

## SAFETY ELEMENT

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# Safety Element

## Vision

*A City where the public is protected from both natural hazards and hazards created by human activities.*

*A City that is a quiet and safe place to live, work, play or go to school.*

*A City where local government services, including police, fire protection, and recreation meet the needs of its citizens.*

*A City where citizens are prepared for disasters and emergency situations.*

## Introduction

Ensuring the health and safety of La Mesa's citizens and maintaining quality of life in the community have been long-standing goals of the City. Identifying potential hazards and minimizing risks to life and property serves to further these goals. Hazards can include natural occurrences such as wildfires, floods, and earthquakes, as well as man-made hazards that can result from hazardous and toxic materials, fires, and crime. The City also recognizes that we live in an ever-changing environment where it is essential to be prepared to respond to the unknown.

## Purpose

A Safety Element is one of seven elements mandated by State law for inclusion in the General Plan. Its purpose is to minimize the impact on the community from hazardous conditions and emergency situations. Reducing the risk of death, injury, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides,

### Safety Goals:

**Goal 1:** Protection from the adverse effects of flooding.

**Goal 2:** Protection from risks associated with landslides and other geologic hazards.

**Goal 3:** Protection from adverse effects caused by earthquakes and other seismic hazards.

**Goal 4:** Protection from risks associated with fire.

**Goal 5:** Protection from exposure to hazardous materials and waste.

**Goal 6:** Safety services at levels necessary to protect the public.

**Goal 7:** Effective emergency disaster response where citizens are prepared and disruptions to vital public and private services are minimized.

and other hazards helps to ensure the overall health and safety of La Mesa’s citizens. The Safety Element follows guidelines in the State Government Code, Sections 65302(g) and 65302.5, as well as Public Resources Code Sections 4102, 4125, 4128.5 and 2699.

## **Hazard Mitigation Plan**

The Safety Element also acknowledges and reinforces the County of San Diego’s Multi-jurisdictional Hazard Mitigation Plan. This county-wide plan identifies risks and ways to minimize damage caused by natural and manmade disasters. It is a comprehensive resource tool that serves to enhance public awareness, create a decision tool for management, promote compliance with State and Federal program requirements, enhance local policies for hazard mitigation capability, and provide inter-jurisdictional coordination. San Diego County is one of the first in the State to tackle this planning effort on a region-wide basis, and the County’s 2004 Plan has received national recognition in the form of an achievement award from the National Association of Counties organization.

## **Organization and Content**

The Safety Element identifies existing local conditions within the community relative to specific hazards. Existing conditions are described along with the goals and policies established by the City to minimize the risks associated with these conditions. Existing conditions include:

- **Flood Hazards:** The Alvarado, Chollas, and Spring Valley Creeks flow through and around La Mesa. Their flows have been mapped for the 100 year flood. Areas within the 100 year flood plain of these creeks have levels of protection which vary from none to complete.
- **Seismic Hazards:** La Mesa is subject to seismic activity from various fault systems located within San Diego County. The Uniform Building Code has placed La Mesa in Zone 4 for purposes of determining the structural requirements of buildings for earthquake safety.
- **Landslides:** Large portions of La Mesa are underlaid by sedimentary rock. This rock type is inherently susceptible to slope failure.
- **Fire Hazards:** Open, undeveloped canyons pose the biggest threat to fire safety in La Mesa.
- **Hazardous Materials:** Underground storage tanks, medical waste, and manufacturing chemicals are among potential sources of hazard in La Mesa.

## Relationship to Other General Plan Elements

The Safety Element is directly related to those General Plan Elements that address the health and welfare of La Mesa residents. These include the Land Use and Urban Design Element, Conservation and Open Space Element, Public Services and Facilities Element, and Health and Wellness Element. Each contains goals and policies designed to ensure protection from hazardous conditions.

The relationship between the Safety Element and other General Plan Elements is tabulated in Table SE-1.

**Table SE-1. Relationship with Other General Plan Elements**

Safety Issues	Land Use & Urban Design	Health & Wellness	Conservation & Sustainability	Open Space & Recreation	Public Services & Facilities	Circulation
Flood Hazards	X		X	X	X	
Seismic Hazards	X					
Fire Hazards	X		X	X	X	X
Landslides	X		X	X		
Hazardous Materials	X	X			X	
Other Hazards						

## Flood Hazard

Comprehensive management of flood prone areas can reduce or even eliminate the threat to public safety and property. Flood protection strategies range from structural control facilities confining floodwater to a channel, to land use regulations, which limit development in flood hazard areas. Flood management programs respond to local flood hazards while utilizing cost effective strategies appropriate to the magnitude of the existing problem.

Since the 1970s, the Federal Flood Insurance Program has adopted the 100-year flood as an appropriate balance between inadequate and excessive flood hazard protection. The result has been that the 100-year flood has become a national standard for flood protection planning. Local agencies agree, as a condition of participation in the Flood Insurance Program, to use the 100-year flood for land use and facilities planning in flood impacted areas. The Department of Water Resources’ Division of Flood Management maintains floodplain management and flood control information, including floodplain maps where available.

The 100-year flood is the runoff from a storm with an expected occurrence rate of 1% in any year. This does not imply that no greater flood could ever occur or that such a flood could not happen more than once in 100 years, only that in any year, the chances are 1 in 100 that a flood of this degree of severity could occur. Analysis of drainage basin size, slope, and type of land cover determine the amount of runoff resulting from precipitation totals. Flood Hazard Areas for La Mesa are shown on **Figure SE-1**.

## **Drainage Patterns**

Unlike other parts of the United States which cope with an annual spring runoff, in San Diego County storm runoff is the primary source of flood hazard. Runoff from each storm episode increases relative to total precipitation. Other factors influencing the amount of runoff include soil type, soil saturation, land cover, and slope of the drainage basin. Duration of the storm episode also influences runoff. The same measure of rainfall can be a gentle shower or the 100-year flood depending on whether it falls over the course of the day or all in an hour.

All watercourses in La Mesa are tributary to larger regional drainage systems. Dry most of the year, during storm episodes they fill quickly with water, resulting in localized temporary flooding conditions. The storm runoff and drainage facility needs for La Mesa’s principal drainage channels, Alvarado Creek, Chollas Creek and Spring Valley Creek, are summarized below.

### **Alvarado Creek**

Alvarado Creek runs parallel to and south of Fletcher Parkway. Most of the area north of Interstate-8 is in the Alvarado Creek drainage basin. Alvarado Creek joins the San Diego River near the stadium in Mission Valley.



Alvarado Creek near the Grossmont Transit Center.

In 1974, the County of San Diego mapped the inundation area of the 100-year flood for the Alvarado Creek. Flood hazard and lack of flood control facilities are the primary causes of the underdeveloped and blighted conditions evidenced in this area in the past. Storm drainage improvements funded by the Alvarado Creek Redevelopment Project Area in 1998 provide flood control along a significant portion of Alvarado Creek.

