
EMERGENCY SERVICES ELEMENT

Natural and man-made acts threaten our property and personal well-being, sometimes necessitating the immediate aid of fire, paramedic or other emergency services. Emergency services are probably the clearest area of responsibility by the City or other public agencies to the Community. Poway's ability to protect the community residents from the effects of hazards is a combination of individual effort and City programs and operation. Emergency services planning in the future should emphasize the need to continue the high level of service. ¹

The Poway Amateur Radio Society (PARS) in conjunction with the Radio Amateur Civil Emergency Service (RACES) and Amateur Radio Emergency Services (ARES) are considered an integral part of the City of Poway Emergency Plan. In the event of an emergency, these organizations will provide a coordinated backup emergency radio communication-network interconnecting police, fire and other organizations located throughout the City, County and State.

FIRE PROTECTION

Poway is a relatively safe community in terms of danger from structural fires. There exists within the community a well-developed and managed fire safety program that includes two stations. A third fire station is planned within the South Poway Business Park. In addition, the condition of most of the structures in the City is relatively good and therefore, they are more resistant to the spread of a major fire.

Wildland fires pose a greater danger because they are more difficult to control and suppress and can rapidly spread due to adverse climatic conditions. There are several sections of Poway where rural and single family residential homes are adjacent to open space areas. These homes are in greater danger because of their proximity to wildland areas. Policies should stress the need to reduce this danger through fire-retardant building materials and buffered setbacks. In addition, the City should also particularly stress the individual's part in fire protection.

FIRE STATIONS

Fire protection and suppression services are provided to the community by the Poway Fire Department.

The City of Poway Fire Department has a total of 35 employees and two fire stations. Nine firefighters are certified paramedics. All firefighters have received emergency medical training and have been certified in defibrillation.

The Poway Fire Department has an Automatic Aid Agreement with the City of San Diego, which results in an immediate dispatch of the closest unit to respond upon request for services. The City also has signed a Mutual Aid Agreement with the County of San Diego to assist any other cities/districts in firefighting efforts upon request.

The majority of Poway Fire Department responses are medical aids, traffic accidents, and wildland fires during the summer months.

The most significant issues which concern the City are those of hazardous material transport, earthquake damage to mobile home parks, major flood damage, aircraft accidents, and the potential danger associated with wildland/urban interface areas of the City.

The City presently has an Insurance Service Office (ISO) rating of four, and the following fire hazard standards are utilized:

- Minimum flow for fire protection water and minimum hydrant spacing.
- Stringent access for buildings; and hazardous material disclosure handling.

- Limitation of areas and land use for storage of combustible and flammable liquids in outside, above-ground tanks.
- Stringent fire sprinkler ordinance.

MEDICAL SERVICES

A major concern of the residents of Poway is the availability of medical services and facilities of the highest quality at the most efficient cost. Medical services should be provided with respect to the unique needs of the service area, with the Palomar Pomerado Health System, a special district, assisting the City of Poway in reviewing and analyzing the demand for medical services, and the proper method to respond to these changing needs. (Amended per GPA 93-01A)

TABLE VII-1

	<u>ON-DUTY PERSONNEL</u>	<u>FIREFIGHTING EQUIPMENT</u>
Station #1	4 Firefighters 2 Paramedics	1 - 55' Squirt Apparatus 1 - Paramedic Unit 1 - Brush Engine 1 - Water Tender 1 - 1500 GPM Reserve Engine 1 - Reserve Paramedic Unit
Station #2	3 Firefighters	1 - 1500 GPM Engine 1 - Brush Engine

Station #1 (headquarters) is located at the southwest corner of Community Road and Civic Center Drive. This site also includes a regional fire training tower facility.

Station #2 is located at the northwest corner of Espola Road and Old Coach Road in the North Poway area.

The availability of quality medical services is fundamentally important, in order to respond to daily health care needs, to personal emergencies, and to community disasters. In recent years, the delivery of quality medical services has shifted from the provision of these services at an acute care hospital to other delivery methods. For instance, skilled care nursing homes provide short-term care for patients who would have received such care in the hospital in the past. An increased number of surgical procedures are now provided in out-patient surgery centers. Freestanding urgent care clinics provide up to 24 hour care at secondary locations, in addition to hospital emergency rooms.

Essential medical and emergency care services are currently provided in Poway at Pomerado Hospital which is a 126-bed general acute care facility, providing a wide range of services except psychiatric and pediatric care. The hospital also includes a 149-bed skilled nursing facility and a chemical dependency unit. The campus of Pomerado Hospital, as well as the areas surrounding it, has been a focal point for many related medical services, such as medical and dental office buildings, nursing homes and other support facilities. In addition, a comprehensive discussion of the medical services and facilities available to North County residents is contained in the Palomar Pomerado Health System's *Strategic Long-Range Plan*. Services not provided directly at Pomerado Hospital are readily available elsewhere in the City or in neighboring communities within the district or the region.

LAW ENFORCEMENT SERVICES

The City of Poway receives its law enforcement service under contract from the San Diego County Sheriff's Department. A single Sheriff's Substation, located in the southeast quadrant of Poway Road and Pomerado Road is manned by 42 sworn officers and has a total of 56 employees.

Residential burglaries, auto thefts and petty thefts are enforcement problems within the City. According to the Sheriff's Department, these crimes seem to be spread throughout the City, rather than occurring in specific areas.

The City of Poway continues to have the lowest crime rate (27.5 crimes per 1000 population) within the County of San Diego.

A crime prevention program known as Neighborhood Watch, began in 1987 and approximately 300 neighborhood groups are currently operating under the program

PATROL STAFFING LEVELS

General law enforcement staffing is determined by a concept called the "base level of service." This is a staffing plan developed by the Sheriff's Department to establish a minimum level of general patrol coverage for the more urbanized areas of the county and the contract cities. That minimum level of service is currently established at one 24-hour patrol unit (three eight-hour cars) for each 13,275 population.

Traffic staffing levels are largely based on guidelines developed by the International Association of Chiefs of Police (I.A.C.P.). Additionally, the nature and configuration of the roadways prior accident and enforcement history, the judgment of the traffic supervisors, and the desires of the City are elements which help determine adequate traffic staffing levels.

The Poway Sheriff's Department contract for the City currently provides for nine patrol units per day, four traffic units per day and two motorcycle units 8 hours per day (Monday through Friday).

Based upon current crime and traffic statistical data, the current level of staffing is considered "optimal". The combined level of patrol and traffic is sufficient to accommodate the current Poway population of 43,516 persons, since there is presently one 24 hour unit per 3,350 population.

DEFENSIBLE SPACE

Although crime is brought about by underlying social conditions, there are physical planning and design measures which can help deter criminal activity and protect individuals and their property. These measures take two forms. The first consists of improving the security of structures and the second consists of promoting social control over the immediate community by increasing visual and social contact among citizens.

In response to the alarming increase in urban crime rates during the late 1960s, architects, housing developers, city planners and police began to explore the

relationship between man's physical environment and criminal activities.

It had become increasingly apparent that the crime problems could not be solved by continual expansion of police forces or costly expenditures on security and surveillance equipment. Numerous studies were conducted to determine the relationships between the location of crimes and physical considerations such as building size, densities, architectural features and landscaping.

One idea that emerged from these various studies was the concept of "defensible space." "Defensible Space" can be defined as a physical environment which inhibits crime by creating a social fabric that defends itself:

.....All the different elements which combine to make a defensible space have a common goal - an environment in which latent territoriality and sense of community in the inhabitants can be translated into responsibility for ensuring a safe, productive and well-maintained living space. The potential criminal perceives such a space as controlled by its residents, leaving him an intruder easily recognized and dealt with . . .¹

¹Newman, Oscar, *Defensible Space*, New York, Collier Books, 1973.

The role of the City in employing the concepts of "defensible space" and other crime-preventive measures has never been formally defined. Although the design of most development proposals is

POWAY COMPREHENSIVE PLAN: GENERAL PLAN

now reviewed by the City Council, crime preventive design measures have not traditionally been a concern of local governments.

One of the purposes of this element is to formally describe the importance of "defensible space" and clearly illustrate the function of this concept as part of the general plan and development process.

Traditionally, the responsibility for maintaining security in suburban neighborhoods has been relegated to the police and locksmiths; however, this situation is self-deceptive. When people attempt to protect themselves on an individual basis rather than as a community, the battle against crime is effectively lost.

"Neighborhood Watch" programs have been successfully instituted in many areas of Poway. Similar programs have been started in other cities and counties by local merchants for the protection of commercial and industrial properties. In all cases it is the open interaction, participation and communication between citizens and with law enforcement personnel that has led to the reduction of crime. Poway should continue to highly encourage and support community programs which open the lines of communications on a regular basis and which act as a mechanism to enhance neighborhood cohesiveness.

Neighborhoods can be designed so that the residents have private and semi-private outdoor spaces while still fostering social cohesion. A sense of neighborhood social support is important not only for conventional single family

detached subdivisions, but for multi-family developments as well.

Residential Design

Unfortunately, the construction of burglar-proof housing is virtually impossible. The main emphasis should be placed on the provision of security devices which delay the time required for illegal entry which in most cases is a sufficient deterrent. Recommended security measures include:

- Use of solid exterior doors without glazing, to prevent breakage of the door windows in order to reach and release the door lock. If door windows are desired, the width of the glazed area should be less than three inches to prevent access to the inside lock. (Interior keyed door locks serve the same purpose but are not recommended since they hinder egress in the event of fire.) Another alternative would be to install expanded metal over door window areas, using one-way screws.
- Solid exterior doors should be equipped with a fish eye lens viewer, or have a window located nearby, to permit identification of visitors.
- Windows should be located a sufficient distance from the door to prevent breakage of the glass and opening of the door from within.
- Standard exterior doors should be fitted with dead bolt locks with a minimum bolt length of one inch. The door frame must be drilled sufficiently to accommodate the one-inch dead

- bolt in a locked position. Sliding exterior doors should have slide-bolt locks on the bottom track to help prevent forced entry.
- Windows should be fitted with keyed window locks and the locks secured with tamper-proof screws. Sliding glass windows may be secured with pointed thumb-turn locks, along with anti-lift screws or clips on both sides of the top track of the sliding section of glass.
 - Buildings and their entries should be positioned to promote the feeling that the streets are an extension of the resident's territory.
 - Amenities such as recreational areas, open areas and vegetation should be included in areas defined for the use of individual households, but should be designed to create a sense of territoriality while retaining the maximum level of visibility to these residents and passers-by.
 - Design approaches recommended elsewhere in this document should be employed to achieve greater social contact at the micro-neighborhood scale and a sense of possession and thus, control of public areas which adjoin residences.
 - Exterior/interior garage doors should be of solid-core construction, with exposed hinges pinned and secured with dead bolt lock(s).
 - Overhead garage doors should be secured with padlocks, flush bolts or cane bolts on both sides of door(s).
 - House numbers should be four inches in height on a contrasting background. They should be located on the house and the curb, and on the entrance to the driveway of each home when the structure is not clearly visible from the street. Multi-family units should have three-foot numerals painted on each roof for easy identification by the Sheriff's ASTREA unit.
 - Street names shall not be over three words or 40 letters in length for facilitation of dispatching emergency vehicles to the area. Repetition of street names or similar-sounding street names should be avoided.

Nonresidential Design

The use of design techniques to prevent crime in nonresidential districts is more direct. The key is not to create social cohesiveness, but rather to design structures in a manner to ease the patrol operation of law enforcement officers and to aid community surveillance.

Decisions concerning crime prevention in commercial and industrial properties involve trade-offs between ease of access for patrol vehicles on the one hand and aesthetics and protection of adjoining residential properties from noise and intrusions on their privacy on the other hand. Commercial, office and industrial properties that are designed in a manner to provide interior garden courts, private fenced patios or isolated entrance points are more prone to burglary and robbery than those that have a high degree of visual accessibility.

POWAY COMPREHENSIVE PLAN: GENERAL PLAN

A typical solution to the problem of noise impacts from commercial and industrial operations on residential neighbors is to construct masonry walls and landscaping berms. Law enforcement personnel have indicated that a masonry wall/landscape setback solution to attenuate noise and visual intrusion does not increase incidents of burglary in adjoining homes.

should be secured with expanded metal with one-way screws to prevent access into the building(s).

Recommended security measures include:

- Entrances and exits to buildings should be kept to a minimum, be well lighted, and visible to the public and patrols. All exterior doors should be of solid-core construction, with exposed hinges pinned.
- Walkways should be situated to generate enough traffic to provide a deterrent by virtue of the number of people using the path at all times.
- Landscaping materials along walkways and parking lots should not permit concealment.
- Adequate lighting should be provided along all streets in parking lots, in landscape areas and around interior areas.
- Parking stalls should be laid out to permit maximum observation by patrol, the public and parking lot attendants. If possible, the lot should be at a lower grade than the surrounding streets to increase observation opportunity.
- All means of gaining access to roofs should be removed except where required by fire codes. Roof openings

HAZARD MANAGEMENT ELEMENT

Hazards created by natural phenomena or as a result of human action are a part of everyday life. Most hazards occur infrequently and normally at random. The random occurrence normally expected with hazards causes the fear of their ability to damage or destroy property and endanger health or lives. It has generally been considered the responsibility of government to make community residents aware of hazards and create as safe an environment as possible.

The Hazard Management Element contains the provisions for the protection of life, health and property as a result of national hazard occurrence. This is accomplished by the (1) identification of hazards areas and (2) establishment of hazard management guidelines.

The natural hazards that occur in Poway are:

- Geologic hazards;
- Seismic or earthquake induced hazards; and
- Flooding caused by rainfall or inundation from dam failure.
- Fire hazards; and
- Noise hazards.

State Planning Law requires cities and counties to identify hazardous conditions and to prepare and implement policies to increase public health and safety. The following sections are addressed by this element:

- Section 65302(f) of the Government Code which requires preparation of a

noise element that quantifies the community noise environment and serves to guide development to achieve noise compatible land uses.

- Section 65302(i) which requires the preparation of a safety element with provisions for the protection of the community from fires, geologic hazards and crime.
- Section 65302(f) of the Government Code requires preparation of a seismic safety element to assess the potential and level of risk that exist from seismically induced hazards.

