

*City of Glendale*



## Noise Element

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*of the General Plan*

City of Glendale Planning Department  
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May 2007

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## **Chapter 1 – INTRODUCTION**

### **1.1 Purpose and Content**

The Noise Element of a General Plan is a comprehensive program for including noise management in the planning process. It is a tool for local planners to use in achieving and maintaining land uses that are compatible with environmental noise levels. The Noise Element identifies noise sensitive land uses and noise sources, and defines areas of noise impact for the purpose of developing programs to ensure that Glendale residents will be protected from excessive noise intrusion.

The current Noise Element of the General Plan for the City of Glendale was adopted in July 1978. That Element identified roadways as the most significant source of noise in the City. While traffic noise is still the major noise source in the City, other sources have become a concern. Additionally, the method for controlling noise and incorporating noise concerns into planning decisions has become more sophisticated over the years since the first Element was adopted. Thus, the decision was made by the City to update the Noise Element to more effectively protect and plan for the residents of the City.

The Element is divided into three sections plus the Technical Appendix. Included in the Technical Appendix is more detailed background information on noise, health effects, and the noise measurement survey conducted throughout the City, and the methodology used to generate the noise contour maps. The Noise Element is organized as follows:

1. **Executive Summary** – summarizes the noise environment and the implementation programs to minimize noise and land use conflicts.
2. **Goals, Policies and Programs** – defines the goals and policies of the Noise Element, and how each will be implemented by the City to achieve these goals. Responsible departments are identified. Given the challenging budgetary environment the City faces, timing has not been specified. It is expected that departments will work on the Program items as staff and budget allow.
3. **Background Information** – groups noise problems into four broad categories and discusses related issues.

### **1.2 Legal Requirements**

The Noise Element follows the revised State guidelines (“General Plan Guidelines,” Governors Office of Planning and Research, November 1998, and Preliminary Draft of revised guidelines, Year 2002) and State Government Code Section 65302(f). The Element quantifies the community noise environment in terms of noise exposure contours for both near and long-term levels of growth and traffic activity. The information will become a guideline for the development of land use policies to achieve compatible land uses and provide baseline levels and noise source identification for local noise ordinance enforcement.

### 1.3 Regulatory Environment

A local government has little direct control of transportation noise at the source because of preemption by the State and Federal Government. State and Federal agencies have the responsibility to control the noise from the source, such as vehicle noise emission levels.

Cities like Glendale can best manage the noise environment through proper land use planning. By considering the potential for noise creation as part of the zoning and General Plan maintenance process, incompatible land uses can be separated and appropriate regulations adopted to address noise-generating uses. Noise generation can also be reviewed during the evaluation of environmental effects of new construction. Mitigation measures or conditions of approval, if needed, can then be incorporated into the design of the project to reduce noise impacts. Finally, having an adopted noise ordinance allows Glendale to enforce standards adopted by the City Council. Glendale employs all these techniques to manage the noise environment of the City.

## **Chapter 2 – EXECUTIVE SUMMARY**

The City of Glendale is essentially built out, and thus experiences a set of noise problems unique to a mature city. In this update, the technical description of noise in Glendale was updated and a series of comprehensive goals, policies, and implementing actions were developed. The process of updating the Noise Element included a review of existing and future noise problems and the re-evaluation of City policies concerning environmental noise. All recommendations in this plan are made in order to have a beneficial impact on the quality of life. By use of this noise element plan and its policies, noise impacts from existing noise generators should be lessened.

### **2.1 Findings**

The predominant noise sources in Glendale, as in many other communities, come from mobile noise sources, including motor vehicles. Approximately 55.9% of the City's population is exposed to noise levels of 60 CNEL or higher, approximately 22.3% is exposed to noise levels of 65 CNEL or higher, and 8.5% to levels 70 CNEL and above.

A number of freeways and arterial roadways expose the City to significant noise levels. The Union Pacific Railroad along the west side of the City also contributes to the overall noise environment. Aircraft operating in the area are not a major contributor of noise in the area although helipads do have some contribution to overall noise. Industrial noise in the City is minimal and isolated from noise sensitive receptors. The noise environment in Glendale varies from the busy, high density corridor along freeways and major arterials to the lower density, residential communities on the hillsides. Other sources of noise within the City are from non-transportation sources including commercial and construction activities.

Noise affects all types of land uses and activities, although some are more sensitive to high noise levels than others. Land uses identified as noise sensitive include residences of all types, hospitals, rest homes, places of worship and schools. Within the City are a number of public and private schools and day care centers (generally in-home day care centers).

The noise environment for Glendale can be represented using noise contours developed for the major noise sources within the City. The noise contours are used to identify areas of existing or potential noise impacts. The contours are developed for existing conditions and future conditions and are presented in Exhibits 1 and 2. The 60, 65, and 70 dB CNEL contour levels are shown on these maps. Land uses within these areas should be reviewed for compatibility with the criteria established in Table I and with the standards proposed in Table 2. Although the freeways and roads in the City are going to carry more traffic in 2030 compared to 2006, the noise contours are projected to expand only minimally when the noise contour maps for the two years are compared. The noise contours along the freeways widen a small amount and additional portions of roads, such as Kenneth Road and Honolulu Avenue, will be in the 60 db CNEL or higher contour in 2030.

## **2.2 Noise Mitigation Measures**

Sources of noise in Glendale can be divided into transportation sources and non-transportation sources. Measures that can be used to reduce noise from transportation sources include, but are not limited to, noise barriers, land use planning, site design review, circulation improvements, and truck access restrictions. Noise from existing uses can be managed via the noise ordinance. Noise related to new projects can be mitigated during the project planning review with the implementation of conditions of approval or mitigation measures such as providing access from non-residential streets, restricting the hours of delivery, or submission of an approved truck route plan.

### **2.2.1 Noise Barriers**

A noise barrier (such as a wall, berm, or combination wall and berm) may be the most effective way to mitigate noise from development. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and the receiver is blocked by the barrier. Noise barriers may be one of the mitigation measures employed in new projects and recommended during the environmental review process. Noise barriers may also be used to reduce noise levels in existing development. In particular, the City will continue to work with Caltrans and the Metropolitan Transit Authority to get sound walls built along additional portions of the 2, 5, 134, and 210 Freeways.

### **2.2.2 Land Use Planning**

Noise concerns should be incorporated into land use planning to reduce future noise and land use incompatibilities. This can be achieved by establishing standards and criteria that specify acceptable limits of noise for various land uses throughout the City. These criteria are designed to integrate noise considerations into land use planning to prevent noise/land use conflicts. Table 1 presents the recommended criteria used to assess the compatibility of proposed land uses with the noise environment. These criteria are the basis for the development of specific Noise Standards. These recommended Standards, listed in Table 2, present the recommended City policies related to land uses and acceptable noise levels. These tables are the primary tools which allow the City to ensure integrated planning for compatibility between land uses and outdoor noise. For example, residential development within the 60 CNEL contour should be carefully reviewed to ensure that no private outdoor yard or patio areas are exposed to noise levels above 65 CNEL. The Criteria in Table 1 and the Noise Standards in Table 2 will be implemented by requiring that all new residential and noise sensitive land uses within the 60 CNEL noise contour be subject to environmental review or conditions of approval to ensure that noise impacts are mitigated. Impacts on new development will be considered mitigated if the interior noise level meets the 45 CNEL noise standard and the exterior, private yard meets the 65 CNEL noise standard listed in Table 2 of the Element.

### **2.2.3 Site Plan Review**

The Land Use/Noise Compatibility Matrix shown in Table 1 is used in the site planning stage of the development process. It is used to identify property opportunities and constraints. In conjunction with the Noise Contour Maps (Exhibits 1 and 2), this matrix may be used to determine whether a certain type of land use is appropriate in a particular CNEL zone. This

matrix is particularly helpful to assist in the layout and design of large mixed-use projects because it identifies the noise sensitivities of various land use types. Such consideration permits the location and layout of noise sensitive uses in lower noise exposure areas on the project site.

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Exhibit 1

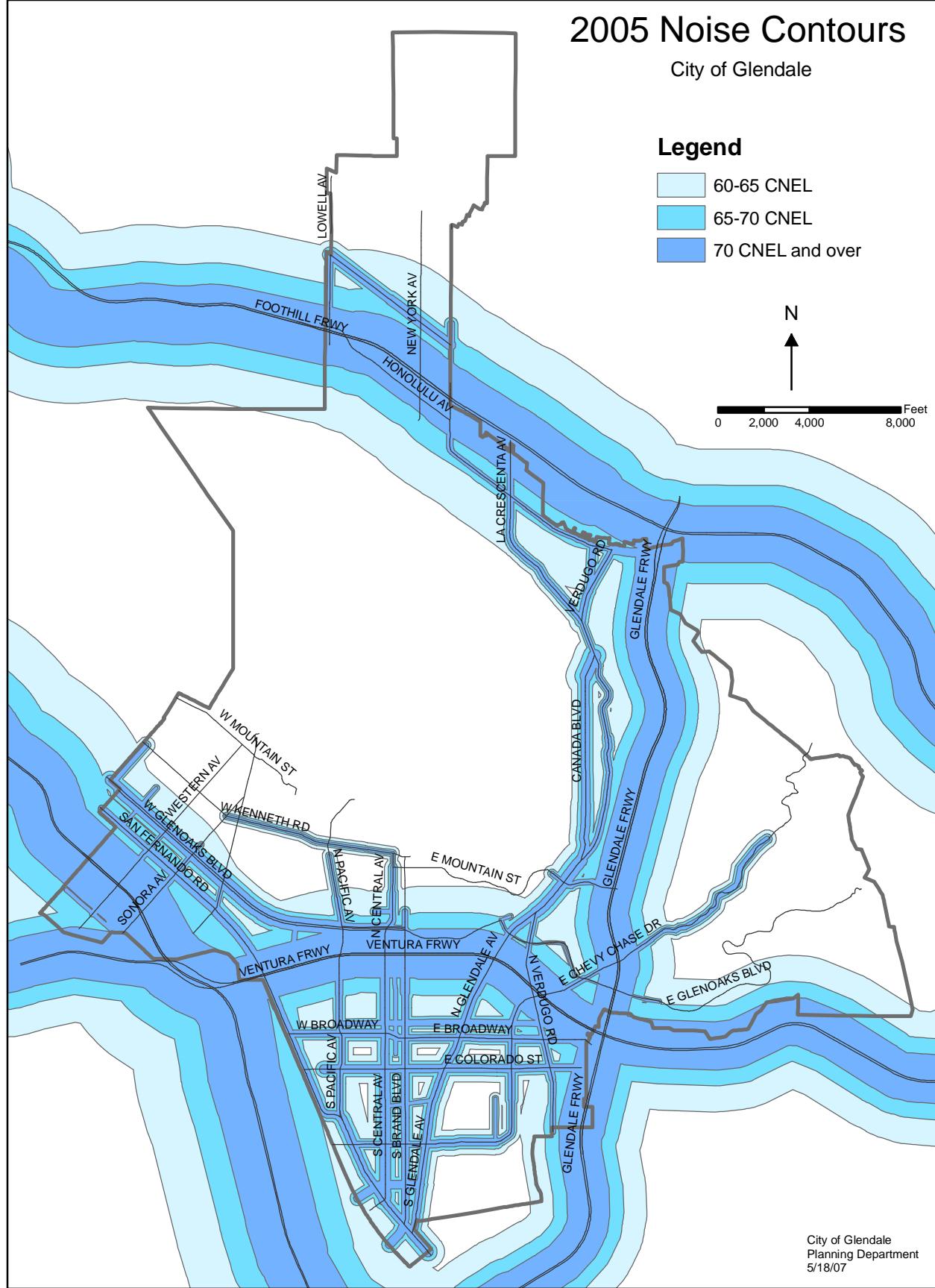
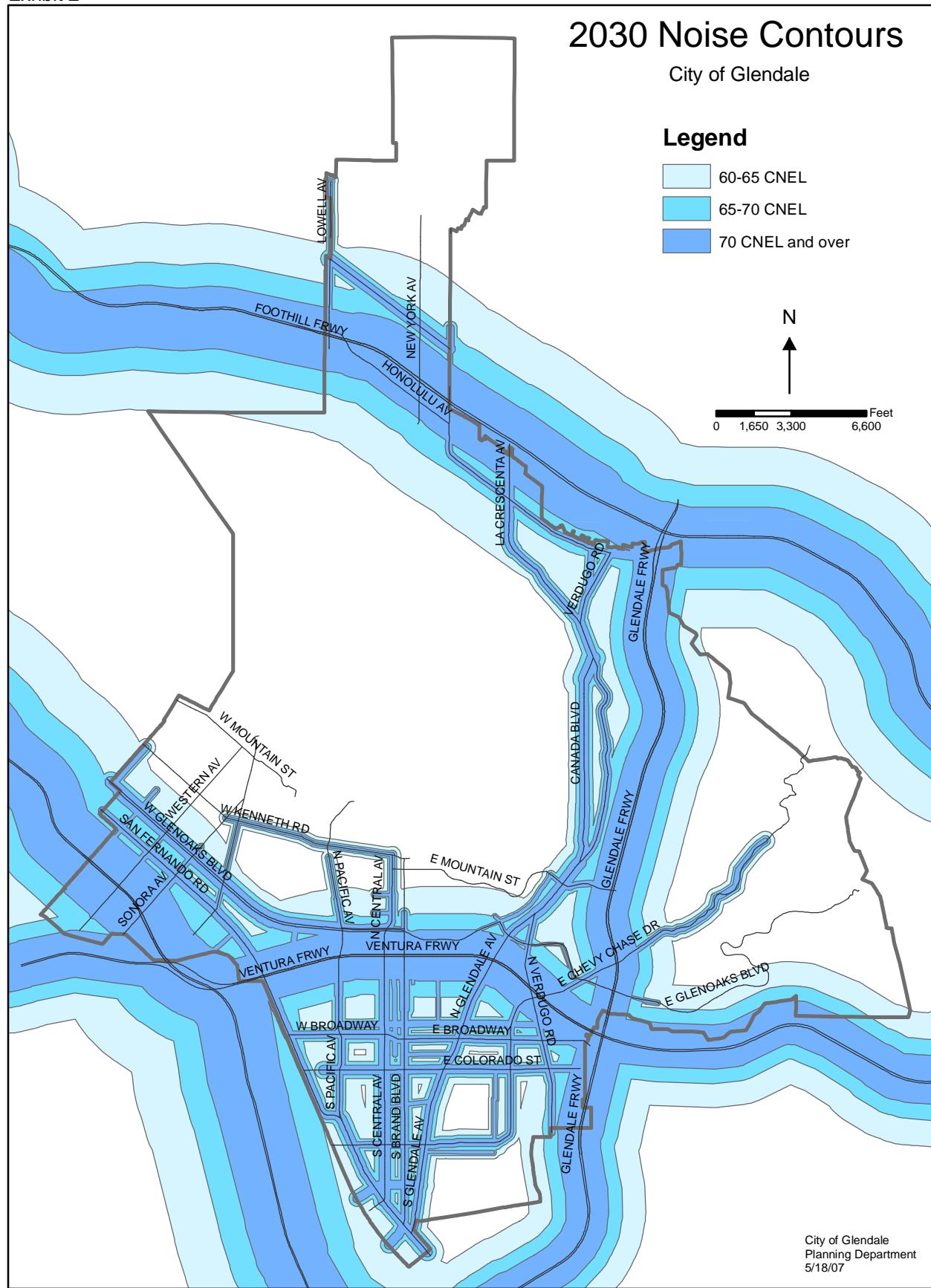


Exhibit 2

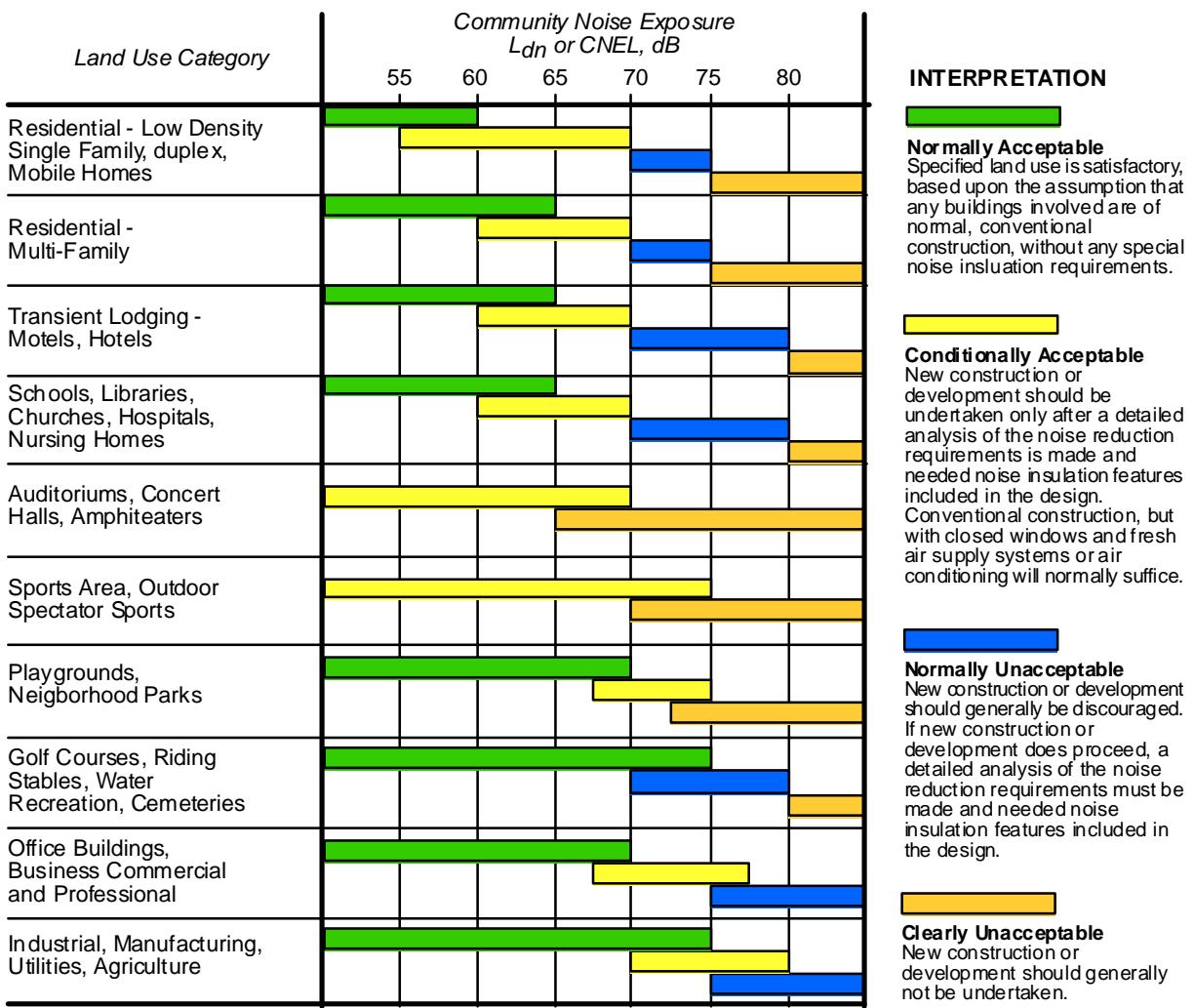


The Interior and Exterior Noise Standards shown in Table 2 are the actual design standards to be used in the project design stage. Compliance with these standards should be incorporated by conditions of approval or environmental mitigation measures and evaluated as part of City Development Review and building permit plan check.

#### 2.2.4 Noise Ordinance

The most effective method to control community noise impacts from non-transportation noise sources is through application of the Community Noise Ordinance. The City of Glendale has a strong, enforceable Noise Ordinance. The Noise Ordinance is designed to protect quiet residential areas from stationary noise sources. The noise levels encouraged by the ordinance are typical of a quiet residential area. It should be noted that while some noise problems are resolved through measurements and code enforcement actions, there are some problems that are best addressed through some form of mediation program.

**Table 1**  
**Noise/Land Use Compatibility Table**



Source: State of California, "General Plan Guidelines," 1998

Table 2  
**INTERIOR AND EXTERIOR NOISE STANDARDS**

<b>CATEGORIES</b>	<b>LAND USE CATEGORIES</b>	<b>USES</b>	<b>NOISE STANDARDS</b>	
			<b>INTERIOR CNEL</b>	<b>EXTERIOR CNEL</b>
RESIDENTIAL	Single Family		45 (1)	65 (2)
	Multi-Family		45 (1)	65 (3)
	Residential within Mixed Use		45 (1)	--
COMMERCIAL	Hotel, Motel, Transient		45 (1)	--
	Lodging			
INSTITUTIONAL	Hospital, School Classroom,		45	--
	Church, Library			
OPEN SPACE	Parks (4)		--	65

**Notes:**

1. Applies to the indoor environment excluding bathrooms, toilets, closets and corridors.
2. Applies to the outdoor environment limited to the private yard of single family residences (normally the rear yard).
3. Applies to the patio area where there is an expectation of privacy (i.e., not a patio area which also serves as, or is adjacent to, the primary entrance to the unit).
4. Only applies to parks where peace and quiet are determined to be of prime importance, such as hillside open space areas open to the public. Generally would not apply to urban parks or active-use parks.

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## Chapter 3 – GOALS, POLICIES AND PROGRAMS

### Goal I: Reduce noise impacts from transportation noise sources

- Policy I.1 Coordinate with the California Department of Transportation (Caltrans) and the Metropolitan Transportation Authority (MTA) to reduce noise impacts from existing or proposed freeway projects with respect to existing noise sensitive land uses.
- Program I.1 Investigate the opportunity for Caltrans or the MTA to construct barriers to mitigate existing sound emissions where necessary and where feasible.  
Responsibility: Public Works Department to coordinate with Caltrans and MTA
- Program I.2 Actively pursue with Caltrans or the MTA the potential for noise barriers for the apartments west of Paula Avenue and the residential areas along the Ventura Freeway near Isabel.  
Responsibility: Public Works Department to coordinate with Caltrans and MTA
- Program I.3 Include noise mitigation measures in the design or improvement of freeways and arterial roadways consistent with funding capability and support efforts by Caltrans, the MTA and the City to provide for acoustical protection for existing noise sensitive land uses affected by these projects.  
Responsibility: Public Works Department to coordinate with Caltrans and MTA
- Policy I.2 Ensure the inclusion of noise mitigation measures in the design of new roadway projects in Glendale.
- Program I.4 Attempt to reduce transportation noise through proper design and traffic calming techniques in public projects.  
Responsibility: Public Works Department
- Program I.5 Encourage the use of noise-reducing paving materials for road surfacing projects.  
Responsibility: Public Works Department
- Policy I.3 Reduce transportation noise through proper design and coordination of routing.
- Program I.6 Continue evaluating truck and bus movements and routes in the City to balance noise protection with transit needs.  
Responsibility: Public Works Department

- Program I.7 Review desired truck routes and establishment of truck prohibitions, such as prohibiting through traffic while exempting local deliveries, on noise sensitive streets.  
 Responsibility: Public Works Department
- Program I.8 Regulate truck routes, access, and delivery times by conditions of approval when reviewing new land uses.  
 Responsibility: Planning Department
- Policy I.4 Ensure the effective enforcement of City, State and Federal noise levels by all appropriate City Departments.
- Program I.9 Encourage the enforcement of State Motor Vehicle noise standards for cars, trucks, and motorcycles through coordination with the California Highway Patrol and Glendale Police Department.  
 Responsibility: Police Department
- Policy I.5 Consider noise reduction measures when making revisions to the Circulation Element.  
 Responsibility: Planning Department
- Policy I.6 Include noise considerations in evaluating city purchases of buses and other noise generating equipment and take actions as appropriate to quiet existing City owned bus fleet.
- Program I.10 Evaluate the costs and benefits of purchasing quieter buses as new buses are needed. If appropriate, include a noise specification in the purchase of new buses.  
 Responsibility: Public Works Department
- Program I.11 Evaluate the costs and benefits of retrofitting existing buses with quieter mufflers. If appropriate, implement a program of replacing existing mufflers with quieter muffler on City-owned buses.  
 Responsibility: Public Works Department

## Goal 2: Reduce noise from non-transportation sources

- Policy 2.1 Improve enforcement of required noise control measures in building design.
- Program 2.1 Require that all Building Permit applicants, including contractors, sign a form acknowledging requirements of the Noise Ordinance, and assume responsibility for compliance with the Noise Ordinance. This is particularly important for the non-resident contractor installing mechanical equipment.  
 Responsibility: Public Works Department
- Program 2.2 Ensure that required noise control features are installed and that conditions of approval related to noise control are fulfilled prior to building occupancy.  
 Responsibility: Public Works and Planning Departments

Policy 2.2	Coordinate noise abatement efforts among city departments.
	<p><b>Program 2.3</b> Promote regular coordination among City departments involved in noise abatement efforts, such as issuing warnings or citations. Include proactive measures as abatement tools to reduce the re-occurrence of problems.</p> <p>Responsibility: Public Works, Community Development and Housing, and Planning Departments</p>

### Goal 3: Continue incorporating noise considerations into land use planning decisions

Policy 3.1	Ensure that land uses comply with adopted standards.
	<p><b>Program 3.1</b> Use the criteria in Table 1 and standards in Table 2 to assess the compatibility of proposed land uses with the noise environment. New land uses, as described in the Land Uses column of Table 2, in a 60 CNEL or higher noise contour, as shown on the map of the 2030 Noise Contours, Exhibit 2, may be subject to potentially significant environmental impacts that must be addressed by a noise study. The study, prepared by a qualified consultant (to the satisfaction of the City), shall address the noise environment and propose appropriate conditions of approval or mitigation measures to comply with the interior and exterior noise standards as shown in Table 2. Interior tenant improvements, signs, and exterior remodeling will not normally be subject to review under this Program.</p> <p>Responsibility: Planning Department, Development Services and/or Public Works Department</p>
Policy 3.2	Encourage acoustical mitigation design in new construction when necessary.
	<p><b>Program 3.2</b> Continue to enforce the State of California Building Code that specifies that the indoor noise levels for residential living spaces not exceed 45 dB CNEL due to the combined effect of all noise sources.</p> <p>Responsibility: Public Works Department</p>

### Goal 4: Enhance measures to control construction noise impacts

Policy 4.1	Amend the Noise Ordinance to address construction noise problems.
	<p><b>Program 4.1</b> Change the permitted hours of construction to Monday through Friday, 7 a.m. to 7 p.m. and on Saturday from 9 a.m. to 5 p.m. Maintain the ban on construction on Sundays and Holidays. Continue to allow emergency repair work, and work to correct safety hazards, at any time.</p> <p>Responsibility: Public Works Department</p>

## Goal 5: Promote Noise Awareness in the Community

Policy 5.1      Inform residents of the ways that they can assist in noise abatement.

Program 5.1      Provide information via the Internet and cable television on ways residents can abate noise, such as retrofitting their homes, being “good neighbors” when attending late-night events, etc.

Responsibility: Public Works and Planning Departments

Policy 5.2      Inform the public of the provisions of the Noise Ordinance and its enforcement.

Program 5.2      Provide information via the Internet and cable television on the provisions of the Noise Ordinance.