# GENERAL PLAN

## FLOOD HAZARD AREAS

### Legend

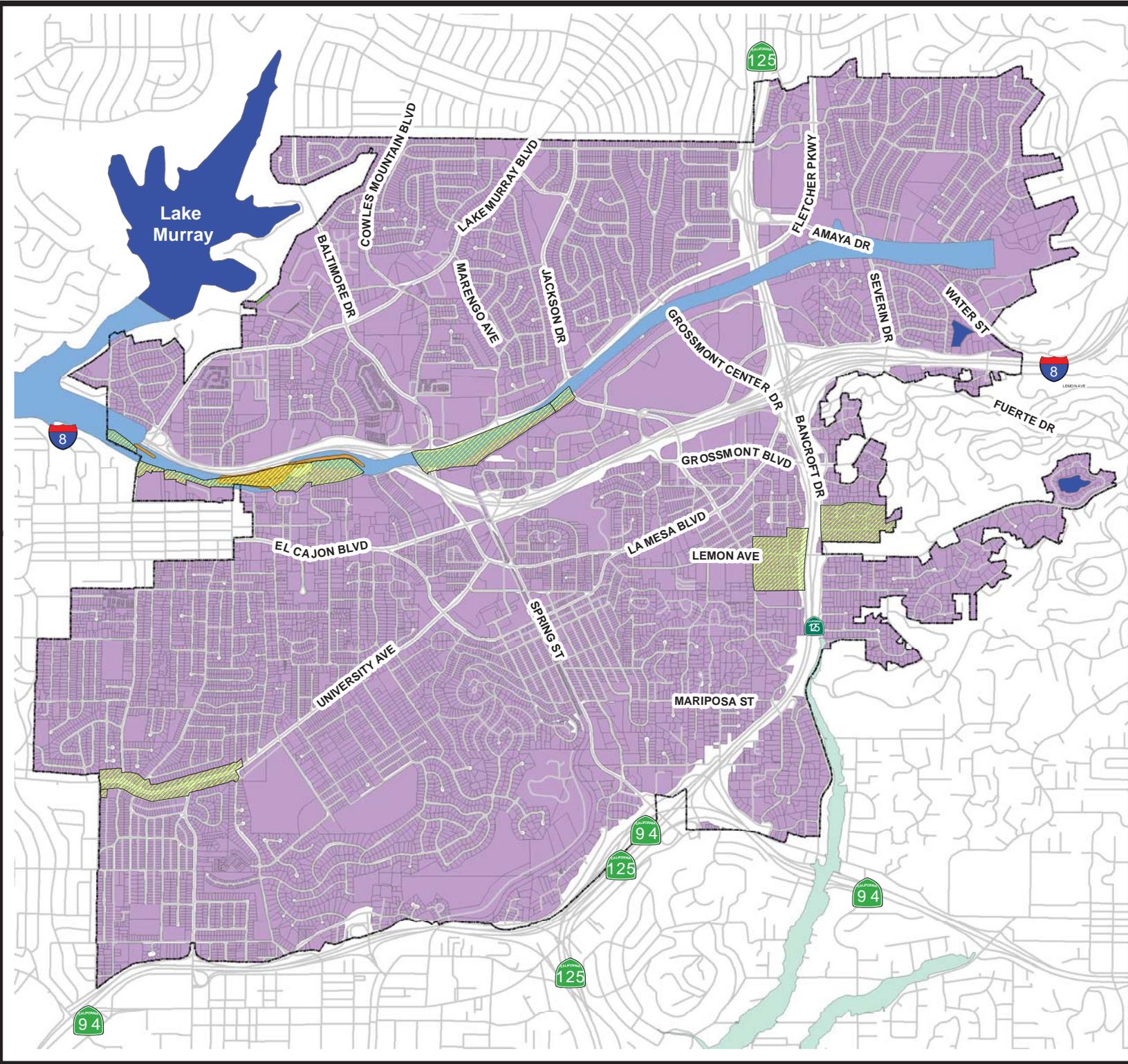
Flood Insurance Rate Map (FIRM) Flood Data

-  Zone AE  
100 Year Flood Hazard Areas & Stream Channels
-  Zone X  
1% Annual Chance of Flood up to 1 foot depth
-  Dam Inundation Area
-  San Diego County 100 Year Floodway
-  City of La Mesa Floodway Overlay
-  Lakes



Data Sources:  
SanGIS  
City of La Mesa

Figure SE-1



### **Chollas Creek**

A branch of Chollas Creek runs parallel and south of University Avenue. The drainage basin includes the area south of El Cajon Boulevard, west of Downtown and north of the ridgeline of Eastridge. Chollas Creek drains into San Diego Bay near the 32nd Street Naval Station.

Flooding of low-lying intersections along University Avenue during periods of heavy rainfall is a traffic safety hazard. Inadequate and undersized storm drains are responsible. Unlike Alvarado Creek, there is no funding mechanism to build the infrastructure needed to alleviate flood hazards along Chollas Creek.

### **Spring Valley Creek**

A branch of Spring Valley Creek flows off the west slope of Mount Helix, along Bancroft Drive. Spring Valley Creek drains Mount Helix, Casa de Oro and Spring Valley and flows into the Sweetwater Reservoir.

Existing flood control improvements include a cobblestone-lined drainage channel dating back to the 1930s. Undergrounding of the drainage channel has occurred in some locations, the result of more recent development activities.

### **Response to Flood Hazards**

Flood hazards in La Mesa are primarily the result of a lack of adequate storm drain facilities. During the 1950s and 1960s, areas developed without benefit of the requirements for the level of drainage improvements that are in effect today. As a result, flood hazard mitigation planning must retrofit flood control facilities into a built environment.

Response to flood hazard takes two basic forms. In areas where there are substantial existing improvements, construction of flood protective infrastructure is necessary. Structural flood control measures include floodwater storage systems such as dams, reservoirs and retention basins as well as channel improvements. Nonstructural measures include zoning and subdivision regulations, exclusion of uses in the floodway and building code requirements. In undeveloped areas, land use regulations, which steer development away from flood impacted areas, are more cost effective.

Existing development is at risk throughout all the flood-impacted areas in La Mesa. Along the Alvarado Creek commercial development and portions of the trailer park south of Alvarado Road are at risk. Traffic hazard on Interstate-8 could result from flooding of Alvarado Creek. A mix of businesses and residential uses on University Avenue are affected by flooding within the Chollas Creek basin. Single-family residential uses as well as

Bancroft Drive and access to Highway 125 are located in the flood hazard area of Spring Valley Creek.

Flood hazard areas are identified on the General Plan and Zoning maps. The map in Figure SE-1 generally shows areas where potential flooding could occur in La Mesa. Development of property within the "F" overlay zone designation must adhere to flood control regulations. All new development is required to be elevated above the level of the 100-year flood. New development, or substantial improvement of existing structures, requires construction of flood protection improvements. If actual construction of flood improvements is not practical, a bond must be posted to guarantee future construction. Recent construction of flood control facilities along Alvarado Creek is the result of compliance with flood control regulations affecting new development. Future redevelopment along Alvarado Creek will provide additional flood control improvements.

Within the Chollas and Spring Valley Creek drainage basins there is less opportunity for funding of flood control facilities through new development. The established land use pattern leaves little land available for new construction or redevelopment. A program for funding of flood control facilities in the Chollas and Spring Valley Creek basins could take the form of a basin-wide or City-wide drainage improvement assessment district. An advantage of a basin-wide or City-wide approach is that contributory as well as impacted property owners share equally in the cost of the solution to flood hazard problems. While specific property owners would benefit from the elimination of hazard, the community would also benefit from more efficient utilization of property and increased property value.

## **Seismic Hazard**

Living with earthquake hazards is a fact of life in California. In response, the State Legislature has enacted legislation to reduce the degree of earthquake hazard. For example, the Field Act, enacted as a result of the 1933 Long Beach earthquake, addresses the safety of public school buildings. Pre-Field Act schools throughout the State have been phased out or replaced as a result of this legislation.

Other legislation targets those areas with known hazard from identified faults. The Alquist-Priolo Special Studies Zones Act of 1972 requires identification by the State Geologist of active fault traces within California cities and counties. Along the traces of active faults, the Alquist-Priolo Act mandates the adoption of regulations designed to mitigate fault hazard.

Seismic hazard is not, however, confined only to those areas with identified faults. Effects of earthquakes are experienced miles from the active fault. In consideration of this, State Law directs all cities and counties to address seismic safety within the Safety Element of the local General Plan.

## Local Conditions

Several major active faults pass through the Southern California region. They are parallel, trend in a northwest/southeast direction, and display lateral or sideways movement. Although the San Andreas Fault is the most notorious, all the lesser-known faults are capable of producing damaging earthquakes. The degree of damage, experienced region-wide, would depend on the strength of the earthquake as well as location of the epicenter. **Figure SE-2** shows a map of the region’s earthquake faults.

The following section describes the regional fault patterns. Table SE-2 provides a simple comparison of the Richter scale magnitudes with the Modified Mercalli Intensity Scale as a means of describing the effects from earthquakes.

**Table SE-2. Comparison of Earthquake Intensity**

Richter Magnitude	Scales	Modified Mercalli Intensity Scale (1931)
1.0-3.0	I	Not felt except by a very few under especially favorable conditions.
3.0-3.9	II	Felt only by a few persons at rest, especially on upper floors of buildings.
	III	Felt noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
4.0-4.9	IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
	V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
5.0-5.9	VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
6.0-6.9	VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
7.0 and higher	VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
	IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
	X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
	XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
	XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

# GENERAL PLAN

## SEISMIC HAZARDS

### Legend

— Active Faults

Peak horizontal acceleration in %g with 10% probability of exceedance in 50 years.