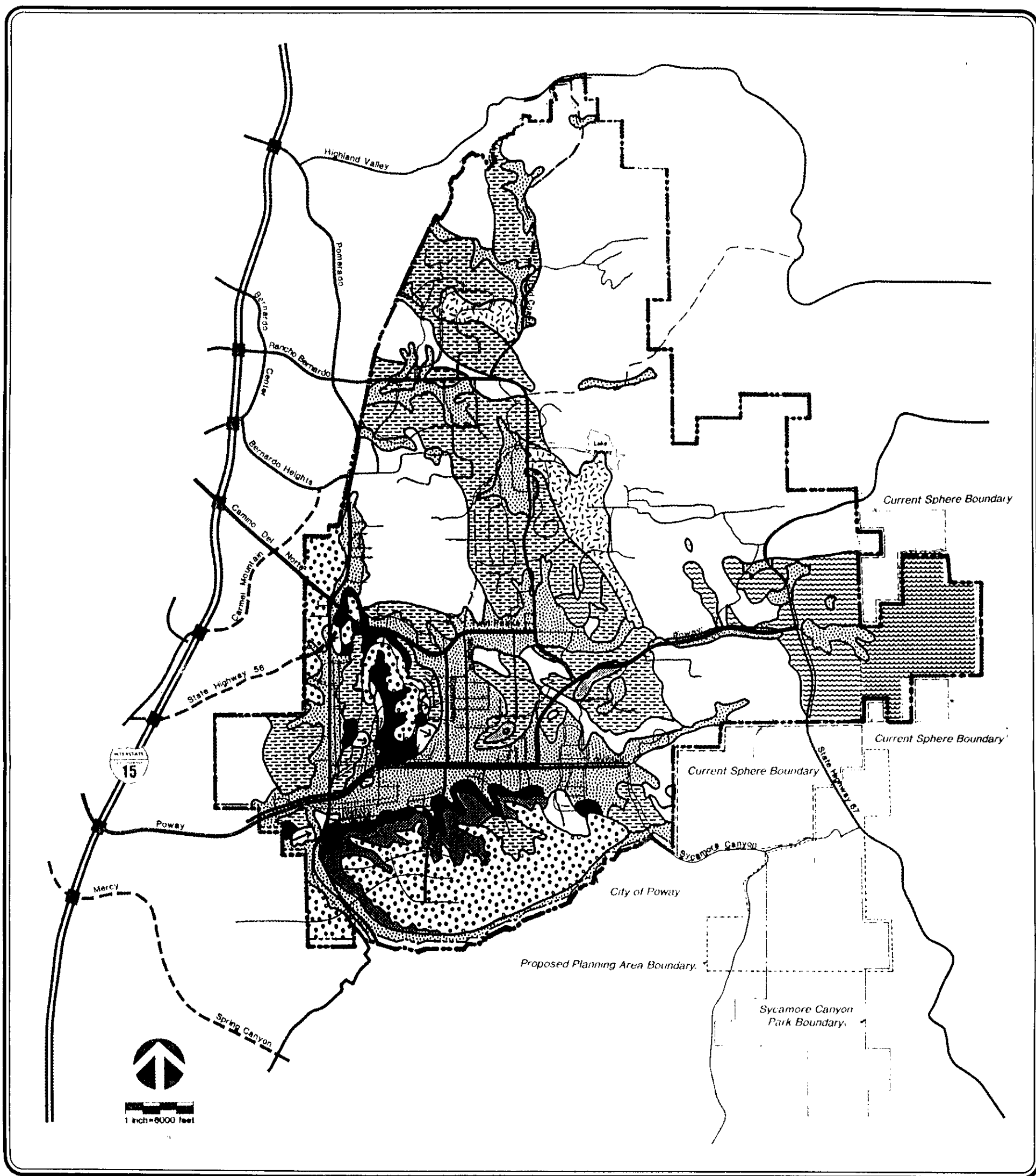
GEOLOGIC HAZARDS

Geologic hazards occur as a result of unstable geologic formations that can be caused by nature or by man. In Poway, landslides, rock falls, seismic induced rupture or shaking, earth settlement and expansive soil conditions are the main geologic hazards.

Most of the problems associated with the geologic hazards in Poway are because of the vulnerability of several geologic formations found in the City and previous poor land development practices. Over a period of several years, the latter conditions have significantly worsened the problem.

LOCAL GEOLOGY

The geology of Poway can be divided into geologic zones based upon the age and general composition of exposed rocks (Figure VII-1). These areas are:



Geologic Formations

Figure VII-1

LEGEND

	Lusardi Formation		Green Valley Tonalite
	San Marcos Gabbro		Santiago Peak Volcanics
	Friars Formation		Pomerado Conglomerate
	Alluvium		Woodson Mountain Granodiorite
	Landslide		Stadium Conglomerate



Metamorphic Rocks

Bedford Canyon Formation: Low grade metamorphic rocks comprised of clastic meta siltstone, slate, shale and meta sandstone and meta conglomerate.

Santiago Peak Volcanics: This rock unit consists of slightly metamorphosed and acidic, rhyolitic, and dacite volcanic rocks, with local tufts and breccias. These rock units are relatively dense and resistant to erosion.

Igneous Rocks

San Marcos Gabbro: This unit is hornblende gabbro which intruded the older Santiago Peak Volcanics and Bedford Canyon Shale and was in turn intruded by the younger granitic rocks. The gabbro is rather resistant to weathering; exposures tend to form broad based, conical-shaped, bold hills with few surface boulders.

Green Valley Tonalite: This unit is highly susceptible to weathering and forms low areas with gentle topography.

Woodson Mountain Granodiorite: This unit is very resistant to erosion, forming most of the high areas in the Planning Area. Outcrops tend to be characterized by large rounded boulders, as on Mt. Woodson. Also large exfoliation domes are common.

Sedimentary Rocks

Lusardi Formation: This unit is one of the three post-batholithic Cretaceous units of the Rosarion Group. The Lusardi formation is a boulder

conglomerate that occurs in limited outcrops in the Planning Area. This unit is characteristically very coarse and poorly sorted and contains locally derived cobble-to boulder-sized material.

Friars Formation: This is one of six units that make up the La Jolla Group. The Friars formation consists of lagoonal and nonmarine sandstones are composed of expansive clays, montmorillonite and kalinite. The sandstone beds may be locally interbedded with sandy claystones. Cobble conglomerate lenses of stream origin are also found.

Stadium Conglomerate: This unit is one of three units that make up the Poway Group. The other two units of the Poway Group, the Mission Valley Formation and the Pomerado Conglomerate, underlie only a small portion of the area and are located in the southwest portion of the planning area. The Stadium Conglomerate is a moderately well sorted cobble conglomerate of nonmarine origin. The distinctive "Poway" cobbles are composed of slightly metamorphosed rhyolitic and dacitic volcanics and some quartzites. The cobbles were deposited by westward flowing streams, as river channel and deltaic sediments from an eroded source area within a short distance east of their present position.

Mission Valley Formation: The Mission Valley Formation is a soft, friable, light silver-gray fine to medium grained, quartz rich sandstones. It also contains interbeds, tongues and lenses of brackish water claystones that locally compose 20 percent of the section. The unit is found only in the southwest portion of the Planning Area and is not an extensive unit.

Pomerado Conglomerate. The Pomerado Conglomerate is a massive cobble conglomerate which is lithologically identical to the Stadium Conglomerate. The Pomerado is the youngest unit of the Poway Group and is separated from the Stadium Conglomerate by the Mission Valley Formation. Where the Mission Valley Formation is missing, the two conglomeratic units are in contact and are indistinguishable.

Alluvium and Slope Wash: Alluvial material consisting of poorly consolidated stream deposited silt, sand, gravel and cobble-sized particles occur in the major stream channels and mantels the lower valley slopes.

As stated previously, landslides, rockfalls, seismically induced movement, fill settlement and expansive soils are the principal geologic hazards in the City. Factors which are likely to induce ground movement on unstable slopes include:

- Oversteeping of natural slopes by erosion or grading; most landslide prone areas with slopes greater than 30 percent have landslide deposits.

- Undercutting of slope bases by erosion or grading.
- Overloading slopes with additional weight.
- Saturation of incompetent material by periods of prolonged rainfall, over-irrigation, leaky swimming pools or utility pipes and leach line discharge.
- Ground acceleration during earthquakes.

The Friars and Mission Valley Formations have been involved in numerous landslides. Most of the landslides are rotational slopes. It is estimated that most of these landslides occurred 15,000 to 20,000 years ago, based on data of slides having similar characteristics. Generally, sliding appears to have originated at the contact between the upper portion of the Friars formation and the lower portion of the Stadium Conglomerate. Rockfall are created by oversteepened slopes in the granitic terrain all due to seismic shaking. Fill settlement is due to poor grading and compaction techniques due to inadequate inspection and enforcement of grading codes. Expansive soils are clay soils which expand in volume with an increase in moisture content. Damage is caused when structures are built on this soil without adequate foundation design. As with landslides, fill soils derived from the Friars and Mission Valley formation are the predominate materials involved in fill settlement and expansive soil problems.

GIMS MAPPING SYSTEM

The City has a method of identifying general geologic hazard areas in terms that can be understood by the layman. In the past, geological assessments in General Plans have been encumbered by highly technical jargon that is meaningful only to engineering geologist. The system used herein, the Geotechnical Interpretative Mapping Symbols (GIMS) System, has simplified the communication of geotechnical information.

The GIMS map interprets both soil engineering and engineering geologic information to employ the use of the symbols that are shown on Figure VII-2. The symbols that have been devised represent the principal geotechnical considerations that can directly impact the feasibility and economics of land use. The use of the system relies on the ability of the map user to familiarize himself with a few symbols that, when observed on the GIMS map, can be directly translated onto a course of action by any one of several disciplines that are involved in land use. Each symbol is unique to a particular geologic or soil engineering concern that is commonly referred to by the geotechnical community. Once the map user has memorized the symbol and its related geotechnical consideration, area-wide maps can be viewed and utilized to understand land-use potential and those impacts which will require thorough analysis by the soil engineer and the engineering geologist.

The previously mentioned geotechnical considerations imply varying degrees of

impact geology and geotechnical factors may have on land use. These impacts do not prohibit development, but suggest an order of geotechnical investigation and mitigation to be considered. The Slope Stability symbol designates the areas where development constraints require the greatest care and analysis, followed to some lesser degree by Expansive Soils, Rippability and Compressible Soils. The factors of shallow groundwater, flooding potential and erosion might all be considered of equal importance having similar economic and design impacts.

Any mapping system has limitations under which it should be employed. The GIMS system of mapping does not act as a substitute for the project specific geologic map or geotechnical investigation. The hazards map simply provides some pre-assessment of what should be looked at in more detail.

SEISMIC HAZARDS

The Seismic Hazards section is designed to identify and evaluate potential seismic hazards and risks within the City of Poway and provide mitigation in the form of general policy guidelines. The mitigation measures shall include the requirements of California law and the recognition of the City's responsibility to the community residents.

This section is closely related to the Geologic Hazards section. While Geologic Hazards analyzed the potential risks that exist because of the geologic formation of Poway, Seismic Hazard

analyzes to what extent these conditions will be increased or altered by a seismic event.

LOCAL SEISMIC ACTIVITY

Although the Regional Fault Map shows faults in Poway, these are classified as inactive by the California Department of Conservation, Division of Mines and Geology. Based upon the available information and historical records, Poway is remarkably free from other seismic hazards despite relatively high earthquake activity along the major fault systems in Southern California. It can be expected that minor to moderate damage will result from seismic activity. The potential exists for a major seismic event to occur along one of the major faults and result in local damage.

REGIONAL SEISMIC ACTIVITY

As stated previously, seismic hazards do exist as a result of a major seismic event on one of the fault systems located in Southern California. Three faults systems - the Elsinore, San Jacinto and Rose Canyon - would have the greatest impact on the City (see Figure VII-3)

Elsinore Fault

The Elsinore Fault is a large, active, northwest trending fault which comes as close as 20 to 22 miles to Poway. The overall length of the fault is approximately 135 miles; however, the most active portion of the Elsinore Fault is the 60 mile section between Lake Elsinore and the Vallecito Valley. There have been a number of epicenters in the Lake Elsinore area. Because of its proximity and great length, the Elsinore

Fault has the greatest potential to cause damage to Poway. The maximum probable earthquake on the Richter Scale has been calculated at 6.9 to 7.3. The recurrence interval for an event at one per hundred years. The maximum credible earthquake is approximately 7.6 with no calculable recurrence rate.

The largest recorded quake on the Elsinore Fault occurred in 1910, was centered in Lake Elsinore area and was recorded as having a Richter Scale magnitude of 6.0. This event, epicentered about 60 miles north of Poway, caused no recorded damage in the Poway area. A maximum probable quake of 6.9 to 7.3, with an epicenter located on the closest sections of the fault, might cause heavy damage to, or the collapse of, unreinforced masonry structures. A maximum credible quake of 7.6 could cause moderate to heavy damage to weak masonry structures and light to moderate damage in wooden frame structures. Quakes with epicenters along the more distant sections of the fault are not likely to cause significant damage in the Poway area

The Agua Caliente Fault and the Earthquake Valley are considered major branches of the Elsinore Fault. These faults are located approximately 28 to 30 miles respectively from Poway and there is little known about their recurrence rates or potential for damage although they are believed to be active. The Temescal Fault runs roughly perpendicular to the Elsinore Fault and intersects it just west of Lake Henshaw. There have been many small (2.0 to 3.9 Mag.) earthquakes located in this area.

These may or may not represent the release of accumulated strain along the Elsinore Fault; however, the continual release of small amounts of energy along this fault reduces the potential of a major event occurring.

San Jacinto Fault

The San Jacinto Fault is a major, active, northwest-trending fault located less than 45 miles from Poway at its closest point. The San Jacinto Fault is considered to be a major active branch of the San Andreas Fault system. Land forms along the fault indicate a long, active history. The proximity and activity of the San Jacinto Fault make it more significant to Poway than the San Andreas itself, which at its closest point is about 70 miles from Poway. Significant events occurring along the San Jacinto Fault include a quake in 1890 and quakes in 1899, Richter Scale magnitude 6.5 in 1968 and 5.9 in 1969. Topozada and others (1981) and Yerkes (1985), list at least five other earthquakes on the San Jacinto fault: 1) a M6 earthquake on September 20, 1907; 2) a M6.8 earthquake on April 21, 1918; 3) a M6.0 earthquake on July 23, 1923; 4) a M6 earthquake on March 25, 1937; and 5) a M6.6 earthquake on October 21, 1942. There was no reported damage in the Poway area resulting from the 1890 and 1899 events. The 1968 and 1969 quakes, considered the strongest to hit California in 15 years, caused only minor damage locally.

The maximum probable quake has been estimated at 6.9 to 7.3 with one such event occurring every 100 years. According to the working group on

California Earthquake Probabilities (1988), there is a 50 percent chance of at least one of these earthquakes occurring before the Year 2018. The maximum credible quake for the San Jacinto fault is considered to be approximately 7.6 with no calculable recurrence rate. Damage resulting from a maximum probable intensity event would be expected to cause little or no damage in well built structures, light to moderate damage in poorly built structures, and possible heavy damage or collapse of unreinforced masonry structures. A maximum credible quake would be expected to cause similar but more widespread damage resulting from greater intensity and duration.

The San Jacinto fault is approximately twice as far from Poway as the Elsinore Fault. This distance has an insulating effect, and makes the San Jacinto Fault relatively less hazardous to the Poway area than the Elsinore Fault.

The Coyote Canyon Fault is considered a branch of the San Jacinto Fault. During the 1968 magnitude 6.8 quake, a surface rupture 20.5 miles long occurred along this fault. No recurrence rates of probable earthquake intensities are available for this fault; for planning purposes it should be considered part of the San Jacinto Fault zone.

Rose Canyon Fault

The Rose Canyon Fault lies 16 to 20 miles west of Poway in the Pacific Ocean, and may be part of the Newport-Inglewood Fault system which has been historically active and was the source of the 1933 Long Beach Earthquake. Recent studies have caused the California Division of Mines and Geology to consider the Rose Canyon Fault to be active. These trenching studies (Anderson and others, 1989, Lendral and others, 1990) have found evidence of Holocene movement along the fault. Earthquakes of 5 and 6 intensity have occurred near the Rose Canyon Fault. Studies indicate the maximum probable earthquake would be between 5.8 and 6.2 with two repeat intervals of one per 100 years. The maximum credible earthquake would be approximately 7.1 with no stated recurrence interval.

A maximum probable quake on the closest section of the Rose Canyon Fault could cause moderate damage in the Poway area. Unreinforced masonry or poorly built structures might sustain moderate damage on the closest sections of the Rose Canyon Fault. A maximum credible earthquake could cause moderate damage in well built structures and heavy damage or collapse in poorly built structures.

