

EXHIBIT 3



City of Irwindale GENERAL PLAN UPDATE

**City of Irwindale
5050 North Irwindale Avenue
Irwindale, California 91706**



June 2008



Section 6

Public Safety Element

City of Irwindale
2020 General Plan



Introduction to the Public Safety Element

This Public Safety Element establishes City policy relative to the reduction and mitigation of natural and manmade hazards that must be considered in future planning and decision-making. The public's health and safety is an important component of the General Plan due to the City's location in a seismically active region. In addition to the public safety issues that must be addressed, this Element's scope has been expanded to include noise and air quality.

This Public Safety Element meets the State's requirements for a safety element and noise element. The Safety Element is concerned with identifying existing hazards and ways to reduce risk to people and property from the hazards on persons and of property. State law requires that every safety element include the following:

- The identification, mapping, and appraisal of seismic hazards of concern to planning and future development, including areas subject to liquefaction, ground-shaking, surface rupture, or seismic sea waves (Section 65302(f));
- An appraisal of mudslides, landslides, and slope stability that might occur as a result of a seismic disturbance (Section 65302(f)); and,
- The identification of the potential for fires and other natural and manmade disasters and measures designed to reduce the loss of life, injury, and damage to property (Section 65302(i)).

This Public Safety Element contains a plan that identifies evacuation routes and the locations of emergency shelters. The Public Safety Element also emphasizes the importance of emergency preparedness in reducing the impacts of natural and manmade disasters. Any effective disaster response program requires the cooperation of many governmental agencies. A primary goal of the City is to continue working with other agencies, both to prevent accidents (as much as this is possible) and to minimize risk. Towards this end, key elements of the City's Natural Hazards Mitigation Plan have been incorporated into the Element.

The Public Safety Element also addresses those issues mandated by the State of California for consideration in noise elements. The State recognizes that noise may have a significant impact on a community's well being, and therefore requires all jurisdictions to prepare a noise element to identify ways to minimize exposure. The State guidelines are

also very specific as to the content of noise elements. Government Code Section 65302(f) indicates 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 that the following noise-related impacts are considered:

- 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 over flights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operations;
- Local industrial plants, including, but not limited to, railroad classification yards; and,
- Other ground stationary sources identified by local agencies as contributing to the community noise environment.

The State General Plan Guidelines further indicate that noise exposure information should be used to develop the land use element (the Community Development Element) in the Irwindale General Plan, to achieve noise-compatible land use patterns (Section 5302(f)). Because land use patterns in Irwindale generally are well established, this Element focuses on resolving existing noise concerns. The policies related to noise issues stress the importance of protecting residents from excessive noise. Complementary policies and programs that address noise impacts are also found in the Community Development Element and the Housing Element.

The Public Safety Element identifies those health and safety issues (man-made and natural) that need to be considered in future planning and development. The Public Safety Element consists of the following sections:

- The *Introduction* provides an overview of the Element's scope and content.
- The *Public Safety Element Profile* provides an overview of those issues related to public safety, risk, and noise.
- The *Safety Plan* indicates those City policies related to public safety, emergency preparedness, and noise abatement. This section also identifies those programs that will be effective in addressing risk in the City.



The California Government Code states, "the General Plan and the parts and elements thereof shall comprise an integrated and internally consistent and compatible statement of policies." This Public Safety Element contains policies and programs designed to alleviate risk in the City. This Element indicates those areas of the City that may be subject to natural and man-made hazards including, but not limited to, flooding, seismic hazards, and exposure to high levels of noise.

Public Safety Element Profile

The City of Irwindale is located in a seismically active region and, as a result, is subject to the potential risks typically associated with earthquakes. In addition, the residents and workers in the City may also be exposed to other types of hazards commonly found in an urban environment. The presence of numerous large industrial activities and open pit mining operations also require special consideration in evaluating hazards in the City. This section of the Safety Element discusses agencies providing emergency services to those living and working in Irwindale and the primary hazards facing the City at the present time.

Public Safety Resources

The City of Irwindale is included in the County of Los Angeles Consolidated Fire District, which maintains a single fire station in the City, Station No. 48. This station, located at 15546 Arrow Highway near the Civic Center, consists of 16 full-time fire fighters. The station's equipment resources include one pumper, one reserve truck, and a paramedic unit. The average response time throughout the City is 6-minutes. Additional emergency resources are available from other California Division of Forestry (CDF) stations (the station is located in the City of Baldwin Park). The CDF equipment includes a snorkel truck and a triple pump. The overall fire insurance rating is 3 with the availability of alarm systems²⁸

On November 1, 1960, the Irwindale Police Department was established with five motorcycles and one police unit. The department now consists of 28 full-time police officers, 7 reserve officers, and 11 civilian employees. The department's enforcement tools include a K-9 unit, stolen vehicle tracking devices, and two motor units and a commercial enforcement unit, each equipped with radar. Response times in most areas of the City are five minutes or less. The Department is responsible

²⁸ The rating was developed by the Insurance Service Organization (ISO) that established a protection class rating of between 1 and 10 with 1 representing the best rating.

for staffing various activities aside from regular patrol duties that encompass calls for service from the business and residential community. These activities include stock car and drag racing at the Irwindale Speedway, Santa Fe Dam and City Park events, and various task force opportunities that combat illegal street racing, seat belt usage, and DUI violations.

The Department is currently involved in community outreach through its Community Lead Officer program. This program is tasked with educating the public on crime suppression, trends, reporting, and various other public safety issues. Neighborhood Watch and a Citizen's Academy are two programs recently implemented to assist in this endeavor. The department typically utilizes one person patrol units as part of its enforcement action, and has bicycle patrols that cover City Park and other community events.

The Department has jurisdiction over the City's 9.5 square miles of land that includes the Santa Fe Dam Recreational Area and bike paths along the riverbed. A mutual aid contract with the Los Angeles County Sheriff's Department provides for special weapons teams when required, and other specialized equipment or services including Homicide investigations. Air Support services are provided through a contract with the El Monte Police Department. Jail bookings are accomplished through a contract for services with the Glendora Police Department Jail Facility.

Two major hospital complexes that recently merged to become the Citrus Valley Health Partners, serve the City of Irwindale. Following the merger, the Inter-Community Campus and Queen of the Valley campus now work together to provide comprehensive health care service to the community's residents. In addition, there are three industrial medical clinics in the City: the Trans-Valley Medical Clinic, Foothill Medical Clinic and Irwindale Industrial Medical Clinic. The City of Hope medical complex and hospital is located in nearby Duarte.

Geologic and Seismic Setting

The City of Irwindale, along with the larger South Coast Basin, is located within a seismically active region located at the junction of the Transverse Ranges and the Peninsular Ranges. These two physiographic provinces experience continual seismic activity associated with the lateral movement of the North American and Pacific tectonic plates. The San Andreas Fault system, located approximately 31 miles north of the City, delineates the boundary where these two plates are joined.



Faults that may affect the City in the future include the following:

- *Duarte Fault.* While numerous faults, including active faults, have been mapped in the Southern California region, there is a single fault trace actually known to be present within the City's boundaries. A buried segment of the active Duarte fault is known to traverse the southwestern corner of the Azusa Largo pit continuing along Foothill Boulevard to the east.²⁹ The Duarte fault is considered a component of the larger Sierra Madre fault zone that is located along the southern foothills of the San Gabriel Mountains.
- *Sierra Madre Fault-San Gabriel Fault Zone .* The Sierra Madre fault is a reverse fault located approximately 2 miles north of the City, possessing a maximum credible magnitude of about 7.2 on the Richter scale.
- *San Andreas Fault.* The aforementioned San Andreas fault is considered most likely to produce a large seismic event within the next 100 years. The San Andreas fault lies approximately 23 miles northwest of the City. Geologic evidence suggests that a major earthquake (7.5 to 8.5 Richter magnitude) has a 50% chance of occurring within the next 30 years. An earthquake of this magnitude is comparable to the 1906 San Francisco earthquake and has the potential for causing considerable damage in the Southern California region.
- *Newport-Inglewood Fault.* An earthquake occurring along the Newport-Inglewood fault could impact Irwindale more severely than a San Andreas induced earthquake. The Newport-Inglewood fault is located approximately 29 miles southwest of the City, and it is estimated that 6.0 to 6.5 Richter magnitude earthquakes on this fault have a 15% to 50% probability of occurrence within the next 100 years. A 6.5 magnitude earthquake could produce strong ground shaking lasting from 12 to 18 seconds. The Long Beach earthquake of 1933 registered 6.3 on the Richter scale.
- *Raymond Hill Fault.* The Raymond Hill fault extends through the cities of South Pasadena, Pasadena, Arcadia, and San Marino. This fault has been postulated to be an extension of the Sierra Madre fault system. There is evidence of surface rupture exhibited by scarp features in

addition to fault creep. The Raymond Hill fault, a component of the larger Sierra Madre fault system lies approximately 3 miles west of the City. This left lateral reverse (strike slip) fault has a potential for a maximum credible magnitude of 6.7.