-  0 - 0.2
-  0.21 - 0.25
-  0.26 - 0.3
-  0.31 - 0.4
-  0.41 - 0.6
-  > 0.6
-  City Boundaries

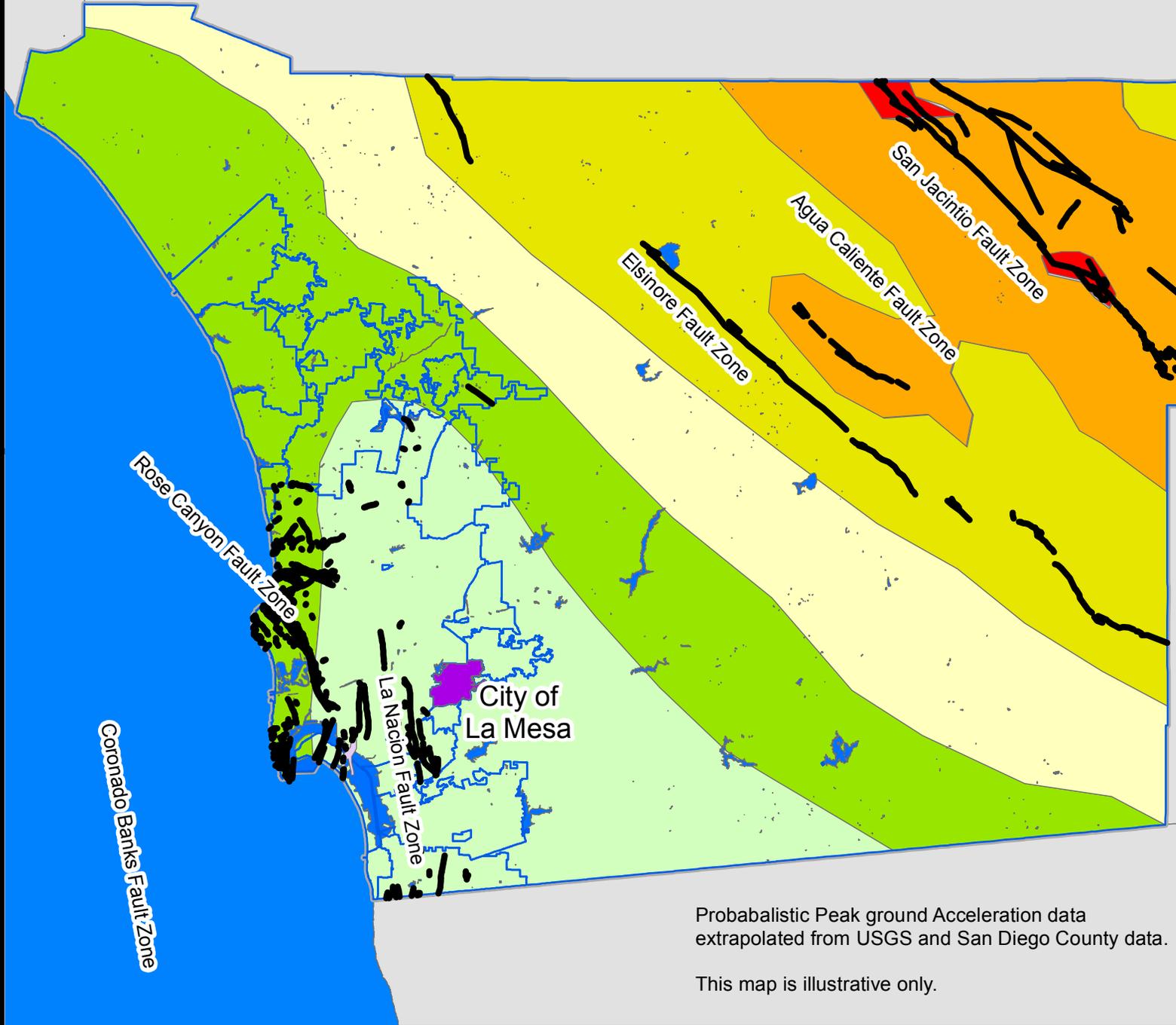


0 5 10 15 Miles



Data Sources:  
SanGIS  
City of La Mesa

**Figure SE-2**



Probabilistic Peak ground Acceleration data extrapolated from USGS and San Diego County data.

This map is illustrative only.

### **San Andreas**

Over 650 miles long, the San Andreas Fault runs northwest from the Gulf of California to north of San Francisco Bay. The fault trace in this region runs along the east side of the Salton Sea. The San Andreas Fault is the most studied, as well as the most active, fault in California. Geologists have identified lateral (sideways) movement of hundreds of miles.

The San Andreas Fault was the source of two large earthquakes in Northern California, in 1906 a magnitude 8.3 and in 1989 a magnitude 7.1 on the Richter Scale occurred. In Southern California, the Desert Hot Springs earthquake in 1948, measuring magnitude 6.5, was centered on the San Andreas. Numerous smaller earthquakes have occurred on this fault. Maximum magnitude of future earthquakes centered on the segments of the San Andreas in Southern California could range from magnitude 7.3 to 8.2. A magnitude 8 earthquake on the southern segment of the San Andreas could produce Mercalli intensities of VII to IX in eastern San Diego County and VI to VII in the coastal zone.

### **San Jacinto Fault**

The San Jacinto Fault is parallel to and west of the San Andreas. Stretching 125 miles from the Imperial Valley to San Bernardino, the San Jacinto Fault cuts diagonally across the northeast corner of San Diego County. Between 1899 and 1979 there have been eight earthquakes with a magnitude near or greater than 6.0. The San Jacinto Fault is the most active fault in San Diego County. Maximum magnitude could range from 6.9 to 7.3. Portions of the San Jacinto Fault are only 60 to 80 miles from San Diego. An earthquake of magnitude 7.0 could produce Mercalli intensities of VI or VII in the coastal areas.

### **Elsinore Fault**

The Elsinore Fault, at approximately 135 miles, is the longest active fault in the County. This fault begins near Vallecito in Anza/Borrego, passes through the Julian area, heads northwest past Mount Palomar, into Riverside County. The Elsinore Fault was the source of an earthquake with a magnitude of 6 in 1910. Since then only one earthquake greater than magnitude 5 has been experienced on the Elsinore Fault. An earthquake with a magnitude as high as 7 is possible for the Elsinore Fault. An earthquake of this size could cause damage equal to intensity VII or greater.

### **Rose Canyon Fault**

The Rose Canyon Fault repeats the northwest-tending pattern of the faults to the east, however instead of running through sparsely populated mountains and desert, it runs through the densely populated coastal strip. This fault comes on shore at La Jolla, passes to the east side of Mount Soledad, extending south along the I-5 corridor towards the bay and Downtown San Diego. The fault consists of several parallel strands that, when examined as a group, create a fault zone.

In the historic past, earthquakes originating on the Rose Canyon fault have been in the range of magnitude 3 to 4. It is generally agreed that an earthquake of magnitude 6 to 7 is not improbable. An earthquake of this size could create Mercalli intensities ranging from VIII to IX in the urbanized coastal area. While La Mesa would likely be spared the worst, destruction of lifelines and temporary disruption of the general social fabric would have community wide impacts.

### **Offshore Faults**

The sea floor off the coast of Southern California is extensively faulted. Studies of underwater topography reveal numerous basins, steep-sided ridges and offshore islands indicative of faulting activities. Maximum probable magnitude for the offshore faults range from 6.0 to 7.7. Mercalli scale intensities as high as VIII could be experienced. An earthquake of this size could cause severe damage in the coastal area. An earthquake centered on any of the offshore faults could also create a seismic sea wave or tsunamis.

### **The Effects of Seismic Activity**

Significant earthquakes originating on local faults are a probability in the San Diego area. Unfortunately, the location, occurrence and magnitude of earthquakes cannot be predicted. The effects of an earthquake can be predicted and steps taken to minimize loss of life and property damage, and to prepare for emergency needs as a result of a major seismic event. The following section describes the primary and secondary effects of earthquakes.

Initially, surface ruptures and fault displacements occur along the fault trace. Movement will either be lateral (sideways) or vertical. Usually only a few inches but sometimes several feet, of movement can occur. Shifting of the earth can be a slow, continual creep (displacement) or rapid movement resulting from an earthquake (rupture). Structures built across an active fault are susceptible to damage from fault movement. There are no known faults in La Mesa. Damage resulting from surface rupture or fault displacement is not expected, however an earthquake with significant surface rupture or fault displacement along the Rose Canyon fault would have regional impacts. Regional impacts could include damage to sewer, power and water lines and disruption of the regional transportation network.