Responsibility: Planning Department

## **Chapter 4 – BACKGROUND INFORMATION**

### **4.1 Introduction**

This section contains a detailed description of the current and projected noise environment within the City. This description of the noise environment includes identification of noise sources and noise sensitive land uses, a community noise measurement survey and noise contour maps.

To define the noise exposure, this section of the report defines noise terminology, describes the noise measurement results and identifies the major sources of noise in the community. The sources of noise in Glendale include: motor vehicles, trains, construction, commercial areas, and general neighborhood noises. To completely assess the noise environment in the City, noise sensitive receptors must also be identified. As mandated by the State, noise sensitive receptors include, but are not limited to, areas containing residential uses, schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use area deemed noise sensitive by the local jurisdiction.

Based upon the identification of the major noise sources and the location of sensitive receptors, a noise measurement survey was conducted. The survey has two functions. The first is to determine the existing noise levels at noise sensitive land uses and at other areas of interest. A second function is to obtain an accurate description of the ambient noise levels in various neighborhoods throughout the City.

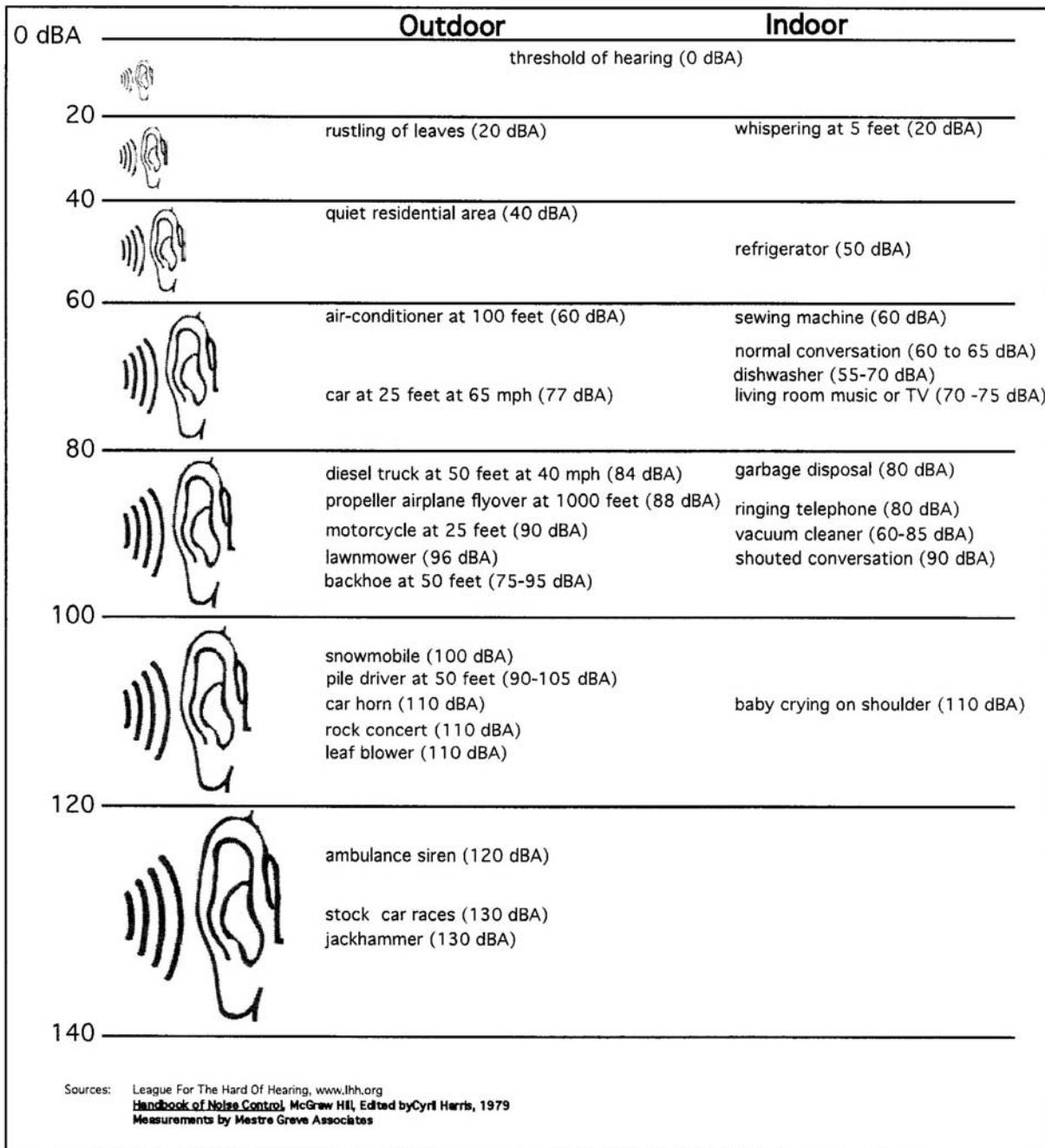
Noise contours for all of the major noise sources in Glendale were developed. These contours were based upon traffic mix, traffic levels, and vehicle speed. The contours are expressed in terms of the Community Noise Equivalent Level (CNEL) and are shown on Exhibits 1 and 2.

### **4.2 Definitions**

Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the way that the Richter scale is used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud; and 20 dBA higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud). Examples of various sound levels in different environments are shown in Exhibit 3.

**Exhibit 3**  
**Typical A-Weighted Sound**



Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the

public health and safety and prevent disruption of certain human activities. These criteria are based on such known effects of noise on people as hearing loss (not generally a factor with community noise), communication interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the narratives below.

#### 4.2.1 Hearing Loss

Hearing loss is, in general, not a concern in community noise problems. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments with long-term exposure. The Occupational Safety and Health Administration (OSHA) identifies a noise exposure limit of 90 dBA for 8 hours per day to protect from hearing loss. Noise levels in neighborhoods, even in very noisy airport environments near major international airports, are not sufficiently loud to cause hearing loss. It is significant to note that in recent years hearing loss is being caused more and more by recreational exposure to noise, such as off-road vehicle riding, loud music, target and skeet shooting, etc.

#### 4.2.2 Communication Interference

Communication interference is one of the primary concerns in environmental noise problems. Communication interference includes speech interference and activities such as watching television. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

#### 4.2.3 Sleep Interference

Sleep interference is a major noise concern in noise assessment and, of course, is most critical during nighttime hours. Sleep disturbance is one of the major causes of annoyance due to community noise. Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages and cause awakening. Noise may even cause awakening, which a person may or may not be able to recall.

Extensive research has been conducted on the effect of noise on sleep disturbance. Recommended values for desired sound levels in residential bedroom space range from 25 to 45 dBA. The lower noise level recommendations are generally for continuous noise sources such as heating and ventilating systems and the higher part of the recommended range is for intermittent noise such as outdoor noise event intrusion into the sleeping area.

#### 4.2.4 Physiological Responses

Physiological responses are those measurable effects of noise on people, which are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm. Generally, physiological responses are a reaction to a loud short term noise such as a rifle shot or a very loud jet over flight.

#### 4.2.5 Annoyance

Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability. The level of annoyance, of course, depends on the characteristics of the noise (i.e.; loudness, frequency spectra, time, and duration), and how much activity interference (e.g. speech interference and sleep interference) results from the noise. However, the level of annoyance is also a function of the attitude of the receiver. Personal sensitivity to noise varies widely. It has been estimated that 2 to 10 percent of the population is highly susceptible to noise not of their own making, while approximately 20 percent are unaffected by noise. Attitudes are affected by the relationship between the person and the noise source--is it our dog barking or the neighbor's dog? Whether we believe that someone is trying to abate the noise will also affect our level of annoyance.

#### 4.2.6 Scales

Community noise is generally not a steady state and varies with time. Under conditions of non-steady state noise, some type of statistical metric is necessary in order to quantify noise exposure over a long period of time. Several rating scales have been developed for describing the effects of noise on people. They are designed to account for the above known effects of noise on people. These scales are: the Equivalent Noise Level (LEQ), the Day Night Noise Level (LDN), the Community Noise Equivalent Level (CNEL), and percentile noise levels (L%).

**LEQ** is the “energy” average noise level during the time period of the sample. It is a number that represents a decibel sound level. This constant sound level would contain an equal amount of energy as a fluctuating sound level over a given period of time. LEQ can be measured for any time period, but is typically measured for 15 minutes, 1 hour or 24 hours.

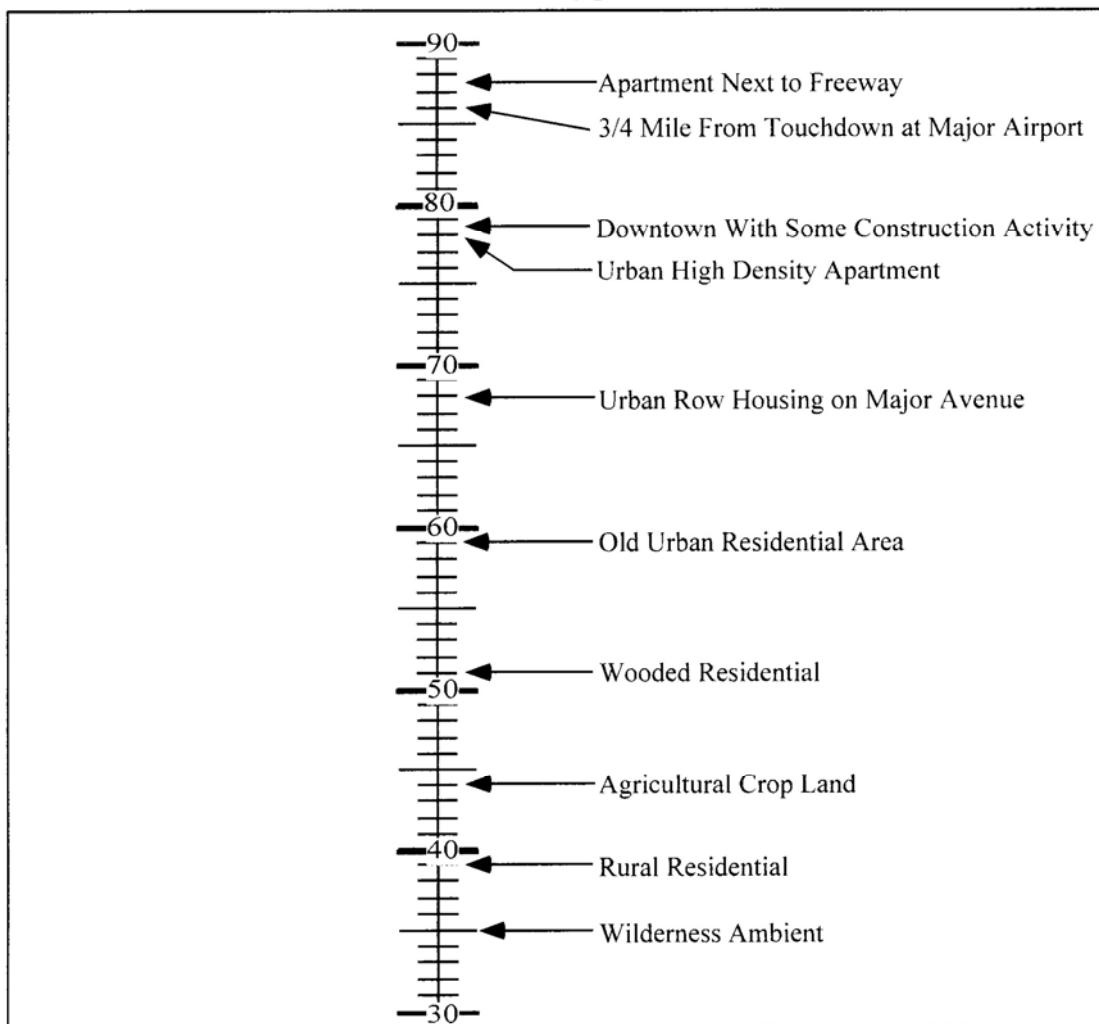
**LDN** is a 24 hour, time-weighted annual average noise level. Time-weighted refers to the fact that noise which occurs during certain sensitive time periods is penalized for occurring at these times. In the LDN scale, those events that take place during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where sleep is the most probable activity.

**CNEL** is similar to the LDN scale except that it includes an additional 5 dBA penalty for events that occur during the evening (7 pm to 10 pm) time period. Either LDN or CNEL may be used to identify community noise impacts within the Noise Element. Example noise environments in terms of the CNEL metric are shown in Exhibit 4.

#### Exhibit 4

Source: Adapted from "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare With an Adequate Margin of Safety", EPA, 1974

CNEL      Typical Outdoor Location



$L(%)$ ,  $L_{max}$  and  $L_{min}$  are statistical methods of describing noise which accounts for variance in noise levels throughout a given measurement period.  $L(%)$  is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example since 5 minutes is 25% of 20 minutes,  $L(25)$  is the noise level that is equal to or exceeded for five minutes in a twenty-minute measurement period. It is  $L(%)$  that is used for most Noise Ordinance standards.  $L_{max}$  represents the loudest noise level that is measured. The  $L_{max}$  only occurs for a fraction of a second with all the other noise less than the  $L_{max}$  level.  $L_{min}$  represents the quietest noise level during a noise measurement. All other noise during the measurement period is louder than the  $L_{min}$ .

#### 4.3 Noise Measurements

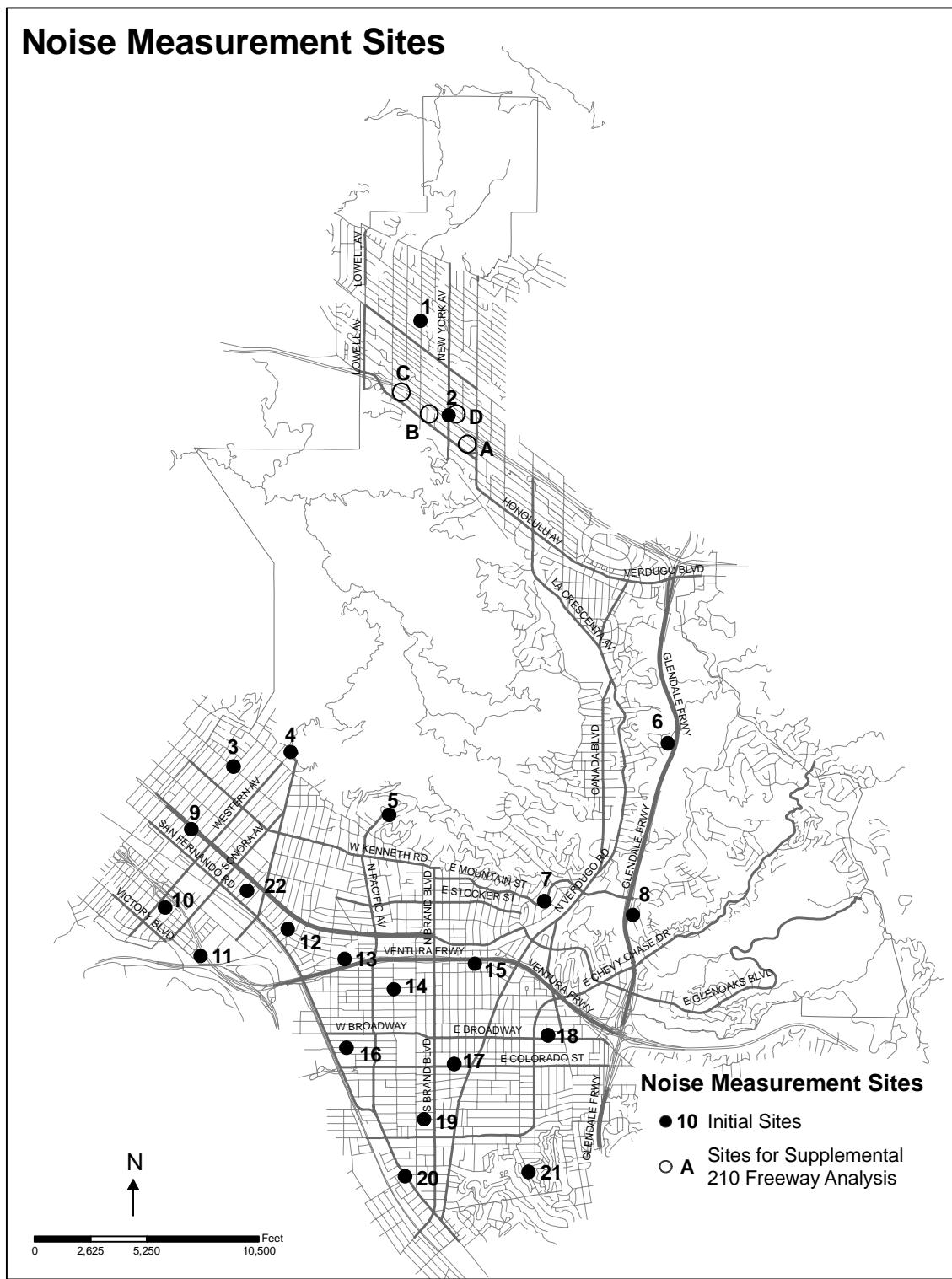
Twenty-three sites were selected for measurement of the noise environment in Glendale. A review of noise complaints, discussions with City staff, input from a community meeting and identification of major noise sources in the community provided the basis for the community noise survey. The measurement locations are depicted in Exhibit 5.

Noise measurements were made of the short-term Leq values. These measurements provide a short ‘snapshot’ view of the noise environment. The noise measurements were made at a normal receptor height of about 5 feet above the ground. Measurements were made on August 16 and 17, 2005. The measurements were made with a Brüel & Kjaer Type 2236 Sound Level Meter, and calibrated on a regular basis. These noise measurement systems meet the American National Standards Institute “Type I” specifications, which is the most accurate for community noise measurements. The meter and calibrator have current certification traceable to the National Institute of Standards and Technology (NIST).

The results of the noise measurements are shown in Exhibit 6. These figures also depict the date and time of the measurement. The cause of the loudest event is identified and the most predominant noise source(s) are identified. The quantities measured were the Equivalent Noise Level (Leq), the maximum noise level (Lmax) and the minimum noise levels (Lmin).

When examining the noise data shown in Exhibit 6 it is important to note that most of these sites were at the front yards of homes. These data are intended to identify noise levels over a broad range of the City and are not an assessment of impacts at these sites. In all cases the major sources of noise are motor vehicles. The noise levels measured cover a wide range. The quietest environment was in a residential area where noise levels were often below 40 dBA. The loudest events were buses and trucks and these events would push the noise levels into the mid 80 dBA range. In general, aircraft noise, industrial noise, and commercial noise sources did not appear to contribute significantly to the noise levels measured. A detailed discussion of each of the noise measurement sites and the monitoring results is presented on a site by site basis in the Technical Appendix.

Exhibit 5



City of Glendale Planning Department 4/4/06 JH

Exhibit 6

**Graphic Summary of Short-Term Ambient Noise Measurement Results**

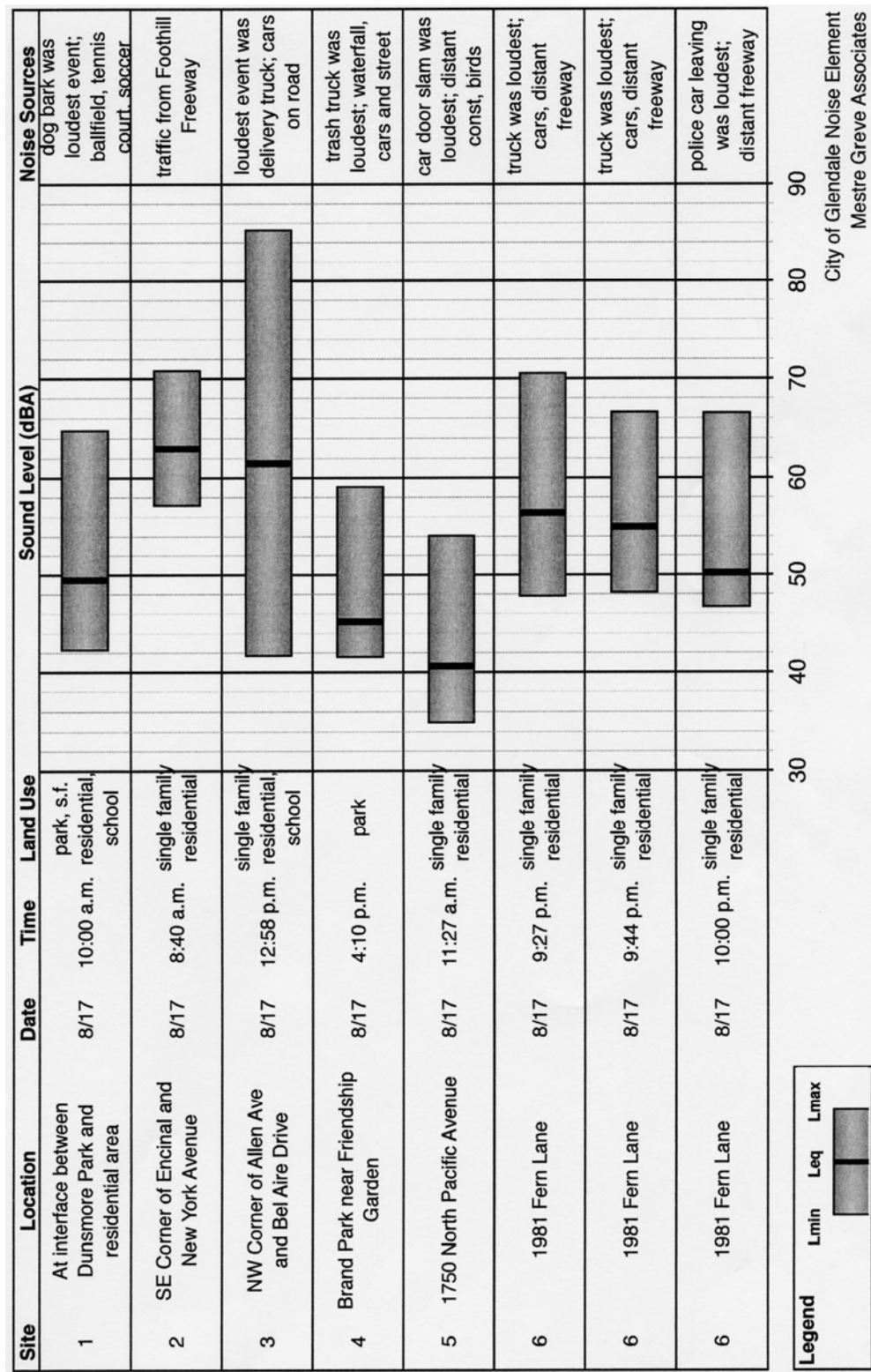


Exhibit 6 (contd.)

**Graphic Summary of Short-Term Ambient Noise Measurement Results**

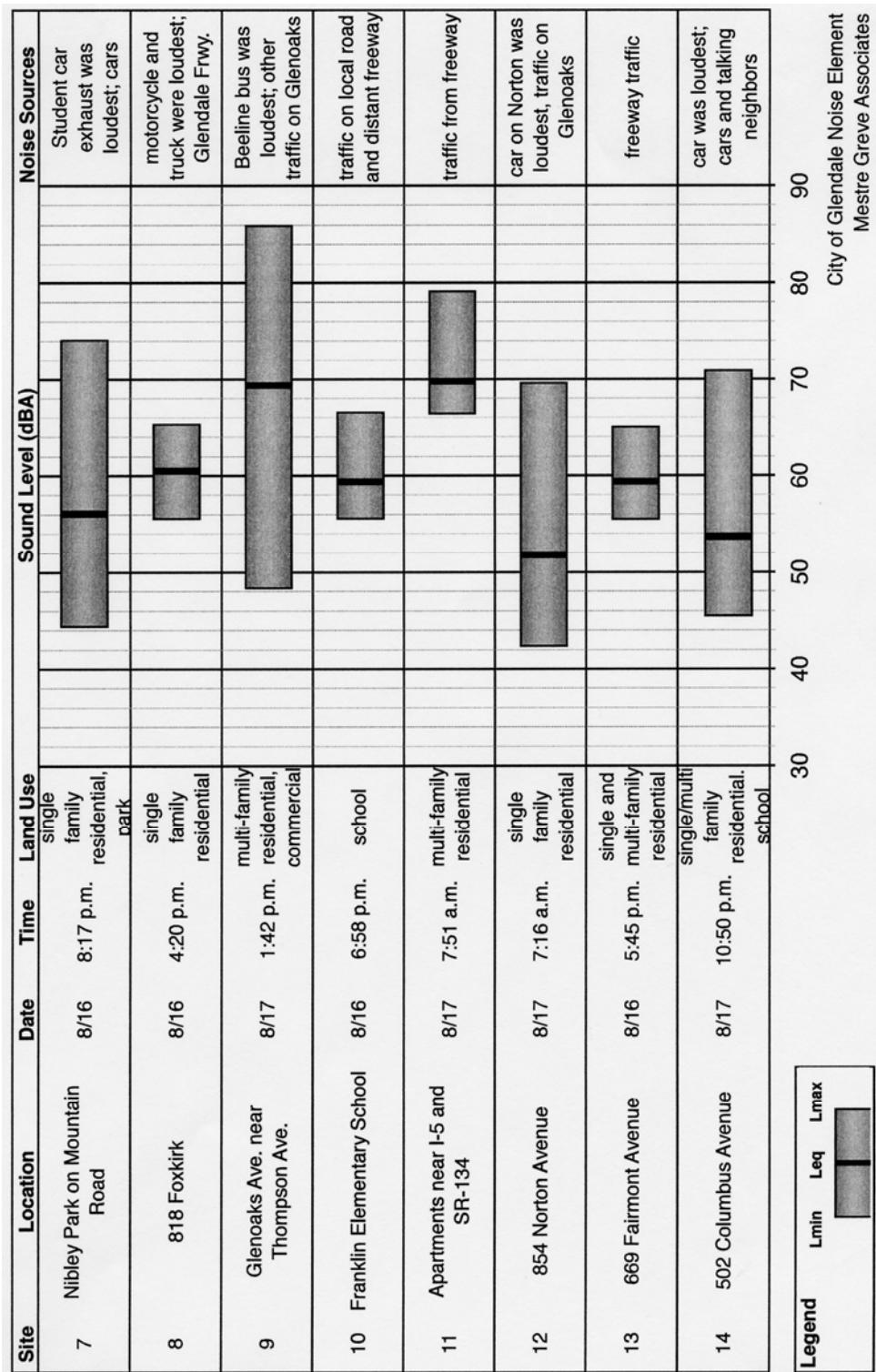
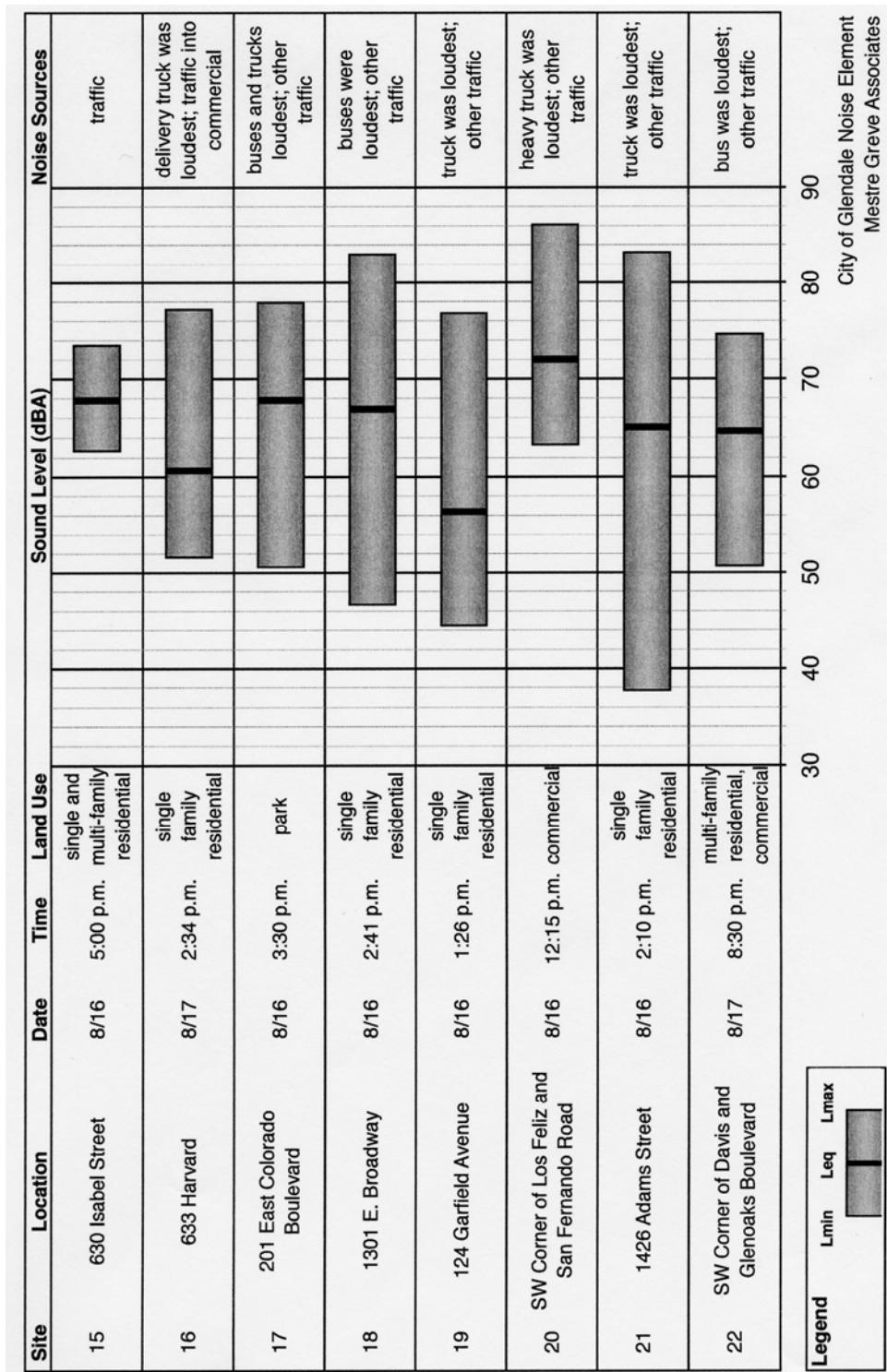