FAULTING AND SURFACE RUPTURE

Surface ruptures occur on existing faults when a fault displacement extends upward from the ground surface. The surface will not rupture every time a fault moves. As earthquakes increase in magnitude, there is a stronger possibility

of ground rupture occurring. When the surface is ruptured, everything in its path will be affected. Because no active faults are present in Poway, surface rupture is not considered an apparent hazard.

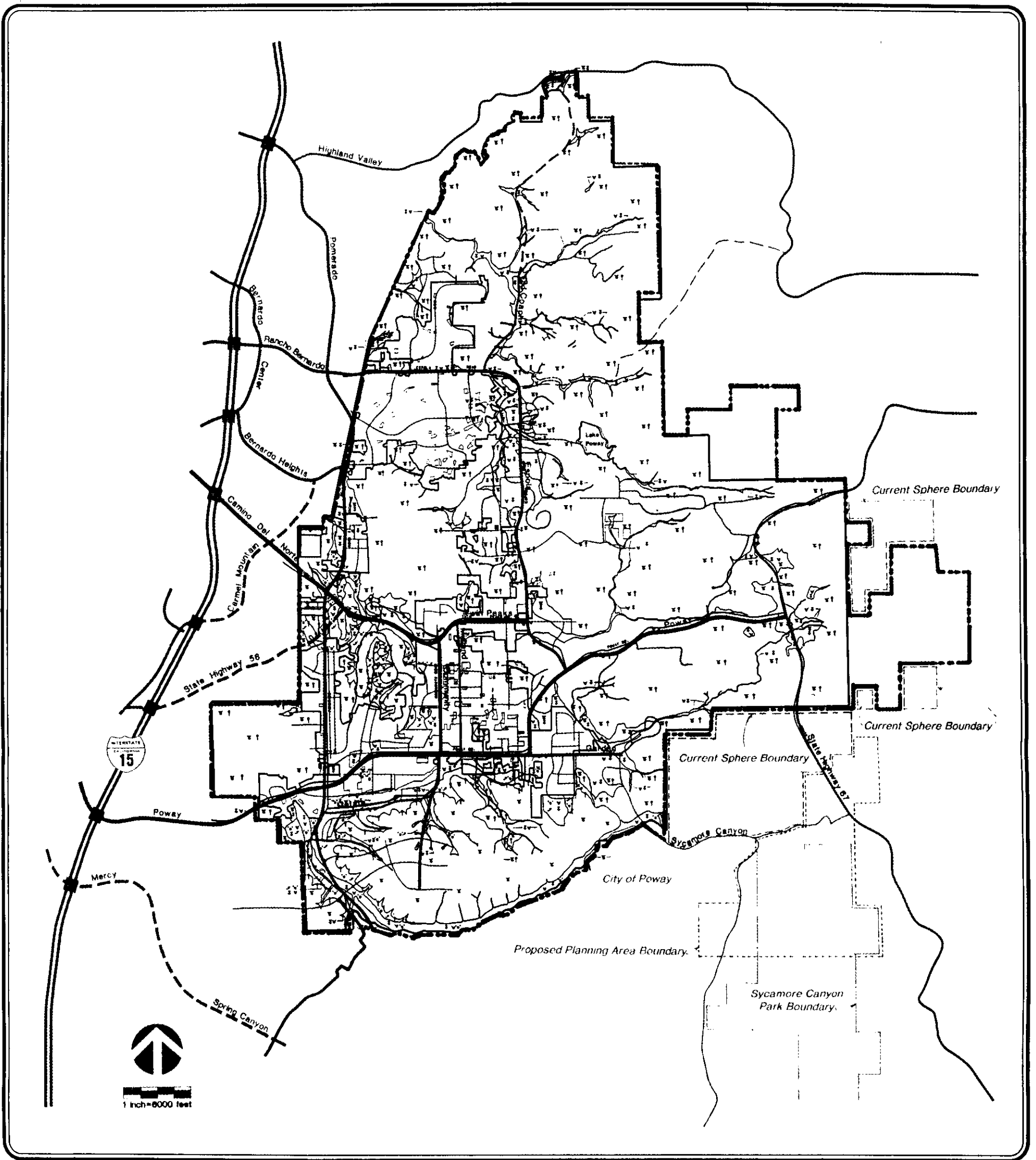
GROUNDSHAKING

The severity of the seismic groundshaking depends on the magnitude of the earthquake, the distance of the site from the quake epicenter and soil conditions at the site and in between. Groundshaking can be felt and even can cause damage hundreds of miles from the epicenter of the earthquake. The effects of groundshaking depend on its severity based on the above factors, duration and on the type of construction and its integrity.









Groundshaking is expected to have the greatest amount of seismic impact on Poway. Major seismic events along one of the fault systems discussed previously would cause significant groundshaking to cause property damage. Also, other potential seismic hazards will occur primarily as a result of intense groundshaking. Damage to structures and other property may be minor because the great majority of structures in Poway are earthquake resistant (wood frame or buildings built to earthquake standards). However, severe damage due to secondary affects such as landslides and liquefaction could still occur

GROUND FAILURE

Most seismic ground failures occur as landslides where the seismic event, gravity, groundwater and poor geologic



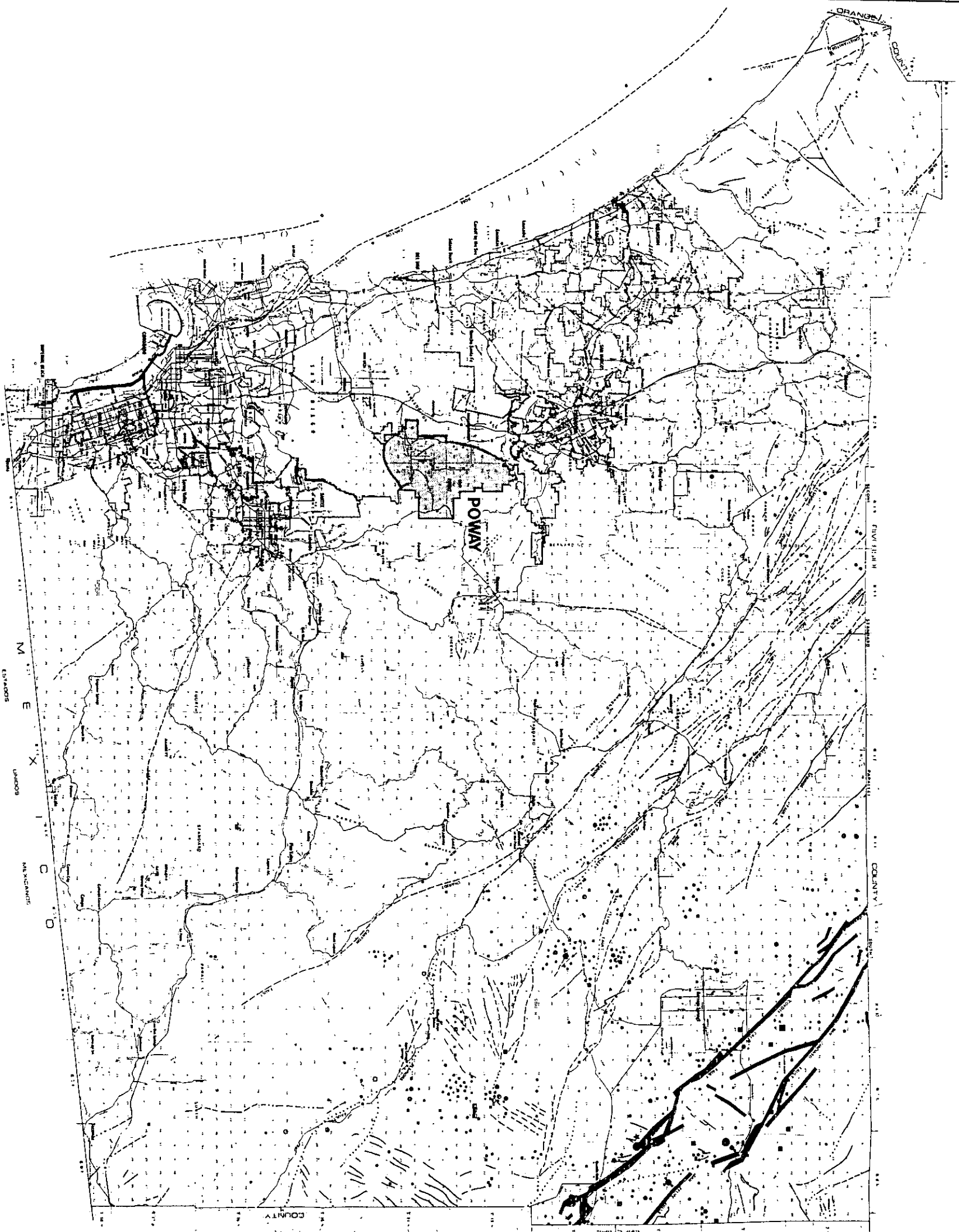
LEGEND

-  **COMPRESSIBLE SOILS**
(Cl, Ol, Gs)
-  **EXPANSIVE SOILS**
(Gls, T)
-  **SHALLOW GROUNDWATER**
(Cl, Kg, Ks, Kt, Gs)
-  **SEEPAGE POTENTIAL**
(Kg, Ks, Kt, T)
-  **EROSION & MUDFLOWS**
(Kg, Ks, Kt, T)
-  **SLOPE STABILITY**
(Gls, T)
-  **RIPPABILITY**
(Kg, Ks, Kt, T)
-  **EXISTING LAND USE**

Geotechnical Considerations

Figure VII-2





Source: County of San Diego
Faults & Epicenters June 1977

FAULTS

- CONCEALED FAULTS
- LOCATED FAULTS
- INFERRED FAULTS

EPICENTERS

- DATA TAKEN 1962 - 1968
- DATA TAKEN 1934 - 1961

Magnitude on Richter Scale:

- 6.0 - 6.9
- 5.0 - 5.9
- 4.0 - 4.9
- 3.0 - 3.9
- 2.0 - 2.9

- △ MINOR AFTERSHOCKS
- ★ MAJOR AFTERSHOCKS



SPECIAL STUDIES ZONES

Regional Fault Map

Figure VII-3



conditions all work together to displace small or large amounts of earth. As stated before, Poway has many areas which are highly susceptible to landslides. A major seismic event could easily act as the trigger for an ancient landslide to once again move either slowly or rapidly down a slope.

The most effective way to avoid landslide damage is to prevent development of landslide-prone areas. However, modern engineering practices, although costly, can stabilize slide-prone areas through application of one or more techniques including, but not limited to: removing, redistributing, compacting or otherwise stabilizing hazardous earth masses; installing proper drainage devices; using buttress fills; and practicing careful landscaping and irrigation techniques.

LIQUEFACTION

Liquefaction is the loss of strength (bearing capacity) in granular, saturated, unconsolidated sediments. Areas with sediments and shallow water tables are particularly susceptible to liquefaction may be caused as the ground liquefies and flows or spreads laterally or responds as quicksand causing buildings to tilt or sink. For liquefaction to occur, three factors must be present:

1. Soils must contain relatively loose granular fine sands or silts.
2. The water table must be shallow
3. Intense, long duration ground shaking (greater than .13g with a duration of greater than 45 seconds) must occur.

A preliminary investigation of soil conditions in the Poway Valley indicates that there is little or no potential for liquefaction. This conclusion is based primarily on the structure and particle size mix of the soil types found in the low-lying areas of the City. For liquefaction to occur, soils must be loose, evenly graded fine sands or silts. According to the U.S. Soil and Conservation Service *Soil Survey for the San Diego Area*, the soils of the low-lying areas are sandy loams with clay substrata. The high percentage of clay particles integrated with sands reduce interstitial space and gives the soils a massive structure.

Given these soil conditions and the lack of evidence of any past history of intense, long duration groundshaking as a result of nearby seismic activity, it is believed that the three factors necessary for liquefaction to occur are not present in the correct combination and, therefore the potential for widespread liquefaction in the Poway area does not exist. However, it may be that the local history is too short to make an unequivocal statement as to the potential liquefaction in the entire City.

SUBSIDENCE

Subsidence, the downward settling of surface has four primary causes of subsidence:

- Ground water withdrawal.
- Oil or gas withdrawal.

- Hydrocompaction (usually caused by first-time wetting of open textured soils which compact under their own weight).
- Peat Oxidation (results from shrinkage of burial organic debris).

STRUCTURAL HAZARD

The large majority of buildings within the City have been constructed within the past 30 years. The Uniform Building Code has contained seismic design standard since 1943, although plan checking and inspection and the standards themselves have significantly improved since that time. Experience in recent earthquakes indicates that when structures are built according to seismic design standards they can be expected to perform well during an earthquake. This is true for areas where earthquakes are relatively minor and may not be true for a local major earthquake.

Pursuant to State law, the City is currently undertaking a study of unreinforced masonry buildings within its jurisdiction. Five buildings have been identified for further study. The owners have been contacted and appropriate measures will be taken if any of the buildings are determined to, in fact be unreinforced masonry.

DAM HAZARD

Two dam structures exist in the Poway area: Lake Poway Dam and Lake Ramona Dam. In evaluating dam performance during a seismic event, a number of factors must be considered including the potential for seismic activity and intensity and an assessment of the

structural integrity of a dam. In addition, the potential for landslides and seiches (water waves caused by seismic waves) causing dam overtopping must be considered.

Lake Poway Dam is the only nearby structure in Poway that could cause widespread property damage and loss of life if it were to fail during a seismic event. Lake Poway Dam is approximately 160 feet in height and impounds a reservoir containing up to 3,400 acre-feet of water over 60 surface acres. Lake Poway, originally built by the Poway Municipal Water District in 1971, now serves the City of Poway as both a water storage reservoir and regional park and recreation facility.

In regard to the potential for dam failure or overtopping as a result of a seismic event, the potential is remote. The design of Lake Poway, as illustrated in the Design Report prepared by Boyle Engineering in May and June 1970, clearly illustrates that the dam design incorporated maximum credible seismic activity anticipated in the dam vicinity. The rock and earthen dam is designed to withstand a major seismic event and the spillway design will accommodate overtopping as a result of landslides along the steep banks or seiches. Therefore, the potential for property damage or loss of life due to the failure of Lake Poway by a seismic shock is considered small.

Lake Ramona Dam is located approximately one-mile northeast of the Lake Poway Dam and is situated immediately east of the Poway City boundary in the unincorporated

community of Ramona. The Lake Ramona Dam was constructed by the Ramona Municipal Water District (RMWD) during the mid-to-late 1980s. Lake Ramona has a drainage basin of approximately 1,120 acres and a maximum storage capacity of 12,000 acre feet (an acre foot is the volume of water that covers one acre, one foot deep in water and is equal to 326,000 gallons). The filling of the reservoir began several years ago and is expected to take as long as five years to completely fill. The dam spillway will divert any overflow from the reservoir into the adjacent drainage basin to the north.

The engineering staff of the RMWD recently prepared an analysis of the potential inundation area should dam failure occur. This analysis assumed a flow of 300,000 cubic feet per second (cfs) from the dam to Lake Hodges via the Green Valley Creek/Sycamore Creek drainage. This quantity of flow is based on the worst case of instantaneous dam failure which is highly unlikely. A more likely dam failure scenario would result from a breach failure which could be caused by an earthquake or piping failure. The width of the floodplain downstream (dam failure inundation area) resulting from a breach failure would be less than the area of inundation resulting from a complete dam failure.

The potential inundation area resulting from dam failure of Poway Dam would be nearly one-quarter of that of Ramona Dam considering their respective capacities (12,000 acre feet from Ramona and 3,400 acre feet for Poway).