- *Clamshell-Sawpit Fault.* This fault extends through the cities of Sierra Madre and Monrovia. This fault is a reverse thrust fault with a mapped length of 15 miles. This fault was the most likely source of the 1991 Sierra Madre earthquake though the fault's depth probably prevented surface rupture.
- *Whittier-Elsinore Fault.* The Whittier-Elsinore Fault also lies in close proximity to the City (9 miles to the south), but historically this fault has produced relatively minor earthquakes (less than 4.5 Richter magnitude). Geologic studies indicate that this fault has less than a 15% probability of producing a moderate earthquake (5.5 to 6.0 Richter magnitude) within the next 100 years.

In addition to the above faults, a substantial number of previously unknown blind-thrust faults are now suspected to traverse the Los Angeles region. These faults are very deep and generally do not exhibit surface displacement common with the other types of faults. The two most recent damaging earthquakes in the Southern California region, the 1987 Whittier earthquake and the 1994 Northridge earthquake, originated from previously unknown blind thrust faults. Seven earthquakes ranging between 4.4 and 6.4 have occurred in the greater Los Angeles Basin from 1987 to 1994, involving at least five different faults. Major faults found in the vicinity of the City are noted in Table 6-1 and regional faults are shown in Exhibit 6-1.

²⁹ An active fault refers to those faults that have exhibited activity during the Holocene times (11,000 years before present (b. p.)

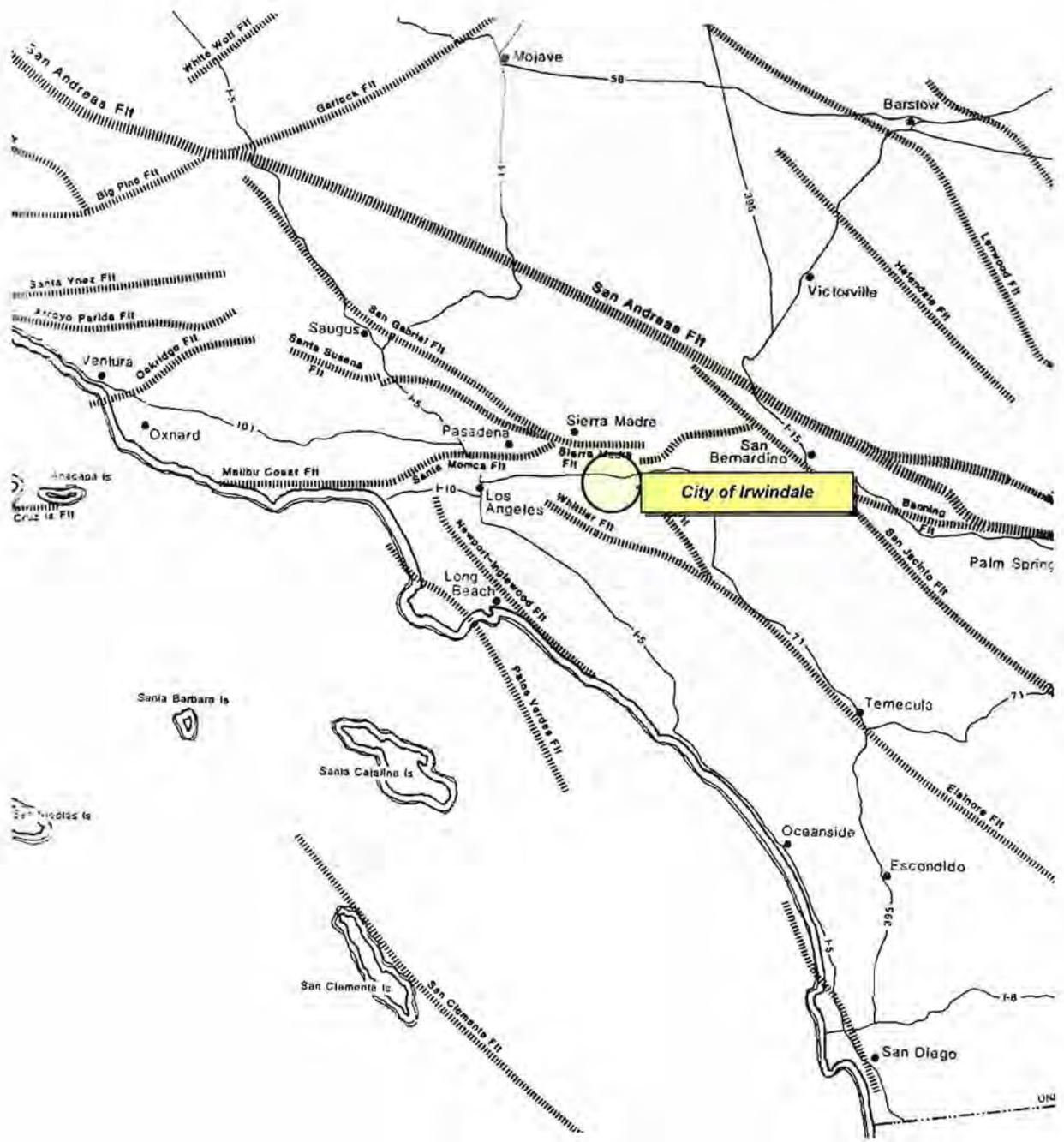


Exhibit 6-1
Regional Faults
City of Irwindale General Plan



**Table 6-1
Major Active Faults in the Irwindale Region**

Fault Name	Distance from City	MCR ¹	Fault Type	Most Recent Activity
Duarte	In the City	7.0	Reverse	N/A
Northridge	29 miles west	6.7	Reverse Oblique	1994
Elysian Park Zone	10 miles north-east	6.9	Blind Thrust Reverse	1987 (Whittier)
Sierra Madre	2 miles north	7.2	Reverse	1971
San Andreas	31 miles north-west	8.0	Strike Slip	1857
Newport Inglewood	29 miles south-west	7.0	Strike Slip	N/A
Whittier/Elsinore	9 south	7.0	Strike Slip	1987
Raymond Hill	3.5 miles northwest	6.0-7.0	Left Lateral	Holocene
Clamshell-Sawpit	3 miles west	NA	Reverse Thrust	1991

Notes: 1. MCR refers to a potential earthquake's the maximum credible intensity as measured on the Richter scale.
Source: United States Geological Survey

The downtown Los Angeles area is now known to be underlain by a number of potentially damaging blind thrust faults. These thrust faults are referred to as "blind" because they do not exhibit any surface expression typically associated with fault traces. Instead, these faults often produce folds in the overlying strata that may be characterized by rolling hills. The nearest known blind thrust fault to Irwindale is the Puente Hills Fault, located approximately 7 miles to the south of the City. The Puente Hills Fault was discovered in 1999 and a follow-up 2003 study prepared by the Southern California Earthquake Center (SCEC) determined that the fault had resulted in a major earthquake at least four times during the past 11,000 years with magnitudes (Richter) ranging from 7.2 to 7.7.

Seismic and Geologic Hazards

The effects of an earthquake may take many forms depending on a number of factors including distance from the epicenter, the characteristics of the underlying soils, the presence of groundwater, and topography. The primary effects include the following:

- **Surface Rupture.** Surface rupture refers to the actual "tearing apart" of the ground surface along a fault trace resulting from an earthquake. The

effects of surface rupture may be mitigated by placing structures at a specified distance from the known fault trace. The State of California has promulgated regulations prohibiting the placement of structures over or in close proximity to a known fault trace through the implementation of the Alquist-Priolo Special Studies Zones (APSSZ). There are no APSSZ in the City.