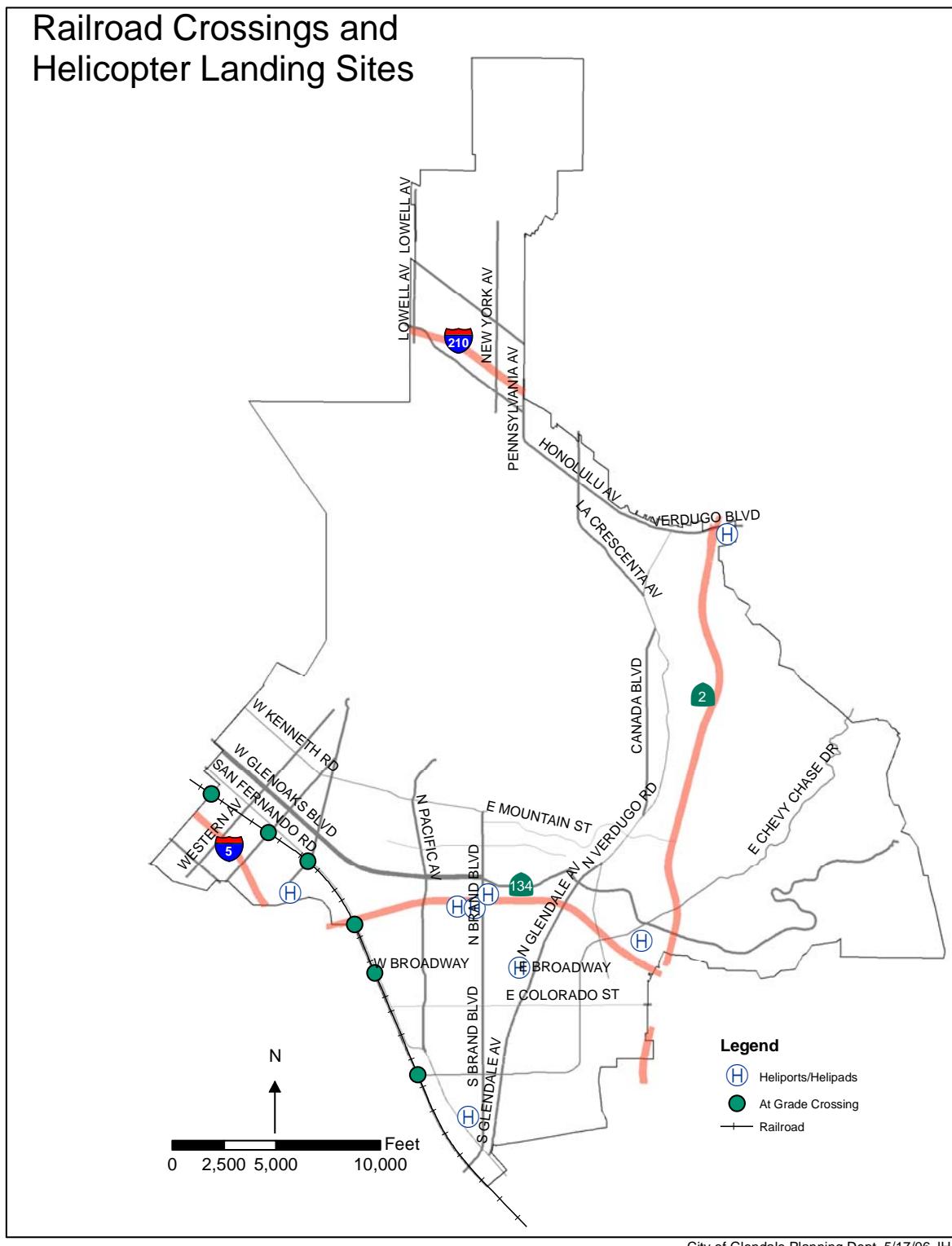
Exhibit 6 (contd.)

**Graphic Summary of Short-Term Ambient Noise Measurement Results**



City of Glendale Noise Element  
Mestre Greve Associates

Exhibit 7



## 4.4 Sources of Environmental Noise

The main source of noise in Glendale is motor vehicle traffic. Other sources of noise in the City that can be of concern include railroad, industrial, commercial, loud car stereos, loud car mufflers, individual buses, lawnmowers and leaf blowers, loud parties, and automotive facilities.

Noise problems were grouped into four broad categories: (1) transportation noise control, (2) noise and land use planning integration, 3) noise control for non-transportation noise sources, and (4) miscellaneous noise concerns. Within each of the categories several issues are presented and discussed.

### 4.4.1 Transportation Noise Control

The City of Glendale is served by four major freeways and many arterial roadways and local streets (shown on Exhibit 7). Freeways include the Glendale Freeway (SR-2), Golden State Freeway (I-5), Ventura Freeway (SR-134), and Foothill Freeway (I-210). Major roadways in the City include Foothill Boulevard, Canada Boulevard, Verdugo Road, Glendale Avenue, Glenoaks Boulevard, San Fernando Road, Broadway, Colorado Street, Chevy Chase Drive, Brand Boulevard, Central Avenue, and Los Feliz Road.

A Union Pacific Railroad line runs along the west side of the City, generally paralleling San Fernando Road. This line is a very active Metrolink route with over 50 trains per day. Amtrak and freight operations also use this railroad.

The City of Glendale contains 6 operational helipads throughout the city (shown on Exhibit 7) with many emergency helistops in the Verdugo Mountains and San Rafael Hills for firefighting purposes.

The transportation noise sources are the major contributors of noise in Glendale. Cost effective strategies to reduce their influence on the community noise environment are part of a Noise Element. However, the City of Glendale is limited in controlling certain noise sources due to preemption by Federal and State law. The California Motor Vehicle Code establishes noise limits for motor vehicles in several sections of the code. Included in the Motor Vehicle Code (MVC) are the following sections that govern vehicle noise limits: Sections 27200 (new vehicle sales), 27204 (vehicle noise limits), 27150 (adequate muffler), 27151 (muffler modification), 27150.3 (no whistle-tip muffler), 27202 (motorcycle limits), 27150.2 (exhaust systems), and 27007 (sound amplification devices). In other words, the City cannot impose their own limits on the noise emitted by motor vehicles, nor can they directly limit the amount of vehicles that drive on the roadways.

**Effectiveness of Soundwalls.** The California Department of Transportation (Caltrans), in coordination with the City of Glendale, has constructed soundwalls along most of the freeways adjacent to residential areas within the City. Monitoring sites 2, 8, 11 and 15 were used to test the effectiveness of these soundwalls or to check for the need of a soundwall in these locations. Soundwalls were present at Sites 2 and 8, which are along the Foothill Freeway and Glendale Freeway, respectively (see Exhibit 5). The noise levels at these sites were below the Caltrans standard of 67 dBA (Leq), and indicate that the soundwalls installed are providing adequate

mitigation of the noise. Site 11 represents an apartment site west of Paula Avenue near the Golden State and Ventura Freeways, and although soundwalls are provided for nearby residential areas, no soundwall is provided for the apartment complex. Noise levels at the apartment site were monitored at 70 dBA (Leq), which is above the Caltrans standard and is generally considered unacceptable. Similarly, measurements were made at an apartment complex at 630 Isabel along the Ventura Freeway. The freeway is depressed in elevation with respect to the surrounding community, and no soundwalls are provided. Noise levels of 74 dBA (Leq) were measured in this area, and represent an unacceptable noise level for the community.

The California Department of Transportation has essentially two procedures whereby soundwalls are added along an existing freeway. The most common approach is that when a freeway is widened or significantly modified, Caltrans will construct soundwalls for all areas exceeding their noise standards if the soundwall is feasible and cost effective. The second approach is part of the Community Noise Abatement Program, more commonly referred to as the retrofit program. Essentially sites are added to a Caltrans list and prioritized based on need. Usually the City must take the initiative to show that an area is worthy of being placed on the retrofit list. Funding is a major obstacle for these retrofit wall projects, and many areas may be on the list for a decade and more before being funded. Currently Glendale has two areas that are on the Phase II list. Both of these areas are small. One site is along both sides of the 210 Freeway between Honolulu Avenue and Boston Avenue (0.3 miles) and the second is along eastbound side of the Ventura Freeway and is listed as near San Rafael Avenue (0.1 mile). Program 1.1 (programs are presented in Chapter 3) has been developed to pursue adding additional areas to the retrofit wall program and to actively pursue with Caltrans possible additional funding mechanisms.

**Residential Along Major Roadways.** Residential areas along major roadways are represented by monitoring Sites 9 and 18. These sites were located in residential areas adjacent to major roadways; specifically, Glenoaks Boulevard and Broadway. Noise levels along these roadways were in the upper 60 dBA (Leq) range and the CNEL noise levels would be about 70 dBA. Existing homes in these areas may experience unacceptable indoor noise levels. Older homes, even with windows closed, have an outside to inside noise reduction of 20 to 25 dBA. This means that the indoor noise levels with windows closed would be in the 45 to 50 CNEL. New home construction is required by State building codes to be designed to meet a 45 CNEL noise standard.

The zoning on Glenoaks Boulevard and Broadway, and several other major streets, allows commercial and mixed used development. Any residential use constructed would be a multi-family development. Interior noise levels can be mitigated to meet Building Code requirements simply by adhering to the Building Code. Programs 3.1 and 3.2 are proposed to address the potential problems associated with siting residential development in areas subject to elevated noise levels. Noise studies required by Program 3.1 will ensure that new residents will not be subjected to excessive noise levels.

**Soundwall Along Railroad.** The Union Pacific Railroad line borders and passes through portions of the west side of Glendale. Generally the railroad parallels San Fernando Road. Metrolink is the primary user of the line, but Amtrak and freight trains also use the line. The

concern was raised at the public meeting that perhaps a soundwall could be constructed along the railroad to protect nearby residential areas to the east. Measurements and noise projections indicate that traffic on San Fernando Road is a greater source of noise than is the train traffic. Little benefit would be achieved by constructing a soundwall adjacent to the railroad, and therefore no action is recommended.

#### 4.4.2 Noise and Land Use Planning Integration

Information relative to the existing and forecast noise environment within Glendale should be integrated into future land use planning decisions. This Element presents the noise environment in order that the City may include noise impact considerations in development programs. Land use conflicts related to noise can often be avoided by proper planning and standards.

The City of Glendale has industrial uses in the southwest corner of the City, in a small area in the southern portion of the City along the east side of San Fernando Road, and in a small portion of Montrose. These uses do not appear to create major noise problems in the City. Neither the on-site activities nor the trucks associated with this type of land use were mentioned at the public meeting. Noise measurements near these areas confirmed that the industrial uses present are not generating loud levels of noise. Noise generated by the industrial uses within their property boundaries is subject to the limitations in the Glendale Noise Ordinance.

Noise generated by parking areas, delivery trucks, and music from bars and restaurants are common sources of noise complaints. In discussions with staff and again in public meetings, noise from banquet halls was identified as the most significant commercial noise impacting residential areas. The banquet halls are in many areas of the City. Other commercial sources of noise that were identified include the public address (PA) systems at auto dealerships. Additionally, future plans for the downtown area integrate commercial uses with residential uses (i.e., mixed use development). Residences may be located above or within close proximity to dance clubs in this zone. These sources of noise are discussed in more detail below.

**Downtown Residential Interface.** As part of the revitalization of the downtown area many mixed-use projects may be constructed. Such projects hold the promise of reducing traffic congestion by housing people closer to jobs and entertainment. They also improve the economic viability of downtown by providing a more stable customer base. Aside from these hoped-for benefits, the increasing number of downtown residential projects are simply a response to market demand. One of the tradeoffs of living downtown, however, is exposure to elevated noise levels. The combination of traffic, the mix of residential and commercial land uses, and the close proximity of uses makes for a unique problem. Just as residents in agricultural areas must accept the odors associated with agricultural operations, downtown residents must accept a certain amount of elevated noise levels. Clubs, late-night restaurants, and banquet facilities are some examples of commercial uses that could locate in the downtown area and generate noise into nighttime hours. The proximity to such entertainment is certainly one of the attractions for at least some downtown residents. Programs 3.1 and 3.2 provide the City with the tools to ensure that excessive noise will be avoided or mitigated.

**Active Park and Residential Interfaces.** One question that arises in land use planning is whether an active park or playfields conflict with adjacent residential land uses. The noise measurement at Site 1 was taken at the interface between Dunsmore Park and the adjacent residential area. This site is in the Montrose area of the City. This site was selected to check on the compatibility of an active park area with residential uses. While the measurements were conducted, the ball field, soccer field and tennis courts were all active. There is a parking lot between the homes and the active fields which acts as a buffer zone. The noise levels measured at the residences ranged from 42 to 64 dBA with the average noise level (Leq) being just under 50 dBA. Most of the noise measured was due to the playfields, however, the loudest sound recorded came from a neighborhood dog that barked. The daytime Leq is often indicative of the CNEL noise level. The CNEL in this area would be expected to be around 50 dBA. Thus this area represents a quiet residential area and shows that residential and active park uses can be compatible when in close proximity if properly planned. No program was proposed since with the proper planning active parks adjacent to residential do not appear to be a noise conflict.

**Noise Standards for Various Park Uses.** The park uses in Glendale can be divided into three types: urban parks, active parks, and quiet parks. The Glendale Central Park located along Colorado Street is an example of an urban park. Noise levels at this park (i.e., Monitoring Site 17) range up to 68 dBA (Leq). However, the park appeared to be busy and people did not appear to be bothered by the noise levels. Active parks, such as Dunsmore Park, are usually generators of noise and are not very sensitive to noise from outside sources. Brand Park (Site 4) is an example of a quiet park. The noise level at Brand Park was 45 dBA (Leq). In this type of park, peace and quiet are expected and high noise levels would ruin the park experience. Noise standards, including standard for “quiet parks,” are being proposed as part of Program 3.1. More background and discussion is provided in the following item in regards to City noise standards.

**City Noise Standards.** Noise standards are designed to ensure that new sensitive land uses are designed and constructed so that the noise environment will be acceptable for that land use. For example, most cities have an outdoor noise standard for rear yards of single-family residential uses of 65 CNEL. This requires that when new residences are constructed that soundwalls, berms, setbacks or other features be used that will result in the rear yards meeting a 65 CNEL noise level now and for future traffic projections. Currently, the City does not have any noise standards, which are normally contained in the Noise Element of the General Plan. (Noise standards should not be confused with the Noise Ordinance, which is discussed in the Section 4.4.3.) The City enforces the State building code (Chapter 12, Section 1208A) which requires that “new hotels, motels, dormitories, apartment houses and dwellings other than detached single-family dwellings” be designed and constructed so as to achieve an indoor noise level of 45 CNEL or less when constructed and at least 10 years into the future. The standard protects these dwellings from exterior noise sources such as highways, county roads, city streets, railroads, rapid transit lines, airports and industrial areas. Cities are allowed to develop noise standards for other uses as they see fit.

In addition to protecting new construction from obtrusive noise levels, city noise standards also provide a criterion by which to evaluate the impact of new projects on existing residential areas

and other noise sensitive areas. For example, assume that the City adopts a 65 CNEL for residential land uses. If a new project is proposed which will generate significant traffic, it can be determined if the 65 CNEL level will or will not be exceeded at existing residential areas. If exceeded, then the project would be determined to have a significant impact without further mitigation.

Program 3.1 utilizes the standards in Table 2 for residential and quiet park uses. These standards ensure that new development will be adequately protected from noise, and provide a consistent criterion with which to assess impacts generated by new projects.

**San Fernando Corridor Development.** San Fernando Road represents one of the major noise corridors through the City. Noise levels monitored at Sites 16 and 20 show noise levels near and on this roadway to range from 60 to 72 dBA (Leq). High peak noise levels are also experienced along this roadway due to the large amount of trucks traveling the roadway and the nearby railroad. Mixed use is planned for some parts of the San Fernando Corridor. This type of use would be acceptable from a noise standpoint, as long as the residential units are properly soundproofed. Adoption of specific City noise standards as proposed in Program 3.1 would insure that new residences in this area are properly designed.

**Noise Compatibility Guidelines.** The City currently has a set of Noise Compatibility Guidelines (Table 1). The guidelines identify the general acceptability of noise exposures for various land use categories in the City. The guidelines are based on the State of California recommendations for Noise Elements made in 1976. The State in their "General Plan Guidelines," has modified slightly the noise compatibility guidelines and Program 3.1 presents for adoption these updated guidelines. It should be noted that the compatibility guidelines are simply guidelines, and do not represent standards. The guidelines provide an initial evaluation of the compatibility between a land use and noise environment.

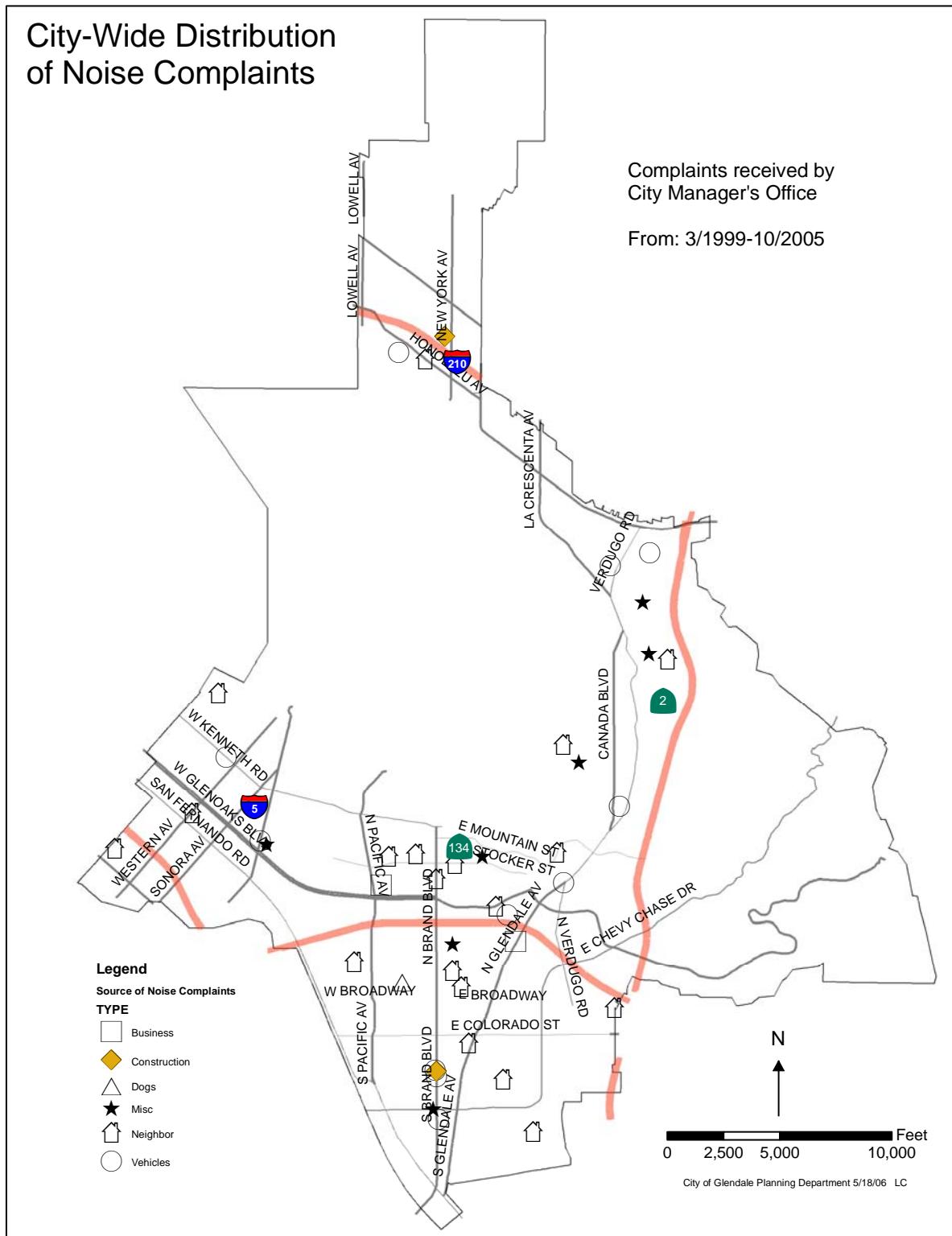
#### 4.4.3 Non-Transportation Noise Sources—The Noise Ordinance

Exhibit 8 illustrates the spatial locations of noise complaints filed through the City Managers Office from 3/4/99 to 10/11/05. The significance of the locations is that no specific area is impacted by localized sources.

Residential land uses and areas identified as noise sensitive must be protected from excessive noise from non-transportation sources including commercial activities, construction noise, late-night entertainment, spa and pool equipment and air-conditioner noise to name a few. These impacts are most effectively controlled through the enforcement of an effective City Noise Ordinance. A noise ordinance is designed to control noise generated on private property and impacting another parcel of property. A noise ordinance is not designed to control traffic on public streets, aircraft noise, train noise and other public transportation noise. The noise ordinance is part of the City code, and is not contained in the Noise Element of the General Plan. However, as part of a Noise Element update the noise ordinance is often reviewed and recommendations made for changes if needed. The key noise ordinance related issues are discussed below.

**Review of Noise Ordinance.** The Noise Ordinance is contained in the Glendale Municipal Code, Title 8, Chapter 36 – Noise Control. The ordinance was updated in 1991. To be enforceable the courts have ruled that a noise ordinance must have specific noise limits and protocols for noise measurements. The Glendale Noise Ordinance contains these requirements and the protocols for measurement of potentially offending noise sources are clear. In general, the City's Noise Ordinance is an excellent tool for controlling noise generated on private property throughout the City. Because of concerns expressed by residents about disturbing noise from construction activities on the weekends, the Element proposes to revise the allowable hours for construction. Currently construction is allowed from 7 a.m. to 7 p.m. Monday through Saturday with construction prohibited on Sundays. The proposed change is to restrict the hours of construction on Saturday to 9 a.m. to 5 p.m. with other days remaining unchanged. This change would not affect the authority of the Director of Public Works and the Building Official to authorize other hours.

Exhibit 8



**Automotive Interface with Residences.** Automotive uses along Brand Boulevard abut the residential neighborhood in many locations. Noise is generated by automotive repair, public address (PA) systems, parking of cars, and unloading new cars from transport trucks. This interface between automotive uses and residences has been a major point of conflict in other cities. Our measurements (e.g., Site 19) indicate that the noise generated by the automotive facilities is minimal. This finding was also supported by the fact that this was not brought up as an issue in the public meeting for the Noise Element Update. In some cases the City has limited hours of operations for some automotive activities, prohibited PA systems and imposed other restrictions on the automotive facilities. Additionally, the City has an enforceable Noise Ordinance that can and has been used to ensure that the residential areas are not unduly impacted. In summary, the automotive/residential interface does not appear to be generating impacts on a regular basis, and therefore, no actions items or changes to policy are recommended.

**Banquet Facilities Interface with Residences.** Banquet facilities have several sources of noise. Generally, the parking lots associated with the facilities are the most significant source of noise. Cars driving into and out of the lots, groups of people talking and shouting, and inadvertent car alarms can all occur in the parking lot and can occur late at night when the banquet ends. Music is often played at the banquet facilities and has the potential for being a problem in the surrounding area when doors and windows are left open. The City does not allow banquet facilities within 200 feet of a residential zone. Limiting hours and requiring onsite parking away from residential areas are other planning restrictions that can be used. Banquet facilities that are currently operating can be controlled via the Noise Ordinance. The Noise Ordinance has very specific noise level limits that are measured at the nearby residential property line. The Noise Ordinance limitations apply to all noise generated at the banquet facilities including parking lot noise. The Noise Ordinance limitations are more stringent after 10 p.m., so nighttime noise is controlled to a greater extent than noise generated during the evening. Since the Noise Ordinance is in place and can be used to effectively control banquet facility noise, no action items or changes to policy are recommended.