By far the greatest seismic hazard is ground shaking, resulting from energy released during an earthquake. The intensity and duration of the seismic event influence the degree of damage. Distance from the epicenter, bedrock and soil characteristics also influence the severity of ground shaking.

Distance mitigates ground-shaking originating on the San Andreas, San Jacinto and Elsinore faults. Ground shaking resulting from a moderate earthquake centered on any of these faults might not be detected in La Mesa. Ground shaking would be noticeable in a

major event, but damage would be restricted to poorly constructed buildings or structures on unstable soil.

The Rose Canyon fault and the offshore faults are closer. Ground shaking centered on these faults could range from minor to significant depending on the epicenter location and the duration and intensity of the seismic event. Damage to structures resulting from ground shaking would also range from minor to extensive depending on soil stability and the type of construction.

Although ground shaking and surface ruptures are the primary effects of seismic activity, several other related phenomenon are potential seismic hazards. These secondary effects can be as damaging as the earthquake itself. The following section describes the secondary effects.

Liquefaction is a soil phenomenon in which water saturated unstable soil loses its strength when subjected to the forces of intense, prolonged ground shaking. Soil liquefaction can magnify ground shaking, induce landslides and cause differential settling of structure foundations. Loosely structured soils, such as alluvium or improperly compacted fill, are more susceptible to liquefaction. Clay-rich, well-compacted soils are less susceptible. Deep unconsolidated soil, combined with a high water table, increase the risk of liquefaction hazard.

Portions of La Mesa are underlain by the granitic rock of the Southern California batholith, the “Santiago Peak Volcanics”. Where these geologic formations are present, bedrock is close to the surface; soils are shallow and fairly fast draining. These areas are relatively free from hazards related to liquefaction. Sedimentary rocks of the marine terraces underlie most of La Mesa. Soils developed from these rocks are clay rich and fairly well consolidated. However, pockets of less consolidated material are present. In addition, in some areas an impermeable hardpan layer traps and holds water close to the surface.

A key factor in evaluating liquefaction hazard is the degree of soil saturation. Dry soil is inherently more stable than wet soil because water acts as a lubricant. Information on groundwater depths in La Mesa is limited. The presence of subsurface springs indicates that water is close to the surface, at least in localized areas. It is more likely that throughout most of La Mesa groundwater is not naturally abundant. However, more information is needed about the nature of the subsoil and the presence of groundwater before an accurate assessment of liquefaction hazard can be made.

Tsunamis are seismically induced ocean waves. Destructive forces resulting from tsunamis can range from negligible to substantial. La Mesa's location and elevation allow the City to avoid the tsunami hazard experienced by low elevation coastal areas. However, a regional hazard remains. The potential for disruption of lifelines and transportation networks in coastal areas could have region-wide impact that affect La Mesa.

Seiches and surges are the oscillation of water within a confined basin, such as a lake, river or bay. Imagine liquid sloshing when a glass is shaken. On a much larger scale, this same phenomenon causes seiches and surges. Duration ranges from a few minutes to several hours after the initial shock. Flooding can result as waves run up on the lake shore. The force of seismic induced water surges has damaged steel water tanks. Water bodies in La Mesa, which could be subjected to seiches or surges, are Lake Murray, Lake Helix, and the lake behind Anthony's Fish Grotto restaurant, which is located at 9530 Murray Drive. Enclosed reservoirs and water tanks related to area-wide water distribution service could also be affected, as well as public and private swimming pools.

Fire is often a secondary effect of an earthquake. Damaged power lines, gas mains and electric or gas equipment can start fires. Effort to put fires out can be hampered by broken water mains or damaged fire-fighting equipment.

Flooding can result from seismic activities. In its most dramatic form, flooding threatens lives and properties in areas downstream from a seismically induced dam failure. More likely, however, is property damage related to flooding caused by broken water and sewer pipes.

An earthquake can trigger slope failure. Sedimentary rock is at risk for slope failure resulting from the layered nature of this rock type. Sliding can occur along transition areas of sedimentary rock with different stability characteristics.

### **Reducing Seismic Risk**

The Uniform Building Code assigns four seismic zone designations based on the degree of earthquake hazard. Minimum structural requirements increase as level of risk increases. Zone 3 implies high degree of risk, although not as high as Zone 4. Zone 4 is applied in areas close to major faults. The urbanized western portion of San Diego County is designated Zone 3 in response to the perception of a lesser degree of hazard. The eastern more rural section of the County is designated Zone 4 to reflect a greater degree of hazard from the Elsinore, San Jacinto and San Andreas faults. Recent information about the Rose Canyon fault shows a higher degree of activity than was previously believed. An upgrading of the coastal areas of San Diego County, from seismic Zone 3 to Zone 4 may result. Compliance with the more stringent requirements of Zone 4 increase construction cost between one and five percent.

There are three categories of risk from seismic hazard. These are: risk to the public of injury or death, risk of damage to property and risk of social disruption. Mitigation of these risks is a public agency responsibility requiring identification of an acceptable level of risk and development of a risk mitigation program.

The concept of acceptable risk recognizes there are varying degrees of risk inherent in all human activities. Administration of hazard mitigation programs balances the social and

economic cost of hazard elimination against the probability that the hazard will occur. Hazard with a high probability and with severe impacts on society demand the attention of the community. Those hazards, which occur infrequently or impact a small number of people, are less important. Earthquakes occur infrequently however, the consequences of a major earthquake could be extremely disruptive.

Assignment of local resources to seismic hazard elimination requires establishment of priorities. The first priority must be the protection of the public from injury and death. Protection of property is a second priority. Elimination of social disruption is less important at the local level.

Protection of the public from injury and death primarily involves the identification and elimination of hazardous structural conditions. Voluntary versus involuntary risk play a role in setting priorities for unsafe structure elimination. Public buildings not occupied by choice, such as hospitals, schools and buildings used for public assembly, should sustain very low levels of risk. Owners of these types of facilities have been mandated by the State to plan and execute retrofit programs. Buildings housing disaster response functions should also be viable after a severe earthquake. La Mesa's public safety facilities have been upgraded to earthquake structural standards. Single-family dwellings, which are the majority of structures in the City, can tolerate a higher level of risk due to the voluntary nature of the occupancy.

## **Landslides**

Bedrock is the foundation for the physical characteristics of the landscape. It is the soil, however, that supports the natural biologic environment as well as agriculture and the built environment. Consideration of the physical properties and limitations of the various soil types is important when planning for urban development. Failure to accommodate the limitations of a particular soil can have disastrous consequences. Soil hazard includes landslide and slumping, excessive erosions, and damage to foundations roads, and infrastructure.

Soils are the product of the weathering of the bedrock, topographic relief, decomposition of organic material, and climatic influences. Over thousands of years, the interaction of these four factors produce soils which are unique to the area in which they are developed.

The US Geological Survey and California Geological Survey have published landslide inventory and landslide debris-flow susceptibility maps at a variety of scales for selected areas of California. Areas prone to rainfall-triggered landslides overlap areas where earthquake-induced landslides, mapped under the Seismic Hazard Mapping Act, are likely.

In 1973, the U.S. Department of Agriculture published a soil survey for the San Diego Area. Soils with similar characteristics were grouped together as a soil series. Fifty-four different soil series were identified; cataloged and mapped based on physical

characteristics. The soil survey rates soils based on their resistance to erosion, runoff potential and shrink-swell behavior, as well as fertility and suitability for home sites.

### **Local Conditions**

Most of La Mesa is underlain by soil of the Redding Series. Redding soils are derived from the sedimentary rock of the marine terraces. The Redding soil series is characterized as gravelly loam at the surface with a subsoil layer of gravelly clay. At a depth of approximately 30" an impervious clay hardpan layer can sometimes be found. Redding soils are of low fertility and are mild to strongly acidic. This soil type is a potential source of construction gravel.

Three other characteristics of Redding soils are significant in an urban setting. The first is the high degree shrink-swell behavior. Because it contains relatively large amounts of clay, this soil expands when wet and contracts as it dries. Without adequate reinforcement buildings and infrastructure constructed on this soil can be damaged by the shrink-swell affect.

Secondly, Redding soils are highly erosive. Grading operations and land stripped of vegetation increase the erosion potential of the soil.