- **Ground Shaking.** The energy created from earthquakes moves out from the epicenter in waves that affect the various rock and soil types differently. In some instances ground shaking may cause unconsolidated soils to settle, which can result in significant damage to structures.
- **Liquefaction.** Liquefaction results when seismic induced ground shaking cause water-laden, cohesion-less soils, to form a quicksand-like soil condition below the ground surface. Structural damage may ensue as building foundations lose ground support. Liquefaction occurs in areas where groundwater exists within 30 feet of the ground surface and where poorly consolidated, cohesion-less soils predominate.
- **Slope Failure.** The ground motion generated by an earthquake may result in landslides and/or



slope failure. Those areas at greatest risk in the City include the steep slopes typically found within the quarries.

- *Tsunami.* A tsunami is created from offshore, underwater earthquakes that generate large and, often destructive wave fronts. The City's location away from the coastal areas precludes the affects of a tsunami from impacting Irwindale.
- *Seiche.* A seiche can be most clearly illustrated by imagining the "sloshing of water" in a large tub of water. The effects of ground motion often result in rhythmical, side-to-side movements of surface water bodies (lakes, streams, etc.), causing fluctuations of the water level. The exposed groundwater in the bottoms of a number of the larger quarries may be subject to seiche risk. However, given the depth of the groundwater and the steepness of the quarry walls, no off site risk is anticipated.

The California Geological Survey, through the Seismic Hazards Mapping Program, has identified those areas of the City that may be subject to liquefaction. Liquefaction hazard mapping focuses on areas historically characterized by ground water depths of 40 feet or less. Accordingly, a ground-water evaluation was performed in the Baldwin Park Quadrangle to determine the presence and extent of historically shallow ground water. Data required to conduct the evaluation were obtained from technical publications, geotechnical boreholes, and water-well logs dating back to the turn-of-the-century, including 1904 ground-water contour maps, 1944 ground-water contour maps, Department of Water Resources data, and ground-water level measurements compiled between 1960-1997.

The evaluation showed that the 1904 and 1944 ground-water levels within the Baldwin Park Quadrangle were quite similar. Both sets of maps demonstrate that shallow-water conditions (less than 40 feet depth) exist over a large area in the southwestern part of the quadrangle (near the Whittier Narrows) and along the southern margin within the San Jose Creek stream valley. Where records were examined, ground water is also relatively shallow in restricted drainages within the Puente and San Jose Hills. In general, it appears that relatively shallow and impermeable bedrock underlying the stream canyon sediments results in a shallow water table. These sediments can also remain saturated for long periods of time during wet seasons.

The areas underlain by late Quaternary geologic units were included in liquefaction zones using the criteria developed by the Seismic Hazards Mapping Act Advisory Committee and adopted by the California State Mining and Geology Board (CSMGB). Under

those criteria, liquefaction zones are areas meeting one or more of the following:

- Areas known to have experienced liquefaction during historic earthquakes;
- All areas of uncompacted fills containing liquefaction susceptible material that are saturated, nearly saturated, or may be expected to become saturated;
- Areas where sufficient existing geotechnical data and analyses indicate that the soils are potentially liquefiable; and
- Areas where existing geotechnical data are insufficient.

The application of CSMGB criteria for liquefaction zoning in the Baldwin Park Quadrangle is summarized below.

- *Areas of Past Liquefaction.* No areas of documented historic liquefaction in the Baldwin Park Quadrangle are known. Areas showing evidence of paleoseismic liquefaction have not been reported.
- *Artificial Fills.* Artificial fill sites in the Baldwin Park Quadrangle include water basin dams and river levees. Although these fills were certainly properly engineered, seismic hazard zoning for liquefaction at these localities is governed by the liquefaction susceptibility of natural soils underlying the fill sites.
- *Areas with Existing Geotechnical Data.* Sufficient geologic and geotechnical data exist for the California Geological Survey to adequately evaluate liquefaction potential of alluvial sediments throughout the Baldwin Park Quadrangle. The liquefaction susceptible soil inventory and quantitative analyses of geotechnical data in the Baldwin Park Quadrangle indicate that all Holocene and modern soils saturated within 40 feet of the ground surface are potentially liquefiable. These conditions are present over a 19-square-mile area, almost one-third of the quadrangle. Accordingly, the State has delineated this area as a Zone of Required Investigation.
- *Areas without Existing Geotechnical Data.* Some stream drainage and alluvial low land areas within the areas located well south and east of the City are "zoned" on the basis of CSMGB criteria for areas where geotechnical data are lacking or insufficient. These areas are located outside of the City. Most of these areas were placed within Zones of Required Investigations



because such soils generally reflect conditions named in the previous criteria.

The resulting map (refer to Exhibit 6-2) prepared for the Baldwin Park Quadrangle has identified the southwesterly corner of the City as having a potential for liquefaction.



 Liquefaction Risk in Northern Portion of Irwindale



 Liquefaction Risk in Southern Portion of Irwindale

Exhibit 6-2
Seismic Hazard Zones
City of Irwindale General Plan



Flood Risk

Portions of the City of Irwindale located along the San Gabriel River are within a designated 100-year flood plain as described by the Federal Emergency Management Agency (FEMA). In addition, portions of the Santa Fe Dam Flood Control Basin along with the quarries located within the City may become locally inundated with water during a 100-year flood.

The primary flood control facilities in the City include the Santa Fe Dam and Reservoir. This 2,300-acre facility is owned by the Army Corps of Engineers and covers one-third of the City's total land area. The reservoir is bounded generally by Arrow Highway and the I-210 and I-605 Freeways, and is located in the north-central portion of Irwindale. The dam is located on the upper San Gabriel River, 29 miles upstream from the Pacific Ocean, 7 miles upstream from Whittier Narrows, 16 miles northeast of the L.A. Civic Center, and 4 miles downstream from the mouth of San Gabriel Canyon. So situated, the dam regulates the runoff from a drainage area consisting of 236 square miles. The dam was completed in 1948 and is an earthen fill structure with a 513-foot elevation, a crest width of 30 feet, and a crest length of 23,800 feet at the top. Both the upstream and downstream slopes of the structure are protected with cobbles of a minimum 6-inch diameter. The reservoir area has both an east-west and north-south span of approximately two miles each.

The reservoir area lies in a heavily urbanized area of both commercial and residential growth. For the protection of the nearby communities, during a flood event, releases of water from the reservoir may be increased to a maximum of 41,000 cubic feet per second (cfs). In the unlikely event that a dam failure occurred when it was full of water, the water flow would be in a southwesterly direction. As the primary purpose of the Santa Fe Dam is flood control, its recreational development is not allowed to interfere with flood control operations. The Army Corps of Engineer's guidelines for land use within a dam are based on 10, 50, and 100-year flood lines; which is the major constraint to development. Approximately 95% of the existing development within the dam and 90% of the proposed development are above the 50-year flood line. The flood risk in the City is illustrated in Exhibit 6-3.

Hazardous Materials

Many of the City's industries produce, use, and store hazardous materials. Public safety issues involve not only the use of these materials in populated areas but also the transport and disposal of the substances. A number of industrial plants are located within the City and, in certain instances these uses are located

adjacent to residential neighborhoods.

The transportation of chemicals and other hazardous substances through the City also presents public safety problems. Two major freeways, numerous railway lines and the urban arterials that traverse the City carry traffic that is involved in the transport of hazardous materials. These transportation routes carry a variety of materials that could pose health risks to Irwindale's residents in the event of an accident. The possibility of such an occurrence may be relatively higher in Irwindale than other communities given the extent of freeway and railroad traffic that passes through the City and the concentration of manufacturing uses in the area. Exhibit 6-4 identifies those registered hazardous waste generators and handlers in the City. Because these businesses use hazardous materials, they are required to obtain necessary permits from various public agencies.

Characteristics of Sound

Noise exposure is a health concern and, as a result, noise related issues have been included in the Safety Element. Noise levels may be described using a number of methods designed to evaluate the "loudness" of a particular noise. The most commonly used units for measuring the level of sound is the decibel (dB), equivalent noise level (Leq), and the community noise equivalent level (CNEL). The predominant sound level criteria in use in California at the present time utilizes the Leq and the CNEL. The Leq is the average of the sound level energy for a one-hour period and employs an A-weighted decibel correction that corresponds to the optimal frequency response of the human ear. The CNEL is based upon 24 one-hour Leq measurements. The average noise levels for the late evening and early morning hours (the period between 10:00 PM and 7:00 AM are weighted 10 decibels. This is to take into account a person's increased sensitivity to noise during the early morning and late evening periods. A decibel is a unit used for measuring the intensity of sound. Zero on the decibel scale represents the lowest limit of sound that can be heard by humans. The eardrum may rupture at 140 dB. Noise levels associated with typical activities are illustrated in Exhibit 6-4.

