

CHAPTER
6

ENVIRONMENTAL HAZARDS

A. OVERVIEW

Environmental Hazards incorporates the state-mandated “Safety” and “Noise” elements of the General Plan. It addresses natural and man-made hazards in the City, including earthquakes, landslides, floods, wildfire, air and water pollution, hazardous materials, and aviation accidents. It includes a summary of emergency preparedness in San Leandro, with policies that provide the foundation for disaster planning in the City. The Element also addresses noise pollution, with the dual objective of mitigating existing noise problems and avoiding future disturbances or conflicts.

The overall purpose of this Element is to minimize the potential for damage and injury resulting from environmental hazards. The State Government Code requires that the Element identify and evaluate the hazards that are present in the community and establish appropriate goals, policies, and action programs to reduce those hazards to acceptable levels. Environmental hazards define basic constraints to land use that must be reflected in how and where development takes place.

Public education is critical to the successful implementation of this Element. Although San Leandrans are generally aware that the City is located in “earthquake country,” there is still much that can be done to improve readiness and response

when disaster strikes. The Environmental Hazards Element takes a pro-active approach to emergency preparedness, emphasizing mitigation and reduced exposure to hazards as well as response and recovery.

The Element sets forth a pro-active strategy for addressing noise issues in the community. Surveys conducted during the General Plan update found that noise was perceived as a significant problem in San Leandro. This is not surprising considering the City’s location next to a major international airport and alongside some of the region’s busiest freeways and rail corridors. The Element recommends several programs to resolve domestic, transportation, and airport noise conflicts.

The 1868 Hayward Fault earthquake caused the collapse of the Alameda County Courthouse, which was then located on Davis Street in Downtown San Leandro. If a quake of similar magnitude (7.0) occurred today, damage would be widespread.



B. NATURAL HAZARDS

Earthquakes

Seismic Conditions

Earthquakes are the most pervasive safety hazard in San Leandro. The eastern edge of the City is crossed by the Hayward Fault, creating the potential for serious and widespread damage. The last great quake on the Hayward Fault—a magnitude 7.0 temblor in 1868—destroyed many buildings in San Leandro and literally changed the course of the City's history.

A 1999 ABAG study of earthquake probabilities estimated that there is a 32 percent chance of a magnitude 6.7 or greater quake on the Hayward Fault during the next 30 years. Such a quake could topple buildings, disrupt infrastructure, cripple the transportation system, and trigger landslides throughout the San Leandro Hills. The City is also vulnerable to damage from earthquakes on the San Andreas Fault, located 10 miles to the west, and the Calaveras Fault, located 10 miles to the east.

The major earthquake-related hazards are ground shaking and ground failure. Both hazards tend to be amplified on artificial fill and on deep alluvial soils like those found along the Bay and old streambeds. As the 1989 Loma Prieta Earthquake illustrated, serious damage may occur on such soils even if they are 70 or 80 miles away from the epicenter of the quake. Earthquake hazard maps prepared by the Association of Bay Area Governments indicate that a large Hayward Fault quake would trigger very

violent shaking close to the Fault in the northeastern part of the City, and a high risk of liquefaction in the Marina Faire/Mulford Gardens and Washington Manor/Bonaire neighborhoods.

The State Division of Mines and Geology has designated the area immediately adjacent to the Hayward Fault as a “Special Studies Zone.” Before any development may occur within this zone, geologic studies are required to determine the precise location of active fault traces and evaluate the feasibility of construction. Structures must be set back at least 50 feet from any fault trace and must be engineered to reduce the potential for earthquake damage. Elsewhere in the City, the Uniform Building Code includes a number of provisions to reduce the potential for quake damage.

Figure 6-1 shows the location of the Hayward Fault and Special Studies Zone, along with those areas identified as having the highest risk for groundshaking and liquefaction in a major earthquake.

Structural Hazards

Enforcement of the Uniform Building Code (UBC) by the San Leandro Building Department helps ensure that new construction will withstand the forces associated with a major earthquake. However, many of the buildings in San Leandro pre-date the modern UBC and are susceptible to damage. The City is nearing completion of a multi-year program to retrofit unreinforced masonry buildings (URMs), most of which are located in and around Downtown.

Several other building types have been identified as vulnerable and have been targeted for future retrofit programs. These include:

- *Concrete tilt-up structures.* About 320 tilt-ups have been identified in San Leandro, with about 50 retrofitted to date. Many of these structures require additional roof to wall connections to avoid their collapse during an earthquake.

- *Soft-story buildings.* These are multi-story structures with little or no first floor bracing—368 soft-story buildings have been identified in San Leandro. Most are two and three-story apartments or offices constructed over ground-level parking.
- *Older single family homes.* Many older homes in San Leandro have not been bolted to their foundations and would benefit from additional underfloor bracing.

Seismic retrofitting can be expensive. The City provides assistance to property owners in the form of classes and seminars, tool lending, and guidelines for do-it-yourself retrofit projects. In the past, the City has helped property owners by providing grants, financing support, and underwriting of permit fees. Additional assistance programs will be explored in the future.

The City has completed the retrofitting of most public facilities, including City Hall, the Police Station, the Main Library, and most fire stations. Both the San Leandro and San Lorenzo Unified School Districts have also undertaken major seismic retrofit programs during the past few years. Retrofit work by Caltrans and BART is ongoing, while EBMUD is in the midst of a \$189 million program to reinforce its reservoirs and major water lines. Some of the freeway overpasses in San Leandro remain vulnerable and will require further strengthening in the coming years.

Landslides and Erosion

Landslides are relatively common in the East Bay Hills, especially during high intensity rainstorms. Most slides occur naturally, but they may be exacerbated by excessive grading, improper construction, and poor drainage. The most recent evidence of landsliding in San Leandro is above Hillside Drive in the Bay-O-Vista neighborhood. During the El Nino storms of 1998, a two-acre slide at this location required the removal of two homes from their foundations. The slide is presently being repaired. Any additional development in the hills must be carefully engineered to avoid the risk of further property damage or loss of life.

Erosion is the wearing away of the soil mantle by running water, wind, or geologic forces. It is a naturally occurring phenomenon and ordinarily is not hazardous. However, excessive erosion can contribute to landslides, siltation of streams, undermining of foundations, and ultimately the loss of structures. Removal of vegetation tends to heighten erosion hazards. The City enforces grading and erosion control ordinances to reduce these hazards. Maintenance programs along San Leandro Creek also help reduce the threat of erosion.

Wildfire

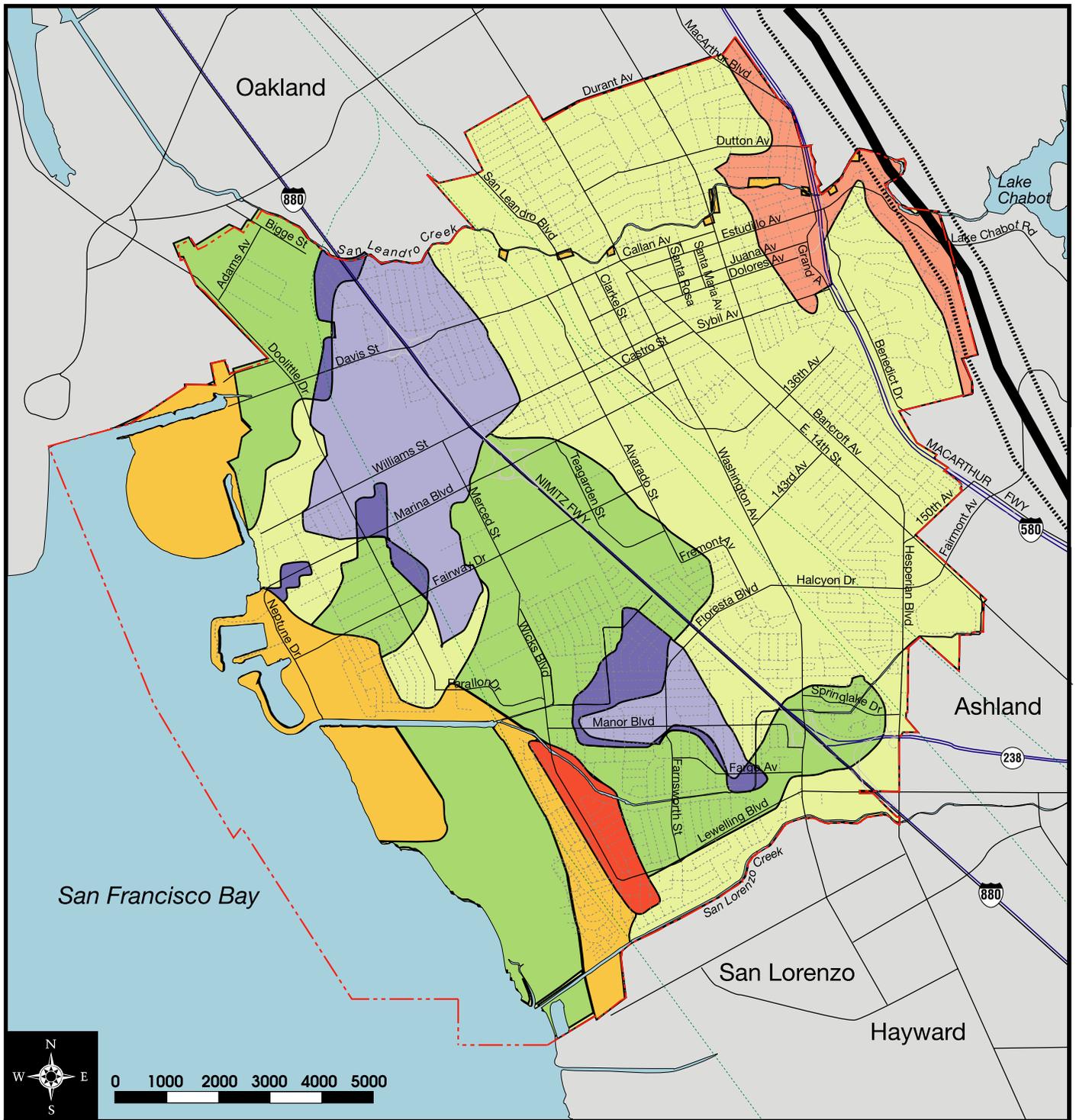
The risk of urban wildfire in California has increased dramatically as a result of population growth on fire-prone hillsides. The danger is not just limited to rural areas. In fact, the costliest wildfire in U.S. history took place just eight miles north of San Leandro in 1991. That fire caused \$3 billion in property damage, caused 25 deaths, and resulted in the loss of some 3,000 homes in the Oakland Hills.

Fortunately, the risks are less severe in the San Leandro Hills. The area east of I-580 is classified as a “moderate” fire hazard by the California Department

of Forestry. The lack of a dense tree canopy is a mitigating factor as are the relatively wide streets, gentle slopes, and grassland vegetation. Nonetheless, the City lies adjacent to thousands of acres of potentially flammable coastal scrub and forested open space. There are also a number of locations in the City, particularly along San Leandro Creek, where large eucalyptus trees and other highly flammable vegetation exists. Even the grasslands at Oyster Bay Regional Park pose a potential wildfire threat.

The Alameda County Fire Department is responsible for wildfire prevention activities in San Leandro. The Department works with property owners to maintain “defensible space” around homes and to require the removal of flammable vegetation and combustible litter. The Uniform Fire Code specifies additional requirements that are enforced by the City’s Building Department. The City also requires fire-resistant roofing materials in new construction and major remodeling projects.





LEGEND

- Very Violent Groundshaking
Very High Liquefaction Risk
- Very Violent Groundshaking
Low to Moderate Liquefaction Risk
- Violent Groundshaking
Very High Liquefaction Risk
- Violent Groundshaking
High Liquefaction Risk

- Violent Groundshaking
Very Low to Moderate
Liquefaction Risk
- Very Strong Groundshaking
High Liquefaction Risk
- Very Strong Groundshaking
Low/Moderate Liquefaction Risk
- Hayward Fault
- Limits of Alquist-Priolo
Special Studies Zone

This map has been derived from ABAG data indicating probable groundshaking severity (Modified Mercalli Scale) and liquefaction hazards in the event of a 6.9 Earthquake on the Southern Hayward Fault. Source: ABAG, 1999. Map intended for planning only.

**EARTHQUAKE
HAZARDS**

FIGURE 6-1

San Leandro General Plan Update, 2002



Flooding

Flood hazards in San Leandro are associated with overbank flooding of creeks and drainage canals, dam failure, tsunamis, and rising sea level.