**Construction Noise.** Construction noise is addressed in the Noise Ordinance in Section 8.36.080. The noise ordinance exempts construction activities from compliance with the noise ordinance limits under certain circumstances. If construction occurs within 500 feet of a residential zone, then construction is prohibited from 7 p.m. to 7 a.m. every night and from 7 p.m. on Saturday to 7 a.m. on Monday (i.e., no Sunday construction). Construction on certain holidays is also prohibited. To respond to complaints about noise from construction on the weekend, Program 4.1 proposes to change the Noise Ordinance by restricting construction on Saturday to the hours of 9 a.m. to 5 p.m. This level of control is consistent with the approach used by most other jurisdictions, with the exception that other jurisdictions usually prohibit construction on Saturday as well as Sunday. Some jurisdictions do not have a distance limit in their ordinance and essentially prohibit construction anywhere in their city at night and on weekends and holidays.

#### **4.4.4 Miscellaneous Noise Issues**

Several issues came up as part of the public input process. Not all of the issues raised are strictly issues that are normally dealt with in the Noise Element. But since they were of concern to the residents all issues were investigated and usually noise measurements were made to determine the significance of the issue.

**Loud Car Mufflers.** Several residents commented on the extensive use of loud mufflers on vehicles in the City. The type of mufflers and the legal noise levels for with cars is regulated by the State of California, and the City has no regulatory power in this area. The California Motor Vehicle Code establishes noise limits for motor vehicles in several sections of the code. Included in the Motor Vehicle Code (MVC) are the following sections that govern vehicle noise limits: Sections 27204 (vehicle noise limits), 27150 (adequate muffler), 27151 (muffler modification), 27150.3 (no whistle-tip muffler), and 27150.2 (exhaust systems).

Site 7 is along Mountain Road at Nibley Park. At the community meeting some residents complained about the exhaust noise from student vehicles during the evening hours. Because there are speed bumps on this road, travel speeds are generally low. This measurement was intended as a check on the situation. Measurements were initiated 8:17 p.m. It is impossible to positively identify student traffic as opposed to residents, but it was clear that a significant portion of the traffic was associated with the college. During the measurement period about 15 cars passed by whose noise level was between 65 and 70 dBA. Only one car exceeded 70 dBA, and that car was responsible for the maximum sound level measured during the period (i.e., 74.1 dBA). The exhaust on the car was the loudest source of noise. The exhaust on this car, while perhaps annoying to residents is not illegal, and is consistent with noise levels typically measured on other small streets throughout the City. The Leq noise level for the measurement was 56 dBA, which is representative of a quiet urban area. When no cars were present the area was very quiet, with the Lmin noise level measured at 44 dBA. Measurements at other locations throughout the City also did not see an abnormally high use of modified or very loud muffler systems. Program 1.9 supports efforts by the City to encourage enforcement and regulation of motor vehicle exhaust systems in order to keep this noise source under control.

**College Traffic on Mountain Road.** Site 7 was measured during the evening to determine if unacceptable noise levels were generated by traffic associated with college traffic. As indicated in the item above, it was impossible to positively determine what proportion of traffic on Mountain Road is due to the college. Clearly some traffic on this road is due to the college. The City has installed speed bumps on this roadway and this has acted to keep speeds low and the noise is also correspondingly low. The noise levels measured when college traffic was present was still typical for a quiet urban area. Therefore, the noise levels are acceptable for this area, and while it may be desirable to further reduce traffic on this roadway, it can not be justified from a noise standpoint.

**Beeline Bus Noise.** At the public meeting, one resident raised the concern about bus noise. He indicated that he thought the Beeline buses were too loud. His observation was, in fact, confirmed by our observations. Beeline buses accounted for a disproportionate share of the maximum sound levels at many of the measurement sites. In fact, a Beeline bus was the loudest

event monitored at Sites 9, 17, 18, and 22. While this study was not intended to quantify bus noise, it is estimated that the Beeline buses are 5 to 10 dBA louder than buses operating in other cities. It should be noted that the levels generated by the buses are not illegal, simply louder than the typical bus. The noise level emitted by a bus is largely dependent on the type and quality of muffler installed on the bus. Quieter mufflers can restrict the exhaust flow and cause a slight loss in power compared to louder mufflers. Program I.11 has been recommended which would have the City investigate the use of quieter buses, and if appropriate, incorporate a noise standard into their buying program for new buses and/or replace existing mufflers with quieter mufflers.

**Sports Complex Related Traffic Noise.** The Glendale Sports Complex was constructed at the east end of Fern Lane. Residents continue to complain about the traffic noise associated with the Sports Complex. Site 6 is along Fern Lane; specifically measurements were made at 1981 Fern Lane. Three 15-minute measurements were made at this site. During the first two measurements, which lasted from 9:27 p.m. to 9:59 p.m. cars were regularly traveling in a westbound direction from the Sports Complex. From 10:00 p.m. to 10:15 p.m. only one car passed the measurement site. Two factors may have tainted our noise measurements. First, the police were present on the street and this may have caused people to drive slower than if the police had not been present. Second, one resident told us that about half of the playfields were not being used because it was not soccer season. We were unable to independently confirm this. The measurements during the first two periods averaged 56 and 55 dBA. The noise level during the third period was 50 dBA (Leq). The traffic on the distant freeway kept the noise levels in the 48 to 52 dBA range.

Based on our limited measurements, the Sports Complex traffic does appear to increase average noise levels by about 5 dBA during the 30-minute period when the cars are leaving the Sports Complex. (A similar increase might be expected when the cars are arriving at the complex.) This increase in noise would be noticeable to the local residents. However, the noise levels remain low during this time that the time that the cars are leaving. With noise levels in the mid-50 dBA range, this neighborhood is very typical of many neighborhoods that were measured. The residents also have complained about the maximum sound levels due to cars passing by with loud exhausts. In the first measurement period, the loudest event was a pickup truck and the noise was generated by the vehicle's tires. In the second period, the loudest event was caused by the exhaust system on a pickup truck and reached a noise level of 66.6 dBA. Even though this level may be annoying to residents, it is at a legal level and is consistent with what was measured in other neighborhoods. The City has instituted measures to slow traffic on Fern Lane and this does appear to be working.

While the noise levels are significantly higher during the period that cars are arriving and departing the Sports Complex, the noise levels are still well below those experienced in many neighborhoods in Glendale. The curfew of 10 p.m. at the Sports Complex seems to be effective in eliminating car traffic after 10 p.m. From a noise standpoint, no further action is needed on Fern Lane since levels are not excessively loud.

**Truck Traffic on Norton Avenue.** At the community meeting, residents complained that trucks in the early morning cut through on Norton Avenue and cause unacceptable noise levels.

Noise measurements were made early in the morning at 854 Norton Avenue. We counted trucks while we conducted our noise measurements and did not see a single truck (including 2 axle delivery trucks). The site was visited a second time without measurements and again no trucks were observed. Noise levels were fairly low during the measurement with the Leq at 52 dBA. Therefore, no additional action is recommended at this time. Program 1.8 promotes review by the City of proposed truck routes, access and delivery times to manage this issue.

**Police Training and Enforcement.** The issue of police training and enforcement was brought up at the public meeting and in discussions with residents of Fern Lane. In general, the residents stated concerns that more police enforcement of loud mufflers and loud car radios is needed in the City. The Police Department trains its officers on the enforcement of the Noise Ordinance and the Vehicle Code as it relates to noise.

**Apartment/Single Family Homes Interface.** Residents raised the concern about noise generated at apartment sites impacting adjacent single-family homes. In general, they thought that higher noise levels are associated with apartments and single-family homes should not be located directly adjacent to single-family homes. This issue is both a land use planning issue and an enforcement issue. Many newer communities will in fact not plan apartments directly adjacent to single family homes. They feel that there is a higher level of noise associated with apartment buildings. There are more people and traffic within an apartment complex, and higher noise levels than in single-family areas would be expected. On the other hand, there are many apartment complexes that are located directly adjacent to single family homes where no conflict exists. For older communities, such as Glendale, there may be parts of the city where gradual replacement of single-family homes with condominiums or apartments is desirable. Factors that can mitigate the impact of apartment complexes on adjacent residences include keeping the density of the complex to the lower end of the range for apartment buildings. Keeping major traffic ingress and egress points, pool areas, and other outdoor gathering areas away from single family homes can also help. Providing reasonable setbacks between the apartment buildings and property line is also beneficial. Noise conflicts between single and multi-family residences were one of the issues that prompted a review of the single/multi-family interfaces throughout the city and which led to the rezoning of certain parts of the city under the Multi-Family Transition Zoning program.

When conflicts arise between existing single-family residents and apartment residents it is often an enforcement issue. Loud stereos, parties, and other intermittent events usually are handled by the police. Chronic problems, such as pool pump noise, regular crowd noise around the pool area, and other equipment noise problems, can be corrected via the Noise Ordinance process. The loud events can be measured and the apartment owner cited. Corrective action can also be ordered if the problem is severe.

*City of Glendale*



## **OPEN SPACE AND CONSERVATION ELEMENT**

*of the General Plan*

Planning Division  
January 1993

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Kathy Wasung Duarte, Planning Associate  
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Harriet Lang, Intern  
Mark Skutnik, Intern  
Karen Howell, Executive Secretary  
Pauline Voss, Executive Secretary

In cooperation with  
Parks, Recreation and Community Services Division

RESOLUTION NO. 22,818

A RESOLUTION OF THE CITY COUNCIL OF  
THE CITY OF GLENDALE, CALIFORNIA,  
AMENDING THE OPEN SPACE AND  
CONSERVATION ELEMENT  
OF THE GENERAL PLAN  
(GENERAL PLAN AMENDMENT NO. 93-2)

**WHEREAS**, The Council has conducted noticed public hearings pursuant to the provisions of Sections 3-107 of the Glendale Municipal Code and Chapter 3, Title 7 of the Government Code of the State of California; and

**WHEREAS**, the Council has ordered the study of its policies concerning the City's open space and natural resources; and

**WHEREAS**, the State of California Government Code requires every General Plan to have an Open Space and Conservation Element which inventories public and private open space land, biotic, mineral and aesthetic resources, and includes policies and goals which serve to identify, protect, and maintain these natural resources and to prevent their wasteful exploitation and ultimate destruction; and

**WHEREAS**, the Council has received and accepted the proposed General Plan Amendment 93-2: Open Space and Conservation Element 1993, prepared by the Planning Division; and

**WHEREAS**, the Planning Commission of the City of Glendale held noticed public hearings on the Open Space and Conservation Element 1993, on January 26, 1993, February 2, 1993, February 16, 1993, and February 23, 1993, and has recommended adoption thereof to the City Council; and

**WHEREAS**, the Council has found that General Plan Amendment No. 93-2 promotes and protects the public health, safety, comfort, convenience, and general welfare of the citizens of Glendale;

**NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY GLENDALE**, that General Plan Amendment No. 93-2, being a revised and updated Open Space and Conservation Element of the General Plan, is hereby approved and adopted to meet State General Plan requirements, to assess the City's open space and natural resources, to update the policies to protect and maintain the City's open space and natural resources, and to supersede the City's previous Open Space and Conservation Element of the General Plan.

This resolution shall become effective 30 days after the date of adoption.

Adopted this 16th day of March, 1993.

  
Glen Rapp  
Mayor



# OPEN SPACE AND CONSERVATION ELEMENT

## JANUARY 1993

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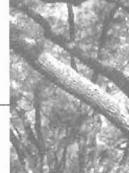
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## EXECUTIVE SUMMARY

### A. DESCRIPTION AND PURPOSE

California State law requires each city to prepare a Comprehensive General Plan to address community policies and objectives for growth and development. The City of Glendale's General Plan establishes the policies and procedures for the use and protection of resources to meet community needs. Glendale's General Plan contains nine sections. These sections are called elements and are published separately. They address the seven topics mandated by state law and two additional topics recommended, but not required, by state law. Glendale's first Open Space and Conservation Element was prepared in 1972 as the Open Space, Conservation and Recreation Element. This document contained two mandated topics—Open Space and Conservation—and a third, optional topic—Recreation. The Open Space and Conservation Element coordinates planning and management for natural resources and the improvements that complement them. It provides a broad overview of existing conditions, issues and opportunities and a comprehensive approach to the management of the identified resources.

### B. OPEN SPACE AND CONSERVATION MANDATES AND OPPORTUNITIES

The primary objective of an Open Space and Conservation Element is to develop a comprehensive plan for the identification and management of natural resources. This mandate ensures that public agencies will inventory their natural resources and develop policies for responsible utilization and stewardship. Although the element is directed primarily at resources and management policies within the City of Glendale, it provides the opportunity to assess the available resources within the regional context and to develop policies and implementation strategies directed toward the acquisition of additional open space land and toward achieving equilibrium between conservation and use.

### C. OPEN SPACE AND CONSERVATION FINDINGS

The following is a summary of significant findings discussed in this element. For more detail, see the respective sections.

## **BIOLOGICAL RESOURCES**

- The hillside areas of the City contain seven native plant communities including chaparral, southern oak woodland, southern oak riparian woodland, coastal sage, aluvial scrub, walnut woodland and big cone spruce.
- The Los Angeles County Department of Regional Planning has identified the Verdugo Mountains as a Significant Ecological Area (SEA).
- The California Department of Fish and Game has designated several riparian corridors in their Natural Diversity Data Base.
- Glendale contains habitat areas which could support as many as fourteen rare or endangered plant and animal species as currently identified by the California Department of Fish and Game.
- Two sensitive plant communities, Riversidian alluvial fan sage scrub and southern oak riparian forest/southern sycamore alder riparian woodland, exist within the City.
- Many public agencies, including the Santa Monica Mountains Conservancy, Los Angeles County Regional Planning and the California Department of Fish and Game, recognize Glendale's open space as an important natural resource within the region.
- To maintain genetic diversity in plant and animal communities, habitat areas must be connected with larger expanses of open space.
- Based upon a biological resource evaluation, the Verdugo Mountains were found to contain the majority of important habitat areas. The most important natural resource in the San Rafael Hills is a 388 acre area in Sycamore Canyon.

## **HYDROLOGY AND WATER RESOURCES**

- The hillside areas of the City contain many drainage courses and tributary streams that normally flow during the winter and spring rainy seasons.
- Unlined stream channels and water basins act as a means to replenish underground aquifers.
- Approximately 32 blue-line streams have been designated and are regulated by the Department of Fish and Game and the U.S. Army Corps of Engineers.

- The City is actively participating in the National Pollutant Discharge Elimination System (NPDES) permit process in order to reduce surface and groundwater pollution.
- Glendale is progressive in its development and use of water reclamation programs, and delivers reclaimed waste water to various public and private users.
- The City has implemented a broad range of water conservation and distribution management programs in coordination with programs at Federal, State and regional levels.
- Glendale operates a hazardous materials collection facility to prevent the illegal dumping or disposal of hazardous materials in landfills to protect against groundwater contamination.

## **VISUAL AND SCENIC RESOURCES**

- Glendale contains numerous landscaped medians, parkways, and neighborhood open spaces as well as historic and cultural resources which contribute to the City's identity and character.
- Glendale has three major physiographical features: the San Gabriel Mountains, the San Rafael Hills, and the Verdugo Mountains.
- These mountain ranges provide a dramatic scenic backdrop, open space, and valuable habitat.
- The visual significance of these landforms can be organized into distinct classifications based upon a hierarchy of criteria.
- Glendale historically has regulated the preservation of major ridgelines (as defined by location in the Glendale Municipal Code).
- Primary and important secondary ridgelines and blue-line streams as defined in Chapter IV of this document have been identified for regulation or preservation.
- The public ownership of open space land totals 5,860 acres, not including streets and other public rights-of-way; only 1,540 acres remain in private ownership, available for development.



# INTRODUCTION

## A. BACKGROUND

Originally platted as a township in 1887 and incorporated in 1906, Glendale has grown to population of more than 185,000<sup>1</sup> and an area of more than 30 square miles. The city encompasses diverse physical features, development patterns and population characteristics. Such variety provides both constraints and opportunities for the management of open space and for the conservation of natural resources.

Glendale's patterns of growth are shaped and defined by its geographic character. Variations in terrain have resulted in intense development in some areas and an absence of development in others. The most significant physical landmarks within the community are the Verdugo Mountains and the San Rafael Hills. These two geologic masses flank the central portion of the city. They are divided by a narrow valley, Verdugo Canyon, which connects Glendale's two major flatland areas. A segment of the Crescenta Valley, together with a section of the San Gabriel Mountains beyond, forms the northern boundary of this connection and of the city itself. At its opposite end, Verdugo Canyon opens into a broad alluvial valley that extends to the city's eastern and western boundaries and to the Repetto Hills on the south.

Development patterns have largely respected these geographic features. The two valleys have been the focus of Glendale's growth. The large southerly area was the site of the original city. It forms the urban core of the community, incorporating high density residential, industrial and local and regionally-oriented commercial uses. Development in the Crescenta Valley is suburban with low and medium-density housing and supportive commercial uses. Some residential development extends into the hillsides and the lower elevations of the canyon areas in the Verdugo Mountains and the San Rafael Hills. However, the majority of the ridgelines and rugged upper reaches of these land masses have remained open and undeveloped.

The 1990 Census counted Glendale's population at 180,038 persons. Projections for the future indicate that the city's population will increase to more than 189,000 by the year 2000. This trend is consistent with the goal of the Land Use Element of the General Plan to "effectuate a moderate growth policy for the City of Glendale consistent with community needs, available services, and the environment."<sup>2</sup>

**TABLE 2-1 POPULATION CHANGES BY CENSUS TRACT IN  
GLENDALE 1940 - 1990**

CENSUS TRACT	1940	1950	1960	1970	1980	1990
3003	-----	-----	5,958	7,255	6,467	6,009
3004	-----	-----	6,344	5,926	4,936	5,211
3005	-----	-----	-----	21	1,335	1,629
3006	*	*	5,509	6,082	5,337	6,080
3007	7,645	11,200	6,878	8,624	10,039	11,068
3008	*	*	4,037	5,631	5,499	6,668
3009	5,007	7,651	4,273	6,059	6,399	6,800
3010	+	+	5,210	5,049	4,419	4,845
3011	4,568	4,581	4,951	4,931	5,364	5,844
3012	7,615	8,501	9,019	10,071	10,866	14,659
3013	-----	-----	2,269	2,379	2,202	1,974
3014	3,230	4,030	3,882	3,854	3,729	3,606
3015	3,865	4,315	4,274	4,788	4,921	8,133
3016	4,659	6,803	6,464	7,466	7,800	10,667
3017	5,104	6,003	5,936	5,924	5,826	7,891
3018	4,620	4,651	4,527	4,267	4,507	6,969
3019	3,782	3,906	4,079	3,773	4,483	6,123
3020	4,499	4,797	5,040	5,913	6,438	10,389
3021	6,300	7,105	8,060	9,351	11,326	15,862
3022	4,893	4,631	4,469	4,371	5,195	8,791
3023	5,630	5,938	5,715	6,661	6,422	9,256
3024	4,518	4,489	4,331	4,578	4,635	5,477
3025	6,647	7,101	8,217	9,690	10,913	16,087
TOTAL	82,582	95,702	119,442	132,664	139,060	180,038

\* Included in Tract 3007

+ Included in Tract 3009

Source: U.S. Census of Population and Housing 1940 through 1990.

In Glendale, the population changes that have occurred are both distributional and quantitative. Staff research and the 1970 and 1980 Census figures indicate that during the 1960s and 1970s the population changes were mostly distributional as shown in Table 2-1. During those years the number of children under 14 declined both in real numbers and as a percentage of total population, the number of elderly persons stabilized at a consistent share of the total population (approximately 28 percent), the number of young adults (age 15 to 24) increased substantially, the number of married persons and average household size declined, and the relative percentage of males and females was stable.

However, the 1990 Census and staff research indicates that in the 1980s Glendale experienced both distributional and quantitative population changes as shown in Table 2-2. The Census figures show that during those

years, the number of children under 14 increased both in real numbers and as a total percentage of the population, the number of elderly persons increased by 1.3 percent, the number of young adults (age 15 to 24) decreased by 2.4 percent, the number of married persons stabilized at a consistent share of the total population (approximately 51 percent), the average household size increased and the relative percentage of males and females changed by 1.1 percent with the number of males increasing and the number of females decreasing.

In addition to changes in the distribution of population in Glendale by age and gender, the city has experienced dramatic changes in its ethnic distribution as shown in Table 2-3. According to Census figures between 1980 and 1990, the White population decreased more than 11 percent, the Asian or Pacific Islander population increased more than seven percent and the Hispanic popu-

**TABLE 2-2 POPULATION CHANGES BY AGE GROUP 1940 - 1990**

Age Group	1940	1950	1960	1970	1980	1990
Under 5	4,175 5.1%	6,464 6.8%	9,120 7.6%	8,852 6.7%	7,255 5.2%	11,910 6.6%
5-14	9,778 11.8%	10,626 11.1%	16,015 13.4%	18,097 13.6%	15,795 11.4%	20,967 11.6%
15-24	14,375 17.4%	11,231 11.7%	14,543 12.2%	19,023 14.3%	22,179 15.9%	24,266 13.5%
25-34	13,363 16.2%	14,280 14.9%	13,247 11.1%	17,641 13.3%	22,832 16.4%	35,302 19.6%
35-44	13,926 16.9%	15,184 15.9%	16,205 13.6%	14,341 10.8%	17,035 12.3%	28,778 16.0%
45-54	11,890 14.4%	14,955 15.6	17,454 14.6%	17,654 13.3%	15,268 11.0%	19,400 10.8%
55-64	7,712 9.3%	11,696 12.2%	15,198 12.7%	16,400 12.4%	16,009 11.5%	15,438 8.6%
65-74	4,907 5.9%	7,485 7.8%	11,205 9.4%	12,051 9.1%	12,381 8.9%	12,688 7.0%
75 and over	2,456 3.0%	3,781 4.0%	6,455 5.4%	8,693 6.5%	10,306 7.4%	11,281 6.3%
<b>TOTAL</b>	<b>82,582</b>	<b>95,702</b>	<b>119,442</b>	<b>132,752*</b>	<b>139,060</b>	<b>180,038</b>

\* U.S. Census 1970, subsequently revised to 132,664. Since age categories were not similarly revised, the earlier data were used.

Source: U.S. Census of Population and Housing 1940 through 1990, City of Glendale Planning Division

lation increased three percent. Within the Caucasian population, an ethnic shift occurred with a decrease in residents of Northern European ancestry and an increase of 26 percent in residents of Middle Eastern origin. With these ethnic and racial changes, the city also has seen an increase in average household size and an increase in the number of persons living in extended family arrangements.

These population trends indicate that in the 1960s and 1970s the need for additional open space areas, parkland and recreational sites, over and above the deficiencies already identified in the 1972 Open Space, Conservation and Recreation Element and the 1986 revisions to the Land Use Element, was relatively constant. How-

ever, in the 1980s and 1990s, the need for such land uses greatly increased as a result of a growing population, changing demographics and increased urbanization of remaining open space areas. This increased demand places additional burdens on existing open space, parkland and recreational areas in the city.

The changing population patterns within Glendale are reflected and reinforced through adjustments in land use as well. Although the demarcation between developed and undeveloped land remains essentially intact, some urban and suburban sectors of the community are experiencing profound shifts in density and intensity of uses. An example of this is found in south Glendale. The South Glendale Task Force Report (1983) noted that a substan-

**TABLE 2-3 POPULATION BY RACE OR DESCENT 1970-1990**

Race or Descent	1970		1980		1990	
	Number of Persons	Percent of Population	Number of Persons	Percent of Population	Number of Persons	Percent of Population
White	116,763	87.9%	104,989	75.5%	114,765	63.74%
Hispanic**	13,697	10.3%	24,717	17.8%	37,731	20.96%
Asian or Pacific Islander	1,300	1.0%	8,359	6.0%	24,673	13.7%
American Indian, Eskimo, Aleut	360	0.3%	269	0.2%	473	.26%
Black	84	0.1%	431	0.3%	2,065	1.2%
Other	548	0.4%	295	0.2%	331	.18%
TOTAL	132,752*	100.0%	139,060	100.0%	180,038	100.0%

\* U.S. Census 1970, subsequently revised to 132,664, since racial categories were not similarly revised, the earlier data were used.

\*\* There is no direct comparison of 1970 Hispanics and 1980 and 1990 Hispanics, as in the 1980 and 1990 Census persons reported as White, Black, American Indian, Eskimo or Aleut, Asian or Pacific Islander or Other Race of Hispanic Origin.

tial percentage (72 percent) of the owner-occupied housing in this area was built before 1950. The report also found indications of deferred maintenance and absentee ownership.

This information coincides with data in the 1989 Housing Element and the South Brand Boulevard Specific Plan (1992) which identify areas of underutilization according to current zoning densities. The combination of housing age, condition and low density has led to an increase in the number of multiple family units constructed in the area. Among the many impacts that are associated with such building activity, increased density can place growing demands on city services and facilities, including recreational resources and open space areas. The south Glendale area is just one area of the city experiencing growth, and just one area in which the need for additional recreational resources has been identified.

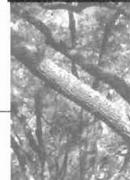
The trend toward intensification of uses in a city that is virtually built out increases pressure for development in undeveloped hillside areas. At the same time, the intensification of uses leaves little available land in urbanized areas for conservation or for undeveloped open space uses, but increases the need for such spaces.

The challenge then, is to identify strategies, objectives

and implementation programs that will allow appropriate levels of growth while providing for the conservation of natural resources and open space land.

## B. PURPOSE AND FUNCTION

The Open Space and Conservation Element is concerned with the preservation of open space and natural resources and the amenities that are important to the residents of the City of Glendale. In the highly urbanized area that comprises most of Glendale, natural resources are generally public parks and areas landscaped by private property owners. However, Glendale is fortunate to have a major natural resource in its hillside areas. Comprised of the Verdugo Mountains, the San Rafael Hills, a small portion of the San Gabriel Mountains and the undeveloped ridgelines and canyons of these mountain ranges, this resource is a scenic, biological and potential passive and active recreational asset for the city. The Open Space and Conservation Element addresses General Plan issues concerning open space and conservation of natural resources as required by the California Government Code sections 65302, 65560 and Public Resources Code sections 2762 and 5076.



### C. AUTHORITY AND SCOPE

The State of California Government Code requires every General Plan to have an Open Space Element [Section 65302 (e)] and a Conservation Element in [Section 65302 (d)], or to combine these two elements into a single element. The required components include an inventory of both public and private open space land, biotic, mineral and aesthetic resources, and the policies and goals which serve to identify, protect and maintain these natural resources and to prevent their wasteful exploitation and ultimate destruction.

The Open Space and Conservation element addresses the preservation of those resources and amenities that are important to the residents of Glendale and satisfies the requirements of California Government Code Section 65302 (d) and (e). According to Section 65560 of the California Government Code, open space land is any parcel or area of land or water that is essentially unimproved and devoted to an open space use, as defined in Section 65560 of the Code and which is designated on a local, regional or state open space plan as any of the following:

- 1) Open space for the preservation of natural resources,
- 2) Open space used for the managed production of resources,
- 3) Open space for outdoor recreation, and
- 4) Open space for public health and safety.