Both the Ramona Dam and Poway Dam

are located in drainage sub-basins that drain into the same major drainage courses leading downstream to Lake Hodges (Green Valley Creek/Sycamore Creek). Subsequently, both dams would contribute to the same potential inundation areas should either dam fail or be breached. Complete failure of either dam is considered a remote possibility. In the event of dam failure of either Poway Dam or Ramona Dam, water would flow through the Green Valley Creek and Sycamore Creek areas to Lake Hodges. The areas of potential inundation are presently undeveloped and will remain so given the potential for property damage, injury and loss of life due to complete or breach failure of either Poway Dam and/or Ramona Dam.

CONCEPT OF RISK

Earthquakes are not predictable with any practical short-term accuracy. It is presumed that an earthquake will occur in certain areas at some point in the future. Seismologists are beginning to be able to establish an approximate rate of occurrence and potential magnitude of future quakes based upon historical data. In the past, California earthquakes have caused significant damage and injury. It is the knowledge of the past events and the potential for future quakes that makes the determination of acceptable risk important in future land use planning.

Risk is the chance of damage or injury occurring over some period of time. The basic objective of evaluating seismic risk is to reduce the loss of life and property damage due to seismic activity to an "acceptable" level. It is not possible or completely practical to eliminate all risk to life and property.

The Council of Intergovernmental Relations guidelines for the General Plan Seismic Safety Elements define acceptable risk as:

"The level of risk below which no specific action by local government is deemed to be necessary other than making the risk known."

Because risk is function of chance (probably), there is an inherent degree of uncertainty in using risk as a basis for land use planning. However, when risk can be determined, programs incorporating or avoiding the risk may be developed. Risk-reduction measures can be enacted and risk can, therefore, be a framework for land use decision-making.

Every seismic hazard has an associated element of risk. This risk has two aspects. The first is the chance that the hazard will, in fact, occur and the second is that the measures taken to mitigate the hazard will be sufficient to reduce the damage to life and property to a predetermined acceptable level. There are no means with which to prevent an earthquake or its natural effects, but the potential for disaster can be minimized.

Factors which should be considered in establishing mitigation measures acceptable risk include:

- Specific importance of essential facilities during seismic events.
- The number of persons subjected to hazardous conditions.
- Voluntary or involuntary use
- Cost of eliminating potential risk. Essential facilities are those structures or buildings and usable for emergency purposes after an earthquake in order to preserve peace, health and the safety of the public. Such facilities include, but are not limited to:
 - Hospitals and other medical facilities having surgery or emergency treatment areas.
 - Fire and police stations.
 - School buildings.
 - Municipal government disaster operation and communication centers deemed vital in emergencies.
 - Public utility facilities.

Because the destruction of any of these facilities could compound problems or emergencies resulting from earthquakes, only a very low level of risk is acceptable in the location and construction of these facilities.

Other factors involved in the determination of acceptable risk for essential facilities include the following:

- **Occupancy Levels:** The number of persons using or occupying a structure should receive important consideration in determining acceptable risk. High-occupancy uses such as large meeting halls, theaters, schools, churches, office buildings and shopping centers could subject large numbers of persons to hazards. Only a low level of risk is acceptable in high

occupancy uses. A higher level of risk may be acceptable in low-occupancy uses such as warehouses and single family houses. The concept of "person to hours of occupancy" can be useful in determining priority in reducing risk.

- **Voluntary vs. Involuntary:** Involuntary risk occurs in structures and uses where a person has no choice in whether to submit to a certain level of risk. These uses include schools, hospitals and convalescent homes. Because persons using these facilities may be incapable or restrained from leaving during an earthquake, only a very low level of risk should be acceptable.
- **Cost of Mitigation:** Cost may be the most important factor in reducing risk. The reduction of risk must be balanced against the cost of achieving that reduction. These costs may be direct, as is the case of reinforcing a building, or indirect, as in the case of zoning seismically or geologically hazardous areas as open space. The following are examples of mitigation measures in which cost is an important factor in reducing risk.
- Rehabilitation or demolition of nonconforming structures.
- Requiring design of certain new buildings to meet extraordinary seismic design criteria.
- Limiting or prohibiting development in hazardous areas.

• **Earthquake Preparedness Scenario:**

An earthquake planning scenario for a large earthquake on the Rose Canyon fault (Reichle and others, 1990) has been prepared by California Department of Conservation, Division of Mines and Geology to evaluate the effects of a devastating earthquake on public utilities, public transportation, buildings and human life in the San Diego region.

FLOOD HAZARDS

Flooding due to winter storms does substantially more property damage and threatens greater injury and potential loss of life than any other natural or man-created hazard. Solving Poway's flood control hazards will continue to be one of the City's highest priority projects until winter rains can be accommodated without property damage, injury or loss of life.

The City of Poway is located within San Diego County Flood Control District Zone 1. Zone 1 extends from Santa Ysabel to the coast and includes the San Dieguito area, Del Mar, San Marcos, Ramona and Poway. The total area of Zone 1 is 587 square miles. The zone consists of four major creek watersheds: San Marcos, Escondido, San Dieguito and Los Penasquitos. Poway is divided between the San Dieguito and Los Penasquitos watersheds.

The Green Valley, Stone Ridge and Old Coach areas of Poway are within the San Dieguito Drainage Basin. The creeks that drain into this basin are the Thompson Creek, Green Valley Creek,

Warren Canyon Creek, and the Green Valley Truck Trail Creek. Drainage from these creeks flows into Lake Hodges and eventually into the Pacific Ocean along the San Dieguito River.

The majority of Poway is within the Los Penasquitos Creek Drainage Basin. The creeks that drain into Los Penasquitos basin are Poway Creek, Pomerado Creek, Los Penasquitos Creek (Beeler Creek) and Rattlesnake Creek. Poway Creek is the largest creek with a drainage area of 21 square miles. The other creeks are similar in size with drainage areas averaging seven square miles.

FLOOD HAZARD DAMAGE

In recent years, the amount of damage caused by flooding has increased. This is both a result of changes in rainfall and more development within flood hazard areas. Essentially, damage is done because homes and other structures are located in the floodplain without proper mitigation. The Zone 1 Comprehensive Plan for Flood Control and Drainage (published July 1976) states that approximately 350 homes along Poway Creek would be inundated by a 100 year storm. The 100 year storm is the value used to design flood control facilities and delineate flood control facilities and delineate flood hazard areas. A City study performed in December 1981 found 465 homes within the same area. Along Rattlesnake Creek there were 115 homes in the 100 year floodplain in 1976 and 213 in 1981. Clearly, past development within the floodplain is the primary cause of the increase in property damage and loss due to flood hazards.

FLOOD MANAGEMENT AND IMPROVEMENT

Previous Poway community land use policies under the County of San Diego clearly did not effectively mitigate flood hazards. Since incorporation, the City of Poway has taken several steps to manage and improve the flood-prone areas. In the future, proper flood hazard management and improvement can be accomplished by a four-fold process: (1) the major creeks should be maintained to keep free and clear of flood water obstructions; (2) appropriate land uses should be delineated within flood hazard areas; (3) upstream detention basins should be constructed to reduce the volume and velocity of flooding areas; and (4) continue to improve and expand the City's drainage system.

Creek maintenance is essential to utilizing natural watercourses as flood control channels. In recent years, debris that included over-vegetation and dumping worsened upstream flood hazards by restricting the free flow of water.

In the long-term, the proper management of the flood hazard areas will do the most to reduce potential loss of life, injury and property damage. Land use within the 100 year floodplain should be restricted to very low density or intensity uses. Flood control improvements may be constructed to reduce the extent of the flood hazard area.

Flood hazard management practices will reduce future increases in flood hazards but will not assist those uses already within the floodplain. Remedial measures to reduce the floodplain area

to the area now within the floodway (the area within the actual creek boundaries) need to be constructed. Generally there are two alternatives available. One is to construct concrete trapezoidal channels that can accommodate rapid volumes of water within relatively small areas.

These are normally required when floodwaters must be channeled through a developed area. There are two major drawbacks with the concrete channel. One is the expense of construction (they are the most expensive form of flood control) and the other is the loss of natural creeks and channels which are a significant element of Poway's rural character and atmosphere.

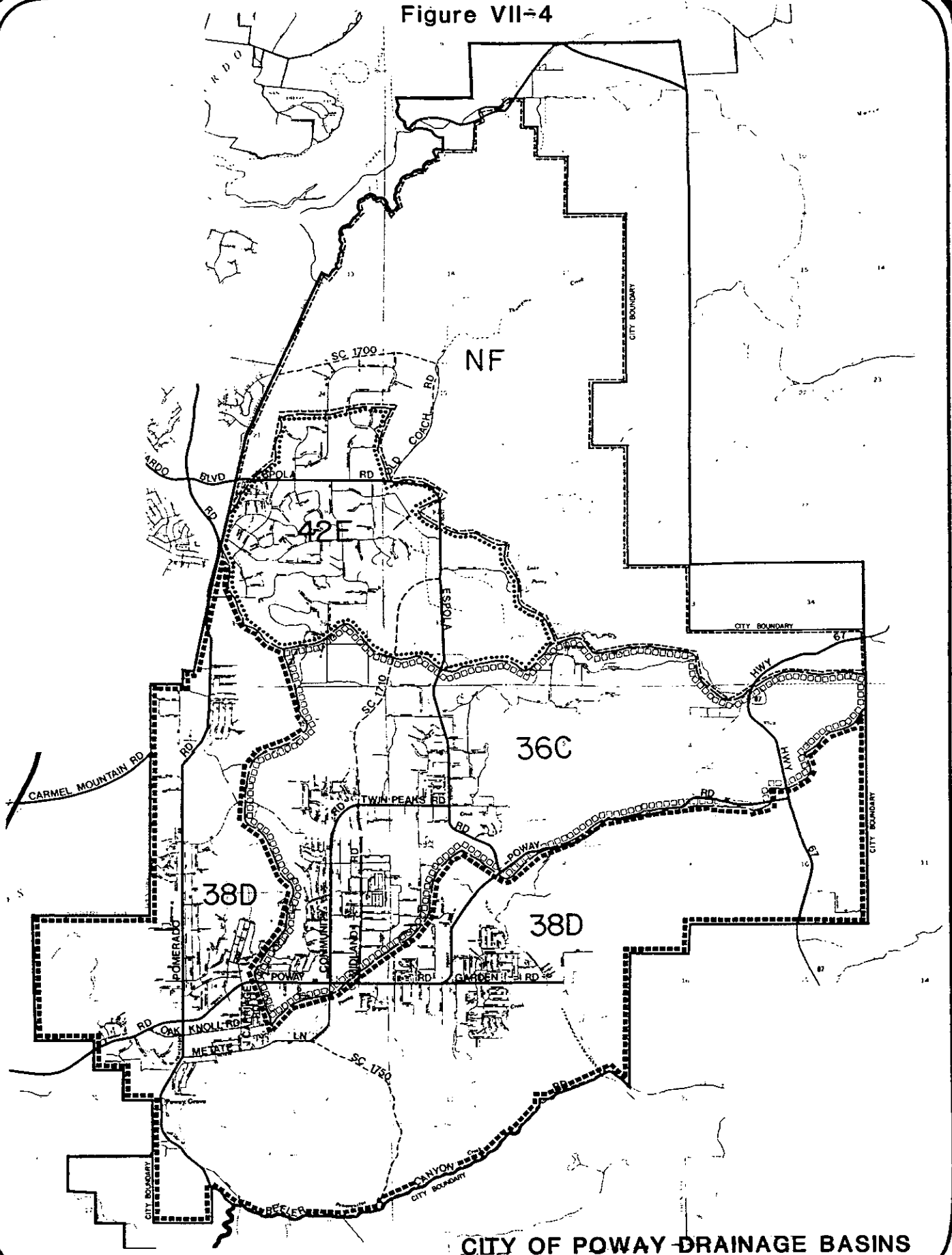
The other alternative is to construct upstream detention basins. The detention basins are less costly, can be constructed at one time (concrete channels are normally constructed in segment due to the high costs), and will save the natural creeksides of Poway. Detention basins reduce the width of the floodplain by holding back the floodwaters and letting them out slowly, but over a longer duration. However, the primary purpose of reducing the volume and velocity is achieved and the amount of damage reduced.

Although flooding poses the greatest potential danger to life and property for those residences in proximity to major streams and channels, losses from flooding are not exclusively limited to those areas. Drainage waters that follow tributaries and ditches often swell beyond their channels during heavy rain storms. New development often increases the amount of impervious surface increasing

the amount of runoff. Each of these sources cumulatively adds to the total amount of drainage water that travels down the street or behind houses before flowing into one of the major channels.

The City of Poway is divided into five drainage basins. The location and size of these basins are determined by the creeks that traverse through them, the amount of residential development in them and the type and size of drainage improvements. To minimize the flooding potential in each of the drainage basins, the City has proposed over 85 drainage improvement projects that include expanding earthen channels, constructing new underground pipe systems and replacing old and inadequate systems. The timing and construction of these projects will be based on need and financing.

Figure VII-4



CITY OF POWAY DRAINAGE BASINS

HAZARDOUS WASTE MANAGEMENT

We live in a time of advanced technology and a high standard of living. This industrial age has lent itself to a great dependence upon the use of products containing chemical substances and/or requiring the use of chemicals in their manufacturing and packaging. While our quality of life and economic stability may, in some sense, be dependent on these products, we are, at the same time, threatened by the mismanagement of their chemical remains or the hazards generated. In 1986, Poway generated 179 tons of hazardous waste, nearly all of it waste oil.

Hazardous waste is any waste material that has the potential to damage human health or the environment. A vast array of consumer goods such as televisions, computers, automobiles and medicines generate hazardous waste as part of their manufacturing process. Hazardous waste may be toxic, corrosive, reactive and/or flammable. The risk posed by a particular waste depends on its chemical composition, physical state, concentration, its availability for exposure to humans and the environment and the manner in which it is handled and managed.

Historically, the majority of hazardous waste generated in San Diego County has been disposed of directly in land disposal facilities. Presently, there are no hazardous waste landfills in Southern California. This land disposal crisis along with associated environmental and public health concerns pointed to the need to

explore alternative solutions to this traditional reliance on land disposal. These solutions focus on a hierarchy of management approaches aimed at reducing the wastes generated or treating hazardous waste produced rather than to simply bury them.

The answer to the critical issue of hazardous waste management lies in a comprehensive, cooperative planning effort among government, industry, environmental organizations and the public. Given this planning arena, it is possible to remedy the past mismanagement of hazardous waste by developing strategies to improve the capability for the safe management of these chemical by-products. Not only must we move away from land disposal of hazardous waste toward effective treatment and disposal in ways that are safe to the environment and to human health, but we must also take a hard look at reducing the waste generated by all segments of society--from large industry to small business, from governments to households.

The San Diego County Hazardous Waste Management Plan (HWMP) is the primary planning document in the County providing the overall policy direction for all the County's jurisdictions, including Poway, toward the effective management of the County's hazardous waste. The HWMP establishes programs to manage hazardous waste safely within the County and is the guide for local decisions regarding hazardous waste issues.