Overbank Flooding

At one time, flooding along creeks and streams was relatively common in San Leandro. These hazards were greatly reduced during the 1960s and 1970s when the Alameda County Flood Control and Water Conservation District (ACFCWCD) channelized the lower portions of San Leandro Creek and constructed flood control ditches in the southern part of the City.

Although the flood control channels were effective, they did not eliminate flood hazards entirely. During the last 40 years, urbanization in the watersheds has increased impervious surface area, which has resulted in faster rates of runoff and higher volumes of stormwater in the channels. Recent maps published by the Federal Emergency Management Agency (FEMA) indicate that a 100-year storm (e.g., a storm that has a one percent chance of occurring in any given year) could cause shallow flooding in parts of southwest San Leandro.

In 1999, the City appealed the flood zone boundaries established by FEMA, believing that the number of flood prone properties had been overestimated. Revised maps became effective in February 2000. Although the revised maps show fewer properties in the flood zone than the 1999 maps did, the zones may still be overstated. According to FEMA, there are still 1,870 homes in the Manor, Floresta, and Springlake neighborhoods within the 100-year flood plain. Flood insurance costs for these residents

amounts to over one million dollars a year. The City is presently working with impacted homeowners to verify the elevations of their homes, possibly enabling some residents to have their properties removed from the flood plain boundary. Additional appeals of the boundaries may be filed.

The principal consequence of a property's designation within the 100-year flood zone is that flood insurance is required for federally insured mortgage loans. Insurance also may be required by other mortgage lenders. Moreover, the City's Flood Plain Management Ordinance requires that new construction, additions, and major home improvement projects be raised at least one foot above the base flood elevation—this can be a significant expense for homeowners making alterations to existing structures.

While the City works with FEMA to improve the accuracy of the flood zone maps, it is also working with the ACFCWCD to increase the carrying capacity of the channels. Measures being pursued include redesign of the channels, replacing undersized culverts, and keeping the channels well-maintained and free of debris. Steps should be taken to identify additional funding sources and expedite the reconstruction of the channels.

Other Flood Hazards

Dam Failure. Most of San Leandro would be flooded in the event of dam failure at the Lake Chabot or Upper San Leandro Reservoirs. Such a flood could produce catastrophic damage and casualties in the City. The dams at both reservoirs have been seismically strengthened during the last 30 years, making the risk of failure extremely low. Continued maintenance and seismic reinforcement will take place in the future.

Tsunamis. Tsunamis are long-period waves usually caused by off-shore earthquakes or landslides. Because the San Leandro shoreline does not face the open ocean, the risk is very low. A 100-year frequency tsunami would generate a wave run-up of 4.4 feet at the San Leandro shoreline. Most of the shoreline is protected by rip-rap (boulders) and would not be seriously affected.

Rising Sea Level. Rising sea level is a global issue that could affect San Leandro later in the 21st century. Environmental studies indicate that global warming could lead to a sea level rise of one to 11 feet during the next 100 years. This could have significant effects on the ecology of San Leandro's Shoreline Marshlands. It could also increase erosion along the waterfront and raise the hazard of tidal flooding along Neptune Drive and nearby streets. The City will remain involved in state and regional discussions about this issue and the ways to mitigate its effects on the Bay shoreline.

C. MAN-MADE HAZARDS

Air Pollution

Air pollution is a byproduct of industrial, domestic, agricultural and transportation activities, particularly the combustion of fossil fuels. It is strongly influenced by topography and climatic factors such as wind direction and temperature. The effects of air pollution range from minor problems such as reduced visibility to serious health hazards like asthma and heart disease. Maintaining clean, healthful air is an important goal in San Leandro, to

be achieved not only by regulating stationary sources but also by influencing the way people travel in and around the City.

The traditional image of air pollution is one of a factory smokestack. However, over the last 30 years, industrial emissions have been substantially reduced as a result of state and federal clean air legislation. New technologies have enabled the Bay Area to attain state and federal standards for most industrial pollutants.

Today, the most pervasive pollution source in the Bay Area is the automobile. On hot summer days, traffic congestion can create high levels of ozone and carbon monoxide throughout the region. Pollution from other sources, including jet fuel from aircraft and exhaust from generators, lawnmowers, and even home barbecue grills, can exacerbate the problem. Because the state and federal standards for ozone and fine particulate matter are sometimes exceeded, the Bay Area has been designated a "non-attainment area" for these pollutants.

Any air basin that does not meet federal standards is required to prepare a Clean Air Plan which identifies strategies for improving air quality. In the San Francisco Bay Area, these plans are the responsibility of the Bay Area Air Quality Management District (BAAQMD). The Clean Air Plan is regional in nature but identifies many strategies that can be implemented at the local level.

The BAAQMD also issues permits to stationary sources of air pollution in the Bay Area and inspects these facilities to ensure that they operate within allowable standards. In 1998, there were 27 permitted sources in San Leandro, including 20 dry cleaning businesses, the Water Pollution Control Plant, and a handful of industrial and medical uses. The BAAQMD also maintains a data base of air quality complaints filed by residents and businesses in each Bay Area community. During the last two years, most of the complaints from San Leandro callers related to noxious odors. Each complaint is investigated and corrective action is required if a problem is detected.

Policies in the San Leandro General Plan call for the enforcement of state and federal air quality standards, the regulation of construction and grading to control airborne dust, tree planting to

In a Nutshell... An Air Pollution Primer

The major components of air pollution are ozone, carbon monoxide, suspended particulate matter, nitrogen and sulfur dioxide, and toxic air contaminants.

Ozone (O₃). is formed through a series of photochemical reactions involving reactive organic compounds and nitrogen oxides. It is characterized by a visibility reducing haze. Motor vehicle emissions, refineries, power plants, solvents, and pesticides are the primary sources. Ozone is considered a regional pollutant because its precursors are transported and diffused by wind. This makes it particularly difficult to eliminate. During the late 1990s, the state ozone standard was exceeded an average of three days a year at the San Leandro monitoring station.

Carbon Monoxide (CO). Carbon Monoxide is an odorless, colorless gas formed by the incomplete combustion of fuels and other organic substances. Motor vehicles are the main source, particularly vehicles which are idling or driving slowly. High levels of atmospheric CO can lower the amount of oxygen in the bloodstream, aggravate cardiovascular disease, and cause fatigue, headaches, and dizziness. In contrast to ozone, CO tends to be a localized problem. Concentrations usually correspond to areas of traffic congestion. CO levels at monitoring stations in the East Bay are well within state and federal standards.

Suspended Particulate Matter (PM₁₀ and PM_{2.5}). PM₁₀ and PM_{2.5} include solid and liquid inhalable particles that are less than 10 and 2.5 microns in diameter, respectively. These particles include smoke, dust, aerosols, and metallic oxides. Major sources include road traffic (i.e., dirt particles), agriculture, fires, and construction and demolition activities. Health hazards are usually most severe during wildfires, and during the winter months when firewood is burned. During the late 1990s, violations of the state standard occurred an average of once a year at the San Leandro monitoring station.

Nitrogen Dioxide and Sulfur Dioxide. These pollutants are both within acceptable levels in the Bay Area. Nitrogen dioxide is a brown-colored gas that is a byproduct of the combustion process. Sulfur dioxide is a colorless gas with a strong odor. It is generated through the combustion of fuels containing sulfur, such as oil and coal. Major contributors of nitrogen dioxide and sulfur dioxide include motor vehicles, power plants, and refineries.

Toxic Air Contaminants. Toxic air contaminants (TACs) are emissions with short-term and/or long-term health effects which may be harmful even in very small quantities. These emissions, which include asbestos, benzene, beryllium, mercury, and vinyl chloride, are regulated through emission limits rather than ambient air quality standards. Several of these chemicals are known carcinogens. Common sources of TACs include gas stations, factories, medical incinerators, dry cleaners, wastewater treatment plants, and hospitals. Regulation of toxic air contaminants is achieved through federal and state controls on individual sources.

absorb carbon monoxide, and the siting of development to avoid exposure to odors and air contaminants. The Plan also promotes public education on air quality hazards and encourages residents to “spare the air” by curtailing certain activities when pollution hazards are greatest.

The General Plan also contributes to cleaner air through policies and programs that reduce automobile dependency and promote transportation alternatives. By encouraging transit-oriented development, better transit service, improved provisions for bicycles and pedestrians, shuttles and carpools, and shorter commutes, the Plan emphasizes more environmentally-friendly methods of travel. These measures—referred to as “Transportation Control Measures” by the Bay Area Air Quality Management District—may ultimately offer the greatest potential for improving air quality in the Bay Area.

Water Pollution

The creeks and channels that flow through San Leandro and the groundwater underlying the City are prone to pollution from a variety of sources. Fifty years ago, the most egregious sources of pollution in the area were heavy industries, landfills, and sewage plants, many of which discharged directly into San Francisco Bay with little or no wastewater treatment. Beginning in the late 1940s, a growing number of state and federal laws established pollution control requirements and put an end to untreated “open pipe” discharges. These requirements have resulted in significant improvements to water quality in the Bay and the partial recovery of several fish and wildlife species.

As point sources of pollution have been curtailed, pollution control efforts have shifted to non-point sources like streets, parking lots, construction sites, and lawns. Rainwater can carry pesticides, grease, oil, paint, household chemicals, and other pollutants from these areas to storm drains, flood control channels, creeks, and ultimately, San Francisco Bay. The Regional Water Quality Control Board (RWQCB) for the San Francisco Bay Basin was established to protect the Bay and its tributaries and implement a variety of programs to control both point and non-point sources. Among its responsibilities is the issuance of federal National Pollution Discharge

Elimination System (NPDES) permits for surface water discharges.

In 1987, the U.S. Environmental Protection Agency began requiring NPDES permits for large stormwater discharges in areas where water quality standards had yet to be achieved. Jurisdictions in the San Francisco Bay drainage basin were affected by this requirement. In 1991, the RWQCB granted Alameda County and its 14 cities a joint permit that allowed the continued discharge of stormwater to the Bay, subject to a number of conditions. Foremost among the conditions was the development of a stormwater management program, to be implemented collaboratively by each of the jurisdictions in the County.

The initial five-year program began in 1991; a subsequent five-year program was initiated in 1996 and the next five-year program will soon be underway. In San Leandro, responsibility for implementing the Clean Water Program is shared by the Departments of Engineering and Transportation, Community Development (Environmental Services), and Public Works.

The Clean Water Program includes several components, including regulatory compliance and management, watershed planning, stormwater monitoring, public information and participation, public works maintenance, development and construction controls, illicit discharge control, and a best management practices program. Recent program achievements in San Leandro include the stenciling of 2,270 storm drains, distribution of brochures at City fairs and festivals, student tours of the Water Pollution Control Plant, and City support to the Friends of San Leandro Creek.

Much of the framework for the City’s Clean Water Program is laid out in a Storm Water Management and Discharge Ordinance, adopted in 1992. The intent of the Ordinance is to eliminate non-storm water discharge to City storm sewers and reduce pollutants in storm water discharge to the maximum extent practical. The Ordinance provides a mandate for preventive measures such as street sweeping and regular cleaning of storm drain inlets.

During FY 1999-2000, some 5,502 cubic yards of debris was swept from San Leandro streets, 2,277 storm drain inlets were cleaned, and 11 miles of V-ditches were cleaned or inspected. Approximately 37 cubic yards of debris was removed from the City's storm drain inlets and ditches. The Storm Water Ordinance also establishes a local inspection and enforcement program, with fines and penalties for violations. It also requires compliance with a series of best management practices for new development to limit the transport of pollutants from construction sites.



San Leandro students learn about water quality at a Friends of San Leandro Creek exhibit.

PHOTO COURTESY OF FRIENDS OF SAN LEANDRO CREEK

Water quality monitoring is another key part of the City's Clean Water Program. Regular monitoring of San Leandro waterways is conducted by the San Francisco Estuary Institute, with assistance from trained volunteers. Monitoring of industries and storm drains is performed by the City's Environmental Services Division.

No specific "hot spots" have been identified in San Leandro. However, the urban character of the watershed continues to be a challenge to restoring high quality water. High levels of diazinon (an insecticide) have been reported in San Leandro Creek, and concentrations of coliform bacteria, suspended particulates, and various trace substances in the Bay often exceed safe levels for water contact recreation.