The third factor, which is significant in an urban setting, is the high runoff potential characteristic of Redding soils. Clay content and the presence of an impervious hardpan layer limit water percolation and increase runoff. Runoff potential affects the size and configuration of flood control facilities.

There are at least 8 other soil series present in La Mesa and the planning area. The map in **Figure SE-3** shows the general locations of these soil formations.

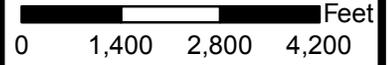
# GENERAL PLAN

## GEOLOGICAL MAP

### Legend

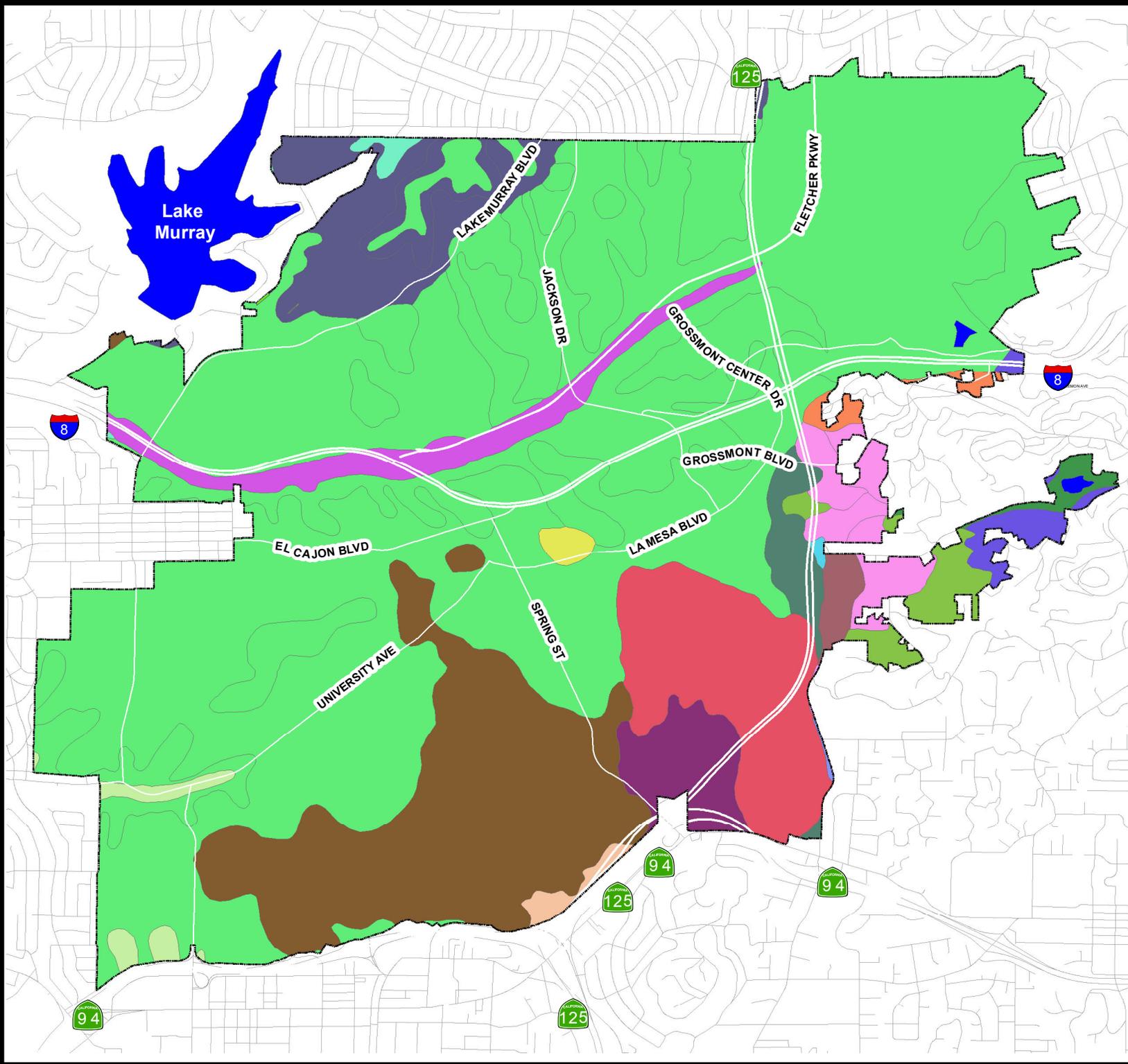
#### Soil Types

-  Bosanko Clay
-  Cieneba Coarse Sandy Loam
-  Cieneba Rocky Coarse Sandy Loam
-  Diablo-Urban Land Complex
-  Escondido Very Fine Sandy Loam
-  Fallbrook Sandy Loam
-  Friant Rocky Fine Sandy Loam
-  Huerhuero Loam
-  Olivenhain-Urban Land Complex
-  Placentia Sandy Loam
-  Ramona Sandy Loam
-  Redding-Urban land complex
-  Riverwash
-  Tujunga Sand
-  Visalia sandy loam
-  Vista coarse sandy loam
-  Vista rocky coarse sandy loam
-  Lakes
-  City Boundary



Data Sources:  
SanGIS  
City of La Mesa

Figure SE-3



### Mitigating Geologic Hazards

A variety of techniques are available to mitigate hazards related to soil. Identification of soil type through soil testing is important. Once the particular characteristics of a soil are known, appropriate construction practices can be incorporated into development plans.



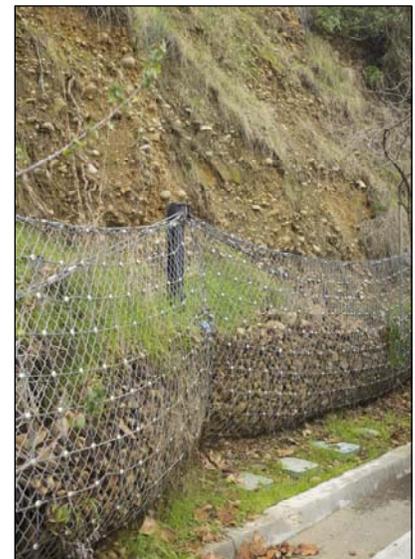
Soil composition can effect grading operations.

Chapter 70 of the Uniform Building Code contains basic regulations governing grading. Regulations include the requirement for a grading plan, the issuance of a permit and inspections during the work. A community can establish more stringent requirements as local conditions dictate. In 1974 the City Council adopted a Grading Ordinance, which includes Chapter 70 with additional provisions addressing concerns specific to La Mesa. Enforcement of the Grading Ordinance mitigates hazardous soil conditions.

Expansive soils can be addressed through special foundation construction techniques. Drainage directed away from the structure prevents moisture build-up near the foundation. Removal and replacement with re-compacted, non-expansive soil is another mitigation technique.

### Slope Failure

Slope failure is the movement of soil and rock material down slope. Movement can be rapid, as in a landslide, or slowly creeping. A slope can become unstable by several techniques common to grading and land development. Removal of material from the bottom steepens the angle of the slope, increasing instability. Adding fill at the top of the slope increases the weight the slope must carry. Water from septic tanks, gutter runoff, irrigation or diversion saturates the slope, increasing instability.



Temporary fencing retains debris from a failing slope.

Large portions of La Mesa are underlain by sedimentary rock. This rock type is inherently more susceptible to slope failure. Different stability characteristics between layers of sedimentary rock create the possibility of instability, especially when the layering is parallel to the slope. As in-fill development moves into areas with steep slopes, hazard from slope failure increases.

Hazards related to slope failure can be mitigated. Identification of slide prone areas is the first step. Development of areas identified as susceptible to slope failure should be avoided. Modern grading practices can incorporate slope stabilization techniques. Administration and enforcement of a comprehensive grading ordinance is the most important aspect of a slope failure hazard elimination program.

Predominate soil types in La Mesa exhibit shrink/swell behavior, are erosive and relatively impermeable. Hazards created by this geologic condition must be considered when the City reviews new development proposals.

## Fire Hazard

State law mandates policies related to fire hazard in the Safety Element. The purpose is a reduction in the exposure to fire risks experienced in urban and rural areas throughout the State. In rural areas, the emphasis is on reducing fire loss related to wild land fires. In urban areas structural fire protection is emphasized.