TABLE VII-2
Summary of Hazardous Waste Facility
Siting Criteria

OBJECTIVE: PROTECT THE RESIDENTS OF POWAY

1. Proximity to Populations (Modified Authority Criteria)
2. Proximity to Immobile Populations (Modified Authority Criteria)
3. Capability of Emergency Services (Modified Authority Criteria)

OBJECTIVE: ENSURE THE STRUCTURAL STABILITY OF THE FACILITY

4. Flood Hazard Areas (Authority)
5. Areas Subject to Tsunamis, Seiches and Storm Surges (Authority)
6. Proximity to Active and Potentially Active Faults (Modified Authority Criteria)
7. Slope Stability (Authority)
8. Subsidence/Liquefaction (Authority)
9. Dam Failure Inundation Areas (Authority)

OBJECTIVE: PROTECT SURFACE WATER QUALITY

10. Aqueducts and Reservoirs (Authority)
11. Discharge of Treated Effluent (Authority)

OBJECTIVE: PROTECT GROUNDWATER QUALITY

12. Proximity to Supply Wells and Well Fields (Authority)
13. Depth to Groundwater (Authority)
14. Groundwater Monitoring Reliability (Authority)
15. Major Aquifer Areas (Authority)
16. Permeability of Surficial Materials (Authority)
17. Existing Groundwater Quality (Authority)
18. Proximity to Groundwater Dependent Communities (County)

OBJECTIVE: PROTECT AIR QUALITY

TABLE VII-2 (Continued)

OBJECTIVE: PROTECT ENVIRONMENTALLY SENSITIVE AREAS

- 19. Wetlands (Authority)
- 20. Proximity to Habitats of Threatened and Endangered Species (State)
- 21. Natural, Recreational, Cultural and Aesthetic Resources (Authority)
- 22. Prime Agricultural Lands (State)
- 23. Mineral Deposits (State)
- 24. Public Facilities and Military Reservations (Authority)

OBJECTIVE: SAFE TRANSPORTATION OF HAZARDOUS WASTE

- 25. Proximity to Areas of Waste Generation (Authority)
- 26. Distance from Major Routes (Authority)
- 27. Structures Fronting Minor Routes (Authority)
- 28. Highway Accident Rate (Authority)
- 29. Capacity Versus AADT of Access Roads (Authority)

OBJECTIVE: PROTECT SOCIAL AND ECONOMIC GOALS

- 30. Consistency with General Plans (Authority)
- 31. Direct Revenue to Local Jurisdictions (Authority)
- 32. Changes in Employment (Authority)

The plan was prepared pursuant to State Assembly Bill 2948 (Tanner, 1986) which requires counties to develop comprehensive hazardous waste management plans and streamlines the permitting process for hazardous waste treatment facilities. The plan has been developed for adoption and implementation by the County of San Diego and the 18 incorporated cities in the County, including Poway. The management of hazardous waste, as put forth by the HWMP, should follow a hierarchy of preferred alternatives. The first priority is the reduction of the hazardous waste at the source, because it eliminates or minimizes the problem and risk and avoids the need for further handling. On-site and off-site recycling, recovery, and reuse is the next priority. This is followed by on-site and off-site treatment of hazardous wastes. Treatment techniques can physically or chemically alter the wastes to eliminate or diminish their hazardous properties and often reduce their volumes. Finally, land disposal facilities will continue to be necessary for the management of residuals produced by these treatment technologies.

The County of San Diego provides for County-wide managing and permitting of hazardous materials and their ultimate disposal, and the City of Poway supports the County in this regional effort. The City of Poway has authority for land use decisions regarding hazardous materials facilities within the City boundaries. The General Plan contains goals and policies relating to hazardous waste minimization, proper disposal of household hazardous wastes, and the proper siting of potential hazardous materials facilities. A

summary of siting criteria which will be applied is included as Table VII-2 and further described in Public Safety Appendix A.

NOISE HAZARDS

Noise is generally defined as unwanted or unpleasant sound. For most people, the usual consequences of noise are associated with interference with speech and other communication, distractions at home and at work, disturbance of rest and sleep, and the disruption of various recreational pursuits. The long-term effects of noise are widespread and include both psychological and physiological effects.

Noise, however, is a function of the mechanized world we live in. Noise is principally caused by the operation of machines for transportation (ground and air) and production. In Poway, traffic movement on the City's arterial road system is the predominant cause of noise.

The Noise Hazards section is closely related to other elements of the General Plan, particularly Land Use, Transportation and Housing. A major objective of the Noise Hazards Element is to encourage noise-compatible land uses. Effective land use planning can alleviate noise problems.

Regulations

The State of California recognized the relationship between noise and noise-sensitive land uses and emphasizes the need to control noise at the local level

through land use regulation. A noise element as well as other general plan policies and implementation ordinance (zoning code, noise ordinance, etc.) are effective tools in noise reduction and mitigation. Section 65302(g) of the California Government Code requires that each City have a noise element as part of the general plan. This noise element follows the guidelines adopted by the Office of Noise Control, pursuant to Section 46050.1 of the Health and Safety Code.

State guidelines are very specific as to the content of the General Plan Noise Elements. Government Code, Section 65302(f) states that the noise element should be prepared according to guidelines established by the State Department of Health Services. At a minimum, the Government Code requires the element to analyze the noise levels for:

- Highways and freeways;
- Primary arterials and major local streets;
- Passenger and freight on-line railroad operations and ground rapid transit systems;
- Commercial, general aviation, heliport, helistop and military airport operations, aircraft overflights, jet engine test stands and all other ground facilities and maintenance functions related to airport operation;
- Local industrial plants, including, but not limited to railroad classification yards; and

- Other stationary noise sources identified by local agencies as contributing to the community noise environment which may exceed the noise ordinance property line standards.

This element quantified the community noise environment in terms of noise exposure contours. These contours serve as guidelines for the development outlined in the Community Development Element in order to achieve noise-compatible land uses and to provide baseline levels and noise source identification for local noise ordinance enforcement.

Related Plans and Programs

A number of Federal and State agencies have prepared guidelines which identify standards and regulations concerning noise mitigation in both the work place and in residences. The California Department of Health, Office of Noise Control and the U.S. Department of Housing and Urban Development have identified standards and regulations concerning human exposure to noise and noise mitigation.

The California noise insulation standard adopted in 1974, established a maximum interior limit caused by outside sources, and minimum acoustical performance standards for party walls and floor/ceiling assemblies in new multiple family dwelling unit construction, including hotels, motels, hospitals and convalescent homes.

The maximum permissible interior CNEL caused by outside noise sources is 45

decibels. The party wall and floor/ceiling construction minimum performance standards are 45 decibels. An acoustic analysis is required showing that the multi-family units have been designed to limit interior noise levels, with doors and windows closed, to 45 CNEL in any habitable room. Title 21 of the California Administrative Code (Subchapter 6, Article 2, Section 5014) also specifies that multi-family attached units incorporate noise reduction features sufficient to assure that interior noise levels in all habitable rooms do not exceed 45 CNEL.

The California Preemption Plan includes a provision for enforcing property line noise limits according the zoning district, or avoiding incompatibility by implementing the land use CNEL compatibility limits, others of which are consistent with the aforementioned legislation.

The zoning limits, which regulate hourly average noise, can be enforced to control the trespass of noise leaving any property owned or zoned by the City unless the use of the property is preemptively regulated by the state or the federal government. Even in these cases, the agency which has jurisdiction may elect to apply local statutes in addition to state and federal laws. Neither this plan nor the property line noise limits of the zoning ordinance duplicate preempting legislation.

NOISE RATING SCHEMES

Definitions of terms and rating schemes for noise are described below. Noise levels are measured on a logarithmic scale in decibels which are then

weighted and added over a 24-hour period to reflect not only the magnitude of the sound but also its duration, frequency and time of occurrence. In this manner, various acoustical scales and units of measurement have been developed such as equivalent sound levels (Leq), day-night average sound levels (Ldn), and Community Noise Equivalent Levels (CNEL'S).

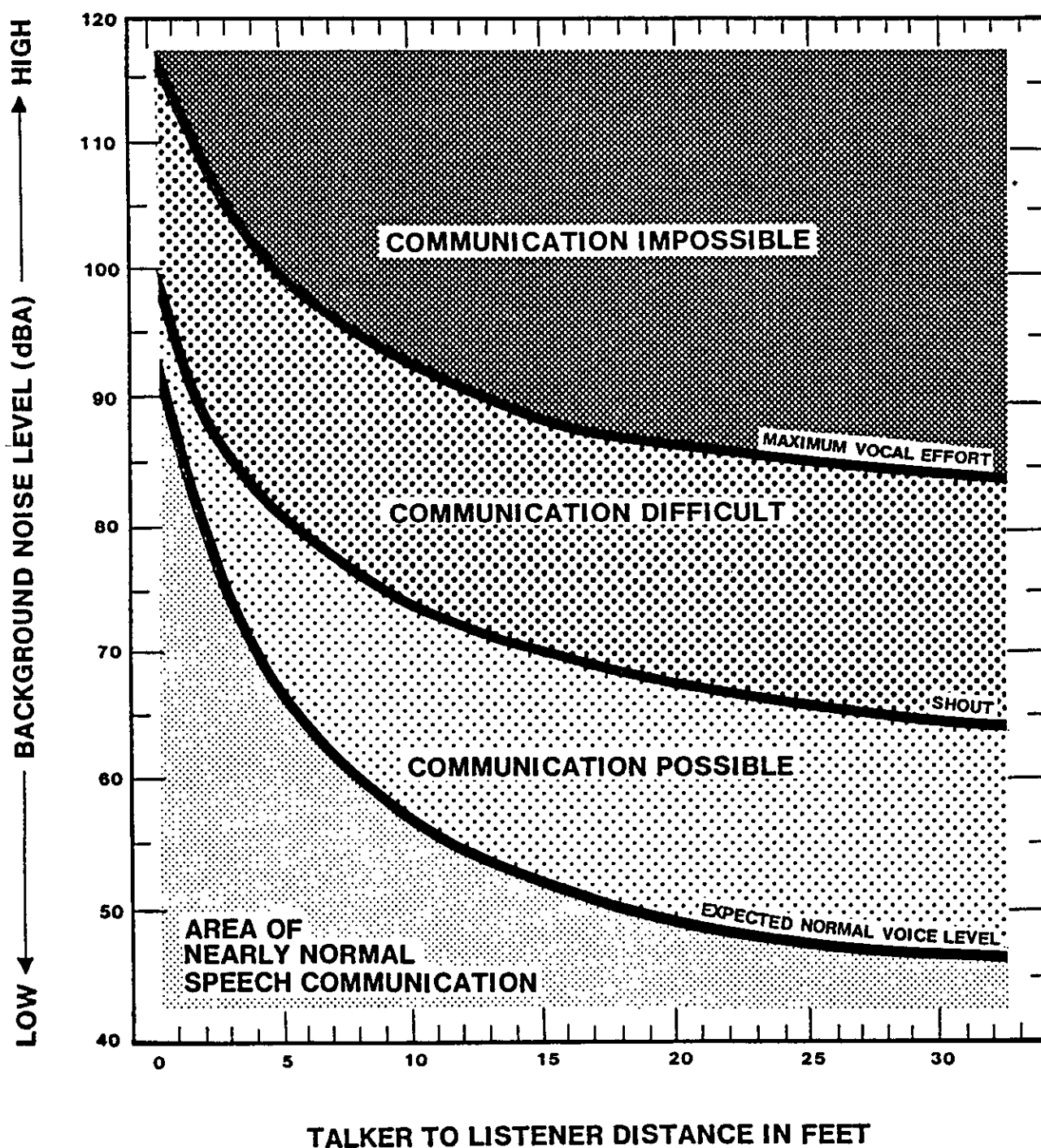
A-Weighted Sound Levels (dBA):

A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against the very low and high frequencies of the audible spectrum. They are essentially adjusted to reflect only those frequencies audible to the human ear. The decibel scale has a value of 1.0 dBA at the threshold of hearing and 140 dBA at the threshold of pain. Each interval of .10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud.

Therefore, a 1.0 decibel increase is just audible, whereas a 10 decibel increase means the sound is perceived as being twice as loud as before. Examples of the decibel level of various noise sources include the quiet rustle of leaves (10 dBA), a soft whisper (20 to 30 dBA), the hum of a small electric clock (40 dBA), ambient noise outdoors or in a house kitchen (50 dBA), normal conversation (60 dBA), or a busy street (70 to 80 dBA).

Figure VII-5

SPEECH COMMUNICATION AS A FUNCTION OF BACKGROUND NOISE LEVEL



SOURCE: "EFFECTS OF NOISE ON PEOPLE" ACOUST. SOC. AM. 56, 724 (1974)

Ambient Noise Level: The combined noise from all sources near and far is the ambient noise level. The ambient noise level is the existing level of environmental noise at a location.

Decibel (dB): A decibel is the unit for measuring sound pressure level and is equal to 10 times the logarithm (to the base 10) of the ratio of the measured sound pressure squared to a reference pressure (i.e., 20 micro pascals) squared.

Equivalent Energy Level (Leq). Equivalent energy levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent energy level (Leq) is the constant level that, over a given time period, transmits the same amount of acoustic energy as the actual time-varying sound. Equivalent energy levels are the basis for both the Ldn and CNEL scales.

Day-Night Average Level (Ldn). Day-night average sound levels are a measure of the cumulative noise exposure of the community. The Ldn value results from a summation of hourly Leq's over a 24-hour time period with an increased weighing factor applied to the nighttime period between 10:00 p.m. and 7:00 a.m. This noise rating scheme takes into account those subjectively more annoying noise events which occur during the normal sleeping hours.

Community Noise Equivalent Level (CNEL): Community Noise Equivalent Levels carry weighing penalties for noises that occur during the nighttime

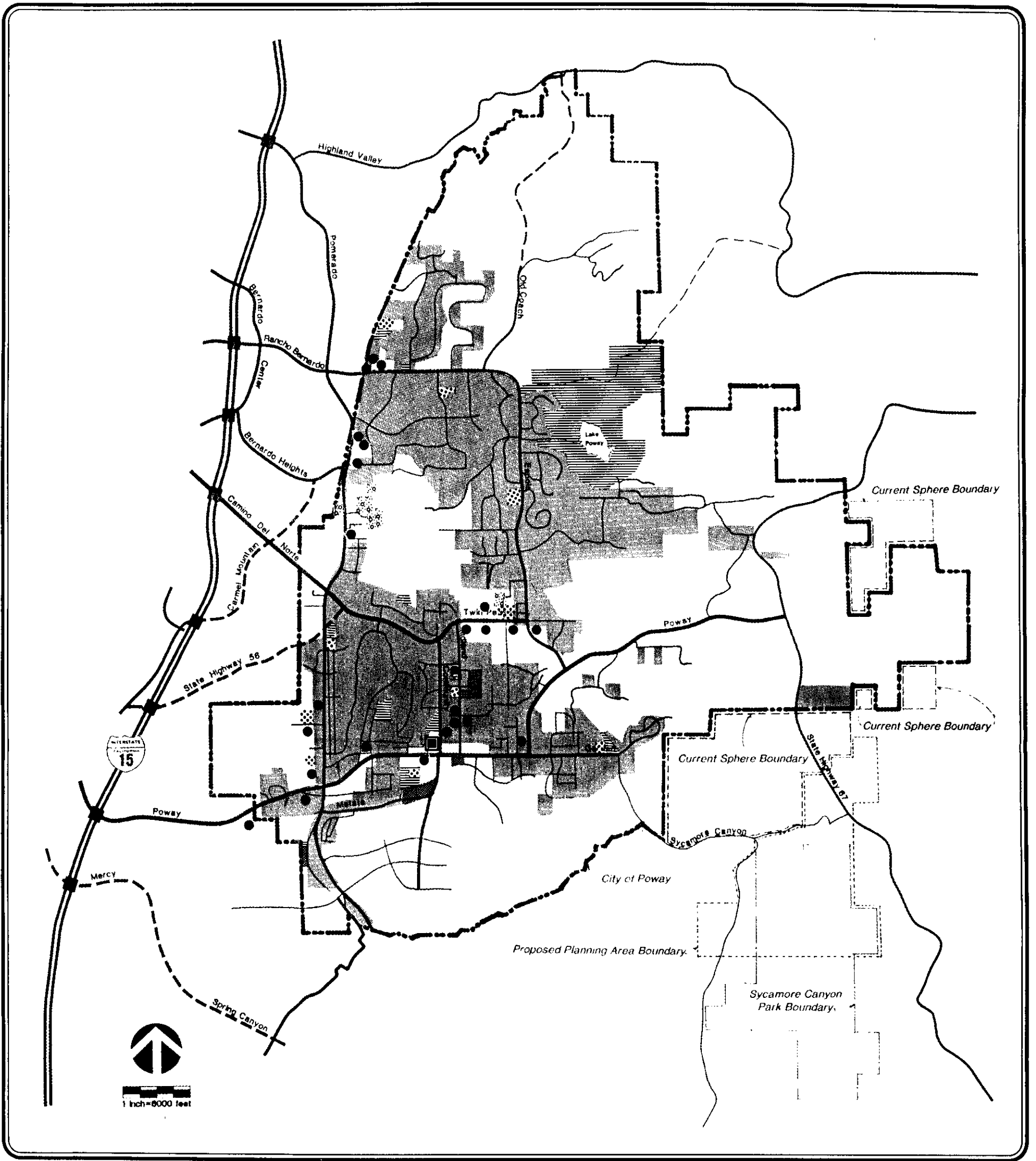
hours or that occur during the evening hours between 7:00 p.m. and 10:00 p.m. Because of the weighing factors applied, CNEL values at a given location will always be larger than Ldn values, which in turn exceed Leq values. However, the CNEL has limitations when compared to the decibel (dB) ratings, because it averages noise over a 24-hour period, and can thus downplay the highest noise events. The CNEL thus represents the daily energy noise exposure averaged on daily and annual basis.