Hazardous Substances

Hazardous substances include materials that may pose a threat to human health or the environment when they are improperly handled, stored, transported or disposed. As a City with a large industrial presence and an extensive rail and freeway network, San Leandro faces the risk of hazardous materials incidents every day. Even if all handling and storage regulations are properly followed, hazardous substances may present a health risk if they are released during an accident or

emergency. Many of the hazardous substance issues in the City are the result of activities that pre-date current environmental regulations. Thus, local programs are designed to prevent future problems while correcting problems that originated in the past.

Contaminated Sites and Hazardous Building Materials

San Leandro has over 250 sites that have been documented as having contamination problems. These sites are primarily located in the West San Leandro and South-of-Marina industrial districts but also include properties along commercial corridors such as East 14th Street, Hesperian Boulevard, and Washington Avenue. Most of the cases are associated with petroleum releases to soil or groundwater caused by leaking underground storage tanks. The Environmental Services Division oversees the investigation and remediation of these sites. Many have already been cleaned and are being monitored. Clean-up is underway at the remaining sites and will continue throughout the planning period.

San Leandro also has four groundwater plumes being monitored and remediated. The largest of these plumes is more than two miles long and one mile wide, extending from Washington Avenue west to Doolittle Drive in the central part of the City. In each of the four plumes, the primary contaminant of concern is trichloroethene, or TCE. TCE is a solvent that was commonly used for industrial metal degreasing. Properties within the plume areas may not use wells for domestic purposes. Although all properties over the plume are connected to the municipal water supply, remediation is taking place to restore groundwater quality.

The City also has older buildings with asbestos, lead paint, PCBs, and other materials that are potentially hazardous if disturbed. Special demolition and disposal requirements may be necessary to reduce the risk of airborne contaminants if these sites are redeveloped.

The level of hazardous materials clean-up required at any given site depends on the degree of contamination and the type of land use that is planned. Environmental assessments are routinely required on development sites with a documented history of hazardous materials use or hazardous building materials. Clean-up can be a long and complicated process, involving local, state and federal agencies. The City is committed to working with property owners to expedite this process while meeting all applicable requirements and maintaining public safety. The City is also committed to protecting residents and “sensitive receptors” such as schools and nursing homes from potential impacts associated with hazardous materials in the community.

Handling, Transport, and Storage

The City’s Environmental Services Division coordinates a number of state and federal programs which govern the handling, transport, and storage of hazardous materials. Among these programs is the monitoring of activities at sites that handle hazardous substances. There were 430 such sites in San Leandro in 2000. These include 60 sites with permitted underground storage tanks.

State law requires the preparation of a Hazardous Materials Business Plan at each site where hazardous substances are handled. A variety of codes and regulations, including the Uniform Fire Code, establish specific provisions for the design of storage tanks, containment facilities, and handling practices. Such provisions significantly reduce the risk of a chemical release and also include provisions for evacuation in the event of an emergency. The transport of hazardous materials is also closely regulated, although the City has less control over such activities due to the interstate nature of commercial and industrial traffic. Communication with state and federal regulatory agencies is critical to reduce the risk of accidents and ensure that response to transportation-related hazardous materials incidents is immediate and effective.

Household Hazardous Waste

When hazardous substances used for residential purposes are discarded, they become household hazardous waste. These substances include paint, lawn care supplies, used motor oil, car batteries, anti-freeze, household cleaners, pool chemicals, roofing products, and any other product containing potentially dangerous materials. Californians improperly discard large quantities of household hazardous waste each year, presenting a threat to water quality and landfill safety, and creating a potential source of groundwater contamination. Household hazardous wastes must be safely disposed at a designated household hazardous waste facility. The closest facilities to San Leandro are in Oakland and Hayward.

As with so many of the programs identified in this Element, public education is critical to the success of the City's hazardous substance programs. Residents should continue to be informed about the proper use, storage, and disposal of hazardous household materials. Businesses should be kept apprised of state and federal hazardous materials regulations. Trucks and other carriers should be licensed and trained in hazardous materials transport. An ongoing effort should be made to inform residents and businesses alike about what to do in the event of a hazardous materials emergency.

Aviation Hazards

The air space over San Leandro is congested. Traffic to and from Oakland International Airport results in a large number of flights over the City, including many aircraft arriving over residential areas and business districts. San Leandro is also impacted by flights in and out of Hayward Airport and San Francisco International. The potential for a crash at any of these airports is an ever-present concern.

The Alameda County Land Use Commission (ALUC) has designated safety zones at the end of the runways at Oakland International Airport to ensure the compatibility of future development with airport operations. The intent of these zones is to avoid concentrations of people and/or other high hazard situations in the vicinity of the runways. The Safety Zone for the runways at Oakland's North Field extends into San Leandro, encompassing land along Hester Street, Eden Road, Adams Avenue, and Doolittle Drive north of Davis Street. The ALUC's Land Use Plan suggests that this area be used for open space, warehousing, non-intensive industry, storage, and other uses where people generally do not congregate.

The ALUC has also identified a Height Referral Zone around the airport, in accordance with FAA regulations. Height restrictions do not significantly affect development in San Leandro but could apply in the event that tall buildings, communication towers, or similar structures were proposed in the flight paths.

Alameda County firefighters are trained to respond to aviation accidents, both on land and at sea. The City of Oakland also has a special fire-fighting unit at Oakland International Airport, equipped with apparatus for aviation incidents. In the event of an aviation accident in San Leandro, the County Fire Department would respond first, with back-up provided by the City of Oakland as needed. The US Coast Guard has designated the San Leandro Marina as the emergency response point in the event of an aircraft accident on the water. The City and County, Port of Oakland, and Coast Guard have periodic drills to ensure readiness in the event of a water landing or crash off the San Leandro shoreline.



D. EMERGENCY PREPAREDNESS

San Leandro's location on the Hayward Fault makes it imperative to be ready when disaster strikes. The City's emergency preparedness programs have been nationally recognized and will continue to be improved and expanded in the future. These programs are operated by the Emergency Services Division of the City Manager's Office, in collaboration with the Alameda County Fire Department. The primary aspects of preparedness are mitigation (i.e., reducing exposure to hazards), training and education, disaster response, evacuation, and post-disaster recovery.

Most mitigation efforts are aimed at the seismic retrofitting of buildings, transportation facilities, and infrastructure. The City has adopted a Hazard Mitigation Plan which identifies ongoing earthquake preparedness programs as well as new programs to be implemented in the coming years. Mitigation from other types of disasters is also important. The vegetation management, flood control, and hazardous materials programs described earlier in this chapter are all part of preparedness planning.

Training and education are probably the most crucial components of disaster planning. Chart 6-1 illustrates that many San Leandro residents believe that additional effort is needed to raise awareness of disaster hazards and inform the public about what to do before, during, and after a major quake. Currently, the Alameda County Fire Department provides neighborhood-based workshops designed to increase basic earthquake awareness and home and family preparedness. Additional outreach is strongly recommended, going beyond neighborhood workshops to reach individuals, school children, the business community, seniors, and other groups with special needs.

Another aspect of training involves drills and simulation exercises. Full-scale disaster simulation exercises are conducted regularly with City staff and representatives from other agencies. Such exercises are essential to maintain effective performance and identify where changes in emergency plans may be needed. All City employees receive basic emergency preparedness training, with advanced training provided to personnel with designated positions in the City's Incident Command System.

The City's emergency response programs are based on the Standard Emergency Management System (SEMS). This is a state-mandated organizational structure that allows agencies throughout California to communicate using common terms and operating procedures. In the event of a major emergency, the Public Works Center on Chapman Road would be activated as an Emergency Operations Center (EOC) and City staff would be deployed to fulfill various management, operations, planning, logistics, and administrative functions. Development of a new EOC is recommended, since the Chapman Road facility was not designed for this purpose and could be incapacitated by an earthquake.

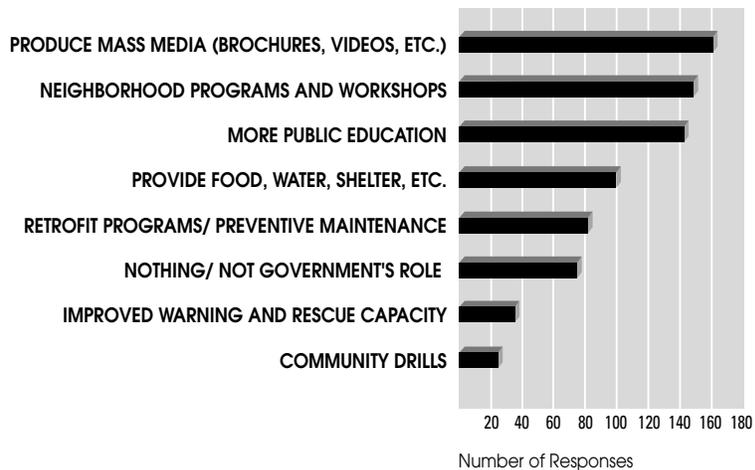
Other components of emergency response include alert systems and radio broadcasts. San Leandro recently installed eight emergency sirens and is considering the development of a high-speed telephone notification system. High-speed notification would be particularly useful in the event of a chemical spill or other type of hazardous materials incident. The City's emergency radio band (1610 AM) also provides a quick and effective way to convey information to the public. However, training and education are needed so the public knows what to do when the sirens sound, and where to turn when disaster-related information is broadcast.

Evacuation is another component of disaster preparedness. At the present time, San Leandro does not have officially designated evacuation routes. While the freeways are the most logical routes out of town, they are likely to be impassable following a major earthquake. Arterial streets, particularly Doolittle, East 14th, San Leandro Boulevard, Washington, Halcyon/Fairmont, Bancroft/Hesperian, and MacArthur/Foothill would function as the major routes out of the City if evacuation became necessary. A formal evacuation plan should be prepared as part of the City's ongoing emergency preparedness program.

Post-disaster response includes the provision of shelter, food, medical assistance, and financial aid, and the rebuilding process. The City is currently implementing an "ark" program that involves the placement of emergency cargo containers at strategic locations around town. Each ark contains basic emergency supplies. Mobile medical and communication equipment is also needed to improve readiness. San Leandro recently received a Project Impact grant from FEMA which will help strengthen existing programs and provide seed money for potential new disaster preparedness, response, and recovery programs.

CHART 6-1 Survey Findings—Emergency Preparedness

Q. What steps can the City take to help you and your family (or business) be more prepared for a natural disaster? (806 responses)



Source: General Plan Citywide Survey, 2001

E. NOISE

San Leandro's location in the heart of a major metropolitan area makes it susceptible to noise conflicts. Each day, hundreds of thousands of cars pass through the City on freeways and major thoroughfares. Large and small planes pass over the City throughout the day and night, many flying at low altitudes to and from Oakland International Airport. Freight and passenger trains, BART trains, buses, and trucks produce noise and vibration impacts in many San Leandro neighborhoods. Even in relatively quiet parts of the City, domestic noise sources such as leaf blowers, home and car stereos, security alarms, and barking dogs can be a source of annoyance.

In San Leandro, as in all communities, maintaining neighborhood "peace and quiet" is a basic part of protecting the quality of life. San Leandro residents and businesses, and the City itself, have invested a great deal of time and energy to deal with noise proactively by mitigating existing conflicts and protecting the City from future conflicts. This is particularly true with regard to freeway and airport noise. As Chart 6-2 indicates, traffic and airplanes were identified by a majority of residents as the two

biggest noise problems in the City. However, there are many other noise issues that also warrant attention.

Cities are required to address noise issues in their general plans, primarily by promoting development patterns that recognize the sources of noise and the locations of noise-sensitive uses. This General Plan achieves that objective while also expressing the City's ongoing commitment to reduce noise conflicts in the community. The following sections of this Element describe the noise environment in San Leandro, the major issues to be resolved, and the strategies for mitigating noise problems. Policies and actions under Goals 35 to 37 set forth a coordinated program to address stationary, transportation, and aircraft noise issues in the future.

Existing and Projected Noise Environment

The text box on page 251 provides an overview of how noise is measured. Chart 6-3 indicates the noise levels associated with typical sounds in an urban environment.