Noise ordinances are designed to protect people from non-transportation related noise sources such as music, machinery and vehicular traffic on private property. Noise ordinances do not apply to motor vehicle noise on public streets or other transportation related noise. The State and Federal governments regulate motor vehicle and other transportation-related noise thus pre-empting local government controls. However, local governments are empowered to enforce these regulations.

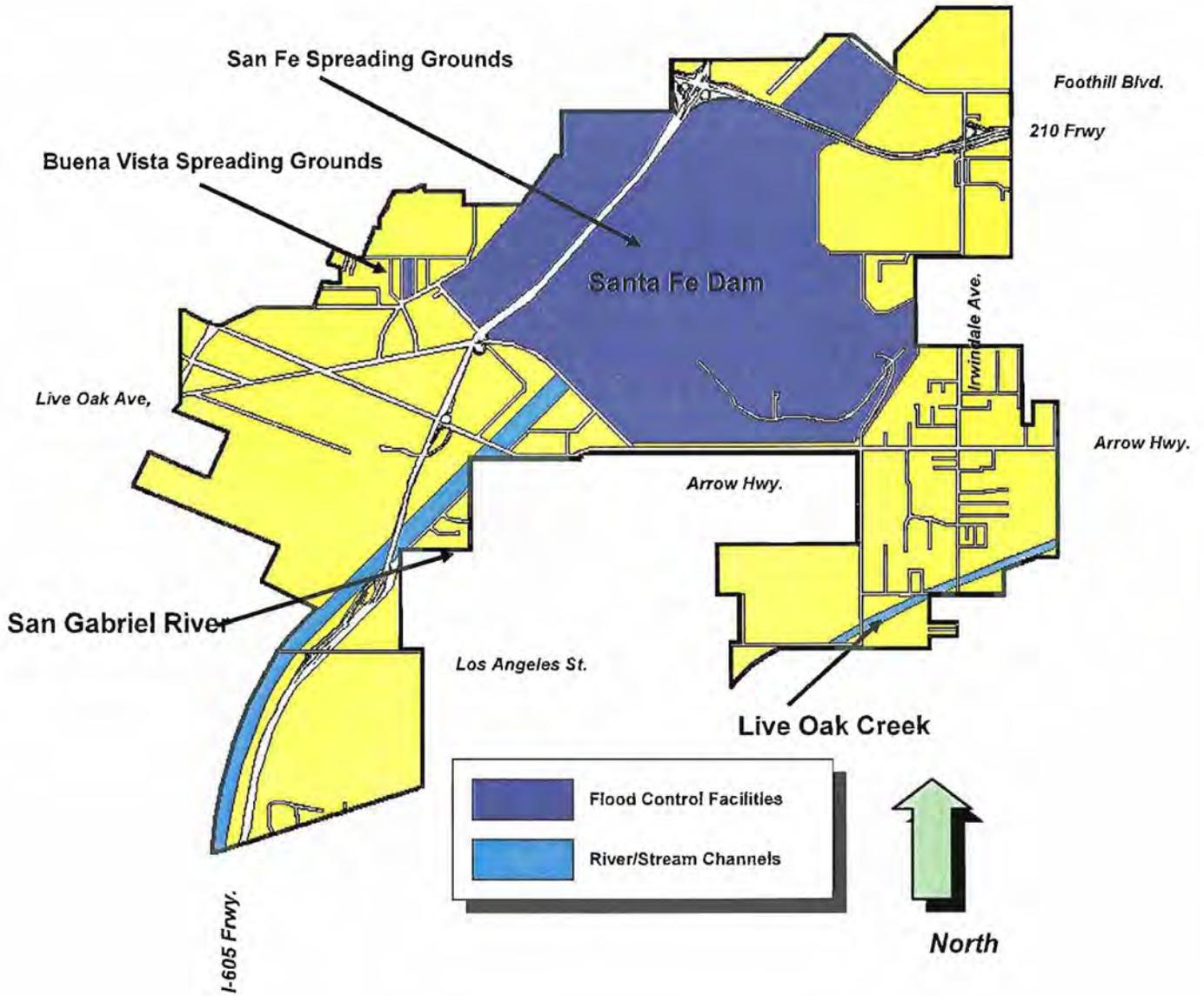


Exhibit 6-3
Flood and Inundation Risk
City of Irwindale General Plan

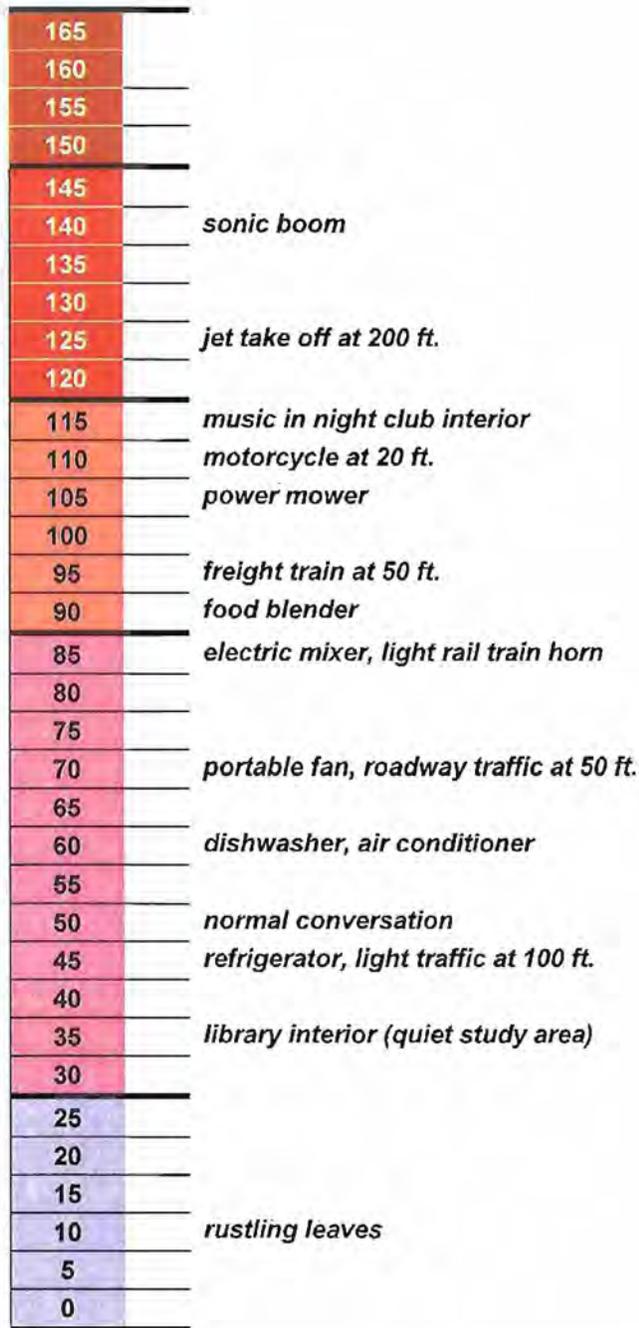


Exhibit 6-5
Typical Noise Levels
City of Irwindale General Plan



Noise and Land Use Compatibility

Guidelines governing land use and noise compatibility have been prepared by a number of Federal and State agencies including the Federal Highway Administration, the Environmental Protection Agency (EPA), the Department of Housing and Urban Development, the American National Standards Institute and the State of California. These guidelines, presented in the following paragraphs, are all based upon cumulative noise criteria such as Leg, LDN or CNEL.

- *Environmental Protection Agency.* In March 1974, the EPA published "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety" (EPA 550/9-74-004). This report indicates that 55 LDN is the requisite level with an adequate margin of safety for areas with outdoor uses, including residential and recreational areas. The EPA "levels document" does not constitute a standard, specification or regulation, but identifies safe levels of environmental noise exposure without consideration for economic cost for achieving these levels.
- *Federal Highway Administration (FHWA).* The FHWA has adopted and published noise abatement criteria for highway construction projects. The FHWA noise abatement criterion established an exterior noise goal for residential land uses of 67 Leq and an interior goal for residences of 52 Leq. The noise abatement criterion applies to private yard areas and assumes that typical wood frame homes with windows open provide a 10 dB noise reduction (outdoor to indoor) and 20 dB noise reduction with windows closed.
- *State of California.* The State requires every city and county to adopt noise elements as part of their general plans. Such noise elements must contain a noise/land use compatibility matrix. A recommended (but not mandatory) matrix is presented in the "Guidelines for the Preparation and Content of Noise Elements of the General Plan," (Office of Noise Control, California Department of Health, February 1976).