Intrusive Noise: Intrusive noise is that noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, tonal or informational content, one prevailing ambient noise level.

L Percentile: L percentiles represent the A-weighted sound levels exceeded for the identified x% of the sample time (eg. L10, L90).

Noise Contours: The lines drawn about a noise source indicating constant or equal level of noise exposure are called noise contours.

Noise Sensitive Land Use: Noise sensitive land uses are land uses associated with indoor/and/or outdoor human activities that may be subject to stress and/or significant interference for noise. They include residential (single and multi-family dwellings, mobile home park, dormitories and similar uses); transient lodging (including hotels, motels, and similar uses);



LEGEND

- | | |
|------------------------|-------------------------------------------|
| ● Churches | Schools/Nursery Schools |
| Library | Hospitals/Convalescent Homes |
| Mobilehome Parks | Current Noise Sensitive Residential Areas |
| Parks/Recreation Areas | |

Existing Residential
Uses/Areas & Current
Sensitive Receptors

Figure VII-6



TABLE VII-3

HARMFUL EFFECTS OF NOISE

Effect	Noise Levels At Which Harmful Effects Occur
Prevention or Interruption of Sleep	35 - 45 dB(A)
Speech Interference	50 - 60 dB(A)
Extra Auditory Physiological Effects	65 - 70 dB(A)
Hearing Loss	75 - 85 dB(A)

Source: California Department of Public Health Report to 1971 Legislature

hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; and public or private education facilities, libraries, churches and other places of public gathering.

Hourly Noise Level (HNL): The HNL is the one hour average, A-weighted sound level. It is used in this plan to regulate noises which are not preempted from municipal control at the nearest property line according to zoning land use.

HARMFUL EFFECTS OF NOISE

Approximately 20 million people in the United States currently have some degree of hearing loss. In many of these cases, exposures to very loud, impulsive or sustained noises caused damage to the inner ear which was substantial even before a hearing loss was actually noticed. To prevent the spread of hearing loss, a desirable goal would be to minimize the number of noise sources which expose people to sound levels above 70 decibels. But hearing

impairment is only one of the harmful effects of noise on people.

Noise can also cause other temporary physical and psychological responses in humans. Temporary physical reactions to passing noises range from a startle reflex to constriction in the peripheral blood vessels, the secretion of saliva and gastric juices; and changes in heart rate, breathing patterns, the chemical composition of the blood and urine, the dilation of the pupils of the eye, visual acuity and equilibrium. The chronic recurrence of these physical reactions has been shown to aggravate headaches, fatigue, digestive disorders, heart disease and circulatory and equilibrium disorders. Moreover, as a source of stress, noise is a contributory factor in stress-related ailments such as ulcers, high blood pressure, and anxiety.

Two other harmful effects of noise which are commonly of concern involve speech interference and the prevention or interruption of sleep.

illustrates how excessive background noises can reduce the amount and quality of verbal exchange and thereby impact education, family lifestyles, occupational efficiency and the quality of recreation and leisure time. As shown therein, speech interference begins to occur at about 40 to 45 decibels and becomes severe at about 60 decibels. Background noise levels affect performance and learning processes through distraction, reduced accuracy, increased fatigue, annoyance and irritability and the inability to concentrate (particularly when complex tasks are involved or in schools where younger children exhibit imprecise speech patterns and short concentration spans).

Several factors determine whether or not a particular noise event will interfere with or prevent sleep. These factors include the noise level and characteristics, the stage of sleep, the individual's age, motivation to waken and so forth. Ill or elderly people are particularly susceptible to noise induced sleep interference, which can occur when intruding noise-induced levels exceed the typical 35-45 decibel background noise level in bedrooms. Sleep prevention can occur when intruding noise levels exceed 50 dBA.

The Table VII-2 summarizes the potentially harmful effects of noise on sensitive noise receptors discussed above.

LAND USE ISSUES

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than

commercial or manufacturing activities. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design of new developments. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work.

The City of Poway must make a determination regarding how much noise is too much. Guidelines for land use compatibility with noise have been generated by the U.S. Department of Housing and Urban Development and the California State Office of Noise Control, as shown in Tables VII-13 and VII-14 of the Master Environmental Assessment.

Significant Noise Sources

Two types of noise source should be considered, stationary and mobile sources. Fixed sources of noise include: manufacturing and construction activities, air conditioning/refrigeration units, whistles or bells, high-level radio, stereo or television usage, power tools, lawn mowers, appliances used in the home, and barking dogs. Mobile noise sources are typically transportation-related and include: automobiles, trucks, buses, motorcycles and off-road vehicles.

Motor vehicles on the City roadway system are the major source of continuous noise. As a result, they affect the noise environment of both the existing and planned land uses adjacent to the master planned transportation

system. The noise exposure due to traffic circulation depends on several physical features of the roadway, traffic patterns, terrain and the proximity to sensitive receptors. To account for all of these factors requires a site specific analysis at every receptor.

Table VII-5 shows the worst case noise influence areas based on existing conditions and recommended master plan traffic patterns for Transportation Element Master Plan roadways. The distances, shown in the boxes under the CNEL contour levels, are based on the maximum expected CNEL level for each roadway.

Noise Reduction Strategies

Growth in and near the City of Poway will generate increased traffic volumes. As traffic levels rise, existing residences will be exposed to higher noise levels.

Site Planning: Proper site planning to reduce noise impacts is one of the first areas that should be investigated for a given project. By taking advantage of the natural shape and terrain of the site, it is often possible to arrange the buildings and other uses in a manner which will reduce and possibly eliminate noise impact. Site planning techniques include:




1. Increasing the distance between the noise source and the receiver.
2. Placing non-noise sensitive land uses such as parking lots, maintenance facilities and utility areas between the source and the receiver.
3. Using non-noise sensitive structures such as garages to shield noise-sensitive areas.
4. Orienting buildings to shield outdoor spaces from a noise source.

Architectural Layout: In many cases noise reduction requirements can be met by giving attention to the layout of noise-sensitive spaces. Bedrooms, for example, will be considerably quieter if placed on the side of the housing facing away from a road. Similarly, balconies facing major noise sources should be avoided. Quiet indoor spaces can be provided next to a noisy roadway by creating a U-shaped development which faces away from the road. Proper architectural layout can often eliminate the need for costly construction modifications.

Noise Barriers: Noise barriers or walls are commonly used to reduce noise levels for ground transportation noise sources and industrial sources. Noise barriers serve a dual purpose in that they can reduce the noise level both outdoors and indoors.

Figure VII-7

FEDERAL EXTERIOR NOISE ACCEPTABILITY CRITERIA FOR HOUSING

DEGREE OF ACCEPTABILITY	EXTERIOR NOISE EXPOSURE Ldn (dB)					
	55	60	65	70	75	80
ACCEPTABLE						
NORMALLY UNACCEPTABLE						
UNACCEPTABLE						

Source: "Interim Noise Assessment Guidelines," U.S. Dept. Housing and Urban Development, 1980.

INTERPRETATION

ACCEPTABLE

The noise exposure may be of some concern but common building construction will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play.

NORMALLY UNACCEPTABLE

The noise exposure is significantly more severe; barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building constructions may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.

UNACCEPTABLE

The noise exposure at the site is so severe that the construction cost to make the indoor noise environment acceptable may be prohibitive and the outdoor environment would still be unacceptable.

Figure VII-8

INTERPRETATION

Normally Acceptable

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable

New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE Ldn or CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL -- LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
RESIDENTIAL -- MULTIPLE FAMILY	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
TRANSIENT LODGING -- MOTELS, HOTELS	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
AUDITORIUMS, CONCERT HALLS AMPHITHEATERS	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
PLAYGROUNDS, NEIGHBORHOOD PARKS	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETARIES	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
OFFICE BUILDINGS, BUSINESS, COMMERCIAL AND PROFESSIONAL	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
INDUSTRIAL, MANUFACTURING, UTILITIES, AGRICULTURE	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Clearly Unacceptable

LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

**TABLE VII-4
ROADWAY CENTER LINE DISTANCE TO CNEL CONTOURS IN FEET
(Based on City of Poway Transportation Plan)**

	CURRENT ADT			RECOMMENDED MASTER PLAN ADT		
ROADWAY SEGMENT	ESTIMATED 60, 65, & 70 DECIBEL, CNEL CONTOUR DISTANCES IN FEET FROM ROAD WAY CENTER LINE LINES*					
	<u>60</u>	<u>65</u>	<u>70</u>	<u>60</u>	<u>65</u>	<u>70</u>
ESPOLA ROAD						
West of Pomerado	262	122	57	327	152	71
Pomerado to Old Coach	233	108	50	360	167	78
Old coach to Lake Poway	126	58	<50	311	144	67
Lake Poway to Twin Peaks	128	59	<50	322	149	69
Twin Peaks to Poway Road	101	<50	<50	423	196	91
POWAY ROAD						
West of Pomerado	436	202	94	416	193	90
Pomerado to Community	453	210	97	373	173	80
Community to Garden	413	192	89	332	154	71
Garden to Espola	191	89	<50	287	133	62
Espola to SR-67	217	101	<50	149	69	<50
STATE ROUTE 67						
Scripps Pow Pkwy to Poway Rd	161	75	<50	473	220	102
North of Poway Road	153	71	<50	507	235	109
SCRIPPS POWAY PARKWAY						
West of Pomerado	N/A	N/A	N/A	461	214	99
Pomerado to SR-125	N/A	N/A	N/A	596	277	129
SR-125 to SR-67	N/A	N/A	N/A	723	336	156
POMERADO ROAD						
South of Scripps Poway Pkwy	73	<50	<50	355	165	77
Scripps Poway Pkwy to Poway Road	69	<50	<50	414	192	89
Poway Road to North City Parkway	219	102	<50	344	160	74
No. City Parkway to Twin Peaks	215	100	<50	379	176	82
Twin Peaks to Bernardo Heights	198	92	<50	396	184	85

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	CURRENT ADT			RECOMMEDED MASTER PLAN ADT		
ROADWAY SEGMENT	ESTIMATED 60, 65, & 70 DECIBEL, CNEL CONTOUR DISTANCES IN FEET FROM ROAD WAY CENTER LINE LINES*					
	<u>60</u>	<u>65</u>	<u>70</u>	<u>60</u>	<u>65</u>	<u>70</u>
NORTH CITY PARKWAY (SR-56)						
Pomerado Road to Twin Peaks	<50	<50	<50	333	155	72
West of Pomerado	N/A	N/A	N/A	482	224	104
CAMINO DEL NORTE						
East of Interstate 15	249	116	54	450	209	97
TWIN PEAKS ROAD						
Pomerado to No. City Parkway	196	91	<50	401	186	86
No. City Parkway to Community	160	74	<50	538	250	116
Community to Midland	175	81	<50	338	157	73
Midland to Espola	146	68	<50	146	68	<50
COMMUNITY ROAD						
Poway Road to Twin Peaks	103	<50	<50	154	71	<50
South of Poway Road	176	82	<50	215	100	<50
SYCAMORE CANYON ROAD						
Scripps Poway Parkway to Poway Road	N/A	N/A	N/A	460	214	99
GARDEN ROAD						
Poway Road to SR-125	125	58	<50	187	87	<50
MIDLAND ROAD						
Poway Road to Edgemoor St	128	59	<50	153	79	<50
Edgemoor to Twin Peaks	73	<50	<50	153	79	<50

To be effective, a noise barrier must be massive enough to prevent significant noise transmission through it and high enough and long enough to shield the receiver from the noise source. A safe minimum surface weight for a noise barrier is 3.5 pounds/square foot (equivalent to 3/4-inch plywood) and the barriers must be carefully constructed so that there are no cracks or openings. Since sound travels in a straight line, to be effective, a barrier must interrupt the line-of-sight between the noise source and the receiver

Another important and often overlooked consideration in the design of noise barriers is the phenomenon of "flanking." Flanking is a term used to describe the manner by which a noise barrier's performance is compromised by a noise passing around the end of a barrier. The effects of flanking can be minimized by bending the wall back from the noise source at the ends of the barrier.

In addition to meeting acoustical requirements, noise barriers must be evaluated for possible maintenance problems, aesthetic and environmental considerations, safety conflicts and cost. Where space is available, a meandering earth berm is both effective and aesthetically pleasing. Where space is restricted, a wall would be appropriate, but, in either case, landscaping should be utilized with the barrier for aesthetic purposes. The overall height of noise walls should be limited to avoid visual blight.

Construction Modifications: If site planning, architectural layout, noise barriers or a combination of these

measures does not achieve the required noise reduction for the building, it will be necessary to modify the building's construction. Indoor noise levels from exterior sources are controlled by noise reduction characteristics of the building shell. The walls, roof, ceilings, doors, windows and other penetrations are all determinants of the structure's overall noise reduction capabilities.

In general, windows and doors are the acoustical weak links in a building. Often, all that is necessary is that the windows be sealed on the noisy side of the building and an alternative means of ventilating the building provided. Beyond this, thicker windows or double-glazed windows may be necessary. Doors should not be located on the side of the building facing a noise source. If they are, they should be solid-core doors and should be equipped with an appropriate acoustical door gasket. If cases in which more noise reduction is required, the ceiling/roof and/or the walls must be modified to provide the required noise reduction. The actual modifications will depend on the amount of noise reduction required.

Exterior Sensitivity

Land use sensitivity to noise depends on the need for the quiet outdoor use of property. The following is the exterior CNEL limit for declared sensitive land uses.