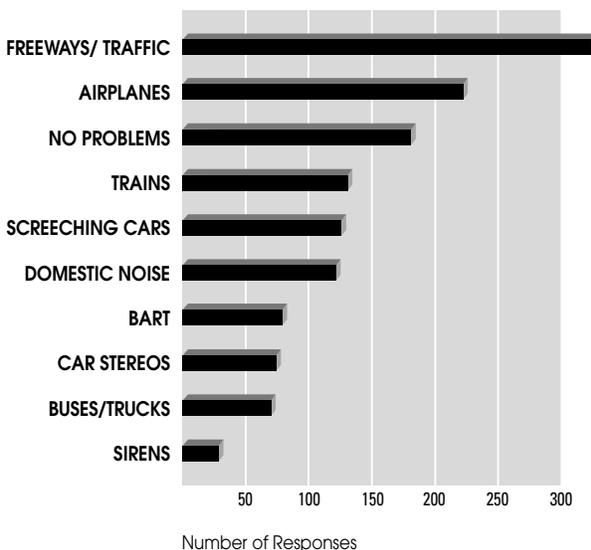
Noise levels can be expressed graphically through the use of contour diagrams. Each contour, or line

on the map, corresponds to the approximate noise level generated at that location. Figure 6-2 shows noise contours in San Leandro in the year 2000 based on noise monitoring conducted as part of the General Plan update. The contours represent approximations only—the actual noise level at any given location depends on a number of factors, such as topography, vegetation and building cover.

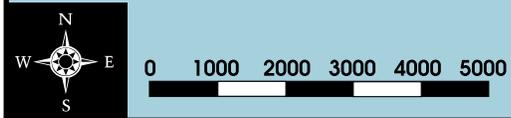
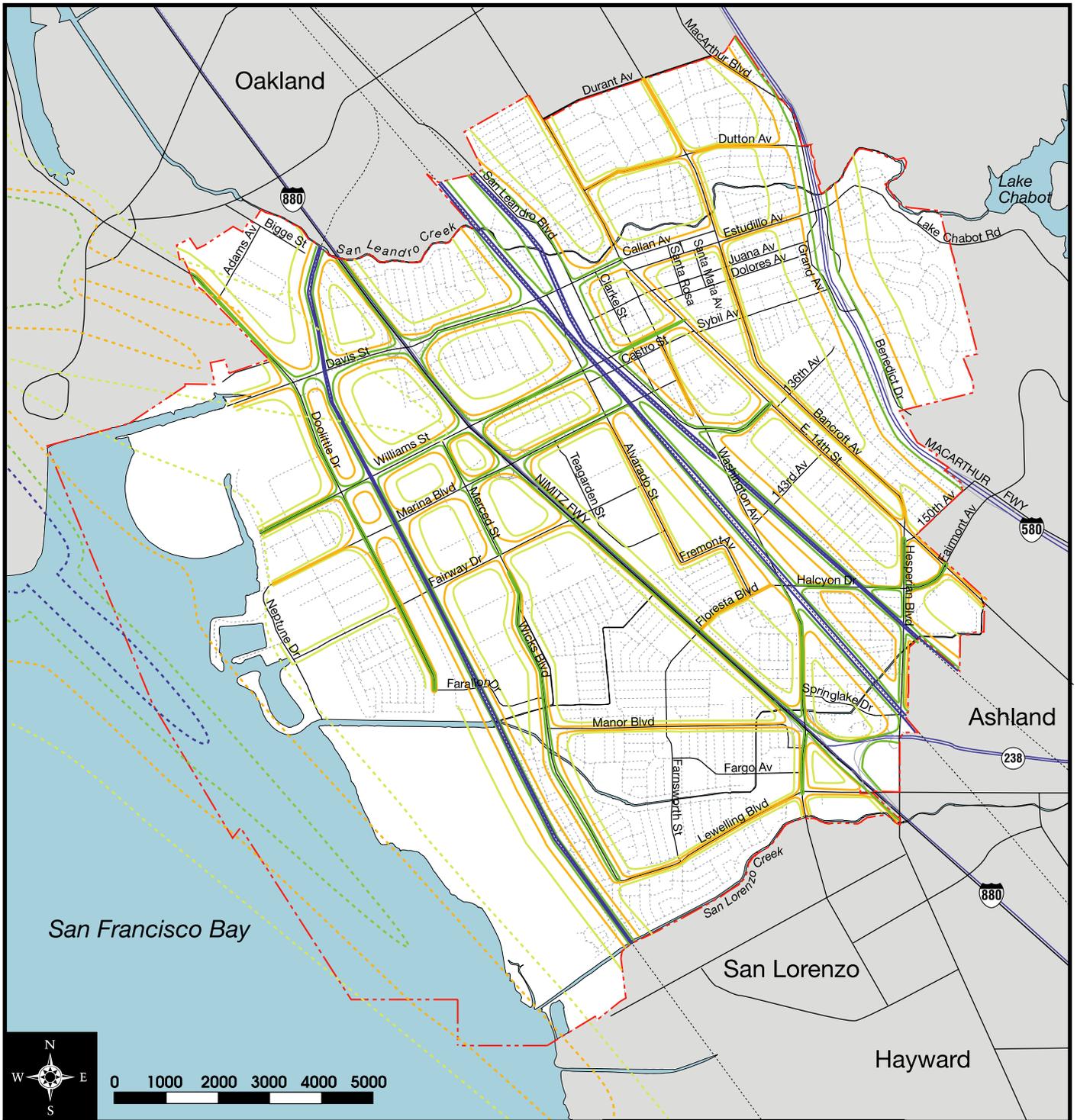
Figure 6-2 illustrates that many residential neighborhoods are currently located in areas where ambient noise levels exceed 60 dB Ldn. A substantial number of homes are within the 65 dB Ldn contour, indicative of a relatively noisy exterior environment. The 60 and 65 dB contours form bands parallel to the City's freeways, railroads, and major arterials.

CHART 6-2 Survey Findings—Noise

Q. What are the major noise issues in your neighborhood?
(1,127 responses)



Source: General Plan Citywide Survey, 2001



LEGEND

Transportation Noise Sources

-  75 dB Ldn
-  70 dB Ldn
-  65 dB Ldn
-  60 dB Ldn

Aviation Noise Sources

-  75 dB CNEL
-  70 dB CNEL
-  65 dB CNEL
-  60 dB CNEL

**2000 NOISE
CONTOURS**

FIGURE 6-2

Source: Illingworth and Rodkin, 2000

San Leandro General Plan Update, 2002

In a Nutshell... How Noise is Measured

Human perception of noise is usually defined in **decibels (dB)**. Decibels are measured on a logarithmic scale, which means that each increase of 10 dB is equivalent to a doubling in loudness. The measurements are usually taken on an “A-weighted” scale which filters out very low and very high frequencies. Everyday sounds range from 30 dB, which is very quiet, to almost 100 dB, which is very noisy. Above 70 dB, noise can become irritating and disruptive.

Noise measurements are usually expressed with some indication of the duration of the measurement period. For longer periods, the measurement reflects the average noise level over the period. Adjustments are usually made to reflect the greater sensitivity of people to noise at night. The term **Community Noise Equivalent Level (CNEL)** is used to describe the average noise level during a 24-hour period, with a penalty of 5 dB added to sound levels between 7 and 10 PM, and a penalty of 10 dB added to sound levels between 10 PM and 7 AM. The term **Day-Night Average Level (Ldn)** is similar, but only includes the 10 dB penalty for 10 PM - 7 AM noise. Shorter measurement durations,

typically one hour, are described in **Energy Equivalent Levels (Leq)**, indicating the total energy contained by sound over a given sample period.

Use of the longer measurement periods accounts for the variations in the frequency of sound levels that may occur during the day. For instance, a landing jet airplane may produce a sustained noise level of 75 dB as it passes over a particular site in San Leandro. The CNEL reading would be much lower, since the noise is not continuous throughout the day and night.

The US Environmental Protection Agency has suggested an exterior noise goal of 55 dB (Ldn) in residential areas. The US Department of Housing and Urban Development’s minimum standard is 65 dB (Ldn). Most local governments use 60 dB (Ldn) as the limit for exterior noise exposure in new residential areas. As a guideline, interior noise levels should be no louder than 45 dB (Ldn). Since the noise reduction provided by a typical house is about 20-25 dB with the windows closed, special insulation measures are usually required where exterior noise exceeds 60 dB.

Figure 6-2 also illustrates contour lines associated with Oakland International Airport. The Port of Oakland indicates that there are no San Leandro homes within the 65 dB CNEL contour—the threshold used to identify “noise-impacted” neighborhoods under federal law. The Port further indicates that there are no homes within the 60 dB CNEL contour. These represent significant improvements from 1994, when there were 28 residences within the 65 dB CNEL contour and 554 residences within the 60 dB CNEL contour. The change is largely the result of a federally-required phase-out of loud jets (known as Stage 1 and 2 aircraft) and the use of hush kits on newer jets (known as Stage 3 aircraft).

The cumulative effects of freeways, arterials, trains, and planes make some parts of the City particularly prone to high noise levels. These areas include the Greenhouse Marketplace, Marina Square, and Westgate areas, the Washington Avenue and San Leandro Boulevard corridors, and much of the West San Leandro industrial district. Although outside the 65 dB CNEL contour, the Davis West, Timothy Drive, Floresta, Mulford Gardens, and Seagate/Marina Faire areas are impacted by frequent airplane flyovers.

Figure 6-3 illustrates projected noise contours in 2015. Although traffic increases on San Leandro streets are likely and additional air traffic over the City is projected, little change to the ambient noise environment is expected. However, if Caltrans

constructs sound walls along I-580 as currently planned, the 60 and 65 dB Ldn would constrict and fewer residences would be exposed to noise levels above 65 dB Ldn. Mitigation for airport noise impacts is discussed in detail later in this Element.

Noise Compatibility

Given the potential for adverse psychological and physiological impacts, some land uses are considered to be more sensitive to noise than others. Residential areas, schools, child care centers, hospitals, churches, libraries, and nursing homes are typically regarded as noise-sensitive. Certain types of park and recreational areas also may be noise-sensitive. It is important that future land use decisions protect such uses and further, that new noise-sensitive uses are located and designed in a way that protects occupants from harmful noise impacts.

Table 6-1 provides noise compatibility guidelines for land uses. The guidelines identify those areas where various uses are acceptable, conditionally acceptable, or unacceptable based on ambient noise levels. The guidelines recognize that mitigation may make certain uses acceptable, even where exterior noise levels are relatively high.

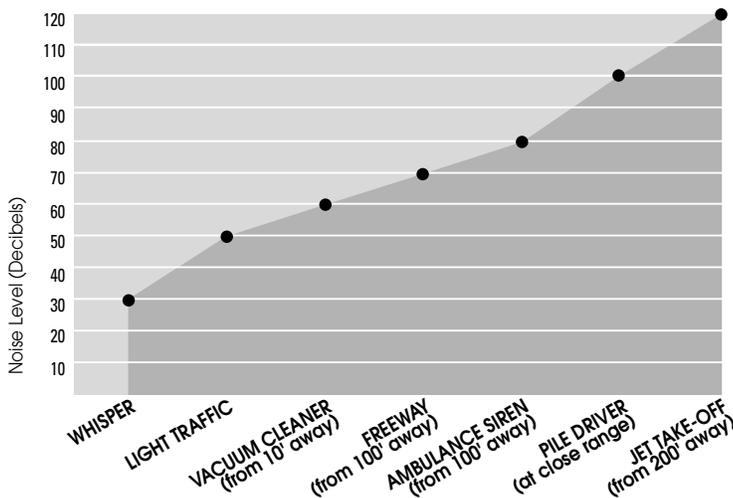
Noise mitigation is achieved by reducing the source of the noise, modifying the path between the noise source and receiver, or adjusting the noise receiver. These approaches are described below:

- Reducing noise at the source usually involves muffling the sound, replacing noisy equipment, or regulating the hours during which the source is in operation. For example, federal regulations require mufflers on cars, hush kits on new jet airplanes, and curfews at some airports.
- Modifying the path between source and receiver is accomplished with barriers such as sound walls, berms, or vegetation.
- Adjusting the noise receiver is typically done through building orientation, design, and construction. Double-paned windows, carpeting, acoustical ceiling tiles, and insulation are all examples of ways to reduce noise interior levels at the receiving end.

Stationary Noise

Stationary noise sources include industrial and commercial operations, construction and demolition, and domestic activities. Cities can exercise more control over these sources than mobile sources such as trains and aircraft. This control is typically exercised through zoning and through the enforcement of local ordinances regulating noise and business activities.