### Local Conditions

La Mesa is at risk for both wild land and urban fires. Wild land fires occur in rural areas and where development interfaces with undeveloped areas. The primary cause of fires in urban areas is carelessness. Arson fire can be a problem in some areas, but arson has not historically been a significant cause of fires in La Mesa.

Although La Mesa is an urban community, wild land fire risks are present in the remaining pockets of undeveloped open area, including Keeney Street Canyon, south of Interstate-8, the open space portions of Eastridge, and Mount Helix. Characteristics shared by these areas are limited access, steep terrain, thick vegetation cover, deficient hydrant spacing, and water pressure.



Fire protection services are enhanced by collaborative regional agreement.

Mishandling of flammable liquids, matches, candles, smoking material, blocked furnace vents, electrical malfunctions, and grease fires in the kitchen are typical causes of residential structure fires. While public education programs are important in reducing the incidence, these types of fires will continue to occur.

## **Response to Fire Hazards**

The Uniform Fire Code sets standards governing the use of property from a fire safety perspective. Setbacks, access, building material and design, building occupancy, and the use and storage of hazardous materials are examples of regulations found in the Uniform Fire Code. The La Mesa Municipal Code also includes a section on fire regulations specifically applicable in La Mesa. Enforcement of these fire code regulations mitigates fire hazard in the community.

Adequate fire protection services, including manpower, equipment and facilities also reduce fire hazard. The City of La Mesa is served by Heartland Fire and Rescue, which utilizes the combined fire protection resources of La Mesa, Lemon Grove, and El Cajon. This unique cooperative fire services agreement ensures a high level of fire and emergency medical services delivery and maximizes resource utilization. Heartland Fire and Rescue achieves an ISO rating of 2, signifying a well-equipped and well-trained fire response service.

Adequate “fire flow,” the amount of water delivered by the hydrant, is essential. The minimum fire flow in single-family residential areas is 1,000 gallons per minute. Most hydrants in the City can deliver the minimum flow. Fire flows are required to be higher in commercial and high-density residential areas. This is achieved by the increased size of water mains serving these areas and by combining hydrant flows.

Fire hydrant spacing is also important. The maximum distance permitted between hydrants in single-family residential areas is 500', placing every home within 250' of a hydrant. In commercial and high-density residential areas the hydrant spacing requirement is reduced to 300' or less based on the type of development. Installation of a hydrant as a condition of development approval is a standard practice.

Installation of fire sprinklers is effective. The 2010 California Residential Building Code expanded the fire sprinkler requirements to include all new one and two family dwellings. Nearly all new development, commercial and residential, now requires the installation of sprinklers.

Adequate access for fire equipment and personnel is required. Minimum access for private easements is 14' for a single dwelling. Access to multiple dwellings and fire lanes serving commercial establishments are required to be 22' of unrestricted width. A turnaround is required at a maximum of 150' or less if warranted by topography or building arrangement.

Fire safety inspection of commercial and industrial facilities is effective. An on-going inspection program targets new, as well as existing, businesses. Identified fire safety violations are corrected and re-inspected.

Around undeveloped and open space areas the selective clearing and thinning of overgrown vegetation reduces fire risk. Native chaparral species, as well as non-native grass species, are relatively less fire resistant. Replacement plantings using fire resistant species along the interface between developed and undeveloped areas reduces wild land fire hazard.

Public education is perhaps the most cost effective fire hazard reduction tactic. For example, the expanded use of home smoke detectors has drastically reduced the national fire-related death rate. Other topics for public education include the safe storage of flammable materials and the need for brush and weed abatement. La Mesa's Fire Safety Public Education Program focuses on all segments of the community to increase fire safety awareness of every citizen.

La Mesa is largely developed; therefore, concern for fire safety is centered on the City's many structures. Fire safety inspection programs help reduce fire hazard in commercial areas, but an on-going public education program is needed to reduce fire risk in residential structures.

## Hazardous Materials

The number of chemical and industrial processes associated with manufacturing, medical, commercial, and residential uses continues to expand. Many of the new processes and products, while raising the standard of living, are potentially hazardous to humans and the environment. As the range of hazardous substances has grown, the laws regarding these materials have become increasingly comprehensive and complex.

The California Health and Safety Code defines hazardous materials as "any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment." Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material for which a handler or the administering agency has a reasonable basis to believe that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment."

### Classes of Hazardous Materials

- Class 1: Explosives
- Class 2: Hazardous Gasses
- Class 3: Flammable Liquids
- Class 4: Flammable Solids
- Class 5: Oxidizers
- Class 6: Toxic Materials
- Class 7: Radioactive Materials
- Class 8: Corrosive Materials
- Class 9: Miscellaneous

Source: Code of Federal Regulations

The degree of hazard presented by hazardous materials depends on several variables, including the chemical and physical properties of the material, the amount and

concentration of the material, the use, activity or process involving the material and the surrounding conditions. Regulating agencies consider these variables when reviewing businesses involved in the production or use of hazardous materials. In California, the threshold above which regulatory oversight is required is 55 gallons of a liquid, 500 pounds of a solid and 200 cubic feet of compressed gas.

## **Federal Regulations**

There are three principal federal policies related to management of hazardous substances. The Toxic Substances Control Act (TOSCA) regulates the manufacture and use of chemicals. The Federal Resource Conservation and Recovery Act (RCRA) establishes a minimum federal standard for hazardous waste management including requirements for record keeping, reporting, transportation, treatment, storage, and disposal. The Hazardous Materials Transportation Act regulates packing, handling, labeling, marking, and routing of hazardous materials. Supplemental legislation, such as the "Superfund" hazardous waste site cleanup and laws regulating underground storage tanks, support and strengthen the Federal commitment to protection of the public health and the environment from the impacts of improper handling of hazardous materials.

### **National Pollutant Discharge Elimination System (NPDES)**

The Clean Water Act of 1995 and its subsequent amendments give the U.S. Environmental Protection Agency (EPA) the authority to regulate industrial and municipal discharges into public storm drains, sewer systems and surface water bodies. The National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are defined by the EPA as discrete conveyances such as pipes or man-made ditches.

## **State Regulations**

The State of California has shown leadership in the enactment of laws related to hazardous materials. The Hazardous Waste Management Act and Hazardous Materials Storage and Emergency Response Law were both adopted in the 1980s. Significantly, the 1986 Tanner Bill (AB 2948) created a local planning process designed to make each county responsible for managing hazardous waste generated within its borders.

Other State Laws which address hazardous substances include a State program for the clean up of contaminated sites, regulation of underground tanks, regulation of medical waste, water quality control, transportation of hazardous substances, and management of household hazardous waste.

### **Hazardous Waste Management**

Initial efforts to manage environmental waste focused almost completely on regulation of "end-of-the-pipe" pollution, rather than pollution prevention. In 1986, the Hazardous Waste Management Act was enacted, directing the State Department of Health Services and the State Water Resources Control Board to promote reductions in hazardous waste generation through recycling and treatment.



Handling hazardous waste requires coordination of Federal, State and local governments.

Each county in the State of California is required to maintain a Hazardous Waste Management Plan. The Department of Environmental Health, Hazardous Materials Division (HMD) has been certified by the California Environmental Agency (CalEPA) as the local Certified Unified Program Agency (CUPA), and thus is responsible for implementing Federal and State hazardous waste laws at the local level.

### **Medical Waste Management**

To protect the public and the environment from potential infectious exposure to disease-causing agents, the Medical Waste Management Program (MWMP), in the Environmental Management Branch of the California Department of Public Health, regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act (MWMA). The MWMP permits and inspects all medical waste offsite treatment facilities and medical waste transfer stations. In addition to the treatment methods specifically allowed in the MWMA, there are more than a dozen alternative medical waste treatment technologies approved for use in California.

Additionally, the MWMP acts as the local enforcement agency in a number of local jurisdictions that elected to have the State implement the large quantity generator inspection program for medical waste management.

The MWMP assists generators of medical waste to minimize waste generation through training and facilitating implementation of the Hospital Pollution Prevention Program. In this regard, MWMP has provided guidance on waste minimization, the elimination of mercury in hospitals, and waste reduction intervention strategies.

### **Hazardous Materials Storage**

The San Diego County Department of Environmental Health, Hazardous Materials Division (HMD) is responsible for inspecting businesses or facilities that handle or store hazardous materials, generate hazardous waste, generate medical waste, and own or operate underground storage tanks. HMD regulates chemical inventories, hazardous wastes, underground storage tanks, above ground petroleum storage, medical waste, and risk

management plans. State Law requires that all businesses which handle hazardous material and hazardous waste submit a "Business Plan" to HMD, which contains detailed information about the type and amounts of chemicals at the site and the amounts of hazardous waste generated.