As noted, the traffic volumes and accompanying noise levels are projected to increase with respect to the development pace of the City. Many of Poway's first subdivisions, which

<u>LAND USE</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>
Single Family & Mobile Homes	Yes	No	No	No
Passive Prks	No	Yes	Yes	No
Multiple Family	Yes	Yes	Yes	No
Lodging	Yes	Yes	Yes	Yes

required little or no noise mitigation, are located adjacent to these roadways. To minimize the noise impacts within these neighborhoods, the City has constructed noise attenuation walls on sections of Pomerado and Twin Peaks Road

It is the goal for all new residential subdivisions to maintain a 60 Db exterior noise standard, however, this level of mitigation is not always achievable when constructing noise walls within existing subdivisions. In such cases topography, setback distances, secondary structures, mature tree sand other amenities constrain the location and height of the wall. Given these circumstances, the City will strive to achieve the best level of mitigation possible.

While it is not the desire of the City to construct a noise wall adjacent to every arterial roadway, the City does recognize the need to maintain noise levels that are conducive to residential living. To this end, the city will continue to evaluate those locations where noise levels exceed unacceptable standards.

For residential areas next to existing arterials, the City will use the following general guidelines:

1. CNEL noise levels in undeveloped areas will mitigate to 60 dB;
2. When improvements to arterials are constructed in developed areas where existing CNEL is below 60 dB, noise levels will be mitigated to a CNEL of 60 dB provided a noise attenuation wall does not exceed eight feet. If the proposed noise attenuation wall exceeds eight feet, the City will strive to reduce noise to the best practical level.
3. In areas where the existing CNEL noise level exceed 65 dB, the noise level will be mitigated to 65 dB.

Regarding intermittent mechanical noise, due to the proximity of some residential areas to commercial uses, a 9:00 p.m. deadline for mechanical noise in these areas would be appropriate (rather than a 10:00 p.m. deadline). Also, deliveries, cleaning of parking lots and dumpster service for commercial and industrial businesses need to be reviewed as these activities may also be disruptive to residential uses in the vicinity.

GOALS, POLICIES AND STRATEGIES

The goals, policies and strategies shown below are those that relate directly to issues discussed in the Public Safety master element. The various elements of the General Plan are intended to be consistent with each other and should be interpreted to be consistent. Goals and policies contained in other elements will also support those included here. A complete listing of all goals, policies and strategies is contained in the Goals, Policies and Strategies Section of this General Plan.

GOAL II. IT IS THE GOAL OF THE CITY OF POWAY TO PROVIDE FOR AN ORDERLY BALANCE OF BOTH PUBLIC AND PRIVATE LAND USES IN CONVENIENT AND COMPATIBLE LOCATIONS THROUGHOUT THE CITY AND TO ENSURE THAT ALL SUCH USES SERVE TO PROTECT AND ENHANCE THE ENVIRONMENT, CHARACTER AND IMAGE OF THE CITY.

Policy B - Distribution of Land Uses

Land uses should be distributed so as to encourage in-fill development within the built-up parts of the City, protect the integrity of existing land uses and densities and preserve the open space and rural nature of Poway.

Strategies

1. Encourage land uses and densities that are consistent with a rural lifestyle and image, including preservation of open space and development of very low density residential land uses. The density of land use shall remain primarily rural within the hillsides and remote regions of the City and suburban within the developed central community core.
2. Large contiguous areas of open space shall be encouraged throughout the City and shall not be fenced or otherwise constricted.
3. Watershed areas with slopes greater than 25 percent shall be retained in parcel sizes of 40 acres or more.
4. The majority of residential construction in the City shall be in rural residential categories. Rural residential areas shall be primarily devoted to large-lot custom home construction although in some instances tract homes that simulate custom homes may be allowed.
5. Various types of multiple family units are encouraged in order to provide greater variety in regard to design and lifestyle preference.

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6. Multi-family residential land uses shall be located in areas compatible with existing land uses and in proximity to major roads, transit, commercial areas and public services and facilities.
7. Recreational uses (e.g., resorts, golf courses) may be allowed in rural areas providing that provisions are made for the health, safety and welfare of the users and surrounding residents and that the uses are consistent with the policies of the Land Use and Community Design Elements.
8. In rural residential areas, most uses other than agricultural and residential shall be limited to areas with natural slopes of 10 percent or less. Other uses such as hiking, and riding trails, driving ranges, golf courses and other recreational uses may be considered on steeper slopes providing that they do not significantly alter the landform. Buildings and parking lots must adhere to slopes of less than 10 percent.
9. The distribution of land uses should consider the health, safety and welfare of the community in regard to natural hazards.
10. Public or quasi-public structures (schools, churches, hospitals) shall be located in low-risk seismic or geologic hazard areas.
11. Community commercial land uses that will serve the entire community or subregion in which Poway is located are encouraged along Poway Road adjacent to existing uses of similar intensity.
12. Limited neighborhood commercial activities may be located on the border of rural residential and urban land uses.
13. Mobile home park land uses shall be located in areas compatible with existing land uses and in proximity to major roads, transit, commercial areas and public services and facilities.
14. New urban development projects (residential areas with greater than two dwelling units per acre (du/ac), commercial, and manufacturing) shall be bounded on a minimum of two sides by existing urban land uses and existing public facilities.
15. Where a commercial area abuts a residential area, the following improvements shall be made to ensure compatibility:
 - Structures shall be adequately set back from the residential property line to avoid land use impacts;

- An eight foot high solid masonry wall shall be constructed along the residential property line, except where it is clearly demonstrated that a shorter wall will adequately protect the residential property;
 - Landscaping in the form of trees, shrubs, and ground covers shall be planted within an area at least five feet wide, in addition to wall footings, on the inside area of the wall.
16. It is the specific intent of the City that commercial land uses on Pomerado, Twin Peaks and Espola Roads not be substantially expanded beyond their present locations.
17. Public and semi-public uses should be located where the use is compatible with surrounding land uses, development intensity, topography and architectural style. The following provisions shall guide the location of such uses:
- Site should be located adjacent to a Transportation Element roadway;
 - Public utilities should be immediately available to the site;
 - Sites where the public/semi-public uses can serve as a buffer between residential and other potentially incompatible use are particularly appropriate.
18. Manufacturing uses shall be located so as not to create adverse impacts on surrounding land uses and/or the City transportation system.
19. Commercial and manufacturing service land uses adjacent to residential land uses shall include a buffer zone or noise attenuation wall to reduce outside noise levels at the property line to 60 dBA.
20. Incompatible land uses shall not be made contiguous without adequate buffering and/or setbacks. Special emphasis and techniques shall be used in buffering surrounding land uses from commercial uses. In the event a question of compatibility exists between two uses or intensities, the lower intensity use shall take precedence. The City Council shall make the final determination in those areas of questionable land use compatibility.
21. Provide information on all submitted development proposals that may affect student enrollment to the Poway Unified School District (PUSD) for review in light of their planning goals. The City shall provide the PUSD with regular reports of building permit activity.

Floodplains and Floodways

22. Land within the 100 year floodplain should be designated for low density residential or open space uses.
23. Structures which do not conform to Poway Flood Hazard Management standards must be brought into conformance with these standards if reconstruction, rebuilding or repairing made necessary by damage will exceed 50 percent of the reasonable replacement value of the structure prior to any damage.
24. Critical emergency uses (hospitals, fire stations, police stations, public administration buildings and schools) shall not be located in flood hazard areas.
25. Development within the 100 year floodway is prohibited.
26. Development in the 100 year floodplain may be approved if the following conditions are met:
 - All structures, both permanent and temporary, must be raised one foot above the 100 year flood level;
 - Information certifying the 100 year flood level must be submitted by a qualified civil or hydrological engineer;
 - All-weather access must be provided to all developments for divisions of land, residential units, commercial buildings, manufacturing buildings or public buildings;
 - Information certifying that no upstream or downstream changes to the 100 year floodplain will occur must be submitted by a qualified civil or hydrological engineer.
27. For purposes of land division, floodway areas shall not be included in the calculation of net area.
28. To prevent increased flooding within Poway, all new land divisions and commercial developments shall be reviewed to determine the feasibility of storm drainage detention. Should the project increase the storm drainage runoff by ten percent or more, the differential storm drainage runoff shall be detained to the satisfaction of the City Engineer. This does not preclude the City from requiring storm drainage detention for projects which do not exceed a 10 percent differential increase in storm drainage.
29. No development shall be approved that would inhibit, prevent or preclude the location of proposed detention basins on Rattlesnake Creek and the north and south branches of Poway Creek, as outlined in the Floodwater Detention Basin Survey, dated August 1981.

GOAL VII. IT IS THE GOAL OF THE CITY OF POWAY TO PROVIDE A SAFE AND HEALTHY ENVIRONMENT FOR THE RESIDENTS OF POWAY.

Policy A - Functional and Financial Opportunities

Encourage and support the delivery of high emergency services through cooperation with other agencies and use of all financial opportunities available.

Strategies

1. Ensure that the maximum advantage is obtained from the resources of the federal government, state, county and neighboring municipalities and support efforts of other jurisdictions to provide safety related services.

Policy B - Fire Protection

The City shall maintain a high standards for the delivery of fire protection services.

Strategies

Fire Prevention

1. Encourage the development, implementation and public awareness of fire prevention programs.
2. Implement programs to reduce the quantity of combustible vegetative materials in the City to reduce wildland fire hazards including a brush management program subject to approval by the City.
3. Continue the use of the Weed Abatement Program and a fire buffer program along heavily traveled roads through thinning, diskling or controlled burning, subject to air quality standards. Brush, but not trees, should be cleared from both sides of major arterials.
4. The existing rows of eucalyptus trees should be trimmed periodically, and combustible vegetative materials at the tree base should be periodically removed.
5. All proposed development shall satisfy the minimum structural fire protection standards contained in the adopted editions of the Uniform Fire and Building Codes; however, where deemed appropriate the City shall enhance the minimum standards to provide optimum protection.

6. Fire protection requirements shall be expanded where structural and/or capital improvements cannot adequately protect the community from property damage or potential loss of life.
7. Study the feasibility of regulations requiring the installation of a sprinkler system at the time of construction of new residential structures and in conjunction with expansion or substantial interior remodeling of existing structures.
8. Require fire retardant roofing materials based upon the type of construction in and outside of high fire hazard areas.
9. Enforce the fire control requirements of the City's landscape standards.
10. In order to minimize fire hazards, the Poway Fire Department shall routinely be involved in the review of development applications. Consideration shall be given to adequate emergency access, driveway widths, turning radii, fire hydrant locations and needed fire flow requirements.
11. Advocate and support State legislation which would provide tax incentives encouraging the repair or demolition of structures which are classified as high fire hazards.
12. The construction of public facilities and transportation corridors shall be consistent with the adopted standards of the Uniform Building Code and Uniform Fire Code.

Facility Location

13. Fire stations shall be located on or near arterial roadways to provide for rapid response times.
14. The timing of station construction shall relate to the rise of service demand in the surrounding areas.
15. The location of stations should consider existing and projected land uses and appropriate buffering should be provided where necessary.
16. Proposed Fire Station 3 shall be located in the South Poway Business Park.
17. Emphasis on future construction and capital improvements should be toward the alleviation of deficiencies in critical risk areas.

RESOLUTION NO. 03-002

A RESOLUTION OF THE CITY COUNCIL
OF THE CITY OF POWAY, CALIFORNIA
AMENDING THE LAND USE ELEMENT OF
THE GENERAL PLAN OF THE CITY OF POWAY
GENERAL PLAN (GPA 02-03A, B, C AND D)
AND REPEALING RESOLUTION 93-018

WHEREAS, the City Council of the City of Poway recognizes that the need may arise to amend the City's General Plan; and

WHEREAS, Section 65350, et seq., of the California Government Code describes the procedures for amending General Plans; and

WHEREAS, the City of Poway has initiated a General Plan Amendment, GPA 02-03, which involves the consideration of the re-designation of land use and zoning of certain parcels, or portions thereof, in the Poinsettia Mobile Home Park from Mobile Home Park (MHP) to Commercial General and from Residential Single Family-7 to MHP; the transposition of the Open Space Resource Management (OS-RM) and Rural Residential A (RR-A) zone on APN 321-111-19 to correct a mapping error for GPA/ZC 02-01; the correction of clerical errors made under GPA/ZC 93-01 that established the Open Space-Recreation, Open Space-Resource Management, Public Facilities and Hospital Campus land use designations and zoning districts; and an amendment is a change to the text of the Public Safety Element of the General Plan deleting reference to the location of Fire Station #3 in the South Poway Business Park; and

WHEREAS, the City of Poway held a properly noticed public hearing in accordance with the California Government Code and the California Environmental Quality Act to consider that request; and

WHEREAS, the City Council further finds that the proposed General Plan amendment would provide minor changes in Land Use in the Old Poway area to align the boundaries of the Poinsettia Mobile Home Park and expand the commercial boundaries in the Old Poway area, would correct errors made in previous General Plan Amendments, and amends the text of the Public Safety Element to maintain consistency with current location requirements of new Fire Stations; and

WHEREAS, the City Council further finds that the proposed General Plan Amendment would result in a Public Safety Element that is consistent with the updated Safety Services Department staffing and facility location requirements.

WHEREAS, the City Council further finds that the proposed General Plan Amendment 02-03B would assist in the preservation of a unique biological habitat and topographic conditions and would result in a land use designation that is compatible with the adjoining open space and low-density residential land uses.

NOW, THEREFORE, the City Council does hereby resolve as follows:

Section 1: The City Council has considered the Environmental Initial Study (EIS) and Negative Declaration (ND), for General Plan Amendment 02-03 and public comments received on the EIS and ND. The subject EIS and ND documentation are fully incorporated herein by this reference. The City Council finds, on the basis of the whole record before it, that there is no substantial evidence the project will have a significant impact on the environment. The City Council hereby approves the Negative Declaration.

Section 2: The City Council hereby approves General Plan Amendment, GPA 02-03, an Amendment to the Land Use Element of the Poway General Plan re-designating certain parcels, or portions thereof, that have been amended to align the boundaries of the Poinsettia Mobile Home Park, correct errors made in previous General Plan Amendments, and amends the text of the Public Safety Element revising a Strategy that deleting reference to the location of Fire Station #3 in the South Poway Business Park as follows:

- A. GPA 02-03A – APN: 314-220-66 and 67 located on the east side of Brighton Avenue shall be re-designated from Residential Single Family-7 (RS-7) to Mobile Home Park (MHP) and the northeast corner of the Poinsettia Mobile Home Park consisting of approximately 10,500 square feet and located between 15002 through 15008 Orchid Avenue with the Poinsettia Mobile Home Park, APN 314-220-68, shall be re-designated from Mobile Home Park (MHP) to Commercial General (CG).
- B. GPA 02-03B - The location of the approximate 2-acre Open Space-Resource Management zone located Parcel 321-111-20 located on Eucalyptus Heights Road shall be transposed with the corresponding approximate 2-acre Rural Residential-A (RR-A) zoned portion located within the same parcel.
- C. GPA 02-03C -
 - 1. The land use of a 4.45-acre parcel located at the southerly terminus of Tannin Drive, APN: 273-790-11, Chaparral Park, and re-designated under GPA 93-01D, Ordinance No. 401 and Resolution 93-018, shall be corrected to read from Open Space (OS) to Open Space-Resource Management (OS-RM), not from Public Facilities (PF).
 - 2. The land use of a 25.24 acre site located at the northwest corner of Meadowbrook Street and Eisenhower Avenue, Meadowbrook Middle School, APN: 317-031-24, 29; 314-131-05; 314-134-07; 314-135-03, 04 and re-designated under GPA 93-01AA, Ordinance No. 391, shall

be corrected to read from Open Space (OS) to Public Facilities (PF), not to Open Space-Recreation (OS-R).