CHART 6-3 Typical Sound Levels in the Built Environment



Source: Illingworth and Rodkin, 2000

Many uses in San Leandro's industrial areas generate noise through their regular operations. Generators, fans, chillers, boilers, compressors, pumps, and air conditioning systems may run 24 hours a day in some locations. Other sources, such as horns, buzzers, and merchandise off-loading, may be more intermittent. Industrial noise sources are of greatest concern when they are close to sensitive receptors such as housing. This is the case in some West San Leandro neighborhoods and on the perimeter of the South-of-Marina and Washington Avenue industrial areas. Monitors indicate that noise levels exceed 60 dB Ldn in many of the city's industrial areas and may exceed 70 dB Ldn where other significant noise sources (such as railroad tracks or freeways) are also present.



0 1000 2000 3000 4000 5000

LEGEND

Transportation Noise Sources

- 75 dB Ldn
- 70 dB Ldn
- 65 dB Ldn
- 60 dB Ldn

Aviation Noise Sources (Year 2010 Projections)

- 75 dB CNEL
- 70 dB CNEL
- 65 dB CNEL
- 60 dB CNEL

Source: Illingworth and Rodkin, 2000. Airport contours are for 2010 and are based on the FAA's Revised Draft Environmental Impact Statement for the Proposed Airport Development Program, September 2000.

2015 NOISE CONTOURS

FIGURE 6-3

San Leandro General Plan Update, 2002

Additional analysis of future noise levels was conducted as part of the Downtown TOD Strategy. The Environmental Impact Report for the TOD Strategy should be consulted for further discussion of projected noise levels in Downtown San Leandro and the BART Station vicinity, including longer-term (2030) projections of future noise levels.

TABLE 6-1 Noise Compatibility Standards for San Leandro Land Uses

Land Use Type	Exterior Noise Exposure (Ldn or CNEL, dB)						
	>55	55-60	60-65	65-70	70-75	75-80	>80
Single- and Multi-Family Residential, and Mobile Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
Schools, Libraries, Museums, Hospitals, Personal Care	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
Offices, Retail/Service Commercial, Restaurants, Hotels/Motels	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
Auditoriums, Concert Halls, and Amphitheaters	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
Industrial and Manufacturing within 500 feet of a residentially zoned area	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
Other Industrial and Manufacturing	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable

- 
Normally Acceptable
 Specified land use is satisfactory, based on the assumption that any buildings involved are of conventional construction, without any special noise insulating requirements.
- 
Conditionally Acceptable
 Specified land use may be permitted only after detailed analysis of noise reduction and insulation requirements.
- 
Normally Unacceptable
 New development should generally not be undertaken because mitigation is usually not feasible.

Source: City of San Leandro, 2001

The City presently uses development review and zoning—specifically, the conditional use permit process—to limit the hours of operation for noise-producing activities and to identify noise muffling and buffering requirements. Shielding equipment may be required for industrial operations and measurable noise limits may be set for air conditioners, compressors, and other exterior noise sources. Similarly, the City requires noise mitigation by residential developers when homes are placed near freeways, industrial uses, and other noise sources. This may include sound walls, double-paned windows, and other measures that protect future residents while helping nearby industrial uses remain viable.

In commercial areas, noise from restaurants, bars, car washes, and other businesses may create conflicts with adjacent residential uses. Again, conditional use permits and zoning provide an effective way to avoid future problems.

Recent Zoning Code amendments allow greater City review and regulation of noise sources on properties abutting residential areas. Additional noise standards may be considered in the future. It is important that noise-reduction requirements are enforced once they are established, and that appropriate penalties for non-compliance are developed and consistently applied.

Construction and demolition noise may occur anywhere in the city. Although it is temporary and intermittent, such noise can be particularly intrusive because of its very high output and repetitive nature. At a distance of 50 feet, a pile driver and



jackhammer may generate noise levels exceeding 100 dBA and 88 dBA respectively (see Chart 6-3). Construction scheduling requirements are typically established to ensure that such noise is limited in duration and occurs only during weekday daytime hours.

Most domestic noise sources are associated with home appliances, yard maintenance and home construction equipment, air conditioners, power tools, and other household activities. Loud music, yelling, and barking dogs are also the source of frequent complaints. The City treats such complaints as a police matter and relies on the Municipal Code to address them.

Title 4, Chapter 1, Article 5 of the San Leandro Municipal Code restricts the hours of operation of sound amplifying equipment and states that noise is considered a nuisance if it disturbs a person with “normal sensibilities.” One of the recommendations of this General Plan is to develop a more pro-active noise ordinance that establishes residential “quiet hours” and measurable standards for defining when

a nuisance exists. A stronger noise ordinance will enable the City to more effectively address many of the noise problems experienced by San Leandro residents.

Transportation Noise

The heavy volume of traffic in and around San Leandro results in high noise levels in many parts of the City. The Nimitz Freeway (I-880) was built before effective noise standards were in place and has residential uses along 60 percent of its San Leandro frontage. Portions of the roadway are elevated and the freeway is a major interstate truck route.

The MacArthur Freeway (I-580) has historically been less of a problem, in part due to its design but also because of the low volume of truck traffic and relatively low night-time volumes. Even so, the abutting uses are almost entirely residential and are very sensitive to noise impacts due to the varying topography. As mentioned earlier, Caltrans is considering the construction of sound walls along several segments of I-580.

The three Union Pacific Railroad corridors that cross San Leandro also affect adjacent uses. Passing trains are among the loudest noise sources in the City, exceeding 95 dBA at 100 feet. Train horns may be even louder, approaching 110 dBA. Brakes, coupling impacts, and crossing guard warnings are also common sources of noise along the railroads. In some parts of central San Leandro, the impacts are amplified because two of the rail lines run parallel and relatively close to each other, with elevated BART tracks along the easterly corridor. The cumulative effect of these sources makes it imperative that noise mitigation measures be incorporated for any development in that corridor.

Up until now, the most common approach to reducing transportation noise in San Leandro has been to construct sound walls. Although such walls are usually welcomed by immediately adjoining property owners, they are almost always controversial. The aesthetic impacts of a sound wall can be significant and there are often concerns about the displacement of sound to other locations.

The GPAC's Safety and Noise Subcommittee felt that sound walls must not be regarded as a "cure-all" for mitigating transportation noise. The Subcommittee felt it was equally important to consider other approaches, such as pavement changes to streets and highways, the use of quieter BART trains and AC Transit buses, and restrictions on train horns and the scheduling of train switching operations. It is also important to ensure that aesthetic and maintenance considerations are fully considered when walls are built. Dense plantings of shrubs and trees, for example, can soften the visual effects of a wall while also absorbing additional sound waves.

Additional noise problems can be avoided by ensuring that new development along freeways, arterials, and railroads is designed to minimize exposure to transportation noise. For example, the design of housing adjacent to the BART line should place the more noise-sensitive rooms such as bedrooms away from the tracks, while less sensitive rooms such as garages, closets, and utility areas may be closer to the tracks. The use of solid walls and reduced window openings facing the noise source also can cut down noise levels. Courtyards may be incorporated to create quieter spaces in buildings with otherwise noisy exterior settings. Balconies should be avoided where they would overhang noisy streets or face train tracks.

The Uniform Building Code and California Code of Regulations contain additional requirements to limit the extent of noise transmitted into habitable spaces. These requirements apply to all new construction and not just construction along transportation routes. They specify the extent to which walls, doors, floors, and ceilings must block or absorb sound between dwelling units. An interior standard of 45 dBA CNEL is required for any habitable room. The City may require an acoustical analysis to demonstrate how dwelling units have been designed to meet this standard on sites where the ambient exterior noise level exceeds 60 dBA CNEL.

Airport Noise

Airport noise has been a persistent issue in San Leandro for over 50 years and has become a greater concern as traffic in and out of Oakland International Airport has increased. Residential areas in the City are located just over a mile from the end of the airport runways. There are plans to substantially increase passenger and cargo service at the airport, creating the potential for even more significant impacts to San Leandro homes and businesses.

Oakland International Airport is subdivided into North and South airfields. The North Field contains three runways (9L/27R, 9R/27L, and 15/33), as well as general aviation, maintenance, and some cargo facilities. The South Field includes the commercial passenger runways (11/29) and most cargo facilities. The flight path impacting San Leandro most directly is associated with landing aircraft on Runway 27R at the North Field. Most descending aircraft pass over Marina Square, the Timothy Drive/Davis West area, and the Adams Street industrial area before touching down. Helicopters also use this corridor.

The City is also impacted by commercial flights using Runway 11/29. Although planes taking off and landing on this runway do not pass directly over San Leandro, the area between the runway and the San Leandro shoreline is open water, providing few opportunities for sound to be absorbed. Consequently, the San Leandro Marina and adjacent waterfront neighborhoods may experience high noise levels. Residential areas also may be impacted by high levels of airport noise when flight patterns are shifted due to inclement weather.

Although all of San Leandro's residential areas fall outside of the "Noise Impact Boundary" defined by the Federal Aviation Administration (FAA) and the Port of Oakland, many San Leandro residents must still contend with noise conflicts. Problems associated with late night arrivals and departures, low-flying aircraft, and engine run-ups have been an on-going issue, particularly in West San Leandro. The frequency of overflights is also an issue. While the 24-hour ambient noise levels may be within a range deemed acceptable by the FAA, some areas experience dozens of short-duration incidents each day where noise levels exceed 70 or 75 dBA.

Proposed Airport Expansion

The Port of Oakland has prepared an Airport Development Program (ADP) guiding the planned expansion of Oakland International Airport through 2010. The Program provides for the expansion of Terminals 1 and 2, construction of a new cross-airport roadway, aircraft support facilities, additional cargo facilities, and widening of taxiways. Although no runway reconfigurations or extensions are proposed, the number of aircraft operations is projected to increase substantially. In 2000, the Federal Aviation Administration projected that 17.2 million annual passengers would use Oakland International Airport by 2010, an increase of 74 percent from the 1999 volume of 9.9 million passengers. Cargo operations at Oakland Airport are presumed to increase from 754,000 tons in 1999 to 2.1 million tons in 2010. The Port is also conducting preliminary studies to identify potential runway changes beyond 2010.



The revised Draft Environmental Impact Statement for the Airport Development Plan prepared by the FAA in September 2000 included projections of future noise levels. These projections take the increased volume of air traffic into consideration, along with changes in the types of aircraft being used. The FAA anticipates that the 65 dB CNEL contour will encompass fewer properties in San Leandro by 2010, while the 60 dB CNEL contour will shift south, impacting a larger swath of the West San Leandro industrial area. The projections indicate that the number of San Leandro residences located within the 65 dB CNEL contour will continue to be zero, while 194 residences will fall between the 60 and 65 dB CNEL contours. The increasing frequency of single event flyovers remains a concern among West San Leandro residents.

Airport Noise Abatement Efforts

The Port of Oakland has been implementing a Noise Compatibility Program (NCP) for Oakland Airport since the 1970s. The current NCP includes a variety of components for both the North and South Fields to reduce off-site impacts. For instance, certain types of aircraft are prohibited from departing or arriving on the North Field, and aircraft must follow particular flight tracks when landing and taking off. Educational training and program information is used to advise pilots of the preferred procedures. A permanent noise monitoring system, including seven San Leandro stations, has been installed.

Additional noise mitigation programs are specified in a Settlement Agreement reached between the City of San Leandro and the Port of Oakland in November 2000. The Agreement prohibits the Airport from allowing large or heavy commercial passenger aircraft on the North Field, except during emergencies and periods when the main runway is closed for maintenance or repair. It also commits the Port to provide funds to the City for the insulation of up to 200 homes in San Leandro, including double paned windows and weather stripping. The Agreement includes provisions to insulate additional homes in the event the North Field Runway policy is changed. It requires a noise study, possible insulation of the Mulford Branch Library, and addresses several other topics related to airport operations.

FAA guidelines acknowledge that some communities may be more sensitive to noise impacts than others and that significant noise impacts may extend beyond the 65 dB threshold. Moreover, land uses such as schools and hospitals, can be negatively impacted even by low levels of noise.

With this in mind, the City of San Leandro should continue to maintain a dialogue with the Port of Oakland on further noise abatement procedures, particularly in residential areas impacted by overflights and in areas between the 60 and 65 dB CNEL contours. The City must continue to be an active participant in discussions about the airport's future. It must also ensure that future development decisions consider the potential for exposure to airport noise, particularly in the West San Leandro and Marina areas. For its part, the aviation industry is exploring changes to aircraft design and navigational technology that also may improve the ambient noise environment around the airport.

F. GOALS, POLICIES, AND ACTIONS

Goal: Mitigation of Natural Hazards

29

Reduce the potential for injury, property damage, and loss of life resulting from earthquakes, landslides, floods, and other natural disasters.