### **Prevention Programs**

The California Accidental Release Prevention (CalARP) Program works with local businesses to reduce the likelihood and severity of offsite consequences from releases of very toxic materials such as ammonia and chlorine gasses.

### **Emergency Operations Plan**

The City Council adopted Resolution No. 2012-075, creating the City of La Mesa Emergency Operations Plan. The Emergency Operations Plan includes the Continuity of Operations Plan, the Annex Q Evacuation Supplement, the Care & Shelter Standard Operating Procedure, the California Emergency Management Agency (CALEMA) Crosswalk, and the After-Action Report/Corrective Action Survey. The Hazardous Materials Storage and Emergency Response Law also mandates preparation of a local Emergency Response Plan based on information provided in the Business Plans. HMD is involved in emergency response planning. The City's Emergency Operations Plan includes hazardous materials response protocol.

### **Household Hazardous Waste**

While the vast majority of hazardous materials are used by industries as part of their manufacturing process, a significant part of the hazardous waste stream is produced by households that use and then discard cleaners, pesticides, paint products, automotive products, hobby products, and other toxic substances commonly found in households. These materials and wastes are significant because they have the potential to cause physical injury and environmental damage in their use and disposal. When these materials are disposed of improperly in the municipal refuse or sanitary sewer system, they have the potential to harm refuse workers and to contaminate landfills, the underlying groundwater and other environmental media.

State Law mandates that local jurisdictions plan for the management of household hazardous waste. The Household Hazardous Waste Element of the County-wide Integrated Waste Management Plans accomplishes this. The City of La Mesa has completed a draft of its Household Hazardous Waste Management Element. This document will be forwarded to the County of San Diego for incorporation in the Integrated Waste Management Plan.

## Local Conditions

The Federal Environmental Protection Agency (EPA) maintains a Toxics Release Inventory (TRI) of sites known to release toxic chemicals into the air. According to EPA records, in 2012 there were no facilities in La Mesa listed in the TRI. The EPA closely monitors the emissions from these facilities to ensure that their annual limits are not exceeded. The San Diego County Air Pollution Control District also issues permits for any operations or equipment that emits or is capable of emitting contaminants into the atmosphere.

The California Department of Toxic Substances Control maintains a list, commonly known as the Cortese List, of Hazardous Waste and Substances Sites. The list is updated at least annually to comply with disclosure requirements required by the California Environmental Quality Act (CEQA). In La Mesa, sites included on the Cortese list are primarily associated with abandoned underground tanks associated with previously operational gas stations.

The San Diego Region has established a successful Household Hazardous Waste Collection Program. Collection events at locations throughout the County allow residents and small businesses to dispose of household hazardous wastes in a responsible manner. Collection events are held in La Mesa several times a year.

Other State laws which address hazardous substances include a State program for clean up of contaminated sites, regulation of underground tanks, water quality control, transportation of hazardous substances, and management of household hazardous waste.

Several other agencies are involved at the local level in hazardous materials management. The Combustible, Explosive and Dangerous Materials Inspection Program is staffed by the City of San Diego Fire Department. The regional HAZMAT Incident Response Team, a cooperative effort between the San Diego Fire Department and the Hazardous Materials Management Division, responds to hazardous material incidents Region-wide. The Air Pollution Control District, the San Diego Regional Water Quality Control Board and local sanitation districts are also involved in hazardous materials and hazardous waste management.

Sections of the Uniform Building Code and the Uniform Fire Code regulate the use and storage of hazardous substances. These codes are adopted and enforced by local jurisdictions to set a minimum standard for building and fire safety. The Building Code sets forth criteria for construction of buildings where hazardous substances are handled, including a requirement for "control areas" which separate and contain operations involving hazardous substances.

The Fire Code calls for Hazardous Materials Management Plans (HMMP) to be submitted by businesses handling hazardous substances. Site plan, building plan, type, and amount of hazardous substances, chemical compatibility, separation, monitoring, inspection, record

keeping, and employee training must be specified in a written plan. This is similar to the requirements of the State-mandated business plan. The La Mesa Fire Department accepts a business plan as a substitution for the HMMP.

Local zoning ordinances and municipal codes are an additional source of regulatory control of hazardous substances. Zoning ordinances can restrict to certain areas, or prohibit all together, businesses which handle more than threshold amounts of hazardous materials.

The City of La Mesa is required to comply with a National Pollutant Discharge Elimination System (NPDES) permit. To reduce pollution from urban runoff and storm water discharges, City staff, developers, contractors, businesses, and residents are required to implement Best Management Practices (BMPs). BMPs are practices or devices used to reduce or eliminate pollutants from entering the storm water system. The City is further required to implement programs to identify and eliminate illegal/illicit discharges into La Mesa's storm water system and conduct monitoring programs during dry and wet weather seasons. A Storm Water Best Management Practices Manual for commercial, industrial, construction, municipal, and residential activities ensures compliance with these regulations.

The Conservation and Sustainability Element also addresses environmental and public health issues related to waste management.

## **Disaster Preparedness**

The foundation of disaster response planning is a mutual aid system involving local, State and Federal agencies. Mutual aid ensures that adequate resources and support are available to jurisdictions coping with the results of a disaster. A hierarchy of authority is established which coordinates the flow of aid as needed while retaining local jurisdictional responsibility and control.

Primary focus of regional disaster preparedness is on earthquake response. A powerful earthquake having Region-wide impacts would severely test response capabilities of the Region. The County Office of Disaster Preparedness, in cooperation with the State Office of Emergency Services, is responsible for Regional coordination of earthquake response. Annual training exercises simulate a hypothetical earthquake incident. Local agency participation is encouraged. Post exercise assessments identify future training and coordination needs. The Office of Disaster Preparedness is also responsible for Regional coordination of all other types of emergency response.

## Local Conditions

La Mesa has an adopted Emergency Operations Plan. The Plan describes a comprehensive emergency management system for response to natural and man-made disasters, including civic unrest, dam failure, earthquake, flooding, hazardous materials, nuclear incidents, public health emergencies, power outages, transportation emergencies, terrorism, and wildfires. Lines of authority and operational responsibilities are identified. A framework for the continuity of government and maintenance of City services is outlined. The Emergency Operations Plan provides City Staff with the basis for an effective response in the event of a local or region-wide disaster.

In addition, in conjunction with community volunteers and the San Diego Unified Disaster Council, the City's Fire Department has developed the "La Mesa Survive" program. This public information program provides a valuable reference tool for quick response and preparations needed for La Mesa residents to be well-prepared if a major disaster affected the City.

## Goals, Objectives, and Policies

### Goal SE-1: Protection from the adverse effects of flooding.

#### *Objective SE-1.1: Provide adequate flood control facilities.*

**Policy SE-1.1.1:** Conduct City-wide storm drain master planning, to include mapping of existing storm drain infrastructure, assessing conditions, prioritizing drainage problems, and developing solutions.

**Policy SE-1.1.2:** Provide on-going replacement of corrugated metal pipe drainage infrastructure with upgraded reinforced concrete and high-density plastic materials.

**Policy SE-1.1.3:** Pursue grant funding for flood control projects as needed.

**Policy SE-1.1.4:** Require that all proposed development be designed to minimize the volume and velocity of surface runoff and to prevent adverse downstream effects.

#### *Objective SE-1.2: Minimize losses caused by flooding within the 100-year floodplain and potential dam inundation areas.*

**Policy SE-1.2.1:** Continue to require that all new development in flood prone areas be elevated to or above the level of a 100-year flood.

**Policy SE-1.2.2:** Maintain and regularly clean out storm drains in low lying areas such as the Alvarado Creek drainage channel.

**Policy SE-1.2.3:** Continue to participate in the National Flood Insurance Program.

**Policy SE-1.2.4:** Cooperate with the City of San Diego to reduce the possible effects of Lake Murray dam failure to the City of La Mesa.

## **Goal SE-2: Protection from risks associated with landslides and other geologic hazards.**

***Objective SE-2.1: Implement development standards that minimize safety hazards and potential property damage due to the effects of naturally occurring geologic formations.***

**Policy SE-2.1.1:** Conduct periodical review of the regulations and standards related to soils investigation and grading (Chapter 14 of the La Mesa Municipal Code) and amend as warranted to incorporate soil hazard abatement criteria.