The importance of open space preservation to the people of California is discussed in Section 65561 of the Government Code in which the legislature finds and declares:

- a) That the preservation of open space land, as defined in this article, is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.
- b) That discouraging premature and unnecessary conversion of open space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage non-contiguous development patterns which unnecessarily increase the costs of community services to community residents.

- c) That the anticipated increase in the population of the state demands that cities, counties and the state, at the earliest possible date, make definite plans for the preservation of valuable open space land and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations authorized by this chapter or by other appropriate methods.
- d) That in order to assure that the interests of all its people are met in the orderly growth and development of the state and the preservation and conservation of its resources, it is necessary to provide for the development by the state, regional agencies, counties and cities, including charter cities, of statewide coordinated plans for the conservation and preservation of open space lands.
- e) That for these reasons this article is necessary for the promotion of the general welfare and for the protection of the public interest in open space land.

The intent of the legislature in enacting this article (Section 65562) is:

- a) To assure that cities and counties recognize that open space land is a limited and valuable resource which must be conserved wherever possible, and
- b) To assure that every city and county will prepare and carry out open space plans, which, along with state and regional open space plans, will accomplish the objectives of a comprehensive open space program.

### D. APPLICATION

The goals, objectives, policies, findings, recommendations and implementation program contained in the Open Space and Conservation Element are part of the City of Glendale's General Plan. As such they form the blueprint for development and management of renewable and non-renewable resources located within the boundaries of the incorporated City of Glendale.

### E. ORGANIZATION OF THE ELEMENT

Because the topics of open space and resource conservation are so closely related, this revised element combines these two state mandated elements—Open Space and Conservation—into a single element, as permitted by the

Governor's Office of Planning and Research. The 1972 version of the City of Glendale's Open Space and Conservation Element included discussion of park and recreation needs and was titled the Open Space, Conservation and Recreation Element. In the 20 years since the previous Open Space, Conservation and Recreation Element was prepared, demographics and development pressures have changed, and the decision was made to combine open space and conservation issues into one element and to prepare a separate Recreation Element in order to treat each topic in a more comprehensive manner in a document of a manageable size.

The Open Space and Conservation Element meets the requirements of local, regional and state law, presents an inventory of private and public open space land and natural resources and establishes policies, goals, objectives and implementation measures for the management of those resources within a local and regional context. These issues are organized into five chapters, which are:

- 1) Executive Summary, which briefly details the contents of the element,
- 2) Introduction, which discusses the required content of an element and its relationship to other planning legislation,
- 3) Overview, which presents information on the community and regional context and identifies the goals, objectives and policies of the element,
- 4) Open Space/Conservation Plan, which presents the inventory and evaluation of resources, and
- 5) Implementation, which details the program for the management of the identified resources.

To avoid redundancy and duplication where data on specific resources are fully addressed in another element of the General Plan, such citation is given and by such is incorporated by reference in this element, and the reader is referred to that document. Technical appendices and reference and resource materials are available in the Planning Division office.

## **F. THE PLANNING PROCESS: PUBLIC PARTICIPATION**

Public participation early in the development of a planning document is an important component in the identification of issues, goals, objectives and methods of implementing proposed changes to existing development and resource management policies. After conducting pre-

liminary research on the issues of open space availability and needs, natural resources and existing development patterns and conditions in the city, city planning staff developed a preliminary set of issues and objectives, a mission statement, policies and goals. A working paper focused on the portion of resource management policy that appeared to be the most controversial—hillside development. This material was then presented to City Council in a study session format on March 17, 1992. Upon receiving Council's input, additional research and analysis was conducted on hillside development standards in preparation for a series of public workshops and study sessions. These sessions were held on April 22, May 13, May 27, June 10, July 1, and July 22, 1992. Property owners, representatives of homeowner organizations, residents, members of the development community and planning advocates attended these workshops and voiced their concerns, observations and suggestions. Simultaneously, planning staff organized a technical task force to review and evaluate suggested approaches to hillside development in order to better address community concerns in this area, and the City Manager's office organized a Community Task Force for the purpose of consensus building. A technical task force was comprised of representatives of city engineering, fire, planning and public works departments. This group met 13 times between April and July 1992. The Community Task Force was comprised of general public, citizens groups, homeowners associations, developers, property owners and design professionals. This group met several times in 1992. In addition, City Council and the Planning Commission also conducted a series of eight study sessions between September and November 1992 to discuss important hillside issues. As a result of all of the commentary and input received from the public meetings, workshops, task force sessions and staff research, a set of draft guidelines for subdivision and other code changes as well as strategies for ridgeline preservation were developed. Upon completion of the guidelines, public workshops and study sessions were again held and revisions made to the guidelines.

The final guidelines have been incorporated into the draft Open Space and Conservation Element in the goals, objectives and policies and the implementation portions of this document. Further public input was sought on the draft element in the form of City Council and Planning Commission study sessions and community workshops to ensure that this element includes a full range of community input on all issues that are part of this Element.

Upon completion of the community workshops on the draft element, further public input was solicited and received through the environmental review process and



the public hearing notification and meeting process. The final element was considered by the Planning Commission and City Council after all public input had been received and evaluated and appropriate revisions to the document made. The policies, goals and findings will be instrumental in providing the basis for future potential amendments to hillside development regulations.

## **G. RELATIONSHIP TO AND CONSISTENCY WITH THE GENERAL PLAN AND OTHER PLANS, POLICIES AND PROGRAMS**

The General Plan Guidelines discuss the need for inter-element consistency and intra-element consistency. State planning law divides the content of a general plan into seven required elements. These are often prepared separately, although they may be combined into a single general plan document. The division of each element, or subject area, whether in separate documents or in separate sections within a single general plan document, de-emphasizes the "...statutory and functional interrelationships among the elements and issues to be addressed in the general plan," (General Plan Guidelines) and may promote fragmentation through inconsistencies in policies and program goals. But by combining closely related elements in a single document, the relationship and effect of policies upon reciprocal issues is emphasized and the implementation of appropriate management strategies consistent with all elements of the General Plan can be facilitated. Examples of the interrelationship of issues among the various General Plan elements includes the following discussion from the General Plan Guidelines:

"... geologic hazards are mentioned specifically in the safety element and also appear under "open space for public health and safety" in the open space element. Open space in turn is mentioned as one of the categories to be addressed in the land use element. Similarly, natural resources are to be addressed in the open space and conservation elements as well as in the land use element. The issues to be addressed in the general plan also interrelate functionally. The consideration of fire hazards in wild land areas involves the analysis of vegetation, topography, weather, availability of water, density of development, adequacy of road systems and fire protection services."<sup>13</sup>

The Open Space and Conservation Element has been prepared with the full knowledge and comprehension of the Land Use, Seismic Safety, Safety, Housing, Circulation and Scenic Highways, Historic Preservation, Community Facilities elements and the Recreation portion of

the 1972 Open Space, Conservation and Recreation Element of the Glendale General Plan. In addition, preparation of an updated Recreation Element will commence upon completion of the Open Space and Conservation Element. In this way, consistency among the elements will be achieved.

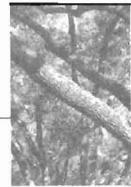
Supporting the General Plan are community plans, specific plans, ordinances and policies that serve as the implementation program for the General Plan. Consistency among these documents and the General Plan is mandatory. In the preparation of the Open Space and Conservation Element the recommendations of policy documents such as community plans, specific plans and ordinances have been consulted and the element prepared with knowledge and comprehension of such documents. Inter-document consistency is not confined however, to city-prepared plans and ordinances. County, regional, State and Federal planning documents and legislation also must be integrated into the General Plan process in order to achieve comprehensive consistency with all applicable mandates.

In preparing the Open Space and Conservation Element update of 1992, planning staff has reviewed and complied with mandated applicable regional, State and Federal legislation governing the management of water resources, integrated and hazardous wastes, air resources, geologic and mineral resources and archaeological and historic resources in a manner consistent with the policies established by the respective legislation.

## **H. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE**

The Open Space and Conservation Element update was the subject of an initial study and subsequent environmental assessment as required by the California Environmental Quality Act. Rather than create the potential for new development at intensities and densities beyond those already identified in the adopted General Plan, the element update has the potential to reduce environmental impacts through more efficient site planning, conservation of resources and preservation of significant habitat areas. It will serve as a guide for the orderly acquisition and management of resources and thus reduce adverse environmental impacts.





## OPEN SPACE AND CONSERVATION PLANNING OVERVIEW

### A. INTRODUCTION

The preparation of the Open Space and Conservation Element was divided into four phases, each phase building upon the findings of the previous phase. During each phase, city staff worked in conjunction with interested members of the community through a series of public meetings and with consultants to ensure that the element contains an appropriate plan with valid and reasonable goals, objectives, policies, recommendations and implementation programs.

The first phase of the work involved research by consultant teams and planning division staff on numerous issues including physical and environmental characteristics of remaining open space areas within the city, community input on topics of open space and recreational land, hillside development standards, landscaping standards, significant biological resources, population and demographic trends, history of subdivision density and history of City acquisition of open space land.

This assessment provided a firm basis for a series of community workshops, City Council and Planning Commission study sessions and technical and community task

force review meetings, which formed the second phase of the process. The input received from this portion of the process provided valuable information that was included in the formulation of the goals, objectives, policies and implementation program of this element.

The third phase of the work involved the refinement of the preferred concepts and the development of an implementation program reflective of the element's goals, objectives and policies. Through public hearing process on the draft element, comments from the Environmental and Planning Board, Planning Commission, applicable County, State and Federal agencies, regional planning organizations and the public was solicited during this phase. Subsequent refinements were made to the element that incorporate input received during the public hearing process. The purpose of refining the element is to ensure that the Open Space and Conservation Element is realistic, that it can be implemented within the capabilities of the City and other responsible public agencies and that it furthers the goals and policies of the community as they are expressed in the General Plan.

The fourth phase of the work involved public hearings before Planning Commission and City Council, final revisions based on input thus received and adoption of the element. Implementation of the element will be an ongoing process throughout the identified planning period of the document.

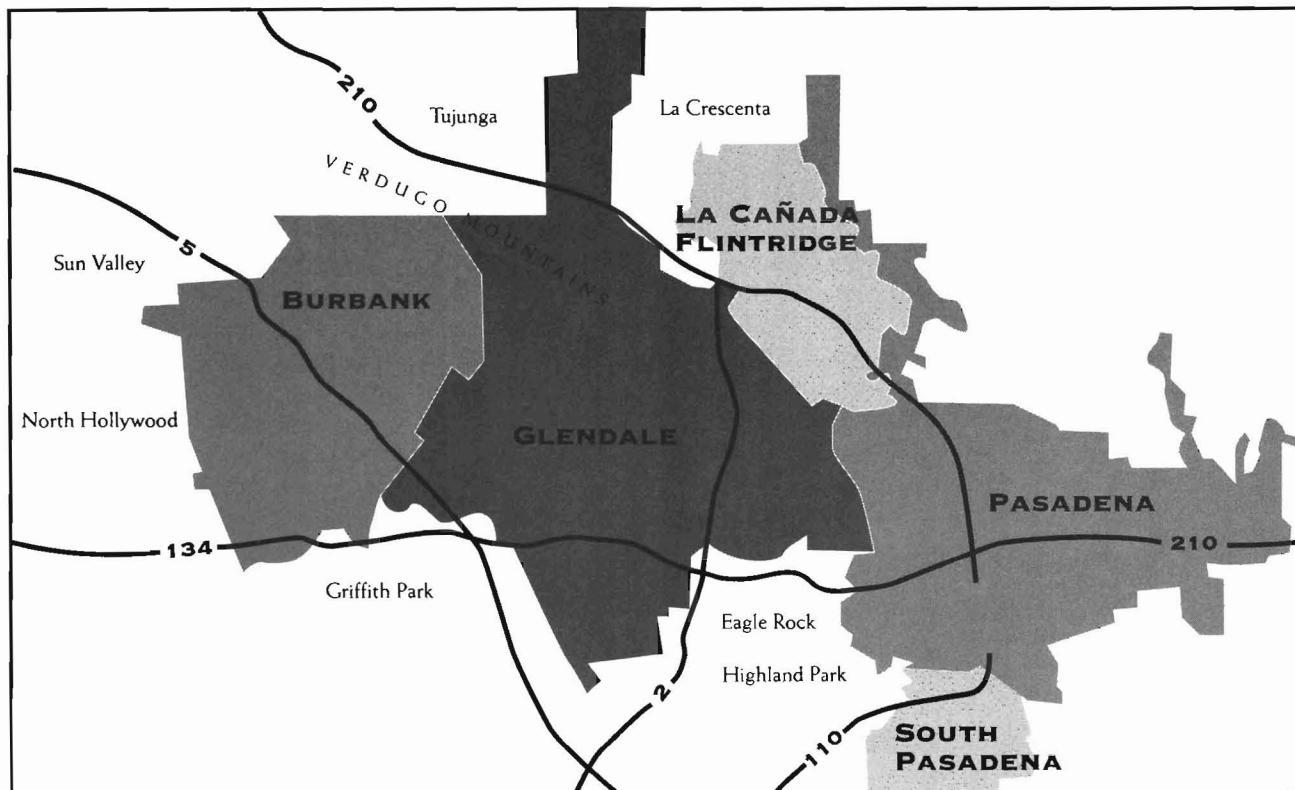
## B. REGIONAL PLANNING CONTEXT AND LOCAL CONDITIONS

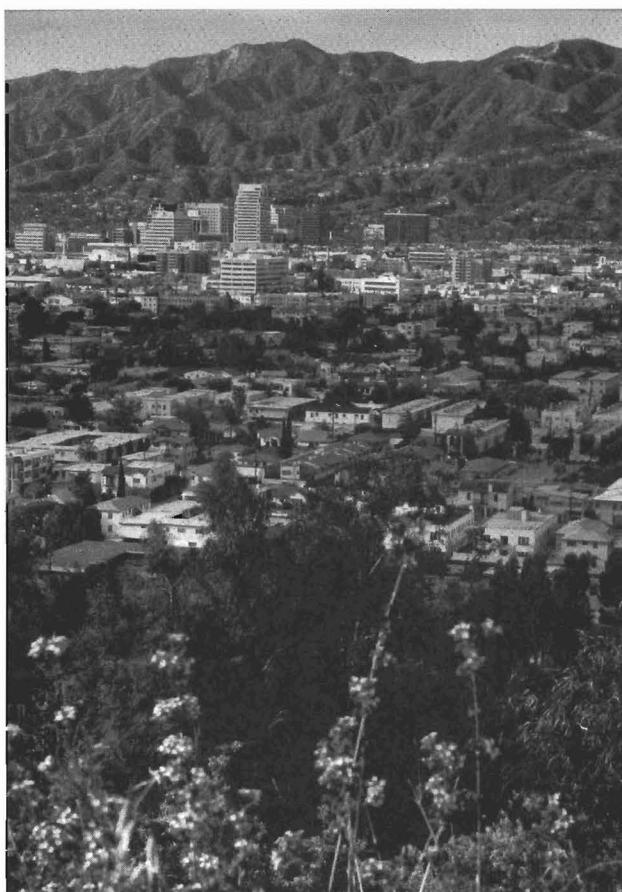
Glendale is bordered on the north by the San Gabriel Mountains, on the northwest by the Verdugo Mountains and on the east by the San Rafael Hills. See Map 3-1 for the regional location of Glendale. To the southwest, just beyond the city boundary, are the Santa Monica Mountains as they reach their eastern most point in Griffith Park. At the southeast edge of the city are the Repetto Hills. Although Glendale abuts the base of the San Gabriel Mountains and is intersected at three points by the San Rafael Hills, the Verdugo Mountains and the Repetto Hills, most land within the city exhibits a very gentle slope with elevations ranging from a low of 420 feet to a high of 4,774 feet above sea level. However, the city does include terrain that exhibits slopes in ex-

cess of 50 percent. Because Glendale, and its surrounding cities of Los Angeles, Burbank, La Canada Flintridge and Pasadena are virtually built out, the hillside areas within the city have been the focus of development pressure for the construction of single family homes during the past 20 years. Only 13 percent of the land in the city is vacant, and 57 percent of this is located in hillside areas where slopes exceed 50 percent, according to Planning Division records. These areas in Glendale, as well as in the surrounding communities, will continue to come under consideration for development in the future as the very small amount of remaining flat land in the core of the Los Angeles metropolitan area is developed for single family use.

Glendale is located between the extreme eastern edge of the San Fernando Valley and the western edge of the San Gabriel Valley, and enjoys a climate similar to most other portions of the valleys. The variance in climate is moderate with warm, dry summers. Precipitation usually occurs in the winter and early spring months. The average annual rainfall is approximately 17 inches. Sunshine is abundant during the summer and fall months. Temperatures range from a mean minimum of 51 degrees to a mean maximum of 77 degrees. Prevailing winds are from the southwest.

**MAP 3-1 REGIONAL LOCATION OF THE CITY OF GLENDALE**





*View of Downtown Glendale and the Verdugo Mountains as seen from Adams Hill*

The City of Glendale is strongly affected by its location near the core of the Los Angeles metropolitan area. A portion of the labor force comes from outside the city, and a portion of the City's population is employed outside the city. Commercial, industrial and retail business in Glendale is dependent upon inter- and intra-community exchange. Recreational and housing demands in the city follow the same inter/intra community exchange pattern found in the commercial sector of the community. Residential uses occupy 33 percent of the city's land area. Expansion of City boundaries may occur if existing unincorporated communities such as portions of La Crescenta and Montrose seek annexation. However, the major portion of new growth will occur through regeneration of previously developed land.

Recent long range planning goals for the metropolitan Los Angeles area include the reintroduction of a mass transit system using light rail, commuter rail and shuttle bus services. After nearly 30 years of reliance on the private automobile and to a lesser extent the auto bus, congestion and air pollution are serious obstacles to further development, a healthy economy and the quality of

life most individuals associate with the region. Glendale is fortunate to be located on one of the first commuter rail lines in the metropolitan area. Morning and evening rush hour trains currently provide service to and from Los Angeles, Moorpark and Santa Clarita with stops in Glendale. As familiarity with the new rail system grows and service, schedules and costs become more attractive, Glendale should benefit from its geographically central location and its relationship to the commuter rail line. New business growth and increased demand for regeneration of developed areas may bring increased pressure for residential development throughout the city. These factors will increase demand for the utilization of natural and environmental resources and development pressure in hillside, open space and conservation areas may increase. Therefore, thoughtful planning of open space and conservation areas will ensure that sufficient natural, environmental and aesthetic resources remain for future generations.

### C. COMMUNITY SETTING

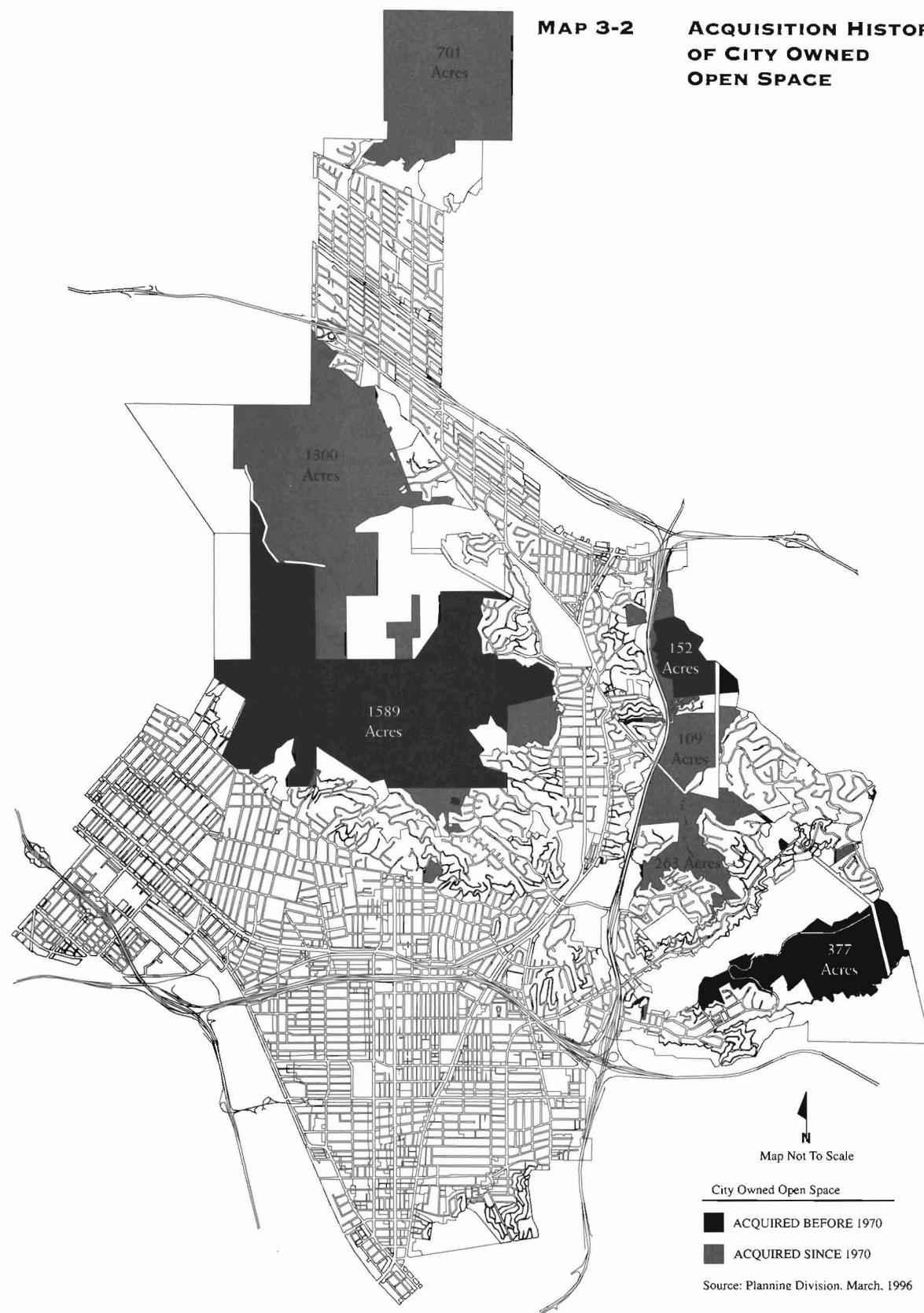
The Land Use Element of Glendale's Comprehensive General Plan, most recently revised in 1986 and again in 1991, predicted and planned for a moderate growth rate.<sup>4</sup> It also anticipated a development process that would improve, rehabilitate and revitalize urban areas. This development was to be supplemented by moderate growth in the lower sections of major hillsides. This scenario essentially has been realized. However, Glendale experienced a greater increase in population and development pressure than anticipated during the late 1980s, which led to a revision again in 1991 which has emphasized the importance of the city's remaining natural resources.

Among the by-products of the City's growth are the assembly, demarcation and definition of open space and conservation areas. The inventory of land dedicated to these purposes has increased from 2,524 acres to 5,860 acres, an increase of more than 75 percent since the 1990 Open Space, Recreation and Conservation Element was prepared in 1972, as shown in Map 3-2, Acquisition History. These resources are divided among City-owned open space, open space created through subdivision conditions, sensitive site design and open space owned by other public agencies and utility companies and constitute a substantial and significant percentage of the City's total land area.

The accumulation of open space generates questions about how it is to be used. Also, because the pattern of growth has surrounded the boundaries of this major environmental resource, an increased pressure for devel-

**MAP 3-2**

**ACQUISITION HISTORY  
OF CITY OWNED  
OPEN SPACE**



Map Not To Scale

**City Owned Open Space**

■ ACQUIRED BEFORE 1970

■ ACQUIRED SINCE 1970

Source: Planning Division. March, 1996



opment of privately owned hillside land, has also generated questions about the protection, maintenance and disposition of this important community asset. The purpose of this plan is to determine and define the character of this natural resource and to develop goals, objectives, policies and recommendations for the conservation and management of open space land and the resources it contains.

## D. ISSUES AND OPPORTUNITIES

Part of this determination and planning process evolves from the diverse nature of Glendale's development. The juxtaposition of industrial, intensive commercial, high-density residential, suburban and open space lands requires decisions regarding the effect each land use classification has on the others. This is especially true for those uses that abut open space and conservation areas. The activity associated with a residential development, for example, has obvious and definite impacts on the viability and integrity of an adjacent open space area. Conversely, given the susceptibility of natural open space to fire, flood, mud slide and other natural occurrences, specific steps need to be taken to insulate and protect nearby residential areas from these hazards. Effective planning must acknowledge conflicting uses and seek a workable balance between them. Further, it must find a way to protect and sustain those resources most essential to the City's existence and identity. This involves detailed analysis of various areas, neighborhoods, environmental conditions and an evaluation of natural resources as internal and external changes and adjustments effect sensitive natural habitats, risk zones, aesthetic and recreational opportunities.

Finally, to understand more subtle forms of internal change and to adjust to the conditions that arise from them, planning and policy must deal with the specific needs of a diverse population. Resolving the disposition of environmental resources means dealing with resident populations that are becoming specialized communities of interest. To residents living in multi-family dwellings, for example, the question of access to open space areas is an important one. For future City residents, the prudent conservation and management of natural resources will ensure that choices and opportunities remain to meet the needs of the years to come. The decreasing availability of land and natural resources and the increasing emphasis on internal reshaping and quality of life constitutes the issue and the challenge for open space and conservation planning.

## E. POLICIES, GOALS AND OBJECTIVES

Meeting the challenges of growth, diversity, conservation and management of resources requires the formation of basic policy. The assortment of goals and objectives necessary to establish a framework for evaluating, planning and problem solving require policies that unify and support the strategies and programs which will result. Such policies amount to a declaration of intent. They are, by definition, those positions that encompass all decisions and activities inherent in the management of natural resources in the City of Glendale. All statements included in this element, including the implementation of its goals, should be considered in light of the policies established by this element.

### POLICIES

The policies discussed here establish the character and scope of the goals and objectives that comprise the Open Space and Conservation Element. The underlying assumptions and implementation of environmental management projects and programs require a meaningful focus and a conceptual consistency which not only shapes individual decisions but also ensures a reasonable amount of flexibility and choice.

The fundamental purpose of this element as required by state law, is recognizing the importance of the City's natural resources and providing a means for their management. Within this context, this element is based on the balance of environmental quality and design. No single project should be undertaken, no program developed, without an understanding of shared community policy and the range of actions thus represented.

**Policy 1:** Natural resources, including open spaces, biological habitats and native plant communities should be maintained and, where necessary, restored.

Natural resources contribute to the quality of community life by improving the environment and providing visual character and identity for the city.

**Policy 2:** The City shall provide a variety of outdoor recreational opportunities to all residents.

Opportunity and access are consistent with the needs of an increasingly diverse population for a variety of recreational experiences.

**Policy 3:** Cultural, historical, archaeological and paleontological structures and sites are essential to community life and identity and should be recognized and maintained.

This policy recognizes the value and contribution to

the City that its heritage makes, providing both a bridge to the past and a sense of place through the judicious management of cultural and natural resources.

**Policy 4:** Natural and man made aesthetic features should be recognized and identified as important natural resources to the community that require proper management.

The contribution of aesthetics and design to environmental quality is an important principle. Such community enhancement can be achieved through preservation of natural or scenic resources and through the recognition of urban form and the context in which the built environment has evolved.