Ambient Noise Environment in Irwindale

The sources of noise in Irwindale fall into five basic categories. These include freeways, both the Foothill Freeway and the San Gabriel River Freeway; aircraft over flights; major and minor arterial roadways; railroad lines; and stationary sources. Each of these sources and their impacts on the noise environment

of Irwindale are summarized in the following paragraphs.

- *Freeways.* The San Gabriel River Freeway (I-605) traverses the westerly boundary of the city in a north/south direction. This freeway is generally below grade with respect to the adjacent areas. Most of the development along the freeway is commercial, along with quarry operations. The Foothill Freeway (I-210) is elevated at least twenty feet above the adjacent areas and no walls exist at the present time.
- *Traffic Noise.* Traffic noise on surface streets is a significant source of noise within the community. Noise levels along roadways are affected by a number of factors. Most important is the average daily traffic (ADT). Roadways in Irwindale have a very high percentage of truck traffic resulting from the mining operations and industrial development in the City.
- *Airports and Heliports.* There are no airports located in Irwindale, nor are there any specific flight corridors that overfly the City. The nearest general aviation airport is located in El Monte. During field surveys conducted in the City, helicopter operations were observed in the vicinity of the Santa Fe Dam.
- *Railroads.* The City of Irwindale has a number of main railroad and spur lines. Major lines located in the city include the BN&SF Railroad, the Los Angeles Junction Railroad Company, Southern Pacific Railroad Company and the Union Pacific Railroad Company. The majority of the railroad traffic consists of freight trains performing switcher operations. A Metrolink commuter line is located in the southern portion of the City.
- *Stationary Sources.* The City of Irwindale contains a large number of stationary noise sources. Commercial areas located near residential areas from adjacent cities result in occasional noise impacts. The primary noises associated with industrial and commercial operations include truck traffic, air compressors, generators, outdoor loudspeakers and gas venting.

The existing traffic noise levels from major roadways in the City were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December 1978). The FHWA model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the Leq noise level. The results of this analysis are shown in Table 6-2.



Table 6-2 Traffic Noise Levels Along Major Arterial Roadways Serving the City					
Roadway Segment	Distance to CNEL Contour (In feet)				CNEL (dBA) 50' from Centerline
	55 CNEL	60 CNEL	65 CNEL	70 CNEL	
Foothill Freeway (I-210)	2,157	1,930	993	110	72.3
San Gabriel River Freeway (I-605)	2,303	2,120	1,220	125	74.1
Arrow Highway (north of Live Oak)	1,100	750	510	15	63.1
Arrow Highway (between Live Oak & Irwindale)	1,215	727	493	27	61.7
Arrow Highway (east of Irwindale)	1,201	693	373	19	61.3
Foothill Boulevard	975	427	210	0	61.0
Irwindale Avenue (north of Arrow)	750	375	163	0	60.7
Irwindale Avenue (south of Arrow)	501	320	110	0	60.5
Live Oak Avenue	275	101	47	0	58.2
Source: FHWA Noise Prediction Model					

The City of Irwindale has three types of noise-sensitive receptors within the city boundaries. Residential areas, the school, and the Santa Fe Dam Recreation Area are currently exposed to several fixed and transient sources of noise. In general, mining operations in the City of Irwindale are not considered significant stationary noise sources. Because noise travels in a line-of-sight manner and attenuates with distance, the depth of the quarries provide significant separation and the pit walls serve as a barrier around the operating equipment. Above-grade sand and gravel mining plant sites and their conveyor systems, however, have been a source of stationary noise for the community.

The Irwindale Speedway is an additional source of noise. Designers have been deliberate about mitigating any potential impact to the City or neighboring communities. The track has been designed so that the major noise contributors located within the pit and paddock areas are located further away from sensitive noise receptors. Noise attenuating bleachers are also used to dampen any noise created by activities and capture it within the

Speedway site rather than allowing it to release into neighboring areas. The City has implemented a noise monitoring program with the cooperation of the Speedway operator to ensure this potential noise source remains in compliance with the City codes.

The noise environment in Irwindale was determined through comprehensive noise measurement surveys with nine sites selected for the measurement of the ambient noise levels. The measurement locations were selected based on proximity to major noise sources and noise sensitivity of the land use. Each site was monitored for a minimum of 15 minutes. The quantities measured were the Equivalent Noise Level (Leq) and the Percent Noise Levels (L%). Percent Noise Levels are another method of characterizing ambient noise where, for example, L90 is the noise level exceeded 90% of the time, L50 represents the noise level exceeded 50% of the time, and L10 is the level exceeded 10% of the time. L90 represents the background or minimum noise level, L50 represents the average noise level, and L10 the peak or intrusive noise levels. The results of this measurement survey are summarized below in Table 6-3.



**Table 6-3
Noise Measurement Survey Results**

Map Reference No. and Location	Measured Noise Levels (in dBA)			Major Source of Noise Affecting the Area
	L10	L50	L90	
1. Foothill/Irwindale	73.3	71.7	69.5	Freeway traffic
2. Irwindale/I 210 Freeway	74.1	73.0	70.1	Freeway traffic
3. Live Oak/I 605 Freeway	71.3	69.7	65.7	Freeway traffic
4. Arrow/Motor	69.1	67.2	64.3	Traffic
5. Arrow/Irwindale	68.5	66.6	63.4	Traffic/machinery
6. Irwindale/Gladstone	67.1	65.3	62.1	Trucks
7. Civic Center	62.3	60.1	58.7	Traffic
8. Vincent/Cypress	61.5	59.3	52.1	Traffic
9. Los Angeles Street	60.7	58.7	54.3	Traffic

Source: Blodgett/Baylosis Associates

Air Quality

The City of Irwindale is located in the South Coast Air Basin, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and the San Bernardino Counties. In 1996, the federal standards for ozone and PM-10 were exceeded in this Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is responsible for monitoring and measuring air quality in the area and maintains a monitoring station in the City of Azusa.

The South Coast Air Basin has been declared a non-attainment area because it has levels of one or more pollutants exceeding national ambient air quality standards. Generally there are five main sources of air pollution emissions in the City of Irwindale: truck traffic; vehicular traffic (including employee work trips); on-site gas/diesel powered equipment operations; stationary emissions from asphalt and cement plants, and particulate matter associated with mining activities.

The area's climate is semi-arid and characterized by moist, mild winters and hot, dry summers accompanied by sea breezes. Wind patterns vary seasonally; westerly winds predominate in the summer months and northeasterly winds in the winter months. Local Southern California weather is affected by winter storms moving along the Pacific Coast,

warm tropical air masses, and hot, dry Santa Ana winds caused by high-pressure systems in the Great Basin.

The dominant daily wind pattern consists of a daytime sea breeze blowing inland from the ocean followed by a nighttime land breeze blowing from the inland areas toward the coast. The climate in Irwindale is consistent with the region's temperate weather patterns. The average daily temperatures range from between 40 F. and 90°F, with an average annual temperature of 64.4°F. Annual precipitation averages approximately 15 to 18 inches per year with most of this precipitation occurring during the winter months. During the summer, the air within the high-pressure center over the ocean sinks and warms. Near the ocean's surface, the air cools due to its contact with the cooler water. This forms a shallow, well-mixed layer of marine air approximately 1,000 feet deep capped by a massive layer of warm air. Pollutants emitted near the ground remain trapped within that shallow layer.