POLICIES AND ACTIONS

IMPLEMENTATION STRATEGIES

29.01

RISK MANAGEMENT

Minimize risks from geologic, seismic, and flood hazards by ensuring the appropriate location, site planning, and design of new development. The City's development review process, and its engineering and building standards, should ensure that new construction is designed to minimize the potential for damage.

Action 29.01-A: Soils and Geologic Reports

Require soils and/or geologic reports for development in areas where potentially serious geologic risks exist. These reports should address the degree of hazard, design parameters for the project based on the hazard, and appropriate mitigation measures.

- Building Code
- Development Review
- Geotechnical Review
- Grading Ordinance
- Engineering Development Standards

29.02

EARTHQUAKE RETROFITS

Strongly encourage the retrofitting of existing structures to withstand earthquake ground shaking, and require retrofitting when such structures are substantially rehabilitated or remodeled.

Action 29.02-A: Residential Retrofit Programs

Undertake programs to assist homeowners with earthquake retrofitting. As funding allows, such programs could include home inspections, do-it-yourself classes, real estate transfer tax rebates, tool lending libraries, low-interest loans for foundation bolting and shear walling, and other measures that reduce the risk of damage and injury in an earthquake.

Action 29.02-B: Concrete Tilt-Ups

Develop an implementation strategy to reduce the hazards posed by concrete tilt-up structures with inadequate roof to wall connections, particularly those constructed prior to 1976.

Action 29.02-C: Soft-Story Buildings

Develop an implementation strategy to reduce the hazards posed by soft-story buildings (multi-story structures with little or no first floor bracing).

- Building Code
- Development Review
- Hazard Mitigation Plan
- Seismic Retrofit Programs

29.03 OFF-SITE IMPACTS OF HILLSIDE DEVELOPMENT

Ensure that development within landslide-prone or geologically hazardous areas, where feasible, does not contribute to higher hazard levels on adjacent or nearby properties. Require drainage and erosion control provisions in such areas to avoid slope failure and to mitigate potential hazards to other properties.

- Development Review
- Geotechnical Studies
- Grading/Erosion Control Ordinances

29.04 CODE REVISIONS

Revise and update construction codes and regulations to incorporate the latest available information and technology related to earthquake and flood hazards.

- Building Code

29.05 PUBLIC AWARENESS

Promote greater public awareness of earthquake hazards, along with incentives and assistance to help property owners make their homes and businesses more earthquake-safe.

- Program Development
- Public Education and Outreach

Action 29.05-A: Educational Materials

Expand the educational materials produced through the City's emergency preparedness programs to include maps that inform the public about groundshaking and liquefaction hazards, and that outline steps to reduce the potential for damage.



29.06

CONSTRUCTION IN THE FLOOD PLAIN

Implement federal requirements relating to new construction in flood plain areas to ensure that future flood risks to life and property are minimized.

Action 29.06-A: FIRM Amendments

Continue to work with FEMA to amend and update Federal Insurance Rate Maps (FIRMs) so that they correctly depict flood hazards in the City. Continue the City's elevation verification program to assist homeowners in determining their flood zone designation and to further refine the flood plain boundaries.

- Flood Plain Management Ordinance
- Intergovernmental Coordination

29.07

REDUCING FLOOD HAZARDS

Work collaboratively with County, State, and federal agencies to develop short- and long-term programs that reduce flood hazards in the City. At the local level, the City will regularly maintain its storm drainage system and ensure that those portions of San Leandro Creek under its jurisdiction remain clear of obstructions.

Action 29.07-A: Coordination with ACFCWCD

Improve coordination with the Alameda County Flood Control and Water Conservation District to ensure that flood channels are regularly cleaned and maintained.

Action 29.07-B: Increase Flood Channel Capacity

Work with Alameda County, State and federal agencies, and elected officials to finance and reconstruct flood control channel Line A Zone 2 (the Estudillo Canal) to reduce flood hazards in the Floresta/Springlake and Washington Manor neighborhoods. As appropriate and necessary, pursue measures to increase the capacity of other flood control facilities to reduce the number of adjacent San Leandro properties subject to flooding.

- Intergovernmental Coordination
- Public Works Maintenance

Goal: Wildfire Hazards

30

Minimize urban wildfire hazards, both within the City and throughout the East Bay Hills.

POLICIES AND ACTIONS

IMPLEMENTATION STRATEGIES

30.01

FIRE PREVENTION

Adopt and enforce building and fire prevention codes that require property owners to reduce wildfire hazards on their properties.

Action 30.01-A: Creekside Vegetation

Manage vegetation along San Leandro Creek to reduce wildfire hazards.

- Fire Code
- Vegetation Management

30.02

FIRE PREVENTION

Ensure that the planning and design of development in high fire hazard areas minimizes the risks of wildfire and includes adequate provisions for vegetation management, emergency access, and fire fighting.

- Development Review
- Fire-Safe Roofing Ordinance
- Engineering Development Standards

30.03

MUTUAL AID

Work collaboratively with other jurisdictions and agencies to reduce wildfire hazards in San Leandro, with an emphasis on effective vegetation management and mutual aid agreements.

Action 30.03-A: Task Force Participation

Continue to participate in multi-jurisdictional task forces and programs that address wildfire hazards in the East Bay Hills.

- Intergovernmental Coordination

Goal:

31

Air Quality

Promote and participate in efforts to improve the region's air quality.

POLICIES AND ACTIONS

IMPLEMENTATION STRATEGIES

31.01

CLEAN AIR PLAN IMPLEMENTATION

Cooperate with the appropriate regional, state, and federal agencies to implement the regional Clean Air Plan and enforce air quality standards.

- City Operating Procedures
- Intergovernmental Coordination

31.02

TRANSPORTATION CONTROL MEASURES

Promote strategies that help improve air quality by reducing the necessity of driving. These strategies include more reliable public transportation, programs for carpooling and vanpooling, better provisions for bicyclists and pedestrians, and encouraging mixed use and higher density development around transit stations.

- Transportation Control Measures

31.03

LAND USE COMPATIBILITY

Discourage new uses with potential adverse air quality impacts near residential neighborhoods, schools, hospitals, nursing homes, and other locations where public health could potentially be affected.

- Development Review
- Zoning

31.04

DESIGN, CONSTRUCTION, AND OPERATION

Require new development to be designed and constructed in a way that reduces the potential for future air quality problems, such as odors and the emission of any and all air pollutants. This should be done by:

- Requiring construction and grading practices that minimize airborne dust and particulate matter.
- Ensuring that best available control technology is used for operations that could generate air pollutants.
- Encouraging energy conservation and low-polluting energy sources.
- Promoting landscaping and tree planting to absorb carbon monoxide and other pollutants.

- Conditional Use Permits
- Development Review
- Municipal Code and Ordinances

Action 31.04-A: Development Review

Involve the Alameda County Fire Department and the City of San Leandro Environmental Services Division in the review of proposed development involving the handling or storage of potential air pollutants.

Action 31.04-B: Clean Air Ordinance

Consider adoption of a Citywide clean air ordinance to address miscellaneous pollution sources (new wood-burning fireplaces, emissions from dry cleaners, gaso-line-powered equipment, etc.).

31.05	<p>ODORS</p> <p>Ensure prompt response to complaints about odor problems and other potential air quality nuisances and hazards reported by residents and businesses.</p> <p>Action 31.05-A: Odor Reporting and Inspection Program</p> <p><i>Use City of San Leandro publications, websites, and other media to expand resident awareness of the BAAQMD’s odor reporting and inspection program and to publish records of odor complaints in the City.</i></p>	<ul style="list-style-type: none"> ● City Operating Procedures ● Intergovernmental Coordination
31.06	<p>“SPARE THE AIR” EDUCATION</p> <p>Promote public education on air quality hazards and the steps that residents can take to help maintain clean air. Continue to participate in the BAAQMD “Spare the Air” program and other programs that increase public awareness of air quality issues.</p>	<ul style="list-style-type: none"> ● Intergovernmental Coordination ● Public Education and Outreach
31.07	<p>AIRCRAFT EMISSIONS</p> <p>Advocate for greater local and regional control over air pollution caused by aircraft, including ground operations and flyovers from Oakland International Airport.</p> <p>Action 31.07-A: Aviation-Related Air Pollution</p> <p><i>Advocate for the following measures related to aviation-related air pollution:</i></p> <ul style="list-style-type: none"> ● <i>An ongoing program to monitor air pollution levels at and around Oakland International Airport.</i> ● <i>Cessation of flight school air operations on “Spare the Air” days.</i> ● <i>Delivery of incident reports to the City of San Leandro following any event in which fuel is dumped by aircraft over San Leandro’s residential neighborhoods.</i> 	<ul style="list-style-type: none"> ● Intergovernmental Coordination
31.08	<p>REGULATORY CHANGES</p> <p>Stay apprised of changes in state and federal air quality regulations and implement programs as required to ensure local compliance.</p>	<ul style="list-style-type: none"> ● City Operating Procedures ● Intergovernmental Coordination
31.09	<p>ALTERNATIVE FUEL VEHICLES</p> <p>Promote the development of infrastructure which supports the use of alternative fuel (i.e., electric) vehicles.</p> <p>Action 31.09-A: Replacement of City Vehicle Fleet</p> <p><i>Pursue the gradual replacement of the City’s vehicle fleet with vehicles using cleaner-burning fuels, such as natural gas and electricity.</i></p>	<ul style="list-style-type: none"> ● Annual Budget ● Development Review

31.10

DOWNWIND IMPACTS

Consider the direction of prevailing winds in the siting of facilities likely to generate smoke, dust, and odors. Ensure that such facilities are sited to minimize the impacts on downwind residential areas and other sensitive uses.

- Development Review

Goal: Water Quality**32**

Maintain and improve water quality in San Leandro's creeks, wetlands, and offshore waters.

32.01

URBAN RUNOFF CONTROL

Continue to implement water pollution control measures aimed at reducing pollution from urban runoff. These measures should emphasize best management practices by residents, businesses, contractors, and public agencies to ensure that surface water quality is maintained at levels that meet state and federal standards.

Action 32.01-A: Stormwater Pollution Prevention Plans

As required by state and federal law, require Stormwater Pollution Prevention Plans for qualifying projects and ensure that such projects include appropriate measures to minimize the potential for water pollution.

- City Operating Procedures
- Clean Water Program
- Development Review
- Stormwater Ordinance

32.02

CLEAN WATER EDUCATION

Promote the public information and participation provisions of the Alameda Countywide Clean Water Program.

Action 32.02-A: Clean Water Program Educational Components

Continue to implement programs in coordination with the Alameda County Clean Water Program to better educate the public on urban runoff hazards. Examples of these programs include storm drain stenciling, preparation of brochures and posters, website information, and television and newspaper advertising. Use these programs to increase awareness of clean water laws and the penalties associated with illicit discharges.

- Intergovernmental Coordination
- Public Education and Outreach

32.03

INTERAGENCY COORDINATION

Coordinate water quality planning, regulation, and monitoring with other public agencies that are involved in water resource management. Establish partnerships and task forces with these agencies and with nearby cities as needed to develop programs addressing issues that cross jurisdictional lines.

Action 32.03-A: NPDES Permit Revisions

Remain an active participant in discussions of possible revisions to state and federal clean water legislation, including revisions to the Alameda County NPDES stormwater permit.

- Clean Water Program
- Intergovernmental Coordination

32.04

WATER QUALITY MONITORING

As required by federal, state, and regional programs, conduct monitoring of water quality in San Leandro waterways to evaluate the progress of local clean water programs and identify the necessary steps for improvement.

Action 32.04-A: Water Quality Monitoring Programs

Continue water quality monitoring programs in San Leandro waterways.

- Clean Water Program
- Environmental Services Programs

32.05

PUBLIC WORKS MAINTENANCE

Implement City Public Works maintenance activities, including scheduled street sweeping and cleaning of storm drains and culverts, to minimize pollution from surface runoff.

Action 32.05-A: Community Clean-Ups

Coordinate with community groups to develop clean-up programs for the shoreline, creeks, and flood control channels to remove debris and litter and minimize the potential for surface water pollution.