**Policy 5:** Proper management of environmental resources, especially natural resources, can assist in reducing hazards to the life and property of the City's residents and should be considered in project planning.

Natural resource areas, open spaces, recreational and other limited development areas used as buffer zones can significantly reduce risk of damage or injury from a variety of naturally occurring environmental conditions such as fire, flood or earthquake. This strategy supplements the plans and programs undertaken in response to Safety and Seismic Safety Element objectives.

**Policy 6:** Opportunities shall be provided for residents to be involved in the development of community environmental policy and programs to the maximum extent possible.

Successful implementation of this policy entails a commitment to public participation in the decision-making process. Environmental management is but one area where citizen input should be sought and encouraged in the development of City goals, policies and objectives.

**Policy 7:** Projects proposed by public agencies, special districts and private developers should demonstrate compliance with the policies, goals and objectives of this element prior to proceeding.

Projects inconsistent with this element should be approved only when it is demonstrated that public benefit would result from such approval and the appropriate amendments to the element are effectuated.

**Policy 8:** Important open space and conservation resources should be protected and preserved through acquisition, development agreements, easements, development exactions and other regulatory strategies.

Ridgelines, canyon and stream areas and ecological habitats identified as significant must be protected in accordance with State law in order to meet the policies, goals and objectives of this element. Future generations need to have aesthetic, ecological and open space re-

sources available to them.

**Policy 9:** Specific issues that arise as a result of Open Space and Conservation Element policies, goals and objectives require a methodical approach to their resolution.

Identified areas of concern should be addressed through a combination of specific needs assessment, master planning, preservation or maintenance strategies.

**Policy 10:** Public and private funding, grants, loans, donations, fees and other forms of financial support shall be actively sought to realize community goals and objectives and all programs.

Implicit in the development of policies, goals and objectives in this document is the commitment to seek appropriate funding to realize programs and projects. This process is a comprehensive one that involves the identification of issues and opportunities, the development of strategies, establishing priorities for acquisition, development and improvement and seeking funding.

## **GOALS AND OBJECTIVES**

The realization of City policies and the recognition of significant community issues are embodied in the goals and related objectives discussed below. These position statements direct decisions and choices designed to deal with specific needs or issues. They are grouped under general topic headings and contain a summarized discussion of findings.

The accumulation of open space is a public asset and is a result of City policy aimed at acquiring this significant resource for the environmental, educational, recreational and conservation benefits it provides. This policy has been implemented in many ways over many years. Initially, it was implemented through grants and donations and, later, as an extension of the 1990 Open Space, Conservation and Recreation Element. Glendale's open space acquisition efforts have been very successful in acquiring important open space areas. Only a few identified properties and linkages between major holdings need to be acquired in order to complete the open space system. The present inventory of undeveloped land in the City is comprised of approximately 7,400 acres, of which approximately 5,860 acres (79%) is held in public ownership (City, County, other cities and public utilities). The remaining 1540 acres is privately owned. Public ownership of Glendale's open space includes City of Glendale, Los Angeles County, City of Burbank, Southern California Edison and other agencies. The future challenge for open space management will be completing the acquisition program and managing these resources through preservation and maintenance and by providing appropriate



access to these areas. The following open space and conservation goals and objectives are designed to meet this challenge.

**Goal 1:** Continue identification, acquisition and protection of open space land vital to ensure enhancement of the quality of life within the city.

**Objective 1:** Prioritize acquisition of open space land according to its environmental sensitivity, ecological, historic or cultural value, impact on surrounding areas, development potential, traffic impacts and its uniqueness or relationship to other open space areas.

**Objective 2:** Allocate funding for acquisitions through the budgetary process.

**Objective 3:** Develop a fee structure for open space acquisition and management in connection with the development review process.

**Objective 4:** Where acquisition of open space land is impractical, ensure that subsequent development incorporates desirable configurations of open space through careful environmental analysis, site planning and other strategies.

**Objective 5:** During the environmental and development review processes, on- and off-site impacts of development on open space and related biological and geological systems should be evaluated. Mitigation measures should be applied to alleviate specific impacts through site planning and design modifications that will protect the integrity of valuable open spaces.

**Goal 2:** Protect vital or sensitive open space areas including ridgelines, canyons, streams, geologic formations, watersheds and historic, cultural, aesthetic and ecologically significant areas from the negative impacts of development and urbanization.

**Objective 1:** Regulate public access for the protection of sensitive land and habitats and regulate uses in hazard zones.

**Objective 2:** Provide buffer transition areas between sensitive open space and development.

**Objective 3:** Continue to apply and monitor open space protection measures as part of the environmental and development review processes.

**Objective 4:** Provide incentives to defer development that is inconsistent with future acquisition priorities or other objectives of this plan.

**Objective 5:** Prohibit incompatible recreational activities which may damage sensitive open space areas or be inconsistent with other recreational pursuits.

**Goal 3:** Establish a management program for open space that provides for appropriate public access for all segments of the population while recognizing preservation goals.

**Objective 1:** Provide for recreational and educational opportunities.

**Objective 2:** Provide for safe hiking trails that respect the integrity of open space lands.

**Objective 3:** Coordinate with non-profit organizations to establish docent programs in an effort to provide outdoor educational experiences for the public.

**Goal 4:** Develop a program that sustains the quality of Glendale's natural communities.

**Objective 1:** Develop a program for the on-going monitoring of those natural resources identified by the California Department of Fish and Game Natural Diversity Data Base and those sensitive habitats identified in the Element's biological assessment report.

**Objective 2:** Prevent development that jeopardizes or diminishes the integrity and value of native plant and animal communities.

**Objective 3:** Encourage acquisition of parcels integral to the integrity of the larger ecosystem.

**Objective 4:** Naturalize, through native revegetation programs, disturbed areas, and prevent the invasion of exotic plant materials.

**Objective 5:** Encourage the development of landscape plans that incorporate native species in those areas adjoining open space land.

**Objective 6:** Evaluate and monitor the impact of public access on habitat.

**Objective 7:** Encourage the continuation of hazard management and safety programs to reduce impacts from wildland fires, floods, mud slides and soil subsidence.

**Goal 5:** Preserve prominent ridgelines and slopes in order to protect Glendale's visual resources.

**Objective 1:** Identify visually prominent ridgelines and establish regulations to promote their preservation.

Objective 2: Establish standards and design criteria which minimize the visual intrusion/impact of development in hillside areas.

Objective 3: Recognize visual resources as a key element in open space acquisition programs.

**Goal 6: Preserve and protect valuable water and mineral resources.**

Objective 1: Preserve and protect important natural stream channels, particularly those identified as blue-line streams by the California Department of Fish and Game.

Objective 2: Protect percolation areas important to ground water recharge.

Objective 3: Encourage the use of naturalized channels in new development projects.

Objective 4: Recognize the importance of watersheds to groundwater recharge and minimize impermeable surfaces.

Objective 5: Design drainage devices in a manner that is compatible with the natural terrain and environment.

Objective 6: Maintain current prohibition of rock, sand, gravel and mineral extraction in designated open space areas.

**Goal 7: Continue programs which enhance community design and protect environmental resource quality.**

Objective 1: Extend landscape treatments along major arterials, into major activity centers, at major city/neighborhood access points and along parkways and medians to provide aesthetic continuity and solidify open space linkages.

Objective 2: Ensure that the design of community facilities within open space areas is harmonious and integrated with the natural environment.

Objective 3: Continue to implement Glendale's comprehensive streetscape program.

Objective 4: Provide for comprehensive, non-obtrusive signage which identifies and links roads, bikeways, trails and parks, vista points, recreational facilities, historic and cultural sites and scenic drives.

Objective 5: Review and revise hillside development standards to minimize the environmental impacts of new

hillside development and to ensure preservation of important natural resources.

Objective 6: Foster design objectives which ensure development that respects the character of existing neighborhoods and the natural setting.

**Goal 8: Continue efforts directed at the identification, preservation and maintenance of structures or sites with historic or cultural value consistent with the goals of the Historic Preservation Element of the Comprehensive General Plan of the City of Glendale.**

Objective 1: Conduct inventories of buildings and sites to determine historic, cultural, archaeological, architectural and aesthetic value.

Objective 2: Revise and update the Historic Preservation Element of the Comprehensive General Plan of the City of Glendale.

Objective 3: Utilize historic and cultural structures and sites for public use where appropriate.

Objective 4: Encourage adaptive reuse of historic and cultural structures, where appropriate.

Objective 5: Continue programs to improve the aesthetic quality and integrity of residential neighborhoods.

**Goal 9: Develop and integrate a trail system consistent with scenic roadway and bikeway plans as specified in the Circulation and Scenic Highways Element of the Comprehensive General Plan.**

Objective 1: Develop a multi-functional path and trail system in open space areas recognizing natural resource conservation constraints.

Objective 2: Expand the existing hiking trail system, providing for trailheads, trail improvements, rest stops, picnic areas, view areas and path demarcation, paying particular attention to scenic resources, recreational opportunities and the impact of accessways on sensitive habitats. The development of a trail master plan for each mountain range within the City is recommended.

Objective 3: Encourage use and maintenance of trails by recreational, educational and other similar institutions or organizations.

Objective 4: Work with adjacent jurisdictions including the Santa Monica Mountains Conservancy to connect hiking and equestrian trails to other local or regional systems.



Objective 5: Coordinate, through the Circulation Element, transportation systems to provide access to trailheads and other recreational opportunities.

Objective 6: Ensure that private development provides access to open space areas.

**Goal 10: Integrate safety concerns into the management of natural resources including recognition of geologic hazards and flood, fire and seismic risks.**

Objective 1: Follow the recommendations of the Seismic Safety Element with particular emphasis on hazard management zones.

Objective 2: Consider selective acquisition, clustering, regulation of development rights and other similar mechanisms for creating open space buffers in earthquake risk areas.

Objective 3: Follow the recommendations of the Safety Element.

Objective 4: Recognize fire risk areas as identified within the Safety Element of the Comprehensive General Plan.

Objective 5: Provide for fuel modification zones and their maintenance between open space areas and peripheral development.

Objective 6: Minimize fire damage risk through subdivision and building design and proper emergency vehicle access.

Objective 7: Develop a fire awareness program including limited or controlled access for adjacent residents and users of wildland areas.

Objective 8: Identify and prevent future development encroachment on natural areas subject to flooding or mud slide damage.

Objective 9: Continue the existing program of maintaining and improving Glendale's flood control systems.

**Goal 11: Minimize environmental hazards including noise, unhealthful air, water and composite hazards.**

Objective 1: Provide adequate buffers from noise sources for open space and recreation users.

Objective 2: Adopt an Air Quality Element as part of the Comprehensive General Plan following the requirements of the South Coast Air Quality Management District (SCAQMD).

**Goal 12: Continue to conserve water resources and provide for the protection and improvement of water quality.**

Objective 1: Continue innovative and expanded uses of reclaimed water as an irrigation resource.

Objective 2: Continue to promote sewer connections in areas not sewered which feed Glendale's ground water basis.

Objective 3: Continue water conservation programs through public awareness efforts and encourage use of drought tolerant landscaping.

Objective 4: Adhere to the requirements of the National Pollutant Discharge Elimination System (NPDES) to ensure surface water quality and to minimize the introduction of pollutants into drainage courses.

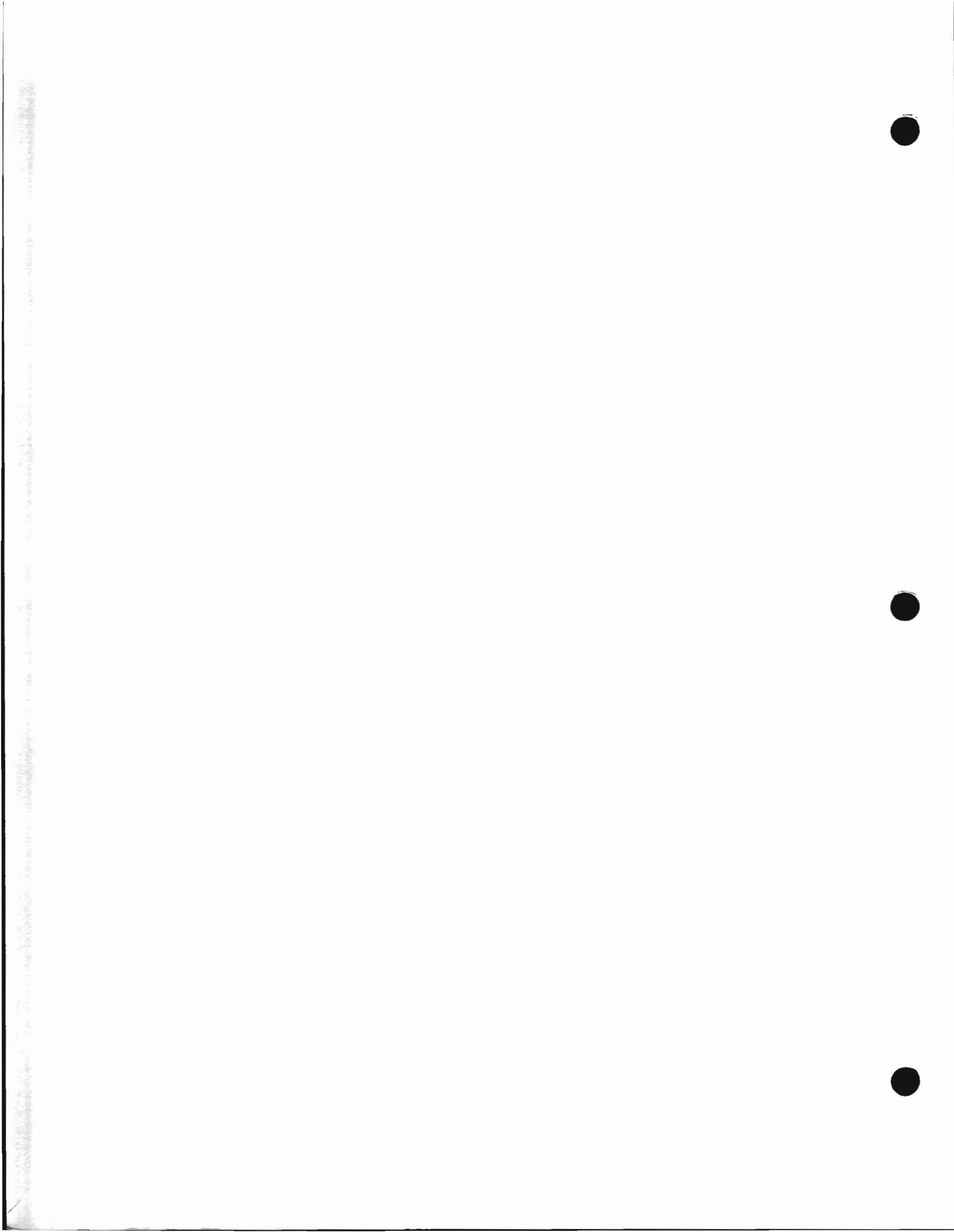
Objective 5: Continue Glendale's hazardous materials collection program to minimize the potential introduction of toxics into groundwater basins and landfills.

Objective 6: Continue to monitor, inventory land uses and coordinate with the Environmental Protection Agency (EPA) to avoid ground water pollution and improve groundwater quality with particular emphasis on industrial areas and landfills.

**Goal 13: Ensure maximum public participation and input for all aspects of environmental resource planning and implementation.**

Objective 1: Involve concerned community groups in the identification, acquisition and management of natural resource areas, recreational facilities, historic and cultural sites, aesthetics and beautification programs.

Objective 2: Facilitate a continuing program of environmental resource presentations, surveys and workshops to educate and inform the public.





# THE OPEN SPACE AND CONSERVATION PLAN

## A. INTRODUCTION

This chapter contains the Open Space/Conservation Plan which includes an inventory of natural resources, an inventory of open space land, and an assessment of the various resources contained within Glendale's hillside areas. It is the intent of this chapter to comply with the requirements of the California Government Code in order to assess Glendale's important natural resources and to develop strategies for their preservation and utilization. This chapter provides for the detailed analysis and inventory of open space resources. This information will provide the basis for establishing programs to conserve and preserve Glendale's natural resources. Given the urban form that has developed in the City, this element addresses those resources which are present in the City. Topics such as forests, minerals (i.e., oil), beaches, rivers, and shorelines are not addressed due to their absence within the City. This chapter focuses upon biological resources, visual and scenic resources, air quality, hydrology, geology, ridgelines and topographic resources. In addition, the element briefly addresses mineral and aggregate resources, hazards and cultural and historic resources. This chapter attempts to coordinate the City's natural resource planning efforts with other organizations involved in planning for open space. This plan has been prepared in a manner which reflects the relationship between conservation and open space and

the Land Use, Safety, and Circulation Elements of the General Plan.

This document should be considered a flexible policy guide rather than an exhaustive inventory of all natural and environmental resources within the City. Its preparation is intended to outline key conservation and open space issues and recommend effective public policy for the implementation of strategies in order to maintain a healthy natural environment which reflects a balance between human activities and natural processes.

## B. DEFINITION AND CHARACTERISTICS OF OPEN SPACE AND CONSERVATION IN GLENDALE

The California Government Code defines open space as any parcel of land or water that is essentially unimproved and devoted to open space uses (as identified in Section 65560). The Government Code further characterizes open space as land for the preservation of natural resources including plants, animals and fish wildlife species. Open spaces are areas required for ecological and scientific study purposes, such as streams and watershed

lands. Open space can also be land used for the managed production of resources, which could include such things as forest lands, range lands, agricultural lands and areas of economical importance for the production of food or fiber. However, due to the urban nature and mountainous characteristics of Glendale, the use of open space for such managed production is infeasible. Open space can also be areas used for outdoor recreation including but not limited to outstanding scenic, historic and cultural venues, areas particularly suited for parks and recreational purposes, and areas which serve as links to regional recreation and open space reserves. Open space lands also include trails and scenic highway corridors, and can refer to earthquake fault zones, unstable soil areas, flood plains and areas pertaining to high fire risk that have been left undeveloped for reasons of public health and safety. Conservation pertains primarily to the reclamation, protection, regulation and management of natural resources. These resources include the water quality of streams, the erosion of soil, and the protection of water resources. In addition, conservation also pertains to the recognition of important habitats and the protection of rare and endangered species.

In the City of Glendale, open space lands are confined primarily to the San Gabriel Mountains, Verdugo Mountains and San Rafael Hills. These unique areas are comprised of undeveloped properties surrounded by intense urban development, which contain a variety of important resources and provide recreational use and for visual relief. These resources need to be considered in their regional context and association with adjoining open space reserves.



*Oakmont Country Club, Private Recreational Use*

## **C. OPEN SPACE INVENTORY**

### **1. Publicly Owned Land**

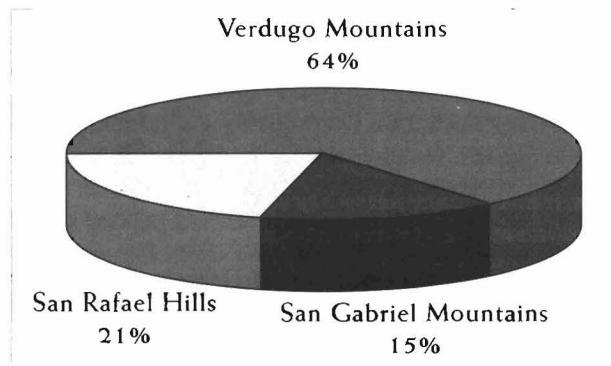
Open space properties in the City of Glendale have been acquired through various means. The majority of the open space property has been obtained by the City of

Glendale. However, other public agencies have acquired properties within the City and these areas increase Glendale's inventory of open space property. In addition, many private properties within the City are utilized for open space purposes such as golf courses, educational facilities or religious functions.

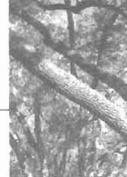
#### **a. Acquisition History of City Owned Open Space**

The City of Glendale has acquired 4,782 acres of open space since 1913. The majority of this is 3,077.95 acres in the Verdugo Mountains. In the San Rafael Hills, 1,002.73 acres were acquired and 707.77 acres were acquired in the San Gabriel Mountains. Chart 4-1 illustrates this distribution.

#### **CHART 4-1 DISTIBUTION OF ACQUIRED OPEN SPACE**



The first property acquired was 62.20 acres in the Verdugo Mountains in 1913. In the 1920s, 598.08 acres were acquired, and all but 5.2 acres of this were part of Brand Park. No property was acquired in the 1930s. Scholl Canyon in its undeveloped state accounted for 378 acres acquired in the 1940s, as well as a portion of the Verdugo Mountains (414 acres) and another 90 acres in the San Rafael Hills. The majority of the land acquired in the 1950s was property adjacent to Brand Park (558 acres). Only 42 acres were acquired in the 1960s. There were small portions in the Verdugo Mountains and San Rafael Hills. The 1970s showed the second greatest amount of open space acquisition, with 1,081 acres. This included two large purchases in the Verdugo Mountains: Henderson Canyon (636 acres) and another addition to Brand Park (201 acres). The greatest amount of open space was acquired in the 1980s, when 1,518 acres came into City ownership. The major properties acquired are: Intervalley Ranch, now known as George Dukemejian Wilderness Park, in the San Gabriel Mountains (702 acres); Bank of Commonwealth and a portion of Henderson Canyon in the Verdugo Mountains (463 acres), and "Polygon" in the San Rafael Hills (175 acres).



In 1991, Deadhorse Canyon was purchased in the Verdugo Mountains (35 acres). Chart 4-2 shows the City's acquisition history by decade. The City has most recently (1992) purchased property in the San Rafael Hills between Buckingham Road and Figueroa Street.

Other publicly owned open space exists in the City of Glendale. The owners of such open space include the State of California Department of Transportation (CALTRANS), Los Angeles County, City of Burbank, Southern California Edison Company, and Los Angeles Flood Control District. These properties are primarily undeveloped and function as open space. Map 4-27 identifies these important properties.

#### b. Privately Held Open Space Properties

Privately held properties include unsubdivided land and developed recreational and educational facilities such as golf courses, youth camps, and religious retreats. Privately held property comprises a total of 1,540 acres.

#### D. ORGANIZATIONS INVOLVED IN PLANNING FOR OPEN SPACE

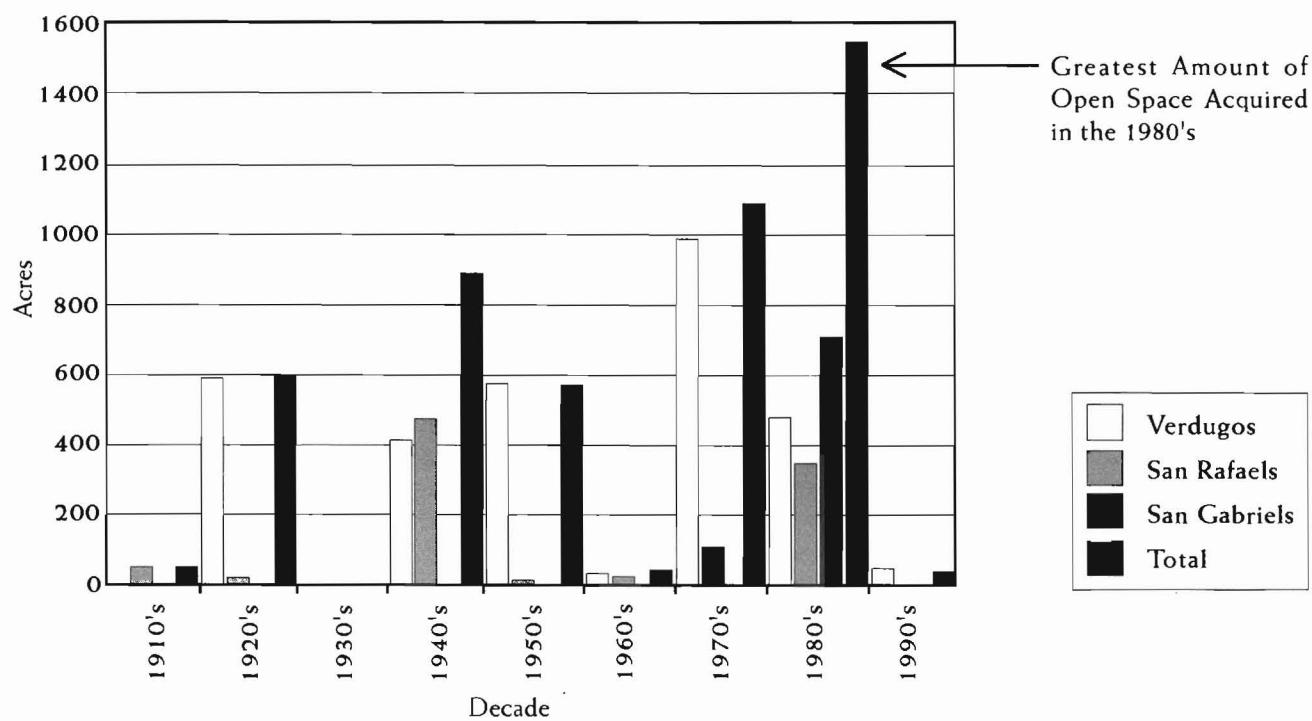
The Santa Monica Mountains Conservancy, Los Angeles County Department of Regional Planning, Small Wil-

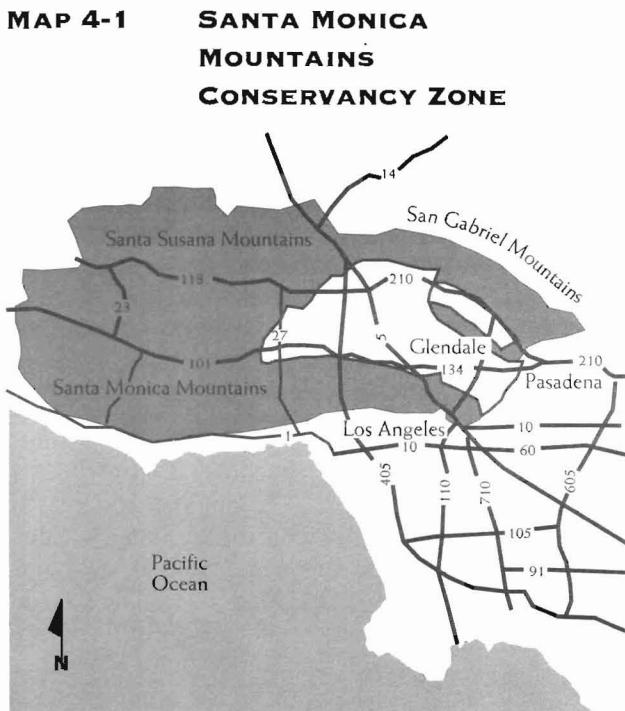
derness Area Preservation (SWAP) and other regulatory governmental agencies are involved in the management of open space and other natural resources. It is important that these organizations and agencies be recognized in the development of open space resource planning in the City in order to coordinate management of these resources within a regional context.

