the District to develop programs to prevent damage due to emergencies or disasters. This involves implementing Uniform Fire Code provisions including built-in fire suppression, automatic alarms, and building inspections. In addition, the City will work closely with the local water districts and the MPFPD to ensure that water pressure is adequate for fire fighting purposes.

Crime Control

Criminal activity in East Palo Alto is higher than other parts of San Mateo County and has generally increased over time. Issues facing the citizens of East Palo Alto include a high violent crime rate, and a serious crime problem among the youth in the City. Ten organized gangs are known in the surrounding area. Protecting citizens and businesses from criminal activity is a priority in the City. Crime prevention techniques include substantive levels of police protection and educating the public about methods to reduce criminal activity.

The East Palo Alto Police Department provides policing services to the City. Crime prevention programs such as Community Watch, Regional Enforcement Detail (R.E.D. Team), East Palo Alto High Crime Response Team, and the Community Policing Project are also implemented. When property owners present development proposals, the City will encourage the use of defensible space and lighting concepts to deter on-site crime. Crime control techniques will be incorporated into new development projects.

While the City will aggressively implement programs to protect public safety, potential for a catastrophic event will still exist. The best strategy to minimize human suffering and property damage is to maintain an Emergency

Hazards Response

Preparedness Plan. The purpose of the Emergency Preparedness Plan is to respond to emergency situations with a coordinated system of emergency service providers and facilities. Local Emergency Preparedness Plans serve as extension of the California Emergency Plan and Emergency Resource Management Plan.

The City of East Palo Alto will maintain its emergency preparedness plan. The Plan identifies resources available for emergency response and established coordinated action plans for specific emergency situations and disasters including earthquake, fire, major rail and roadway accident, flooding, hazardous materials incident, civil disturbance, and nuclear attack.

To support the Emergency Preparedness Plan, the City will support a high level of multi-jurisdictional cooperation and communication for emergency planning and response management. Private individuals and organizations will be solicited to enhance local communication and response with cellular telephones, ham radios, AM/FM radio and cable television. Effective emergency response also requires vital facilities such as hospitals, fire stations, and communication centers to be functional during disasters.

Educating residents and businesses about potential disasters and the Emergency Preparedness Plan can increase the effectiveness of emergency response efforts. An educated public will know how to prevent injury and property damage during and after emergency episodes and know how to find help. The City will work to educate residents and businesses about appropriate actions to safeguard life and property during and

immediately after emergencies. Education about emergency preparedness can occur through the distribution of brochures, presentations to civic groups and homeowner associations, and instruction in local schools.