Action 32.05-B: Street Sweeping Improvements

Improve the effectiveness of the City's street sweeping program through measures such as:

- *more aggressive ticketing or towing of illegally parked cars (by the San Leandro Police Department).*
- *more frequent scheduling of street sweeping.*
- *better coordination with trash collection so that sweeping is not hampered by curbside trash containers and recycling bins.*
- *installation of "no parking on street sweeping days" signs.*
- *increased public education about the program and the water quality benefits it provides.*

- City Operating Procedures
- Public Works Maintenance

32.06	<p>ILLICIT DISCHARGES Control illicit discharges into the City’s stormwater system through inspections, compliance evaluations, enforcement programs, and tracking activities.</p>	<ul style="list-style-type: none"> ● Clean Water Program ● Stormwater Ordinance
32.07	<p>PRE-TREATMENT REQUIREMENTS Maintain and enforce pre-treatment requirements for industries as needed to minimize the discharge of potentially toxic materials into the City’s sanitary sewer system.</p>	<ul style="list-style-type: none"> ● Clean Water Program ● Stormwater Ordinance
32.08	<p>HAZARDOUS SPILL RESPONSE Maintain and update hazardous spill response and clean up programs that minimize the potential impacts of toxic spills on water quality.</p>	<ul style="list-style-type: none"> ● Emergency Preparedness Plan ● Intergovernmental Coordination
32.09	<p>NEARSHORE WATERS Ensure the continued improvement of nearshore waters through the regulation of water pollution sources within and around the San Leandro Marina, including boats and live-aboards.</p>	<ul style="list-style-type: none"> ● Clean Water Program ● Municipal Code and Ordinances
32.10	<p>GROUNDWATER PROTECTION Protect San Leandro’s groundwater from the potentially adverse effects of urban uses. Future land uses should be managed to reduce public exposure to groundwater hazards and minimize the risk of future hazards.</p>	<ul style="list-style-type: none"> ● Development Review



Action 32.10-A: Groundwater Monitoring

Encourage continued monitoring of local groundwater by State regulatory agencies and take steps to prevent further contamination.

Action 32.10-B: EBMUD Injection Wells

Keep apprised of, and actively comment on, EBMUD plans and proposals for injection wells and aquifer storage in the San Leandro vicinity and ensure that such proposals will not compromise the safety of local groundwater or have other adverse environmental impacts.

32.11 IMPERVIOUS SURFACES

Encourage the use of porous pavement and other practices to reduce impervious surfaces and the amount of stormwater runoff from parking lots and driveways.

- Development Review
- Engineering Development Standards

(See also Action 27.02-B regarding the use of recycled water from the water pollution control plant.)

Goal: Hazardous Materials

33

Protect local residents and workers from the risks associated with hazardous materials.

33.01 REGULATORY COMPLIANCE

Work with the appropriate county, regional, state, and federal agencies to develop and implement programs for hazardous waste reduction, hazardous material facility siting, hazardous waste handling and disposal, public education, and regulatory compliance.

Action 33.01-A: CUPA Programs

Continue to implement State programs as required by the City's Certified Unified Program Agency (CUPA) designation.

Action 33.01-B: Implementation of County Hazardous Waste Management Plan

Support Alameda County in the implementation and enforcement of the County Hazardous Waste Management Plan. Periodically review the Plan to ensure that it meets acceptable safety standards.

- County Hazardous Waste Plan
- Environmental Services Programs
- Hazardous Materials Remediation Programs
- Intergovernmental Coordination

Action 33.01-C: Review of Groundwater Reports

Regularly review monitoring reports and other data published by state, federal, and regional agencies to track the condition of groundwater plumes and environmental cases in the City.

33.02

CLEAN-UP OF CONTAMINATED SITES

Ensure that the necessary steps are taken to clean up residual hazardous wastes on any contaminated sites proposed for redevelopment or reuse. Require soil evaluations as needed to ensure that risks are assessed and appropriate remediation is provided.

- County Hazardous Waste Plan
- Development Review
- Environmental Services Programs
- Hazardous Materials Remediation Programs

33.03

DESIGN OF STORAGE AND HANDLING AREAS

Require that all hazardous material storage and handling areas are designed to minimize the possibility of environmental contamination and adverse off-site impacts. Enforce and implement relevant state and federal codes regarding spill containment facilities around storage tanks.

- Development Review
- Fire Code
- Hazardous Materials Business Plans

Action 33.03-A: Implement Fire Code

Administer appropriate sections of the Uniform Fire Code to ensure that buildings comply with hazardous materials policies.

33.04

SEPARATION FROM SENSITIVE USES

Provide adequate and safe separation between areas where hazardous materials are present and sensitive uses such as schools, residences, and public facilities.

- Conditional Use Permits
- Development Review
- Zoning Ordinance

Action 33.04-A: Zoning Review

Consider zoning standards that ensure that new housing is not developed in areas where relatively large quantities of hazardous materials are handled or stored, and that limit the use of hazardous materials by new businesses located in or near residential areas.

33.05

INCIDENT RESPONSE

Maintain the capacity to respond immediately and effectively to hazardous materials incidents. Provide ongoing training for hazardous materials enforcement and response personnel.

- City Operating Procedures
- Emergency Preparedness Plan

<p>33.06</p>	<p>HOUSEHOLD HAZARDOUS WASTES Promote public education about the safe disposal of household hazardous waste, such as motor oil and batteries, including the locations of designated household hazardous waste disposal sites.</p> <p><i>Action 33.06-A: Publicity of Household Hazardous Waste Information</i> <i>Work with Alameda County and ACI to publicize household hazardous waste collection events and provide each household with information on the location and operating hours of the nearest household hazardous waste collection facilities.</i></p>	<ul style="list-style-type: none"> ● Public Education and Outreach
<p>33.07</p>	<p>HAZARDOUS BUILDING MATERIALS Ensure the safe and proper handling of hazardous building materials, such as friable asbestos and lead based paint. If such materials are disturbed during building renovation or demolition, they should be handled and disposed of in a manner that protects human health and the environment.</p>	<ul style="list-style-type: none"> ● Development Review ● Environmental Services Programs ● Intergovernmental Coordination
<p>33.08</p>	<p>PUBLIC AWARENESS Increase public awareness of hazardous material use and storage in the City, the relative degree of potential health hazards, and the appropriate channels for reporting odor problems and other nuisances.</p> <p><i>Action 33.08-A: Disclosure to Property Owners</i> <i>Pursuant to the California Health and Safety Code, enforce community disclosure laws (e.g., Right-to-Know laws) that inform property owners of the presence of hazardous materials nearby.</i></p>	<ul style="list-style-type: none"> ● Public Education and Outreach
<p>33.09</p>	<p>COMMUNITY PREPAREDNESS Ensure that the City’s Emergency Preparedness programs include provisions for hazardous materials incidents, as well as measures to quickly alert the community and ensure the safety of residents and employees following an incident.</p> <p><i>Action 33.09-A: Automated Dialing System</i> <i>Develop and implement an automated telephone dialing system to notify residents in the event of a disaster such as a chemical spill or other hazardous materials incident.</i></p>	<ul style="list-style-type: none"> ● City Operating Procedures ● Emergency Preparedness Plan

Goal: **Emergency Preparedness**

34

Attain—and sustain—comprehensive and highly effective emergency preparedness and recovery programs.

POLICIES AND ACTIONS

IMPLEMENTATION STRATEGIES

34.01

PREPAREDNESS AS A TOP PRIORITY

Establish emergency preparedness as a top City priority. Staffing and funding levels for local preparedness programs should be sufficient to keep all residents and business well informed and prepared in the event of a major earthquake or similar disaster.

- Annual Budget
- Capital Improvement Program
- Grants

Action 34.01-A: Development of Emergency Operations Center

Develop a dedicated Emergency Operations Center, possibly as a component of another new community facility such as a Senior Center.

Action 34.01-B: Siting of Arks

Complete the siting of emergency supply cargo containers or “arks” at locations around the City by the end of 2002. Ensure that each ark is properly maintained and that the contents are periodically inspected and updated.

Action 34.01-C: Essential Service Facility Upgrades

Complete the seismic upgrades of the City’s essential service facilities, including fire stations.

34.02

SEMS PLANNING

Use the Standard Emergency Management System (SEMS) as the basis for the City’s Emergency Preparedness programs. The City should maintain and periodically update a SEMS-based emergency preparedness plan that provides direction and identifies responsibilities following a disaster.

- City Operating Procedures

Action 34.02-A: Management Operations Plan Update

Expand the City’s Emergency Preparedness Plan (the Management Operations Plan) to address hazard assessment, mitigation, evacuation routes, and post-disaster recovery.

34.03

PUBLIC EDUCATION AND AWARENESS

Promote public education and awareness on all aspects of emergency preparedness, including the type and extent of hazards in the community, measures to reduce the likelihood of damage and injury, provisions for emergency supplies, steps to take immediately after a disaster, and the locations of shelters and medical facilities.

- Annual Budget
- Project Impact
- Public Education and Outreach

Action 34.03-A: Educational Materials

Prepare printed guides, handbooks, and other mass media that can be distributed to students, neighborhood groups and homeowners to improve emergency preparedness.

Action 34.03-B: Staffing Levels

Restore local Emergency Preparedness staffing to the level that existed before the transfer of community outreach services to the Alameda County Fire Department. Either the City or County should maintain a staff position that is dedicated solely to preparedness training and education within the City of San Leandro, and liaison to public and private schools in San Leandro. The establishment of an additional position dedicated to preparedness training for the City's business community also should be considered.

34.04

DRILLS

Conduct periodic emergency response exercises to test the effectiveness of local preparedness procedures. Maintain SEMS training programs to ensure that City personnel are sufficiently prepared to respond to an emergency and staff an Emergency Operations Center.

- Annual Budget
- City Operating Procedures
- Emergency Preparedness Plan

Action 34.04-A: Radio 1610

Maintain and upgrade Radio 1610 AM. Implement a program with the school districts to increase resident and student awareness of this broadcasting band, so that it may provide information as effectively as possible in the event of an emergency.



Action 34.04-B: Siren Testing

Conduct periodic testing of the City's emergency warning sirens, and educate the public and school children about the procedures to follow in the event the sirens are sounded.

34.05

TRAINING PROGRAMS

Maintain community-based emergency preparedness training programs targeted to neighborhoods and businesses groups. Ensure that such programs respond directly to local needs and are well publicized throughout the community.

- Public Education and Outreach

34.06

EMERGENCY SHELTERS

Identify essential emergency facilities in the City, including shelters, and take the necessary actions to ensure that they will remain operational following a disaster.

- Capital Improvement Program
- Public Education and Outreach

Action 34.06-A: Information on Shelters

Develop a list of emergency shelters and medical facilities in the City. Publicize this information in local newspapers, neighborhood newsletters, cable TV, and printed materials.

Action 34.06-B: Disaster Response Equipment

Procure facilities and equipment to improve the City's response capabilities following a major disaster, including mobile emergency communication and medical trailers, electric power generators, and ham radio equipment.

34.07

SCHOOLS AND HOSPITALS

Coordinate local emergency preparedness efforts with the San Leandro and San Lorenzo Unified School Districts, and with local hospitals. Work with both School Districts to facilitate the seismic retrofitting of school buildings and to implement disaster preparedness curricula targeted to students.

- Intergovernmental Coordination
- Public Education and Outreach

34.08

BUSINESSES AND SOCIAL SERVICE AGENCIES

Coordinate emergency planning efforts with other jurisdictions, the business community, and social service agencies, including agencies serving special needs groups such as seniors and persons with disabilities.

- Intergovernmental Coordination
- Public/Private Partnerships

POLICIES AND ACTIONS *(Emergency Preparedness continued)*

IMPLEMENTATION STRATEGIES

34.09

MULTI-LINGUAL INFORMATION

Ensure that emergency preparedness information, including printed material, radio broadcasts, video, and other media, is available in Spanish, Chinese, and other major languages spoken by San Leandro residents, as well as in English.

- Public Education and Outreach
- Public/Private Partnerships

34.10

FUNDING SOURCES

Pursue a variety of funding sources, such as grants, low-interest loans, and tax credits, to retrofit community facilities and assist residents and businesses with seismic upgrades.

- Annual Budget
- City Operating Procedures
- Grants

Action 34.10-A: Transfer Tax Rebates

Consider a program wherein a portion of the local real property transfer tax would be rebated back to qualifying property owners undertaking seismic upgrades within one year after the purchase of the property.

Goal: Noise Compatibility

35

Ensure that noise associated with the day-to-day activities of San Leandro residents and businesses does not impede the peace and quiet of the community.