##### 1. Santa Monica Mountains Conservancy

The Santa Monica Mountains Conservancy was established by the California Legislature in 1980 to acquire land and operate programs for conservation, recreation and park purposes in the Santa Monica Mountains Zone, which includes the Santa Monica Mountains and the Rim of the Valley Trail Corridor. The mountainous areas of the City of Glendale fall within the planning jurisdiction of the Santa Monica Mountains Conservancy's Santa Monica Mountains Zone (see Map 4-1). The City of Glendale continues to coordinate its acquisition of new and open space lands with the Santa Monica Mountains Conservancy and to seek grants for the acquisition and development of open space for recreational land. The Santa Monica Mountains Conservancy works closely with the National Park Service, the State parks system and city and county governments in Los Angeles and Ventura Counties to preserve recreational and open space lands and to further opportunities for nature education and recreation.

**CHART 4-2 OPEN SPACE ACQUISITION HISTORY BY DECADE**





The Rim of the Valley Trail Corridor (Map 4-6) is a network of parks and trails connecting the Santa Monica Mountains to all the mountains surrounding the San Fernando Valley including the San Rafael Hills, Verdugo Mountains and San Gabriel Mountains. The Intervalley Ranch property forms an important link in the completion of the Rim of the Valley Trail Corridor and provides protection for significant open space resources. In addition to its direct conservation and recreational programs, the Conservancy administers more than 17,000 acres of park land located in Los Angeles and Ventura Counties and awards grants to local governments for park and recreation districts and land acquisition, access improvement, and outdoor educational programs. The City of Glendale has benefitted from the Conservancy grant program with funding for the acquisition of the Intervalley Ranch property in the San Gabriel Mountains.

## 2. Los Angeles County Department of Regional Planning

In the mid-1970s, the Los Angeles County Department of Regional Planning conducted a survey of the County's biological resources. In 1976, a General Plan Technical Supplement was produced which provided Special Management Areas. In 1980, this information was incorporated into the County wide General Plan which identified Special Management Areas and sixty-one Significant Ecological Areas (SEAs). The SEAs were intended to serve as a guide for prudent development within po-

tentially sensitive areas. The SEAs established boundaries which encroach into incorporated territory. A portion of one SEA is located within the City limits of Glendale—Area 40 in the Verdugo Mountains, which contains chaparral, coastal sage scrub and riparian habitats. Within the SEA Area 40, the County designates medium intensity recreational uses as the development type compatible with the identified habitat (see Map 4-13 Verdugo Mountains Significant Ecological Area (SEA)).

## 3. Small Wilderness Area Preservation (SWAP) - Verdugo-San Rafael Chapter

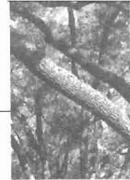
Organized in 1976, SWAP has played a significant role in increasing public awareness of the mountains as important open space assets and in the assistance of land acquisition by State and local governments. SWAP was instrumental in the acquisition of 500 acres in the Henderson Canyon area of the Verdugo Mountains. The organization also assisted in the successful preparation of grant applications from State and local sources for the acquisition of property in Glendale and in La Tuna Canyon which is located in the Los Angeles portion of the Verdugo Mountains. SWAP has coordinated land planning recommendations with the Santa Monica Mountains Conservancy which has led to the purchase of an additional 1,000 acres in the Los Angeles portion of the Verdugo Mountains. SWAP is currently active in acquisition efforts for additional acreage in the La Tuna Canyon area and Big Tujunga Wash.

As part of its ongoing open space plan efforts, SWAP prepared a proposal for a Verdugo-San Rafael Wilderness Park. The proposed park envisions an intra-urban mountain park designated for public use in perpetuity. The park would offer the combined attractions of passive and active recreation. Suitable areas are recommended for development as park land and other areas for restricted access such as trails and primitive camping sites. Preservation of prominent ridgelines and peaks are recommended as a third category of use. This use would serve a visual function of providing a backdrop for the urban environment.

## E. CONNECTORS

### 1. Paths and Trails

The California Public Resources Code requires every City to consider demands for trail oriented recreational use and consider such demands in developing specific open space programs. Each City is also required to identify the feasibility of integrating City and County trail routes with appropriate segments of the California Recreational Trails System. Since none of the trail systems



*Whiting Woods Trailhead Entrance*

within the City of Glendale connect with any trails identified in the California Recreational Trails System, this aspect is not discussed. Emphasis is placed on the local and regional systems.

Trails form an important part of the City's overall open space plan in that they provide access to open space lands and serve as an active recreational amenity. Trails can be utilized for hiking, bike riding and equestrian uses. It is important that trails provide linkages to other open space areas and that they are integrated with other trails so that the overall system can be a continuous one of parks, trails and areas of preserved wildlife habitats that thereby provide maximum opportunity for recreation. It is also important to recognize that direct public access should only be established for those areas that can safely withstand human activities and to evaluate the compatibility of the various potential uses.

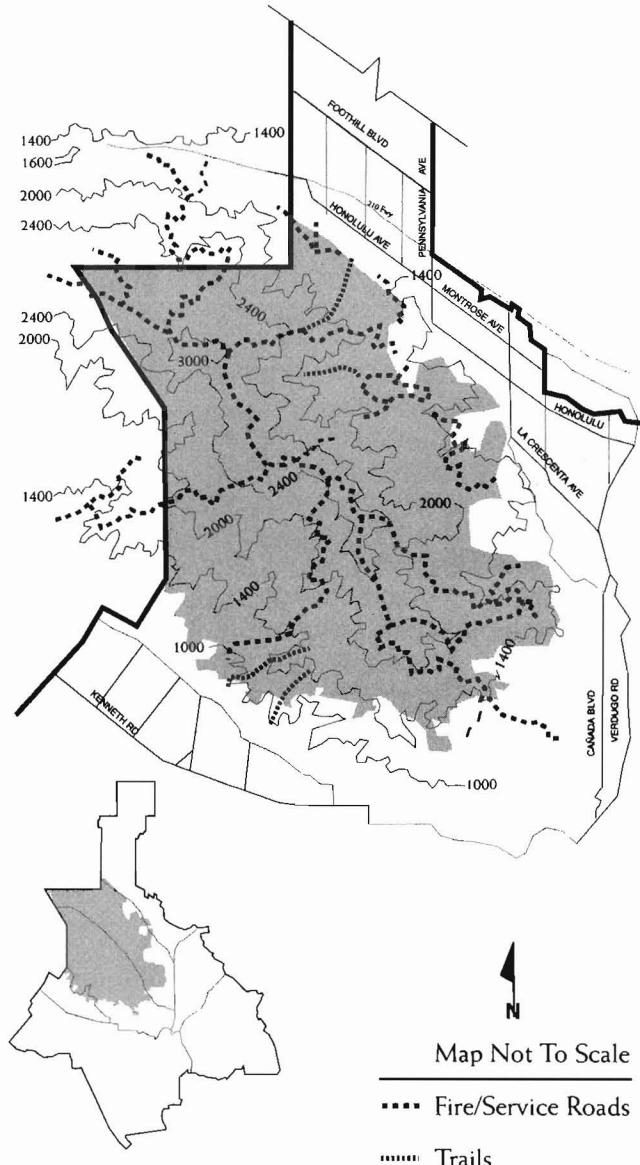
#### a. Verdugo Mountains

Because of the high fire hazard posed by the native vegetation in the Verdugo Mountains, a series of fire roads were established in the 1930's. These provide access to the mountainous areas in order to minimize the threat of fire to the surrounding urban areas. This network of wide, smooth fire roads provides a well developed system of interconnecting trails for the Verdugo Mountains. Map 4-2 identifies paths and trails in the Verdugo Mountains. The trail system is composed of the Verdugo, Brand Park, Beaudry North, Beaudry South, Whiting Woods, Skyline and Hostetter Fire Road Trails. The most popular hiking trails include those on the north facing slope of the mountain range including Beaudry and Hostetter. Whiting Woods, due to its steepness, is utilized less than the other trail systems. Within the Verdugo Mountains these roadways serve as a desirable trail system for mountain bike activity. These trails connect to similar systems in the City of Burbank and also connect to those in the City of Los Angeles as shown on

Map 4-3. The Santa Monica Mountains Conservancy has recently constructed the La Tuna Canyon Trail which connects to the Verdugo fire road trail just outside the City of Glendale. Because of this trail development, it is now possible to travel in the Verdugo Mountains on several loop trails. In a recent publication titled Afoot and Afield in Los Angeles County, the Beaudry Fire Road System is noted as a unique loop trail. Also noted is a west side loop utilizing the recently constructed La Tuna Canyon Trail. The views from these trails are spectacular particularly on any cloud-free, smog-free day. The trail systems are accessible by foot, horse or mountain bike, although there is no equestrian access from the Glendale area into the Verdugo Mountains.

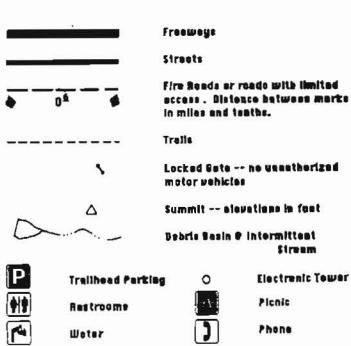
#### MAP 4-2

#### PATHS AND TRAILS OF THE VERDUGO MOUNTAINS



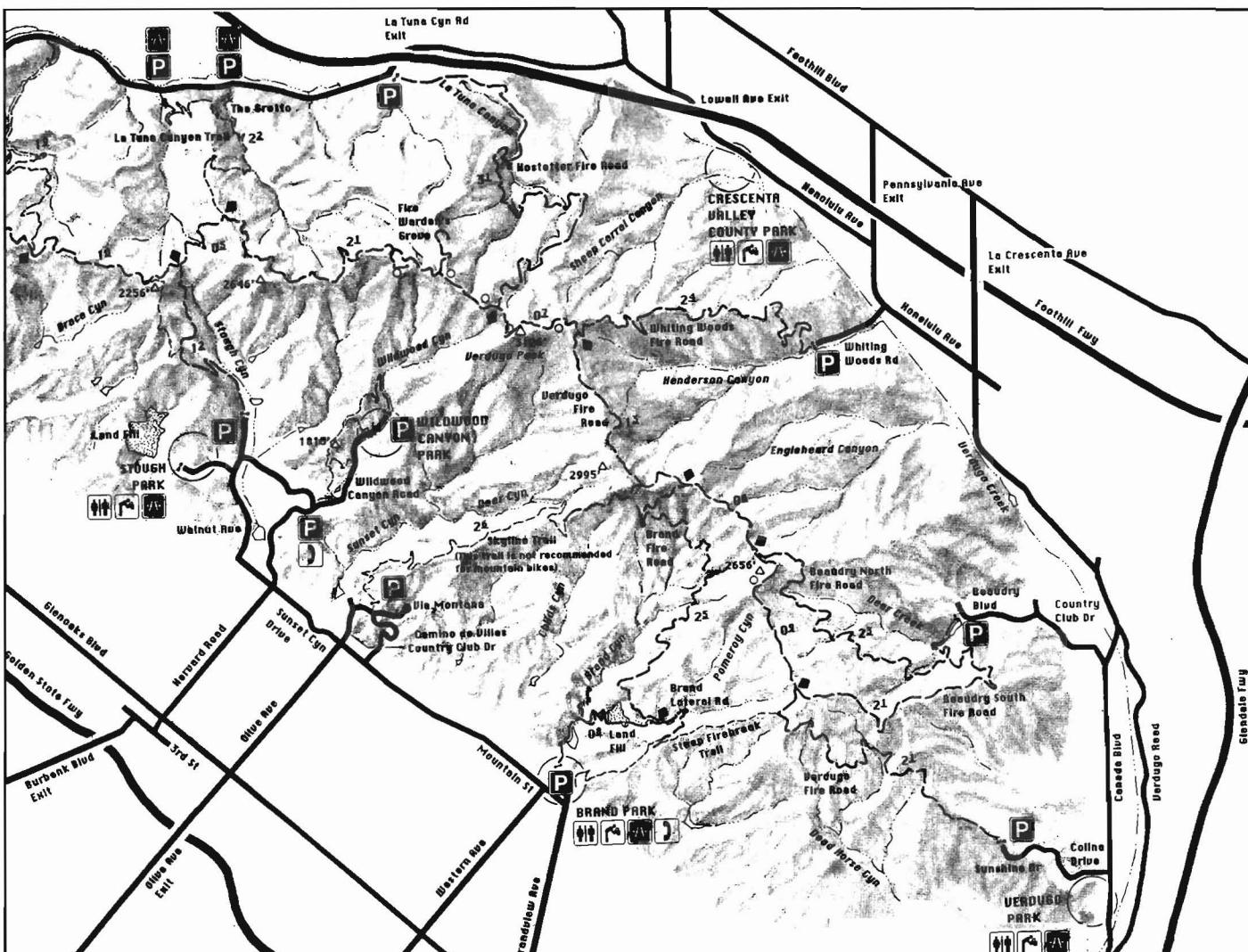
**MAP 4-3 MOUNTAIN BIKE AND HIKING TRAILS OF THE VERDUGO MOUNTAINS  
GLENDALE, BURBANK AND LOS ANGELES, CALIFORNIA**

## **LEGEND**



Source:

Cartography by Don Campbell with help from the planning departments of the cities of Glendale, Burbank and Los Angeles. Valuable contributions were also made by Instructors and fellow students at California State University, Northridge; and by the Santa Monica Mountain Conservancy.



0                    1

Scale Equals One Mile



The only fully developed trailhead for the Verdugos is found in Brand Park. Other trailheads have been established but these only provide for parking facilities. There are numerous other small trail systems in the Verdugo Mountains which have been improved by the Southern California Edison Company for access to their individual towers. However, these trail systems are relatively short and do not connect to major trail systems. Consideration should be given to establishing a new trail system to connect Crescenza Valley Park to the fire road system (via the Whiting Woods Trail) and/or to develop more trailhead facilities for utilization of these trails. Public transportation is provided close to Crescenza Valley Park, thereby providing a greater opportunity for public access to the open space lands.

#### b. San Rafael Hills

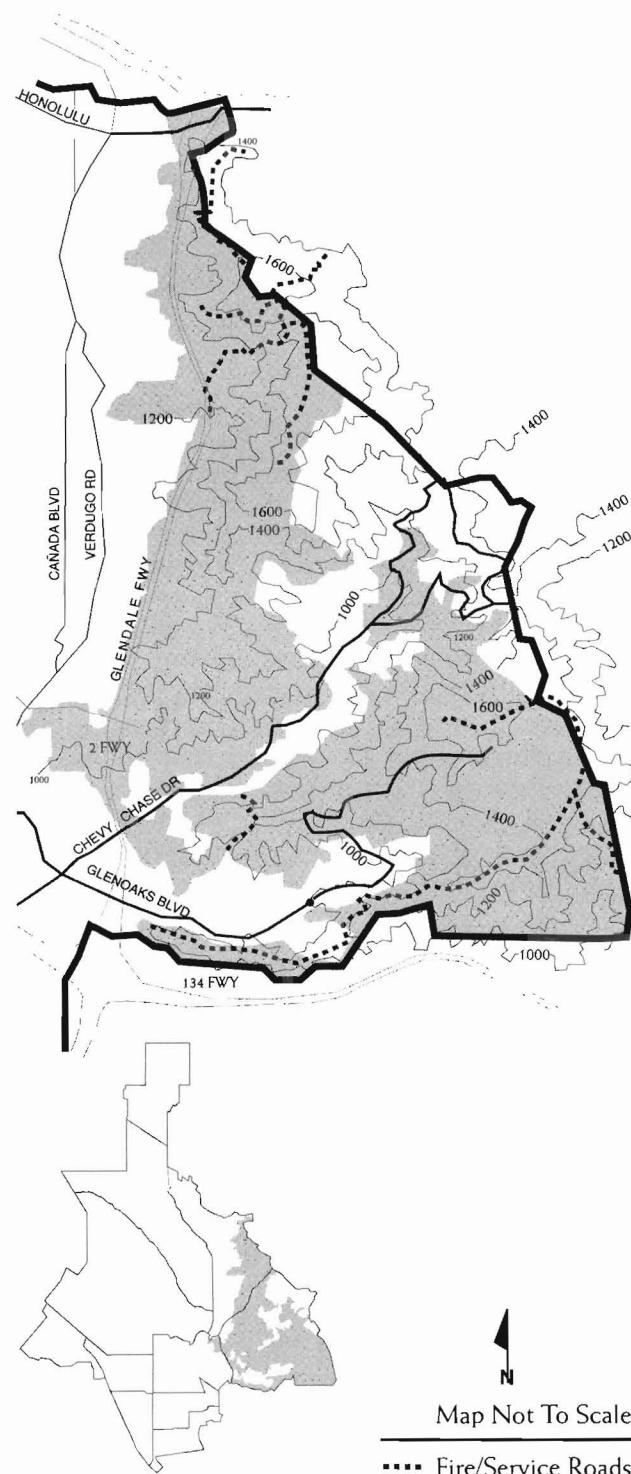
Like the Verdugo Mountains, a series of fire roadways were developed in the early 1930's to provide for fire access. Unlike the Verdugo Mountains, however, the San Rafael Hills have undergone a greater amount of development. As a result, many of these fire roads have been bisected and do not serve as major hiking trails in this area. Furthermore, due to the recent development of the San Rafael Hills Estates project, a paved roadway (Camino San Rafael) has been developed from the Glendale Freeway to Emerald Isle Drive. Access to the open space areas in the San Rafael Hills is still available along this roadway to the ridge motor way which provides access to the Cerro Negro lookout tower and along the La Canada-Flintridge border to Cherry Canyon north of Descanso Gardens. Several laterals from this ridge route are available with access under the 2 Freeway at Fern Lane. The trail system in the San Rafael Hills is much smaller in scale and not as well utilized as the system in the Verdugo Mountains. The Cherry Canyon Trail connects to the equestrian trails of La Canada Flintridge and ultimately to the San Gabriel Mountains. Map 4-4 shows trails in the San Rafael Hills.

#### c. San Gabriel Mountains

With the recent purchase of the Deukmejian Wilderness Park, the City of Glendale has provided public access to the San Gabriel Mountains. Proposed development of this facility includes an interpretive center and other activities which will provide for a developed trailhead system to the open space lands (see Map 4-5). The San Gabriel Mountains, in this portion of the range, are extremely precipitous, thereby making hiking quite difficult in the upper reaches of the canyon areas. The Mount Lukens Trail traverses the upper portion of Glendale's corporate boundary and provides a connection to Haines Canyon Trail and Stone Canyon Trail, which ultimately

MAP 4-4

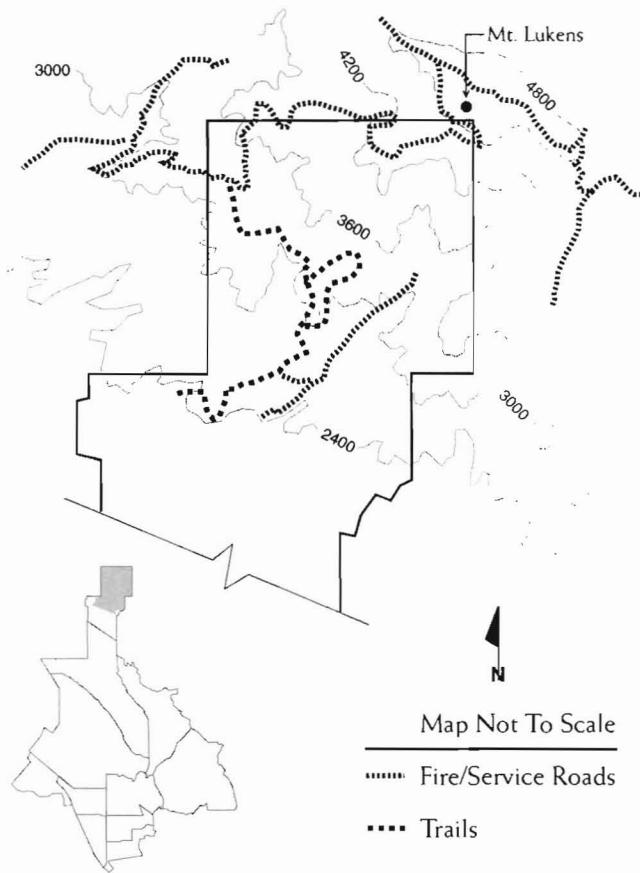
PATHS AND TRAILS OF THE SAN RAFAEL HILLS



Map Not To Scale

---- Fire/Service Roads

#### **MAP 4-5      PATHS AND TRAILS OF THE SAN GABRIEL MOUNTAINS**



provide a connection to various trails in the Angeles National Forest (Tujunga district). Connection through Big Tujunga Canyon can be made to the Pacific Crest Trail which is located approximately nine miles north of the City boundary. Due to the steep topography of the San Gabriel Mountains, the development of a trail system would appear to be limited to the lower elevations. Although there may be potential conflicts regarding safety among hikers, equestrians and mountain bike riders, the needs and compatibility of these three groups should be considered in trail design.

#### **d. Rim of the Valley Trail Corridor**

In 1983, the California State Legislature recognized the natural and recreational value of the greenbelt surrounding the San Fernando and La Crescenta Valleys by expanding the role of the Santa Monica Mountains Conservancy to plan and develop trails for open space in the Rim of the Valley greenbelt. The Rim of the Valley Corridor is an interlocking system of hiking and equestrian trails that connects parks and open space in the San Fernando and La Crescenta Valleys (see Map 4-6). Its primary purpose is to provide public access to the

outdoor preserves of the Los Angeles area. The Rim of the Valley Trail Corridor does not specifically include the Verdugo Mountains or San Rafael Hills as the primary route. It does recognize the Mount Lukens Trail which passes through the upper portion of the City of Glendale. It is recognized, however, that all trails are important within this area and that their continuity with and connection to other trail systems are important. The Santa Monica Mountains Conservancy recognizes the significance of connectors to this system which traverses Glendale's mountainous area. Development of improved trailheads in order to provide greater access to the public are among the desired goals and objectives of the Santa Monica Mountains Conservancy.

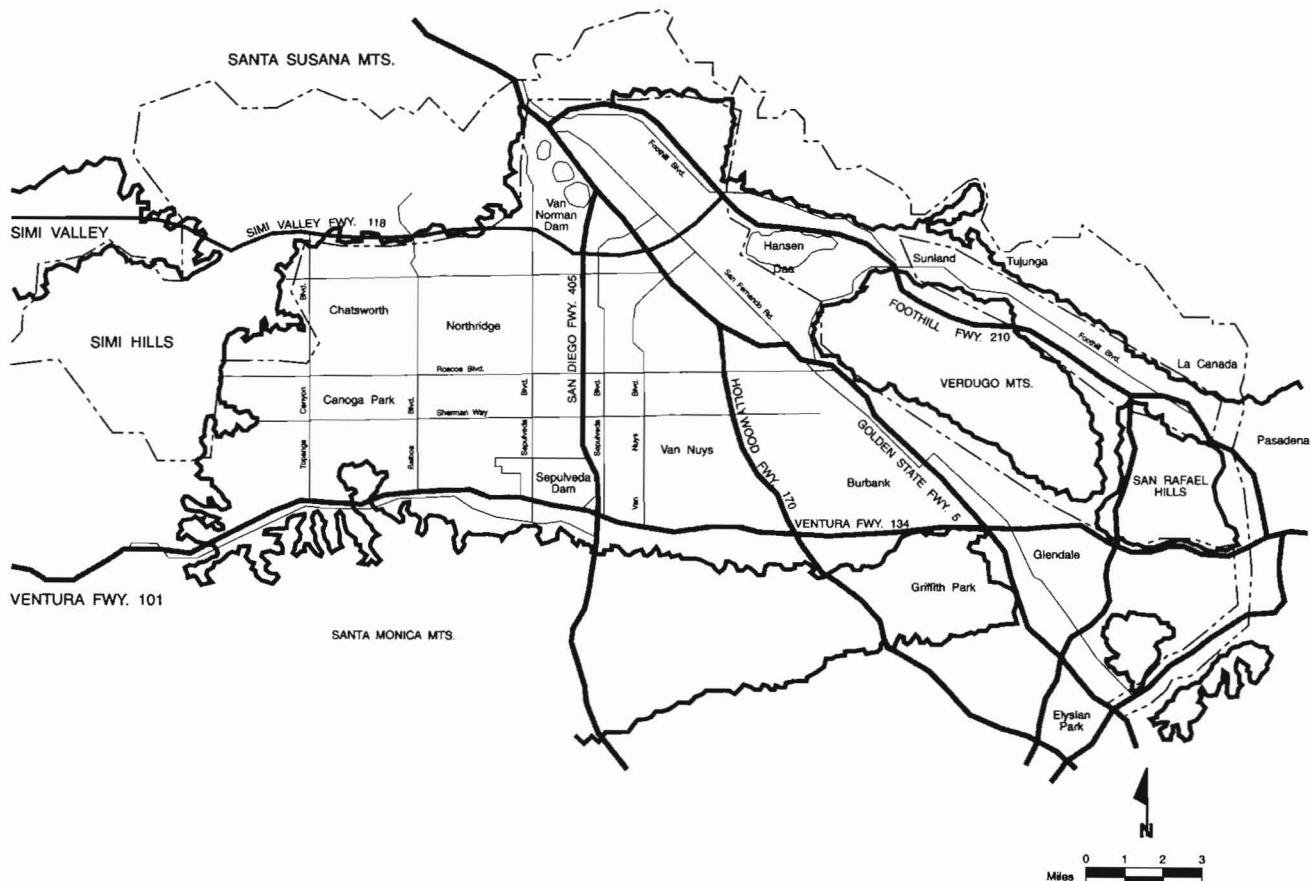
#### **e. Trail Improvements**

Glendale's trail system should be constructed in a manner that can accommodate hikers, joggers, equestrians and bicyclists as well as individuals with disabilities (where applicable) but still preserve open space values and natural resources. The trail alignment should follow existing paths and natural contours as much as possible. Trailheads or staging areas should be developed to provide adequate services (parking, water, restrooms, picnic facilities), without infringing upon residential neighborhoods or large areas of open space land. The trail system should accommodate a varying degree of difficulty for the hiker. Emphasis should be placed upon existing park facilities as the primary access points to open space lands. Access to public transportation should be considered a desirable design element in developing trailhead facilities. Signs should also be provided only for visitor information, safety and resource protection. Visitor information kiosks utilizing natural earth-tone colors could aid in dissemination of educational information for those using Glendale's natural resources.