As each pollution source adds its contribution to that layer, the air arriving at the eastern portion of the Los Angeles metropolitan area may become highly polluted with visibility-degrading aerosols and with unhealthful, invisible gaseous pollutants. This condition will continue and become more concentrated until either the inversion breaks or surface winds increase to disperse the pollutants horizontally. The primary source of emissions in



Irwindale include the quarry operations and the industries within the City as well as the numerous trucks and cars operating on the city's roadways and on the San Gabriel River and the Foothill Freeways that traverse the city. In addition, air pollution generated by traffic and point sources in the immediate vicinity and in the surrounding region contributes to the overall decline in air quality within the city. The SCAQMD is responsible for the implementation of the protocols of the Federal Clean Air Act. In addition, the SCAQMD is responsible for ensuring that the more stringent California clean air standards are met. The SCAQMD Governing Board adopted the 2003 Air Quality Management Plan (AQMP) on August 1, 2003. The 2003 AQMP replaced the 1997 AQMP and included an update of the attainment demonstration for the federal standards for ozone and particulate matter (PM₁₀), replaced the 1997 attainment demonstration for the Federal carbon monoxide (CO) standard with a maintenance plan for CO for the future; and updated the maintenance plan for the Federal nitrogen dioxide (NO₂) standard that the South Coast Air Basin (SCAB) has met since 1992. The most recent revisions to the AQMP also addressed several State and Federal planning requirements and incorporated significant new scientific data. Pollutants regulated by the Federal and State Clean Air Acts include the following:

- Criteria air pollutants;
- Toxic air contaminants, and
- Global warming and ozone-depleting gases.

Pollutants in each of these categories are monitored and regulated differently. Criteria air pollutants are measured by ambient air sampling. For some criteria pollutants, such as carbon monoxide, there are also secondary standards designed to protect the environment, in addition to human health. Toxic air contaminants are typically measured at the source

and their evaluation and control is generally site or project-specific. Finally, global warming and ozone-depleting gases are not monitored though sources of green house gas emissions are subject to Federal and regional policies that call for their eventual elimination.

The EPA has established National Ambient Air Quality Standards (NAAQS) for the following air pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), particulate matter (PM¹⁰), and fine particulate matter (PM^{2.5}). In May 1999, the Federal Court of Appeals in Washington, D.C. overturned the PM^{2.5} standard. Pending the court decision on the rehearing, the new standard cannot be implemented. It is possible for the EPA to re-promulgate the standard with a more adequate explanation, if the appeal is denied). The EPA recently issued a notice of proposed revisions to the NAAQS for particulate matter. The EPA will take final action on the proposal by September 27, 2006. This notice provides advance notice of key issues for consideration in the development of potentially new or revised policies and/or regulations to implement revisions to the NAAQS for PM. The EPA's preferred approach is to revoke of the 1997 PM_{2.5} standards once any new 2006 PM_{2.5} standards would be in place, and to revoke the 24-hour PM₁₀ standard in areas where it would remain after promulgation of any new PM_{10-2.5} standards. The Federal standards are shown in Table 6-4.

The California Air Resources Board (CARB) has also established ambient air quality standards for six of the aforementioned pollutants regulated by the EPA (CARB has not established standards for PM^{2.5}). Some of the California ambient air quality standards are more stringent than the national ambient air quality standards. In addition, California has established ambient air quality standards for the following: sulfates, vinyl chloride, and visibility. Table 6-4 lists the current national and California ambient air quality standards for each criteria pollutant.

Pollutants	National Standards	State Standards
Lead (Pb)	1.5 µg/m3(calendar quarter)	1.5 µg/m3 (30-day average)
Sulfur Dioxide (SO ₂)	0.14 ppm (24-hour)	0.25 ppm (1-hour) 0.04 ppm (24-hour)
Carbon Monoxide (CO)	9.0 ppm(8-hour) 35 ppm(1-hour)	9.0 ppm (8-hour) 20 ppm (1-hour)
Nitrogen Dioxide (NO ₂)	0.053 ppm (annual average)	0.25 ppm (1-hour)



**Table 6-4
National and California Ambient Air Quality Standards (continued)**

Pollutants	National Standards	State Standards
Ozone (O ₃)	0.12 ppm (1-hour)	0.09 ppm (1-hour)
Fine Particulate Matter (PM ₁₀)	150 µg/m ³ (24-hour)	50 µg/m ³ (24-hour)
Sulfate	None	25 µg/m ³ (24-hour)
Visual Range	None	10 miles (8-hour) w/humidity < 70 percent

Source: South Coast Air Quality Management District, 2004

The criteria pollutants of special concern include the following:

- *Ozone (O₂)* is a nearly colorless gas that irritates the lungs and damages materials and vegetation. O₂ is formed by photochemical reaction (when nitrogen dioxide is broken down by sunlight).
- *Carbon Monoxide (CO)*, a colorless, odorless toxic gas that interferes with the transfer of oxygen to the brain, is produced by the incomplete combustion of hydrocarbon fuels.
- *Nitrogen dioxide (NO₂)* is a yellowish-brown gas that, at high levels, can cause breathing difficulties. NO₂ is formed when nitric oxide (a pollutant from burning processes) combines with oxygen. Although NO₂ concentrations have not

exceeded Federal standards since 1991 and the State hourly standard since 1993, NO_x emissions remain a concern because of their contribution to the formation of O₃ and particulate matter.

- *Sulfur dioxide (SO₂)* is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children.
- *PM* refers to particulate matter less than ten microns in diameter. PM₁₀ causes a greater health risk than larger-sized particles, since fine particles can more easily cause respiratory irritation.

The sources and potential health effects of the criteria pollutants are summarized in Table 6-5.



**Table 6-5
Primary Sources and Effects of Criteria Pollutants**

Pollutants	Emissions Source	Primary Effects (including health effects)
Sulfur Dioxide (SO ²)	Combustion of sulfur-containing fossil fuels Smelting of sulfur-bearing metal ores Industrial processes	Plant injury Reduced visibility Deterioration of metals, textiles, leather, & finishes Irritation of eyes Aggravation of respiratory diseases (asthma, emphysema)
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust Natural events, such as decomposition of organic matter	Plant injury Reduced visibility Deterioration of metals, textiles, leather, finishes, coatings Irritation of eyes Aggravation of respiratory diseases (asthma, emphysema)
Nitrogen Dioxide (NO ²)	Motor vehicle exhaust High-temperature stationary combustion Atmospheric reactions	Aggravation of respiratory illness Reduced visibility Reduced plant growth Formation of acid rain
Ozone (O ³)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	Plant leaf injury Irritation of eyes Aggravation of respiratory & cardiovascular diseases Impairment of cardiopulmonary function
Fine Particulate Matter (PM)	Mining of Aggregate Stationary combustion of solid fuels Construction activities Industrial processes Atmospheric chemical reactions	Soiling Reduced visibility Aggravation of the effects of gaseous pollutants Increased cough and chest discomfort Aggravation of respiratory and cardio-respiratory diseases

Source: South Coast Air Quality Management District.

SAFETY PLAN

Public Safety Element Policies

The policies included in this element focus on the following major issue areas:

- The City's commitment to emergency preparedness as a means to respond to disasters resulting from earthquakes, hazardous materials incidents, and other natural and man-made hazards; and
- The City's commitment to reduce the high levels of noise exposure associated with the existing development and transportation facilities in the City.

Issue Area – Emergency Preparedness. The City of Irwindale will strive to maintain the highest levels of readiness to respond to disasters or local emergencies.

Safety Element Policy 1. The City of Irwindale will continue to review and if necessary, update its comprehensive emergency preparedness plan and hazard mitigation plan.

Safety Element Policy 2. The City of Irwindale, at a minimum, will maintain current emergency response standards.

Safety Element Policy 3. The City of Irwindale will work to reduce potential hazards through conscientious land use planning. The City shall require liquefaction assessment studies as part of development proposals in areas identified by the California Geological Survey as susceptible to liquefaction. The studies shall be conducted in accordance with the California Geological Survey's Special Publication 117; Guidelines for Evaluating and Mitigating Seismic Hazards in California, and the Southern California Earthquake Center's (1999) procedures to implement Special Publication 117 – Liquefaction Hazards (both documents are incorporated herein by reference). On



sites shown to be susceptible to liquefaction, the City shall require the implementation of mitigation measures designed to reduce this hazard to an acceptable level. The City shall require a State-certified engineering geologist or registered civil engineer; have competence in the field of seismic hazard evaluation and mitigation, to review the study at the Applicant's expense. The review shall determine the adequacy of the hazard evaluation and proposed mitigation measures and determine whether the requirements of State law are satisfied, as described in Special Publication 117 by the California Geological Survey.

Issue Area – Noise. The City of Irwindale will work to reduce the high levels of noise exposure associated with the existing development and transportation facilities in the City.

Safety Element Policy 4. The City of Irwindale will strive to reduce the community's exposure to noise from on-going manufacturing activities.

Safety Element Policy 5. The City of Irwindale will work towards reducing noise exposure in the City by considering noise and land use compatibility in land use planning.

Safety Element Policy 6. The City of Irwindale will continue to investigate strategies that will be effective in reducing the community's exposure to harmful noise levels.