POLICIES AND ACTIONS

IMPLEMENTATION STRATEGIES

35.01

NOISE COMPATIBILITY TABLE

Ensure that potential noise impacts are considered when new development is proposed. Projects that could significantly increase noise levels should incorporate mitigation measures to reduce such impacts. Apply the standards shown in Table 6-1 when evaluating applications for future development. Table 6-1 specifies the maximum noise levels that are normally acceptable, conditionally acceptable, and normally unacceptable for new development.

- CEQA
- Development Review

Action 35.01-A: Review of Future Development Proposals

On an on-going basis, review future development proposals for compliance with the General Plan Noise and Land Use Compatibility standards in Table 6-1. Require acoustical studies for projects that are likely to be exposed to noise levels that exceed the “normally acceptable” standard and for projects that are likely to generate noise in excess of these standards. Impose mitigation measures based on the findings. Noise studies should consider the effects of significant short-term noise sources (such as passing trains or planes) as well as the average noise levels that may be experienced over a 24-hour period.

35.02**RESIDENTIAL INTERIOR NOISE STANDARD**

As required by the State of California, ensure that interior noise levels in new residential construction do not exceed 45 dB Ldn. For non-residential construction, the acceptable interior noise levels should be determined on a case by case basis, depending on the type of activity proposed.

- Building Code (Insulation Standards)
- Development Review

Action 35.02-A: Insulation Standards

Continue to enforce Title 24 insulation standards for all new residential construction, including the interior noise level standard of 45 dBA Ldn in all habitable rooms for dwelling units.

35.03**RESIDENTIAL EXTERIOR NOISE STANDARD**

Strive to maintain an exterior noise level of no more than 60 dB Ldn in residential areas. Recognizing that some San Leandro neighborhoods already exceed this noise level, encourage a variety of noise abatement measures that benefit these areas.

- CEQA
- Conditional Use Permits
- Development Review
- Zoning Ordinance

35.04**DEGRADATION OF AMBIENT NOISE LEVELS**

If a neighborhood is well within acceptable noise standards, do not automatically allow noise levels to degrade to the maximum tolerable levels shown in Table 6-1. A project's noise impacts should be evaluated based on the potential for adverse community response, as well as its conformance to the adopted standards. For CEQA purposes, an increase of 3 dB Ldn should generally be considered a significant adverse impact.

- CEQA
- Conditional Use Permits
- Development Review
- Zoning Ordinance

35.05

NOISE-SENSITIVE USES

Discourage noise-sensitive uses such as hospitals, schools, and rest homes from locating in areas with very high noise levels. Conversely, discourage new uses likely to produce high levels of noise from locating in areas where noise-sensitive uses would be impacted.

Action 35.05-A: Conditions of Approval

When approving development or issuing conditional use permits, establish conditions of approval (including construction hours and operating hours) that minimize the potential for noise impacts on nearby properties.

- Conditional Use Permits
- Development Review
- Economic Development Programs

35.06

MINIMIZING NOISE IN NEW HOUSING AREAS

In the event that new housing is constructed in areas that exceed normally acceptable noise levels, require project design and construction measures that minimize noise intrusion.

- CEQA
- Development Review

35.07

NOISE REDUCTION MEASURES

Encourage local businesses to reduce noise impacts on the community by replacing excessively noisy equipment and machinery, applying noise-reduction technology, and following operating procedures that limit the potential for conflicts.

- Conditional Use Permits
- Noise Ordinance

35.08

RESPONDING TO NOISE PROBLEMS

Continue to respond promptly and effectively to local noise complaints and noise problems, enforcing City codes and ordinances as necessary to ensure that a peaceful environment is maintained.

Action 35.08-A: Noise Ordinance Update

Amend the San Leandro Noise Ordinance with the objective of establishing residential “quiet hours” and identifying the types of noise sources to be restricted during these hours. The ordinance should establish fines and penalties for violations and should deal with specific problem activities such as the use of loud machinery and equipment in and around residential areas.

- City Operating Procedures
- Noise Ordinance

Goal:

36

Transportation Noise

Reduce the effects of surface transportation noise, including vehicular noise and noise associated with railroad and BART traffic.

POLICIES AND ACTIONS

IMPLEMENTATION STRATEGIES

36.01

TRANSIT VEHICLE NOISE

Encourage BART and AC Transit to develop and apply noise-reduction technologies that reduce the noise impacts associated with BART trains and bus traffic.

Action 36.01-A: Lobbying for Quieter Public Transit Systems

Maintain regular contact with local representatives on the AC Transit and BART Boards to lobby for quieter buses and trains, wheel changes, periodic grinding of BART tracks, and other measures that reduce noise generated by transit vehicles. Strongly urge AC Transit and BART to apply state-of-the art technology to achieve quieter operations.

- Intergovernmental Coordination

36.02

STREET AND HIGHWAY NOISE

Where feasible and appropriate, develop and implement noise reduction measures when undertaking improvements, extensions, or design changes to San Leandro streets.

Action 36.02-A: California Vehicle Code Enforcement

Enforce the applicable sections of the California Vehicle Code pertaining to noise emissions, and enforce applicable traffic laws pertaining to speeding, racing, and screeching cars.

Action 36.02-B: Overnight Truck Parking

Enforce restrictions on overnight truck parking to minimize noise problems associated with idling trucks near residential areas.

- Capital Improvement Program
- Municipal Code and Ordinances

36.03

SITE PLANNING AND BUILDING DESIGN

Require new development or redevelopment near freeways, arterials, BART, and major bus routes to incorporate site planning and architectural design measures that reduce the exposure of future building occupants to traffic noise.

- CEQA
- Development Review

36.04 STATE AND FEDERAL LEGISLATION
 Support state and federal legislation aimed at reducing transportation noise.

- Intergovernmental Coordination

36.05 FREIGHT TRAINS
 Work with the appropriate parties and agencies to reduce or otherwise mitigate the noise from freight trains traveling through San Leandro.

- Intergovernmental Coordination

Action 36.05-A: Train Horns
Continue to work with federal and state agencies and authorities from the Union Pacific Railroad to pursue effective relief from freight train noise, including train horns and noise from the trains themselves.

36.06 FREEWAY NOISE
 Work with local transportation agencies, including Caltrans and the Alameda County Management Agency, to mitigate noise from Interstates 880, 580, and 238. Encourage these agencies to pursue a variety of measures, such as landscaping, berms, pavement changes, and sound walls to reduce the noise impacts of local freeways.

- CEQA
- Intergovernmental Coordination

Action 36.06-A: I-580 Sound Walls
Closely monitor and participate in the Alameda County Congestion Management Agency's proposal to construct sound walls along I-580. Ensure that the community is fully involved in this process and encourage designs and materials which ensure that noise is not deflected to other locations in the community.



36.07

SOUND WALL DESIGN

Where sound walls are used, encourage aesthetically pleasing and innovative designs and require citizen input in the siting and design process. Require future sound wall engineering and acoustical design studies to address and mitigate the potential for displacement of sound from impacted properties to other properties further away from the noise source.

- CEQA
- Development Review
- Intergovernmental Coordination

Goal: Airport Impacts

37

Minimize the local impacts and hazards created by air traffic, ground operations, and all other aviation activities, particularly those associated with Oakland International Airport.

37.01

MONITORING OF AIRPORT PLANS

Actively and aggressively participate in forums and discussions regarding operations and expansion plans for Oakland International Airport. Seek local representation on task forces, commissions, and advisory boards established to guide airport policies and programs.

- City Operating Procedures
- Intergovernmental Coordination

Action 37.01-A: Participation in Airport-Community Noise Management Forum

Supplement the City's participation in the Airport-Community Noise Management Forum through local Airport Task Forces, such as the Neighborhood Aviation Advisory Committee (NAACSL). The mission of such task forces should be to monitor Airport plans and programs and advocate on behalf of residents and businesses impacted by Airport operations and expansion plans.

Action 37.01-B: Staff Acoustical Engineer

Explore the feasibility of creating a staff position (or training existing staff) requiring acoustical engineering expertise to advocate on behalf of the community, act as liaison to the community on aviation issues, and advise the City Council and other local officials on technical matters pertaining to the Airport.

37.02

MITIGATION OF AIRPORT NOISE

Pursue mitigation of airport noise impacts to the fullest extent possible. Support and advocate for operational practices, changes to aircraft, new technologies, and physical improvements that would reduce the number of properties in San Leandro that are impacted by noise.

- CEQA
- Intergovernmental Coordination
- Noise Compatibility Program
- Settlement Agreement

Action 37.02-A: Settlement Agreement

Implementation

Implement the terms of the Settlement Agreement between the City of San Leandro and the Port of Oakland dated November 7, 2000 regarding noise insulation, runway use, easements, and other matters pertaining to current and future operations at Oakland International Airport.

Action 37.02-B: Residential Sound Insulation Program

Program

Continue to work with the Port on expansion of the residential sound insulation program.

37.03

CHANGES TO AIRPORT OPERATIONS

Ensure that any changes to airport operations that would potentially result in higher noise levels in San Leandro incorporate comprehensive noise mitigation measures, even when the impacts will be of limited duration. To the greatest extent feasible, any changes in airport activity should avoid impacts to noise sensitive uses such as residential areas and schools.

- CEQA
- Intergovernmental Coordination
- Settlement Agreement

37.04

COMPREHENSIVE NOISE ABATEMENT

Advocate for noise abatement and mitigation programs that are based not only on the airport’s noise contour maps, but that consider other factors such as the frequency of overflights, the altitude of aircraft, and the hours of operation.

- Intergovernmental Coordination
- Noise Compatibility Program



37.05	<p>USE OF NORTH FIELD</p> <p>Strongly discourage any long-range plans that would extend the runways at the North Field (27 L/R and 9 L/R), or increase the use of the North Field for cargo jets or commercial passenger airlines, except as required for emergencies and periodic maintenance procedures.</p>	<ul style="list-style-type: none"> ● Intergovernmental Coordination ● Settlement Agreement
37.06	<p>AIRPORT SAFETY ZONES</p> <p>Regulate land uses within designated airport safety zones, height referral areas, and noise compatibility zones to minimize the possibility of future noise conflicts and accident hazards.</p>	<ul style="list-style-type: none"> ● ALUC Plan and Referrals ● Development Review ● Zoning Ordinance
37.07	<p>LEGISLATIVE CHANGES TO IMPROVE MITIGATION</p> <p>Pursue legislative changes that provide San Leandro and other cities with greater leverage regarding the mitigation of noise impacts, air pollution impacts, and other off-site impacts resulting from aviation.</p> <p><i>Action 37.07-A: Local Representation on Airport Issues</i></p> <p><i>Lobby for regional representation or other forms of municipal input on the Port of Oakland Commission so that the impacts of Port operations on adjacent cities can be more comprehensively addressed.</i></p> <p><i>Action 37.07-B: Relocation of the Noise Impact Boundary</i></p> <p><i>Support federal legislation that would relocate the Noise Impact Boundary from the 65 dB to the 60 dB CNEL contour. In the event this change is made, seek additional insulation and other mitigation measures that would reduce noise impacts to homes located in the 60-65dB CNEL range.</i></p>	<ul style="list-style-type: none"> ● Intergovernmental Coordination
37.08	<p>MONITORING PROGRAMS</p> <p>Promote ongoing monitoring of noise levels associated with airport operations and support expanded monitoring of other off-site impacts, such as air quality. Advocate for additional study of the health effects of airport noise and emissions, and use the findings of such research in defining the City’s position on airport-related issues.</p>	<ul style="list-style-type: none"> ● Noise Compatibility Program ● Program Development

Action 37.08-A: Expansion of the Noise Compatibility Program

Continue to work with the Port of Oakland on expanding the Noise Compatibility Program for the airport, including limits on the time of operations, advocating for quieter aircraft, mitigating night-time engine run-up activities, and the monitoring of noise levels at additional locations in and around San Leandro.

37.09

AVIATION ACCIDENTS

Maintain a high degree of readiness to respond to aircraft accidents. Continue to participate in preparedness drills and mutual aid activities with the City of Oakland to ensure quick and effective response to emergencies.

- City Operating Procedures
- Emergency Preparedness Plan

37.10

WATER RESCUE OPERATIONS

Maintain the San Leandro Marina as the reconnaissance point for airport emergency response and water rescue operations.

- Emergency Preparedness Plan
- Grants
- Intergovernmental Coordination

Action 37.10-A: Funding Applications

Apply for federal funds which enable the Marina to continue to function effectively as an emergency response base for airport rescue operations.