#### **2. Urban Hikeway**

In addition to the trail system which has been developed for the open space lands of the City, the City has identified several urban hikeways in an effort to provide an opportunity for citizens and visitors to discover Glendale's unique urban form. Three self-guided routes have been established (see Map 4-7), each of which is easily accessible by public transportation. All routes have conveniently located restrooms and provide areas where the urban hiker can sit back and observe the sights of the city and its people. This urban trail system is intended to highlight three of Glendale's unique centers including the Financial/Fremont Park route, Brand Shopping route, and the historic Civic Center route. These routes vary in length between two and three miles and are either developed or proposed to be developed with

## MAP 4-6 RIM OF THE VALLEY CORRIDOR



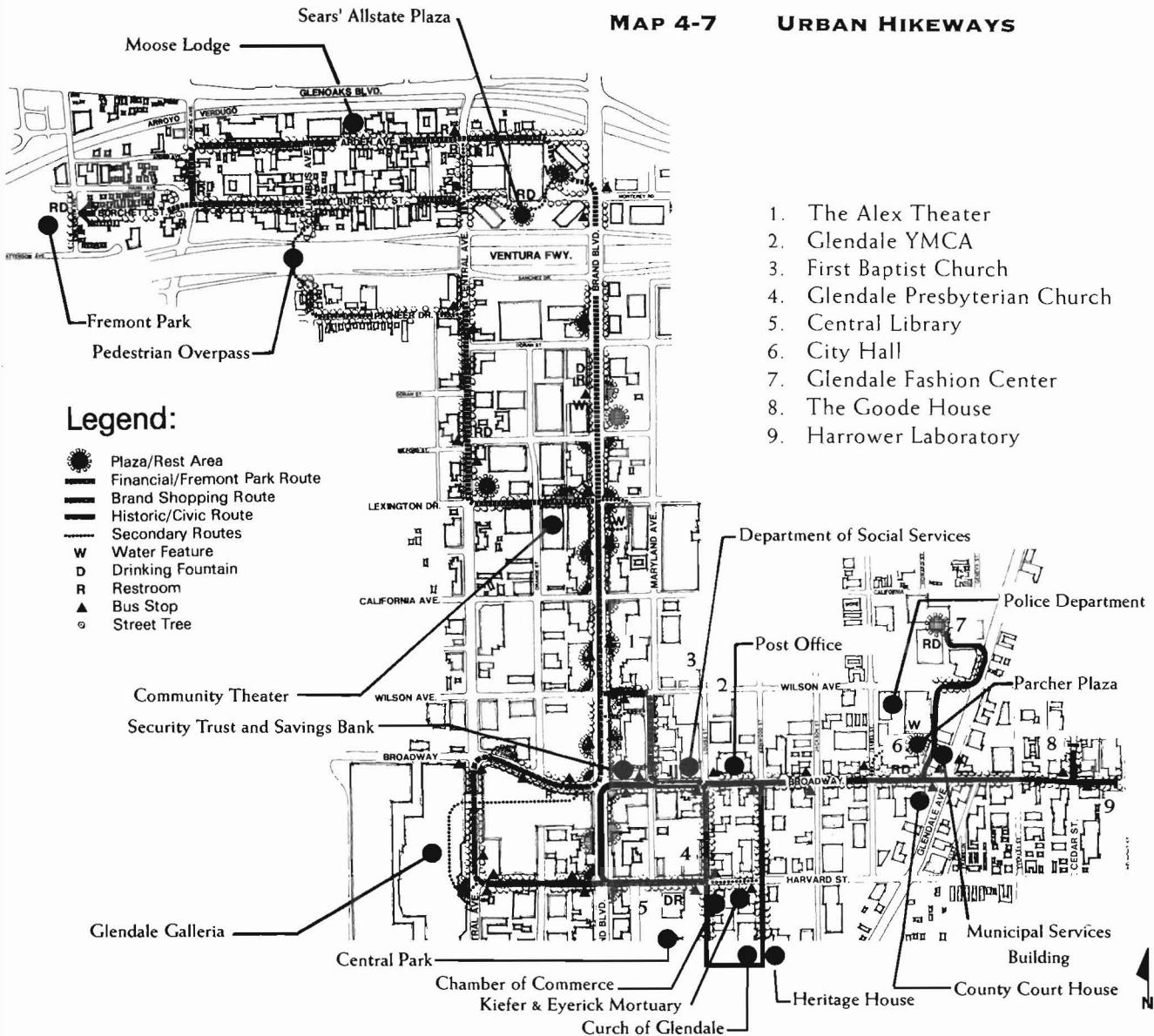
A Part of Glendale's Urban Hikeway Along Brand Boulevard

interesting streetscape features to encourage pedestrian usage. These routes, similar to the other trail systems, are intended to provide connection between activity centers.

### 3. Bikeways and Scenic Roadways

The Scenic Highways Element has been developed in concert with the Circulation Element of the General Plan and provides for discussion of bikeways and scenic roadways. Map 4-8 identifies Glendale's existing and proposed bikeway routes. The City is in the process of updating its Circulation Element and bikeway plans. Coordination of transportation facilities to important trailheads for the linkage of mountain bike trails to existing and proposed bikeways is recommended.

**MAP 4-7 URBAN HIKEWAYS**



## F. IDENTIFICATION AND EVALUATION OF RESOURCES

### 1. Air Quality

In addition to its required topics, the Conservation Element may address the protection or improvement of air quality. The following is a synopsis of air quality issues facing Glendale. A separate Air Quality Element has been developed to address air quality issues in detail.

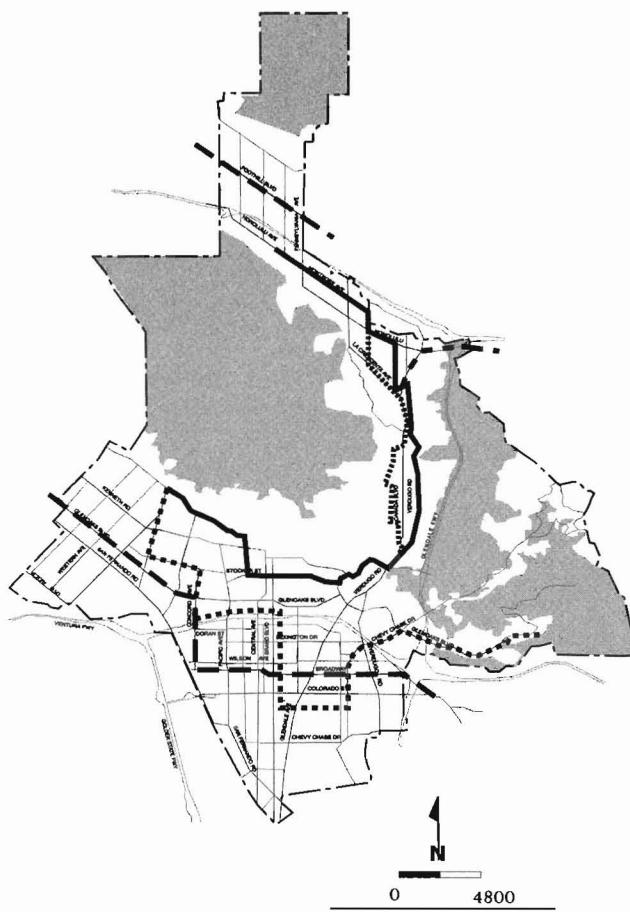
Air pollution is characterized by natural and introduced contaminants in the air which, when concentrated, adversely affect human health, animal health, plant growth, and building material longevity. The main air contami-

nants found in an urban setting include carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, sulfates and lead. All of these contaminants except ozone are directly emitted from fuel combustion. Ozone is created when certain organic gases are combined with nitrogen dioxide in sunlight. Other pollutants include toxic air contaminants which pose either an acute (short-term exposure) or chronic (long-term exposure) health risk when concentrated. Toxic air contaminants are often released as a result of an industrial accident or improper safety equipment.

Daily air emissions generally remain in the air basin in which they are emitted, usually a geographical region bounded by mountains. Over a longer period, they are



**MAP 4-8 EXISTING AND PROPOSED BIKEWAYS**



- ..... Proposed City Designated Route
- - - - Proposed County Designated Route
- Existing Route
- ===== Modifications to Existing Route

dispersed throughout the atmosphere. Glendale is located in the South Coast Air Basin which is composed of the non-desert portions of Los Angeles, San Bernardino and Riverside County, and all of Orange County. As early as the 1940s and 1950s, the Basin began to experience significant air pollution from rapid industrial, population and traffic growth. Ever since, the South Coast Air Basin has been plagued by some of the worst air quality in the country. Light winds, poor vertical mixing, abundant sunshine and surrounding mountains help create the ideal conditions for air pollution. Today, the South Coast Air Basin exceeds federal ambient air quality standards more frequently than any other area in the country.

Air quality in the Basin is regulated at the federal, state and regional level. The following air quality regulations from different government levels affect Glendale.

**a. Federal Clean Air Act**

The Clean Air Act is the federal law that provides for protection of air quality in the United States. With the exception of abatement of nuisances, essentially all federal, state and local air pollution programs derive directly or indirectly from the Clean Air Act. The Federal Clean Air Act (FCAA) Amendments of 1977 stated that a designated agency in each region of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards by December 31, 1987. However, since 1977, additional knowledge and concerns about air quality and exposure to air pollutants have led to substantive amendments. In addition, regions designated as nonattainment were not meeting original compliance standards. For example, the South Coast Air Basin (SCAB) could not meet the attainment deadline for ozone, nitrogen dioxide, carbon monoxide, or particulates.

As a result, the 1990 amendments to the FCAA take the concept of nonattainment areas to a new level of complexity. Congress enacted amendments to the FCAA in October, 1990 which divided the country into five categories of ozone nonattainment areas, ranging from marginal to extreme. Deadlines were based on the severity of the local air pollution problem, ranging from three to 20 years for areas with extremely polluted air. The only section of the country designated "extreme" is the SCAB. Although there is a longer deadline to attain these standards, there are also much stricter control requirements, including offsetting all increases from existing stationary sources, enacting transportation control measures and requiring the use of clean or reformulated fuels. In addition to ozone and carbon monoxide, the FCAA mandates attainment requirements for inhalable particulates (PM10) and nitrogen oxides.

**b. California Clean Air Act**

In 1988, the California Legislature enacted the California Clean Air Act (CCAA). The CCAA amended the enabling authority for air pollution control districts in the state. The legislature gave these districts, including the South Coast Air Quality Management District (SCAQMD), broad new authority to regulate motor vehicle use with indirect source controls (restrictions on land uses which pollute the air principally through their trip generation) in areas that have not met national or state ambient air quality standards.

The CCAA requires that regional emissions be reduced by five percent annually, averaged over three year periods until attainment is demonstrated. Each area that does not currently meet a national or state ambient air quality standard is required to prepare a plan which demonstrates how reductions will be achieved. Areas with the most heavily degraded air quality are required to reduce emissions 50 percent from 1987 levels by December 31, 2000. Plans must be updated in 1998 if attainment cannot be demonstrated by the year 2000.

### c. Air Quality Management Plan of 1991

The SCAQMD adopted the 1991 Air Quality Management Plan (AQMP) to meet CCAA requirements. Although the 1991 AQMP defers the attainment date to 2010, consistent with the 1990 FCAA, it contains fewer Tier III (new technology) control measures than the previous 1989 AQMP, relying on the adoption of new motor vehicle controls by the state which, by the year 2003, will result in cars that are 80 percent cleaner than those sold in 1990. The state control program calls for 10 percent of new vehicles to be electrified by 2003, the 1991 AQMP expands this goal to 50 percent.

The 1991 AQMP also shifts the emphasis from jobs-housing balance (land use policies which are intended to reduce traffic by bringing home and work locations closer together) to equivalent reductions in vehicle miles traveled (VMT). It continues to recommend adoption of Air Quality Elements or Plans as the basis for implementing many of the local government measures, but defers the date for adoption to January, 1993. A variety of options, including jobs-housing balance, can be utilized by local governments to achieve the VMT reductions attributed to growth management. These must be in addition to other measures already required by the plan. In response to the call for local government to regulate certain air quality issues, the City of Glendale, in 1991, joined 15 cities in the West San Gabriel Valley to develop a subregional air quality plan. This plan has identified practical measures from which each city can choose in order to meet the requirements of the 1991 AQMP. The City of Glendale will be using this plan as a base for developing an Air Quality Element as part of its comprehensive General Plan.

## 2. Archaeological, Paleontological, and Historical Resources

Discoveries of ancient human, animal, and plant remains may provide an important record of life in this area. Historic records and artifacts provide a sense of how this community started and developed culturally as well as physically. These elements provide a sense of continu-

ity for the present and a base from which to plan for the future.

### a. Archaeological Resources

In southern California, archaeological finds (remnants of human life and culture in past ages) are usually associated with water sources. Water, quite literally, provided the "life blood" of ancient communities—water for drinking, cooking, farming, and attraction for hunted prey, etc.

Perennial and intermittent watercourses have existed in Glendale through the ages. However, no archaeological sites have been documented. An archival search conducted in February, 1991 has substantiated this conclusion. Sources consulted were the University of California at Los Angeles Archaeological Information Center, the National Register of Historic Places, California Historical Landmarks listing, and all known cultural resource surveys and excavation reports for the Glendale area. Although nineteen archaeological surveys had been completed for projects in the hillside areas of Glendale, no significant archaeological sites have been identified.

This should not be construed as evidence that ancient man did not inhabit this area. Rather, investigation continues, on an individual project basis, through the environmental documentation process. Furthermore, hard surface development over archaeological resources may preserve them for future study. Sites which have not been destroyed or disturbed in past construction may be protected in this way.

### b. Paleontological Resources

Paleontological resources, which are the fossilized forms of ancient plant and animal life, are generally found within sedimentary rock formations. Much of Glendale is underlain by igneous and metamorphic rock. The Repetto Hills (Adams Hill area), however, are an area of sedimentary rock deposits.

Adams Hill was one of the first parts of the City to experience development pressure. Because building took place at a time when there was not a keen interest in paleontology, it may be assumed that any unearthed deposits were either removed or destroyed. If any deposits remain they may be preserved by virtue of the hard building and road surfaces above them.

### c. Historic Resources

Glendale is firmly committed to identifying and protecting its historic resources. This commitment is demon-



strated in the goals presented in the Historic Preservation Element of this General Plan, which was adopted in 1977:

- Preservation of Glendale's historic sites so that they may be part of the consciousness of present and future generations;
- Preservation of sufficient historic resources in number and type so as to successfully evoke the distinctive character of the significant stages of Glendale's history; and,
- Effectuation of a preservation program that maximizes, insofar as practicable, the effective utilization of the City's significant historic sites.

Currently, the Historic Preservation Element lists 33 significant sites. As part of the dynamic character of the general plan process, this element will experience a continuing update beginning in 1993.

The City is at the forefront of the local preservation movement. It was the first municipality in Los Angeles County to adopt an ordinance which enables owners of qualified historic properties to receive a reduction in their property tax assessment. Such savings must be applied to maintenance, rehabilitation, or restoration as specified in a binding contract. Codification of this program enacted the provisions of the "Mills Act," state enabling legislation passed in 1976.

Local preservation efforts are enhanced through the actions of the Historic Preservation Commission. This body is advisory to the City Council and reviews and makes recommendations on alterations, modifications, and demolitions of all designated historic sites.

City ownership of various historic resources protects their future in perpetuity. These include: El Miradero, the Doctor's House, Miss American Green Cross, the former Southern Pacific Railroad Depot, the Verdugo Adobe, the Casa Adobe de San Rafael, the Alex Theatre, the Goode House, and Deukmejian Wilderness Park (Inter-Valley Ranch). The Casa Adobe de San Rafael is a designated State Historical Landmark. The Glendale Post Office, the Verdugo Adobe, and the Derby House (a Lloyd Wright designed residence) are listed in the National Register of Historic Places, which is maintained for the U.S. Secretary of the Interior by the National Park Service. National Register eligibility has been determined for other sites within the City; nomination and listing on the Register is sought as an ongoing policy.

The Glendale Oral History Program further contributes to local efforts in historic preservation. Interviews with long-time residents, as well as community and political leaders, establishes a unique recorded history of the City. Furthermore, these personal accounts may assist in identifying additional or previously unknown historic resources.

Participation in state and federal historic preservation programs also aid in protecting the historic resources of the community. As a Certified Local Government (CLG), Glendale is able to compete for federal Historic Preservation Funds which are administered and distributed by the State Office of Historic Preservation (SOHP).

City involvement as well as non-profit and volunteer participation ensures the success of historic resource conservation in Glendale.

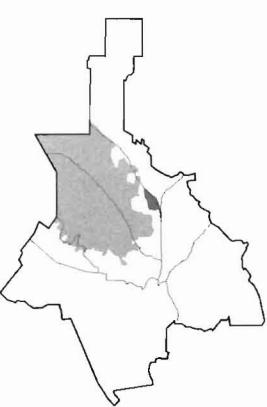
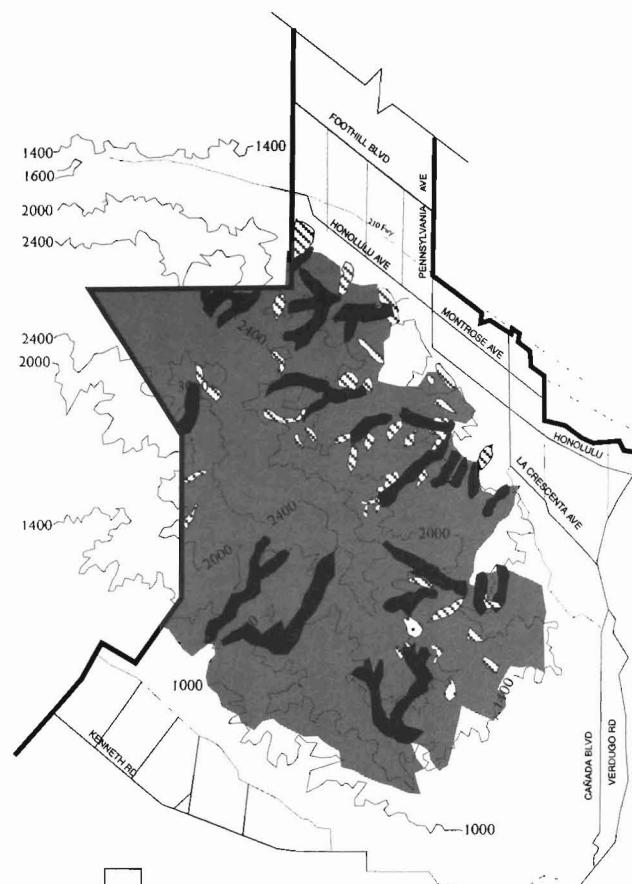
### 3. Biological Resources

#### a. Introduction

A survey of publicly owned and un-subdivided privately held parcels in the San Rafael Hills, Verdugo Mountains, and the portion of the San Gabriel Mountains located within the City of Glendale was conducted by biologist Cheryl Swift, Ph.D, in order to characterize the vegetation and the habitat value of open space in the City of Glendale. In order to adequately assess these characteristics, the vegetation of the Verdugo Mountains, San Rafael Hills and the portion of the San Gabriel Mountains within the City of Glendale was mapped, (see Maps 4-9, 4-10, 4-11) and a list of the characteristic species found in each identified vegetation type was developed. This is not a complete survey of all species in the areas previously mentioned. Instead it is an overview of the biological resources identified within these areas.

Also discussed in this section is information on the open space areas within Glendale identified by the California Department of Fish and Game Natural Diversity Data Base and the Los Angeles County Department of Regional Planning "Significant Ecological Area" (SEA) program (see Map 4-12). The Natural Diversity Data Base and the SEA program analyze biotic resources and identify areas with sensitive plant and animal communities. In some cases, these areas overlap with one another and with those areas identified by Swift in her biological assessment. Map 4-13, "Southern Oak Riparian Forest," shows the findings of the Natural Diversity Data Base, and Map 4-12 illustrates the locations of Glendale's Significant Ecological Area (SEA).

**MAP 4-9 VEGETATION COMMUNITIES OF THE VERDUGO MOUNTAINS**



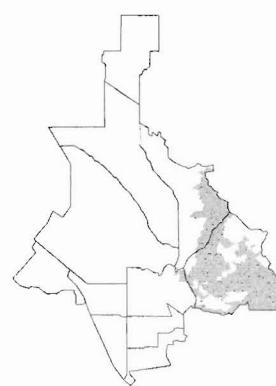
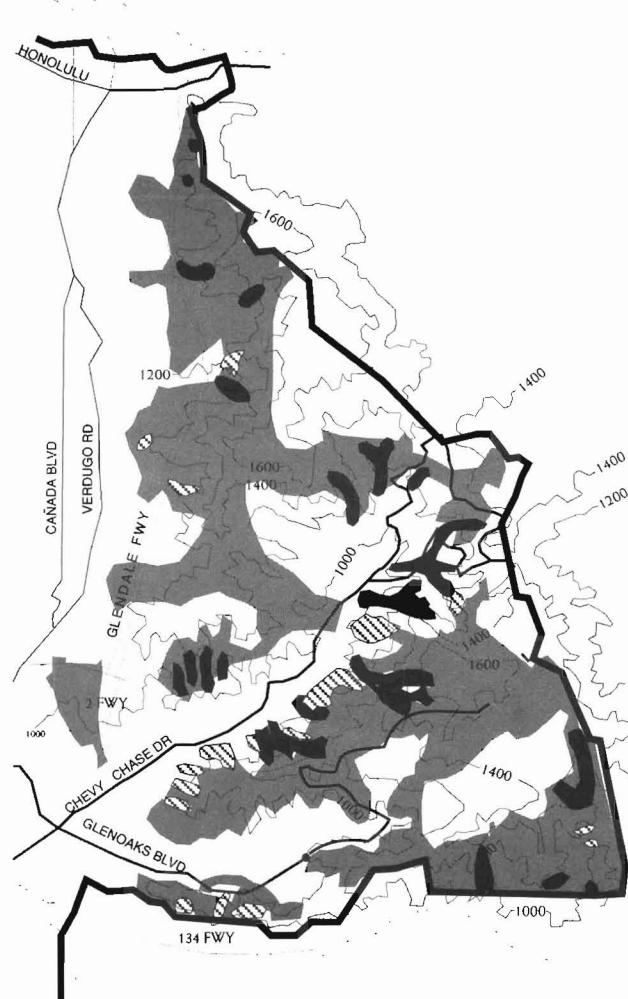
Map Not To Scale

- Chaparral
- ▨ Oak Woodland
- Southern Oak Riparian
- Walnut

#### b. Existing Conditions

The open space within the City of Glendale is characterized as a series of drainages supporting trees within a matrix of chaparral. The areas studied support five recognizable plant communities (Holland, 1986). They include the chaparral, southern oak woodland, southern oak riparian woodland, coastal sage and alluvial scrub communities. Maps 4-9, 4-10, 4-11 show the vegetation communities present in the Verdugo Mountains, the San Rafael Hills and the San Gabriel Mountains. In

**MAP 4-10 VEGETATION COMMUNITIES OF THE SAN RAFAEL HILLS**

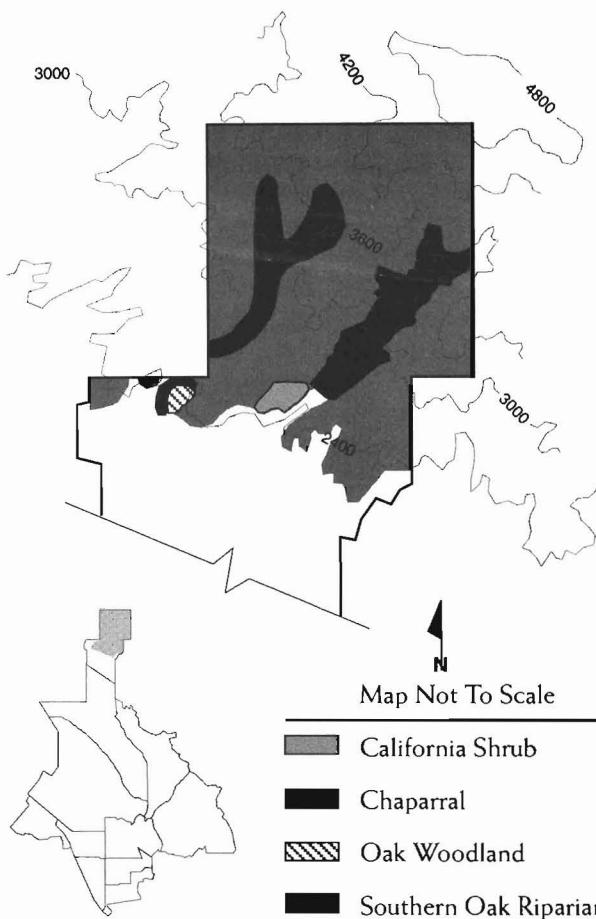


Map Not To Scale

- Chaparral
- ▨ Oak Woodland
- Southern Oak Riparian



**MAP 4-11 VEGETATION COMMUNITIES OF THE SAN GABRIEL MOUNTAINS**



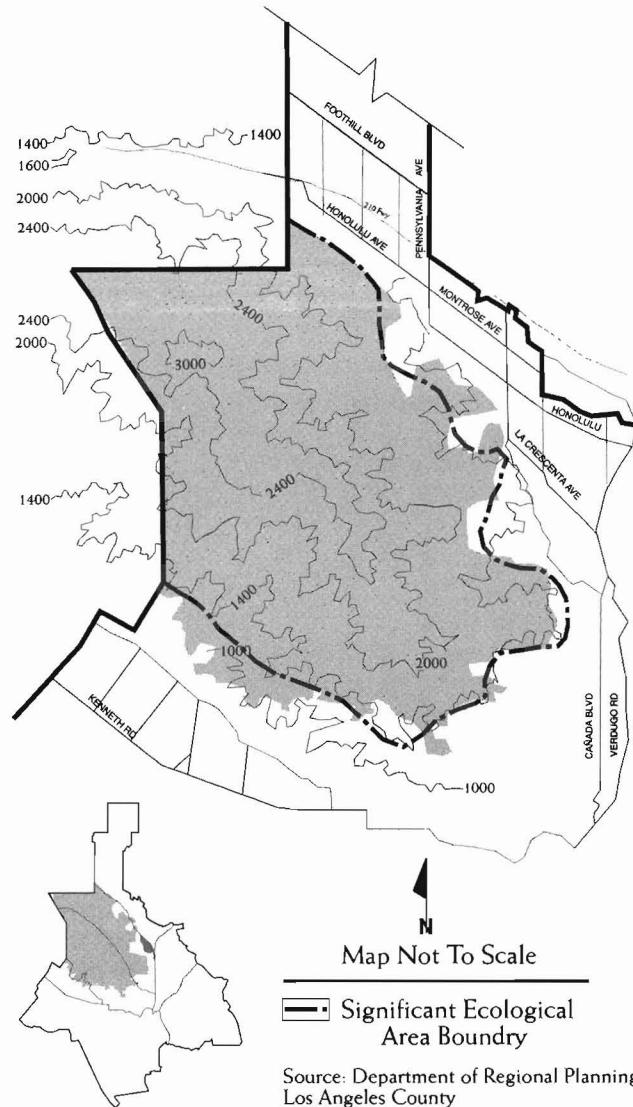
addition, isolated patches of two additional plant communities were identified. These are walnut woodland and big cone spruce. The chaparral plant community covers the ridges and the upper slopes of ridges in all of the areas studied. Table 4-1 provides a summary of vegetation types organized by region.

## 1. Native Plant Communities

### a. Chaparral

This community is characterized by shrubs which typically have small thick leaves and deep roots. A number of these shrub species have evolved under a selection process that includes periodic fires. As a result, a number of species are dependent on fire for regeneration by seed (Keeley and Keeley, 1989). The remaining chaparral species regenerate by one of two means. The first is a combination of seedlings and resprouting, an example

**MAP 4-12 VERDUGO MOUNTAINS SIGNIFICANT ECOLOGICAL AREAS**



Source: Department of Regional Planning  
Los Angeles County



An Example of the Chaparral Plant Community in the Verdugo Mountains