Public Safety Element Programs

The following programs will be initiated or implemented as part of this General Plan.

- *Building Code Review.* The City will periodically review, and if necessary, modify the Uniform Building Code (UBC) to reflect current technology and regulations. The Building Official will identify procedures for the periodic review of the UBC. The City contracts with the Los Angeles County Department of Public Works for building plan check services and has adopted the Los Angeles Building Code. Any review of the Building Code will be undertaken by designated individuals to identify appropriate changes that should be considered. Following this review, amendments to the City's Building Code will be made, as required.
- *Code Enforcement.* A significant cause of damage, injury, and loss of life to fire involves unsafe structures with poor or obsolete wiring or construction materials. The Building Code contains regulations regarding construction techniques and materials that may be effective in eliminating or reducing the spread of fire. Code

enforcement will also ensure that the City's noise control ordinance is adhered to. For this reason, ongoing code enforcement efforts are an important implementation program within the Safety Element.

- *Disaster Response Database.* In the event of a major earthquake or other major disaster, persons living or working in the City may need to be self-sufficient for up to 72 hours before the results of any major relief efforts are realized. Under this program, a database will be created to identify medical professionals, heavy equipment operators, and volunteers trained in first aid and search-and-rescue. The database would identify other volunteers that would staff emergency collection centers, distribution centers, and otherwise assist in the recovery efforts. This information, and the appropriate procedures, would then be incorporated into the City's Emergency Preparedness Plan.
- *Fire Prevention.* The City shall continue to work with the County of Los Angeles Fire Department to promote fire prevention and fire safety programs. The City shall also encourage periodic inspections of existing structures by the Fire Department for compliance with fire safety standards and practices. All new development plans must be submitted to the Fire Department for review and comment during the plan check process. This review must be completed for the development process to continue. New development must conform to applicable standards and regulations.
- *Hazardous Materials Control.* The City shall continue to cooperate with County, State, and Federal agencies involved in the regulation of hazardous materials storage, use, and disposal. The City shall work with the County Fire Department in requiring hazardous materials users and generators to identify safety procedures for responding to accidental spills and emergencies. The Fire Department shall also work with local law enforcement officials in regulating the transport of hazardous materials through the City. The City will continue to promote the safe disposal of "hazardous and toxic substances" used in private households through the support of "Hazardous Materials Collections" conducted at specific locations and times within the City.
- *Police & Fire Services Review.* The City shall regularly review the adequacy of law enforcement services and fire protection and emergency services in the City. This review effort shall be a component of the annual budget review of the contract with the Fire Department,



and the City shall work with the Fire Department to correct any identified deficiencies. Local law enforcement officials and Fire Department representatives shall also continue their review of any proposed development plans. Annual reports concerning each Department will be submitted to the City Council for consideration.

- **Environmental Review.** The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). Environmental review shall be provided for major projects and those that will have a potential to adversely impact the environment. Issue areas related to public safety that may be addressed in the environmental analysis include: earth and geology, risk of upset, public services, and flood risk. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures.
- **Emergency Preparedness Plan.** The City currently maintains a Multi-Hazard Functional Plan that outlines responsibilities and procedures the City will follow in the event of an emergency or citywide disaster. Specific emergency functions and operations, available resources (fire stations, emergency shelters, hospitals and clinics, resource persons, etc.), and mutual aid agreements are described in the Plan. The City shall regularly update its Multi-Hazard Functional Plan for Emergency Operations.
- **Safety Development Review Program.** Certain design standards have been established by the City of Irwindale and the Los Angeles County Fire Department to ensure that site planning and building design consider public safety and fire prevention. These standards include requirements governing emergency access, roadway widths, clearance around structures, location of fire hydrants, etc.
- **Hazard Mitigation Plan.** The President signed the Disaster Mitigation Act of 2000 (Public Law 106-390) into law on October 30, 2000. This new legislation reinforced the importance of pre-disaster mitigation planning by establishing a pre-disaster hazard mitigation program as well as new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). The hazard mitigation planning process is a collaborative process whereby hazards affecting the community are first identified, the vulnerability to the identified hazards assessed, and a consensus reached in how best to minimize or eliminate the effects of these hazards. In recognition of the importance of

hazards mitigation planning, local governments that have an approved *Hazards Mitigation Plan* in effect at the time of disaster declaration may receive additional financial assistance.

A number of other federal, state, and other governmental agencies have adopted standards and recommended noise criteria to protect people in both the work and home environments. A summary of major existing noise regulations are provided below:

- The Federal Highway Works Administration (FHWA) has established noise exposure standards for different land uses. These standards apply to the planning and design of federally funded highway projects, and are expressed in terms of both Equivalent Noise Level (Leq) and L₁₀.
- The Department of Housing and Urban Development (HUD) has adopted environmental criteria and standards for determining project acceptability and necessary mitigation measures to ensure that projects assisted by HUD provide a suitable living environment. Standards include maximum levels of 65 dB Ldn for residential areas.
- The Noise Control Act of 1972 authorized the Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels), and welfare (annoyance levels), with an adequate margin of safety.
- The California Motor Vehicle Code establishes noise standards for those areas not regulated by the federal government. State standards regulate the noise levels of motor vehicles and motorboats; establish noise impact boundaries around airports; regulate freeway noise affecting classrooms, sound transmission control, and occupational noise control; and identify noise insulation standards. The California Motor Vehicle Code sets operational noise limits according to the type of vehicle and date of manufacture.
- Sound Transmission Control Standards contained in the California Administrative Code, Title 24, Building Standards, and Chapter 2.35, outline noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings. These standards require an interior noise level of 45 dB CNEL or less for residential projects. For residential buildings or structures within the 60



dB CNEL of an airport, or vehicular or industrial noise source, an acoustical analysis must be conducted to show compliance with the standards.

- The California Occupational Noise Control Standards contained in the California Code of Regulations, Title 8, Industrial Relations, Chapter 4, outline permissible noise exposure at a workplace. Employees should not be exposed to noise levels of 90 dBA for more than eight hours in any workday.

There are a number of Federal and State agencies involved in the development, implementation, and enforcement of regulations related to clean air. The primary agencies include the United States Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the South Coast Air Quality Management District (SCAQMD).

- *Environmental Protection Agency (EPA).* The EPA is the lead Federal Agency charged with the implementation and enforcement of the Clean Air Act. As part of this effort, the EPA is responsible for the establishment of national ambient air quality standards (referred to herein as the *Federal Standards*). The EPA also regulates mobile emission sources that include automobiles, trucks, aircraft, and recreational vehicles.³⁰
- *California Air Resources Board (CARB).* The CARB is part of the California Environmental Protection Agency (CALEPA) and is responsible for overseeing the implementation of the California Clean Air Act, meeting State requirements of the Federal Clean Air Act, and the establishment of state ambient air quality standards. The CARB is also responsible for setting emission standards for vehicles sold in California and for other emission sources including consumer goods and off-road equipment. The CARB also established passenger vehicle fuel specifications.
- *South Coast Air Quality Management District (SCAQMD).* Because Southern California experiences some of the worst air quality in the nation, the SCAQMD was created in 1977 with passage of the Lewis Air Quality Management Act. This Act merged four County air pollution control agencies into a single regional special district as a means to better address Southern California's air pollution problems. The

³⁰ Automobiles sold in California must meet the stricter emission standards established by the California Air Resources Board.

SCAQMD is now the principal agency responsible for comprehensive air pollution control in the region that includes air quality monitoring, the development of long range plans to improve air quality, and the enforcement of regulations designed to attain and maintain State and Federal ambient air quality standards. The SCAQMD has jurisdiction over a 10,743 square mile area that includes Orange County, Los Angeles County (except for the Antelope Valley), the non-desert portion of western San Bernardino County, and western Riverside County.

Health and Safety Management

The graphic depiction of the City of Irwindale's official policy relative to environmental hazards is presented on Exhibit 6-6, Public Safety Policy Plan. This map illustrates critical facilities and potential evacuation routes that should be considered in future land use planning. Exhibit 6-7 indicates those sensitive receptors that will be subject to excessive noise levels in the future in the absence of mitigation. Appropriate measures should be implemented as a means to reduce the effects of noise exposure in these areas.