3. The land use of a 8.64-acre parcel located at the southwest corner of Pomerado Road and Ninth Street, Pomerado Elementary School, APN: 317-021-22 and re-designated under GPA 93-01BB, Ordinance No. 392, shall be corrected to read from Open Space (OS) to Public Facilities (PF), not to Open Space-Recreation (OS-R).
4. The land use of a 7.24-acre parcel located at the southwest corner of Midland Road and Edgemoor Street, Midland Elementary School, APN: 314-213-02 and re-designated under GPA 93-01CC, Ordinance No. 393, shall be corrected to read from Open Space (OS) to Public Facilities (PF), not to Open Space-Recreation (OS-R).

- D. GPA 02-03D - The Public Safety Element of the Poway General Plan is hereby amended as follows:

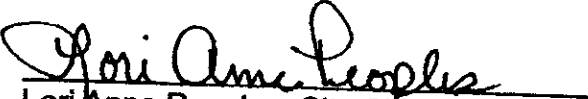
Goal VII, Policy B - Fire Protection, Strategy 16: Proposed Fire Station 3 shall be located in accordance with the June 2000 Department of Safety Services Staffing and Response Effectiveness Study.

Section 3: Resolution 93-018 is hereby repealed.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Poway, State of California, at a regular meeting this 7th day of January 2003.


Michael P. Cafagna, Mayor

ATTEST:


Lori Anne Peoples, City Clerk

STATE OF CALIFORNIA)
) SS.
COUNTY OF SAN DIEGO)

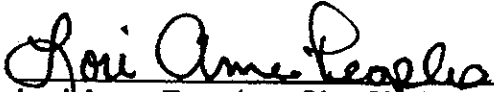
I, Lori Anne Peoples, City Clerk of the City of Poway, do hereby certify, under the penalty of perjury, that the foregoing Resolution No. 03-002, was duly adopted by the City Council at a meeting of said City Council held on the 7th day of January 2003, and that it was so adopted by the following vote:

AYES: EMERY, GOLDBY, REXFORD, CAFAGNA

NOES: NONE

ABSTAIN: NONE

ABSENT: HIGGINSON


Lori Anne Peoples, City Clerk
City of Poway

Inter-jurisdictional Cooperation

18. Opportunities for joint-power agreement facilities and/or operations should be evaluated and pursued where practical.
19. Support mutual aid agreement and communication links with the County and the other municipalities participating in the Unified San Diego County Emergency Service Organization.

Policy C - Medical Services

The City shall seek to ensure the provision of high quality medical services and facilities at a level consistent with the needs of the community residents.

Strategies

1. Regularly communicate with the Palomar Pomerado Health System to ensure that adequate health care facilities are available to meet the needs of Poway residents.
2. Assist the Palomar Pomerado Health System in assessing programs and in developing standards that can be used to evaluate the adequacy of medical service delivery for Poway residents.
3. The City shall assist the Palomar Pomerado Health System in obtaining current or amended reports pertaining to the demographic characteristics of Poway.
4. The City shall provide copies of all submitted development proposals that may cause an increase or change in medical service demand to the Palomar Pomerado Health System.
5. The City shall provide Palomar Pomerado Health System with regular reports of building permit activity.

Policy D - Law Enforcement

The City shall secure high-quality law enforcement so as to maintain a sense of personal safety and security for the residents of Poway.

Strategies

1. Routinely involve law enforcement personnel in the review of new development applications as they relate to street access and safety and to the concept of defensible space.

2. The central focus of law enforcement in the City of Poway should be protection of life and property.
3. Continue to promote the establishment of neighborhood watch programs to encourage community participation in the patrol and to promote awareness of any suspicious activity.
4. Promote crime prevention programs for commercial and industrial areas.
5. All structures should be adequately identified by street address and be lighted sufficiently to deter criminal activity.

Policy E - Air, Water, and Soil Pollution

The City shall work locally and at the regional level to reduce air, water and soil pollution within Poway.

Strategies

1. Work closely with regional agencies to help control all forms of pollution.
2. Seek to promote a development pattern that reduces daily trips for shopping, school and recreation.
3. Encourage ridesharing, the use of transit and other transportation systems management programs to reduce the number of vehicle miles traveled and traffic congestion
4. Consider the use of clean fuel systems for new local government fleet vehicles.
5. Implement plans and programs to phase-in energy conservation improvements.
6. Investigate incentives and regulations to reduce emissions from swimming pools, residential and commercial water heating and heaters.

Policy F - Emergency Plan

The City shall be prepared to successfully manage public emergencies which may occur.

Strategies

1. Pursue new ideas, plans and programs to improve Poway's *Emergency Plan*.
2. Maintain the Fire Department Classroom at Station 1 as a permanent emergency operations center and a secondary command post. Keep it equipped with sufficient supplies to begin operations immediately in the case of a disaster.

3. Encourage volunteer and civic organizations to educate and equip themselves to provide community emergency assistance, if necessary.
4. Develop an accurate citywide emergency resource inventory of locally available supplies, equipment and heavy vehicles and devise a state of emergency procurement procedure.
5. Utilize the Emergency Plan to provide direction to all persons responsible for acting in a disaster situation.

Policy G - Hazardous Waste Management

The City supports the San Diego County Hazardous Waste Management Plan and seeks its implementation by encouraging waste minimization, proper disposal of household hazardous wastes and by establishing criteria for land use decisions regarding hazardous waste treatment facility siting.

Strategies

Waste Minimization

1. Encourage businesses to conduct waste minimization opportunity assessments to determine their potential for source reduction and recycling and to achieve the County-wide goal of 30 percent reduction in hazardous waste by 1994.
2. Investigate the adoption of an ordinance to require businesses to prepare, submit and implement hazardous waste minimization plans.
3. Consider establishing a reward program to recognize businesses that implement waste minimization successfully and conducting a media campaign designed to recognize these businesses.

Household Hazardous Waste

4. Encourage safe and proper disposal of household hazardous waste; comply with Integrated Waste Management Act requirements of no Household Hazardous Waste to landfills by 1995.
5. Continue to encourage district collection events and seek an appropriate location to establish a permanent community collection center.

Contaminated Sites

6. Seek to ensure timely and complete clean-up of contaminated sites.

Siting of Hazardous Waste Treatment Facilities

7. The siting criteria of the San Diego County Hazardous Waste Management Plan are incorporated into the Poway General Plan by reference and shall be used to determine acceptable locations and conditions for off-site hazardous waste treatment facilities.
8. Ensure that off-site hazardous waste treatment facilities are subject to complete and thorough local review.
9. Encourage the coordination of facility siting responsibilities among Southern California's local governments through adoption and implementation of the Southern California Hazardous Waste Management Authority Regional Plan Fair Share Policies and Regional Action Plan.

Policy H - Noise

Ensure a safe and pleasant acoustical environment for the residents of Poway.

Strategies

1. Utilize site planning, zoning regulations, architectural design standards and building construction regulations to reduce noise impacts.
2. Review all discretionary project applications which include sensitive land uses for conformance with the Exterior CNEL Compatibility Matrix table.
3. Require mitigation measures for all proposed projects which are found, according to an Acoustical Analysis Report, to be subject to incompatible CNEL values.
4. Proposed land uses which generate noise should be subject to an Acoustical Noise Report, with mitigation measures to be specified.
5. An Acoustical Noise Report shall be prepared for all public works projects which have a potential for public noise exposure
6. Increases in traffic noise caused solely by roadway improvements shall be mitigated to future levels which would have occurred without the improvement.
7. When noise protection barriers are needed, they shall be located in the most cost-effective location. The maximum protection for a given barrier height and length shall be determined by acoustical analysis using the current edition of the FHWA noise level model program.

8. Noise protection walls may be limited to a height of eight feet, even when a taller wall may be needed to achieve Noise Element standards, if a taller one is deemed to be aesthetically degrading to the environment.
9. Mitigation walls will be at least four feet high, even if mitigation calculations call for a shorter wall.
10. A time-averaging sound level meter meeting American National Standards Institute S.4 standards shall be used to enforce the noise control provisions of the Zoning Ordinance
11. Enforce the provisions of the California Noise Insulation Standards (California Code of Regulations, Title 24) prior to issuing a building permit for multiple-family dwelling units. If these units are located in an area of noise incompatibility (exposed to 60 decibels or more, CNEL), an Acoustical Analysis Report, as prescribed in Section II D of the Noise Hazards Element, shall be prepared demonstrating that interior noise levels of habitable rooms will not exceed 45 decibels.
12. The interior floor/ceiling and party wall assemblies for multiple-family dwelling, whether or not they are located in areas of noise incompatibility, shall provide a minimum insulation between units of 45 decibels, FSTC.
13. Standard care and practice guidelines for building construction shall include, but not be limited to, the current edition of the American Standards for Testing and Materials, E-497, standard practice for installing sound-insulation lightweight partitions.
14. When new projects are submitted to the City that require Conditional Use Permits, Tentative Map approval, etc. a report must be submitted that demonstrates that significant environmental impacts, including noise, are mitigated to less than significant levels.
15. Acoustical Analysis Report standards containing the required format, measurements, calculations and exhibits for land use, zoning and building permit applications shall be prepared and updated annually.

Policy I - Solid Waste

Promote safe, environmentally sound means of solid waste disposal for the community.

1. Proceeds of recycling are a resource and should be used to benefit the community to the extent feasible.
2. Investigate means to create a market for recycled goods.

3. Implement a curbside recycling program in all residential neighborhoods.
4. Promote the use of all plant material waste for compost or mulch.
5. Promote the recycling of construction refuse and "white waste" (water heaters, washing machines, etc.).
6. Investigate ways to encourage businesses to recycle their waste.

GOAL VIII. IT IS THE GOAL OF THE CITY OF POWAY TO MINIMIZE INJURIES, LOSS OF LIFE, AND PROPERTY DAMAGE RESULTING FROM NATURAL AND MAN-MADE HAZARDS.

Policy A - Information and Services

The City should encourage the development and implementation of hazard prevention programs designed to provide adequate information and services to the community.

Strategies

1. Increase public awareness of dangers associated with natural hazards and of strategies that can be adopted to deal with them.
2. Assure that all development applications are reviewed by persons qualified to identify potential natural hazard problems and that appropriate conditions be attached to allowed developments so as to mitigate potential damage.
3. Actively encourage the generation of ideas, plans and programs to achieve a state of community self-reliance

Policy B - Geologic Hazards

The community should be protected against the hazards associated with geologic formations, particularly landslides, through proper land use policies and mitigation.

Strategies

1. Compare all development applications with the GIMS Mapping System to determine if significant geologic hazards exist.
2. Investigations performed by a qualified engineering geologist and soil engineer shall be required for all development review applications. For land development in the Friars Formation areas a detailed slope stability analysis is also required.

3. Include, as conditions of approval, the recommendations of the engineering geologist for geologic hazard mitigation and the soils engineer for soil related issues.
4. Development within unstable slope and landslide areas will be prohibited unless adequate measures are taken to protect against slippage.
5. Establish and maintain proper soil management techniques to reduce the adverse effects of soil-related problems such as shrink-swell behavior, erosion, run-off potential and septic tank failure.

Policy C - Seismic Safety

Seismic hazards should be controlled to a level of acceptable risk through the identification and recognition of potentially hazardous conditions and areas.

Strategies

1. Take all appropriate actions to identify and mitigate seismic hazards such as groundshaking, ground rupture, landslides, liquefaction and structural hazards.
2. The GIMS Mapping System and the Seismic Matrix shall be used to determine if the probability of a seismic hazard exists.
3. Where it has been determined that there is the probability of a seismic hazard, an investigation by a qualified engineering geologist shall be required.
4. Regularly inform community residents of the potential seismic hazards that can exist and the best methods of reducing injury, property damage or loss of life in the home or business establishment.

Policy D - Flood Hazards

The public should be protected against potential loss of life and property through regular dam and creek maintenance, proper flood hazard management policies and future capital improvements.

Strategies

Lake Poway Dam

1. Lake Poway Dam shall receive regular inspections of the embankment, spillway and inlet/outlet facilities to ensure safe operation.
2. Lake Poway shall be kept at or below the designed high water level to reduce the risk of spilling.

Natural Watercourses

3. Natural watercourses shall be maintained as the primary flood control channels. Where feasible, the natural creekside environment shall be preserved.
4. Maintain a program to ensure that the floodways are kept free and clear at all times. Costs associated with creek maintenance shall be borne by the property owner or the holder of open space easement rights.
5. Upstream detention basins shall be constructed on Rattlesnake Creek and the north and south branches of Poway Creek, as outlined in the Floodwater Detention Basin Survey published in August, 1981 in order to mitigate flood hazards while retaining the natural character of the major creeks and channels.

Watershed Areas

6. Watershed areas in the eastern Poway mountains should be preserved to maintain the health, safety and welfare of residents living adjacent to the City's major creeks in the Poway Valley.

Financing

7. The City shall explore and adopt appropriate legislation to finance the acquisition and construction of the detention basins including, but not limited to, developer financing, bonds and assessment areas drawn upon drainage area boundaries.
8. The cost of improvements to the City flood and drainage control system made necessary by new development shall be borne by the developer.

RESOLUTION NO. 00-081

A RESOLUTION OF THE CITY COUNCIL
OF THE CITY OF POWAY, CALIFORNIA
APPROVING GENERAL PLAN AMENDMENT GPA 00-02 AND
ADOPTING THE CITY OF POWAY 1999-2004 HOUSING ELEMENT UPDATE

WHEREAS, the City Council of the City of Poway recognizes that the need may arise to amend the City's General Plan; and

WHEREAS, Section 65350, et seq., of the California Government Code describes the procedures for amending General Plans; and

WHEREAS, the City Council desires to amend the General Plan Housing Element regarding the proposed 1999-2004 Housing Element Update; and

WHEREAS, the proposed 1999-2004 Housing Element Update is fully incorporated herein by this reference; and

WHEREAS, on August 1, 2000 the City Council of the City of Poway held a properly noticed and duly advertised public hearing in accordance with the California Government Code and the California Environmental Quality Act to consider the proposed 1999-2004 Housing Element Update; and

WHEREAS, the City Council finds that proposed General Plan Amendment, GPA 00-02, will not have significant adverse impacts on the environment and hereby issues a Negative Declaration.


NOW, THEREFORE, BE IT RESOLVED that the City Council does hereby approve GPA 00-02 and adopts the 1999-2004 Housing Element Update shown as Exhibit A attached hereto.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Poway, State of California, at a regular meeting this 1st day of August, 2000.



Michael P. Cafagna, Mayor

ATTEST:



Lori Anne Peoples, City Clerk

STATE OF CALIFORNIA)
) SS
COUNTY OF SAN DIEGO)

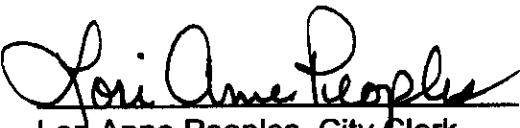
I, Lori Anne Peoples, City Clerk of the City of Poway, do hereby certify under penalty of perjury that the foregoing Resolution No. 00-081 was duly adopted by the City Council at a meeting of said City Council held on the 1st day of August, 2000, and that it was so adopted by the following vote:

AYES: EMERY, HIGGINSON, REXFORD, CAFAGNA

NOES: NONE

ABSTAIN: NONE

ABSENT: GOLDBY


Lori Anne Peoples, City Clerk
City of Poway

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