**Policy SE-2.1.2:** Inform citizens and project applicants of geotechnical submittal requirements as part of the development review process.

## **Goal SE-3: Protection from adverse effects caused by earthquakes and other seismic hazards.**

***Objective SE-3.1: Promote ongoing efforts to improve the seismic safety of buildings and structures.***

**Policy SE-3.1.1:** Apply and enforce seismic design standards and building construction codes for new development.

**Policy SE-3.1.2:** Retrofit all structures necessary for response to a seismic disaster to withstand the effects of a probable earthquake.

**Policy SE-3.1.3:** Identify places of public assembly or storage of hazardous materials which may need upgrading to withstand a seismic shock.

**Policy SE-3.1.4:** Prepare and maintain an inventory of all unreinforced masonry buildings in the City.

**Policy SE-3.1.5:** Encourage, through technical assistance or development incentives, private property owners to take adequate steps to protect their property against seismic hazards.

***Objective SE-3.2: Implement programs to help reduce loss of life and injury and minimize property damage in the event of a major seismic event.***

**Policy SE-3.2.1:** Support programs which raise public awareness about earthquake safety and provide procedures and staff support for effective community response to a major seismic event.

**Policy SE-3.2.2:** Monitor the potential for seismic events with the California Geological Survey and the County of San Diego.

## **Goal SE-4: Protection from risks associated with fire.**

### ***Objective SE-4.1: Minimize the risk from fire hazards in new development.***

**Policy SE-4.1.1:** Continue to enforce fire codes involving new construction.

**Policy SE-4.1.2:** Continue to ensure that street width and turn-around regulations are met. Require upgrade of fire equipment as warranted by the height and location of future development.

**Policy SE-4.1.3:** Require the use of fire-resistive native plant species from the City-approved plant list.

**Policy SE-4.1.4:** Conduct periodical review of the design regulations and standards related to fire safety (Chapter 11 of the La Mesa Municipal Code) and amend as warranted to effectively regulate new conditions, materials and land uses.

### ***Objective SE-4.2: Minimize the risk of wildfires in developed areas of the City.***

**Policy SE-4.2.1:** Continue current practice of weed abatement in brush areas that are vulnerable to wildfire.

**Policy SE-4.2.2:** Continue to participate in Zone, County, and State mutual and automatic aid agreements that support mitigation of wildfire hazards.

## **Goal SE-5: Protection from exposure to hazardous materials and waste.**

### ***Objective SE-5.1: Participate in the safe, efficient, and responsible management of hazardous waste materials.***

**Policy SE-5.1.1:** Participate with the County of San Diego in the implementation of the San Diego County Integrated Waste Management Plan.

**Policy SE-5.1.2:** Implement the programs outlined in the Household Hazardous Waste Element of the City's Integrated Waste Management Plan.

**Policy SE-5.1.3:** Ensure that there is an accurate information system to monitor hazardous materials which are generated, handled, stored, treated, and transported within La Mesa.

**Policy SE-5.1.4:** Confine the storage of large quantities of hazardous materials used in commercial or industrial activities to appropriate areas of the City as designated in the Land Use Element and confirmed by a public review process.

**Policy SE-5.1.5:** Allow the continued usage of potentially hazardous materials typically found in service commercial activities (i.e. dry cleaning fluids, automotive fuels etc.) in commercial developments approved through the City's use permit process as outlined in the Zoning Ordinance.

**Policy SE-5.1.6:** Continue to support programs which will ensure the safe transportation of hazardous materials within La Mesa City limits.

**Policy SE-5.1.7:** Continue to maintain and enforce local ordinances which regulate smoking in public places as a means of protecting its citizens from adverse effects of secondary smoke.

**Policy SE-5.1.8:** Participate in local and regional programs that facilitate the proper disposal of hazardous household waste.

**Policy SE-5.1.9:** Support programs that encourage businesses to use alternatives to hazardous materials and reduce the creation of hazardous waste.

## **Goal SE-6: Safety services at levels necessary to protect the public.**

***Objective SE-6.1: The City will maintain public safety services at levels necessary to protect its citizens.***

**Policy SE-6.1.1:** The La Mesa Police Department will continue to participate in cooperative activities with area law enforcement agencies as a means of combating Regional or Sub-regional crime activities.

## **Goal SE-7: Effective emergency disaster response where citizens are prepared and disruptions to vital public and private services are minimized.**

***Objective SE-7.1: Provide advance planning and disaster preparedness***

**Policy SE-7.1.1:** Establish and maintain programs to raise citizen awareness about the benefits of disaster preparedness.

**Policy SE-7.1.2:** Regularly conduct emergency simulation exercises.

**Policy SE-7.1.3:** Present at least one public awareness program or emergency response exercise each year to keep the community alert to the most current programs and technology available for citizens to effectively respond to a major disaster.

# **Implementation**

## **Flood Hazards**

### ***Hazard Identification***

The Public Works Department and the Community Development Department shall continue to maintain maps, which delineate those areas of the City subject to inundation, and develop programs to reduce flooding hazards to residents and property. Additionally, working in conjunction with the Historic Preservation Commission, the review of impacts

at historical resources is included within the CEQA project review process for proposed discretionary actions within La Mesa municipal boundaries.

***Insurance***

The City shall continue to participate in the Federal Flood Insurance Program.

**Landslides**

***Grading Permits***

Grading permits shall continue to be required as outlined in the La Mesa Municipal Code.

***Hazard Identification***

The Building Division shall continue to maintain a map of identified soil hazard areas.

***Preventative Site Design***

The Planning Division shall continue to apply principles of good site design and Zoning Ordinance provisions to minimize grading on properties with slopes greater than 25%.

**Seismic Hazards**

***Preparedness Program***

The City of La Mesa shall undertake a program of earthquake preparedness as a component of its “La Mesa Survive” disaster response program.

***Public Education***

The City shall expand its public education efforts in the area of earthquake preparedness in an effort to reach all residents and businesses in the City.

***Building Inspection Services***

The City shall continue to adopt the most recent editions of the Uniform Building Code, Uniform Plumbing Code, and the National Electrical Code to apply the most current safety standards to buildings within the City.

The City of La Mesa’s Building Division maintains a highly desirable ISO rating of 2, based on training and qualifications of Building staff, staffing level, details of plan review and inspections, and codes adoption. ISO (Insurance Services Office) is an organization that rates the effectiveness of fire and building department programs across the nation, and then provides the information to insurance companies who adjust their rates for property owners who live in the cities with good ratings.

## **Fire Hazards**

### ***Fire Prevention***

The Fire Department has a Fire Prevention Office which performs the following functions:

- A. Reviews all proposals for new development for compliance with Chapter 11 of the La Mesa Municipal Code.
- B. Conducts annual inspections of multiple-family residential, commercial and industrial structures. Structures with a higher degree of risk due to the type of construction or type of occupancy shall be inspected more frequently.
- C. Develops and maintains public education programs on fire safety in an effort to reach residents and business owners in the City.

### ***Code Compliance***

The Community Development Department has an impact on fire safety through its code compliance efforts. Activities such as development review, building inspection and zoning code compliance combine with Fire Department activities to create a safer community.

### ***Landscape Buffers***

Fire safety in developed areas shall be increased through a program of plant materials management, including weed abatement on vacant land, and the replacement of flammable vegetation with less flammable plant materials.

### ***Fire Service***

The most traditional fire safety program is the maintenance of a system of fire stations capable of responding promptly to emergencies. The City has been able to maintain fire services at a level comparable to the Insurance Service Offices (ISO) level 2.

## **Hazardous Materials**

The use and transport of hazardous materials will continue to be controlled through codes and inspections.

## **Disaster Preparedness**

### ***Incident Plans***

The City shall ensure that major incident plans are developed, updated and coordinated within City departments and the Office of Disaster Preparedness.

The City will encourage owners of commercial and multi-family buildings to develop and disseminate to their occupants an appropriate disaster plan.

## **Public Safety Services**

### ***Safety Design***

New development shall continue to be evaluated through the development review process to ensure that site planning includes safety design features. The Police Department will continue to review new development to apply Crime Prevention through Environmental Design (CPTED) principles.

### ***Neighborhood Watch***

The Police Department shall continue to support and encourage active Neighborhood Watch groups within the City.