Noise and Land Use Compatibility

The State Office of Noise Control has prepared *Guidelines for the Preparation and Content of Noise Elements of General Plans*. This provides a guide for compatibility of noise-sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL or Ldn. Residential uses are normally unacceptable in areas exceeding 70 dB CNEL; and conditionally acceptable between 55-70 dB CNEL for low-density single-family dwelling units, duplexes, and mobile homes, and between 60-70 dB CNEL for multiple-family units. Schools, libraries, hospitals, and nursing homes are treated as noise-sensitive land uses, requiring acoustical studies within areas exceeding 60 dB CNEL. Commercial/professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL, and are conditionally acceptable within 67 to 78 dB CNEL (for commercial and professional offices only).

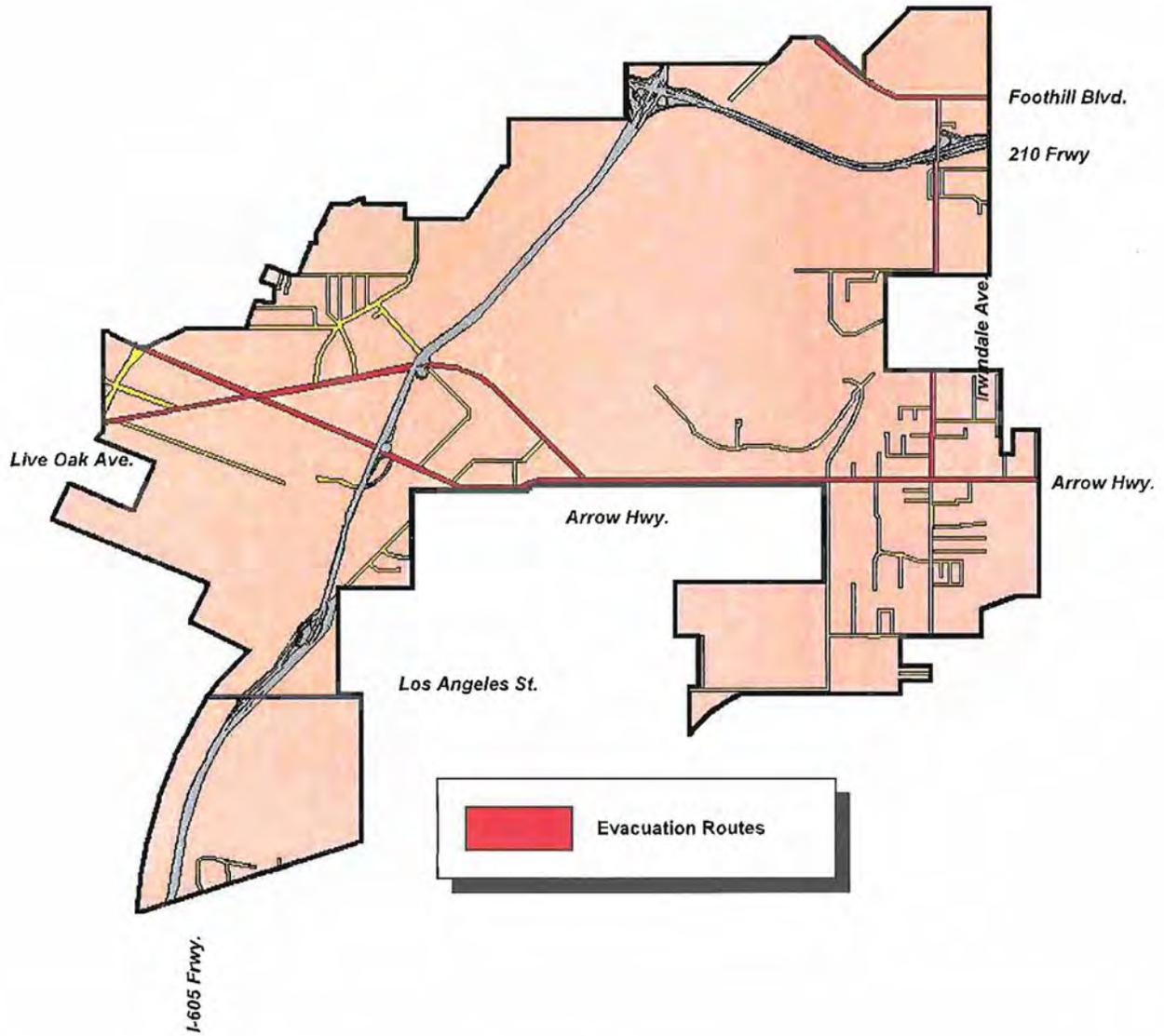


Exhibit 6-6
Safety Plan
City of Irwindale General Plan

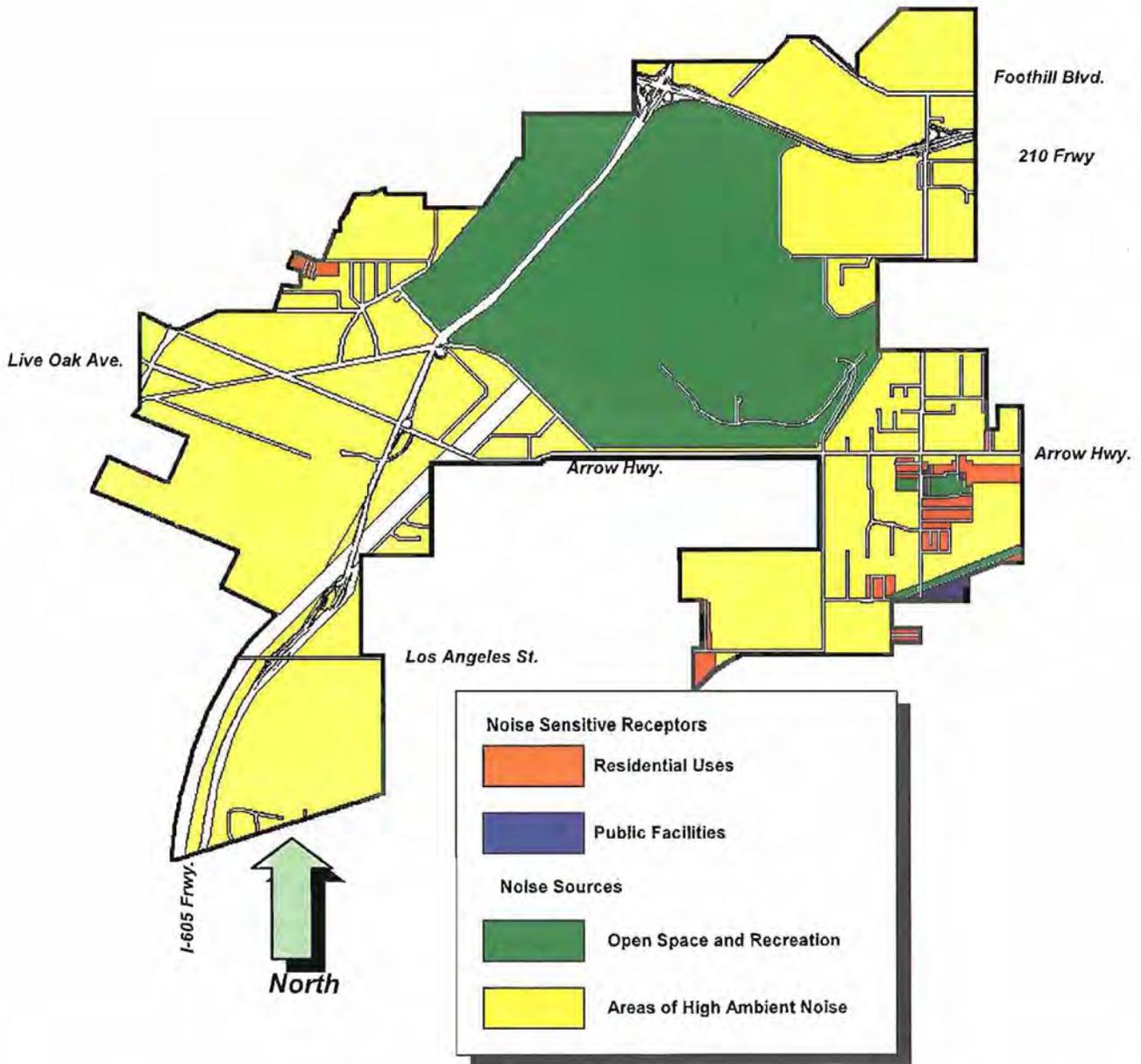


Exhibit 6-7
Future Noise Exposure-Sensitive Receptors
City of Irwindale General Plan